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Canary Islands

and

Azores



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*The Cheapest and Best Route to the Healthy Islands of*

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and

# GRAND CANARY

is

*By the First-Class Steamers*

of the

# AFRICAN STEAMSHIP COMPANY

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and the

## British and African Steam Navigation Company Limited,

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*FARE: £15 and £18 First-Class Return, including all Food  
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Tickets are available for Return by either Company's Steamers; also from Teneriffe and/or Grand Canary to Genoa or Barcelona by the magnificent Steamers of La Veloce Navigazione Italiana a Vapore or La Italia within 12 months from date of Issue.

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These Tickets will also include cost of landing and embarking, conveyance to and from the Hotel, and baths during the week's stay.

\* Passengers for Grand Canary can only be booked by the Express Service Steamers when accommodation is available, subject to the number of Coast passengers.

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STEAM PACKET COMPANY.**

(Royal Charter, dated 1839.)



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**Luxurious .**  
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To	Fare.	Length of Tour.	Sailing.	From
Morocco, Canary Islands and Madeira.	From <b>£22</b>	Days. 22	Every alternate Friday.	London.
Brazil & River Plate via Spain, Portugal & Madeira.	Brazil <b>£50</b> River Plate <b>£62</b>	About 5 weeks. About 7 weeks.	Fridays.	Southampton & Cherbourg.
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West Indies & New York via The Azores.	West Indies <b>£40</b>	34 days.	Every alternate Wednesday.	Southampton & Cherbourg.
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\* Including Hotel Accommodation.

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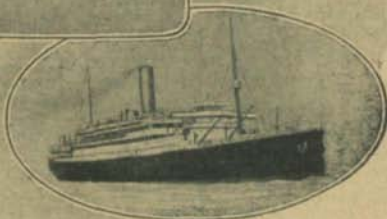
LONDON—18, Moorgate Street, E.C.; and 32, Cockspur Street, S.W.

or to {  
 BLANDY BROS. & CO., MADEIRA.  
 TENERIFFE COALING CO., TENERIFFE.  
 MILLER, WOLFSON & CO., TENERIFFE (Morocco Service).  
 MILLER & CO., LAS PALMAS, GRAND CANARY.  
 BENSUADE & CO., ST. MICHAELS, AZORES.

# A GLORIOUS TRADITION

is that of

## THE ROYAL MAIL STEAM PACKET COMPANY,



Which started on its career in 1839, with Royal Charter which Supplement were granted in 1851, 1882 and 1904.

Its History is admirably illustrated by the four pictures here reproduced, wherein the "Dee" of 1842 and its successors **LEAD UP TO THE PRESENT DAY** vessels of the "A" Class, second to none afloat in the sumptuousness of the equipment and the luxury of their maintenance.

Apart from the R.M.S.P. world-wide Mail Services, which include the West Indies and New York, Brazil, the Argentine, Chili, and indeed the whole South American Continent, Spain, Portugal, besides China, Japan and the Far East, this Company has reached a point when **Pleasure Cruises** have become a regular feature and travellers can visit their favourite cruising grounds of modern society in their magnificent steamers.

### MOROCCO, CANARY ISLANDS AND MADEIRA.

The Royal Mail Steam Packet Company despatch a Cruising Steamer every alternate Friday from London to Gibraltar, Morocco, and the beautiful Archipelagoes of Madeira and the Canary Islands.

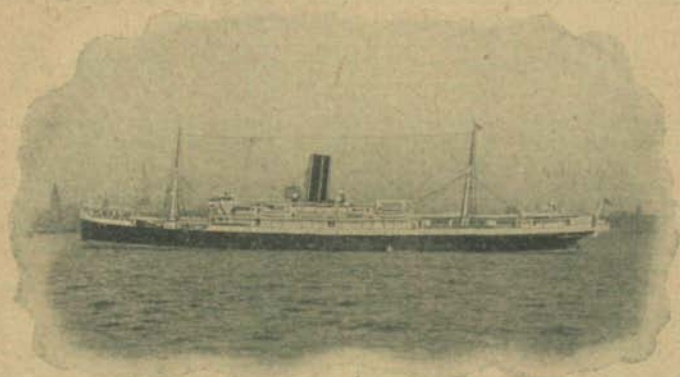
**The Azores or Western Isles** are now regularly served by the West Indian Mail Steamers of the R.M.S.P., which vessels call at St. Michaels out and home, and afford an opportunity of short voyages and interesting experiences.

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These fields for touring are excellently suited to those for whom an attraction is found in the fact that they occupy from 13 to 24 days, and that the saloon fares are very moderate.

*For particulars see page B.*

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**BOOTH LINE** Royal Mail Steamers to PARÁ and MANÁOS.

LIVERPOOL TO MADEIRA about 9th, 19th and 29th of each month, calling at HAVRE, VIGO, LEIXÕES and LISBON.

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FARES: Single £10. Return £16 10s. 0d.  
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**The Aberdeen Direct Line of Steamers.**

London to Port Natal and East African Ports,  
Calling at Teneriffe and Las Palmas.

These splendid Steamers have very fine accommodation for 1st and 2nd Class Passengers, and are well found in every respect.

**CHEAP SUMMER TOURS.**

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or to the Agents in the Islands.

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Sailing every four weeks between London and Australia, *via* Cape of Good Hope, and calling at Teneriffe, both outwards and homewards, have superior accommodation for Saloon Passengers.

Fares from London to Teneriffe, or vice-versa, £13 single;  
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Direct Service of Swift Royal Mail Steamers.

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**Outwards.**—London, Plymouth, Teneriffe, Capetown, Hobart, New Zealand.

**Homewards.**—New Zealand, Montevideo, Rio de Janeiro, Teneriffe, Plymouth, London.

These Steamers are particularly adapted for the New Zealand Trade; are of the highest class, lighted throughout with electric light, and are fitted with every modern improvement for the safety, comfort, and convenience of passengers.

Steamers are despatched every fourth Thursday from London and from New Zealand. Passengers booked to Teneriffe and Cape Town and to Australian and Tasmanian ports *via* Hobart.

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\*Twin-Screw.

†Triple-Screw.

Head Offices—138, Leadenhall Street, London, E.C.,  
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DELPHIC ... (Twin-Screw)	8,273	RANGATIRA ... (Twin-Screw)	7,465
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Passengers booked to Teneriffe, Capetown, Tasmanian, Australian, & New Zealand Ports.

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THE fast and beautifully-fitted Steamers of the above-named Company are subsidised by the Portuguese Government for the carriage of mails between Lisbon, Madeira, and the Azores, are fitted with electric light and every modern comfort, and provide first-class accommodation for passengers.

The new *S.S. San Miguel* leaves Lisbon on the 20th of each month, touches at Madeira about the 22nd, Santa Maria and S. Miguel about the 25th; Terceira about the 27th; Graciosa, S. Jorge, Pico, and Fayal about the 28th; returning by the same route and arriving at Madeira about the 3rd or 4th of the month, and at Lisbon about the 6th or 7th.

## FARES, First Class,

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LISBON TO MADEIRA	... ..	Single	Rs. 20.000
MADEIRA TO ST. MICHAEL'S	... ..	"	21.000
MADEIRA TO FAYAL	... ..	"	23.000

Visitors to the Azores, whether they be invalids in search of the wonderful mineral waters of Furnas, or tourists anxious to make a flying survey of the lovely scenery for which the Islands are so famed, will find it most convenient to ship by this Company's boats, either at Lisbon or at Madeira. Those arriving at Madeira in time to catch the steamer leaving for the Azores on the 22nd can book accommodation beforehand by wire.

Agents in Madeira ... **BLANDY BROTHERS & CO.**  
Telegraphic Address: "BLANDY."

Agents in Lisbon ... **GERMANO SERRÃO ARNAUD.**  
Telegraphic Address: "GERARNAUD."



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REGULAR SAILINGS FROM MARSEILLES

On the 10th of every month for the Brazils and River Plate (calling at Valencia, Almeria, Dakar).  
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On the return voyage steamers of the Société Générale de Transports Maritimes call at Las Palmas about the 2nd, 16th and 25th of every month.

On the return voyage steamers of the France-Amérique Co. call at Teneriffe about the 16th of every month.

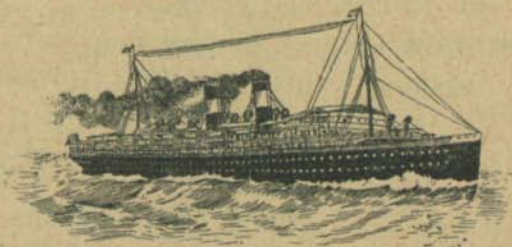
PARIS: 8, rue Menars (rue du 4 Septembre).

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Regular Mail Sailings from Genoa and Barcelona for Rio Janeiro and Santos (when sufficient inducement offers), Montevideo and Buenos Aires and vice versa, calling on the way at the Canary Islands or at St. Vincent.

The service is maintained by the very fast and luxurious twin-screw Passenger Steamers, "Re Vittorio," "Regina Elena," "Principe Umberto," and single-screw "Umbria," "Sicilia," "Sardegna."

For further particulars and tickets apply in Santa Cruz, Teneriffe, to the Teneriffe Coaling Company, Limited; in Las Palmas, Grand Canary, to Messrs. Blandy Bros. & Co.

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WILL BOOK YOUR PASSAGE,  
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RESERVE YOU ROOMS AT HOTELS,  
TELL YOU ALL ABOUT THE ISLANDS,  
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Die Taxen dieser Gesellschaft sind die gleichen wie auf den bisherigen billigsten Wegen.

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**Via TENERIFE-EMDEN,**  
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MADEIRA THE CANARY ISLANDS AND  
THE AZORES  
BROWN'S  
MADEIRA  
CANARY ISLANDS  
AND  
AZORES

A  
PRACTICAL AND COMPLETE GUIDE

FOR THE USE OF

TOURISTS AND INVALIDS

WITH

COLOURED MAPS AND PLANS

AND NUMEROUS

SECTIONAL AND OTHER DIAGRAMS

BY

A. SAMLER BROWN

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London :

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MADEIRA, THE CANARY ISLANDS AND THE AZORES  
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IN LONDON and SOUTH AFRICA—from any Bookseller, from most of the Shipping Companies, from Messrs. Thomas Cook & Son, Ltd., Messrs. W. H. Smith & Sons, or at the Publishers' Offices.

Depôts { IN MADEIRA—Messrs. Blandy Brothers & Co.  
IN SANTA CRUZ, TENERIFFE—Messrs. Hamilton & Co.  
IN PUERTO OROTAVA, TENERIFFE—Mr. T. M. Reid.  
IN GRAND CANARY—Messrs. Miller & Co. ;  
Mr. A. H. Priestly.

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The book is also stocked by several shops and hotels in the different Islands.



# MADEIRA, THE CANARY ISLANDS AND THE AZORES.

## Up-to-date Leaflet, 1920/21.

The changes since the war in the above Archipelagos of chief interest to Visitors are those affecting Shipping, Hotels, and the maintenance of Roads.

**SHIPPING.**—Means of reaching the Islands disappeared at one time altogether, whilst complete restoration of the old facilities is still indefinitely postponed. This is partly due to the demand for vessels elsewhere and partly to the want of space in transoceanic Steamships, unable to carry passengers to half-way ports until the demand for long-distance bookings has been satisfied.

In such circumstances it is useless to include a revised list of passenger Steamships in this work, as the information given in it might become incorrect at any moment. The intending traveller therefore will do best by consulting the shipping advertisements in the papers of the day or by applying to a Tourist Agency. Fares, which are much higher both for passengers and excess luggage, are also subject to sudden alterations.

**HOTELS.**—Many of these were closed during the war and some were debarred to English visitors because of their Teutonic sympathies. A number of Hotels and Boarding Houses, however, are once more catering for the wants of the public, in which, speaking generally, the alterations in prices are less than might be expected. (Note.—Charges recorded below were corrected in November, 1920, but cannot even now be regarded as permanent).

**ROADS, EXCURSIONS, &c.**—In Madeira, in some of the Canary Islands and in the Azores, roads were extended during the war, and most of the roads are in better condition than was previously the case. The charges for carriages, horses, mules, &c., &c., are higher.

As regards the book itself, the reader is asked to take notice that the publishers have been changed and that booksellers and the trade should now apply for copies to Messrs. Simpkin, Marshall, Hamilton, Kent & Co., Ltd., London, E.C. 4, the price of the book being 6/- net.

Those communicating with the author will kindly address their letters to him, care of the same firm in London, or care of Messrs. Hamilton & Co., Santa Cruz, Teneriffe, Canary Islands. When an answer is required, a stamped and addressed envelope should be enclosed.

**PAGES a 7/9.**—The wild fluctuations of the exchanges of late are notorious. The reader will note that the English pound in the Canary Islands is now (Nov., 1920), over par (25·22½ pesetas to £1), and at a tremendous premium in Madeira and the Azores. The rates vary so enormously that actual figures can only be ascertained from the newspapers.

In the Azores, as in Madeira and Portugal, the monetary unit is now the centavo (10 reis) and it is usually better to make bargains in *forte* as only the old notes (expressed in reis) are now *fraco*.

**PAGE a 12.**—Postal and Telegraph rates in Madeira and the Azores are rather higher than in 1914. In the Canaries an addition of 5 centimos has been made on all internal letters and post cards. There is now a parcel post between England and all the Islands.

**PAGE b 3.**—The scale of Expenditure must now be increased.

**PAGES b 6/7.**—The hire of carriages, automobiles, horses, hammocks, &c., &c., are subject to readjustment, as are also the wages paid to labour generally and to domestic servants. These remarks apply to pages h 31/33, i 15, l 51/54, m 35/6, n 2, p 10, p 15, p 18.

**PAGES h 8/9.**—Landing charges at Madeira. Passengers without luggage, 2s. 6d. each way. Passengers on shore at Madeira can now make very long drives by motor car, a matter of considerable importance to visitor.

**Hotels.**—Reid's Hotels.—The Palace; the Victoria; the Bungalow; the Cliff, from 21s. 0d. a day; Jones' Hotel, "Bella Vista," from 14s. 0d. a day; Savoy Hotel, from 15s. 0d. a day; New English Hotel, from 15s. 0d. a day; Monte Palace Hotel, from 15s. 0d. a day; Atlantic Hotel, from 15s. 0d. a day; Golden Gate Hotel, from 12s. 0d. a day.

**PAGE i 5.**—Santa Cruz de la Palma. Hotel Patria, 10 pes. a day.

**PAGE l 6.**—Landing charges at Santa Cruz, Teneriffe. 1s. 6d. or Pes. 1.50, per person each way (without luggage).

**PAGE l 7.**—Santa Cruz, Teneriffe, Hotels, &c. Grand Hotel Quisiana, from 18 pesetas a day; Pino de Oro, from 15s. 0d. a day; Olsen's, from 12s. 6d. a day; Orotava (and Camacho's), from 12 pesetas a day; English Hotel (Mrs. Slee), 7 to 9 pesetas; Victoria, from 8 pesetas; Colon, from 7 pesetas; Rossi, from 7 pesetas; Villa Benitez (on Laguna Road), from 10 pesetas.

**PAGE l 15.**—Güimar. The Pension Sunnyside, from 12s. 0d. a day.

**PAGE l 22.**—La Laguna. Hotel Agüere, from 10 pesetas a day.

**PAGE l 25.**—A Carretera, available for motor cars, now leads from La Laguna almost to the Cruz del Carmen.

**PAGE l 27.**—Tacoronte. Camacho's Hotel takes visitors by arrangement at 15 pesetas a day.

**PAGE l 34.**—Puerto Orotava Hotels. Grand Hotel Taoro, from 15s. 0d. a day; Hotel Monopol, from 12s. 0d. a day; Hotel Martianez, from 12s. 6d. a day; Hotel Marquesa, from 10 pesetas a day.

**PAGE l 45.**—Icod de los Vinos. Hotel Drago, from 7 pes. a day.

**PAGE m 5/6.**—Las Palmas. Landing charges 1s. 6d., Pes. 1.50, each person each way, without luggage. Tramcar fares: 1st class, 35 c.; 3rd class, 25 c.; carriage tariff, 50 per cent. up.

**Hotels.**—Many of the Hotels have been closed. The following were open (Nov., 1920). Outside the town: the Metropole, from 15s. 6d. a day; the Towers, from 10s. 0d. a day. Inside the town: the Madrid, from 10 pes.; the Monopol, the Europa, the Cuatro Naciones, the Central, the Kaiserhof, all from 7 pes. upwards a day.

**PAGES m 19/20.**—Hotels. The Friars, closed; Quiney's Bella Vista, closed; Santa Brigida, from 15s. 6d. a day.

**PAGES m 22/23.**—The carretera from the Monte to Telde is finished and the main road has been carried to some little distance beyond San Mateo.

**Note.**—Where no corrections have been made, it may be taken for granted that the usual charge in country inns in the Canary Islands is now about 7 pesetas a day upwards.

**PAGE p 10.**—Landing Charges, 50 centavos each way, each person.

**Hotels.**—Brown's, 6 \$ 25 a day; Açoriano, about 2 \$ 00; Fernandes, 1 \$ 50.

**Carriages.**—Add from 50 to 100 per cent. to old tariff. Motor cars a matter of arrangement.

**Harbour.**—During the war this became a very important naval base.

**PAGE p 13.**—As Furnas, Hotel Atlantic, about 2 \$ 00 a day.

**PAGE p 15.**—Terceira, Landing Charges, 50 centavos each person, each way.

**Hotels.**—Charges from about 1 \$ 50 per day.

**Note.**—It may be taken for granted that the charges quoted in the Azores in the 10 preceding lines are too low, as, since they were quoted to the writer, there has been a very heavy fall in the value of Portuguese currency.

**COPIES OF BROWN'S GUIDE TO  
MADEIRA, THE CANARY ISLANDS AND THE AZORES  
MAY BE PROCURED**

IN LONDON and SOUTH AFRICA—from any Bookseller, from most of the Shipping Companies, from the Canary Island Agency, 11, Adam Street, Strand, W.C., Messrs. Thomas Cook & Son, Ltd., Messrs. W. H. Smith & Sons, or at the Publishers' Offices.

Depôts	{	IN MADEIRA—Messrs. Blandy Brothers & Co.
		IN SANTA CRUZ, TENERIFFE—Messrs. Hamilton & Co.
		IN PUERTO OROTAVA, TENERIFFE—Mr. T. M. Reid.
		IN GRAND CANARY—Messrs. Miller & Co. (both at the Santa Catalina Mole and in the Triana).

The book is also stocked by several shops and hotels in the different Islands.

The price in the Canary Islands is the same as in England namely, 2s. 6d. In Madeira it is 3s., an addition being made on account of the duty. The price in the local currency depends upon the rate of exchange at the time.



## Opinions of the Press.

### "THE SATURDAY REVIEW" says:—

(FIRST EDITION).—For the increasing number of tourists and invalids Mr. A. Samler Brown has written a handy guide, *Madeira and the Canary Islands*, which is as useful as it is timely. Mr. Brown's excellent little book comprises all the information that travellers need, with a series of legible maps, a useful bibliography, and tables of steamship routes, fares, hotels, and other indispensable matters. The descriptive and historical sections of the book are carefully compiled, and thoroughly readable.

(SECOND EDITION).—Mr. Samler Brown's compact and useful guide to Madeira and the Fortunate Islands has reached a second edition, and has been equipped with much new and useful information about these popular resorts. In some respects Mr. Samler Brown is the very model of a guide. We hardly know another writer of his class who writes so little "about it and about it," and comes so directly to the point. Of talkee-talkie, even about Guanches, there is hardly any; the very dragon-tree does not beguile Mr. Brown from the austerity of a model examination answer. But for distances, paths, prices, the number of beds to be expected at this and that Fonda, the places where you should not drink water, and all such things, he is a pearl of commentators, and all in scarcely a hundred pages, with good, though uncoloured, maps.

(THIRD EDITION).—We have twice before praised Mr. Samler Brown's *Madeira and the Canary Islands*; but this fact shall not prevent our doing it a third time. Like a good man and author Mr. Brown has not contented himself with merely reprinting his second edition and putting third on its title page, but has revised his text, redrawn his maps, and added a good deal of miscellaneous information, all of which is to the point. He draws, and is right in drawing, special attention to his advertisements, which, as he justly boasts, are all but invariably concerned with the subject of the book itself, and tell you something that you may get, or somewhere whither you may go in Madeira or the Canaries.

### "THE FIELD" says:—

(FIFTH EDITION).—This handbook has now reached its fifth edition, which has been revised and brought up to date. It is a thoroughly practical work, and great pains must have been taken by the author to collect so much information, and give it in the comparatively small space of this volume. Tourists and invalids may, with advantage to themselves, consult its pages on all subjects connected with these islands. We recommend it to our readers, etc., etc.

"One of the most scientific and accurate guide-books ever written, full of facts and free from embroidery."—"Climatic Treatment in Grand Canary," by Dr. Brian Melland, M.Sc. (Vict.), M.B. (Lond.)

NOTE.—The First Edition consisted of 111 pages and included 10 maps in one colour, but no plans, diagrams, sketches or meteorological tables. The present volume contains 364 pages, 21 maps and plans in three colours, 2 diagrams, 12 sketches and 8 meteorological tables, in addition to many other tables of shipping public coaches, etc. In spite of the increase in the labour and cost of production the price remains the same.

## PREFACE TO THE TENTH EDITION.

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THE present issue has been brought up to date, both as regards the text and the maps.

The Historical Section is exact and sufficiently complete, and the Guide proper has been most carefully revised.

The chapters on Geology and the pages devoted to a discussion of the Atmospheric Currents of the Mid-Atlantic, are of considerable interest to Invalids and Tourists. It is trusted that the drawings accompanying this part of the work will prove of service and that they will tend to render the text clear and readable.

The general plan of the book remains the same, the proportion of the circulation to the number of visitors to the Islands showing that no other arrangement is likely to suit its purchasers better.

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*NOTE.*—*Steamship Companies, Proprietors of Hotels and others would be doing themselves a service by at once communicating any changes to the Editor, who will receive the same with thanks, and will do his best to bring them to the notice of visitors.*

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THE writer tenders hearty thanks to those gentlemen who have kindly helped him in collecting the various items of information included in this work, and amongst those more especially Fathers Ernesto Schmitz and Jayme de Gouvea Barreto; Illos. Senhores Francisco de Paula Sarrea Prado; Luiz Alex. Ribeiro de Mendonça, Barão d'Uzel; D. G. von Hafe; Messrs. Wm. Keene; John F. Healy; Cossart, Gordon & Co.; Wm. Hinton and Sons; da Cunha & Co.; Blandy Bros. & Co.; Wm. and Alfd. Reid, H. C. Houghton and others of Madeira.—Señores D. Ramon de Ascanio; D. Juan Ballester y Remon; D. Arturo Ballester y Martinez Ocampo; Dr. George Perez; Messrs. Hamilton & Co.; the late Messrs. Henry Wolfson and A. H. Bechervaise, Herr Rudolf von Thanner, Mr. Frank Gooderson and others of Teneriffe.—Señor D. Francisco Gourié and Messrs. Miller & Co.; Richard Blandy; Harold Withers and others of Grand Canary.—Illos. Senhores Francisco Affonso Chaves; J. J. Arruda; the Sociedade Propagadora de Noticias Michaelenses; Mr. W. W. Nicholls (U.S. Vice-Consul), of Ponta Delgada, St. Michael's, Azores; Messrs. Thomé de Castro and Douglas H. Chasserau of Terceira, and Mr. S. M. Wood of Fayal.

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In return for services rendered to the Canary Islands by the publication of this work and by other acts, His Majesty Don Alfonso XIII., King of Spain, graciously nominated the author, as from the 25th January, 1909, Caballero de Merito Militar, with right to use the Insignia of the Order.



## CONTENTS.

	PAGE
PREFACE ... ..	v
TABLE OF CONTENTS ... ..	vii
GENERAL INDEX ... ..	x
STEAMERS running to the Islands, with fares, etc. ( <i>to face pages xviii &amp; a1</i> )	
GENERAL INFORMATION ... ..	<i>a1 to g41 and p1 to p7</i>
Plan of the Guide ( <i>a1</i> ).—Names of Islands ( <i>a2</i> ).—Time of Sea Journeys ( <i>a3</i> ).—Order in which to visit the Islands ( <i>a4</i> ).—Outfit ( <i>a5</i> ).—Passports and Customs Duties ( <i>a6</i> ).—Travelling Agencies ( <i>a6</i> ).—Coinage ( <i>a7</i> ).—Measures ( <i>a9</i> ).—Thermometrical degrees ( <i>a10</i> ).—Difference in time ( <i>a10</i> ).—Length of the solar day ( <i>a10</i> ).—Tides ( <i>a11</i> ).—Posts and telegraphs ( <i>a12</i> ).—Vocabulary ( <i>a14</i> ).—Accommodation, Hotels, etc. ( <i>b1</i> ).—Villas ( <i>b3</i> ).—Annual Expenditure ( <i>b3</i> ).—Religion ( <i>b4</i> ).—Population ( <i>b4</i> ).—Amusements and Sport ( <i>b4</i> ).—Shooting licenses ( <i>b6</i> ).—Expeditions and excursions ( <i>b6</i> ).—Animals ( <i>b6</i> ).—Distances by measurement and by time ( <i>b7</i> ).—Guides ( <i>b8</i> ).—Best way to cross an Island ( <i>b8</i> ).—Camping out ( <i>b8</i> ).—Clouds in the hills ( <i>b8</i> ).—Springs and waterfalls ( <i>b9</i> ).—The Euphorbia ( <i>b9</i> ).—Poisonous reptiles ( <i>b9</i> ).—Mosquitoes ( <i>b10</i> ).—Beggars ( <i>b10</i> ).—Hospitals ( <i>b10</i> ).	
NATIVE SOCIETY AND HABITS; Position of the poorer classes; Food of the People, etc. ( <i>c1</i> ).—Native prejudices ( <i>c5</i> ).	
INDUSTRIES AND AGRICULTURE (for abstract of contents see special Table of Subjects, <i>d1</i> and <i>d2</i> ) ... ..	
	<i>d1 to d36</i>
FORMS OF ANIMAL AND VEGETABLE LIFE ... ..	<i>d37 ,, d42</i>
METEOROLOGICAL STATISTICS AND RESUMÉ OF SAME. ... ..	<i>e1 ,, e10</i>
CLIMATIC CONDITIONS ... ..	<i>e11 ,, e33</i>
In the winter ( <i>e11</i> ).—In the summer ( <i>e14</i> ).—Rainfall ( <i>e16</i> ).—Water-supply ( <i>e17</i> ).—Drainage ( <i>e18</i> ).—Winds ( <i>e19</i> ).—Storms ( <i>e20</i> ).—Tidal waves ( <i>e21</i> ).	
Epidemics ... ..	<i>e21</i>
Locusts ... ..	<i>e21</i>
Mineral Springs ... ..	<i>e21</i>
Submarine Springs ... ..	<i>e22</i>

	PAGE
PERMANENT ATMOSPHERIC CURRENTS OF THE MID-ATLANTIC ; THEIR CAUSES AND THEIR EFFECTS	<i>e23 to e29a</i>
CHAPTER FOR INVALIDS ... ..	<i>e30 " e33</i>
CLIMATIC DIARRHŒA ( <i>e33</i> ). SEA SICKNESS ( <i>e33</i> ).	
ARTICLE ON GEOLOGY ... ..	<i>f1 " f17b</i>
THE SUNKEN CONTINENT OF ATLANTIS ... ..	<i>f18 " f27</i>
HISTORY OF MADEIRA ... ..	<i>g1 " g7</i>
"    "    THE CANARY ISLANDS ... ..	<i>g8 " g36</i>
"    "    THE AZORES ... ..	<i>g37 " g38b</i>
BIBLIOGRAPHY ... ..	<i>g39 " g42</i>
CONSULAR SERVICE ... ..	<i>g43</i>
GUIDE TO MADEIRA ... ..	<i>h1 to h30</i>
"    "    LA PALMA ... ..	<i>i1 " i15</i>
"    "    HIERRO ... ..	<i>j1 " j5</i>
"    "    GOMERA ... ..	<i>k1 " k3</i>
"    "    TENERIFFE ... ..	<i>l1 " l54</i>
"    "    GRAND CANARY ... ..	<i>m1 " m36</i>
"    "    FUERTEVENTURA ... ..	<i>n1 " n3</i>
"    "    LANZAROTE ... ..	<i>o1 " o4</i>
"    "    THE AZORES. Shipping facilities (Supplementary) <i>p1</i> ; General Information (Supplementary) <i>p2 to p5</i> ; Geology (Supplementary) <i>p6 to p7</i> ; Guide proper <i>p8 to p20</i> .	<i>p1 " p20</i>

### MAPS.

CLIMATIC MAP OF THE ATLANTIC OCEAN, SHOWING THE CURRENTS AND ISOTHERMALS ... .. ( <i>to face page</i> )	<i>f2</i>
MAP OF THE CANARY ARCHIPELAGO ... ..	<i>f2</i>
"    "    MADEIRA, WITH SMALL MAP OF THE GROUP AND PLAN OF FUNCHAL ... ..	<i>h30</i>
"    "    LA PALMA, WITH MAP OF THE GREAT CRATER ... ..	<i>k3</i>
"    "    HIERRO ... ..	<i>k3</i>

	PAGE
MAP OF GOMERA ... .. (to face page)	k3
"  "  SANTA CRUZ, TENERIFFE (Municipal) .. .. "	l12
"  "  TENERIFFE, WITH PLAN OF SANTA CRUZ AND MAP OF THE PEAK AND ITS SURROUNDINGS ... .. "	l54
"  "  GRAND CANARY, WITH PLAN OF LAS PALMAS AND OF THE PUERTO DE LA LUZ ... .. "	m36
"  "  FUERTEVENTURA ... .. "	p1
"  "  LANZAROTE ... .. "	p1
"  "  THE AZORES (ARCHIPELAGO), WITH SEPARATE MAPS OF S. MIGUEL ; OF TERCEIRA ; AND OF FAYAL, FAYAL CHANNEL, AND PART OF THE ISLANDS OF PICO AND S. JORGE .. .. "	p19

### DIAGRAMS.

ATMOSPHERIC CHART OF THE MID-ATLANTIC... (to face page)	e29a
PROFILE SECTION OF TENERIFFE ... .. "	e29a
GEOLOGICAL SKETCH MAP OF TENERIFFE ... .. "	f8
IDEAL GROUP OF SATELLITE VOLCANOES ... .. "	f13
THE GARGANTA DE GÜIMAR ... .. "	f15
OUTLINE SKETCHES SHOWING FORMATION OF MADEIRA, PORTO SANTO, THE DESERTAS, GRAND CANARY, TENERIFFE, FUERTEVEN- TURA AND LANZAROTE ... .. "	f1 7a

### ILLUSTRATIONS.

EIGHT VIEWS OF SANTA CRUZ, TENERIFFE (INSERTED, TOGETHER WITH MAP OF THE TOWN, BY THE MUNICIPAL AUTHORITIES) ... .. (to face page)	l8
------------------------------------------------------------------------------------------------------------------------------------------	----



# INDEX.

Figures in larger type denote principal references.

	PAGE		PAGE
Abona . . . . .	118	Atalaya . . . . .	m21, m26
Abrigos . . . . .	117	Atlantis . . . . .	f18
Accommodation . . . . .	b1	Atmospheric Currents . . . . .	e23
Achada do Campanario . . . . .	h17, h25	Azores, The . . . . .	p1
Adeje . . . . .	119, 149	Azulejos, Los . . . . .	143
Advice to Invalids . . . . .	e30		
Afur . . . . .	125		
Agæte . . . . .	m16, m 7, m24	Bajamar . . . . .	124, 129
Agriculture . . . . .	d5, d26, p2	Bañadero . . . . .	m16
"    Ancient . . . . .	g35	Bananas . . . . .	d15
Agua García . . . . .	126, 129	Barley ( <i>see</i> Cereals). . . . .	
Agua Mansa . . . . .	116, 140	Barlovento . . . . .	i8
Agüimes . . . . .	m29	Barranco de Aduares . . . . .	i12, i14
Agulo . . . . .	k3	"    Añavingo . . . . .	115
Alcohol . . . . .	p3	"    de las Angustias (La Palma) . . . . .	i9
Aldea de S. Nicolas . . . . .	m18, m24, m32	"    Azuaje . . . . .	m14
Alegranza (Island of) . . . . .	o1	"    de Badajoz . . . . .	116
Alegría . . . . .	h16	"    de las Cabezas . . . . .	137
Almagrurin adventurers . . . . .	g4	"    de Castro . . . . .	145, 150
Aloe, The . . . . .	d17	"    de Chamorga . . . . .	113, 125
Alta Vista . . . . .	140	"    del Dornajito . . . . .	149
Altitude, Effects of . . . . .	d19, d22	"    del Dragonal . . . . .	m19
Alum . . . . .	p9	"    de Fatarga . . . . .	m32, m84
Amusements . . . . .	b4, p2	"    de Guayadeque . . . . .	m29
Anæmia . . . . .	e15	"    de Guinguada . . . . .	m19
Anaga . . . . .	113, 125	"    de Herques . . . . .	117
Angra . . . . .	p15	"    de las Higueras . . . . .	128
Aniline dyes . . . . .	d10	"    Hondo (North) . . . . .	131
Animals, Engaging . . . . .	b6	"    "    (South) . . . . .	114, 130
Animal life . . . . .	d37	"    del Infierno . . . . .	120
Anjos . . . . .	p8	"    de Lechucilla . . . . .	m24
Anthropology, Native . . . . .	g22	"    de Llarena . . . . .	133, 140
Antigua, La . . . . .	n2	"    de Martianez . . . . .	136
Antilla, Island of . . . . .	g3	"    del Patronato . . . . .	137, 143, 145
Ants, The . . . . .	p8	"    de Poleo . . . . .	i8
Arafo . . . . .	114, 116, 140	"    del Rio (La Palma) . . . . .	i6
Architecture . . . . .	d13, p5 and locally	"    "    (Güimar) . . . . .	116
Arco de S. Jorge . . . . .	h23	"    de Ruiz . . . . .	145, 150
Area, Larga . . . . .	p18	"    de S. Isidro . . . . .	m24
Areynaga . . . . .	m32	"    de Tejeda . . . . .	m18, m28
Argual . . . . .	i9, i12	"    de Tenoya . . . . .	m14
Arguayo . . . . .	120	"    de Tirajana . . . . .	m24, m25, m81, m33
Arguineguin . . . . .	m33	"    de Utiaca . . . . .	m19, m24
Arico . . . . .	118	"    de la Vera . . . . .	137
Armásiga . . . . .	125	"    de la Virgen . . . . .	m15
Arona . . . . .	119	Bathing . . . . .	e10, e32
Arrecife . . . . .	o2		
Artenara . . . . .	m14, m16, m18, m24		
Arucas . . . . .	m14		

	PAGE		PAGE
Beaches, Raised . . . . .	<i>f3, p7, p8</i>	Canary, Grand, Shipping in . . . . .	<i>d2</i>
Beans ( <i>see</i> Cereals or Vegetables).		Candelaria (Ten.) . . . . .	<i>114, 116</i>
Beetles . . . . .	<i>d38</i>	"    (La Palma) . . . . .	<i>i9</i>
Beggars . . . . .	<i>h10, h10</i>	Canical . . . . .	<i>h19</i>
Behaviour . . . . .	<i>c5</i>	Canico . . . . .	<i>h14, h18</i>
Belmaco (Cave of) . . . . .	<i>i14</i>	Capellas . . . . .	<i>p12</i>
Bemfeitoria system, The . . . . .	<i>d27</i>	Caramujo, Chão de . . . . .	<i>h5, h26</i>
Bencomo of Taoro . . . . .	<i>g17</i>	Carob bean . . . . .	<i>d17</i>
Betancuria . . . . .	<i>n3</i>	Carriages, Charges for ( <i>See</i> end of each island.)	
Bethencourt . . . . .	<i>g11</i>	Carrisel (Ten.) . . . . .	<i>120, 148</i>
Bibliography . . . . .	<i>g39</i>	Carrisal (Ten.) . . . . .	<i>m33</i>
Bicycles . . . . .	<i>a11, p2</i>	Carthaginians, The . . . . .	<i>g9</i>
Birds . . . . .	<i>d37</i>	Castor oil . . . . .	<i>d17</i>
Blake, Sir Robert . . . . .	<i>i14</i>	Cattle . . . . .	<i>g19</i>
Boa Ventura . . . . .	<i>h21, h28</i>	Caves (Azores) . . . . .	<i>p6, p17</i>
Boca de los Tauces . . . . .	<i>119, 143, 149</i>	"    (Grand Canary) . . . . .	<i>m16, m17, m21, m23, m27, m29, m33, m34</i>
Bocca dos Corregos . . . . .	<i>h24</i>	"    (Lanzarote) . . . . .	<i>o4</i>
"    das Voltas . . . . .	<i>h22</i>	"    (Lava) . . . . .	<i>f15</i>
Boots (native) . . . . .	<i>a6</i>	"    (La Palma) . . . . .	<i>i13</i>
Botanical Gardens (Orotava) . . . . .	<i>137</i>	"    (Teneriffe) . . . . .	<i>g33, 115, 128, 136, 146</i>
Bread . . . . .	<i>c4</i>	Cemeteries, Native . . . . .	<i>g33, m12, m17, m34</i>
Breña, The . . . . .	<i>i14</i>	Cereals . . . . .	<i>d20</i>
Buena Vista (La Palma) . . . . .	<i>i7</i>	Chahorra . . . . .	<i>142, 149</i>
"    (Teneriffe) . . . . .	<i>120, 147</i>	Chão, Ilheo . . . . .	<i>h28</i>
Buen Paso . . . . .	<i>145</i>	Charco Verde . . . . .	<i>i15</i>
Bugio . . . . .	<i>h28</i>	Charges—Landing (locally); Horses, etc., <i>b6</i> (and at the end of each island).	
Bulbs, Culture of . . . . .	<i>d18</i>	Charity . . . . .	<i>b10, h10</i>
Bull Fights . . . . .	<i>b5, p5</i>	Chasna ( <i>see</i> Vilaflor).	
Buildings (native) . . . . .	<i>m18, m31, o2</i>	Cheese (Canary) . . . . .	<i>m3</i>
Butterflies . . . . .	<i>d38</i>	Chio . . . . .	<i>120</i>
Cabeza del Toro . . . . .	<i>130</i>	Cholera . . . . .	<i>e21, g7</i>
Cables, Telegraphic . . . . .	<i>a13</i>	Cigars . . . . .	<i>d4, i3, 13</i>
Cabo Garajão . . . . .	<i>h18</i>	Cinder Beds . . . . .	<i>p6</i>
"    Girão . . . . .	<i>h17, h27</i>	Cinder Heaps . . . . .	<i>f11, p6</i>
Caes do Pico . . . . .	<i>p17</i>	Cipango . . . . .	<i>g3</i>
Calado . . . . .	<i>d4</i>	Cisma de Gallego, La . . . . .	<i>m26</i>
Caldeira do Inferno . . . . .	<i>p17</i>	Cleavages, Volcanic . . . . .	<i>f18</i>
Caldera de Bandama, Gran. . . . .	<i>m21</i>	Climate . . . . .	<i>e1 to e33</i> and locally
"    de La Palma, Gran. . . . .	<i>i1, i11, i13</i>	Climatic Zones . . . . .	<i>d19, d22</i>
"    de la Vega . . . . .	<i>m22</i>	Clothing required . . . . .	<i>a5</i>
"    de Valleseco . . . . .	<i>m24</i>	Clouds . . . . .	<i>b8, e11, e23, 142</i>
Caletas, Las . . . . .	<i>i14</i>	Coaches, Public (Ten.) . . . . .	<i>154</i>
Calheta (Mad.) . . . . .	<i>h25, h27</i>	"    "    (Can.) . . . . .	<i>m36</i>
Camacha . . . . .	<i>h14, h19</i>	"    "    (Mad.) . . . . .	<i>h30</i>
Camara de Lobos . . . . .	<i>h17, h27</i>	Coaling . . . . .	<i>d2</i>
Camping out . . . . .	<i>b8</i>	Cochineal . . . . .	<i>d9</i>
Cañadas, Las . . . . .	<i>116, 118, 140, 149</i>	Cock-fighting . . . . .	<i>b5</i>
Canaries, The—		Coinage . . . . .	<i>a7 to a9</i>
"    "    Climate of . . . . .	<i>e13</i>	Columbus . . . . .	<i>g4, g16, k2, p8</i>
"    "    History of . . . . .	<i>g8</i>	Commercial Section . . . . .	<i>d1 to d36</i>
"    "    Trade in . . . . .	<i>d2</i>		
Canary, Grand . . . . .	<i>m1</i>		
"    "    Invasions of . . . . .	<i>g12</i>		

	PAGE		PAGE
Communication, Marine, Table of Shipping and	a1 to a3, p1	Drugs . . . . .	a5
Confital Bay . . . . .	m12	Duties ( <i>see</i> Customs).	
Consular Service . . . . .	g43	Earthquakes ( <i>see</i> Volc. Activity).	
Corona, La . . . . .	l41, l45, l50	Elevation of Land . f3, f7, f19, f22,	p8
Corvo . . . . .	p20	Elysian Fields, The . . . . .	g8
Cova da Cevada . . . . .	h23	Embroidery . . . . .	d4
Craters . . . . .	f11, p6	Encumiada Alta . . . . .	h24
Cruelty to Animals . . . . .	b7	Epidemic Diseases . . . . .	e21
Cruz de Afur . . . . .	l25	Eruptions ( <i>see</i> Volc. Activity, also f14).	
„ del Almorzadero . . . . .	l48	Escobonal . . . . .	l17
„ de S. Andres. . . . .	l25	Esperanza, La . . . . .	l25, l30
„ de Lobrelar . . . . .	m22	Euphorbia Canariensis . . . . .	b9
„ de Taganana . . . . .	l12, l25	Exchange . . . . .	a7 to a9
„ de Téa . . . . .	l49	Expeditions, Arranging . . . . .	b6
„ de Tejeda . . . . .	m23	Expense of Living . . . . .	b3
Cruzinhas (Sta Anna) . . . . .	h21	Explorers, Early g1, g3, g10, g37, p9	
„ (Seizal) . . . . .	h24, h26	Exports . . . . .	d3
Cruz Santa, La (Ten.) . . . . .	l37, l39	Fajã Escura . . . . .	h24
Cuesta, La (Ten.) . . . . .	l14, l21	Fanal, The . . . . .	h24, h26
„ de Bacalao . . . . .	l40	Fares by Steamers.—Table of Shipping opposite page a1, also p1.	
„ de Silva . . . . .	m16	Fasnía . . . . .	l17
Cueva de los Verdes . . . . .	o4	Fatarga . . . . .	m32, m84
Culata, La . . . . .	l48	Faults . . . . .	f15, l45
Cultivation, Limit of . . . . .	d23	Fauna . . . . .	d37
Cumbre Nueva (La Palma) . . . . .	i10	Fayal—(Mad.) . . . . .	h18
„ Vieja ( „ ) i11, i14		„ (Azores) . . . . .	p18
Cumbrecita (La Palma) . . . . .	i11	Ferns . . . . .	d41
Cumbres, Las (Canary) m14, m18, m23, m24, m25, m32		Feteiras . . . . .	p12
Curiosities. <i>See</i> description each Island.		Fever, Malarial . . . . .	e32
Curral, Grand . . . . .	h22, h23	Figs . . . . .	d16
„ do Mar . . . . .	h19	Filters . . . . .	e18
Curralinho . . . . .	h15	Finca Corvo . . . . .	m16
Currency . . . . .	a7 to a9	Firgas . . . . .	m14, m22
„ payment in kind . . . . .	c3	Fish . . . . .	c4, d35, d39
Currents, Atmospheric . . . . .	e23	Fishing . . . . .	a31, h16, m34, p2
„ Oceanic . . . . .	f4	Flamengos . . . . .	p19
Custom duties . . . . .	a6, h7	Flora, The . . . . .	d41
Customs, Social . . . . .	c1, p4	Flores . . . . .	p20
„ ancient . . . . .	g24	Florida (Ten.) . . . . .	l40
Dacil . . . . .	g18, g34, l23	Flowers . . . . .	d41
Daute . . . . .	l47	Fogs ( <i>see</i> Clouds).	
Deities, Native . . . . .	g30	Folk-lore . . . . .	f26, g1, g32
Dentists . . . . .	e23	Fondas . . . . .	b2
Denudation . . . . .	f6, i13, m1	Food . . . . .	c3, d31
Desertas, The . . . . .	h28	Foreigners as Settlers . . . . .	d6
Diarrhœa . . . . .	e33	Forests . . . . .	d23, g37
Diseases . . . . .	e21, e32	Formigas, As . . . . .	p8
Doctors . . . . .	e32, e33	Fortaleza, La . . . . .	l41, l49
Dollabarets, The . . . . .	p8	Fossils . . . . .	f6, p7
Dragon-tree, The . g33, l4, l38, l46			
Drainage . . . . .	e18		
Drake, Sir Francis . . . . .	g19		
Drawn Linen . . . . .	d4		



	PAGE		PAGE
Fossil-beds . . . . .	<i>f4, h19, h27, l17</i>	Hæmorrhage . . . . .	<i>e32</i>
Franceses, Los . . . . .	<i>i8</i>	Harbours . . . . .	<i>d2, p3</i>
Fruits . . . . .	<i>d22</i>	Haria . . . . .	<i>o4</i>
Fruit, Shipping of . . . . .	<i>d3</i>	Harimaguadas . . . . .	<i>g13, g31, m27</i>
„ Tinned . . . . .	<i>i4</i>	Harvests . . . . .	<i>d20</i>
Fuencaliente . . . . .	<i>i14</i>	Hawkins, Sir John . . . . .	<i>g19</i>
Fuente de la Cruz . . . . .	<i>l42</i>	Heather, Giant . . . . .	<i>d23</i>
„ Fria . . . . .	<i>l30</i>	Hemp, Sisal . . . . .	<i>d17</i>
„ de la Grieta . . . . .	<i>l43</i>	Hermigua . . . . .	<i>k3</i>
„ de Guadalupe . . . . .	<i>m15</i>	Hesperides, The . . . . .	<i>g8</i>
„ Pedro . . . . .	<i>l41</i>	Hierro . . . . .	<i>j1</i>
„ de Ucanca . . . . .	<i>l43</i>	Hills, Incline of . . . . .	<i>d19</i>
Fuerteventura . . . . .	<i>n1</i>	History . . . . .	<i>g1 to g38, and locally</i>
Funchal . . . . .	<i>e1, h7</i>	„ Natural . . . . .	<i>d37</i>
„ Shipping . . . . .	<i>d2</i>	Homem-em-Pé . . . . .	<i>h21</i>
Fungi . . . . .	<i>d41</i>	Horizon, Distance of . . . . .	<i>a11</i>
Furna do Enxofre . . . . .	<i>p17</i>	Hornillas del Teide . . . . .	<i>l49</i>
Furnas . . . . .	<i>p12</i>	Horses, Charges for (See end of each island.)	
Gáldar . . . . .	<i>m17</i>	Horses, Hiring . . . . .	<i>b6</i>
Gallegos, Los (La Palma) . . . . .	<i>i8</i>	Horta . . . . .	<i>p18</i>
„ „ (Canary). . . . .	<i>m31, m33</i>	Hospitals . . . . .	<i>b10</i>
Gando Bay . . . . .	<i>g10, g12, g13, m30</i>	Hotel tariffs . . . . .	<i>b2</i>
Gando, Punta de . . . . .	<i>m29</i>	Houses of Refuge . . . . .	<i>b10</i>
Garachico . . . . .	<i>l47, l48</i>	Houses on hire . . . . .	<i>b3</i>
Garafia . . . . .	<i>i8</i>	Humiaya . . . . .	<i>g40, m27</i>
Garganta de Güimar . . . . .	<i>f14, l16</i>	Ice cave . . . . .	<i>l41</i>
Garojonay . . . . .	<i>k3</i>	Ice Plant, The . . . . .	<i>d9</i>
Garoe, El . . . . .	<i>j1</i>	Icod el Alto . . . . .	<i>l41, l44, l50</i>
Gaula . . . . .	<i>h18</i>	„ de los Vinos . . . . .	<i>l20, l45</i>
Geology . . . . .	<i>f1, p6</i>	Icor . . . . .	<i>l17</i>
Glacial Epoch . . . . .	<i>f23</i>	Idafe . . . . .	<i>g32, i3</i>
Glas, George . . . . .	<i>d32</i>	Idolatry . . . . .	<i>g31</i>
Gloria, La . . . . .	<i>m22</i>	Iguste . . . . .	<i>l12, l25</i>
Gofio . . . . .	<i>c3, g35, n2</i>	„ (de Candelaria) . . . . .	<i>l14, l30</i>
Golf . . . . .	<i>b5, m7</i>	Implements, Agricultural . . . . .	<i>d26</i>
Golfo, El . . . . .	<i>j4</i>	„ Native . . . . .	<i>g34</i>
Gomera . . . . .	<i>k1</i>	Imports . . . . .	<i>d4</i>
Graciosa, Id. of (Azores) . . . . .	<i>p17</i>	„ Duties . . . . .	<i>a6, h7</i>
„ „ (Can.) . . . . .	<i>o1</i>	Industries . . . . .	<i>d2</i>
Granadilla . . . . .	<i>l18</i>	Ingenio . . . . .	<i>m29</i>
Gran Caldera de Bandama . . . . .	<i>m21</i>	Inscriptions . . . . .	<i>g9, g23, i14, j3, m30</i>
Gran Curral . . . . .	<i>h22, h23</i>	Insects . . . . .	<i>d38, p3</i>
Grand Canary (see Canary).		Invalids, Advice to . . . . .	<i>e30</i>
Guajara . . . . .	<i>l43, l49</i>	Irrigation . . . . .	<i>d19, d27</i>
Guamasa . . . . .	<i>l26</i>	Isleta . . . . .	<i>m2, m11</i>
Guancha, La . . . . .	<i>l49, l50</i>	Jardim da Serra . . . . .	<i>h23</i>
Guanche cave (Icod) . . . . .	<i>l46</i>	Jinama . . . . .	<i>m19, m28</i>
„ Kings . . . . .	<i>g17, l2</i>	Juan Grande . . . . .	<i>m31, m33</i>
Guanches, The . . . . .	<i>g30</i>	Juba, King . . . . .	<i>g8</i>
Guia (Ten.) . . . . .	<i>l20, l49</i>	Krakatoa . . . . .	<i>f15</i>
„ (Can.) . . . . .	<i>m18, m22</i>		
Guides . . . . .	<i>b8, l42</i>		
Güimar . . . . .	<i>e5, l15, l25, l30, l40</i>		
„ Garganta de . . . . .	<i>f14, l16</i>		
Gulf Stream . . . . .	<i>f4</i>		

	PAGE		PAGE
Lagoa . . . . .	p13	Manila . . . . .	d17
Lagoa de Fogo . . . . .	p11	Manure . . . . .	d26
Laguna, La . . . . .	e5a, l22	Maps . . . . .	g42
Lagunetas, Las . . . . .	l25, l30	Masca . . . . .	l20
Lakes . . . . .	p6, p11, p12, p13	Maspalomas . . . . .	m25, m32, m33, m34
Lamaceiros Pass . . . . .	h18, h19	Matanza, La . . . . .	g15, l31
Land, Clearance of . . . . .	d12	Mazo . . . . .	i13
" Reclamation of . . . . .	d21	Meals (Hotels) . . . . .	b2
" Value of . . . . .	d19	Measurement of distances . . . . .	b7
" Waste . . . . .	d21	Measures, Local . . . . .	a9
Landing charges (under each island).		Medano . . . . .	l18
Landlords . . . . .	b3	Medianero System, The . . . . .	d26
Language . . . . .	a4, a14	Medical men . . . . .	e31, e32, e33
" Ancient . . . . .	g23	Mercedes, Las . . . . .	l24, l25
Lanzarote . . . . .	o1	Mesa de Mota . . . . .	l23, l24
Lava . . . . .	f13	Metade Valley . . . . .	h20
Laws, Ancient . . . . .	g24	Meteorology, Statistics . . . . .	e1 to e10
Legends . . . . .	f26, g1, g3, g32	Mina, La (Ten.) . . . . .	l24
Leprosy . . . . .	e21, h3	Mineral Springs . . . . .	e21, i2, i15, j2, l18, l37, m2, m11, m15, m18, p7, p11, p13.
Letreros, Los—Hierro . . . . .	j4	Minerals . . . . .	d2, f6
" Canary . . . . .	m30	Miraflores . . . . .	i7, i9
Levada, do Furado . . . . .	h20	Mists ( <i>see</i> Clouds).	
" dos Vinhaticos . . . . .	h21	Modorra, The . . . . .	g15
Lichens . . . . .	d41	Mogan . . . . .	m18, m24, m25, m32, m34
Lighthouse—Anaga . . . . .	l13, l25	Monasteries . . . . .	g7, g21
" Isleta . . . . .	m11	Money . . . . .	a7
" Maspalomas . . . . .	m33	Mña. de las Arenas . . . . .	l32, l37
Limestone . . . . .	f3, h25, h28, m26, n2, p7, p8	" de la Atalaya . . . . .	l28
Linen, Drawn . . . . .	d4	" de Barracan . . . . .	l48
Livestock . . . . .	d25	" Blanca (above Villa) . . . . .	l40
Living, Expense of . . . . .	b3	"    " (del Pico) . . . . .	l40
Livramento Church . . . . .	h22	" de Cabreja . . . . .	m23
Llano de los Hermanos . . . . .	l49	" de Cerro . . . . .	l30
Llanos, Los, La Palma . . . . .	i9, i12, i15	" de Chaves . . . . .	l32, l39, l43
"    " Canary . . . . .	m27	" de Chipude . . . . .	k3
Lobos, Isla de . . . . .	o1	" de los Chupaderos . . . . .	l30
Locusts . . . . .	e21	" de Cifra . . . . .	l26
" Bean . . . . .	d17	" Clara, Isla de . . . . .	o1
Lodging of Labourers . . . . .	c3	" de la Cruz Santa . . . . .	m24
Lomba da Cruz . . . . .	p12	" de las Cuatro Puertas . . . . .	g30, m27
Lombadas . . . . .	p11	" del Decreto . . . . .	f17
Lugo, Alonso F. de . . . . .	g14	" de Doramas . . . . .	m14, m15, m16
Lyonnesse . . . . .	f26	" de los Frailes . . . . .	l32
Macario . . . . .	l21	" del Fuego, Lanzarote . . . . .	o1, o4
Machico . . . . .	h19, h27	" de Gáldar . . . . .	m17
Machin . . . . .	g5, i8	" de Guerra . . . . .	l28
Madeira . . . . .	h1	" de las Palmas . . . . .	l28
" Climate of . . . . .	e11	" del Picon . . . . .	l28
" History of . . . . .	g1	" del Pulpito . . . . .	l24, l26
Magdalena (Pico) . . . . .	p18	" de las Retamas . . . . .	l28
" do Mar . . . . .	h25, h28	" de Serrogorido . . . . .	l49
Maize, as a standard . . . . .	c3	" de Tagóje . . . . .	i7, i10
Malarial Fever . . . . .	b10, e21, e32	" de Tigaiga . . . . .	l32, l45
Manchas, Las . . . . .	i15	" de Tirma . . . . .	g30, m18

	PAGE		PAGE
Monte, El . . . . .	<i>m</i> 13, <i>m</i> 15, <i>m</i> 20	Pasture . . . . .	<i>d</i> 25
„ Vence . . . . .	<i>l</i> 41	Paul do Mar . . . . .	<i>h</i> 27, <i>h</i> 28
„ Verde, The . . . . .	<i>d</i> 23	„ da Serra . . . . .	<i>h</i> 24, <i>h</i> 25, <i>h</i> 26
Mosors, Attacks by . . . . .	<i>g</i> 19	Paz, La . . . . .	<i>g</i> 28, <i>l</i> 36
Mosquitoes . . . . .	<i>g</i> 10	Peak of Teneriffe ( <i>see</i> Pico de Teide).	
Mosses . . . . .	<i>d</i> 41	Pedro Gil . . . . .	<i>l</i> 16, <i>l</i> 30, <i>l</i> 40
Mosteiros . . . . .	<i>p</i> 12	Penha d'Aguia . . . . .	<i>h</i> 18, <i>h</i> 21
Moths . . . . .	<i>d</i> 38	Peñones de Garcia . . . . .	<i>l</i> 43
Motor Cars . . . . .	<i>e</i> 11	Perdoma, La . . . . .	<i>l</i> 39, <i>l</i> 41
Mountain Climate . . . . .	<i>e</i> 23	Perfumes . . . . .	<i>d</i> 18
Mount Church . . . . .	<i>h</i> 15	Phœnicians . . . . .	<i>g</i> 9, <i>m</i> 30
Moya . . . . .	<i>m</i> 14, <i>m</i> 15	Phylloxera . . . . .	<i>d</i> 6, <i>p</i> 3
Mules, Hiring . . . . .	<i>b</i> 7	Physicians . . . . .	<i>e</i> 32, <i>e</i> 33
Mummies . . . . .	<i>g</i> 33, <i>m</i> 27	Pico, Island of . . . . .	<i>p</i> 6, <i>p</i> 17
Museums . . . . .	<i>h</i> 10, <i>i</i> 5, <i>l</i> 8, <i>m</i> 7, <i>p</i> 11	„ d'Aboboras . . . . .	<i>h</i> 18
Music, Public . . . . .	<i>b</i> 5	„ Arrebentão . . . . .	<i>h</i> 20
Native Curiosities. <i>See</i> des- cription of each island.		„ Arrieiro . . . . .	<i>h</i> 15
Natives, Origin of . . . . .	<i>f</i> 24, <i>g</i> 22	„ de Bandama . . . . .	<i>m</i> 21
Natural History . . . . .	<i>d</i> 37	„ de Barracan . . . . .	<i>l</i> 48
Negroes . . . . .	<i>d</i> 5	„ dos Bodes . . . . .	<i>h</i> 27
Nelson, Admiral . . . . .	<i>g</i> 19, <i>l</i> 8	„ Canario . . . . .	<i>h</i> 22
New Road, Funchal . . . . .	<i>h</i> 16	„ del Cedro . . . . .	<i>i</i> 9
Nunneries . . . . .	<i>g</i> 7, <i>g</i> 21	„ do Cidrão . . . . .	<i>h</i> 22
Observatory Cañadas, Teneriffe		„ do Fogo . . . . .	<i>p</i> 12
„ . . . . .	<i>e</i> 29, <i>l</i> 43	„ Grande . . . . .	<i>h</i> 22
Obsidian . . . . .	<i>g</i> 34, <i>l</i> 42	„ de Moranha . . . . .	<i>h</i> 23
Ocean, Depth of . . . . .	<i>f</i> 2	„ de los Osorios . . . . .	<i>m</i> 13, <i>m</i> 15
Oidium Tuckeri . . . . .	<i>d</i> 6, <i>p</i> 3	„ „ Pechos . . . . .	<i>m</i> 24
Oil, Castor . . . . .	<i>d</i> 17	„ „ Pozos (Canary) . . . . .	<i>m</i> 24
Oliva, La . . . . .	<i>n</i> 3	„ Ruivo . . . . .	<i>h</i> 21, <i>h</i> 23
Oranges . . . . .	<i>p</i> 3, <i>d</i> 16	„ „ do Paul . . . . .	<i>h</i> 25
Orotava, Puerto de . . . . .	<i>e</i> 4, <i>l</i> 38	„ de Salamão . . . . .	<i>p</i> 11
„ Valley of . . . . .	<i>l</i> 32	„ da Silva . . . . .	<i>h</i> 14
„ Villa de . . . . .	<i>l</i> 16, <i>l</i> 38, <i>l</i> 44	„ de Suna . . . . .	<i>h</i> 18
Osiers . . . . .	<i>d</i> 16	„ da Vara . . . . .	<i>p</i> 9
Osorios, Los . . . . .	<i>m</i> 13, <i>m</i> 15	„ as Torres . . . . .	<i>h</i> 23
Outfit . . . . .	<i>a</i> 5	„ de Teide (Ten.) . . . . .	<i>g</i> 30, <i>l</i> 1, <i>l</i> 40
Oxen . . . . .	<i>d</i> 25	„ „ Exc. to the . . . . .	<i>l</i> 40
Pack animals . . . . .	<i>b</i> 7	„ „ Hints to climbers . . . . .	<i>l</i> 42
Pagador . . . . .	<i>m</i> 17	„ Viejo . . . . .	<i>l</i> 41
Pájara . . . . .	<i>n</i> 3	Pileta, La . . . . .	<i>m</i> 29
Palheiro . . . . .	<i>h</i> 14	Pilgrims' Pass . . . . .	<i>l</i> 15, <i>l</i> 31, <i>l</i> 40
Palma, La . . . . .	<i>i</i> 1	Pine Apples . . . . .	<i>d</i> 16, <i>p</i> 3
„ „ Invasions of . . . . .	<i>g</i> 12, <i>g</i> 14	Pines . . . . .	<i>d</i> 23, <i>d</i> 24
Palmar . . . . .	<i>l</i> 20, <i>l</i> 48	Pintaderas . . . . .	<i>g</i> 35
Palmas, Las . . . . .	<i>e</i> 2, <i>m</i> 8	Pipe, Capacity of the . . . . .	<i>a</i> 9
„ „ Shipping . . . . .	<i>d</i> 2	Plants, Native, etc. . . . .	<i>d</i> 40, <i>l</i> 43, <i>p</i> 3
Parcels . . . . .	<i>a</i> 12, <i>a</i> 13	Plough, The . . . . .	<i>d</i> 26
Partidos, Los . . . . .	<i>l</i> 48	Poizo, The . . . . .	<i>h</i> 15, <i>h</i> 18, <i>h</i> 20
Paso, El (La Palma) . . . . .	<i>i</i> 11, <i>i</i> 15	Ponta Delgada (Mad.) . . . . .	<i>h</i> 23
„ de la Plata . . . . .	<i>m</i> 25, <i>m</i> 32	„ „ (Azores) . . . . .	<i>p</i> 9
Passports . . . . .	<i>a</i> 6, <i>h</i> 7, <i>p</i> 1	„ do Pargo . . . . .	<i>h</i> 26
		„ „ Sol . . . . .	<i>h</i> 25, <i>h</i> 27
		Poor, Wants of . . . . .	<i>c</i>
		Population . . . . .	<i>b</i> 4, and locall
		„ Ancient . . . . .	<i>g</i> 22



	PAGE		PAGE
Portella Pass . . . . .	h18	Rigomaz . . . . .	l48
Portillo, El (Ten.) . . . . .	l40, l43	Rio (Ten.) . . . . .	l18
Porto da Cruz . . . . .	h18	Rio, El (Lanz.) . . . . .	o4
"  Pargo . . . . .	h27	Risco, El (Lanz.) . . . . .	o4
"  Moniz . . . . .	h24, h26, h27	Roads, h2, i3, l4, l17, l46, m3, n2,	o1, p2
"  Novo . . . . .	h18	Rocks, Order of . . . . .	f11
"  Santo, h28; History of g1, g6		Romeiro, Ilheu de . . . . .	p8
Porto, Villa do . . . . .	p8	Roofs of Churches . . . . .	h10, l44
Postal Arrangements . . . . .	a12, a13	Roque de Bentaguaya . . . . .	m23
Potatoes . . . . .	d14	"  del Moro . . . . .	m16
"  Sweet . . . . .	d17, p3	"  de los Muchachos . . . . .	i8, i9
Povoação . . . . .	p12	"  Nublo . . . . .	m23, m24
Praia (Fayal) p19; (Graciosa) p17; (Terceira) p16.		"  de los Saucillos . . . . .	m24
Prayer, Forms of Native . . . . .	g31	Rosario (Mad.) . . . . .	h24
Prazeres . . . . .	h27	Sabinosa . . . . .	j2, j4
Priests, Native . . . . .	g31	Sabrina . . . . .	p7
Progress of Trade . . . . .	d2	Saddle horses, etc. b7 and locally	
Pronunciation . . . . .	a20	Salamanca . . . . .	l11, l21
Ptolemy . . . . .	g9, g22	Salvages, The . . . . .	h29
Public Coaches, Ten. . . . .	l54	S. Amaro . . . . .	h16
"  "  Can. . . . .	m36	S. Andres—La Palma . . . . .	i8
"  "  Mad. . . . .	h30	"  Hierro . . . . .	j4
Puerto de Cabras . . . . .	n2	"  Ten. . . . .	l13
"  de la Luz . . . . .	m5	S. Antonio—Mad. . . . .	h16
Puerto de S. Marcos . . . . .	l46	"  Ten. . . . .	l31
Puestelagua . . . . .	k3	"  da Serra . . . . .	h14, h18
Pumice Stone . . . . .	d2	S. Bartolome (Tirajana) m25, m31,	m34
Pumpkins . . . . .	c4	S. Brendan or Borondon . . . . .	g2
Punta Gando . . . . .	m29	S. Carlos . . . . .	p16
"  Gorda . . . . .	i8	S. Fernando . . . . .	m16
"  de Teno . . . . .	l48	S. Isidro—(Ten.) l14; (Can.) m22,	m24
"  Llana . . . . .	i8	S. Jorge—Mad. . . . .	h21
Purpuriae, The . . . . .	g1, g8	"  Azores . . . . .	p17
Rabaçal . . . . .	h25	S. José . . . . .	i14
Railways . . . . .	h31, l7	S. Juan de la Rambla . . . . .	l45
Rainfall (see also Climate) . . . . .	e16	S. Lorenzo . . . . .	m13, m10
Ramblota, La . . . . .	l41	S. Martinho . . . . .	h16
Realejo . . . . .	l37, l39, l48, l44, l50	S. Mateo . . . . .	m23, m34
Refuge Houses . . . . .	h10	S. Miguel—Azores . . . . .	p1
Rejon, Juan . . . . .	g13	"  Ten. . . . .	l10
Religion . . . . .	b4	"  Lanzarote . . . . .	o
"  Ancient . . . . .	g30	S. Pedro—Mad. . . . .	h18
Rent . . . . .	b3	"  La Palma . . . . .	i7, i11
Reptiles . . . . .	d38	S. Roque . . . . .	h1
"  Venomous . . . . .	b9	S. Sebastian . . . . .	k2
Requirements, Clothing, etc. . . . .	a5	S. Vicente . . . . .	h23, h24, h25
Retama, La . . . . .	l42	Sand, Shifting . . . . .	f4
Reyes, Los . . . . .	j4	Santa Anna . . . . .	h21
Ribeira Brava . . . . .	h24, h25, h27	"  Brigida . . . . .	m20, m22
"  da Janella . . . . .	h24, h25, h26	"  Catalina . . . . .	m11
"  Grande . . . . .	p11, p12	"  Cristina . . . . .	m17
"  Quente . . . . .	p12	"  Cruz—Flores . . . . .	p20
Ribeirinha . . . . .	p19	"  "  Graciosa . . . . .	p17
Ribeiro Frio . . . . .	h20		

	PAGE		PAGE
Santa Cruz—Mad.	<i>h18, h27</i>	Storms	<i>e20</i>
"    "    La Palma	<i>e8</i>	Strata, Commonly found	<i>f6, p6</i>
"    "    Ten.	<i>e3, l6</i>	(at Güimar)	<i>l16</i>
"    "    "    Attack by		Stream, Gulf	<i>f4</i>
Nelson	<i>g19</i>	Subsidence	<i>f18</i>
"    "    "    Shipping	<i>d2</i>	Sugar	<i>d5, p3</i>
"    Lucia	<i>m25, m31, m32</i>	Sulphur	<i>d2</i>
"    Magdalena	<i>h26</i>		
"    Maria (Azores)	<i>p8</i>	Tacoronte	<i>e6, l14, l28</i>
"    "    de Betancuria	<i>n2</i>	Tafira	<i>m13, m14, m19, m26</i>
"    Ursula	<i>l31</i>	Taganana	<i>l12, l25</i>
Santiago—Ten.	<i>l20, l48</i>	Tagasaste, The	<i>d17</i>
"    Can.	<i>m31</i>	Tagoror	<i>g25</i>
Santo Domingo (Garafa)	<i>i8</i>	Taidia	<i>m25, m32</i>
Sardina	<i>m33</i>	Tamaraceite	<i>m13, m19</i>
Sauces, Los	<i>i8</i>	Tanks, Cost of	<i>d28</i>
Sauzal	<i>l29, l31</i>	Tanque, El	<i>l48</i>
Scenery, <i>a5, b9, e27, f1, p6</i> ; also see locally and under intro- duction to each Island.		Tanquinhos	<i>h25, h26</i>
Sea, Depth of	<i>f2</i>	Tariffs, Hotel	<i>b2 and locally</i>
Sea-sickness	<i>e33</i>	Tazacorte	<i>i12</i>
Seasons	<i>d20, e11 to p16</i>	Tea	<i>p3</i>
Seaweed	<i>d40</i>	Tegueste	<i>l24, l26</i>
Seeds, Culture of	<i>d18</i>	Tejeda	<i>m18, m23</i>
Seizal	<i>h24</i>	Tejina (South)	<i>l20; (North) l24,</i>
Serra d'Agoa	<i>h24</i>		<i>l26, l29</i>
Serrado, The	<i>h22</i>	Tejita	<i>l18</i>
Sete Ciudades	<i>p12</i>	Telde	<i>m19, m21, m28</i>
Settlers	<i>d6</i>	Telegrams (see also Cables)	<i>a13</i>
Shells	<i>d39</i>	Telegraphic Communication	
Shipping, Table of, to face page <i>a1</i> , also <i>a3, p1</i> .		<i>a13; (Madeira) h5; (La Palma)</i>	
Shipping Movements	<i>d2</i>	<i>m5, i14; (Teneriffe) l6; (Canary)</i>	
"    of fruit	<i>d2</i>	<i>m5; (Azores) p10</i>	
Shooting	<i>b5, p2</i>	Temperature	<i>e1 to e33</i>
"    Licenses	<i>b6</i>	Temples, Native	<i>g30, m18, m22,</i>
Shops	<i>a6</i>		<i>m27</i>
Silk	<i>d18</i>	Tenants	<i>b3</i>
Silos, Los	<i>l47</i>	Teneriffe, <i>l1</i> ; Invasions of, <i>g12, g14,</i>	
Slaves	<i>d5</i>	<i>g15; Shipping, d2.</i>	
Sledges, Charges for	<i>h30</i>	Tenoya	<i>m14</i>
Snow	<i>e16, e17</i>	Terceira	<i>p15</i>
Social Habits, etc.	<i>c1 to e5, p4</i>	Teresm	<i>l19</i>
Society	<i>b3, c1</i>	Teror	<i>m13, m14, m15, m17, m22</i>
Socorro	<i>l16</i>	Terraces on hills	<i>d12</i>
Soda, Manufacture of	<i>d9</i>	Threshing, Method of	<i>d26</i>
Solar Day	<i>a10</i>	Tidal Waves	<i>e21</i>
Sombrero, El	<i>l18</i>	Tides	<i>a11</i>
Sortija, La	<i>b5</i>	Tigaday	<i>f4</i>
Spirits	<i>d17</i>	Tigaiga	<i>l32, l45</i>
Sport	<i>b5, p2</i>	Tigalate	<i>i14</i>
Springs (see Mineral Springs).		Tijarafe	<i>i8</i>
Spring-water, on sea surface	<i>e22</i>	Tijoco	<i>l20</i>
Steamers, Fares. See table of Shipping opp. p. xviii and <i>p1</i> .		Tilos, Los	<i>m14, m15, m16</i>
		Timber, Native	<i>d23</i>
		Time, El (La Palma)	<i>i3, i9</i>
		"    Local	<i>a10</i>

	PAGE		PAGE
Times of Journeys . . . . .	a3, b7	Vilaflor . . . . .	e7, f18, l43, l49
Tinerfe the Great . . . . .	g17, l2	Villa Franca . . . . .	p13
Tinor . . . . .	j4	Villas . . . . .	b3
Tirajana . . . . .	m24, m25, m31, m33	Vine, The . . . . .	d6 to d9, p3
Tobacco . . . . .	d4, d12, p3	Virgen de Candelaria . . . . .	l14, l16
" Duty on . . . . .	h7	Vocabulary, a14 ; Native . . . . .	g24
Tomatoes . . . . .	d14	Volcanic Activity, f7, f17, h2, i3, l1, l15, l16, l48, m33, p7, p9, p15	
Torrinhas . . . . .	h22	Volcanic Waves . . . . .	e21
Trade—Progress of . . . . .	d2	Volcanoes, Formation of . . . . .	f2, f11, f15, p6
" Winds . . . . .	e23	Voyages, Duration of . . . . .	a3
Traditions . . . . .	f25, g1, g32		
Trapiche . . . . .	h16	Walnuts . . . . .	d16
Travelling Agencies . . . . .	a6	Waste Land . . . . .	d21
Trees . . . . .	d22, d23, d41, d42	Water, Cost of . . . . .	d28
Tronqueras, Las . . . . .	l48	" Courses . . . . .	d28
Tuineje . . . . .	n3	" Rights . . . . .	d29
Tunny Fishing . . . . .	a32, m34	" Supply . . . . .	e17
Tunte ( <i>see</i> Tirajana).		Wattle, The . . . . .	d16
		Waves, Action of . . . . .	f5
Valleseco . . . . .	m14, m24	Weapons, Native . . . . .	g34
Valle del Bufadero . . . . .	l12, l25	Weights . . . . .	a9
" de Guerra . . . . .	l24, l29	Wells . . . . .	d28, d29
" Hermoso . . . . .	k3	Whales . . . . .	p4, p18
" de los Hijaderos . . . . .	l19	Wheat ( <i>see</i> Cereals).	
" de Jimenez . . . . .	l21	Whistling . . . . .	a14, g36, k1
" de Tabarez . . . . .	l21	Winds . . . . .	e18, e23
Valsequillo . . . . .	m22, m23, m27	Wine . . . . .	d6 to d9
Value of Land ( <i>see</i> Land).		Woad . . . . .	p3
Valverde . . . . .	j3		
Vasco Gil . . . . .	h16	Yaiza . . . . .	o4
Vega, La (Icod) . . . . .	l48		
" de Abajo (Can). . . . .	m14, m19	Zargo . . . . .	g6
" de Arriba . . . . .	m14, m23	Zones, Climatic . . . . .	d19
" del Centro . . . . .	m13, m22	" of Cultivation . . . . .	d22
Vegetables . . . . .	d14, d17, d22, p3		
Vegetation, Effects of Altitude on . . . . .	d22		
Vellas, Villa das . . . . .	d22		
Venomous Reptiles . . . . .	b9		
Victoria, La . . . . .	g16, g31		



## OBSERVATIONS.

Ma

apply to Madeira; (b) to Canaries. Return tickets 12 months.  
 1st fares, from Madeira, inside cabins, 12 guineas and 8 guineas;  
 2nd Canaries, 11 guineas and 7 guineas. Passengers landed free of  
 their destination. Reduced Tourist Tickets, April/Sept.

Sat. boats; (b) Wed. boats. Return tickets twelve months.  
 Altere available for return by the steamers of either Company; also to  
 Satu or Genoa by the Steamers of La Veloce Nav. Ital. Special  
 for tourists, see advt. page A.

Fortr 20% abatement from Madeira homeward fare if returning within  
 48 hrs.

For tourist facilities see advt. pages B and C.

Service.—Return tickets six months. With liberty to break the

Fortr at each port 25 gns. Unbroken round voyage, 23 days, 20 gns.  
 to Canaries Madeira, 3 gns. (interchangeable with Yeoward  
 ); to London 10 gns.

Tickets are available for twelve months by either line.  
 1st fares, 1st Class, £11; 2nd Class, £9.

All tickets twelve months.

Fortr break journey any port. Passengers landed at Santa Cruz  
 ) and at Las Palmas alongside Mole.

Tickets available from either Teneriffe or Grand Canary. Reduced  
 tickets, April/Sept.

Fares from Teneriffe, £11.

1st Ca Co., Teneriffe, p. 18; Miller & Co., Grand Canary, p. 56.  
 2nd (F. Martins, Madeira, p. 12; De la Torre Hermanos y  
 — D., run boats during the winter from New York and Boston  
 Co.

go. their Agents.  
 A. F. G.  
 s, sev



LINES OF PASSENGER STEAMERS. (For further details see Advertisements on pages A to L and 54 and 59.)

To face page XVIII.

NAME OF LINE.	CENTRAL OFFICE.	WHEN BOATS SAIL.	WHERE FROM.	TICKETS.				TOUCHING AT.						AGENTS IN THE ISLANDS. (The numbers against Agents' names indicate the page on which the Firm's Advt. appears.)	OBSERVATIONS.
				Single.		Return.		Madeira.	Teneriffe.	Gd. Canary.	La Palma.	Azores.	Intermediate Ports.		
				1st.	2nd.	1st.	2nd.								
<b>British.</b> Union-Castle Line Mail SS. Co. (advt. p. 59)	3 & 4, Fenchurch St., London, E.C.	Every week Madeira, alternate weeks Teneriffe and Gd. Canary	London, Southampton	(a) 15 gns. (b) 14 gns.	10 guineas 9 guineas Selected cabins extra.	£25 10s. £23 12s. 6d.	£17 £15 2s. 6d.	Every Saturday	Alternate Saturdays	Alternate Saturdays	...	...	...	Blandy Bros. & Co., Madeira, p. 12 Miller & Co., Grand Canary, p. 56 Hamilton & Co., Teneriffe, p. 24	Prices (a) apply to Madeira; (b) to Canaries. Return tickets 12 months. Homeward fares, from Madeira, inside cabins, 12 guineas and 8 guineas; from the Canaries, 11 guineas and 7 guineas. Passengers landed free of charge at their destination. Reduced Tourist Tickets, April/Sept.
British and African S.N. Co. Limited (advt. p. A.) African SS. Co. (advt. p. A.)	Colonial House, Liverpool	Fortnightly to Madeira and weekly to Teneriffe and Las Palmas.	Liverpool, Hamburg, and Rotterdam	(a) £10 (b) £12	£6 £7 10 0	15 guineas 18 guineas	£12 £15	Alternate Saturdays	Every Saturday	Every Wednesday and Saturday	...	...	...	Elder Dempster & Co., Madeira, Teneriffe and Grand Canary, p. A	Prices (a) Sat. boats; (b) Wed. boats. Return tickets twelve months. Tickets are available for return by the steamers of either Company; also to Barcelona or Genoa by the Steamers of La Veloce Nav. Ital. Special facilities for tourists, see advt. page A.
The Royal Mail Steam Packet Company (advt. pp. B and C.)	18, Moorgate St., London, E.C.	Fortnightly ...	Southampton ...	£11 10s. (Madeira) £10 (Azores)	£8	£20 14s. £15	£14 8s. £12	Fortnightly	...	...	...	...	Cherbourg, Vigo and Lisbon Cherbourg ...	Blandy Brothers & Co., Madeira, p. 12 The Teneriffe Coaling Co., Teneriffe, p. 26 Miller & Co., Grand Canary, p. 56 Miller, Wolfson & Co., Teneriffe (Morocco Service), p. 18 Bensaude & Co., Azores	Madeira.—20% abatement from Madeira homeward fare if returning within six months. Azores.—For tourist facilities see advt. pages B and C. Morocco Service.—Return tickets six months. With liberty to break the journey at each port 25 gns. Unbroken round voyage, 23 days, 20 gns. From the Canaries to Madeira, 3 gns. (interchangeable with Yeoward Brothers); to London 10 gns.
The Royal Mail Steam Packet Company (Morocco Service) (advt. pp. B and C.)		Fortnightly ...	London ...	15 guineas (Canaries)	...	From 20 guineas	...	Fortnightly	Fortnightly	Fortnightly	...	...	Gibraltar and all Morocco ports		
New Zealand S. Co. (advt. p. E.) Shaw, Savill & Albion SS. Co. (advt. p. E.)	138, Leadenhall St., London, E.C. 34, Leadenhall St., London, E.C.	Fortnightly ...	London ...	£14	£11 10s.	£22	£17	...	Fortnightly	...	...	...	Plymouth ...	Hamilton & Co., Teneriffe, p. 24	Return tickets are available for twelve months by either line. Homeward fares, 1st Class, £11; 2nd Class, £9.
The Booth SS. Co. Limited (advt. p. D.)	Tower Building, Water Street, Liverpool	Every 10 days ...	Liverpool ... London ...	£10 10 guineas	...	£16 10s. od. £17 10s. od.	...	All boats	...	...	...	...	Fishguard, Havre, Cherbourg, Vigo, Oporto, Lisbon.	Blandy Bros. & Co., Madeira, p. 12	Return tickets twelve months.
P. & O. Branch Service (advt. p. F.)	3 & 5, East India Avenue, London	Monthly ...	London ...	£12	...	£20	...	...	...	All boats	...	...	Plymouth ...	Blandy Bros. & Co., Grand Canary, p. 57	
Yeoward Brothers (advt. p. F.)	27 & 29, Stanley Street, Liverpool	Weekly ...	Liverpool ...	6 to 8 guineas	...	10 to 12 guineas	...	Fortnightly	Weekly (Santa Cruz & Orotava)	Weekly	...	...	Lisbon ...	Yeoward Bros., Santa Cruz and Orotava (Teneriffe) and Las Palmas Leça, Gomes & Co., Madeira	Liberty to break journey any port. Passengers landed at Santa Cruz (Teneriffe) and at Las Palmas alongside Mole.
Aberdeen Direct (J. T. Rennie, Son & Co.) (advt. p. D.)	4, East India Avenue, London, E.C.	Every ten days ...	London or Portland	£10	£8	£18	£14	...	Alternate out and home	Alternate out and home	...	...	...	Hamilton & Co., Teneriffe, p. 24 Miller & Co., Grand Canary, p. 56	Return tickets available from either Teneriffe or Grand Canary. Reduced Tourist Tickets, April/Sept.
Geo. Thompson & Co. Ld. (advt. p. D.)	7, Billiter Square, London, E.C.	Every four weeks ...	London ...	£13	...	£22	...	...	All boats	...	...	...	Plymouth ...	Hamilton & Co., Teneriffe, p. 24	Homewards from Teneriffe, £11.

Other British SS. Lines running to the Islands are: — Natal Direct (Bullard, King & Co.), every 10 to 14 days, Agents, Blandy Bros. & Co., Grand Canary, p. 57; Miller, Wolfson & Co., Teneriffe, p. 18. — Bucknall SS. Line, Agents, Blandy Bros. & Co., Madeira, p. 12; Miller, Wolfson & Co., Teneriffe, p. 18; Miller & Co., Grand Canary, p. 56. — Houlder Bros., Limited, twice monthly, Agents, M. Gonçalves & Co., Madeira; The Teneriffe Coaling Co., Teneriffe, p. 26; The Grand Canary Coaling Co., Grand Canary, p. 58. — Blue Funnel Line (Alfred Holt & Co.), occasionally. — R. P. Houston & Co., Agents, J. de F. Martins, Madeira, p. 12; De la Torre Hermanos y Ca., Grand Canary, p. 55. — Lamport & Holt, Agents, Miller, Wolfson & Co., Teneriffe, p. 18; Miller & Co., Grand Canary, p. 56. — David MacIver Sons & Co., Agents, Hamilton & Co., Teneriffe, p. 24. In addition to these the White Star Line and the Cunard SS. Co., Ltd., run boats during the winter from New York and Boston to the Mediterranean and Egypt and back. The boats touch at St. Michael's (Azores) and Madeira (outwards only). Agents:—Blandy Bros. & Co., Madeira, p. 12; Hamilton & Co., Teneriffe, p. 24.

Some of the firms engaged in the fruit trade run Steamers constantly between the various Islands of the Canary Archipelago. Visitors will often find these boats the most convenient means of reaching small ports otherwise difficult of access. Enquiries should be made locally of the Owners or of their Agents.  
**LA PALMA.**—In addition to the Steamers given in the proper column, the Píñillos Izquierdo y Cia., and the A. Folch y Cia. (Spanish lines), both call once a month. There are also two or three fruit steamers weekly (regular) from Teneriffe to both Santa Cruz and Taracorte (La Palma).  
**MADEIRA.**—Coasting steamers run from Funchal along the S. coast of Madeira both Eastwards and Westwards, several times a week, and to Porto Santo once a fortnight. See end of Madeira. A steamer runs to the N. of Madeira once a week.  
**AZORES.**—See over leaf and on page p. 1, and advt. page I.



LINES OF PASSENGER STEAMERS. (For further details see Advertisements on pages A to L and 54 and 59.)

To face page 1.

NAME OF LINE.	CENTRAL OFFICE.	WHEN BOATS SAIL.	WHERE FROM.	TICKETS.				TOUCHING AT						AGENTS IN THE ISLANDS. (The numbers against Agents' names indicate the page on which the Firm's Advt. appears.)	OBSERVATIONS.	
				Single.		Return.		Madeira.	Teneriffe.	Gd. Canary.	La Palma.	Azores.	Intermediate Ports.			
				1st.	2nd.	1st.	2nd.									
<b>German.</b> Hamburg Südamerik. Dampf- schiff. Gesellschaft (advt. p. H.)	Hamburg	Frequently	Hamburg	m. 240	...	less 20%	both ways	Several steamers monthly.	Fortnightly	...	...	...	...	{ Antwerp, Havre, S'hampton, Boulogne, Bilbao, Coruña, Vigo, Leixões, Lisbon (also at Azores)	{ M. Gonçalves & Co., Madeira Jacob Ahlers, Teneriffe, p. 25 Woermann Linie, Grand Canary	{ Reductions on returns granted within 12 months. Passengers may return by the Hamburg-Amerika Linie (South American Service).
Woermann Linie and Hamburg Bremer Afrika Linie (advt. p. H.)	Hamburg	Eleven times monthly	Hamburg	m. 250	m. 150	less 20%	both ways	{ Twice monthly	Six times monthly	Eleven times monthly	...	...	Rotterdam, Antwerp, Boulogne, Dover, Southampton	{ Blandy Bros. & Co., Madeira, p. 12 Jacob Ahlers, Teneriffe, p. 25 Woermann Linie, Grand Canary	Return reductions within 12 months. Interchangeable with Deutsche Ost-Afrika Linie. Passengers may also return by the Hamburg-Amerika Linie (African Service).	
Deutsche Ost-Afrika Linie (advt. p. H.)		Every 18 days														...
Other German SS. to the Islands Agents, Blandy Bros. & Co., Madeira, p. 12	Agents, Blandy Bros. & Co., Madeira, p. 12	America Linie, Hamburg, ; Hamilton & Co., Teneriffe, p. 24; Woermann	Irregular, Agents, Blandy Bros. & Co., Madeira, p. 12; Hamilton & Co., Teneriffe, p. 24; Woermann	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>French.</b> Soc. Gle. de Transports Mari- times à Vapeur (advt. p. J)	Marseilles	Thrice monthly	Marseilles	frs. 350	frs. 250	less	20%	Monthly outwards	Fortnightly homewards	Fortnightly homewards	...	...	Barcelona, Valencia, Malaga	{ Teneriffe Coaling Co., Teneriffe, p. 26 Miller & Co., Grand Canary, p. 56 M. A. Silva Passos Successores, Madeira	Homeward fares, 300 frs. and 200 frs.	
Other French SS. to the Islands Agents, Hardisson Frères, Teneriffe, p. 27	Agents, Hardisson Frères, Teneriffe, p. 27	Reunis, Bordeaux, Irregular, Agents, Hardisson	Reunis, Bordeaux, Irregular, Agents, Hardisson	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>Belgian.</b> Cie. Belge Maritime du Congo	Antwerp	Every 21 days	Antwerp	£12 10s.	£7 10s.	...	...	...	All boats	...	...	...	La Pallice	Elder Dempster & Co., Ltd., Teneriffe, p. A		
<b>Norwegian.</b> Otto Thoresen Line (advt. p. G)	Christiania	Weekly	Christiania	6 gns.	...	...	...	Irregular	Weekly homewards	Weekly homewards	...	...	London	{ Otto Thoresen, Teneriffe and Grand Canary, p. G { Leça, Gomes & Co., Madeira	Passengers homewards only.	
<b>Italian.</b> Navigazione Generale Italiana (advt. p. J.)	Genoa	Fortnightly	Genoa	frs. 275	frs. 195	less 20%	less 20%	...	All boats outwards	All boats homewards	...	...	Barcelona	{ Blandy Bros. & Co., Grand Canary, p. 57 { Teneriffe Coaling Co., Teneriffe, p. 26		
La Veloce Nav. Italiana	Genoa	Three times a month	Genoa	frs. 250	frs. 175	frs. 400	frs. 280	...	Twice monthly	Once monthly	...	...	Barcelona	{ Grand Canary Coaling Co., Grand Canary, p. 58 { The Teneriffe Coaling Co. Teneriffe, p. 26	{ Between Barcelona and the Canaries, 1st Class, 160 frs.; 2nd 125 frs. Return, 256 frs. and 200 frs.	
Other Italian SS. to the Islands Agents, Miller & Co., Grand Canary, p. 56	Agents, Miller & Co., Grand Canary, p. 56	Lloyd Italiano, Genoa, Fortnightly, Agents, Miller & Co., Grand Canary, p. 56	Lloyd Italiano, Genoa, Fortnightly, Agents, Miller & Co., Grand Canary, p. 56	...	...	...	...	Monthly, Agents, The	Teneriffe Coaling Co., Teneriffe, p. 26	Teneriffe Coaling Co., Teneriffe, p. 26	...	...	...	Grand Canary, p. 58.		
<b>Portuguese.</b> Empreza Insulana (advt. p. I.)	Lisbon	Monthly (20th)	Lisbon	20\$000	15\$000	36\$000	27\$000	Monthly (22nd)	...	...	...	...	All Islands	{ Blandy Bros. & Co., Madeira, p. 12 Bensaude & Co., St. Michael's and Fayal Thomé de Castro, Terceira	Return tickets 3 months. The fares given are those between Lisbon and Madeira.	
Empreza Nacional (advt. p. J.)	Lisbon	Twice Monthly (1st & 7th)	Lisbon	25\$000	17\$000	less 15%	both ways	3rd & 9th	...	...	...	...	...	J. E. Martins, Madeira	{ Return tickets 6 months. The fares given are those between Lisbon and Madeira.	
<b>Spanish.</b> Cia. Trasatlantica Española (advt. p. 54)	Barcelona	Thrice monthly	Barcelona	pes. 250	pes. 175	less	10%	...	Thrice monthly	Thrice monthly	Twice monthly	...	Valencia, Alicante, Cadiz	{ Vda. é Hijos de J. La Roche, Teneriffe, p. 27 { M. Curbelo y Cia., Grand Canary, p. 54 { J. Cabrera Martin, La Palma.	Return tickets 12 months.	
Soc. de Nav. é Industria	Barcelona	Weekly	Cadiz	pes. 132.60	pes. 82.10	less	20%	...	All boats	All boats	Monthly	...	...	{ J. A. Brage Successores, Teneriffe { Vda. de T. Bosch y Sastre, Grand Canary	Commonly called the Spanish Mail (Correo de España).	
Other Spanish SS. to the Islands Agents, Juan Bordes Claverie, Grand Canary; Elder Dempster & Co., Ltd., Teneriffe	Agents, Juan Bordes Claverie, Grand Canary; Elder Dempster & Co., Ltd., Teneriffe	Pinillos Izquierdo y Cia., Cadiz, Irregular, Agents, Juan Bordes Claverie, Grand Canary; Elder Dempster & Co., Ltd., Teneriffe	Pinillos Izquierdo y Cia., Cadiz, Irregular, Agents, Juan Bordes Claverie, Grand Canary; Elder Dempster & Co., Ltd., Teneriffe	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>Austrian.</b> —Austro-Americana	Trieste	Fortnightly	Trieste	...	...	...	...	...	...	...	...	...	...	...	...	...

**THE AZORES.**—The "Empreza Insulana" runs two boats a month to the Azores, one of which stops at Madeira on the 22nd of the month. Time from Lisbon direct about 3 or 4 days; from Madeira about 45 hours. The boat stopping at Madeira touches at Santa Maria, São Miguel, Terceira, Graciosa, S. Jorge, Caes do Pico, and Fayal. The direct boat does not touch at Santa Maria, but does so at the other islands, as well as at Flores. The Madeira boat makes the round and returns to Madeira in about twelve days, and is ordered to remain three or more daylight hours in each port stopped at. Fares—Funchal to São Miguel (St. Michael's), 1st 21\$000; 2nd 17\$000. To Terceira, 22\$000 and 18\$000. To Fayal, 23\$000 and 19\$000 single. Further details regarding boats to the Azores will be found under "Shipping facilities" (Azores) page 11, and in the Advt. page 1.



## OBSERVATIONS.

indicate)  
appears.)

Reductions on returns granted within 12 months. Passengers may return by the Hamburg-Amerika Linie (South American Service).

Return reductions within 12 months. Interchangeable with Deutsche Ost-Afrika Linie. Passengers may also return by the Hamburg-Amerika Linie (African Service).

Return reductions within 12 months. Interchangeable with Woermann Linie

inie, Grand Canary.—The "Kosmos" SS. Co., Hamburg, Irregular,

Homeward fares, 300 fcs. and 200 fcs.

, p. A

Canary, p. G. Passengers homewards only.

57

ary, p. 58  
p. 26 { Between Barcelona and the Canaries, 1st Class, 160 fcs.; 2nd  
125 fcs. Return, 256 fcs. and 200 fcs.

yal Return tickets 3 months. The fares given are those between  
Lisbon and Madeira.

{ Return tickets 6 months. The fares given are those between  
Lisbon and Madeira.

iffe, p. 27  
54

Return tickets 12 months.

ary  
stre, Grand Canary. Commonly called the Spanish Mail (Correo de España).

# GUIDE

TO

# Madeira, the Canary Islands,

AND THE AZORES.

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## PLAN OF THE BOOK.

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THE object of the writer of this Guide has been to provide a hand-book by means of which the reader can ascertain how to reach the places described; how to visit the points best worth seeing after arrival and how to calculate beforehand the approximate outlay whilst on the journey. It has been borne in mind that Madeira and the Canaries are well-established sanatoria and that the wants of the invalid must receive as careful attention as those of the tourist.

In adding a mass of information for the use of residents and others, or in dealing with subjects which, if not actually of service, are at least of considerable interest to the traveller, care has been taken that such additional pages should be kept separate and that they should not be allowed to interfere with the "Guide" proper.

Steamboat fares are given in the large folding-sheet; landing and hotel charges under the town or village to which they appertain; the prices of carriages, horses, mules, guides, boats, omnibuses, etc., etc., at the end of the description of each island.

Those wishing to know the rent of houses, cost of living, state of trade, of agriculture, etc., or to inform themselves on matters beyond those usually enquired into by the tourist, should turn to the Index.

The system followed is to take the tourist along from the base to the end of some particular road, the side excursions being printed in smaller type. By the aid of the maps more extensive journeys may be planned.

To each island is affixed a general description, which will be found of use to those thinking of visiting it. The tables of coinage, the postal arrangements, etc., are correct and up to date. The times of the public coaches, prices of same and of private carriages are altered in each edition when necessary.

The facilities of communication with Europe and between the islands themselves, allow a trip to include Madeira, the Canaries and the Azores within the short limits of an ordinary holiday.

It is trusted that the following pages will cause many to come to these charming Archipelagos who might otherwise have remained at home.

To the invalid they are a haven of rest and of recuperation; to the tourist they are a play-ground open all the year round.

When the Alpine valleys are deep in snow and ice, the wooded precipices of Madeira, the forests of La Palma, the mountainous slopes of Teneriffe and the irrigated valleys of Grand Canary, lie bathed in sunshine.

When the snows of Switzerland have gone to swell the waters of the Rhine and of the Rhone and the mantle of white has melted from the Peak of Teneriffe, the mountain summits of Madeira, of the Canaries and of the Azores are at their best. In the summer they stand for months together above the clouds, in a world of their own, where the pure and exhilarating atmosphere allows of constant exercise under the most favourable conditions and amidst the most lovely and interesting surroundings.

## Names of the Islands forming the Archipelago

TAKEN FROM WEST TO EAST (NOT INCLUDING ROCKS).

**The Madeiras** :—Madeira ; the Desertas ; Porto Santo.

**The Canaries** :—Hierro ; La Palma ; Gomera ; Teneriffe ; Grand Canary ; Fuerteventura ; Lanzarote (with its satellite Graciosa and Alegranza).

**The Azores** :—Flores ; Corvo ; Fayal ; Pico ; São Jorge ; Graciosa ; Terceira ; São Miguel ; Santa Maria.



**Time of Sea Journeys.**—These vary and those given below are only approximate.

Between Europe and the Islands (Regular lines of Passenger Boats only. Some only homewards, some only outwards. See SS. List.)

	<i>Madeira.</i>		<i>Canaries.</i>		<i>Azores.</i>
	Days.		Days.		Days.
Liverpool ... ..	5	...	6	...	—
London ... ..	5	...	6	...	—
Southampton ... ..	3½	...	6	...	—
Plymouth ... ..	—	...	5	...	—
Hamburg ... ..	6	...	7	...	—
Havre ... ..	7	...	6	...	—
Bordeaux ... ..	—	...	5	...	—
Cherbourg ... ..	4½	...	—	...	—
Lisbon ... ..	1½	...	3	...	3½
Cadiz ... ..	—	...	3	...	—
Gibraltar ... ..	3	...	3	...	—
Barcelona ... ..	—	...	5	...	—
Marseilles ... ..	—	...	6	...	—
New York ... ..	7	...	—	...	6
Boston ... ..	9	...	—	...	6

(Distances will be found in the description of the Islands; in the reduced scale maps of the Madeiras and of the Canaries, etc.)

Reference to the SS. list will show that lines of steamers, touching at one or other of the islands, afford direct means of communication with most of the principal ports of England, Germany, Holland, Belgium, France, Spain, Portugal, Italy and Morocco.

The majority of these steamers touch at the islands for coaling purposes and proceed direct to all parts of West, South and East Africa; to Australia, New Zealand, South America, the West Indies, etc., etc., calling again on their return. In fact, the aggregate movement of the mercantile marine taking place in these harbours is far beyond that usually to be seen in any European port, and the vessels are increasing year by year in numbers, in size and in speed.

### **Interinsular Times** (ALSO APPROXIMATE).

**The Madeiras.**—Between Madeira and Porto Santo, about 4 hours; Madeira and the Azores, about 44 hours.

**The Canary Islands.**—Between Teneriffe and Grand Canary, about 5 hours; Teneriffe and La Palma, about 10 hours; La Palma and Hierro, about 7 hours; Hierro and Gomera, about 7 hours; Teneriffe and Gomera, about 4 hours.

Between Grand Canary and Fuerteventura, about 10 hours; Fuerteventura and Lanzarote, about 6 hours; Grand Canary and Rio de Oro, about 34 hours.

**The Azores.**—Between Santa Maria and S. Miguel, about 5 hours; S. Miguel and Terceira, about 10 hours; Terceira to Graciosa, about 4½ hours; Graciosa to S. Jorge, about 3½ hours; S. Jorge to Pico, about 1 hour; Pico to Fayal, about 1½ hours.

## GENERAL INFORMATION.

### The best order in which to visit the Islands, with hints to Tourists.

(NOTE.—Portuguese is spoken in Madeira and the Azores, and Spanish in the Canaries.)

**Order in which to visit the Islands.**—There is communication between Madeira and the Canaries or *vice versâ* at short intervals, but steamers are often full of through passengers and visitors cannot rely upon securing berths.

Large parties wishing to see the three Archipelagos described in the Guide must take this difficulty into serious consideration. As regards weather it does not greatly matter which group is taken first, except as regards the Azores, which are at their best in the late spring and summer.

Arriving in the Canaries, before the passenger has lost his sea-legs by a long stay on shore, it is suggested that a more or less prolonged visit, according to fancy, should be made to the less important islands (Western Group:—La Palma, Hierro and Gomera. Eastern Group:—Fuerteventura and Lanzarote).

Teneriffe and Grand Canary can be left till afterwards, arrangements being made to finish the tour in time to catch the steamer selected for the journey to Madeira or to Europe.

From Madeira a cruise of about twelve days allows of a visit to the whole of the Azores Archipelago with the exception of Flores and Corvo. Instead of returning to Madeira by the same boat, the passenger can alight in any island he may choose and await the next steamer to Madeira or elsewhere (*see* List of Passenger Steamers).

The author thinks it right to point out that visitors generally do not move about as much as they should. Not only would more change improve the health of all—with the exception of cases where illness makes travelling impossible—but those who have come so far should recognize that a tour round the Archipelagos is now no more than a small cruise; that every new island has its own charms, its own customs, its own individuality; that all of them, Madeiras, Canaries and Azores alike, are tiny worlds, blessed with a mild and benignant climate; that most of them are still remote from our prosaic, progressive life, and that each one must necessarily possess some new and interesting feature, which cannot fail to arrest the attention of every person of imagination or of ordinary intelligence.

As regards trips in the Canaries, besides the Ocean-going Steamers touching at two or more of the Islands, there are Fruit and other Steamers, regular and irregular, running from one harbour to the other.

The local steamboat service in the Madeiras is on a smaller scale, but is sufficient for the short distances to be traversed.

The steamers running between Lisbon, Madeira and the Azores are well-found boats, with all modern requirements, and are kept most scrupulously clean.

It is but rarely that passengers are inconvenienced when landing in any of the principal harbours of either of the Archipelagos, but difficulties may be encountered during bad weather in many of the smaller ports and, if it be very rough, it may even be impossible to go on shore.

The shortest time in which Madeira, Teneriffe and Grand Canary can be visited, and the return journey to Europe be completed, is about three weeks. This allows of time to see little more than the ports stopped at and must be regarded as a yachting cruise. The time necessary for seeing each island will be found under the description of the island.

It only remains to be stated that the most beautiful scenery is to be found in La Palma, Teneriffe, Madeira, Gomera, Grand Canary, São Miguel and Pico. Fuerteventura and Lanzarote are not attractive.

The inclusion of the Islands in more comprehensive tours, now rendered easy by reason of the constantly increasing facilities for ocean travelling, is a growing feature. A few instances are given:—

- (a) London—Gibraltar—Morocco—Canary Islands—Madeira—Azores—Lisbon—Madrid—Biarritz—Home.
- (b) Genoa—Barcelona—Cadiz—Canary Islands—Madeira—Mediterranean—Naples—Italy—Home.
- (c) Spain—Portugal—Lisbon—Madeira—Azores—Canary Islands—Spain or Morocco—Home.
- (d) New York—Azores—Madeira—Canary Islands—Barcelona—Balearic Islands—Spain—Morocco—Algeria—Biskra—Tunis—Sicily—Naples—Home.
- (e) New York—Azores—Madeira—Cape Town—Johannesburg—Durban—Mombasa—Suez—Naples—Home.

and so on all down the alphabet, arranging the times so as to suit the climatic conditions.

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### Outfit.

Those things absolutely necessary, and not likely to be found in the islands, must be taken. Invalids using drugs which are little known, had better carry these with them.



There are some good shops in Funchal, Las Palmas, Santa Cruz (Teneriffe), Santa Cruz (La Palma), Orotava, Ponta Delgada, Angra and Fayal.

In the Canaries, clothing is cheap. Good flannels are to be had in Las Palmas and Teneriffe and capital shoes and boots in most of the islands. The latter are made from the native tanned goat-skin. These, with the rough side out, are to be preferred to any other footgear for the bad lava roads in the mountains. If hobnails, as used in Switzerland, are desired, they must be brought from England. For Madeira, where the streets are very slippery, it is advisable to take a supply of india-rubber heels.

Intending climbers should take light alpen stocks with them; axes are only required on the Peak of Teneriffe in mid-winter. As regards clothing, both warm and light suits must be taken, but, for ordinary purposes, light woollen dresses for the ladies and flannels or tweeds for the men are to be preferred during the daytime. Mackintoshes are indispensable in the mountains, but are apt to rot if kept over six or eight months. The native washing is not very good, and linen is quickly frayed and torn to pieces, partly owing to the habit of drying it upon the tops of the prickly aloes.

The best hat is a broad, light felt.

**Travelling Agencies.**—Many of the Hotels have representatives in London and elsewhere who will answer all enquiries, engage rooms, etc.

Those requiring information or wishing to book tickets may sometimes save themselves trouble by applying to these agents or to such firms as the Canary Islands and Madeira Agency, 11, Adam Street, Strand, London, W.C., to Messrs. Thomas Cook & Sons, Ltd., etc., etc.

**Passports and Customs Duties.**—In the Canaries passports are not required.

Since 1852, all ports have been free except for certain articles of consumption. Amongst those most heavily taxed are alcohol, spirits, sugar, cocoa, chocolate, coffee, pepper, tea, honey. The duty on tobacco is light. Luggage is rarely examined.

The Canaries are regarded politically and judicially as a part of Spain.

In Madeira and the Azores passports are also unnecessary.

Nearly all goods not fairly coming under the category of "Passenger's Luggage" or "Used Household Effects" pay a heavy duty. Further information will be found under Funchal.

Madeira and the Azores are regarded politically and judicially as a part of Portugal.

## Coinage.

{ Note.—Owing to the fluctuation in the exchanges between Portugal and Spain and the rest of Europe, the reader will bear in mind that currency prices given in this book, though as correct as possible at the time of issue, cannot be absolutely relied upon.

## PORTUGUESE MONEY USED IN Madeira.

(Calculated at the official rate of exchange of 4\$500 to the £ sterling. With the exchange at 5\$000 the dollar is worth only 4s., and with exchange at 6\$000 only 3s. 4d. and so on. It is impossible to state all these amounts which the visitor must work out for himself in the column provided for that purpose.)

								With exchange at..... the equivalent is
Copper.	{	3 Reiss =	2½d.	...	...	...	...	...
		5 " =	1½d.	...	...	...	...	...
		10 " =	1½d.	...	...	...	...	...
		20 " =	1½d.	...	...	...	...	...
		40 " =	2½d.	...	...	...	...	...
Silver.	{	50 Reiss =	2½d.	...	...	...	...	...
		100 " =	5½d. (called a bit or testaõ)	...	...	...	...	...
		200 " =	10½d.	...	...	...	...	...
		500 " =	2s. 2½d.	...	...	...	...	...
Gold.	{	1 Dollar =	4s. 5½d. (also called a pataca)	...	...	...	...	...
		2 " =	8s. 10½d.	...	...	...	...	...
		5 " =	£1 2s. 2½d.	...	...	...	...	...
		10 " =	£2 4s. 5½d.	...	...	...	...	...

English sovereigns and half-sovereigns used to pass current in ordinary transactions as 4\$500 and 2\$250 respectively. Portuguese gold coins were always rare and are now never seen, all gold being snapped up at once at a premium, either for hoarding or for export to Lisbon. ... Even silver has been very largely replaced by paper money.

Fluctuations in the Rate of Exchange.—In Madeira the £ sterling passed current until 1890 as 4,500 reis. From that date the exchange gradually went against the rei, until in June, 1898, as many as 8,700 reis were obtainable for an English sovereign. In 1901, the rate was about 6,300. In 1908-10, about 5,000.

## MONEY USED IN the Azores.

This is similar in denomination to that used in Madeira, but the value of the Azorean mil reis is as 8 to 10 as compared with the Lisbon mil reis. For instance, 1\$000 reis *fraco* (Azores) = 800 reis *forte* (Lisbon), and 1\$000 reis *forte* = 1\$250 *fraco*. To turn *forte* into *fraco*, multiply by 8 and divide by 10, and *vice versa* to turn *fraco* into *forte*. *Fraco* notes and *fraco* copper money are issued, available only in the Azores. No *fraco* silver exists. All payments are made in *fraco* unless otherwise stipulated. Quotations in this Guide for carriages, etc., are in *fraco*.

## SPANISH MONEY USED IN THE Canary Islands.

(Calculated at the rate of exchange of 25 pesetas to the £ sterling. With the exchange at 10% premium = 27½ pesetas; at 20% premium, 30 pesetas, and so on for all component parts.)

					With exchange at..... the equivalent is	
Copper.	{	One centimo = 100 to a peseta	...	...	...	
		Two centimos = 50 to a peseta	...	...	...	
		Five centimos = the "perra chica," 20 to a peseta	...	...	...	...
		Ten centimos = the "perra gorda," 10 to a peseta = about 1 penny	...	...	...	...
Silver.	{	One real de vellon = 25 centimos	...	...	...	
		One half peseta = 50 centimos	...	...	...	
		One peseta = 100 centimos, or nominally tenpence	...	...	...	
		One escudo = 2½ pesetas, or half-a-dollar (medio duro)	...	...	...	...
		One dollar (duro) = 5 pesetas	...	...	...	
Gold.	{	One gold dollar = 5 pesetas	...	...	...	
		Two gold dollars = 10 pesetas	...	...	...	
		Four " = 20 "	...	...	...	
		Five " = 25 " or one sovereign nominal	...	...	...	
		Eight " = 40 pesetas or one pound twelve nominal	...	...	...	
		Sixteen " = one "onza," 80 pesetas or three pounds four nominal	...	...	...	

The peseta and the centimo have now replaced the old forms of money, which are obsolete, but some of which are still used by the peasantry as a basis for estimating values, notably the *cuarto* (about 3 centimos), the *fisca* (about 31 centimos), the *real de plata* (about 47 centimos) and the *toston* (about 125 centimos).



Gold has disappeared from the Canaries for the same reasons as from Madeira, high premiums being paid on behalf of Madrid.

**Fluctuations in the Rate of Exchange.**—Up till 1890, a £ sterling was worth 25 pesetas or a little over. In 1891, the exchange rose to about 27 pesetas; in 1892, to about 28½ pesetas; in 1893, to about 30 pesetas. In 1894 it fell to about 29½ pesetas; and, in 1895, to about 29 pesetas. In 1896, it rose again to 30 pesetas, and by the end of 1897 to about 33 pesetas. In April, 1898, a sovereign was worth 45½ pesetas. In 1901, 34; 1905, 33½; 1908, 28¾; 1910, 26¾ pesetas.

Owing to the outbreak of war in 1898 between Spain and America, fluctuations were so violent in the early part of that year that business, both in Spain and Portugal, was almost brought to a standstill.

## Measures.

### PORTUGUESE.

A few weights and measures are: One plegada = 1·102 inches; one covada = 26¼ inches; one vara = about 43 inches; one league = 6,760 yards; one acre = 5·16 alqueires; one alqueire = 0·1938 of an acre, or 0·04789 of a hectare; one arrotel or libra = 1·0011 pounds avoirdupois; one arroba = 32·035 pounds; one almude = 3·88784 Imperial gallons; one barril = 7⅔ gallons; one pipe of wine = 92 Imperial gallons, or 418 litres; one alqueire = 1·55 pecks; one moio = 23¼ bushels.

Since the adoption of the metric system by Portugal, the above measures, though often used, are not legal.

### SPANISH.

Twelve pulgadas = 11·128 inches; one vara = 33·141 inches, or = 83½ centimetres; one hundred Spanish libras (a quintal) = 101·442 English pounds, or 46 kilos; one arroba = 25 lbs. Span; one fanega (of wheat) = 106 to 110 lbs.; (of slaked lime) = about 80 lbs.; (of maize) = about 130 lbs.; (of barley) = 84 to 90 lbs.; (of liquid) = 62·66 litros. One cuartillo = 0·984 of a litro, or 1·73184 of a pint. 132,920 varas = one degree; one degree = 20 leguas.

One fanegada in Teneriffe	...	= 52 ares	·4829	= 1·2969 acres.
„ Grand Canary.	= 55	„	·365	= 1·36 „
„ La Palma	...	= 52	„	·5763 = 1·292 „
„ Lanzarote and Fuerteventura	} = 136	„	·9591	= 3·3844 „

A fanegada in Teneriffe is approximately a square of 79 English yards or 86 Spanish varas.

The measure known as the alqueire and the fanegada mean, or once meant, a space of land on which an alqueire or a fanega of wheat might be sown broadcast and are therefore a species of valuation of the capability of the soil.

In Spain as in Portugal the metric system is officially recognised.

### METRIC SYSTEM.

The *French Metric* system used in all the islands is here compared with the English as regards a few of the units. One metre = 39'371 inches. Eight kilometres, roughly speaking, equal 5 miles. One litre = 1'76 pints. One gramme = 15'432 grains Troy. One hectare = 2'471 acres. One are = 119'603 sq. yards or  $\frac{1}{100}$  of a hectare. One kilogramme = 2'20462 lbs. avoirdupois. 70 kilos = (approximately) 154 lbs. or 11 stone.

For the convenience of those wishing to reduce altitudes from metres to feet or *vice versa* the following table is appended:—

1 metre =	3'2809 feet.	6 metres =	19'6854 feet.
2 " =	6'5618 "	7 " =	22'9663 "
3 " =	9'8426 "	8 " =	26'2472 "
4 " =	13'1235 "	9 " =	29'5281 "
5 " =	16'4042 "		

### Thermometrical Degrees.

To reduce Fahrenheit to Reaumur, deduct 32°, multiply the remainder by 4, and divide by 9. Fahrenheit to Centigrade deduct 32°, multiply by 5, and divide by 9.

### Difference in Time.

The time in Funchal is 1 hr. 7 m. 40 sec. later than in London in Valverde, Hierro, 1 hr. 11 m. 20 sec.; in Santa Cruz, La Palma, 1 hr. 10 m.; in S. Sebastian, Gomera, 1 hr. 8 m. 40 sec.; in Santa Cruz of Teneriffe, 1 hr. 5 m. 12 sec.; in Orotava, 1 hr. 6 m. 20 sec.; in Las Palmas, Grand Canary, 1 hr. 1 m.; in Puerto de Cabras, Fuerteventura, 55 m. 12 sec.; in Arrecife, Lanzarote, 54 m. 20 sec.; and in Ponta Delgada, S. Miguel (Azores), 1 hr. 42 m. 44 sec.

### Length of the Solar Day.

In the Canaries the shortest solar day is 10 hrs. 11 m. 12 sec., and the longest, 13 hrs. 48 m. 48 sec.

## Tides.

The usual rise and fall of the tide in Madeira is about 7 feet; in the Canaries it is about 9 feet; in the Azores from 4 to 6 feet.

## Distance of the Visible Horizon.

To ascertain at a given altitude above sea-level the distance in English miles from the observer to the *visible* horizon—take the square root of the altitude in English feet and multiply the same by 1.32.

Example: Required the distance of horizon at 2,500 feet. Square root of 2,500 = 50. Multiply by 1.32. Result 66 English miles. (*Note.*—The visible horizon is about 7 per cent. further than the actual horizon, the increase being due to refraction of the light rays by the atmosphere.)

## Bicycles and Motor Cars.

In **MADEIRA** both are practically useless. Bicycles come in as luggage. Motor cars pay no duty if entered under special permission and taken away within eighteen months, otherwise each car, 150,000 reis. Petrol pays 13 % ad valorem, plus 5 reis per kilo. Drivers must pass an examination and pay a small fee for same. Municipal tax, etc. (annual), about 12,500 reis. Duty on tyres, 620 reis per kilo.

In the **AZORES** the roads are better and not so hilly. Duties, etc., much the same as in Madeira.

In the **CANARIES** there are no customs duties on either. *Bicycles* can be used by those in good health, but the roads are hilly and are kept in bad repair. Bicycles and motor bicycles pay a small annual tax.

*Motor Cars* would be more useful if the road surface were better. Very few hills exceed the gradient of 1 in 10, but some are very long. Radiators should be provided with a fan cooler. The brakes must be very efficient. Those knowing their cars can probably get repairs done in Santa Cruz, Teneriffe and in Las Palmas, Grand Canary. Numerous spare parts, etc., must be carried. Pneumatic tyres last fairly well if carefully looked after. Driver and car must pass an examination before obtaining a license; cost about 45 pesetas. Annual luxury tax, 25 per cent. of which is payable quarterly, 34 to 68 pesetas, plus 3.25 to 4.70 pesetas (according to population of district) for each seat, including driver's.

Petrol is expensive. Charges for sending out on deck, increased freight, shipper's risk, plus a *consumo* tax on entry (for Santa Cruz, Teneriffe, of 26 pesetas 60 centimos per 100 kilos). One gallon of 700 petrol weighs 3.1818 kilos; of 715 petrol, 3.25 kilos.



## Post and Telegraph.

Madeira, Teneriffe, Grand Canary, Lanzarote, La Palma, and the Azores are all connected by telegraph with Europe, and are also part of the Postal Union. Letters, first oz., 2½d.; further ozs. or fractions, 1½d.; Post Cards, 1d.; Newspapers, ½d. per 2 oz. Samples, ½d. per 2 oz., with a minimum charge of 1d.; Commercial Papers, the same, with a minimum of 2½d.

Samples to Madeira or the Azores must be marked "*Amostras*." Those weighing more than 250 grammes (about ½ lb.) are opened in the Custom House.

**Parcel Post to Madeira.**—Not over 3 lbs., 1s. 6d.; not over 7 lbs., 2s.; not over 11 lbs., 2s. 6d. Limit of weight, 11 lbs.; of measurement, 3½ ft. any way. Length and girth combined, 6 ft. Parcels can be insured up to £20.

**To the Azores.**—The same limits, etc., the prices being also 1s. 6d.; 2s.; and 2s. 6d.

**To the Canaries.**—Parcel post from Spain only. Other countries in course of arrangement.

**Madeira.**—*Inland Postage* (20 grammes), 25 reis. Post Cards, 10 reis. Newspapers, each 50 grammes, 2½ reis. Printed matter, 5 reis. The same rates apply to Portugal, the Azores, all Portuguese Colonies, Spain, and the Canaries (*viâ* Lisbon) and Morocco.

**Postal Union.**—Letters, 50 reis the first 20 grammes and 30 reis each additional 20 grammes; Post Cards, 20 reis; Newspapers, per 50 grammes, 10 reis; Commercial Papers, the same, with a minimum of 50 reis.

Letters insufficiently stamped are not delivered to countries outside of the Postal Union.

There is a special issue of stamps for Madeira.

**Inland Parcel Post** (limit of weight 5 kilos; of size 20 decimetres cubic and 60 centimetres largest measurement). Rates to be ascertained at the Post Office.

**Foreign Parcel Post** (limit of measurement the same). Weights and charges to be ascertained at the Post Office.

**Telegrams.**—Inland, 65 reis the first word, and 10 reis per word afterwards.

Telegraphic cables are laid from Madeira to Portugal, England and the Cape de Verde Islands (Brazil and South African lines).

**The Azores.**—Postal rates are similar to those in Madeira. Separate stamps are issued in each of the three political divisions, *i.e.*,

Ponta Delgada, which includes São Miguel and Santa Maria.  
 Angra, which includes Terceira, Graciosa and São Jorge.  
 Horta, which includes Pico, Fayal, Flores and Corvo.

Telegraphic cables have been laid between the Azores and Lisbon, Emden, Canso, New York and Waterville. At São Miguel, Fayal, Santa Maria, Flores and Corvo there are wireless installations.

**The Canary Islands.**—*Inland or Inter-insular Postage.* Letters (15 grammes), 15 centimos; Post Cards, 10 c.; Newspapers,  $\frac{1}{4}$  c. each 10 grammes; Commercial Papers up to 400 grammes, 10 c.; Samples (each 20 grammes), 5 c., with a minimum of 10 c. Printed matter, each 10 grammes,  $\frac{1}{4}$  c. The same rates apply to Spain or Spanish Colonies.

To Portugal, Madeira and the Azores: Letters, 15 grammes, 10 c.; Post Cards, 5 c.; Newspapers, each 50 grammes, 1 c.; Printed matter and Samples, 50 grammes, 2 c. (Minimum on Commercial Papers, 10 c.)

*Postal Union*, which includes nearly the whole world. Letters, up to 20 grammes, 25 centimos; each additional 20 grammes, 15 c.; Post Cards, 10 c.; Newspapers (each 50 grammes), 5 centimos; Commercial Papers (minimum 25 c.) and Samples (minimum 10 c.) the same.

The ordinary Spanish postage stamp is used in the Canaries.

*Parcel Post (Inland).*—Limit of weight, 5 kilos; of size, 60 c. largest measurement. Any weight, inside the Canaries, 50 c.; to Spain, 1 peseta.

*Parcel Post (Foreign).*—In course of arrangement.

Those wishing to send parcels should apply to Messrs. Yeoward Bros., of Liverpool; Elder Dempster & Co., of Liverpool and London; The Royal Mail Steam Packet Co., of London; Audley Sparrow & Read, of 28, Warwick Lane, E.C.; Alfred Williams, of Santa Cruz, Teneriffe, and of Las Palmas, etc.

*Telegrams.*—Inland, 50 centimos for 15 words and additional words, 5 c. each.—Inter-insular, 1 peseta for 15 words and additional words 10 c. each. Besides this there is a tax of 5 c. on all telegrams. All the Islands are connected by cable and Teneriffe and Grand Canary also possess wireless installations.

Telegraphic Cables are laid from Teneriffe to Cadiz, to Emden, to Monrovia and to Senegal (Pernambuco and Dakar-Brest lines). Extensions are proposed to several parts of German Western Africa and a second cable to Pernambuco.

The wireless installations (système Popp) erected at Santa Cruz, Teneriffe and Jinama, Grand Canary, have a proposed radius of 3,000 miles, to include Cadiz, Casablanca, Dakar, Pernambuco and perhaps St. Vincent.

## Vocabulary

of a few words which will be found constantly used in this book in preference to their English equivalents.

**Portuguese.**—Hospedaria, an inn.—Ribeira, a large ravine or stream.—Ribeiro, the same but smaller.—Lombo, a mountain spur.—Levada, an aqueduct.—Encumiada, the summit of a range of hills or mountains.—Lagôa, a crater with water in it.—Quinta, a farm or villa.—Achada, a small plain.—Bocca, a gap or mouth.—Caminho, a road.—Capella, Ermida, a chapel.—Igreja, a church.—Ponta, a cape.—Porto, a port.—Praça, a square.—Rua, a street.—Pinheiral, a pine forest.—Curral, a cattle fold.—Vereda, a mountain track.—Cidade, a city.—Villa, a town.—Freguezia, a parish.—Furado, a tunnel through rock.

**Spanish.**—Fonda, an inn.—Patio, a courtyard.—Azotea, a flat roof.—Calle, a street.—Barranco, a ravine.—Carretera, a carriage road.—Caldera, a crater.—Monte, uncultivated mountain land.—Monte Verde, the same, covered with heather or shrubs.—Pinar, a pine forest.—Cumbre, the summit of a range of hills or mountains.—Finca, a farm or villa.—Albarda, a pack saddle.—Arriero, a mule boy.—Venta, a small shop.—Atarjéa, acéquia, an aqueduct.—Algibe, a covered-in tank or cistern.—Ciudad, a city.—Villa, a town.—Pueblo, a village.—Camino real, the king's high bridled road.—Malpais, country covered with lava, etc.—Fielato, a octroi or municipal custom-house.—Mina, a tunnelled spring of water.—Carro, a waggon, cart.—Iglesia, a church.—Capilla, Ermita, a chapel.

In Spanish, among the guides, *volcan* does not mean a volcano, but the lava which flows from it. The volcano itself is called Caldera, Montañeta, etc., etc.

For the whistling language of Gomera turn to Gomera itself.



A VOCABULARY OF WORDS NECESSARY IN SPEAKING TO  
SERVANTS, ETC.

<i>English.</i>	<i>Portuguese.</i>	<i>Spanish.</i>
Bacon	o toucinho	el tocino
Basin	a bacia	la palangana
Bed	a cama	la cama
Beef	a carne de vacca	la carne de vaca
Blanket	o cobertor	la manta
Bread	o pão	el pan
Butter	a manteiga	la manteca
Candle	a vela	la vela
Chair	a cadeira	la silla
Chamber pot	o bacio	la escupidera
Chicken	a gallinha	la gallina
Coffee	o café	el café
Counterpane	a colcha	la colcha
Cup	a chicara	la taza
Dirty	sujo	sucio
Drink	beber	beber
Eat	comer	comer
Egg	o ovo	el huevo
Envelope	o sobrescripto	el sobre
Fish	o peixe	el pescado
Fork	o garfo	el tenedor
Fruit	a fructa	la fruta
Glass	o copo	el vaso, la copa
Hour	a hora	la hora
Jam	a jelêa	el dulce
Jug	o jarro	el jarro
Knife	a faca	el cuchillo
Lamp	o lampeão	el quinqué
Matches	os phosphoros	los fosforos
Mattress	o colchão	el colchon
Meat	a carne	la carne
Milk	o leite	la leche
Mirror	a espelho	el espejo
Mosquito curtain	o mosquiteiro	el mosquitero
Mutton	o carneiro	la carne de carnero
No	não	no
Paper	o papel	el papel
Pillow	a almofada	la almohada
Plate	o prato	el plato
Postage stamps	sellos do correio	sellos
Sheet	o lençol	la sábana
Sleep	dormir	dormir

<i>English.</i>	<i>Portuguese.</i>	<i>Spanish.</i>
Soap	o sabão	el jabon
Soup	a sopa	la sopa
Spoon	a colher	la cuchara
Sugar	o açúcar	el azucar
Table	a mesa	la mesa
Tea	o chá	el té
Veal	a vitella	la ternera
Wake	accordar	despertar
Wine	o vinho	el vino
Yes	sim	si
One	um, uma	uno, una
Two	dois, duas	dos
Three	tres	tres
Four	quatro	cuatro
Five	cinco	cinco
Six	seis	seis
Seven	sete	siete
Eight	oito	ocho
Nine	nove	nueve
Ten	dez	diez

A FEW PHRASES NECESSARY TO THOSE MOVING ABOUT.

<i>English.</i>	<i>Portuguese.</i>	<i>Spanish.</i>
<i>On the Steamboat.</i>	<i>A bordo do vapor.</i>	<i>En el vapor.</i>
I want a boat to go on shore ; how much ?	Preciso d'um barco para ir a terra ; quanto é ?	Quiero un bote para ir á tierra ¿ quanto cuesta ?
How much to go and return ?	Quanto é para ir e voltar ?	¿ Quanto cuesta para ir y volver ?
This is my luggage, how much will it cost ?	Esta é a minha bagagem, quanto quer para leval-a ?	Este es mi equipage, ¿ quanto cuesta llevarlo ?
That is too much and more than I will give.	Isso é muito, é mais do que eu quero dar.	Es muy caro ; no pago tanto.
All right, you can take it.	Bem, póde leval-a.	Esta bien, llévelo.

<i>On Shore.</i>	<i>Em terra.</i>	<i>En tierra.</i>
Take my luggage to—	Leve a minha bagagem para—	Lleve mi equipage á—
Which is the way to to—	Por onde se vai para—	¿ Por donde se va á—

I want a carriage to go to . . .	Quero uma carruagem para ir a . . .	Quiero un coche para ir á . . .
I want a horse to go to—	Quero um cavallo para ir a—	Quiero un caballo para ir á—
I want a donkey to go to—	Quero um burro para ir a—	Quiero un burro para ir á—
I want a mule to go to—	Quero uma mula para ir a—	Quiero un mulo para ir á—
I want a camel to go to—	Quero um camêlo para ir a—	Quiero un camello para ir á—
To take a drive (or ride)	Dar um passeio	Dar un paseo
We are two [three] [four] [five] persons	Nós somos dois, (or duas), [trez] [quatro] pessoas	Somos dos [tres] [cuatro] [cinco] personas
We want two ladies' saddles	Queremos duas selas para Senhora	Queremos dos sillars para Señora
We want pack animals	Queremos animaes de carga	Queremos bestias de carga
We want a guide to take us round the town	Queremos uma pessoa que nos mostre a cidade	Queremos un guia para que nos enseñe la ciudad

(The custom house is best left to the proprietors of the hotels.)

*In the Hotel.**No Hotel.**En la Fonda.*

Have you a bedroom for me (for us)?	Tem um quarto para mim (nós)?	¿Hay una habitacion para mí (para nosotros)?
We want single } double } beds	Queremos camas pequenas—camas de casal	Queremos camas de una persona—de dos personas
On the first } second } floor third } } andar	No primeiro } segundo } terceiro } } andar	En el primer } segundo } piso tercer } } andar
The room is too small [too expensive]	O quarto é muito pequeno [muito caro]	La habitacion es muy pequena [muy cara]
I want some hot water	Quero agua quente	Quiero agua caliente
I want some cold water	Quero agua fria	Quiero agua fria
I want a hot bath	Quero banho d'agua quente	Quiero un baño caliente



I want a cold bath	Quero banho d'agua fria	Quiero un baño frio
Are the sheets dry?	Estão seccos os lençoes?	¿Estan secas las sábanas?
I want drinking water	Quero agua de beber	Quiero agua para beber
I want clean towels	Quero toalhas limpas	Quiero tohallas limpias
I want bath towels	Quero toalhas de banho	Quiero tohallas de baño
At what time is breakfast?	A que horas é o almoço?	¿A que hora se almuerza?
At what time is lunch?	A que horas é o lunch?	¿A que hora se toma lunch?
At what time is dinner?	A que horas é o jantar?	¿A que hora se come?
Call me at four [five] [six] [seven] [eight]	Chame me ás quatro [ás cinco] [ás seis] [ás sete] [ás oito]	Despiérteme á las cuatro [cinco] [seis] [siete] [ocho]
Where is the lavatory?	Onde é a casinha?	¿Donde está el excusado?

*Walks and Expeditions.*

*Passeios e Expediçoes.*

*Paseos y Expediciones.*

How far is it to the spring?	Qual é a distancia d'aqui á nascente?	¿Que distancia hay de aqui á la fuente?
How far is it to the path leading to...?	Qual é a distancia ao caminho que dá para...?	¿Que distancia hay al camino que va á...?
How far is it to the mountain of...?	Qual é a distancia ao monte de...?	¿Que distancia hay á la montaña de...?
How far is it to the top?	Qual é a distancia ao Pico?	¿Que distancia hay á la cumbre?
How far is it to the bottom?	Qual é a distancia ao fundo?	¿Que distancia hay hasta abajo?
How far is it to the crater?	Qual é a distancia á cratera?	¿Que distancia hay á la caldera?
How far is it to the stream of lava?	Qual é a distancia á corrente de lava?	¿Que distancia hay al volcan?
How far is it to the church?	Qual é a distancia á egreja?	¿Que distancia hay á la Iglesia?
How far is it to the valley?	Qual é a distancia ao valle?	¿Que distancia hay al valle?

How far is it to the view of...?	Qual é a distancia á vista de...?	¿Que distancia hay á la vista de...?
How far is it to the ascent of...?	Qual é a distancia á subida de...?	¿Que distancia hay á la subida de...?
How far is it to the descent to...?	Qual é a distancia á descida de...?	¿Que distancia hay á la bajada de...?
How far is it to the (mountain) spur?	Qual é a distancia ao lombo?	¿Que distancia hay al lomo?
How far is it to the sea?	Qual é a distancia ao mar?	¿Que distancia hay al mar?
How far is it to the inn?	Qual é a distancia á hospedaria?	¿Que distancia hay á la fonda?
How far is it to the drinking shop?	Qual é a distancia á taberna?	¿Que distancia hay á la venta?
How far is it to the village of...?	Qual é a distancia á aldeia de...?	¿Que distancia hay al pueblo de...?
How far is it to the town of...?	Qual é a distancia á villa de...?	¿Que distancia hay á la villa de...?
How far is it to the city?	Qual é a distancia á cidade?	¿Que distancia hay a la ciudad?
Tie the blanket on to the pack saddle.	Amarre o cobertor á sella.	Sujete la manta en la albarda
Do you think it will be clear at the top?	Julga estar claro lá em cima?	¿Cree V <sup>d</sup> que estará claro por encima?
Do you think it will rain to-day?	Julga que choverá hoje?	¿Cree V <sup>d</sup> que llovera hoy?
Is the road bad?	O caminho é máo?	¿Es malo el camino?
Is the road very bad?	O caminho é muito máo?	¿Es muy malo el camino?
Can animals pass?	Os animaes podem passar?	¿Pueden pasar bestias?
Are you sure you know the way?	V <sup>ce</sup> tem a certeza que conhece o caminho?	¿Esta V <sup>d</sup> seguro que conoce el camino?
I shall not pay you if you don't.	Não lhe pagarei se V <sup>ce</sup> não souber	No le pagaré á V <sup>d</sup> si no sabe.
Where is the market?	Onde é o mercado?	¿Donde está la recoba?
Where is the post office?	Onde é o correio?	¿Donde está el correo?
Where is the chemist?	Onde é a botica?	¿Donde está la botica?
Where is the club?	Onde é o club?	¿Donde está el casino?

## Pronunciation.

**Portuguese.**—*lh* is pronounced like the *ll* in million; *nh* like the *n* in renew; *ç* like *s*; *ão* (with a til) like *an*; *ch* like *sh* in English; *j* soft as in French; *qu* is soft as in quilt before *a*, *o* and *u*, but hard before *e* and *i*; vowels are broad and the *u* is like *oo* in moon. The people in Madeira drop the ends of words more than is the case in Lisbon. An *accent over a vowel* indicates that that vowel forms the principal syllable of a word.

**Spanish.**—*ll* is pronounced like the *ll* in million; *ñ* (with til) like the *n* in renew; *ch* soft as in English; *j* like *h*; *g* like *h* before *i* and *e* but hard before *a*, *o*, and *u*; *h* is not sounded; *qu* is hard like *k*; *cu* is soft like *qu* in quilt; vowels are broad and the *u* is like *oo* in moon. All letters are sounded, including the *final r*. An *accent over a vowel* means the same as in Portuguese.



## Accommodation, Hotels, etc.

As the recovery of an Invalid and the comfort of a Tourist depend fully as much on the accommodation obtainable as on the conditions of the climate, a few words on this subject are necessary.

**Madeira** has been so long a health resort that the requirements of visitors have become one of the staple productions of the country. Hotels are consequently able to provide themselves with certain luxuries, such as fresh butter, cream, strawberries, etc., more easily than in the Canaries.

As regards comfort of surroundings, furniture, etc., there is nothing to choose between the best hotels in Madeira, Teneriffe, or Grand Canary. All strive to do their best.

To a certain extent the officials in **Madeira** recognise the fact that it is worth while to make the town attractive, the gardens being well kept and outdoor life generally fairly well organised. The new railway is also of great benefit in a place where locomotion, in spite of hammocks, "carros" and horses, was formerly somewhat tedious.

There is only one carriage road. Those too weak to walk can get about easily in the town or can even penetrate a short distance into the country by means of the local sleigh drawn by oxen, whilst the hammocks afford a luxurious means of visiting districts along paths where even mules cannot pass.

Passing on from Madeira to **Teneriffe** the attention is first directed to Santa Cruz and to the valley of Orotava, where there are large, well-found hotels at different levels, a most remarkable advance having taken place during recent years. At Tacoronte, La Laguna, Güimar and Icod there are more hotels, some of which are very good indeed.

The electric tramway from Santa Cruz to Tacoronte is a great boon to Teneriffe. Communication by carriage is easy and agreeable drives can be taken, but the bridle paths are indifferent.

In **Grand Canary** there are several excellent hotels in or near Las Palmas and up in the Monte district.

Carriage roads, affording a great diversity of drives, lead to several parts of the island and bridle paths to the rest.

At Santa Cruz, **La Palma**, there is a travellers' hotel. Out of Santa Cruz there is a fonda at Los Llanos.

A good road has been constructed, and those in need of fresh air are able to drive in an open carriage by an easy gradient half round the island, which is crossed by several fair bridle paths.

There is practically no accommodation for invalids in the remaining four islands of the Canary group. What there is will be found to be sufficiently described in its proper place.

In the **Azores** much remains to be done before the hotels are brought up to European requirements, but negotiations are in progress with the object of raising capital for this purpose. So far the best accommodation is to be found in São Miguel (St. Michael's), where there is an English hotel, homely and very simple, but excellent as far as it goes.

The roads in the Azores are usually good, drives and expeditions being less fatiguing than is the case in the other islands.

**Hotels, Hospedarias and Fondas.**—These and the prices they charge are given under the description of each town or village, to find which refer to the Index.

All hotels will reduce their prices to those staying for a long period, if arrangements are made beforehand. A married couple are sometimes considered as one and a half when occupying the same room.

Parties of more than three should send a telegram or letter on ahead when visiting small towns with limited accommodation. Letters of recommendation are of advantage in very out-of-the-way places.

The charges in the native inns are calculated from experience on a fair basis. Though more than a native would pay, they are probably less than will be asked from strangers in the first instance.

A difference is always made between native and English people in the native hotels.

English wishing to live at local prices must adopt the native style: Coffee early; a full breakfast at from 9.30 to 11 a.m., and dinner from 5 to 7 p.m. (In the Azores, Coffee at 7 a.m.; breakfast, 9 to 10 a.m.; dinner, 3 to 4 p.m., and a light repast at night.) Wine is always placed upon the table free.

The English service means tea or milk if required when called, a meat breakfast at 9, a meat lunch at 1, afternoon tea, and dinner at 7. Wine generally extra. Coffee is served after dinner in both cases.

Many of the native hotels are very good, and by accommodating one's self the expense is much lessened. The native sanitary arrangements are often indifferent, but the linen may be reckoned on as being clean and the proprietors as being invariably willing to oblige in every way.

**Boarding Houses.**—Several Private Residents (usually Foreigners) receive Boarders, charges in such cases being generally so much per week or per month. In cases where names of Boarding Houses are communicated to the author they are inserted locally in this guide.

**Villas and Houses.**—If spending a winter or two away it will often be found more economical to hire a villa.

Houses are cheap in the Azores and are plentiful in Madeira, but are a good deal wanted in the Canaries. Furnished houses in Madeira let at from £60 to £300 for the season or the year. For unfurnished houses in the Canaries, from £4 to £20 per month is asked.

In the Canaries the landlord is responsible for the exterior dilapidations of all buildings, for the repairs of all water-courses and walls, and for the loss of buildings by fire.

In Madeira the landlord is responsible in the case of villas but not in that of farms.

Those wishing to take houses, either in Madeira or elsewhere, must be prepared for long negotiations. Prices asked of the English in the Canaries are several times as much as were paid a few years ago. Above all, strict enquiries must be made regarding the supply of water and what chance there is of its being pure.

Visitors should avoid sleeping in ground floor rooms, unless they are quite sure that the moisture cannot be drawn up into the walls. In native houses this part of the building is, as a rule, only intended for cellars: the walls are built with earth instead of mortar and damp is generally to be feared.

### Annual Expenditure.

The vital question to many of how much per annum it is necessary to spend is rather difficult to answer. Those who care to do so can be extravagant here as they can elsewhere, but, as every extra luxury means extra labour and worry to the master or mistress, it is better for them to indulge themselves in another part of the world, unless they bring an entire staff of European servants with them.

Generally speaking there is but little entertaining amongst the English and less amongst the Portuguese and Spaniards. The greatest dissipation is to go to a dance, or to be five deep for afternoon tea.

It may be roughly calculated that a husband and wife and one or two young children can live very nicely, have friends to lunch two or three times a week, keep a couple of maid servants and a man, and, barring rent and education of the children, spend



from £300 to £500 a year. That is to say, while such a couple can manage to live on less than half these sums, they can also spend as much as £600 or £800. Above this all is vanity and vexation of spirit to the mistress who has to look after the housekeeping.

The chief economy of the place lies in the fact that such amusements as can be found are cheap, and that it is not easy to throw away an occasional fiver. Wine also is not expensive, whilst tobacco and cigars in the Canaries are moderate in price.

Some of the first necessities of life, such as bread, are dear, but the producer and the consumer come more readily together than is the case in larger communities and the iron hand of the middle-man is only noticeable in the price of imported articles.

For all this, the cost of living is much greater than it used to be when fruit, eggs, etc., were not exported in such large quantities and when the number of ships calling and requiring supplies was less.

In Madeira and the Azores the cost of all imported articles is of course greatly increased by the heavy protective duties, which sometimes amount to twice or thrice the original cost, and to the heavy Consular fees exacted from the shippers.

Living is still very cheap in the Azores, but even there prices are going up. Still the annual figure given above may be considerably reduced in the Western Islands, but, alas! there are no afternoon teas and not many friends to come to lunch.

**Religious freedom.**—There is perfect freedom of religious belief as far as civic and military rights are concerned, but no church which is not Roman Catholic is allowed to advertise its existence by a bell or exterior emblem.

**Population.**—The populations given in this work are those of the district, not that of the village itself, which is often a most insignificant centre to a widely-distributed parish. In all the islands the figures given are the most recent obtainable. (Madeira and the Canaries, 1900. The Azores, 1900 and 1908.)

### Amusements.

Visitors for long periods should bring something to employ their time. There is little to do and riding constantly along the same roads becomes monotonous. If saddlery is brought, it should not be new, as the men are extremely careless.

The chief amusements are excursions, picnics, sketching, taking photographs, or making collections of objects of natural history, etc.

Sport can scarcely be said to exist, though there are partridges, woodcock and rabbits to be found in all the islands. An exception may perhaps be made in the case of quail shooting, which is sometimes very good, especially during the first half of August. In Gomera and in the Azores partridges are plentiful.

The deep-sea fishing often gives very good sport, but ordinary visitors find it too hot upon the water. In the summer very good fun may be had in some of the ravines by turning up the large stones for fresh-water eels, which are uncommonly good eating.

In the large towns, such as Funchal, Santa Cruz, Las Palmas, Ponta Delgada, and sometimes Orotava, open-air musical promenades are given. Cock fights take place in most of the towns during the springtime, and occasionally there are bull fights in Santa Cruz, Teneriffe, and in Angra, Terceira (*see* Azores, "General Information").

The "*corridas de sortija*" which take place more frequently in Orotava than elsewhere, are a species of tournament where ladies and gentlemen gallop on horseback under a bar and endeavour to put a diminutive lance through a ring. The ring is attached to a ribbon wound round a reel, which the successful rider carries away as a prize.

At Las Palmas there are golf links, a cricket club and, once a year at carnival time, a battle of flowers. In all the chief resorts there are lawn-tennis grounds.

Of an evening many of the hotels get up dances or other entertainments, and there are the usual games at whist, billiards, etc.

**Native Amusements.**—In Madeira, beyond the usual dancing, etc., on feast days, there are no national amusements which appeal particularly to visitors. The Portuguese, however, sometimes play lawn-tennis, and have a liking for riding, yachting and other popular English sports.

Of these, riding alone seems to appeal to the Spanish taste. Even in this they differ from Englishmen by preserving all the traditions of the *haute école*. Both Portuguese and Spaniards are very clever in teaching their horses to curvet, to turn upon their hind legs, to halt at full gallop, and to perform other tricks long since discarded amongst ourselves.

In the Canaries, besides the bull-fights mentioned above, wrestling is a national sport and visitors should not fail to see a *lucha* when they have the chance.

The customs of La Palma have altered less by contact with the outside world than is the case in the other larger islands and cock-fighting is indulged in more than in any part of the Canaries, a large permanent building being erected on purpose.

An athletic feat, scarcely to be described as an amusement, but yet a matter worthy of attention from a sporting point of view, is that daily performed by goat-herds in precipitous parts of the islands—for instance, in the Great Caldera of La Palma. These men, when chasing a refractory goat amongst the rocks, will jump on to some crag many feet below them, will strike it with their *lanza* as they descend and will break their fall by sliding down the *lanza* before allowing their feet to touch the ground. Occasionally they can be induced to exhibit their powers by springing from the tops of houses into the street, etc. One of them once offered to jump from the top of the tower of the church of S. Francisco, Santa Cruz de la Palma, into the barrack yard below. The *lanza* is usually from six to seven feet long and is made of any hard wood, frequently of heather.

**Carnival.**—Carnival time in the islands is observed by all classes as a holiday. The three days ending with Ash Wednesday are devoted to feasting and to merry-making. Houses are everywhere thrown open to friends and acquaintances and the streets are filled with men and women, masked, painted and dressed in fanciful costumes. Confetti, paper ribbons, etc., are thrown at passers-by, and the population generally takes part in the amusements going on, though the want of organisation usually prevents these from being so effective as might otherwise be the case.

From Thursday till midday Saturday in Holy Week vehicles are not allowed to pass through the towns except in cases where transit is absolutely necessary.

**Shooting Licenses.**—In the Canaries to carry arms of any sort from 7 to 30 pesetas; to shoot game, 15 to 40 pesetas, which includes the right to carry arms. The amount is regulated by the class of Cedula Personal held by the applicant. Season (usually), August 1st to February 15th.

In Madeira to carry arms, 2,600 reis. To shoot game a license must be obtained in each Camara (district) at a cost of from 1,500 to 4,000 reis. Season, September 1st to January 31st.

## Expeditions and Excursions.

**Animals.**—It is advisable, when engaging men and animals for expeditions, to fix a price before setting out and to stipulate that the drivers and the guides must find everything for beasts and selves. A little relaxation from this rule at lunch-time and a moderate tip at the end of the journey are likely to satisfy all parties thoroughly.



As far as possible prices paid for the hire of horses, etc., in the principal centres are given at the end of the description of each island. In country places, and in fact in the centres themselves, the hirer must exercise his common sense and should not spoil the market by paying ridiculous prices. For ordinary expedition work, double the wages paid to a man and mule for a day's work on a farm is more than ample.

A good deal of bargaining is necessary. When a beast is engaged it is understood that the man goes with it on foot. In the Canaries the "arrieros" are exceedingly clever in loading horses, especially if the rider will use a native saddle, "albarda." In Madeira, however, nothing will persuade them to put anything on to the horse which is to be ridden.

Pack animals, which have brought cargo from the other side of any of the islands, can be engaged to take back passengers at considerably lower prices than those usually current. Animals of this sort are accustomed to the roads and are rarely very much overworked. Those who know how to bargain may often economise a good deal by remembering this. The "arrieros" from the country are also less contaminated by the influence of the town and are better acquainted with the district traversed.

Before starting it is as well to see that horses, if they are shod at all, are well roughed, some of the roads being very slippery in wet weather. If they have never been shod so much the better. In Madeira the blacksmiths are usually very careful.

Those relying on native saddlery should never omit to put a good length of stout string in their pockets.

**Cruelty to Animals.**—In Madeira, owing to the efforts of the Society for the Prevention of Cruelty to Animals, backed up by local sympathy, a great improvement has been effected. In the Canaries, however, matters are deplorably bad and visitors are urged to be extremely careful to set a good example.

**Distances by measurement and by time.**—All land measurements have been carefully worked out into English statute miles and French kilometres. Geographical miles are only used for long sea journeys.

Unless otherwise stated, times given on bridle roads are those necessary for mules or horses going well and *no allowance is made for stoppages*. To these times walkers may add 30 per cent. or more. On carriage roads distances are given.

The time is usually given from the writer's own experience. As, however, the footpaths and bridle roads cover a distance of many thousands of miles, it has been impossible to visit them all personally. Information procured at second hand has often been

found most erroneous, even when given by Englishmen. Where recourse has been had to the peasants, whose ideas upon the subject of time are vague in the extreme, accuracy has been impossible. Those leaving the beaten tracks cannot, therefore, place implicit reliance upon the times given, though these are constantly being amended as opportunity allows.

This general carelessness about time also causes the public coaches to start sometimes a little before, sometimes a little after the hour fixed. Those using them must, therefore, take the necessary precautions against being left behind.

**Guides.**—Under ordinary circumstances the reader will find the information in this book sufficient, but in the mountains, where clouds or fog may occur, it is as well to be accompanied. For any of the passes the "arriero" who drives the horses or mules is all that is required. A practised guide is, however, necessary in the case of the Peak of Teneriffe, especially in the winter. When the snow and ice lie thick upon the slopes of this mountain, even the native guides are of little use and none of them can be relied upon in case of exceptional difficulty or danger.

**Best way to cross an island.**—In many cases it is impossible and in others unadvisable to go round by the coast unless, of course, a *carretera* (high road) has been made. The *Camin Real* (King's highway) often goes up and down into the *barranco* in the most amazing manner.

By shirking what seems an unnecessary climb of some 5,000 or 6,000 feet, the traveller may find at the end of the day that the sum total of his ascents has doubled this figure; that he has not gone so far as he hoped, and that, by choosing the lower road he has missed much of the best scenery.

**Camping out.**—When preparing for camping out, regard must be had to the fact that all baggage will have to be carried by mules or horses and that these should not be required to take more than from twelve to fourteen stone when on a journey. Tent pegs should be made of iron or hard wood, owing to the nature of the ground. Petroleum can generally be bought in the villages. Those wishing to remain for the summer months will do wisely to remove to the hills. Tents may not be pitched without permission from the Department of Forests.

**Clouds in the hills.**—Travellers leaving for the mountains will please note that the start should always be made at an early hour in order to avoid the fogs and mists which frequently gather later on. Such mists are encountered at all altitudes in accordance with the weather. In the Canaries they are, however, most clearly defined, gathering, as a rule, at an altitude of from 3,500

to 5,500 feet and forming a canopy some 1,000 to 1,500 feet in thickness. When such clouds assemble during normal weather it is quite safe to climb through them, as the sky is sure to be clear above and the heat of the sun rapidly dries the tourist's clothes. Well-defined clouds like these are caused by the warm trade wind, which is thrown up by the land, meeting a colder region. They rarely form before sunrise nor last for long after sunset.

In the Canaries, where the altitude is less than 6,000 feet, one cannot be sure of getting above them. In Madeira, which is too far north for the full effect of the trade wind to be felt and where the influence of the gulf stream is more noticeable, the risk of getting no view when clouds are about is still greater. In the Azores cloudy days are more common than in either Madeira or the Canaries.

At times all of the islands are clear for days or weeks together and this is the best time for excursions. When the clouds are very low and threatening, or the hills are visible with the sky above them obscured at a great altitude, it is best to stay near home. Even two or three streamers, pointing away from the island as a centre, should be taken as a warning. Invalids should not remain out after sunset, especially when up in the hills.

**Springs and Waterfalls.**—Care must be taken not to pay too much attention to local descriptions of scenery. The scarcity of water on some of the southern slopes causes the natives, who have never been elsewhere, to regard a spring or stream of the smallest dimensions as an object of beauty and to bepraise it in a manner quite incomprehensible to Englishmen. By following their advice many an hour may be wasted in fruitless wanderings.

**The Euphorbia.**—Tourists unlucky enough to get any of the juice of the *Euphorbia canariensis* (cardon) into the eye, can neutralise the burning of the caustic by squeezing some of the juice of a fleshy-leaved species of house-leek into the same place. The two plants are usually found in the same neighbourhood, if not actually intermingled.

The *E. Canariensis* is indigenous and peculiar to the Canaries. It is rarely found in positions where the roots do not come into contact with basic lava. The milk is sometimes used by fishermen to stupefy fish.

It cannot be doubted that, could a proper application be found for them, the juices of the *E. Canariensis* and of the *E. Balsamifera* (*tabaiba dulce*), the latter of which is neither hot nor poisonous, might be of considerable commercial value.

**Poisonous Reptiles.**—Pedestrians walking through woods need have no fear of venomous reptiles. Snakes are unknown



Poisonous spiders exist, but are rare. Scorpions are only found in a few places, where they have been introduced with timber, etc., from abroad.

**Mosquitoes.**—These are most abundant on the eastern and southern sides of the Canary Islands, especially those nearest to Africa. When present, the night must be passed under curtains. These should be high and airy, allowing a single bed not less than 120 cubic feet. Ammonia should be applied to the bites as soon as possible.

The writer knows of no cases of malaria contracted in the Islands and authenticated by bacteriological analysis. He believes, however, on medical and on traditional evidence, that the parasite is endemic in one or more ravines (uninhabited) known as Los Valles, near the Roque Negro, Taganana, Teneriffe. He also believes that varieties of the anopheles mosquito are to be found in the Canaries, though they do not seem to be present in Madeira.

**Beggars.**—These are sometimes very importunate. It must, however, be remembered that there are no poorhouses and that a very little is made to go a very long way. Alms should be given on Saturday, and it is best to act under local advice.

**Conduct of the Hospitals.**—The conduct of the Hospitals, which, taking all the circumstances into consideration, is most excellent, is largely due to the efforts of the local ladies' committees, who are admirably seconded by the sisters of charity. Private rooms may be secured by the payment of a very moderate sum; the public rooms are free.

### **Government Houses of Refuge.**

These are to be found chiefly in Madeira. Those wishing to use them must obtain permission from the Director of the Obras Publicas.

## Native Society and Habits of the People.

The upper classes in all the islands are friendly and courteous, with somewhat stately and old-fashioned manners. Education is not often very cosmopolitan, and but little interest is usually displayed in matters other than local, or which take place outside of Portugal or Spain.

This is partly owing to the domestic habits of the gentlemen, many of whom do not care to go far out of sight of home. The duenna still reigns supreme, but the young ladies are said to envy at times the liberty enjoyed by their English sisters. In the Sunny South, however, young men arrive early at the age of indiscretion, therefore the lover still stands and gazes from the street at his fair one in the balcony, or at most converses with her occasionally through the "postigo." The "postigo," as it is called in the Canaries, is a small wooden shutter, hanging on hinges, which is slightly pushed open from inside when the occupant of the window seat wishes to look out at a passer-by. It was once common in Andalusia, but is now seldom met with in Europe.

Though there is a good deal of social intercourse and friendly visits are constantly paid by one family to another, neither the Spaniards nor the Portuguese are accustomed to entertain one another as we do in England.

As it is unnecessary to cement friendship by asking an acquaintance to put his legs under the household mahogany, and as no one is obliged to introduce the comrade of yesterday or the comrade's wife to the bosom of one's family, those who meet casually at an hotel may speak at once and need not walk round and round one another suspiciously, waiting for some formal introduction before breaking the ice. English visitors to the Islands, who have not been broken in on the Continent, may take it for granted that in these latitudes it is quite possible to enter into a conversation with a stranger without thereby making themselves unduly cheap.

These casual conversations, carried on in the case of the Spaniards over a numberless succession of cigarettes, are the approved method of passing the time in a place where life flows leisurely by. When your new friend bids you farewell and trusts he may see you again, he probably does not mean it; when he places his house at your disposition, he may not want to see you there; when he asks you to dinner, unless the invitation is repeated three times, you must not go. These are little courtesies common to the country where it is considered rude for a man to leave the table without a word, or to ignore the presence of others occupying the same room with him.

The disposition of many of the Islanders is so amiable that there are authenticated cases where one house has been occupied by several young married couples, several mothers-in-law and a long array of other relations, and where the peace has remained unbroken for days or even weeks at a stretch.

Perhaps the greatest fault of the Spaniard is the belief, by no means common to all, that to be a "*caballero*" a man must do no manual work. "The Man under the Umbrella" is a far too common object in the fields and vineyards.

On the other hand the peasants, Portuguese and Spanish, are an honest, hard-working people. Too much habituated to "The Man with the Umbrella," they (especially the latter) require attention when earning a daily wage. It is rarely that they make first-class mechanics, but this is largely due to the almost absolute want of education amongst the lower classes.

Generally speaking, they are temperate and law abiding. In spite of a very small police force, safety to the person is as great or greater than in London.

The morality of the country women is decidedly high. If married they are nearly always faithful, even though the husband may emigrate and leave them alone for years. If unmarried it is very rare for them to have more than one lover.

The male peasant in the Canaries, however, is not so faultless. That women should work in the fields is only natural, but the husband, brother, or even son is a species of petty tyrant who struts about the yard like a cock on a dung-hill, and ninety-nine times in a hundred, if on his way to the town in company with his wife and his donkey, rides the animal while the wife carries the burden on her head. A great weight is often so supported. Though a man will carry things when alone, he never does so if a woman is with him. In fact, except during courtship, this slave of a slave does not hold a position one iota superior to that of an ordinary Indian squaw.

Women receive more consideration in Madeira, and in the Azores.

The wants of the poor are few, and when from old age or other reasons it is impossible to earn a living by work, the neighbours, who are probably more or less related, will never allow a family to starve. If room cannot be found in the houses, there are the caves or lava streams in the neighbourhood where dwellings can be erected rent free. Clothing consists of nothing more than a linen shirt and drawers and a worn-out blanket. For food a little *gofio* or potatoes will suffice. The standard of comfort is so small that a bed is not a necessity and to sit all day doing nothing in the sun is only what is customary to everyone during idle moments.



In fact the destitute are nearly as well off as the wealthy, all the administrative expenses of more highly organised charity being done away with, whilst in country districts it is much more difficult to impose upon one's neighbours than it would be upon an appointed officer foreign to the intricacies of local affairs.

In a few parts of the Canaries labour is still paid for in kind. The old valuation was that a *peon* should receive one *almud* of maize or its equivalent. A man with a mule might earn double this or even a little more. A ploughman with a "*yunta*" (pair) of oxen would be paid half a fanega of "*chochos*" (lupines) per day or its equivalent. A ladder made of wood cut in the mountains would be estimated as two, three or four days' labour, and would fetch two, three or four *almudes* of maize in accordance. Even now women with eggs or other country products for sale will sometimes ask how much maize you will give in exchange. The custom only exists in the depth of the country, and is rapidly dying out, to the manifest disadvantage of all concerned. Were it possible to quote values in so stable a medium as grain, the commerce of the islands would at once be liberated from the injurious effect of the fluctuating tokens commonly employed.

Speaking generally, both the richer and poorer classes are content with accommodation far inferior to that common in England. Amongst the labouring classes attention is rarely given to either exterior or interior ornamentation or to the creation of shade by the planting of trees. Ventilation or scientific drainage is unknown, some of the crowded quarters of the towns being dirty to a degree. Thanks, however, to the wonderfully purifying influence of the sun and to the proximity in all cases of mountain and sea, zymotic diseases are not at all frequent.

In a closely built town, such as Santa Cruz, Tenerife, the cooking is very likely performed over a small fire in a dirty little yard, where a few fowls are kept, and the pig, sleeping on the manure heap, acts as scavenger to the house on the principle of let nothing be wasted. This is, however, a bad case, and sometimes the peasantry are particularly clean, but always badly lodged, even when regard is had to the climate.

In a country town such as Puerto Orotava, the accommodation would be better.

In Madeira, houses in the country are generally owned by their occupants and caves are not used. The sanitary conditions are no better, but the Madeira labourer is naturally much nattier and more cleanly than his brethren in the Canaries, who have no idea of anything beyond just living.

In the Canaries the staple food of the labouring class is not bread but *gofio*, which is grain prepared by a method known to the Guanches, namely, by toasting and grinding it with the

addition of a little salt. The chemical result of heat thus applied to the grain is said to greatly add to its value as a nutriment. The best gofio is made from wheat or maize, but any edible seed can be used in times of scarcity. It is mixed with water and eaten in lumps resembling dough. Gofio is eaten in some parts of India.

*Bread* is only eaten in the towns. The loaves are usually called lbs., but often weigh less. When the inspectors of weights and measures are going round, it is customary to announce the fact in the newspaper.

*Potatoes* are so important an article of food that the population could not be supported without them.

*Sweet potatoes (batatas)* and *yams (ñames)* are both rather cheaper than potatoes.

*Salt fish* forms the greater part of the animal food eaten.

*Goat's milk, cheese, figs, fruit,* and sometimes *salt pork* form the remainder of the labourer's diet.

In *Madeira* gofio is unknown and bread is not largely eaten. The chief articles of food are *yams, potatoes, cabbage, pumpkins, lupine, kidney beans, maize porridge, chestnuts* and *fresh fish (tunny, etc.)*. The Rev. R. T. Lowe argues that the pumpkin because of the readiness with which it assimilates itself with fatty substances and because of the large quantity of saccharine and farinaceous material it contains, forms a most nutritious food, a good deal of the muscular power of the peasantry being due to it.

Except during fiestas and holidays the labourer in the country rarely drinks anything but water. There is a certain amount of drunkenness at carnival time, but the people on the whole are abstemious.

Most of the population being to a greater or lesser extent owners of land or members of a family to which land belongs, it is usual about harvest time to see the public works, quarries, etc., almost deserted.

The upper classes maintain a certain geniality towards the employed, and it is probable that the labour question will have gone far towards its solution elsewhere before it becomes very prominent here. Besides this the grinding misery of poverty is unknown. The climate not only makes the wants fewer, but acts with a sedative effect all round.

The hours of labour are generally from daylight to sunset, with an interval of two hours during the day or two intervals of one hour.

## Warning to respect Customs and Prejudices.

It is incumbent upon every visitor, whether he wishes to associate with the islanders or not, to respect their customs and prejudices and to endeavour to conform a little to views which may occasionally clash with his own. Instances could be given of such outrageous behaviour on the part of English and other visitors, who should have known better, that too much emphasis cannot be given to this remark.

The standard of politeness, especially amongst the Portuguese, is a very high one. Though in certain ways the Islanders may be less refined than a well-bred Englishman, their general courtesy is far greater than that common amongst ourselves. Visitors should remember that it is their compatriots who will suffer if they inadvertently or carelessly leave a bad impression behind them.

**Picnics, &c.**—Parties picnicking or lunching in the open should always offer something to those who pass. Unless offered more than twice and pressed this will be refused, but it is as well that at least one member of the party should offer it. This is the custom of the country which should never be omitted. The same rule applies in small country inns when strangers enter and find others at meals.

Again it is usual for strangers meeting in an inn or public conveyance to recognise one another's existence and for a lady to bow to a gentleman who leaves the footpath on her account.

Serious inconvenience has been caused by the foolish manner in which irresponsible Englishmen passing through the islands have openly declared that in their opinion the Canaries should and eventually will belong to England. Gaining conviction by the constant repetition of these sentiments, some have concluded by braying them loudly from the house-tops.

The writer is able to assure his readers that the British Government has no wish to interfere in any way with the Canary Islands nor with any of the Coastlands of Spain nor any desire to create a situation which might enable England to claim an alteration in the existing state of affairs.



## Industries and Agriculture.

The following extracts are from the author's report on the "Social and Economical Condition of the Canary Islands," presented to the Foreign Office and published by the British Government in 1892. (Miscellaneous Series, No. 246. Reports on Subjects of General and Commercial Interest. Spain.)

Madeira was afterwards included and the whole corrected, revised, and brought up-to-date in the successive editions of this work.

Owing to the difficulty of procuring figures in all the islands and to the change in the methods of fiscal registration in the Canaries from values to quantities, the statistics compiled became valueless for purposes of comparison and the writer found himself compelled to abandon his scheme of presenting to his readers what he hoped at one time might be a useful resumé of practical benefit to the mercantile community.

The portions still published are those the author believes to be of general interest. For greater statistical detail the reader is referred to the Consular Reports, etc.

Since the landing of Bethencourt in Lanzarote in 1402, the discovery of Madeira in 1419, and the final subjugation of Teneriffe in 1496, the history of Madeira and of the Canary Islands has been chiefly interesting as a record of agricultural success or failure.

Manufacturing industries have played but a small part in the economical condition of the people and the following remarks will principally deal with the innate capabilities of the land itself.

It is hoped that this part of the work will be of service to settlers in some of the British Colonies where climatic and other conditions are more or less similar to those of the islands under discussion.

### TABLE OF SUBJECTS.

	PAGE
<b>Industries</b> ... ..	D2—D4
Minerals; Shipping; Coaling; the Fruit Trade; Exports (including Minor Industries); Imports.	
<b>Agriculture</b> ... ..	D5—D11
Sugar; the vine; the ice-plant; cochineal; the tomato; the potato; the banana; the orange; pine apples; figs, etc.; the walnut; the osier; the wattle; the carob tree; the tagasaste; the sweet potato; castor oil; the aloe; silk; the manufacture of perfumes; cultivation of bulbs, etc.	
<b>Some indications of the capabilities and value of land in different positions</b> ... ..	D19—D22
Incline of the hills; quantity of water required for irri- gation; seasons and harvests; cereals; land as an investment; waste land tax free; climate.	

	PAGES
<b>Zones of vegetation, forestry, pasture and live stock...</b> ...	D22—D25
The Zones and the plants growing in each; forest land; the planting of pines in Madeira; care of forests; pasture; live stock.	
<b>Method of agriculture and of conveying and storing water</b>	D26—D29
Implements; manure; the Medianero and Bemfeitoria systems; best watered islands; cost of tanks, etc.; pipes; open watercourses; searching for water.	
<b>Results and reasons of the influx of visitors</b> ... ..	D30—D31
Enterprise induced by visitors; storing of food a necessity.	
<b>The Fisheries</b> ... ..	D31—D36
The Selvage islands; the tunny fishery; the great African fishery; results of the researches of George Glas; salting and curing; names of the fish.	

## Industries.

**Minerals** :—Amongst the successive layers of comparatively recent volcanic deposit of which the islands are almost wholly constructed, none of the mineral deposits known to exist have been worked hitherto with markedly successful results.

A society has however been formed (1908) for the quarrying of pumice stone from about the base of the Peak of Teneriffe, and the extraction of sulphur from the summit of the same mountain. Native copper has been found inside the Great Caldera of La Palma.

**Shipping** :—Since the construction of the harbours of refuge in Grand Canary, in São Miguel, and in Fayal, and the provision of greater facilities for landing and embarking merchandise, fruit, etc., in several of the islands, the number and tonnage of vessels calling for coaling and other purposes has increased enormously, especially in Grand Canary and in Teneriffe. Should the proposed canal be made through the Isthmus of Panama, the Azores, by virtue of the fact that they would lie in the direct route between the canal and the chief ports of Northern Europe, would without doubt become equally important places of call and would soon reap the advantage their energy is entitled to, even though at present their reward may be somewhat delayed.

**Coaling** :—As the number of ships calling has risen from hundreds per annum to as many thousands and their tonnage from hundreds of thousands to millions, so the quantity of coal delivered to them has grown from tens of thousands to hundreds of thousands of tons. The future of this branch of trade, which cannot fail to increase as the population of the remoter parts of the earth augments, is being provided for by the installation of new coaling sheds and lighters, constructed on the most modern and improved systems.

**Fruit Trade** :—For many years considerable quantities of onions and potatoes have been shipped to the West Indies, to the West Coast of Africa, etc., but it was not until the early eighties that the supply of bananas, tomatoes, potatoes, etc., to Europe (chiefly to England) was commenced. At first the amount forwarded was small, but by the close of the last century it had increased to truly enormous proportions, some 200,000 tons of produce leaving the islands every year.

A traffic which at first received but scant attention by the commanders of vessels calling for coal, is now so valuable that it is eagerly catered for by every passing ship. Scarcely a year goes by which does not see some fresh firm in the field, competing for the favor of a consignment from the very merchants whose venture has been brought to its present successful state in the face of what at one time almost amounted to discouragement.

It is true that some of the steamship lines, possessed of more foresight than the others, laid themselves out to help the budding industry, and their owners may be congratulated on the fact that they still do the bulk of the carrying trade.

**Exports (including Minor Industries)** :—The profits derived from the supplying of ships with coal and provisions, from the export of fruit and, to a minor degree, from the expenditure of visitors, added to that derived from the older industries such as the manufacture of wine, etc., brought so much money into the islands that the Imports doubled or trebled themselves during the last two decades of the nineteenth century.

Not even in the cochineal epoch were the Canary Islands more prosperous. As regards Madeira, though the island derived less benefit from the export of fruit, compensation was found to a certain extent in the increased quantity of wine sent away, whilst the other sources of income named above were common to both Archipelagos.

Large as the gains were between 1880 and 1900, during the succeeding years they were larger still.

At first the farmers and proprietors of land were afraid that the promised prosperity was too glorious a prospect to be actually realised. Later they thought that it was impossible for so golden a harvest to continue. Lastly confidence in the future was established and land, hitherto planted with cereals or other annual crops, was laid down with bananas, the most remunerative crop of all.

About 1908, owing to competition and lower prices, a check was experienced and in certain districts, more especially where the growers were handicapped by the want of shipping facilities, maize, etc., again began to take the place of the more exotic productions.



There are other industries also, small perhaps in themselves, but of gigantic importance compared with what they were when the fruit trade first made its appearance.

These industries are Embroidery, Wicker-work, Tinned Tunny, Tobacco, etc. (Madeira), and Embroidery, Drawn Linen-work (*Calado*), Cigars, etc. (Canaries).

**Madeira Embroidery** has long been known in most of the European markets, but has never been exported on anything like the scale obtained at present.

**Drawn Linen-work** (*Calado*), though by no means confined to the Canaries, is now derived chiefly from those islands and more especially from Teneriffe. By the enterprise of foreign firms; by the introduction of good designs first from Mexico and later from trained designers in the best markets; by the supply of good material to the workers, this industry, so small at first, has become a source of livelihood to several hundreds of women scattered over an ever-widening district. To it must now be added the sister-art of embroidery (*bordados á mano*) most of which is done in La Palma.

**Cigars**:—Teneriffe and Canary cigars have long been known all the world over. To this established industry has lately been added another, tobacco being now planted in La Palma from Havana seed and a really excellent cigar being manufactured entirely from locally grown leaf.

As the production of fruit and of vegetables, of embroidery and of drawn linen, of wicker-work and of cigars has grown, so the market has extended.

With ships running to all parts of the world, it is obvious that goods can be forwarded without difficulty to any quarter and agencies established in direct communication with the producer.

Thus we find that though perishable goods such as vegetables and eggs go no further than to South Africa, the other articles named, which can travel without damage to any distance, are sent for sale to the furthest corners of the earth.

Though the proportion sold by bumboat men may be small, this branch of trade is important, every article disposed of on a ship serving as an advertisement and creating a demand for others like it in places where its existence might otherwise remain unknown.

**Imports**:—Nearly every manufactured article is brought in from abroad.

Raw food is also imported in large quantities, the production of cereals being so curtailed by the land devoted to the vine and to the fruit trade that the estimated output is only about a quarter of that consumed.

## Agriculture.

**Sugar.**—In Madeira sugar was at one time by far the most important industry. It is stated that in 1552 it gave employment to no less than 2,700 slaves. In 1772, Captain Cook said that he found a prodigious number of negroes and mulattos, some slaves and some free, showing that there was a tendency to intermixture between the whites and the blacks. In 1775, about the time when the wine trade took the first place, slavery was abolished in Portugal. Thus sugar and slavery existed side by side in Madeira as, curiously enough, they seem so often to have done elsewhere.

The cane is said to have been introduced into Madeira from Sicily in 1425. In 1453 the first mill was erected. By the end of the century there were some 120 mills in different parts of the island. About the year 1500, some 35,000 cwt. of sugar seems to have been produced. Although sugar as a crop afterwards practically disappeared, the nunneries of Madeira have remained famous for their sweatmeats until the present day. The replanting of sugar commenced after the vine disease of 1852.

The cane is planted by putting one or two joints of the top of the stem into the ground and watering it. It is ready for cutting in two years and will last some seven years before being replaced. The leaves are given to the cattle.

Owing to the price paid for sugar-cane in Madeira, its cultivation has increased enormously, somewhat to the detriment of the beauty of the landscape. The position is unnatural (1910) the price being regulated by certain complicated fiscal regulations. It seems scarcely possible that the eventual outcome should not become injurious to the general welfare of the island.

**Sugar (in the Canaries).**—But few records are obtainable of the earlier times, but it appears that about 1490 the Canaries were at least partly planted with sugar and had entered into competition with Madeira, then the principal producer. As far back as 1533, there were English factors, representing London merchants, resident in Grand Canary.

During the 16th century the large landowners, who were the immediate result of the conquest, employed negro labour and seem to have made large profits. Lord Verulam (Francis Bacon) writing about 1600, says that being first in an invention "doth sometimes cause a wonderful overgrowth of riches, as it was with the first sugar man in the Canaries."

No figures are now obtainable to show what these exports were, but there is no doubt that the profits, if not the production, decreased early in the 16th century, the islands being unable to compete with the West Indies.



Afterwards, with the exception of a temporary activity due to the vine disease in 1850-52, sugar fell more or less into abeyance. During the last few years a fresh start has been made, and a considerable amount of English and other capital has been ventured.

**The Vine.**—In Madeira.—Before the close of the fifteenth century the vine was introduced into Madeira and from thence into the Canaries. The original plants were obtained by Prince Henry of Portugal from the already famous vineyards of Malmsey or Malavesi in Crete.

Up till 1850, this grape continued to grow and fruit freely, but was then attacked and nearly exterminated by the ravages of a fungus known as the *Oidium Tuckeri*, a disease which first appeared in Kent in 1845, and spread thence to the Continent, the Mediterranean, etc. Hardier species of vines have since been introduced, but the best wines are still made from the old grape budded on to American stock.

The history of the vine in Madeira is even more important than that of sugar. The soil and climate of the island are so favourable to the growth of the grape, that, in face of the large returns now to be gained by forwarding market-garden produce to London, wine still forms the larger part of the total exports.

It formed a part of the stipend of the parish priests as early as 1485, but the first mention of shipments was in 1566, when a pipe was officially valued at 3£200. In 1646, some 2,000 pipes seem to have been exported. In 1800, the record year, 16,981 pipes. The annual export now averages about 6,000 pipes, and the stock maturing about 30,000 pipes.

In 1873, the phylloxera appeared and caused immense damage until 1883, when the growers began to obtain the mastery over it.

The actual produce of the island is difficult to estimate. Jeaffreson, in 1676, computed it at 25,000 pipes, and it is stated to have reached as much as 30,000, though probably the highest during the present century was about 22,000. At present it is estimated at about 10,000 and is expected to increase. Porto Santo, which never suffered from the phylloxera, produces from 800—1,000 pipes.

The fluctuations in price, taking "London Particular" as a standard, have been as follows:—In 1778, £27 per pipe; in 1798, £40; in 1816, £77; in 1826, £46, at which price it remained until 1852. A great rise followed the destruction of the vintage, the year of highest price, viz., £75, being reached in 1865, which was also the year of least exportation. I then gradually fell, until, in 1885, it was £38, at about which price it is still quoted.

The Wine trade in Madeira is probably the best illustration that can be given of the openings for foreigners in this part of



the world, and it must be some satisfaction to an Englishman to know that the chief industry of the flourishing little island of Madeira is due largely, or even mainly, to the exertions of his own countrymen. What has been done before can be done again. Though it may take many years to thoroughly establish a business, it is well for the invalid to reflect that there are still chances even in this minute island, and that there are many places with similar climates where a sick man can live a healthy life and be of assistance to the commonwealth by developing the resources of the country he adopts.

Among the many shippers of Madeira wines, let us take one instance in order to show that expatriation, whether on account of illness or otherwise, is not always a misfortune.

In 1745, a young gentleman, named Francis Newton, left England for Madeira and started in the wine trade. At that time the total export of the island was about 3,000 pipes, the price of a pipe of good wine being about £20. Mr. Newton, who died in 1805, lived to see a total export of some 17,000 pipes, with a gradually increasing value. The price of a pipe of "London Particular" at the time of his death was about £45, and the highest price on record, viz., £77, was touched eleven years later.

It is a well-known fact that Mr. Newton and the partners who afterwards joined him were largely instrumental in this all-round improvement. The wine was produced in enormous quantities a century before Mr. Newton's arrival, but it needed the energy and knowledge of the foreign element and years of hard labour to force the islanders to turn the juice of their grapes into that famous, golden drink which, for a time, swept every other wine out of the market.

The wonderful quality of the wine produced under these new conditions soon attracted the attention of the English officers on the way to and from the East and West Indies, who presently carried the fashion of drinking Madeira into England and afterwards to every English-speaking community. The result was a long period of prosperity for Madeira.

Here, then, we have an instance of an Englishman coming to a foreign country under what must have been disadvantageous circumstances. Yet this man was able to found a business, which is well-known and flourishing concern at the end of 165 years.

Though traders in similar countries to Madeira may not become rich in the London or Parisian sense of the word, there is no doubt that the position of such a firm as that selected is one that may well be envied; indeed, from the vast amount of labour employed, directly and indirectly, it is locally of considerable importance. Scarcely a stranger comes to the island who does not visit their Wine "Armazems," which are certainly one of the

most interesting sights in Funchal, upwards of a hundred men being constantly at work in the various stores.

In any case, a business which can maintain partners both in the Island and in London, and which can profitably occupy a large space in so crowded a town as the capital of Madeira, must necessarily be more or less successful, and the writer sees no reason why Messrs. Cossart, Gordon and Co.'s business should differ materially, except perhaps in magnitude, from that of a number of other firms trading in Madeira or in the Canaries, most of which no doubt reap a fair and proper profit in proportion to their turn-over.

Messrs. Cossart, Gordon and Co.'s house, though one of the most prominent, is by no means the only case in point that could be given, even in the wine trade alone. Historically, the career of the firm is perhaps the most striking, but it appears to the writer that the future of many of the present generation, occupied in opening up the export of fresh fruit or in establishing general commercial relations between Madeira or the Canaries and Europe, may lead to equally interesting results. The names of some of the gentlemen so engaged, possibly some of our own names, as far as that goes, may be cited a century hence as Mr. Newton's name has been cited here, and their memory may also be held up to honour for the same or for very similar reasons.

**The Vine in the Canaries.**—The date of the introduction of the vine into the Canaries has already been given. The frequent references by Shakespeare to Canary Sack prove that the wine was commonly drunk in England in his time.

In consequence of the disease of 1850, the export from the Canaries, which, in 1804, amounted to 48,000 pipes and had gradually fallen in 1845-50 to about 22,000 pipes per annum, almost disappeared. Glas stated, in 1764, that at that time 15,000 pipes of wine and brandy were exported from Teneriffe alone, chiefly to British North America, and that the trade was in the hands of Irish Roman Catholics.

During the time when it was most in request, Teneriffe white wine (Malmsey probably), rose to 75 and 80 silver ducats the pipe, a ducat being worth about 9 shillings.

Owing to the enterprise of a few merchants the trade is again reviving. The export, which was valued at £6,740 in 1884, and at £4,855 in 1885, is now estimated to be worth some £25,000 a year.

Vines in the Canaries are planted on unirrigated slopes and find a congenial home amongst volcanic cinders or slag. They have been and may again become the most important of all products of the country.



The ordinary method of manuring them, when manure is given, is to plant lupine between the vines in the winter and to hoe it in in the spring.

The quality of wine produced by the best houses both in Madeira and in the Canaries, has, for some years, been equal to any made in the palmiest days. Stocks have accumulated largely and it is questionable whether as sound a glass of wine can be procured anywhere else for the same prices as those quoted at present in both archipelagos.

The sugar cane and the vine have always been and still continue the main sources from which the people of Madeira derive their revenue. In the Canaries, however, special crops have been cultivated at various times, prominent among these being the ice-plant, the cochineal cactus and latterly the tomato and the banana. The last named is also grown to a certain extent in Madeira. From both of the groups, potatoes, onions and sweet potatoes were exported in large quantities to the West Indies and to other tropical countries long before the shipment of more perishable fruit to Europe became possible.

**The Ice Plant.**—In 1742, a cura of Lanzarote (D. José García Duran) was captured by the Moors. Whilst in slavery he learned the art of extracting soda from the ashes of the mesembryanthemum.

Returning to Lanzarote, he showed his fellow-countrymen how to do this, with the result that a consignment was sold shortly afterwards to a Venetian Captain (Sanqui) at the price of four reales de plata (about two pesetas) the quintal (100 lbs.). The buyer must have made a large profit, for, in 1810, 150,000 quintales were sold at ninety reales the quintal.

The plants from which the soda was extracted were suitable to the very dry climate of the eastern part of the archipelago and were extensively cultivated there.

According to Viera y Clavijo, those principally grown were the *Mesembryanthemum noctiflorum* (*yerba de vidrio* or *cofe cofe*), *M. crystallinum* (*escarchosa*) and the *Aizoon Canariense* (*patilla*). In 1815, Leopold von Buch found only the second in cultivation and that principally in Lanzarote.

The first blow to the industry was the discovery that soda could be extracted from sea-water and the second was the dishonesty of the shippers, who mixed stones with their remittances and thus helped to destroy the trade.

**Cochineal.**—In the Canaries the next in importance to the vine was cochineal, which was originally brought to the islands in



1826. At first it met with great opposition from those who were afraid that this new and loathsome form of blight would spoil their prickly pears; in fact in the previous century it was forbidden to land cochineal at all. Prejudice was overcome and it was found that the cochineal cactus (*nopalea coccinellifera*; locally, *tunera*), which grows freely in the islands, was the best adapted to the insect's wants; also that the cheapness and abundance of labour and the climatic conditions allowed it to be produced more plentifully and of better quality than elsewhere. Elsewhere had previously been Mexico, Honduras, and Guatemala. In 1814, 176,259 lbs. were sold in London at about £1 16s. per lb.; in 1820, 158,840 lbs. at about £1 5s. 6d. per lb.; in 1830, 297,985 lbs. at about 10s. 6d. per lb.

The first shipment from the Canaries was in 1831. It consisted of 8 lbs., which in 10 years had increased to 100,566 lbs.; in 1850, to 782,670 lbs.; in 1860, when fuchsine was first chemically known, to 2,500,000 lbs.; and, in 1869, to the highest total of 6,076,869 lbs., with a value of £789,993, the medium price for that year in the market at Grand Canary being 3·25 pesetas per lb.

The population at this period was about 270,000, so that cochineal alone produced a revenue of about £3 5s. to every man, woman, and child in the place.

All the aniline dyes were discovered by this time, but were not commercially manufactured to such an extent as to seriously interfere with cochineal. The islanders, however, became somewhat alarmed at the low price and began to talk about over-production and the means of preventing it.

In 1874, the crisis had reached a more acute stage and the price in the London market went down to from 1s. 6d. per lb. to 2s. per lb.—The export in this year was from—

	lbs.
Teneriffe ... ..	2,270,138
Grand Canary ... ..	2,531,176
La Palma ... ..	198,895
Lanzarote ... ..	88,536
Total ... ..	5,088,745

In order to combat the fall a company was formed in Orotava with a capital of £12,000 (Union Agrícola de Tenerife) with the avowed object of placing the cochineal on the market by degrees. Its methods were immediately denounced as commercially unsound by an Englishman, Mr. George C. Bruce, almost the only man who seems to have kept his head. The company in their turn denounced Mr. Bruce and, in May, 1874, heroically

defied all the machinations of the market wire pullers and the competition of any other dye as a rival to cochineal. Mr. Bruce's answer was a journey to Belgium, followed by statistics of the production of aniline at that date, namely about 95,000 cwts. a year at the price of 2 fr. 50 c. per kilo.

The result was, of course, a foregone conclusion. The company was unable to fight the rest of the world. In spite of defiance, the price and production gradually diminished, until, in 1882, the latter was 4,840,262 lbs., and, in 1886, 2,330,947 lbs.

In 1879, the manufacture of aniline dyes received a sudden impulse owing to the tropical rains, which gave rise to rumours of a short cochineal crop, causing the price to jump from 2.45 pesetas to 3.62 pesetas, and even more.

The damage was exaggerated but the evil was done. The merchants, who congratulated themselves upon the ready sale of their old stock at enhanced prices, were astounded and in most cases ultimately ruined by the fall which ensued, the best qualities of dried insect going as low as 10d. and 11d. per lb.

Some slight recovery has taken place now that it is known that cochineal is after all the only red dye which satisfactorily resists hard wear and heavy rain, but the output is now comparatively very small.

Cochineal is still grown, because it is easy to cultivate and because the cactus grows in situations unsuitable for other plants.

**Effects of the boom in cochineal.**—The economical results of the cochineal culture are yet widely felt in the islands. Their influence is still so great that it is impossible to pass them over in a review of general progress.

Immediately after the collapse of the wine trade the owners of land found themselves face to face with an unsuspected mine of wealth which enriched them almost without an effort on their own part. Everyone shared in the golden shower. The peasant was able to gain as much as 2 pesetas (then 1/8) a day, and his wife and children to find constant employment at equally remunerative rates. The merchant and the shipper benefited by a state of affairs where the commonest coin was the gold ounce (£3 4s.) and the expenditure of all classes rose by leaps and bounds.

The price at first was about 10 pesetas per lb., but, fast as the export grew, the market widened. It is true that the quotation gradually sank to 5.12 pesetas in 1849 and to 3.25 pesetas in 1869, but the producers were justified in thinking that a fair but remunerative limit would at length be permanently reached. The gross profits were larger than ever and it appeared as though the gold mine was inexhaustible.



Land was unpurchaseable and everyone wanted to buy. Old streams of lava were broken up and built into walls in order to expose the ancient soil below; hills were terraced where terraces could be made; property was gladly mortgaged at any percentage in order to build new fields, with the certainty that the loan would soon be wiped off. What the cost of all this was can never be known. The labour in many instances was enormous in proportion to the superficial results. It is questionable whether any other country can show farms which, foot for foot, have entailed so much wear and tear of sinew and muscle.

Crowds of dealers were only too glad to buy the cochineal and to employ their capital or credit by storing it. The landed gentry ordered expensive furniture, silver-mounted saddlery and other costly goods from Europe, or spent their time in general dissipation.

Retribution was swift, sudden, and universal. Aniline dyes took the public taste and left merchants loaded with stocks which never ceased to fall; money lenders with heavy mortgages on comparatively worthless property; resident land owners insolvent and a peasant population temporarily demoralised by high wages and easy living.

Below a certain altitude cactus was planted in every corner, grain and most necessaries being constantly imported. Now the bewildered farmer found he must either root the cactus up or starve.

**Attempt to replace cochineal by Tobacco.**—What little had been saved was wasted in building sheds for the drying of tobacco, which it was hoped would take the place of cochineal. A commission was appointed to the islands by the home Government with the object of fomenting the new industry, but the encouragement it gave proved to be a misfortune. The monopoly was sold to a company, which refused to take the tobacco sent in, declaring that it was not up to sample.

**Utter ruin caused by cochineal.**—That riches should lead to poverty seems absurd and paradoxical. However, to give one instance. In 1885, a gentleman from the West Indies built a sugar factory in one of the most productive parts of Teneriffe and not only planted sugar himself, but induced all his neighbours to do so as well. Before any work could be done, he came to the end of his resources and left without paying his rent. The owner of the property was a large landowner in this and in other parts of the island; sugar can only be planted on irrigated land, which is naturally the best. Those who had planted were therefore by necessity the principal men of the neighbourhood. The



factory was practically completed and little outlay beyond coal was needed to set it going. Yet the machinery was allowed to rust and the sugar, just coming into bearing, was grubbed up, because the pecuniary position of the planters would not allow them to speculate by growing a crop of which the return might be temporarily delayed or of which the ultimate result was in the least problematical.

That such a pitiful condition was mainly caused by the excessive profits derived from cochineal is scarcely to be doubted. The steady and sure gains in the wine trade gave no room for extravagance. Though each has benefited the islands, it has been in quite a different way.

**Development of land caused by cochineal.**—The cochineal, growing as it did near the coast, caused a great area to be brought under cultivation which was formerly worthless, for instance, the slopes above Santa Cruz in Teneriffe. The land so reclaimed, however, was not paid for when the collapse came and left a load of debt which greatly impeded development for years to come.

The fairest monuments of the wine trade on the other hand are those cool, spacious old houses, whose roomy balconies and broad staircases look down into a shady "patio" or yard, and which stand in reproachful contrast to the buildings run up at a time when everyone was anxious to be rich. There are a few exceptions to the rule, but, taking it all in all, the modern village or small country town is little more than a collection of mud huts, daubed with lime. The degradation of art in the Canaries is largely to be attributed to the utilitarian style of architecture adopted in the cochineal times by choice and continued by habit or by necessity afterwards.

**Cultivation of cochineal.**—When the plants are ready to receive the insect, this is either dusted on to the leaf in the embryo state during the rainless season, or allowed to attach itself to a piece of muslin in the spring, the muslin being laid for a few minutes on to a box full of "madres" (mothers) in a room kept at a temperature of 85°. The muslin is then fastened on to the leaf by means of thorns taken from the wild prickly pear cactus (*Opuntia Dillenii*).

The female is wingless and is characterised by the tarsus, which terminates by a peculiar hook. The body is round and fat like a currant and terminates in two small hooks. When once attached to the leaf she cannot move any more.

White cochineal is killed by being smoked with sulphur, and black cochineal by being shaken in sacks. The colour is due to the process employed in preparing the insect for the market.

The land in the Canaries which owes its existence to cochineal is now largely planted with tomatoes, etc. If it has now risen to the value of its original cost, it is because of the fruit and vegetable trade, started and fostered by Englishmen and maintained entirely by the English demand.

In Madeira conditions have been somewhat different. The climate not being dry enough for cochineal, wine has, roughly speaking, always been the chief article of export. As already stated, the cultivation of the vine has little of the speculative element in it. Reclamation of land in Madeira was therefore originally undertaken on a more stable basis.

**Tomatoes**, which are most largely cultivated in the Canaries, are considered one of the most profitable crops, but are looked upon as possibly temporary, and are more subject to disease than cereals.

Seeds imported from England are planted in August and September, and the plant pricked out on irrigable land when from 6 in. to 8 in. high.

The Canary-grown fruit is of splendid flavour and the earliest ripens by about October.

**Potatoes**.—On low-lying lands potatoes must be planted on irrigable soil even in the winter. Ground, however, at a slight elevation, if it is largely mixed with tufa or rotten pumice-stone, can do without watering. The earliest shipments commence about the end of January, and the magnum bonum is the favourite. Seed potatoes are shipped from England as soon as they can be procured in September or October.

The English potato produces from 3 to 5 fold, and, exceptionally, up to 8 fold. It has been found that if the same potato is replanted for several years it degenerates in quality but becomes more robust, and yields from 7 to 15 fold. It has almost replaced the potatoes formerly in favour.

The potato disease first appeared in October, 1843, near La Laguna, and, by 1845, had spread to all the islands. At the time it committed great ravages. Unfortunately it again shows a tendency to become malignant. This is very likely because tomatoes and potatoes are planted in succession, or even at one and the same time. It has been found that it is less prevalent in breezy situations, but planting in exposed positions leads to great loss in case of storms.

Neither tomatoes nor potatoes are shipped very largely from Madeira, but the peasants at a certain level obtain three crops of potatoes off the same land every year.

**Bananas.**—Bananas only grow on irrigable land up to an altitude of about 800 feet. They are shipped more especially from the Canary Islands. Land planted with bananas takes about eighteen months to come into bearing.

The roots should be planted about 12 feet apart in rows about 12 feet apart. This gives about 400 cepas or about 1,200 to 1,500 trunks to the Canary fanegada. These should produce about 800 bunches a year. New land planted with old trunks will give fruit at from 4 to 6 months earlier than similar land planted with suckers.

Each trunk produces one bunch or *racimo*, after gathering which the trunk is cut down. In the meantime suckers spring up. These should be reduced to not more than three, the suckers being chosen so that they may come forward in their due order of succession.

Expenses consist of labour, plenty of water and some manure (generally chemical).

About the year 1905, bananas in the Canaries began to suffer from the attacks of mealy bug, thrip, etc., and the necessity for combating these pests has considerably increased the expense of cultivation.

When fairly started, a banana plantation gives little trouble, but the plant is rather difficult to kill should it be necessary to clear the ground for other crops.

The leaves used as litter rot slowly, but form a good manure, or they are used for packing. The stems serve as fodder for cows.

There are some 57 varieties of the banana in the Philippine Islands and the Indian Archipelago alone. The original home of the plant is believed to be Southern Asia, but it is known to have flourished in America for the last four centuries. The banana most common in Madeira and the Canaries is the Chinese banana (*musa chinensis*). The botanists of ancient Greece, who accompanied Alexander the Great into the Punjab, classed the banana as a cross between the maize and the sugar cane.

It will grow in nearly every soil except those composed almost entirely of sand or calcareous matter and is said to produce 133 times as much as wheat and 14 times as much as potatoes.

The value of the banana as an article of food has hitherto been only partially recognised.

When cooked or dried, the fruit is very digestible. A large fortune awaits the man who can place a palatable, white banana



flour on the market, if only as a food for infants and invalids. By fermentation, a refreshing but somewhat intoxicating beverage can be produced.

**Oranges.**—As a rule, oranges grow best on the south side of the Canaries. The finest oranges in the world are to be found at Telde in Grand Canary. They also grow well in Teneriffe in the Bufadero Valley and at Granadilla. Those from Telde weigh sometimes as much as ten ounces and are very thin skinned.

Oranges first ripen in November and could be shipped in considerable quantities were they carefully picked and packed without bruising.

The trees of all the islands suffer from a slow consumptive disease believed to have been hatched in America, and due to an insect which attacks the root. Dr. Morris, of Kew, says that this and other maladies, such as scale, can easily be combated.

**Pine Apples.**—These are grown largely in the Azores and to a small extent in Madeira, in both cases under glass. They do not seem to be a very remunerative crop, but a new manure (a French patent) has recently been tried and promises remarkably good results.

Beyond the above five fruits practically none, with the exception of a few **French beans** from Madeira, are as yet shipped to England unless in very small quantities or by way of an experiment.

**Figs, grapes, etc.**—Among the more delicate fruits, such as the grape, mango, custard apple, apricot, etc., is the fig. This grows in great variety, and is especially good in the Island of Hierro.

The **Walnut** is kiln dried and sent away to a small extent. The tree grows well in suitable situations in all the islands.

The **Osier** will grow well wherever it can be planted on the bank of a stream or of a tank. Stripped osiers from Madeira (*salix viminalis*) are said to fetch the highest price in the London market. No use has so far been made of the bark. The plant is believed to be indigenous, is easy to propagate and grows freely.

The **Black Wattle** grows luxuriantly in all the islands and might be used to replace mountain scrub or even be planted on land now devoted to lupine. So far it has not been planted commercially in the islands.

**The Carob Tree.**—Some attention has been directed to this plant as a means of reclaiming dry hill-sides and producing fodder for cattle. In certain parts of Italy, even horses are fed on nothing else but the pod of the bean mixed with bran.

It will grow in dry, stony situations, bears fruit very freely and is a great ornament to the landscape. Specimens may be seen both in Madeira and in the Canaries, but the extraordinary conservatism of at least the Canary peasant prevents the fruit being utilised as an article of food. The writer has seen the ground covered with pods left to rot within twenty yards of a poor man's pig-sty. When remonstrated with, the man merely shrugged his shoulders and said that no one thought of picking them up. Though urged to do so, he would not gather a few for his pigs, even by way of an experiment.

**The Tagasaste** (*Cytisus Proliferus Varietas*), is a plant indigenous to La Palma in the Canaries and but little cultivated even in the islands themselves. It deserves mention from the importance it may ultimately acquire in countries where the pasturage is liable to suffer from long droughts.

Attention was first called to it by the late Dr. Victor Perez, of Orotava, who experimented on it for years. The result of his labours may be obtained in pamphlet form ("Le Tagasaste, etc.," Kirkland Cope & Co., London).

**The Sweet Potato** (*Ipomœa Batatis*), of which the Demerara variety is chiefly cultivated, is a tuber of the convolvulus family. It grows freely at most altitudes, giving up to 3 crops a year. The leaves are given to the cattle. Large quantities of spirits are extracted from it in the Azores.

**Castor Oil.**—Besides the yield of the bean of the castor oil plant as an oil producer, the refuse, after pressing, is a valuable manure to a country where such plants as the potato and the tomato are cultivated to any extent. The plant grows wild in the most arid situations and could no doubt be made to fill up a great part of the waste unirrigated lands on the south side.

**The Aloe.**—Like the castor oil and the prickly pear this thrives almost anywhere and seems to require no moisture. That in the islands has not hitherto been cultivated commercially, although samples of sisal hemp made from it have proved to be of the very finest quality. The variety grown in the Bahamas, the *Agave Sisilana* of Perrine or *Bahama Pita*, does well in all the islands and might be cultivated with advantage.

**Silk**—Silk was once a considerable export and continues to be grown and woven on a small scale in La Palma.

**The Manufacture of Perfumes, Culture of Bulbs, etc.**—

This is an industry which has as yet received no attention, yet one for which Madeira and the Canary Islands are singularly well adapted, not only by virtue of the climatē, which allows of so wide a range of culture, but also because both archipelagos are directly connected by passing steamers with so many parts of the world. The women engaged in embroidery in Madeira or in the making of drawn linen, etc., in Teneriffe, are the very class which might be expected to adapt itself most easily to the manufacture of scented fats by the *enfleurage* process. Accustomed to keeping their fingers scrupulously clean, they might be relied upon not to impart disagreeable scents to the fat and thus to spoil it for the European market.

Of all places in the islands, Realejo in Teneriffe should be that first inspected for the purpose. Lying one thousand feet above the sea and in a situation where the sun rises late, the flowers might be gathered in the morning with all their perfume latent in the petals.

To form some idea of the magnitude to which such an enterprise might attain, it is sufficient to quote a few figures from the South of France.

In Cannes, Nice and Antibes the perfume factories used in the year 1895, 3,332,000 kilogrammes of flowers for pomades and 1,666,000 for scented oils, to which must be added millions of kilogrammes of scented plants distilled for essences. The culture of bulbs is conducted on a colossal scale. In Hyères alone some 5,000,000 white hyacinth bulbs, 400,000 narcissus bulbs and 100,000 lily bulbs are produced annually. A single perfume factory on the Riviera uses every day in May some 40,000 lbs. of orange flowers, 20,000 to 30,000 lbs. of rose leaves and 4,500 lbs. of jasmine flowers. The same factory consumes during the season some 1,100,000 lbs. of mint, 220,000 lbs. of peppermint and 22,000,000 of lavender. To all this must be added an enormous seed culture and an immense export of cut flowers, a trade which is hardly likely to pay in Madeira or in the Canaries. In Grasse some 80,000 kilogrammes of violets are grown every year and, on the top of all this, comes the manufacture of crystallised fruits and high-class bonbons. Altogether on the Riviera there are over 1,000 hectares of land devoted to the cultivation of flowers.



## Some Indications of the Capabilities and Value of Land in Different Positions.

Land in Madeira or in the Canaries is so difficult to purchase that the following remarks are made more with a view of giving visitors an interest in their excursions, than of helping them to settle in a country where no foreigner is likely to get a fair percentage on the price that would be asked of him for land of any real value.

Many of those visiting Madeira or the Canaries will do well to examine the country closely and to study the methods of tillage and irrigation thoroughly, with a view to availing themselves of the knowledge gained should they afterwards decide to live in one of the British Colonies where the climate and conditions are similar. In his "Guide to South Africa," the author repeatedly refers to these little islands of the Atlantic, especially when treating of such subjects as market gardening.

**Incline of the hills.**—Owing to the rapid incline, often 16 per cent., at which the cultivated coast lands rise towards the hills, narrow zones or belts are formed, each of which is more adapted to one culture than another. These zones may be said to be divided by irregular isothermal lines which approach or separate in accordance with the steepness of the incline or the atmospheric conditions induced by the contour of the immediate neighbourhood. Under equal conditions the fall in temperature is about 1° Fahrenheit to every 300 ft., and the fall in the barometer 1 inch for every 1,000 ft.

On the nature of the product of any particular zone the value of land within it greatly depends. Other considerations are: firstly, whether it is irrigable or dependent upon rains and, in the former case, what is the quantity of water obtainable and what the size and cost of the tanks and means of storage or distribution in proportion to the area cultivated; secondly, what is the nature of the soil itself; thirdly, what are the means of communication with the outside world.

**Quantity of water required for irrigation.**—There is naturally a great difference between the value of land into which water can be carried and that where reliance must be placed upon the rains. Though the foreigner is not likely to find the purchase of land remunerative he may perhaps employ his capital advantageously in the storage or carriage of the water necessary for irrigation.

In the islands most distant from Africa, including Grand Canary, droughts are unusual and rarely serious, but in the Eastern Canaries, and especially in Fuerteventura, great distress is sometimes felt for want of rain, although in a wet year it is here and in Lanzarote that the greatest quantity of grain is produced.

The seasons are fairly well fixed. Rain may be expected to fall on the coast lands early in October and to cease early in May.

Sir J. B. Lawes and Dr. Gilbert's observations show that wheat, oats or hay, in a climate like that of England, can mature into average crops with an allowance of 700 tons of water per acre, provided that the moisture be distributed at the proper time. One inch of rain equals about 100 tons per acre. In England there is an average of 25 inches. The meteorological statistics given further on show that even on the sea shore at Grand Canary there is more than the seven inches absolutely necessary. Granted that in a drier climate, where the water must be run into the fields, double the quantity named, *i.e.*, 14 inches is required, it is obvious that, except in Grand Canary and the S.E. side of Teneriffe, the requisite amount falls even on the coast.

But water is best stored on the hills, where, as has just been said, the greatest rainfall is to be found. To this rain could be added the moisture which fringes of trees, judiciously planted, would extract from the mountain mists, more common be it remembered in the summer, when a renewal of the supply is most wanted, than in the winter. So copious is the quantity sometimes extracted by trees, that anyone standing to the leeward of a small pine whilst the warm mid-day mist is passing would be wet through in five minutes, though the ground outside of the radius of the tree would be perfectly dry.

**Seasons and harvests.**—The gathering of vegetables or the harvest of cereals depends, to some extent, on the zone in which they are grown and the time of planting. On irrigable lands a wide latitude is enjoyed as regards nearly everything. On land which is watered by the rain, the winter is of course the season of growth and the summer of rest.

**Cereals.**—On unirrigable land the staple crops are cereals and beans, only one crop of wheat or barley being usually obtainable per annum as compared with two, three, or even four of potatoes, maize, tomatoes, etc., where water is available. However, where the rainfall is sufficient, the question of purchasing water does not affect calculations, and, at the usual altitude at which wheat, etc., is best grown, every crop is almost a certainty. The worst

land should produce from twelvefold to twentyfold, and good land (high up) fiftyfold or more. It is said that in a good year in Lanzarote and Fuerteventura as much as two hundred and fortyfold has been gathered.

Wheat land is generally situated at from 1,600 ft. to 2,300 ft. above the sea, the irrigated lands below being planted with crops which mature more quickly.

In Madeira, wheat rarely gives more than 12 bushels to the acre, rye less, and bearded wheat only eightfold or ninefold. For this reason it has been found advantageous to plant pines on many of the hills. This subject is referred to under "Forestry."

Irrigated land is usually sold including water rights, which must be separately mentioned in the deed of conveyance.

No owner of waste land is inclined to sell to foreigners at spot prices. This is because of the idea that, by their greater knowledge, they will turn it to some good account, the holder preferring that a neighbour should be the seller and allow him to copy the methods of the astute stranger and to make the gains himself.

This timorous feeling is a great bar to the progress of the islands, as it prevents the acquisition on reasonable terms of tracts of country or of forest land, capable of yielding some small return, but remaining useless because the owner clings to them and yet is unable to derive any benefit from them personally.

**Popularity of land as an investment.**—One reason for the dearness of land is that those who have saved money in the islands, or who have emigrated and been fortunate, know of no other investment than houses and land. The few wealthy people have no idea of distributing their money in various countries, or of undertaking works of public utility on a large scale where a certain amount of risk is encountered. Unfortunately they do not even care to plant timber as a source of future wealth, but prefer to hold land giving hand to mouth crops and perhaps only returning them a very low rate of interest, or to lend money on mortgage, which is, after all, only another way of buying real estate.

The custom of working a farm on the part profit system will be found described under "methods of cultivation."

**Waste land tax free.**—In the Canaries absolutely waste land, brought under cultivation, may obtain a concession to be considered as a "colonia agricola," and the farm and those resident upon it obtain the privilege of exemption from both territorial and municipal taxes during a period of about 20 years.



**Climate.**—Some indications have now been given of the price of land and the crops to which it is adapted, and the next consideration is the climate. But little need be said about this in connection with agriculture, except that it is notably as perfect as can be found, and that on irrigated land, barring disease, one year's crop is as good as another.

The matter has been fully entered into in another part of this volume where figures of temperature, rainfall, etc., will be found.

The statistics given, however, only refer to the towns, and by no means indicate the actual amount of moisture available in the islands. The rainfall and the vapour collected on the mountains, especially when covered with wood, exceeds by many times that to be measured below the Monte Verde.

### Approximate Zones of Vegetation, Forestry, Pasture and Live Stock.

The value of land in the islands depends greatly upon its altitude, firstly, because of the crops cultivable; secondly, because of the methods of irrigation available and, thirdly, because of the facilities of carriage.

Firstly as regards the various plants which flourish in the various zones, where conditions as regards water and soil are favourable.

**Climatic Zones.**—Zone I.—*From the sea-level to about 500 ft.*—Pine apples (indifferently), and among fruit trees, date palms (in protected situations), papoyas and tamarinds. Tomatoes as a winter crop on the North side of the Canaries. (*Limit of coffee in Madeira.*)

Zone II.—*From the sea-level to about 1,000 ft.*—Bananas, sweet potatoes, gourds, arrowroot (little planted), cochineal, castor oil, sugar, bamboo, cape-gooseberry, and among fruit trees alligator pears and custard apples. Potatoes as a winter crop. Tomatoes as a winter crop on the South side of the Canaries. (*Limit of figs in Madeira.*)

Zone III.—*From the sea-level to about 2,000 ft.*—Tobacco, tomatoes, potatoes, yams, onions, beans, lentils, peas, lucern, sweet peppers, flax, garbanzos, lupine, tagasaste, and *cereals*, wheat, bearded wheat, barley, maize, rye and oats (little planted). All vegetables grown in England, such as Globe and Jerusalem artichokes, parsley, lettuce, carrots, turnips, cabbages, cauliflowers,

spinach, vegetable marrows, etc. Celery is not first rate, and asparagus is rather bitter. Among fruits, the mango, pitanga, vine, orange, lemon, citron, almond, olive, fig, prickly pear, mulberry, pomegranate, peach, apricot, custard apple, guava, coffee, Japanese loquat, melon, melon pear, strawberry, granadilla (edible passion flower). (*This applies to both Madeira and the Canaries except for coffee and figs.*)

Also the osier and the *arundo donax*, a cane largely used in making trellises and tying up tomatoes.

Zone IV.—*From 1,000 ft. to 4,000 ft.*—The limit of cultivation very rarely exceeds 4,000 ft., and is generally reached at 3,500 ft. or thereabouts.

Many of the plants of Zone III. can be cultivated at the higher level, but the most general crop is cereals, followed by beans or lupine, the last of which is eaten down by the oxen for the sake of manure, as turnips are eaten in England, helping to prepare the land for the next year's harvest.

The chief crop at a great altitude is the Spanish chestnut, but many of the hardy fruit trees, such as apples, pears, &c., do very well, and there seems no reason why some of the large expanses of cinder and pulverised lava in the upper hills should not be planted with vines if shelter were provided by the planting of belts of trees.

Zone V.—*Forest Land.*—In the Canaries, heather, laurel, bracken and scrub sometimes commence as low down as 1,200 ft., but the usual commencement of what is known as the "Monte Verde," or green mountain side, is at 2,500 ft. to 3,200 ft.

The forest itself has been cut down so much, that it is rare to find pine trees growing below 2,500 ft., and many of the *pinars*, or pine forests, only commence at about 4,000 ft.

The greatest height at which any shrub or tree is found is that of the Cañadas of Teneriffe, where the broom, known as the *retama* (*Cytisus fragrans*) grows from 5,600 ft. to nearly 11,000 ft. The *pinus Canariensis* (*téa*) lives at a height of nearly 8,000 ft., and the native cedar (*Juniperus oxycedrus*), now probably extinct, once grew at about the same level.

The principal forest trees are the pines, of which the *pinus Canariensis* is peculiar to the islands, and a slow-growing but most valuable timber; the *viñatigo* (*Persea indica*) or native mahogany; the *palo blanco* (*Picconia excelsa*), a hard white wood; the *barbusano* (*Phoebe barbusana*), a dark wood of great strength and endurance, used for making the beams of wine presses; the *til* (*Oreodaphne foetens*), also a hard, dark wood; the *Laurus Canariensis* and several species of heather, one of which (*Erica arborea*) grows upwards of 40 ft. in height, and measures sometimes over 5 ft. round the stem.

On Mount Ruenzori, west of Lake Victoria Nyanza, trunks of this heath are to be found indicating a height of about 80 ft., the base of the same mountain being clothed with laurels resembling those found in the Canaries. These two trees would appear therefore to share with the dragon tree and perhaps with a few other plants the honour of representing the class of vegetation commonly found on the African continent in the period intervening between the Ice Age and the Tropical Epoch of to-day. The subject has been referred to when describing the dragon tree in the introduction to Teneriffe.

There are many more trees, including the cork, the elm, the oak, the eucalyptus, the plane, the beech, the cypress, the coral tree, the stone or umbrella pine (*pinus pinea*), the camphor, india-rubber, wattle, pepper, acacia, araucaria, rose apple, etc., etc. In fact, it is evident that in a climate where the orange and the fir, the mango and the blackberry find a congenial home, it is difficult to name any tree which cannot be cultivated with more or less success.

In Madeira the conditions are much the same, except that the mountain scrub commences as low as from 1,000 to 1,500 ft., and that the *pinus Canariensis*, so widespread in the Canaries, is wanting. Owing to the discovery, however, that a pine forest pays better than bad wheat land, a great many hills are clothed with verdure which would otherwise be bare and brown.

The tree usually planted is the *pinus pinaster*. The method of planting adopted is for the owner of the land to allow some neighbouring peasant to sow the pines together with a crop of barley and to take the barley for his trouble. Where the land has been long under cultivation, it is sometimes difficult to get the pines to start growing. Two or 3 years may be wasted in this way, but, when once started, they continue to do well and to renew themselves. In from 3 to 4 years the trees are large enough to make trellises for the vines; in 4 or 5 years they are large enough to make supports for the same. In good positions, they can be chopped up for firewood in about 7 years, though sometimes they take from 10 to 12. To get a plank a foot wide the tree must remain over 20 years. It does not pay to let them go beyond the firewood stage, and woods are then generally sold by auction.

**Care of Forests.**—There is but little natural forest land left in Madeira, and even in the Canaries most of the woods have been burnt or destroyed. At present their chief value lies in the charcoal made from the heather and laurel, and from the sale of cattle finding food within their limits. The Spanish Government,



however, has commenced to recognise the value of planting trees. If orders are properly carried out, the goats kept away from young plantations and the peasants prevented from carrying away pine needles to make manure, the importance of wooded hills as a means of storing water can be indefinitely increased and the mountains, which are now too often bare, can be covered with a more wonderful and more varied verdure than was ever the case before.

The malignant neglect of centuries has been mercifully rendered almost harmless by the shortness of watercourses and by the adamant nature of the rocky spurs, whose millions of pockets still hold the earth, which only requires a minimum of expenditure to become a source of revenue in more ways than one.

**Pasture.**—In certain parts of the Canaries extensive open pasture land is found, but most of the feeding ground is actually in or about the Monte Verde.

Probably the most economical method of fattening cattle for the ships or for export is by means of planting land with beans, lupine, etc., and allowing them to eat it off.

Those animals put out to graze are generally goats, although of course both sheep and oxen are seen feeding on the hills.

In Madeira the centre of the island is almost entirely surrounded by a stone wall, the pasture land inside belonging as a rule to the adjacent municipality in the same way as common land does in England.

**Live Stock.**—A certain amount of cattle is bred for the use of ships and for export. Sheep are worth little and are small. Goats are of a good breed for milk, but the flesh is not much relished. Fowls, etc., do well but fatten badly.

In the Canaries horses are bred small but wiry, and are willing workers, but mules and oxen are more usually employed for heavy work. The oxen, which do all the work in Madeira, are handsome animals, and sometimes of enormous size, but the bone is very large in proportion to the meat, and they rarely cut up well. Jersey cattle have been imported into the Canaries and, when crossed with native stock, do well. Camels and donkeys are chiefly bred in Fuerteventura and Lanzarote and are of a good strain.

## Method of Agriculture and of Conveying and Storing Water.

The *implements* used in agriculture differ but little in the two archipelagos. The plough is simply a beam with an iron point, usually drawn by oxen, or in the eastern islands by camels. The greater part of the work is done with a heavy hoe, single and narrow in districts where the ground is hard, broad and partly forked where it is soft. It is customary for an overseer to sit by and watch the men working, even if they are very few in number. All threshing is done by oxen on paved floors, and the broken straw is used as fodder. Half the straw is considered fair payment for the work of threshing.

In the Canaries the oxen are harnessed to a sledge, of which the bottom is studded with sharp pieces of hard basalt (*pedra viva*). Such a sledge is to be seen hanging up in the British Museum as one of the few existing examples of the stone implement age. Maize is separated from the cob by hand machines imported from America. Owing to the hilly and stony nature of most of the land, it is questionable whether the introduction of heavy machinery would be advantageous.

**Manure** is poor in quality owing to the way horses and cattle are fed. Less is given to the ground than is customary in England, great reliance being placed on the recuperating power of the sun during the summer rest.

**The Medianero system in the Canaries.**—The overseer is often also the “medianero”—that is to say, a species of tenant or bailiff receiving a share of the profits. The terms between the owner and the “medianero” naturally vary, but the following may be said to be a fair sample agreement.

The proprietor provides a house for the “medianero” and his family.

When cereals, potatoes, vegetables or fruit are the crops, the proprietor pays for half the seed but none of the labour. The results are divided equally. When tomatoes, onions or bananas are the crop, the proprietor pays half the expense of preparing the land and planting and half of the gathering and sending into market, but none of the intermediate labour.

When cochineal is grown, the proprietor pays half the seed (or rather insects) and half of the subsequent labour.

All manure raised on the farm is used on the farm unless otherwise arranged. When any is bought the proprietor pays half.

When water has to be bought half is paid by the proprietor, but all the labour of watering is provided by the "medianero."

The proprietor buys the live stock, replaces that which dies and pays the half of any food which has to be bought. The proceeds, such as milk, eggs and young are divided.

Repairs are paid for by the proprietor.

Taxes are generally two-thirds proprietor and one-third "medianero." Any losses are halved.

When land is let, the tenant can claim for improvements.

**The Bemfeitoria system in Madeira.**—In Madeira it is customary for the land to belong to two parties, the *senhorio*, who owns the soil and the water brought to irrigate it, and the tenant (*colono*) who is called *caseiro* or *meyro*, according to whether he has a house upon the property or not.

The *colono* owns all the property which is the work of man. With the exception of houses he may construct what he likes and cannot be ejected without full compensation, the amount being fixed by official arbitrators (*avaliadores*).

The produce of the land is halved or divided according to arrangement. The system has one advantage, viz., that it causes the tenant to add improvements in order to secure his tenure, and therefore leads to the ground being brought up to its full bearing capacity.

The tenant tills, plants, manures and threshes, or, in the case of grapes, presses out the juice. He generally tries to grow as many vegetables as possible as it is difficult for the landlord to keep them under supervision and to claim his half share.

The system of *bemfeitorias* is not altogether popular with landlords, who sometimes find it very difficult to get their land back if they wish to cultivate it themselves. The tenant has to keep all work in repair.

**Irrigation.**—The next important consideration is water. Speaking generally, at over 1,500 feet, irrigation is rendered unnecessary by reason of the rainfall.

It may be taken as correct, that, in proportion to their size, the quantity of water available for irrigation is as follows:—

First, Madeira; second, Grand Canary; third, Teneriffe; fourth, La Palma and Gomera; and fifth, Lanzarote.

The last has very few springs; Fuerteventura and Hierro have none.

Fuerteventura and Lanzarote depend on the rain which occasionally does not fall in the winter, both the islands being comparatively low and bare of trees. Lanzarote is essentially volcanic. In Fuerteventura there are considerable deposits of



limestone which retain the moisture, with the result that water can generally be found by digging wells.

Hierro, owing to its position and to its being more directly in the course of the Gulf Stream, is less dependent upon springs.

The same remark applies to both Gomera and La Palma, in the latter of which, owing to the steep descent of the coast, water in any quantity issues from no more than four principal springs, all situated on the walls of its famous and gigantic crater.

Teneriffe, from its formation and the height of its mountains, should apparently be best supplied. As a matter of fact, parts of it are well watered, but if ten times as much water were available it could be profitably used.

There is no doubt that a fortune is awaiting the first man who perambulates the province with a properly inspired hazel-twig. Curiously enough no one seems to have thought of sinking wells in the great plain of the Cañadas round the Peak, although there are good indications of the presence of large underground springs.

Grand Canary is to be congratulated on the possession of many springs, especially of one near Tejeda, estimated to yield a supply of 2,500 cubic metres per diem (88,289 cubic feet), a part of which is carried to Las Palmas by means of an aqueduct many miles in length. Grand Canary is better supplied with tanks for storing water than Teneriffe.

In Madeira some of the levadas are very long. That known as the Levada do Furado is about 50 miles long. Municipal water is put up for auction every year. The holder has the first right to it at the price he was last paying, but no one may buy it for the purpose of re-selling. A fair sample of the cost of water at Funchal is that given by the Levada Piornaes near S. Martinho, one of the largest levadas, where 8 to 9 dollars a year is paid for a fourth part of the stream for one hour every fortnight.

The same quantity of water in the Canaries would scarcely be obtainable. A mere dribble will sometimes cost a dollar or more for one single hour. At Telde in Grand Canary sufficient water for 1 fanegada of land once in 15 days has been bought for £24 per annum.

In the Azores irrigation is rarely necessary.

**Cost of tanks and watercourses.**—Tanks in the Canaries are often constructed of stone and locally burnt lime and lined inside with hydraulic cement. The estimated cost is 1 dol. a pipe—that is to say, roughly speaking, a tank 40 ft. long by 40 ft.

broad by 10 ft. deep would hold 1,000 pipes, and costs about £200 less exchange. No estimate can be made of the cost of the stone watercourses, because this depends so much upon the nature of the course, etc. Over a long distance it might average from 3s. to 4s. a yard.

In Grand Canary and elsewhere, when the earth is suitable, tanks are also made by means of embankments. A clay-like soil is required which will not allow of the least percolation, a matter which must be reported on by an expert.

With a large tank of this description as much as 15 pipes of water, or even more, may be stored at the cost of one dollar. The relation of the width of the base to the height of the embankment must be as four to one, and the angle of elevation must not exceed 40 to 45 degrees. Nothing but grass must be planted on the sides. Trees and plants with long roots may break up and destroy the embankment. The area occupied by an earthen as compared with a stone tank is necessarily much greater in proportion to the water each will hold.

In Madeira the government levadas completed before the commencement of the Levada do Furado measured 110 miles and cost 500,000,000 reis or about £100,000, and the private levadas 130 miles at a cost of 230,000,000 reis or say £46,000. The government levadas include compensation and are usually those built in the most inaccessible positions.

Pipes in every way would be better and more economical than stone channels because of the loss by evaporation, by leakage and by robbery from the latter.

The judicial authorities can compel any landed proprietor to allow the passage of water through his territory on consideration that he is indemnified beforehand.

In cases where wells or horizontal tunnels are made for the sake of finding springs, the jurisdiction or parish in which the works are situated are able to demand that, in case of injury to their own springs, they shall continue to receive from any new supply which may be found the same quantity of water as before, and that, if the works result in an increase in the total flow, 25% of this increase shall be retained for their use.

Water having been brought to the land is distributed by means of furrows which are successively filled. For household purposes it is stored underground in cemented tanks. Drinking water is usually fetched in barrels from the public fountain.

## Results and reasons of the Influx of Invalids and Casual Visitors.

In the Canaries, where industrial occupations, with the exception of the manufacture of wine and of sugar and the building of a few coal lighters and schooners, are confined to the making of a little linen and woollen cloth for household use, of a certain quantity of drawn linen (*calado*), of a few casks for the vine growers, of the plaiting of straw, rolling of cigars and baking of a certain quantity of tiles and unglazed jars, a new and lucrative source of employment has been created by the wants of an army of foreigners which invades the islands regularly every winter.

The change in the last few years is marvellous. In Grand Canary beautiful hotels with extensive lawns and flower gardens have sprung up from what was a sandy desert and an Anglican church has been built. In Orotava (Teneriffe) an inaccessible and useless lava stream is crowned by a spacious and handsome building in whose gaily planted grounds are an Anglican church and parsonage, the former being even provided with stained glass windows and encaustic tiles. In Santa Cruz (Teneriffe) a group of handsome hotels has been erected for the express purpose of accommodating foreigners and a third Anglican church has been built. In Güimar, in La Laguna and in Tacoronte there are more hotels, whilst the village must indeed be small which does not boast its inn or fonda, all bent on turning a certain quota of the golden shower in their own direction.

The facilities for movement have also been increased. Conveyances constantly ply for hire in Funchal, Santa Cruz (Teneriffe), and Las Palmas. In addition to this there are livery stables and in Madeira, Teneriffe and Grand Canary there are fixed motor car services. To these must be added the Mount Railway in Madeira and the Electric Tramways of Teneriffe and Grand Canary.

Altogether the islands are to be congratulated on the progress made and, if a large part of this is due to the energy of the foreign element, it may justly be hoped that the enterprise of strangers will now be seconded by a more liberal local co-operation.

The above remarks apply less to Madeira, because it preceded the Canaries by several years and the change lately has not been



so rapid. Even here, however, fresh hotels are springing up or older ones are being enlarged to meet the constantly growing demand.

What amount of money is actually left by visitors to the two archipelagos is open to argument, but it is certainly very large. A part of this is expended on articles brought from England, such as bacon, butter, cheese, etc., but up till now far more English capital has been sunk in new enterprises than has been taken out.

Many of the wealthier Spanish residents hold shares in the hotel companies, but it is doubtful whether their class has profited by the movement, as the price of meat, eggs, fowls, vegetables, etc., has naturally risen. The working classes, however, have been directly benefited by the same cause.

The Canary islander is slow to receive an impression and still slower to risk any money by acting on an idea, but measures are being taken by the peasantry to meet this new demand and doubtless all classes will be gainers by it sooner or later.

Besides the profits derived from what is consumed, many of the visitors come to stay, invest money in land or in building houses, take part in trade, or, by spreading a knowledge of the islands and their products, are an important help in the extension of markets.

Good shops and stores have been started to provide for the wants of visitors, and merchants generally have increased their stocks. Establishments have also sprung up for the manufacture of ice and soda water, dairy produce, etc., but the bulk of the supplies of all kinds are derived from a native source.

As regards food for invalids there is much to be done. Game is far from plentiful, fowls are thin and dry, and the excellent frozen mutton, etc., which passes through the harbours is unobtainable. Cellars or cool chambers where these can be stored are required and would pay as an enterprise if properly worked in agreement with the hotels, which would probably be glad to offer some sort of guarantee.

Though many things may be wanting as regards feeding there is also much to be thankful for. Fruit and vegetables are always plentiful and a good native cook will make delicate dishes out of more unpromising materials than those found in English markets. Fish is also in some instances delicious and the climate is a very good sauce which compensates for many shortcomings.

### The Fisheries.

On the warm and shallow banks along almost the whole of the West African Coast, fish of several species are to be found in great numbers. The deep water stretching from Cape Noun

on the north to Cape Blanco on the south, and bounded by the Canary Islands on the west, affords a fishing ground which has been stated by competent authorities to be perhaps the best in the world.

There are other less important fisheries, notably that of the Selvage Islands, half-way between the Canaries and Madeira, where a number of fishing boats are engaged during August.

There is also a company engaged in catching and tinning tunny at Funchal, Madeira (erected in 1909-10), and another, working on a much smaller scale, in Gomera (formerly at Gando Bay, Grand Canary, 1884).

It is with the first (West African Coast) fishery that this report must deal. It is by far the most important and by virtue of its situation with the sands of Africa on the one side and the shores of Lanzarote and Fuerteventura on the other, the best adapted to any extensive operations in which the scientific drying and salting of fish or extraction of oil might be carried on at a profit.

So far but little has been done to develop it, partly because of the apathy of the islanders, and partly because of the caution or jealousy of the Spanish Government.

As far as the Moors themselves are concerned they have no boats and the population near the coast is extremely scanty, but there is no doubt that if Cape Juby or the neighbourhood ever becomes practicable for the purposes of trade, there is a good opportunity for those with enterprise and capital.

Certainly one of the greatest authorities on the subject was George Glas, the Herodotus of the Canary Islands, who actually started drying fish at Mar Pequeña in 1765 or 1766.

What he might have done cannot be said, as he was seized and imprisoned by the Spaniards, but, in his "History of the Canary Islands," published in 1764, he gives the following particulars. His remarks apply almost as much to the present time as they did to his.

That the *cherne*, a sort of cod, caught there is "much better tasted than the cod of Newfoundland or those of the North Sea," and that "another fish of a yet more excellent taste is caught here, called *mero*" (the *mero* is the pollock). That about 30 ships of an average of from 15 tons to 50 tons were engaged, the smallest carrying 15 men and the largest 30 men. That during the spring the fish congregate to the north, but gradually go southward, where they are found in the autumn and winter.

The fish are very voracious and bait may readily be caught near the shore by trailing at the rate of about 4 miles an hour, or horse mackerel can be taken with the rod and line and a piece of red flannel or other lure.

In fine weather a bark, if well manned, can often load up in 4 days, the *sama* and *cherne* being taken in from 15 fathoms to 60 fathoms of water.

The fish are gutted and washed and stacked to drain; then salted and stored in the hold; but Glas says: "They do not, like the French on the banks of Newfoundland, wash their fish a second time and resalt them, so that they will not keep above 6 weeks or two months."

Glas was a practical sailor and goes on to describe the kind of ships necessary, which, he states, must hold a good wind on account of having to beat up against the north-north-east breezes. These blow almost constantly on these coasts except close to Africa, where the wind blows off shore in the morning and landward in the afternoon. For this reason, he says, it is customary for barks to run out early in the day and fish till the afternoon, when they sail back under the shelter of some promontory and cure the fish they have caught. Needless to say this morning and evening breeze would be of particular service to curers on the African beach.

It must, however, be stated that Glas found, after setting up his establishment at Mar Pequeña, that the boat he had brought was of no use. It was while seeking another in the Canaries that he disappeared into prison at Teneriffe.

He says these barks make 8 or 9 voyages a year from Grand Canary, but stop at home for repairs from the middle of February to the middle of April, when the fish are only found to the northward and in a place where the coast is much exposed to the north-west wind common at that time.

Glas sailed round both Fuerteventura and Lanzarote, noted the prevailing winds and tides, made charts of the harbours, passed along and explored all the Barbary coast and personally visited places which would even now remain practically unknown were it not for the praiseworthy exertions of the British Admiralty; experimentally fished in the waters he wrote about and eventually determined to gain his livelihood, or perhaps his fortune (for Glas was not a poor man), by their help. It is only fair that any conclusions he came to should receive the most careful consideration and be treated with the greatest respect.

Glas says:—"It is strange that the Spaniards should want to share the Newfoundland fisheries with the English when they have one much better at their own doors—I say better, for the weather here and everything else concur to make it the best fishery in the universe. What can be a stronger proof of this than the Moors on the Continent drying and curing all their fish without salt or by any other process than by exposing them to the sunbeams, etc."



He afterwards says, "That the English have no reason to be apprehensive of the Spaniards ever being able to bring it to any degree of perfection so as to rival them in the Spanish and Italian markets," from which it will be seen that Glas in his way was a prophet.

Poor Glas was imprisoned in the Fort of San Cristóbal, next the mole at Santa Cruz, Teneriffe. At the end of eighteen months he made his position known by writing messages on crusts of bread, which he threw over the wall. Someone picked one of these up and eventually the British Ambassador obtained his release. On regaining his liberty, Glas found that his wife and daughter had fled from Morocco on the sack of the factory (Port Hillsborough) which he had established there. With them he took sail for England in the "Earl of Sandwich," but a mutiny broke out during the voyage, all the officers and passengers being murdered and the ship scuttled. So ended the most deliberate attempt yet made to open up these valuable waters.

Instead of the 30 ships employed in Glas's time, various estimates place them now at from 50 to 80.

Most of the boats belong to Canary and most of the salted fish (*pescado salado*) is landed at Canary, Teneriffe or La Palma *en route* for its destination, a large proportion being actually consumed in the islands. As in the time of Glas, it is still badly cured, and its high smell and emaciated appearance when discharged from the boats is almost revolting.

A few boats fitted with tanks are now bringing fish to Grand Canary and Teneriffe alive, keeping them so pending the arrival of purchasers.

On the Island of Graciosa, north of Lanzarote, are spacious sheds, erected for the drying and curing of fish. Because the position was too far north for ships to run readily home or for some other reason, the buildings usually stand idle.

In 1884, an American was engaged in negotiations with the Spanish Government with the object of obtaining a concession to build curing sheds in the south of Lanzarote. For years he was passed from one official to another without result. In 1885, he was unfortunately drowned off the Lanzarote coast.

There is no such fishery near Madeira but the market is usually plentifully supplied, more especially with tunny, which forms one of the chief supplies of the poorer classes and of which three species are caught.

Salt fish is consumed in much smaller quantities than in the Canaries and comes principally from Canada, being of much better quality than the *pescado salado* mentioned above.

Pilchards are caught off all the islands, but not in sufficient quantities to make a paying oil industry.

Ships entering at night will often notice the water covered by a multitude of lights. These come from the fishing boats which burn a fire in the bows for the purpose of attracting the fish. The anchors used are composed of wooden prongs to which a heavy stone is fastened. These, as is the case with the sledges used for threshing, are a relic of the stone age.

Laws have been passed against the use of dynamite, but this destructive method of catching fish is far too commonly practised.

**List of the Edible Fish**, commonly caught off Teneriffe, as given by D. Felipe M. Poggi y Borsotto in his "Guia de Santa Cruz de Teneriffe," 1881.

(Those fish marked with a \* are most appreciated.)

- |                                                       |                                                             |
|-------------------------------------------------------|-------------------------------------------------------------|
| * Abadejo, abad (cod fish). <i>Gadus Pollachius</i> . | * Congrio (conger eel). <i>Muræna Conger</i> .              |
| * Aguja (needle fish). <i>Esox Belone</i> .           | Cornudo. <i>Squalus Zigoëna</i> .                           |
| Albacora (var. tunny). <i>Scomber Albacares</i> .     | * Curvina (var. hake). <i>Merlus</i> .                      |
| Almeja (mussel).                                      | * Dorado (gilt-poll). <i>Sparus Aurata</i> .                |
| Atun (tunny). <i>Scomber Thynnus</i> .                | * Escolar. <i>Rovetus Pretiosus</i> .                       |
| * Bésugo (var. sea bream). <i>Sparus Pagrus</i> .     | Fula.                                                       |
| Boga (var. herring). <i>Sparus Boops</i> .            | * Galana. <i>Sparus Mœna</i> .                              |
| Bonito (var. tunny). <i>Scomber Pelamis</i> .         | * Goraz. <i>Sparus Synagris</i> .                           |
| * Bosinegro. <i>Sparus Pagrus Rubescens</i> .         | * Guelde. <i>Blennius Webbia</i> .                          |
| * Breca (bleak). <i>Sparus Erythrinus Minor</i> .     | * Herrera. <i>Sparus Morminis</i> .                         |
| * Brota. <i>Gadus</i> .                               | Hurel. <i>Scomber Glaucus</i> .                             |
| Búcio (sea snail). <i>Buccinum</i> .                  | * Langosta (var. lobster). <i>Locusta Marina</i> .          |
| Burgado (periwinkle). <i>Nerita</i> .                 | Lapa (limpet). <i>Patella</i> .                             |
| * Caballa (horse mackerel). <i>Scomber Hippos</i> .   | * Lenguado (sole). <i>Pleuronectes Linguala</i> .           |
| * Cabrilla. <i>Perca Cabrilla</i> .                   | * Lisa (large grey mullet). <i>Múgil Cephalus</i> .         |
| Calamar (var. cuttle fish). <i>Loligo</i> .           | * Logobante (var. lobster). <i>Astacus Gammurus</i> .       |
| * Camarón (shrimp). <i>Cancer Squila</i> .            | * Longorón (var. anchovy). <i>Clupea Encrasicolus</i> .     |
| Cangrejo (crab). <i>Cancer</i> .                      | * Mero (pollock). <i>Gadus Monopterygius Cirratus</i> .     |
| Cantarrera. <i>Scorpena Scropha</i> .                 | * Morena (var. lamprey). <i>Morena Nigricans Unicolor</i> . |
| Catalineta. <i>Sparus Lurta</i> .                     | * Morion, the male of the Morena.                           |
| Catalufa. <i>Priacanthus Boops</i> .                  | * Palometa (var. mackerel). <i>Scomber Glaucus</i> .        |
| Cazón (tope). <i>Squalus Galeus</i> .                 | * Pampano (gold-line). <i>Perca Labraj</i> .                |
| * Cerruda. <i>Sparus Spinus</i> .                     | * Pargo. <i>Sparus Annularis</i> .                          |
| * Cherne (ruffie). <i>Sparus Orphus Cernua</i> .      | Peje-perro. <i>Labrus Rubescens</i> .                       |
| * Chicharro. <i>Scomber Trachurus</i> .               | * Peje-rey. <i>Scomber Amia</i> .                           |
| Choco (var. cuttle fish). <i>Jibia</i> .              | Peje-tamboril. <i>Tetrasdon Honckenii</i> .                 |
| * Chopa (var. sea bream). <i>Sparus Melanurus</i> .   | * Peje-verde. <i>Laurus viridis</i> .                       |
| * Conejo del Mar. <i>Scomber Pelagicus</i> .          |                                                             |

- |                                               |                                               |
|-----------------------------------------------|-----------------------------------------------|
| * Picuda. <i>Esox Sphyrana</i> .              | * Salmonete (surmullet). <i>Mullus</i>        |
| Pulpo, or Capullo (octopus). <i>Polipus</i> . | <i>Surmuletus</i> .                           |
| Raya, or Chucho (var. skate). <i>Ralae</i> .  | * Sama (sea bream). <i>Abramis</i>            |
| * Rascacio. <i>Scorpena Porcus</i> .          | <i>Marinus</i> .                              |
| Roncador (in Spain). <i>Perca Striata</i> .   | * Sardina (pilchard). <i>Clupea spratus</i> . |
| Roncador (in Canaries). <i>Trigla</i>         | Sargo (sea-roach). <i>Sparus sargo</i> .      |
| <i>Günardus</i> .                             | Trompetero. <i>Centriscus</i> .               |
| * Rubio (red gurnard). <i>Trigla</i>          | * Vieja. <i>Labrus Psitta Corostratus</i> .   |
| <i>Thirundo</i> .                             |                                               |
| * Saifia. <i>Sparus Variegatus</i> .          | <b>Fresh Water:—</b>                          |
| Salema, or Pachonas. <i>Sparus</i>            | * Anguila (fresh water eel). <i>Murœna</i>    |
| <i>Cantharus</i> .                            | <i>Anguila</i> .                              |



## FORMS OF ANIMAL AND VEGETABLE LIFE IN MADEIRA AND THE CANARY ISLANDS.

THE following remarks are necessarily incomplete and are only intended to serve as a reference for those wishing to have some rough idea of the Fauna and Flora. The writer hopes at some future time to go into the matter more thoroughly. In the meantime he will be very glad to receive corrections or suggestions.

A list of some of the works issued will be found in the Bibliography.

### Fauna.

**Birds.**—Canon Tristram of Durham, Father Ernesto Schmitz and Father Jayme de Gouvea Barreto of the Seminario, Funchal, Dr. Ernst Hartert of Tring, and Herr Rudolf von Thanner have, at various times, very kindly corrected the author's notes with the following result.

**Madeira.**—202 different birds have been collected, of which 36 breed in the island; 4 birds are common to Madeira and the Canaries but unknown elsewhere; 2 are found in the above islands and in the Azores and 4 very distinct and some less apparent forms are peculiar to Madeira.

**Canary Islands.**—212 species of birds have been collected in the Archipelago, of which 85 breed there. Besides the 4 referred to above as being also found in Madeira, 22 others are, so far as is known, peculiar to some one or more of the Canaries.

Amongst these are two very large species of pigeon, very distinct from the peculiar pigeon of Madeira; a large blue chaffinch, peculiar to Teneriffe, with sub-species in Grand Canary, both confined to the pine forests; the trumpeter bullfinch, which breeds in the South of Teneriffe and others of considerable interest.

A few birds of Fuerteventura and Lanzarote are distinct from those of the other five islands and belong to the desert inhabitants of North Africa. Amongst these are the Houbara bustard and the black oyster-catcher. The sand grouse and the Canary chaffinch occur in Fuerteventura only. The cream coloured courser is now known to breed as far to the West as Teneriffe (South coast only).

**Azores.**—About 120 species of birds have been collected in the Archipelago, of which 26 or 27 breed there. The only bird known to be peculiar to the Azores (Western St. Michael's) is the grey bullfinch ("Priol") which is said to be dying out.

**Reptiles.**—Mr. Yate Johnson says that in Madeira there is only one lizard. The Loggerheaded Turtle is found off the coast. Canon Tristram was again kind enough to help and added the following:—In the Canaries there are a vast number of species of lizard, but all belong to the Mediterranean or North African fauna with the exception of three, one very common throughout the islands, another in Lanzarote and a third only found on a rock off Hierro.

**Batrachians.**—Two species of frogs have been introduced into both Madeira and the Canaries.

**Fishes.**—The only fresh water fish in both Madeira and the Canaries is the eel.

Madeira. About 250 different marine fishes have been taken and their species determined. A portion of an illustrated work on the subject was issued by the Rev. R. T. Lowe and several papers by the same author and by Mr. Yate Johnson, both of whom have described many new genera and species.

The marine fishes of the Canaries have not received so much attention. The most complete work on the subject is probably that of Messrs. Webb and Berthelot, 1839. A list of names is given in this book under the heading of "Fisheries."

**Insects.**—Mr. Yate Johnson classified 1,331 insects found in the Madeiras. His list is given below with some slight alterations, most of which are due to the kindness of Father Ernesto Schmitz. Mr. Wollaston in "Insecta Maderensia," a most elaborate work, described 483 species of beetles. His researches were afterwards extended. The most complete catalogue is that published by M. Albert Fauvel of Caen, who gives (corrected list) 555 species.

Canon Tristram said that in the Canaries there are several species of diurnal lepidoptera, as well as many South European and North African forms and not a few introduced from America. The number of butterflies and moths given below was revised in 1910 by Mr. W. W. White of Güimar (Teneriffe), whose collection, now in the Oxford University Natural History Museum, is almost complete.

	Species.	
	<i>Madeira.</i>	<i>Canaries.</i>
Diptera (two-winged insects, <i>e.g.</i> , gnats, house-fly, etc.)...	250	550
Hymenoptera (ichneumons, gall-flies, wasps, ants, etc.)...	217	
Coleoptera (beetles) ... ..	685	930
Hemiptera { Heteroptera (bugs)...	54	
{ Homoptera (aphides, etc.)...	14	
Thysanoptera (midges) ... ..	6	
Lepidoptera Rhopalocera (butterflies) ... ..	11	30
do. Heterocera (moths) ... ..	101	300
Orthoptera (grasshoppers, locusts, cockroaches, etc.) ...	19	11

		Species	
		Madeira.	Canaries.
Neuroptera (dragon flies, white ants, etc.)	... ..	22	
Trichoptera (caddis-flies, water-moths, etc.)	... ..	10	
Aphaniptera (fleas) ... ..	... ..	3	
Dermatoptera. Forficulidae (earwigs)	... ..	12	5
		1,404	
Arachnida (spiders) ... ..	... ..	over 120	
Miriapoda (centipedes) ... ..	... ..	10	

(It is believed that there are over forty Miriapoda in the Canaries.)

**Land and Fresh Water Shells.**—The most complete work on this subject is "Testacea Atlantica," by Mr. Wollaston, 1878. In it he gives the mollusca of the Madeiras as 158, of which 6 live in water and 152 on land. Of these 70 are peculiar to Madeira; about 40 to Porto Santo; and only 3 or 4 common to all the Madeiras.

The writer has not been able to obtain any complete or satisfactory information regarding the Canaries.

**Marine Mollusca.**—Mr. Yate Johnson, who gives the matter in some detail, says that about 300 or 400 species have been taken in the Madeiras. Mr. Robert McAndrew classified some 156 species in 1854, and the Rev. R. B. Watson 382 in 1897. Others have been discovered by the Rev. Canon Norman, but the result of his labours has not yet reached the author's hands.

The Marine Mollusca in the Canaries have been only partially collected. The writer believes that some 150 species have been classified.

**Cephalopods (Cuttle Fish).**—Eleven in Madeira, described by M. A. A. Girard, and at least as many in the Canaries.

**Bryozoa or Polyzoa.**—Mr. Yate Johnson stated that he possessed over 100 species found in the Madeiras. Canon Norman (*see Bibliography*) described 139 species in 1909.

**Cirrepedia.**—In the Madeiras there are over a dozen.

**Crustaceans.**—Numerous both in the Madeiras and Canaries, but the number of species wanting.

**Worms (Land worms).**—Four species are known in the Madeiras, and D. Ramon Gomez states that there are 5 or more in the Canaries.

(Sea worms).—Dr. Langerhans collected upwards of 240 species in the Madeiras. Species in the Canaries not known.

**Echinodermata.**—In the Madeiras 10 species of sea-urchins and several star-fish are given by Mr. Yate Johnson. In the Canaries 4 sea-urchins and 5 star-fish by D. Ramon Gomez.



**Acelaphae.**—The Portuguese and the Sallee man-of-war are known in both Madeira and the Canaries.

**Zoophytes.**—Mr. Yate Johnson mentions 30 corals and 10 sea-anemones in the Madeiras.

**Foraminifera.**—The same writer says that 60 species have been found in his collection made off the Madeiras.

**Sponges.**—In the Madeiras about 70.

By dredging and wading Mr. Isaac C. Thompson, F.L.S., F.R.M.S., collected in Grand Canary 5 species of nudibranchs, several axidians, a few species of star-fish, sea-urchins, actiniae, etc. By the tow net in Orotava 65 species of Copepoda (of which 23 are found in British waters). He states that the surface water in Orotava is more prolific than in Grand Canary.

A most valuable and interesting work on ocean dredgings, soundings, &c., which includes descriptions and a series of magnificent illustrations of various forms of life existing chiefly in the waters surrounding the Azores, is "Campagnes Scientifiques" by Albert I., Prince of Monaco. The colouring of some of the plates is delicate and lovely beyond description.

## Flora.

**Trees and large shrubs.**—In Madeira there are some 80 species, of which 11 are peculiar to Madeira and the Canaries; 2 peculiar to Madeira and the Azores; 4 to Madeira, the Canaries and the Azores, and 6 to Madeira alone.

The author has been told that the number of forest trees in the Canaries is about 42 (*see* overleaf).

**Flowering plants.**—Mr. Yate Johnson's list in Madeira includes 363 genera and 717 species, of which Monocotyledons 70 genera and 128 species, and Dicotyledons 293 genera and 589 species. Some 80—90 are peculiar to Madeira and about 110 to Madeira and other Atlantic Islands.

Of truly wild plants, flowering or otherwise, Dr. Morris says that the Canaries contain some 800. Dr. Christ says that 414 of these are endemic and 392 are found on the adjoining African coast, or occasionally in the south of Europe. These, when left alone, show no tendency to disappear.

**Ferns.**—In Madeira 45 varieties have been classified, of which 3 are peculiar to Madeira and 5 to Madeira and other Atlantic Islands (Macaronesian).

In the Canaries Dr. Morris states that there are 30 varieties, of which 5 are endemic.

**Lycopods.**—In Madeira 4. In the Canaries 3.

**Mosses.**—More than 100 mosses and about 50 species of Hepatica have been collected in Madeira by Mr. J. Yate Johnson.

**Lichens.**—In Madeira about 145 are known (1910).

**Fungi.**—A collection of 154 varieties made by Father Jayme de Gouvea Barreto in the Madeiras, have been classified by Father C. Torrend (1910).

**Marine Algæ.**—About 60 species have been collected in the Madeiras and 110 in the Canaries by Dr. Hillebrand. In 1895-6, Mlle. A. Vickers collected 136 species chiefly in the neighbourhood of Las Palmas. Their names and habitats are given in "Annales des Sciences Naturelles," 8me. Série, tome iv, 1896. Masson et Cié., Paris. Some of the algæ are very pretty.

**Trees and Shrubs** (*continued*).—Don Arturo Ballester, Chief Engineer of the Department of Forests of the Canaries, gives the following list of trees and shrubs growing wild in the Canaries, including both indigenous and acclimatized. Names in Latin and Spanish (*italics*).

*Visnea mocanera* (*mocan*)\*; *Ilex platyphylla* (*naranja silvestre*); *I. canariensis* (*aceviño*); *Catha cassinoides* (*peralillo*); *Rhamnus glandulosus* (*sanguino*); *Pistacia atlantica* (*almácigo*); *P. lentiscus* (*lentisco*); *Teline canariensis* (*codeso blanco*); *Cytisus proliferus* (*escobón*); *C. prolif. var. Palmensis* (*tagasaste*); *C. albidus* (*escobón blanco*); *Spartocystis nubigenus* (*retama blanca*); *Retama rhodorrhizoides* (*retamón*); *Spartium junceum* (*r. amarillo*); *Ceratonia siliqua* (*algarrobo*); *Prunus lusitanica* (*hija*); *Tamarix canariensis* (*tarajal*); *Viburnum rugosum* (*follado*); *Sambucus palmensis* (*sabugo*); *Arbutus canariensis* (*madroño*)\*; *Erica arborea* (*brezo arboreo*); *E. scoparia* (*tejo*); *Olea europæa* (*acebuche*); *Notelæa excelsa* (*palo blanco*); *Ficus carica* (*higuera salvaje*); *Pleiomeris canariensis* (*marmolán*); *Heberdenia excelsa* (*aderno*)\*; *Apollonias canariensis* (*barbusano*); *Persea indica* (*viñátigo*); *Laurus canariensis* (*laurel*); *Oreodaphne foetens* (*til*); *Myrica faya* (*faya*); *Salix canariensis* (*sauce*); *Juniperus sabina* (*sabina*); *J. cedrus* (*cedro*); *Pinus canariensis* (*pino tea*); *Dracæna draco* (*drago*); *Cistus monspeliensis* (*juagarzo*); *Rhodocistus berthelotianus* (*jara*); *Rhamnus crenulata* (*leña negra*); *Teline ramosissima* (*gildana*); *Pyrus aria* (*manzanero*); *Kleinia neriifolia* (*berode de costa*); *Plocama pendula* (*balo*); *Prenanthes canariensis* (*alfife*); *Echium giganteum* (*taginaste*); *Ricinus communis* (*tártago*); *Euphorbia dulcis canariensis* (*tabaiba dulce*); *E. Mauritanica* (*t. morisca*); *E. sylvatica* (*t. salvaje*); *E. canariensis* (*cardón*); *Bosea yerbamora* (*hediondo*); *Webbia canariensis* (*granadillo*); *Rhus coriaria* (*zumaque*); *Cneorum pulverulentum* (*leña buena*); *Adenocarpus viscosus* (*codeso del pico*); *Rubia canariensis* (*tasaigo*); *Periploca lægiovata* (*cornical*); *Rhodorrhiza scoparia* (*leña Noel*); *Convolvulus floridus* (*guaidil*); *Messerschmidia fructicosa* (*duraznillo*); *Rumex lunaria* (*vinagrera*).

Of these, six yield timber with a density greater than that of water.

Three of them, marked by stars, formerly constituted the source of the fruit supply of the indigenous inhabitants.



## METEOROLOGICAL OBSERVATIONS.

The greatest care has been taken to make the following statistics as accurate as possible. Many of them have been averaged by the author, the monthly tables not always being added up by the recorders. This gave a large amount of work and accounts for some of them spreading over so few years.

This opportunity is taken of thanking the gentlemen who were so very kind as to supply them and to allow of their publication.

FUNCHAL, MADEIRA.														No. of years of observations.		
Temperature. Shade.	Mean of Mean Daily	60	60	60	60	60	60	60	60	60	60	60	60	60	60	25
"	Minimum	63.9	60.5	57.3	55.7	55.1	55.2	57.6	59.6	62.4	64.4	64.4	64.4	64.4	64.4	19
"	Range	9.9	9.8	9.3	9.5	10.0	9.9	9.4	9.2	9.4	9.2	9.2	9.2	9.2	9.2	"
Moisture of Atmosph.	Rel. Humidity	Sat. 100	66.0	68.3	68.2	69.0	66.0	63.4	65.9	65.9	65.5	65.5	65.5	65.5	65.5	"
Rain. Amt. of	Mean Monthly	Inches.	2.30	4.78	4.10	4.58	2.64	2.83	1.75	1.07	1.07	1.07	1.07	1.07	1.07	"
"	No. of days on which rain fell (or of an inch or more)	—	8.7	10.0	10.7	12.0	6.7	8.4	7.0	5.7	5.7	5.7	5.7	5.7	5.7	11
"	" during day time	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sunshine records have not been taken in Madeira. Absolute Maximum, July, 1882, 90.5. Absolute Minimum, March, 1883, 45.7. Temperature of Sea at Funchal, Maximum, 75°, Minimum, 63°.

Total annual rainfall, 26.71 inches (17 years' observations). During 1895-6 no less than 58.28 inches of rain was measured at 250 feet above the sea. Of this 18.43 fell in October and 9.12 in February, 1895. This abnormal weather was followed by a long drought both in Madeira and in the Canaries.

Observations were taken at an altitude of 82-89 feet, at 9 a.m. and 9 p.m., in the years 1826 to 1831, and 1865 to 1881, by the Posto Meteorologico, Fortaleza, Funchal, and by Drs. Heineken and Renton. Piazzi Smyth, working from observations made in 1834-35 by Dr. Mason, estimated the mean difference between the wet and dry bulbs as 4.60 F. His Relative Humidities for that year average about 8 per cent. more than those given above. It will be noticed that none of these exceed 70 per cent., an incomprehensibly low figure for a warm oceanic climate.

NOTE.—When required the mean maximum can always be found by adding the mean daily range to the mean minimum. The absolute maximums and minimums only include those brought to the notice of the writer and may therefore be incorrect.

## LAS PALMAS, GRAND CANARY.

				October	November	December	January	February	March	April	May	No. of years of observations
Temperature.	Shade.	Mean Daily	...	71.4	67.6	64.7	62.3	62.9	63.0	64.6	66.5	5
"	"	Minimum	...	66.8	63.2	59.7	57.8	57.9	58.8	60.0	61.9	"
"	"	Range	...	9.2	8.9	9.0	9.1	10.1	9.5	9.2	9.2	"
"	Sea.	Surface.	...	72.4	70.1	67.5	65.7	65.1	65.4	65.9	67.3	"
Moisture of Atmosph.	Rel. Humidity	{ Day ... { Night...	Sat. 100	68	66	65	68	66	66	65	65	"
Rain. Amt. of	Mean Monthly	Inches	"	76	73	75	73	75	74	74	74	"
"	No. of days on which rain fell ('01" or more)	"	"	106	175	157	168	0.57	0.79	0.40	0.35	"
"	during day time	"	"	6	11	12	10	5	7	4	2	"
Sunshine	Total amount ...	Hours	"	189	165	161	168	183	189	190	218	"

Absolute Maximum, 95°, Sept. 15, 1897. Absolute Minimum, 47°, February, 1884.

Total annual rainfall, 8'348 inches. At San Mateo, 2,680 feet above the sea, the annual rainfall is estimated at 25 inches.

Observations were taken at 9 a.m., noon, 3 p.m., and 9 p.m., by Dr. J. Cleasby Taylor, M.B., C.M. Edin. Univ., M.R.C.S., Eng., by whom the above figures were kindly supplied, and the absolute minimum by A. H. Bechervaise, Esq.

Observations taken during two winters by Dr. Brian Melland will be found in his work, "Climatic Treatment in Grand Canary". Tables of comparative statistics, for which there is no space in this volume, will be found in the book named and in "The Health Resorts of the Canary Islands," by Dr. J. Cleasby Taylor.

## SANTA CRUZ, TENERIFFE.

	October	November	December	January	February	March	April	May	No. of years of observations
Temperature. Shade. Mean Daily	71°0	69°0	66°0	64°0	63°0	64°0	65°0	68°0	8
" " Minimum	{ 74°2	{ 68°7	{ 56°0	{ 56°0	{ 60°8	{ 61°9	{ 64°3	{ 67°0	"
" " Range	{ 63°0	{ 59°0	{ 15°0	{ 13°0	{ 53°7	{ 53°3	{ 57°3	{ 59°4	"
" " Rel. Humidity	{ 66°0	{ 62°2	{ 15°0	{ 13°0	{ 53°7	{ 53°3	{ 57°3	{ 59°4	"
Moisture of Atmosph. Rel. Humidity	{ 15°0	{ 15°0	{ 15°0	{ 13°0	{ 15°0	{ 15°0	{ 14°0	{ 15°0	"
Rain. Amt. of	{ 16°4	{ 13°1	{ 67	{ 73	{ 66	{ 66	{ 62	{ 60	9
" No. of days on which rain fell ('01" or more)	67	64	67	73	66	66	62	60	9
" " during day time	0·98	1·59	2·48	1·97	1·64	1·53	0·58	0·31	22
State of Sky (0 clear, 10 fully covered)	7	6	9	11	9	8	7	2	"
Sunshine. Mean Daily Hours	5	4	5	7	7	5	5	1	"
	4	4	5	5	4	4	4	3	5
	5·4	4·4	4·4	5·4	6·7	6·0	6·7	7·9	

Absolute Maximum, 30th July, 1893, 103°. Absolute Minimum, 17th January, 1885, 46°8'.

Total annual rainfall, 11·72 inches (17 years).

Observations were taken at an altitude of 118 feet, at 11 a.m. and 5 p.m., in the years 1880 to 1889 (partial). Rain, 1867 to 1889, by Sr. D. Francisco de Aguilar y Fuentes, Ayudante de Obras Publicas, Santa Cruz de Tenerife, by whom the above figures were kindly supplied.

The figures in Italics were taken in Salamanca, on the upper outskirts of Santa Cruz, 250 feet above the sea, in 1893 only, by Captain E. H. Baines, who was good enough to allow the writer to use them.



PUERTO DE OROTAVA, TENERIFFE.		(70 feet.)												No. of years of observations			
		January	February	March	April	May	June	July	August	September	October	November	December				
Temperaturé.	Shade.	Mean Daily	...	Fo	61.2	61.6	62.6	64.0	68.3	69.8	72.5	73.3	72.7	71.2	67.1	63.7	8
"	"	Minimum	...	"	54.4	54.5	55.6	57.1	58.6	62.6	65.9	66.7	65.6	64.4	60.0	56.7	"
"	"	Range	...	"	13.6	13.7	13.9	13.9	14.5	14.3	13.2	13.6	14.0	13.7	13.9	13.6	"
Moisture of Atmosph.	Rel. Humidity	"	9 a.m.	Sat. 100	71.3	67.7	70.3	69.5	69.1	69.2	72.9	73.0	72.1	73.4	73.0	72.2	"
"	"	"	"	"	79.4	77.1	79.1	80.9	77.9	79.7	83.6	86.4	83.9	83.1	81.0	78.9	"
"	"	"	Average	"	75.4	72.4	74.7	75.2	73.5	74.4	78.3	79.7	78.0	78.2	77.0	75.5	"
Rain.	Amt. of	Mean Monthly	Inches.	3.10	1.83	2.31	1.34	0.49	0.05	0.02	0.05	0.27	2.64	2.09	2.50	"	"
"	No. of days on which rain fell ('or' or more)	"	—	8.5	6.8	8.5	5.3	2.2	0.3	0.5	0.5	1.8	6.8	9.5	8.7	"	"
"	during day time	"	—	5.5	4.0	3.1	2.9	0.5	0.1	0.0	0.1	0.7	3.4	5.5	4.7	"	"
Sunshine	Total amount	...	Hours	147	167	170	174	200	192	165	165	165	180	166	153	145	"

Absolute Maximum, Sept. 26th, 1896, 90.1° Ft. Absolute Minimum, Feb. 28th, 1891, 48.4° Ft.

Total annual rainfall, 16.69 inches.

Observations were taken at an altitude of 70 feet, at 9 a.m. and 9 p.m., from 1890 to 1897 inclusive, by Mr. Alfred F. Perry, of the Sítio de Cullen, with instruments furnished by the Meteorological Society of London. The above averages have been kindly furnished to the author by Messrs. Alfred F. Perry and Frederick Lishman, M.D., of Puerto Orotava.

GÜIMAR, TENERIFFE. (1,000 feet.)			October	November	December	January	February	March	April	May	Annual Mean.	No. of years of observations
Temperature.	Shade.	Mean Daily	...	F 0	58.6	57.8	59.9	57.4	—	—	66.6	1
"	"	Minimum	...	"	52.3	52.0	53.1	50.0	—	—	57.7	"
"	"	Range	...	"	12.7	11.6	13.6	14.9	—	—	—	"
Moisture of Atmosph.	Rel. Humidity	"	...	Sat. 100	64.5	59.5	60.3	62.0	—	—	64.9	"
Rain.	Amt. of	Mean Monthly	Inches	3.70	0.25	4.34	1.04	2.26	1.45	0.18	13.7	"
"	No. of days on which rain fell ('.01" or more)	"	—	—	2	1	1	10	—	—	—	"
"	"	during day time	...	"	—	—	—	—	—	—	—	"
Sunshine	Total amount	...	Hours	—	106	222	174	195	—	—	—	"

Temperature:—Mean of six winter months (October to March) at 9 a.m. 63.7 F°; of six summer months (April to September) 70.2 F°. Mean maximum: winter, 67.0 F°; summer, 76.7 F°. Actual maximum: winter, 80.0 F° (October); summer, 66.5 F° (August). Actual minimum: winter, 47.0 F° (January and, 1900); summer, 57.0 F° (April). Mean maximum whole year, 72.9 F°. During 1900 the sun shone for 8 hours or more on 268 days. There were very few days on which there was no sunshine. \* March, 1890, was much colder than usual.

Observations were taken at an altitude of 1,000 feet, at 9 a.m. and 9 p.m., from December 11th, 1889, to March, 1890, by Dr. A. J. Wharry, and those given in italics by Dr. Stanford Harris during the year 1900 (365 days).

## LA LAGUNA, TENERIFFE.

(1,774 feet.)

		August	October	November	December	January	February	March	April	May	No. of years of observations
Temperature. Shade.	Mean Daily	71.5	65.4	59.7	56.2	54.1	54.3	56.9	57.2	63.9	4
"	Minimum	60.4	56.9	52.7	48.4	46.8	45.7	47.5	49.4	52.8	"
"	Range	22.2	16.9	14.9	15.6	14.6	17.3	18.8	15.6	19.3	"
Moisture of Atmosph.	Rel. Humidity	64.3	80.4	83.2	82.9	82.8	79.7	77.3	79.7	73.9	"
Rain. Amt. of	Mean Monthly	0.02	2.08	6.17	2.94	6.94	3.48	2.96	3.84	0.20	"
"	No. of days on which rain fell ('.01" or more)	0.7	9.7	15	11	18	11	11	12	3	"
State of Sky (0 clear, 10 fully covered)	...	2.7	6.6	7.4	6.7	6.6	5.9	6.2	7.0	4.7	4

Absolute Minimum, February, 1886, 36°.

Absolute Maximum, August, 1885, 104.9.

Total rainfall, nine months, 28.63 inches.

Observations were taken at 9 a.m. and 3 p.m., from 1884 to 1888, by the "Instituto" of La Laguna.



## TACORONTE, TENERIFFE.

(1,525 feet.)

	Shade.	Mean of	Mean Daily ...	Fo	September	October	November	December	No. of years of observations.
Temperature.					69.1	65.6	58.6	54.3	1
"	"	Minimum	"	"	56.1	58.3	53.8	50.3	1
"	"	Range	"	"	16.9	14.6	9.7	7.9	1
Moisture of Atmosph.		Rel. Humidity	...	Sat. 100	75.5%	83%	78%	84%	1
Rain. Amt. of		Mean Monthly	...	Inches	—	—	—	—	—
"	No of days on which rain fell	...	...	—	1	15	17	—	1
"	" during day time	...	...	—	1	11	12	—	1
State of Sky (0 clear, 10 fully covered)	...	...	...	—	2.33	4.75	3.76	5.70	1
Barometer (not corrected)	...	...	...	Inches	28.44	28.44	28.39	28.52	1

Observations were taken in 1897, at 8 a.m., 2 p.m., and 8 p.m., by the author. Only a part of September and only 10 days of December are included. The daily barometrical curve for the whole period and at the hours named, was 28.46—28.43—28.46. During the period of observation, a rising glass was usually followed by rain.—The lowest Relative Humidity was generally between sunrise and the time of the arrival of the moisture-laden breeze from the sea, which happens at about 8 a.m. For instance, on September 25th, between 8 a.m. and 8.10 a.m., the dry bulb temperature fell with the arrival of the sea breeze from 75.3° F. to 69.7° F. and the Rel. Humid. rose from 43 per cent. to 78 per cent. During fine weather there is a sudden jumping Relative Humidity immediately before or after sunset. Invalids should therefore take their exercise before breakfast and about the middle of the day, and should get in early in the afternoon.—Observations were taken without a proper screen and on a north wall. If errors have been made, the mean maximum temperature is probably rather too low and the humidity rather too high. It is trusted that these observations will some day be supplemented by others spreading over a more extended period. It should be mentioned that the hotel stands some 130 feet higher than the house in which the observations were made. The situation it occupies enjoys a rather drier and more bracing climate than the less exposed portions of the village itself.

VILAFLOL (CHASNA), TENERIFFE. (4,335 feet.)		January	February	March	April	May	August	September	October	November	December	No. of years of observations
Temperature. Shade.	Mean Daily	44.9	47.6	52.5	57.8	56.8	76.7	66.8	58.0	56.2	45.2	1
"	Minimum	34.3	37.9	40.8	44.7	44.5	68.4	54.7	48.3	41.4	35.8	"
"	Range	16.8	16.3	19.4	21.9	20.3	13.6	18.2	17.7	21.5	16.7	"
Moisture of Atmosph.	Rel. Humidity	71.3	62.7	61.9	56.7	63.3	35.7	53.6	70.8	66.6	86.7	"
Rain. Amt. of	Mean Monthly	1.75	2.07	1.59	0.17	1.78	0.00	0.03	3.85	0.11	6.61	"
"	No. of days on which rain fell ('or' or more)	9	5	6	1	4	0	1	8	1	15	"
"	during day time	5	1	5	0	1	0	0	6	1	8	"
Sunshine	Total amount ...	156	169	164	206	256	138	275	189	224	123	"

Absolute Maximum September, 1890, 89° F°. Absolute Minimum January, 1891, 28° F°.

Total rainfall, 11 months, 18' or inches. Observations were taken three, four, and sometimes five times a day, between 8 a.m. and 11 p.m. from the 20th August, 1890, to 15th June, 1891, by Mr. P. R. Beddington, Assoc. M. Inst. C.E., by whom the above figures were kindly supplied. In July to September, 1882, a few observations were recorded by Mr. Herman Honegger, which have also been incorporated.

SANTA CRUZ, LA PALMA. (137 feet.)		October	November	December	January	February	March	April	May	No of years of observations
Temperature.	Shade.	70.2	65.9	61.9	60.2	60.8	63.6	64.9	68.1	8
"	Mean of	...	...	...	...	...	...	...	...	"
"	Minimum	65.7	60.4	56.7	55.7	56.2	58.4	57.8	61.1	"
"	Range	11.1	11.9	12.9	11.8	14.1	13.7	14.9	14.5	"
Moisture of Atmosph.	Rel. Humidity	71	69	75	74	71	68	66	67	7
Rain, Ami. of	Mean Monthly	4.91	5.82	3.17	5.41	2.86	3.10	0.68	0.61	"
"	No. of days on which rain fell ('01" or more)	11	14	14	15	8	11	6	4	"
"	during day time	—	—	—	—	—	—	—	—	"
State of Sky (0 clear, 10 fully covered)	...	5.2	5.8	5.5	6.3	4.9	4.3	3.8	4.3	3

Absolute Maximum, 91.4°, August, 1892. Absolute Minimum, 51.8°, January and February, 1891.

Rainfall, for eight months, 26.56 inches, as compared with 24.05 inches in Funchal, Madeira. Observations were taken at 137 feet above the sea at 7 a.m., 2 p.m., and 11 p.m., from 1858-60 and 1889-98. The last were the most complete, and were made by Sr. D. Sebastian C. Arozena, catedrático de Física y Química del Instituto de Santa Cruz de la Palma, by whom the above figures were kindly supplied.



Anybody who will correct or augment the above tables at any future period will greatly oblige the author, who will be glad to receive and incorporate the records of *bonâ fide* observations.

Meteorological observations extending over a very short period are often misleading. However, where these only could be obtained, it appeared the proper course to insert them, in the hope of improving them later on.

The plan adopted has been approved of by several medical men as giving all that is absolutely necessary in as short a space as possible.

*Barometrical Readings* are not given, but they show, allowing for compensation for temperature, an annual average at the sea level of 30 inches (29·99 to 30·02) in Madeira, and 30·09 (30·08 to 30·10) in the Canaries.

The fall is about one inch per thousand feet and the daily curve, both on the coast and in the hills, is lowest at midday or a little later.

The result of the tables given shows that the mean of the *mean monthly temperature* over the eight months from October to May inclusive is—for Santa Cruz (Teneriffe), 67·5°; Las Palmas, 65·4°; Orotava, 65°; Santa Cruz (La Palma), 64·4°; Funchal, 62·7°; La Laguna, 58·5°; Vilaflor, 52·3°.

The mean of the *mean daily range* for the eight months is as follows:—Las Palmas, 9·3°; Funchal, 9·6°; Santa Cruz (La Palma), 13·1°; Orotava, 13·8°; Santa Cruz (Teneriffe), 14·6°; La Laguna, 16·6°; Vilaflor, 18·8°.

The mean temperature for the eight months given above shows that, at least up to 4,500 feet, the rule of a fall of one degree in temperature per 300 feet of altitude applies fairly well even in the Canaries. That this should be so is rather surprising, as the disturbances due to local topography are a recognised and prominent feature both in the Canaries and in Madeira.

In order to make a comparison with European resorts to which patients are sent for the sake of warmth, one may quote the averages for the five coldest months in Torquay and Mentone, these being 43·4° and 50·8° respectively. The average for the same five months in Funchal is 61·0°; in Las Palmas, 63·5°; in Santa Cruz (Teneriffe), 64·4°; and in Puerto Orotava, 62·6°.

The mean percentages of *relative humidity* for eight months, are:—In Santa Cruz (Teneriffe), 65·6; Funchal, 66·5; Vilaflor, 67·5; Santa Cruz (La Palma), 70·1; Las Palmas, 70·2; Orotava, 75·2; La Laguna, 80·0.

Future observations will confirm or correct the above, the results of the figures having been given as they were obtained. It has, however, already been remarked that the humidity recorded for Funchal is mainly calculated from the figures supplied by the Government Observatory, which are generally believed to be too low.

It must also be remembered that the humidity of the daytime, and of the night time vary very greatly, and that the average result depends upon the hours at which the records are taken. For instance, in Las Palmas the saturation during day averages 66 per cent. and during the night 74 per cent., giving a mean of 70 per cent., which might be made to show a very much smaller percentage of moisture if the 9 p.m. reading were omitted.

**Temperatures of the Sea.**—For purposes of comparison the following figures are given, the temperature of the sea at Falmouth being selected as being generally the highest to be found on the English coast. The temperature of the sea off Grand Canary or off Teneriffe is practically the same.

	Jan.	Feb.	Mch.	Apl.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Falmouth..	48·4	47·3	47·6	49·2	52·1	55·7	58·5	59·9	59·1	56·7	53·6	50·3
Las Palmas	65·5	64·8	64·9	65·3	66·2	67·6	70·6	73·2	72·6	71·2	69·1	66·2

For Madeira no figures are available, but the temperature of the sea at Funchal rarely falls below 64° F.

The subject is treated at greater length and more thoroughly in a pamphlet entitled "Sea Air, Sea Temperature and Sunshine" by Dr. J. Cleasby Taylor of Las Palmas, Grand Canary.

## MADEIRA AND THE CANARY ISLANDS.

### Climatic Conditions, etc.

HOWEVER accurate the figures may be, machine-made records can never hope to give more than a comparative idea of a climate. The thermometer, for instance, may stand at 51° Fahrenheit on a dry day in England and the human body feel warm. The same number of degrees on the sea level in Madeira or in the Canaries will sometimes be attended by rain or great humidity; by a warm upper current, heavy evaporation, reeking damp and general discomfort. So low a temperature, however, cannot well occur except at night or in the evening, when an invalid can light a fire or an oil stove, or go to bed. The higher the general temperature of the resort chosen, the rarer are such spells of cold weather.

It does not follow that a low temperature is invariably accompanied by damp, even at the sea level. Such extreme instances as those cited may not occur six times in the course of a winter, even in positions where they are most to be expected.

When living in the hills cold and damp are less and less associated according to the altitude chosen and to the special nature of the surroundings.

### Climate of Madeira in the Winter.

Figures of temperature, humidity and rainfall are given elsewhere, and a comparison has been made between Madeira, Torquay and Mentone. From the statistical tables and from the subsequent remarks the reader can gather as much precise information as is usually required.

Though situated some two hundred and fifty miles to the N. of Teneriffe, the temperature of Madeira is but little lower than that of the Canaries, being maintained nearly constantly at a high degree by the Gulf Stream, which, dividing at the Azores, sweeps southward and envelopes the island in its warm embrace, skirting the Canary Archipelago on its way back towards Central America.

Reference to the general climatic map will make this matter clear at a glance.

Speaking in a general way, Madeira, in spite of its reputation for cloud and damp, is a warm and sunny place even in the winter. As far as most invalids are concerned, the island begins and ends at Funchal, the capital and the site of all the principal hotels.



Invalids and others may visit the hills during fine weather, but the winter is not the best season to explore the recesses either of Madeira or of the Canaries. Still a man in ordinary health may go where he likes at any time of year.

In the upper parts of Madeira rain may fall from morning to night or snow may even lie thick upon the ground. On the South and near the sea, the wettest days have fine intervals. Showery weather, though it may force one to keep within reach of home, is sometimes most charming. The banks of clouds are usually followed by a bright blue sky through which the sunshine pours as through a burning glass. Before the eye has turned from gazing at the rainbow hanging over the other side of the town, there is a fresh pattering on the leaves, a dark shadow sweeps along the street, and every one runs for shelter. As quickly as it comes the storm passes away; the sun breaks through again; the streets dry as though by magic and the crowd of chattering men and women hurry backwards and forwards as before.

Madeira is certainly somewhat relaxing and tends to keep invalids in a state of repose, which is exactly what many of them want. When rest has allowed them to achieve the necessary repairs it is easy enough to go somewhere else, supposing that the physician considers it necessary.

There are, however, positions in Funchal itself which differ widely in this particular. The climate near the beach, that at the top of the town, that above the *levada*, and that on the East or West Cliffs can scarcely be compared.

At the top of the railway, barely 1,900 feet above the sea, the air begins to have some of the exhilarating properties of a mountain atmosphere. Yet the vine can be grown and will bear fruit, and the vegetation to be seen generally is a further proof that cold in our sense of the word is unknown.

Between the Monte Church, which is just beyond the terminus of the railway, and the Mole there is a wide choice where a man may find an agreeable and sufficiently bracing climate amidst most lovely surroundings. Above this level the climate is certainly unsuitable for invalids during the winter.

The particular feature of Madeira is the conjunction of a very warm, equable, somewhat moist climate, with an almost absolute freedom from dust. The last point is not entirely due to the generally calm state of the atmosphere, but to the paving of the streets and to the absence of wheeled vehicles.

Dense, stationary clouds, such as those commonly formed against the mountain slopes of Madeira and of the Canaries, accumulate foul or partially exhausted air immediately beneath them. For this reason it is well to reside in some place outside of their influence, that is to say, near enough to the coast to be

beyond the fringe to which their shadow reaches in normal weather. The climate is also much drier low down than it is along the neighbouring slopes.

It must not be supposed that the greatest degree of dryness must necessarily afford the greatest amount of benefit in all cases of illness. On the contrary, a moderate amount of moisture is often far preferable. Where the dryness entails exposure to a great amount of dust it may be actually harmful.

Quite close to the beach the air is much cooler and more invigorating than it is fifty or a hundred yards inland. Those of an irritable temperament, however, generally find it preferable to live beyond the belt to which the salt spray of the sea is thrown and to avoid the excess of ozone common near the beach. Experience, or the advice of a medical man, should decide the choice.

The coldest and rainiest months are generally January and February. The winter season proper extends from the middle of October to the end of April or well into May, the earliest date on which invalids should return to Europe.

Generally speaking, those wishing to explore the islands and to visit remote parts should endeavour to give Madeira the most favourable chance, as there is more rainy weather there during the winter than is the case in the Canaries. The Azores are best explored in the spring or summer.

The tables of figures given elsewhere are the best means of ascertaining which month or fortnight is the most likely one to be fine, though it is only occasionally that any one year is likely to agree with the average of a decade.

The tourist or semi-invalid should endeavour to make such arrangements that he may include at least two out of the three archipelagos in his trip. There are such lovely walks and excursions in all the islands that it is worth while to take some little forethought on the subject.

### Climate of the Canaries in the Winter.

The difference between Madeira and the Canaries is not very great. Many of the remarks made in describing the former must be held to apply equally well to the latter.

The two do, however, vary in many important particulars.

Firstly, the Canaries are windier. Were it not so the temperature of the two would differ more widely. As it is, the freer movement of the atmosphere causes the North Coast of the Canaries to be only slightly warmer than the South Coast of Madeira.

Invalids and others visiting the Canaries have a very much wider choice of residence and are able to get about more freely



than in Madeira, where the North Coast is too cold and damp during the winter, even for the average tourist.

This freedom of movement and the more exciting nature of the Canary climate are too often an inducement to undue exertion. When the weather is at its best, doctors do not always find that their patients make the most progress.

Then again the wind causes more dust. In this particular the islands must not be compared with health resorts on the African main-land, be they in the North or in the South. They are, however, dustier than Madeira, which, as previously said, is peculiarly favoured in this respect.

*The difference between Madeira and the Canaries is very well indicated by the date palm, which, when grown in sheltered positions, bears fruit in both places, although it is only in the Canaries that the fruit will ripen.*

The writer believes that those to whom absolute quietude is necessary will do best by taking Madeira first on the list and Orotava or Güimar (Teneriffe) second. Tacoronte, La Laguna, Santa Cruz (Teneriffe), and the Monte or Las Palmas (Grand Canary) are pleasant and suitable resorts even for invalids, but are not recommended to those in an extremely critical state of health.

Those requiring a warm atmosphere with bracing conditions on the sea level will find them at their best in Grand Canary. In Teneriffe the most bracing coast climate is to be found in the environs of Santa Cruz and in Madeira on the West Cliff.

Those desiring to live at a considerable altitude during the winter should go to the Monte in Grand Canary, 1,350 feet; La Laguna, Teneriffe, 1,800 feet; Güimar, Teneriffe, 1,200 feet; or Tacoronte, Teneriffe, 1,700 feet.

### The Summer Climate (Madeira and the Canaries).

This subject is more fully discussed in the article headed "Permanent Atmospheric Currents of the Mid-Atlantic," to which the reader is referred.

A few remarks, however, seem to be called for in this place.

Tourists and others will find the summer the best time for expeditions, the climate in the hills being superb. On the coast it is sometimes oppressive but never excessively hot during normal weather. For instance, 88° F. is very high, even in Santa Cruz, Teneriffe, which is notoriously a warm place. In Madeira the residents usually retreat to the upper part of the Valley of Funchal, to which access by means of the railway is now rendered easy. Camacha is also a favourite resort.



In the Canaries, La Laguna and Tacoronte, Teneriffe, and the Monte, Grand Canary, are the most fashionable resorts.

In none of the islands is there any accommodation at the true summer level, that is to say, at an altitude above that at which the clouds are formed. The highest available is Vilaflor in Teneriffe, but the place is not easy of access.

As, however, rain very rarely falls during the summer months, even invalids may camp out in the hills. The writer, in fact, though suffering from chest complaint, has slept in the open by a fire at an altitude of over 7,000 feet. The expense of purchasing proper tents must be balanced against that incurred by hiring a villa or by making a trip to England.

Those who have been living by the sea all the winter require a change of some sort. Both in Madeira and in the Canaries, the hills are usually chosen, but in the latter there is an alternative, namely, to move to some place on the South Coast and to live actually on the beach or close to it. Why this is so, is explained in the article on "Atmospheric Currents."

To remain all the year round in those positions which in the winter are most agreeable and most conducive to the recovery of an invalid, is to run the risk of suffering from anæmia and from an impaired liver. A wider daily range of temperature is necessary. A complete change of surroundings is also beneficial, whilst the attenuated atmosphere and comparative freedom from excess of ozone, from dust and from bacterial life for a few weeks may have the most important results on the health.

The recuperating effect of the mountain air on a constitution requiring a change is considerable, and to lead a nomad existence above the clouds for six months is a most delightful way of passing the time. Fine as the climate of Madeira and of the Canaries may be in the winter, it is infinitely finer and more enjoyable in the summer.

#### Climatic Conditions in the Azores (Winter and Summer).

The temperature is a little lower than that of Madeira or the Canary Islands, rain and cloud being much more prevalent. The mean temperature on the coast during the winter is about 59° F.; during the summer it is about 71° F., the conditions in the different islands varying but little. During the five years (1896-1900), the minimum registered during the winter was 41° F., and the maximum during the summer, 82° F.

The rainfall near the sea averages about 28.5 inches in the year. Some of the islands are very damp during the winter, ferns, echeveria and lichens growing freely on the walls and roofs even near the coast.

The best months for explorers are from June till the end of October, this being the time of year when visitors from Lisbon,

Madeira and the United States come to the islands to avoid the excessive heat commonly experienced in their own countries. The mean daily variation is about 14° F.

The weather during the winter is, as a rule, somewhat too wet to allow the islands to be regarded as a winter resort for those suffering from chest complaints, but the summer and autumn months are delightful and the good effects of the climate can be aided by drinking or bathing in the mineral waters, which exist in great variety.

The Island of Pico is said to be that best suited to consumptive invalids, who should inhabit the intermediate slopes.

The higher parts of all the islands are apt to be covered with cloud, especially from October to May. Snow is rare and only lies for any length of time on the top of Pico.

Invalids in Madeira or the Canaries who want a change in the summer but who do not care to risk going to Europe, will find a trip to the Azores most interesting.

### Rainfall (Madeira and Canaries).

The statistics show that the amount of rain falling in Madeira is greater than is the case in the Canary Islands. It is also certain that, commencing with Fuerteventura on the E., which is the driest and where the annual rainfall does not average more than five or six inches, the Canary Islands themselves become gradually damper as the distance from the African desert increases.

At Cape Juby, on the Morocco coast, the rainfall is said to be only about three inches per annum.

The N. and W. sides of Teneriffe and the Islands of Gomera, Hierro, and La Palma are much on a par with one another, the altitude of the mountains being an equivalent in the first to the greater influence of the Gulf Stream in the others.

In estimating the probable amount of rainfall in any particular island where no figures are obtainable, regard must be had to the vegetation found, not only as an indication of what the climate is like and of what the island can produce, but as being in itself at times a direct incentive to the accumulation of vapour.

Taking Madeira as the first on the list, we find an elevation of rather over 6,000 feet, and a group of mountains, many of which are densely wooded. Next in order comes the western portion of the Canary group, La Palma (7,760 feet) being also well provided with much the same forest trees, though the pine is of a different species (*Pinus canariensis*). We then pass to Gomera (4,400 feet) and Hierro (4,990 feet), both with a considerable rainfall. In the former water is especially abundant and the forest vegetation most luxuriant.



The west and north of **Teneriffe** have a few forests. In places a great quantity of moisture is derived from the Peak (12,192 feet), which is covered with snow for the greater part of the year. This mountain, with its surroundings, naturally serves as a constant attraction to clouds or vapour, whether caused by a general disturbance, of which the Peak may be the centre, or by the deflection of the trade wind, of which mention is made in the hints given to those thinking of starting on expeditions and in the article on "Atmospheric Currents."

In **Grand Canary** (6,400 feet) a greater extent of forest land would probably be an advantage and lead to a more equable distribution of moisture. The mountains are, however, sufficiently high to gather clouds around them, though the number of tanks shows that water in the summer is more precious than further west.

In **Fuerteventura** and **Lanzarote** there are no forests. Both are very dry. Except in the northern part of the latter island, which is sparsely provided with moisture, both are entirely dependent upon rain water and tanks. The indigenous plants are puny or even microscopic. Large crops of cereals, however, are grown in favourable years. The cochineal cactus and the vine can be cultivated over a very large area. **Lanzarote** of late years has also become a place from which large quantities of tomatoes are shipped.

**Snow line.**—It should here be remarked that the supposed line of perpetual snow is—for **Madeira** about 11,500 feet, and for the **Canaries** about 12,500, an elevation very nearly attained in the latter instance.

During the winter the lowest limit where snow may fall and lie for a few hours in the very worst weather is approximately as follows:—**Madeira**, north side, 2,500 feet; south side, 3,000 feet. **Teneriffe**, north side, 3,000 feet; south side, 3,500 feet. **Grand Canary**, 4,000 feet. For snow to fall at so low a level is most exceptional, and it is very rare for it to lie even during the night.

### Water Supply.

Passing to the water supplies, we find in **Madeira** a soft water, almost without lime, running in open channels and with roads specially engineered to avoid damage by heavy rainfalls. The ravines are, however, dry on the south side, except in the wet months.

In **La Palma** the water is very soft, the channels are almost invariably covered in, and the barrancos are generally dry, with the exception of that leading out of the **Caldera** to **Tazacorte**. The same remarks apply to **Gomera**, but here, the island being smaller, barrancos are shorter. In **Hierro** the rainfall is plentiful,



but there are practically no springs and water during summer can only be obtained from tanks or *algibes* (cisterns).

On the western slopes of Teneriffe the water is harder and there are fewer tanks. On the south side, especially near Santa Cruz, water is preserved at all costs, and care is taken to save the drinking water from pollution between the source and the town.

In Grand Canary tanks are to be seen everywhere, and the long open channels down which the irrigation water comes, frequently run by the side of the road. The drinking water used in Las Palmas is caught up at a spring issuing in a ravine above the town, and brought down in covered aqueducts and pipes.

The previous remarks about Fuerteventura and Lanzarote are sufficient to indicate the nature of the supply in those islands. In the Azores the supply of water is abundant.

In all cases and in all parts of the world, the source and the method of storing the water put on the table is a matter of great interest to the traveller, and one worthy of his close, personal attention. The author supplies what information he can locally.

The filter in general use is the dripstone, well known in the West Indies, but probably inefficient in bad cases of pollution.

Intending residents should provide themselves with a really reliable filter, preferably one where the medium can be changed or cleansed.

To reassure intending visitors it may be stated that the source of the water supply is in most instances greatly superior to that of London and that considerable care is taken that water carried to the drinking fountains should not be contaminated whilst *en route*. It is usual to fetch water from these in barrels.

In all the large towns it is contemplated to gradually replace the aqueducts by iron pipes.

## Drainage.

The drainage of the towns themselves is in every way deficient, but it must not be forgotten that the porous nature of the soil, which readily absorbs all moisture, and the constant movement of air consequent upon the proximity of mountains and open sea, greatly tend to prevent any epidemic diseases, from which, indeed, all the islands are singularly free. There are bad smells to be found, but nearly all Continental towns are decidedly worse off in this respect. The large hotels have naturally availed themselves of every opportunity to ensure safety in this particular, many having spent very large sums of money upon their sanitary arrangements. The first-class hotels leave nothing to be desired and compare favourably with those of London.

However energetic the hotels may be, the municipalities themselves require to be reminded that they are far behind the times and that they show no haste in making the advances legitimately to be expected.

It is to be hoped that the inevitable competition between Madeira and the Canaries will eventually force the authorities in both to recognise the fact that it is their duty to provide proper promenades and amusements for their guests, as well as an adequate and complete system of water supply and drainage. The necessary expenditure could scarcely fail to yield a handsome return by reason of the increased popularity such measures would ensure.

## Winds.

Another important item to be considered is the prevalent wind. In all cases this blows from the N.E., but, in the Azores and in Madeira, is less felt than further south. In Madeira it is said to prevail during about 200 and in the Canaries during about 240 days out of the 365. In La Palma there is nearly always a soft healthy breeze.

The trade wind always blows most strongly and persistently in the summer.

The subject of the Trade Wind and of the local breezes is more fully dealt with in the article on "Atmospheric Currents."

**South wind.**—Excessive warmth may occur for three or four days during the prevalence of a south wind, when it is often hotter in the hills than on the coast.

Such winds, though distressing to many, are not always disliked and in any case never last very long, nor do they occur very frequently, being more usual in the summer than in the winter.

The origin of the wind is believed to be some disturbance on the African mainland. The heated air from the desert is supposed to rise to a great height and to descend upon the place to which it is carried, which may happen to be the Canaries or elsewhere. During its prevalence clouds usually disappear but the atmosphere is hazy and sight obstructed.

The supposed reason for this is excessive dryness, the quantity of moisture in the air being so exceedingly small that the space between the atoms is not filled and the light is refracted.

At times dust falls, sometimes in large quantities, as was the case on February 16-20, 1898, when for more than two days the view was limited to some 200 yards, and everything was covered with a fine white powder. The area of the storm, measured from north to

south, was about 1,800 miles. The dust, when collected in a mass, is of a sandy red colour. When magnified to say 75 diameters, it is found to consist of small, clean crystals, closely resembling moist sugar, with foreign substances scattered here and there throughout the mass. During the storm of 1898, and during one which occurred in 1862, the air was full of moths, butterflies, and other insects carried over with the sand.

### Storms.

These occur at intervals, being most frequent in the Azores. In Madeira or the Canaries the worst effect is usually to prevent vessels from coaling in an open roadstead, such as that of Funchal or of Santa Cruz, Teneriffe.

Sometimes, however, the weather is very violent. In 1842, and again in 1848, five vessels were driven on shore at Funchal. In 1724, 1803, 1842, and 1856, water swept down from the hills into Funchal and did great damage. On the first occasion a great part of the town of Machico was swept away. On the second, many houses in Funchal were destroyed and 400 lives are said to have been lost. The beach was also extended for a considerable distance and the anchorage markedly improved.

The worst storm on record in the Canaries raged from Nov. 6th till Nov. 9th, 1826. Though felt throughout the archipelago and very violent in Grand Canary on the 6th and 7th, it was fiercest in Teneriffe, where it arrived on the 7th.

In the Puerto de la Orotava the sea was driven up into the Plaza de la Constitucion. Floods of water came from the mountains and carried away numbers of houses, men and cattle, creating a wide waste now known as the Barranco de las Cabezas. In the Valley of Orotava it is said that 225 houses were destroyed and that 235 human beings and 804 head of cattle perished. In the neighbouring village of Icod el Alto, 51 lives were lost.

The damage was not confined to that part of the island. La Laguna and Santa Cruz suffered severely. At Candelaria, on the south, part of the Dominican Monastery was destroyed, the famous image of the Virgen de Candelaria being swept into the sea and lost. Owing to a sudden change in the wind there were also numerous wrecks.

The storm was no doubt accompanied by waterspouts, which burst somewhere in the mountains and discharged themselves both in Grand Canary and in Teneriffe.

Thunderstorms occur but rarely and the lightning is not usually destructive. There are years, however, when they are fairly frequent (1897, for instance), and there have been cases where trees and houses have been struck.



**Tidal Waves.**—The last recorded instance of a tidal wave of any great magnitude is that of 1755, when the earthquake at Lisbon caused a body of water to break upon Madeira. The wave is said to have been 15 feet in height, to have advanced and receded three times and to have done great damage to the lower part of Funchal. The writer has not been able to ascertain its volume at the time it reached the Canaries.

### **Epidemics.**

At various times the islands have been attacked by contagious diseases, which, after raging for a time, were stamped out. Though not entirely free from malarial influences, neither Madeira nor the Canaries can be said to suffer from any chronic and ineradicable malady, unless, of course, one includes that universal scourge, tuberculosis. Leprosy exists here and there, but is practically non-contagious. None of the Sisters in the Hospital at Las Palmas have ever been infected.

Yellow fever, small-pox, cholera, and typhoid have been introduced at various dates during the present century, but, in spite of the backward state of sanitary appliances, have not usually led to great mortality.

In December, 1906, a disease, said by some to be plague, broke out in Teneriffe, but the number of fatal cases was small. In 1908-9 there was a temporary outbreak of plague in Terceira (Azores).

### **Locusts.**

These have been brought over from Africa at various times, but never seem to have been able to establish themselves and to breed. Records state that they appeared in the Canaries in 1588, 1607, 1659 (badly), 1754, and in Nov., 1901.

### **Mineral Springs.**

Invalids, especially when suffering from cutaneous diseases, may derive benefit from some of the natural waters found in the islands. A more minute investigation of their value is wanted, but some are known to be efficacious, and several are commonly used by the islanders, for instance, those at Vilaflor and Agua García in Teneriffe; at Sta. Catalina, Agaete and Fargas in Grand Canary; at S. Antonio in Madeira; at Charco Verde in La Palma; and at Sabinosa in Hierro.

The best known centre of all is at Furnas, in São Miguel (Azores). No one should use the Furnas waters without taking proper medical advice. They are both hot and cold, are very potent and offer a large choice. For further details *see* under "Furnas."

One of the best drinking water springs in the Azores is that which yields the Lombadas Water. Lombadas Water, Serra do Trigo Water (S. Miguel) and Fargas Water (Grand Canary) are all bottled and exported.

When possible, analyses of the water are given in this guide under the description of the locality.

### Submarine Springs.

All who have lived by the sea must have speculated as to the cause of the smooth oily streams sometimes to be seen meandering in different directions on the surface of the salt water. Those who have watched them constantly will have noticed that under the same conditions of tide and weather, the same patterns recur and that if any such stream be cut by a passing vessel, it regains its old shape in the course of half-an-hour or so.

In Madeira and the Canaries, owing to the great height of the cliffs and to the more languid current of the tides, this phenomenon can be observed at its best.

The reason is that fresh water is forced by hydraulic pressure to emerge from submarine outlets. Being lighter than the salt water, it comes to the top by force of gravity. If the surface be smooth, it does not mix at once with the salt water, but spreads out as oil would do. A mere thread of fresh water may thus cover an appreciable breadth.

As the surface of the sea is always moving and the thread continues to rise in the same place, the consequence is that the oily streak is carried away to the horizon. The set of the tide being affected by the nature of the bottom, the fantastic curves and eddies, ejected from scores of springs and covering the whole sea-scape, are, to a certain extent, and especially when the water is not too deep, a sort of drawing or aquagraph of the rocks beneath.

Fresh water may be seen thus in the very midst of the ocean, hundreds or even thousands of miles from land. The actual depth of such a stream being perhaps a mere fraction of an inch, the smallest amount of wind causes it to disappear.

In Madeira and the Canaries a number of similar streams rising near some particular part of the coast, clearly indicate that water is escaping by subterranean channels.

## Permanent Atmospheric Currents of the Mid-Atlantic ; their Causes and their Effects.

The climate of Madeira and the Canaries generally has already been dealt with. Meteorological tables are given and the local peculiarities are described, as accurately as possible, in their proper places.

There are, however, great controlling forces, not yet considered, which are of the highest interest to the student and of the utmost importance to the resident. In dealing with these the writer will endeavour to show that the islands offer resources for the alleviation or destruction of disease far beyond those usually recognised or as yet rendered available. When all parts of them have been fully developed, physicians may perhaps accept them as sanatoria, where the curative and antiseptic conditions are equal to those found in any other part of the world.

If it can be shown that the results sought in the Upper Valleys of the Alps or on the frozen plains of Colorado are obtainable in Madeira or in the Canaries under more genial conditions and in places lying within an hour's journey of a healthy, semi-tropical climate, the facility of movement from one to the other would give the Atlantic archipelagos the preference over almost any other part of the globe.

At present a journey from the coast to the summit of any of the islands entails a ride of several hours on horseback or in a hammock along roads bad beyond all description. Until this is altered no comfort can be expected at the upper end.

How the change may be brought about, time will show. For the moment, however, it may be pointed out that a wire-rope railway from the Valley of Orotava to the summit of the Peak of Teneriffe would be scarcely ten miles long; it might be constructed for some £6,000, and would take passengers from the one point to the other in a few minutes. Although perhaps out of place in this article, it may be added that such lines, erected in any of the larger islands, would, if properly directed, immediately secure a heavy goods traffic.

### Atmospheric Chart of the Mid-Atlantic.—See plate 2.

In that part of the Atlantic swept by the "Trades," and especially during the summer when these winds blow with the greatest force, a stratum of cloud will often form about the altitude where the surface drift of the Trade Wind Current encounters the cool, upper atmosphere.



The uniform character of this cloud is altered when the wind meets with some centre of obstruction, such as an island. The moisture-laden current is then thrown suddenly upwards and banks of visible vapour are formed around the mountains, extending at times to a considerable distance on either side. The prevalence of this cloud-layer is of great interest to those staying in Madeira or the Canaries and the following description should be of service.

In drawing up the accompanying chart a sectional view of the Island of Teneriffe has been chosen, because the greater height and more regular formation of the mountains and the acuteness of the angle of ascent from the sea-level to the summit of the Peak are all most favourable for the purpose of illustration. Were this not so, Madeira or any of the Canary Islands would serve equally well, though it would probably be more difficult to determine the limits of the atmospheric currents in the former than in the latter, as the trade wind, though prevalent in both archipelagos, blows with more force and constancy in the latitude of the Canaries.

Though the cloud-layers and currents depicted are those ordinarily to be observed during the greater part of the summer, they are by no means peculiar to that part of the year, the same conditions being frequently reproduced during a spell of fine weather in the winter. The trade wind, however, during the latter season blows more softly and less continuously and there are periods when the sky is completely overcast at varying altitudes for days together, or when, on the contrary, the entire heaven is free from cloud.

Even in the summer similar interruptions occur, but such periods are abnormal and seldom last for any length of time.

Clear weather during the summer may be due to more than one cause. For instance, the view is rarely impeded whilst the "Levante," or hot wind, is blowing from the African deserts, though the atmosphere at the time is always hazy, for the reason given under the heading "South Wind." At other times the trade wind cloud condenses at a greater altitude than usual and the vapour driven over the lower parts of the islands, such as that to the north-east of La Laguna in Teneriffe (about 3,000 feet), does not, as is usually the case, become visible. A record of the connection between the readings of the barometer in the hills and of this phenomenon, which is evidently due to a change in the altitude of the lower stratum of the upper atmosphere, would be most interesting.

Occasionally the Peak is visible from the sea, but the sky above it is covered by a grey mass of vapour suspended at an immense

altitude, perhaps at a distance of from 30,000 to 40,000 feet from the water. Such clouds do not commonly assume the form of cirrus, but appear to be due to an excess of electricity in the atmosphere. They are often followed by thunder and lightning, the storm being probably unaccompanied by rain and wearing itself out without approaching much nearer to the earth.

Next to the Gulf Stream, which helps to regulate the temperature of this part of the world, the most important factor from a climatic point of view is the trade wind, which blows during the greater part of the year from the north-east.

It is merely an under-current. Where there is no land to influence it, it is probably confined between the surface of the ocean and an altitude of from 800 to 1,500 feet, its force increasing towards mid-day and moderating as night draws on.

The nearer the trades come to their destination, which is usually a little to the north of the Equator, the more steadily they blow, continuing to gather moisture from the ocean, whose surface catches and retains most of the dust or impurities the wind may carry with it.

On encountering the "doldrums" or "equatorial calms," the current of air is forced upward in a great curve, which gradually bends over to the north, in which direction it continues to move until it again sinks to the sea-level, somewhere about latitude 37° north, where it curves downwards to the south and becomes once more an integral part of the trade wind, the circle of motion being thus complete.

The writer has done his best to make it perfectly clear that the trade wind is a body of air constantly revolving on a vertical plane. On the sea-level and for a few hundred feet above it, it blows strongly towards the Equator, reappearing at a greater altitude as a vast mass, many thousands of feet in depth, flowing gently onward in a reversed direction, with a tendency to descend as it progresses.

The transformation of the N.E. trade wind into the "great southerly return current" or "counter trade," is attended by a phenomenon of considerable importance to an invalid visiting the islands.

On rising from the sea-level the air at once commences to suffer a loss of temperature and is compelled, by reason of a well-known law, to part with most of its moisture, which falls in the shape of tropical rain, thoroughly cleansing the air from which it comes and that through which it passes. The upper return current, therefore, commences its return journey from the Equator in a state of singular purity.

Close to the line, the height to which it is carried must be immense and the decrease in temperature must be proportionate.

On its way back it gradually falls and regains some of its warmth, descending upon the summits of Madeira or of the Canaries in a very dry state, that is to say, with a capacity for taking up moisture.

To enjoy this aridity to the full, it is necessary to live above the clouds, *i.e.*, in places where there is no accommodation at present and where no proper meteorological statistics have been made.

Immediately below the clouds, at Vilaflor, a village on the south side of Teneriffe, lying at a height of 4,335 feet above the sea, records show the low relative humidity of 35.7 per cent. for the month of August, a figure which is without doubt considerably reduced a thousand feet or so higher up.

What the actual degree of humidity on the Peak of Teneriffe or on the Cumbres of Grand Canary may be, the writer does not know, but that of Vilaflor, in August, compares very favourably with that of Aliwal North, in Cape Colony, during mid-winter (June), which is 31 per cent., the driest record for a warm climate with which the writer is acquainted. It is probable that the average summer humidity in the highlands of Grand Canary, Teneriffe, or even Madeira, would compare favourably with those of a South African winter. In any case, by living at a great elevation, the invalid is removing himself to an atmosphere where damp is only present during misty or rainy weather.

Other advantages of height and of the downward flow mentioned are that bacterial life is decreased, as in the Alps during the winter and is probably present in very minute quantities, the air before rising having been filtered by a long journey over the sea and finally washed by the tropical rains. The writer can give no figures on this subject, but Piazzi Smyth, who resided on and near the Peak of Teneriffe during July and August (1856), declared that there was a complete absence of dust above the level of 9,000 feet.

The reader must be careful not to confuse the southerly return current with the south or hot desert wind already alluded to. The latter is usually known in the Canaries by the name of the "Viento del Sur," or "Levante," and is an abnormal current of short duration, rarely blowing for more than three days at a stretch.

By turning to the chart it will be seen that the "trades," on encountering the north coast of the island, are forced, as by a wedge, to a considerable altitude. In rising, they gradually die away, the resistance of the upper atmosphere compelling them to find an outlet over or round the shoulders of the island. The belt of clear sky and consequently of sunshine so often to be found



along or about the coast-line of an island at a time when both the surrounding ocean and the central slopes are shaded by cloud, is due to this disturbance or break in the general movement of the lower atmosphere.

Reference should here be made to the sectional outline of Teneriffe from east to west, given under the Atmospheric Chart.

In the meantime, that portion of the wind which directly meets the land and climbs the side of the mountain range is robbed of its vapour in the same way as the whole trade wind is robbed later on when it meets with the doldrums. The trade wind clouds and their position as regards the mountain slopes are clearly shown on the chart and attention is called to the gradual diminution in their altitude towards the north, that is to say, before they are influenced by the inclination of the land.

It will also be noticed that the lower part of the cloud is composed of rounded cumuli, which, under the circumstances, might be expected to shed an almost continuous series of showers.

The capacity of absorption of the upper current, however, to which the superficial flatness is due and that of the mountain side itself, with the foliage which covers it, supply the necessary outlets. The latter attracts the grosser particles of vapour and together they allow the cloud to relieve itself without condensing into rain, falling rain from such clouds during the summer being a sign that the weather is not normal.

The trade wind cloud usually commences to form over the land at about nine o'clock in the morning and fades away about sunset, at which time the sea-breeze also dies away. The latter is presently replaced by a gentle land-breeze, which itself disappears a little later and is followed by a calm night.

The effect of the cloud clothing the mountain slopes is to hinder radiation from below and to shade all that it covers from the sun. The inhabitants prefer to live beneath it, but this choice may be due to custom, as those parts under its influence are naturally the most fertile and best watered. The diminution in heat due to its shadow is more imaginary than real, for it is a well-known fact that any obstruction to free radiation, even though it be but a snow-covered mountain obtruding into the field of view, will at once cause a rise in the thermometer. The cloud also prevents the egress of the bad gases generated during the day, the air, more especially immediately below it, generally lacking freshness.

Above it, on the other hand, though the heat in the sun is greater, that registered in the shade is far less and every breath exhilarates. The atmosphere is so dry that perspiration rarely soils the clothes and the glorious view, which extends to the

furthest limit of the horizon, is most cheering and in itself beneficial to health. Here the invalid may live for months under a rainless blue sky and in a genial climate, wandering amongst gorgeous forests and magnificent precipices; below him a vast sea of billowy cloud, out of which the summits of the other islands rise, beckoning him to new explorations.

The fall of temperature at night is enough to make a fire agreeable and to act as a mild tonic, very necessary to those living for any length of time in the more equable climate of the sea-coast.

Practically the only shelter to be obtained at these levels is that of a cave or of a canvas tent; but, as the total cost of the latter is considerably less than the rent of a furnished villa in the hills and as it will serve again or can be sold, a good tent or two cannot be regarded as an extravagance.

The flat-topped cloud to the south of the island (*see* Atmospheric Chart) is noticeably higher than those resembling it on the north, with which it has no connection whatever.

After passing round the shoulders of the island, the divided trade wind is unable to effect a junction until it has travelled several miles further towards the Equator. It follows that behind or to the south of the land, there is a space which is neither controlled by the trade wind nor by the upper return current.

The winds circulating inside this sheltered triangle are necessarily regulated by the local action of the sun.

As might be expected, the result is a land-breeze in the morning and the evening and a sea-breeze during the middle of the day. From nine in the forenoon until sunset, the slopes directly opposed to the sun heat the air resting upon them, causing it to flow upwards, the vacuum being re-filled by atmosphere drawn from out to sea. This blows strongly or freshly on the beach, gathers warmth as it rises and is eventually forced to curve over by the pressure of the upper atmosphere, after which it travels out to sea again, losing heat on its progress and finally returns to the shore re-converted into a cool sea-breeze. The circular movement here described is an exact miniature repetition of that adopted by the trade wind itself on its travels between the Temperate Zone and the Equator.

The cloud to the south of the island is therefore composed of the moisture gathered up within a short distance of the southern coast or on the sun-baked slopes of that coast itself, and is consequently small in extent, often does not appear at all, and at other times is found as a thin film at the head of the broadest valleys, but is invisible elsewhere. Unlike the trade wind cloud



on the north side, it is denser in the winter when the ground is moist, than in the summer when it is parched and dry.

The coolest resorts on the southern side must evidently be on the beach itself or above the eddy. Residents from half-way up the slope visit the beach during the hot season for the sake of the bathing and of the fresh air.

Whether on the south side or on the north, it is, however, above the clouds that the invalid, whose strength allows of his doing so, should spend the summer months; seeking the health-giving shade of the pine forest during the heat of the day and sleeping under canvas at night. He is then breathing an ideal atmosphere and, if he can obtain a proper food supply, is living a delightful life under most favourable conditions: conditions which may some day cause Madeira and the Canaries to be looked upon as one of the pleasantest resorts for the summer tourist, where he will find many of the advantages of the Alps, combined with the certainty of perpetual fine weather.

It is impossible to give any precise meteorological statistics for the mountains and a great deal of what takes place can only be indicated. Neither have any exact experiments been made in these latitudes of the effects of a great altitude upon the blood and upon the various organs, though a properly conducted series of observations would be of immense service to the medical profession.

It is, however, obvious that the returning trade-wind, or rather upper-current, must be of a highly antiseptic nature, and that the treatment of disease must be aided by the possibility of letting a patient pass the day in a banana-garden, and the night in the Arctic regions, for both these climates, or any modifications of them, can be found in the few miles lying between the Port of Orotava and the Peak (Teneriffe). In the other islands the extreme on the cold side is not so great; but so very drastic a measure as the construction of a sanatorium on the Peak itself, 12,000 feet above the sea, need not enter into one's ordinary calculations. Sick people generally would probably be satisfied with half this height, which can be attained in Madeira, Teneriffe, Grand Canary and La Palma, and which, as far as the summer clouds are concerned, is a full thousand feet more than is absolutely necessary.

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NOTE.—The foregoing remarks were written at a time when the author had few or no exact observations to guide him.

The records now being made by Dr. Robert Wenger in the Observatory in the Cañadas, Teneriffe, about 7,400 feet, and by Dr. Oscar Burchard, near the Botanical Gardens, Puerto Orotava, about 330 feet, both in collaboration with the Hamburger Seewarte, will eventually provide material for extensive alterations.



As the result of information supplied to the author and of that given in Dr. Wenger's "Rapport sur les lancers de pilotes exécutés sur l'île de Tenerife, etc.," Monaco, April, 1909 (Imprimerie M. du Mont Schauberg, Strasbourg, 1910), and his "Untersuchungen über die Mechanik und Thermo-dynamik der freien Atmosphäre im Nordatlantischen Passatgebiet" (Otto Nennich, Leipzig, 1910), there is no doubt that the altitude up to which the trade wind blows is far greater than that surmised in the foregoing pages.

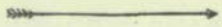
On August 5th, 1908, the height at which a pilot balloon swung off into the return S.W. current was stated as 6,210 metres, *i.e.*, 20,375 feet. The writer cannot help thinking that this record, which corresponded with the disappearance of a depression that had advanced to the Southward from the Azores, was very abnormal and that 2,000 to 2,500 metres, *i.e.*, 6,500 to 8,000 feet or thereabouts is, as shown by other flights, the more usual turning point. If the height of 2,000 metres (6,500 feet) be accepted, then the Cañadas, which are some 7,000 feet above the sea, are situated outside of the ordinary influence of the trade wind.

The want of continuity in the recorded observations made by pilot balloons and the absence of any flights during the hours of darkness, when the strength of the trade wind at the sea-level decreases, does not, as far as the writer can gather, allow as yet of any hard and fast conclusions being drawn. Under these circumstances pages 223 to 229 are allowed to remain unaltered for the moment. The author's deductions must unquestionably be wrong in many particulars, but, for all that, there is no doubt that a stratum of cloud does form at the height stated in the original article, *viz.* : 3,000 to 5,000 feet; that above this stratum there is, during normal weather, a region of atmospheric calm; also that peculiar conditions of atmospheric pressure, absence of dust and freedom from humidity do exist in this region, whether the gentle current of air encountered be due to the trade wind blowing from the N.E. as shown by the pilot balloons, or to an Equatorial current moving from the S.W. as the author formerly imagined.

Dr. Wenger remarks that one of his calculations shows that "l'effet de la montagne (*i.e.*, the Peak of Teneriffe) s'étend jusqu'à une distance de 5 à 6 km. dans l'atmosphère libre," which supports the author's view that when a continuous current of air passing over an ocean is interrupted by any obstruction such as an island, it will be diverted both vertically and laterally, not only creating subsidiary eddies, but also causing any given phenomena to take place at a greater altitude in the space affected by the island than outside of it where the course of the air is not interfered with.

The study of the upper atmosphere is one of such engrossing interest that it is to be trusted that any fresh information gained by forthcoming observations will promptly be communicated to the public.

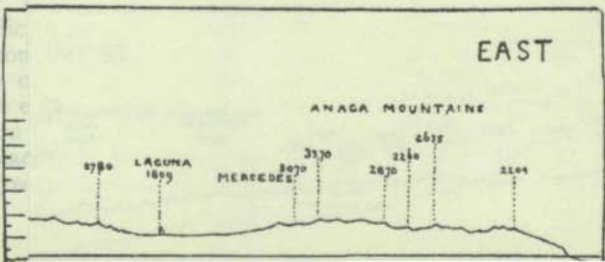
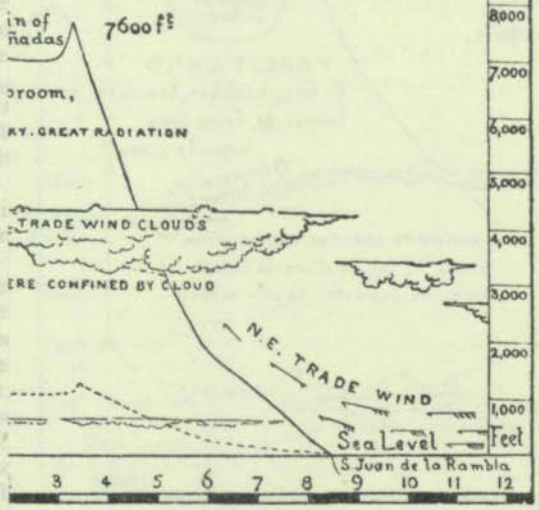
therly return current



opposed limit of perpetual snow.

ORTH →  
VEGETABLE LIFE.

limit of dust haze. Snow lies 8 months of year  
in the shade.





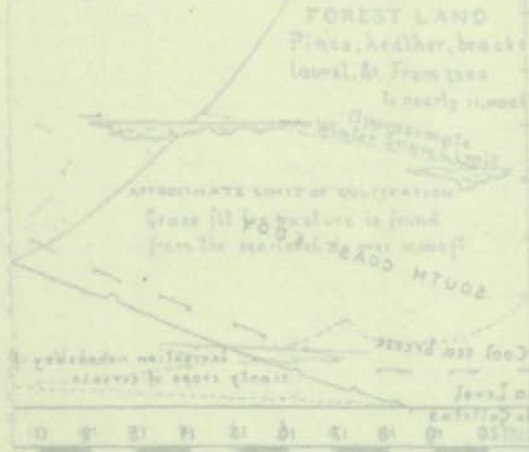


ATMOSPHERIC CHART OF THE MOUNTAINS DURING NORMAL SUMMER WEATHER

ILLUSTRATED BY A SECTIONAL VIEW OF THE MOUNTAINS

THUS SOUTH

Illustration for use of the nature of the terrain  
 outlines being given in dotted lines.  
 The line of level is the Peak and  
 runs due North and South. THESE GREAT SOUTH  
 SLOPE SLOPES



## CHAPTER FOR INVALIDS.

INVALIDS in an advanced stage of illness are cautioned against visiting the islands alone, or are advised to place themselves under close medical supervision. So many distressing instances have occurred of deaths taking place with no one to help or understand the dying man, that the presence of a friend or nurse cannot be too much insisted on.

That, even amidst the somewhat prejudicial surroundings of a gay hotel, remarkable instances of prolongation of life and even of absolute recovery constantly occur cannot be disputed. For the latter a lengthened residence may be necessary, or it may be found advisable, after the health has been partially restored, to complete the cure by changing the mild climate of the islands for one that is more invigorating and antiseptic.

Madeira and the Canaries are an agreeable home for those suffering from bad health in a less temperate zone. To the sick man, hoping again to become robust, they are stepping stones on the way to health, where he may tarry and recuperate himself for a time before visiting other countries where the conditions are not so well adapted to an invalid.

It is urged that too much attention should not be paid to any one personal experience, which may have been prejudicially affected by individual carelessness or misfortune. Invalids are too apt to imagine that the mere change of climate permits them to take liberties with their strength and stomach such as they would never dream of in Europe. Elated and excited by the charm of a nearly constant sunshine and of a temperature which permits them to be out at almost any hour in the day, they fail to see the necessity of dieting and watching themselves carefully, presume on the increase of vigour common after a sea voyage, and, acting in an imprudent manner, frequently so accelerate the ravages of the disease from which they suffer, that they never recover, being subsequently cited as examples of the insalubrity or inefficiency of the climate. To these must be added those who, commencing cautiously, destroy all the good effects of months of care by some sudden freak of madness. Also those who are either sent away too late, or who, through want of knowledge on the part of their medical advisers, have been ordered off to a place entirely unsuited to them. It must be obvious that all degrees of climate being obtainable, all the islands and all

elevations cannot be equally well adapted to all classes of disease, and that a careful study of the case by the consulting physician must be accompanied by an equally careful study of the nature of the district to which he is sending his patient.

This variety of choice is a great point in favour of the islands as a health resort, and one which is more fully dealt with in the chapter about the prevalent atmospheric currents.

Rapidly growing in popularity, they are attracting the attention of physicians of all nations. In addition to the Portuguese or Spanish doctors, there are a number of medical men from other countries and patients have the advantage, when desired, of detailing their symptoms in their mother tongue. It is from the doctors to be found in the islands that the most exact information regarding the various necessary conditions are to be obtained. A letter from the physician who has been treating the case would enable one of these to send the patient to the most favourable locality and afterwards, should the conditions require to be changed, to despatch him elsewhere to find in a situation, probably only a few miles away, a complete alteration in the climatic conditions, thereby administering a tonic or a sedative as may be required.

The author takes this opportunity of saying that medical men do not always insist as they might on the necessity of these occasional changes, being too apt to allow listless patients to have their own way and to lounge about in their accustomed surroundings when they ought to be elsewhere.

Many visitors come to the islands expecting nothing else but sunshine and fine weather, forgetting that only a very small part of the world and that by no means the most favoured is absolutely rainless. Again, one season is naturally worse than another. An average of years must be taken into account, as well as the probability that many in an advanced stage of illness will live longer in these islands than anywhere else, and, if they can manage to occupy their minds, will, in many cases, find life pleasanter.

The even temperature which can be enjoyed all the year round by moving such short distances and the extremely favourable conditions under which a variety of maladies can be specially treated are matters worthy of the attention of medical men. Sufferers, for instance, who would have to wait until the summer months in other latitudes, may be taken in hand at once in a climate where the warmth and total absence of miasma guarantee, if a little foresight is used, a practical immunity from chills and damp. Where a doctor would hesitate to put a patient on "Banting" diet further north, he need have no fear so far south.



Gout, rheumatism, diseases of the kidneys, etc., are more easily attacked and a great advantage is gained by the constant supply of green vegetables, tomatoes, fresh fruit, etc. The Trauben Kur (grape cure), so much practised in Germany, can be commenced earlier and spread over a longer period. Sea bathing, when proper arrangements have been made, can be indulged in all the year round.

A contributor to the *Lancet* (January 27th, 1894) states that Madeira is suitable for some forms of bronchitis and laryngitis; for irritable nervous affections, diseases of the kidneys, scrofula, and anæmia, and for those convalescent and requiring rest after dangerous illnesses, malarial fever, etc. For cases of phthisis in its early stages, when attended by hæmoptysis, it is said to be extremely good, but in phthisis generally it is held to be rather palliative than curative. This agrees practically with the general opinion of those consulted by the writer and bears out his remark that the islands should be used as a stepping-stone by consumptive patients on their way to a more vigorous atmosphere. In all probability there is no warm country in the world where the irritating influence of wind and dust is so completely absent as in Madeira.

In the **Canaries** bronchitis sometimes does well, but laryngitis or a tendency to severe hæmorrhage would generally do better in Madeira. Rheumatism, neuralgia, Bright's disease, gout, scrofula, venereal and other diseases find the climate most suitable and are greatly helped by the constant supply of fresh fruit and vegetables common to all the islands.

The first and second stages of consumption often show material improvement. As in Madeira, the free and open-air life, which can be indulged in all the year round, sometimes almost leads to a cure and generally allows the patient to gain sufficient strength to face the more trying period of a South African winter.

If strength permits, excursions should frequently be made to the hills or to the mountains, the change of air, even if only for a few hours, being of great advantage. All the hotels will provide luncheon in a basket.

Cases of hæmorrhage will do well to keep quiet when the barometer is exceptionally low.

Cases of *malarial fever* which do not improve in the Canaries will do well to try Madeira, a better half-way station for many constitutions enfeebled by residence in Africa.

This article might be indefinitely prolonged and extracts from one medical man after another given. Let it suffice, therefore, to quote a few words of the late Dr. Andrew Combe, who, in

writing to a friend, says, "If I must forego the pleasures of home, it is better to resort at once to the *most* advantageous climate than to adopt the half-measure of going to Italy, Jersey or the south of England."

European doctors and dentists will be found practising in Madeira, Teneriffe and Grand Canary. In most of the other islands there are medical men who speak English, French or German.

**Climatic Diarrhœa.**—In all the islands, and indeed in all southern countries, foreigners, especially English people, occasionally suffer from diarrhœa, shortly after their arrival. The complaint is sometimes difficult to get rid of and may last for weeks, but can be avoided by care. Chlorodyne, bismuth and laudanum are among the best remedies, or a retreat to the mountains will generally effect a cure. All comers must be most cautious as regards fruit, native wine, excessive fatigue, or even undue exercise. Meat should only be eaten twice a day. These attacks of diarrhœa are due to the presence of unsympathetic matter in the stomach and the cure should generally be commenced by a dose or two of castor oil, taken in the early stages.

### Sea Sickness.

Now a few lines regarding sea-sickness. Let the medical adviser give an efficient aperient two or three days before the patient starts and another on arrival on board the steamer and let the patient aid this treatment by eating sparingly of simple food for his last few days on shore.

When attacked by vomiting the greatest comfort is to be found in lying down. A belt drawn tightly round the stomach is at times a relief. As a remedy a solution containing bicarbonate of soda, chloroform, or bromide of potash and sal volatile is of great assistance. Efforts should be made to keep the digestive organs at work. For this purpose a few apples and dry biscuits are in every way most convenient. It is rarely that sickness gives much trouble after the second day.

## A Sketch of the most prominent Geological Features of Madeira and of the Canary Islands,

WITH HINTS AS TO THEIR EFFECTS UPON TOPOGRAPHY, SCENERY,  
CLIMATE, VEGETATION AND HISTORY.

THE following article is not intended as a scientific discussion of geological problems, for which the student will turn to other works. Visitors generally are, however, interested in the formation of the country, whether they be tourists or invalids; physicians are specially concerned with its effects upon climate, whether local and otherwise. The usual results of elevation are very much affected in Madeira and the Canaries by the immediate surroundings, a matter that does not always receive the recognition to which it is entitled and regarding which it is felt that a few remarks will be useful.

The formation of the islands has again an important bearing upon their history, both ancient and modern and must be considered when treating of ancient legends, of race problems, or of the methods of life adopted by the residents of to-day.

The investigations of Alexander von Humboldt, Leopold von Buch, James Dwight Dana, Sir Charles Lyell, Piazzzi Smyth, Dr. G. Hartung, Karl von Fritsch, W. Reiss, Dr. A. Rothpletz, and others, though not agreeable in all their particulars, have provided a mass of literature upon the geological phenomena, from which the student may gather ample material to aid him in further researches. As regards Madeira the data have been most ably collected and edited by the late Mr. James Yate Johnston, in his "Handbook for Madeira." The intimate acquaintance of the author with the island in question enabled him to add many valuable notes resulting from his personal observations.

More than thirty years ago the researches of Sir Charles Lyell showed the plutonic and volcanic formation of Madeira and of the Canaries to be more closely associated with the landscape of to-day than is the case in countries where denudation or submersion have played a more important part in the building up of the visible contour of the land.

The geological problems presented by the archipelagos of the Eastern Atlantic have much in common, and the groups of islands from the Azores on the north to the Bouvet Islands on the south resemble one another in that they are isolated mountains of igneous origin, in some of which the volcanic forces are still active and in all of which there are indisputable evidences of recent energy.

NOTE.—The Azores are treated separately (*see* Index) although many of the remarks in this article necessarily apply to that group.



The depth of the ocean immediately surrounding them is usually very great and the density of the water, by which they are partially supported, has allowed the superstructure to rest upon a base so small, that, were the water drained away and the sides exposed to view, the islets would, in some instances, appear as slender cones, towering many thousands of feet into the air. Even the channels separating the component parts of the archipelagos are not always raised much above the general level of the ocean bed, though soundings have traced a number of submarine elevations lying above what is doubtless one of the principal fissures traversing the crust of the globe (*e.g.*, the Alice Bank in the Azores, details concerning which are to be found in "Campagnes Scientifiques," by Albert I., Prince of Monaco).

The greatest depth of the ocean between Madeira and the Canaries is 2,400 fathoms (13,200 feet). Long before the bottom is reached the pressure must be so enormous and the power of gravitation so reduced, that only very closely grained matter could sink to the bottom. Under such circumstances even sheets of basalt, of which the density as compared with water is about 2.6, might protrude far beyond the underlying stratum, immense caverns being created, in whose recesses living forms may exist of which we have no cognisance. It was possibly from such a ledge as this that the lead fell when the route of the cable from Cadiz to Teneriffe was being surveyed and the sounding line suddenly ran out for 1,400 feet without a stoppage.

At a short distance below the surface of the sea the action of the waves ceases; temperature is maintained at a constant level (about 36° Faht.), and the "weathering" of the rock, which, under exposure to the atmosphere is constant and often very rapid, must be limited to tidal influences and to the corroding action of marine growths or to that of matter held in solution by the ocean itself.

In our study of the nature of the submarine formation of mountains, we should, paradoxical as it may appear, turn to the moon.

In our great satellite the force of gravity, though greater than at the bottom of the Atlantic, is only one-sixth of that to be found on the surface of the earth. The absence of atmosphere and of water in the moon and of active disintegrating influences at the bed of a terrestrial ocean, may again be compared, for in both cases the surface of igneous rock would remain unchanged for an indefinite length of time. Volcanoes therefore that have been built up between restraining walls of water do not require wide-spread declivities of talus to support them, but often consist of acute peaks, sometimes encircled by very precipitous walls, as is the case with the lunar group of Catharina, Cyrillus

and Theophilus. The fact that volcanic islands which have appeared above the surface within historic times, as for instance in the Azores, have usually disappeared shortly after the cessation of activity, indicates the absence of a long, shallow, submarine fore-shore, or of any form of breakwater capable of hindering surface erosion.

**Raised beaches, etc.**—Traces of former coast lines and of marine deposits are found in various parts of the islands, often far removed from the present level of the sea. The relative elevation of the land and of the water may have altered many times in both directions. It is even probable that, were the islands again to be raised, evidences of atmospheric weathering would be disclosed in places now lying far below the surface.

During the Helvetian stage of the Upper Miocene Epoch, limestone was deposited near São Vicente in Madeira at a point now situated some 1,300 feet above the sea. On the islet of Baixo, to the S.W. of Porto Santo, an ancient coral reef, formed about the same time, has been lifted some 200 feet, and in Porto Santo itself a raised beach, about 40 feet above the sea, contains specimens of marine shells belonging to species now living.

In Teneriffe the evidences of wave action are a matter of deduction rather than of proof. It is believed that some of the inland cliffs of the valley of Orozava were formed by the sea and Piazzi Smyth stated that part of the S.W. wall of the Cañadas, lying at a height of some 7,000 feet above the sea, showed signs of having been subjected to marine influences, an assertion of which some confirmation is desirable.

Grand Canary, whose geological conditions merit a closer study than has yet been accorded to them, has most undoubtedly been, at least partially, subjected to submersion, perhaps more than once. Even the shallow cup-like formation of the extreme summit may be owing to other forces beyond those of mere denudation.

Limestone is quarried at Jinamar, on the east coast, some 260 feet above the sea, whilst to the S.W. of the island there are instances of cinder-heaps (*fumaroles*), planed down to an absolute level with the detritus by their side, in places where the existing conditions do not indicate their disappearance to be due to water running down from the hills.

There are also extensive deposits of limestone in Fuerteventura, though these are situated at no great height above the sea and call for no especial remark, beyond directing the reader's attention to the fact that both in Madeira and in the Canaries the lime used for building is taken from the eastern part of the archipelagos and that the districts in which it is found are in each instance partially covered by drifted sand. Some of the calcareous deposits are said to be due to the decomposition of the basaltic rocks.



**Blown sand.**—Whatever may be the case as regards sand in the Madeiras, there can be no doubt that the yellow sand to be seen in certain parts of Grand Canary and, more extensively, in Fuerteventura and Lanzarote, is carried thither from Africa by tidal action, the set of the current being influenced by and being more or less identical with that of the prevailing wind. In the two latter islands, which lie close together, it is a matter of common occurrence for sand to form on the east coast in the shape of a demi-lune and to march straight across country, moving probably in almost exactly the same manner as the sand-dunes to be found in certain parts of the desert of Sabara. Indeed, Sahara itself is not very far away, as the channel separating Fuerteventura from the African mainland is barely sixty miles in width.

Similar sand is also cast up in Grand Canary in two places, both some 130 miles distant from Africa.

Porto Santo in the Madeiras, where a great part of the surface is covered by sand, lies about 380 miles west of the nearest point on the African coast. It seems, therefore, to lie outside of the area covered by the present argument.

There is reason to suppose that the bed of calcareous sand in which the fossil remains are found at the north-western extremity of Madeira, was brought by the wind to its present position from a beach on the north coast which has now disappeared.

The presence of sand is a matter of meteorological importance, for, presuming that in the Eastern Canaries it is being brought over from Africa, it is fair to assume that those parts in which it is most abundant must be affected by the agencies by which it is carried. It has been stated that these are the sea and the wind, therefore, in the islands just named, the air beating upon the land should give the climate a more continental character than in places where the atmosphere is renewed by a breeze subject to no other influence than that of an artificially warmed sea-surface such as that of the Gulf Stream.

Be this as it may, it is a fact that the islands of the Canary group nearest to the African coast are exceedingly dry; that moisture increases towards the west, and that the humidity in Madeira is greater than in any of the Canaries.

**The Gulf Stream.**—The depth of the channels has the effect of allowing the Gulf Stream to flow very freely around and amidst the islands, which seem to afford little interruption to its passage. It progresses to the west at the rate of from 12 to 15 miles a day.



The general direction of the Gulf Stream and of the trade wind are the same. Both bear down upon the islands from the N.N.E. The moisture which the former yields to the latter has been and is still an important factor in the shaping of the hills and valleys, being the main cause of the dissimilarity of the northern and of the southern slopes. As a result the angle of subaërial ascent on the north is usually the steeper whilst the submarine coast line, to a depth of 50 fathoms or more, advances further from the land and is less irregular.

In the Eastern Canaries its power is mitigated by the neighbourhood of the African coast, by irregularities in the bed of the Ocean and by the change in the direction of the wind, which cause it to form great curves and eddies. The result is a marked difference in the temperature of the water in places comparatively close to one another.\*

**Action of the waves.**—It has been pointed out that the channels separating the various islands are usually of great depth; that the foreshores are narrow and the sub-oceanic decline exceedingly steep.

We find, therefore, that the waves are driven on to the land with great force and that on the north and north-west, where the coast is exposed to the full fury of the Atlantic, the cliffs are usually most precipitous, the breakers, even in calm weather, rolling in with a power and majesty of which the little wavelets of the North Sea are but a poor imitation.

The constant agitation of the water creates a fine cloud of spray, which is, of course, impelled against the coast when the breeze moves in that direction, playing an important part in the climatic conditions of the districts in which it is common. The wind usually sets towards the shore during the hottest part of the day. The effect is so marked that observations of the humidity of the atmosphere, taken within 100 to 150 feet of the sea level on the north side of any of the islands, are useless unless the incrustation of sea salt be washed from the wet-bulb every twenty-four hours. The same remark applies, though in a lesser degree, to the south coast. On the north a certain quantity of salt is probably carried to the same height as that to which the trade wind is driven. Telegraph wires crossing Teneriffe, *viâ* La Laguna, are corroded by salt at an altitude of over 2,000 feet.

**Formation of the Land.**—The sections of strata exposed by the inroads of the sea or along the sides of the ravines almost invariably disclose a succession of beds of igneous rock, divided

\* NOTE.—The temperature of the surface water in the full flow of the Gulf Stream off Madeira, is about 8° higher than off Mogador on the Moorish coast.

by layers of tuff or of volcanic detritus, sometimes metamorphosed by heat throughout their entire thickness. In the neighbourhood of a centre of volcanic energy these are frequently interlaced by numerous dykes, crossing and intersecting one another in every direction.

The soil of which the surface is composed is generally shallow, but, where the adjacent and most recent volcanoes are of friable material, decomposition has often led to deposits of considerable thickness, varying from a few feet to many yards. In such cases the earth nearest to the underlying stratum is generally much compressed and, though not impervious to water, can only be broken by blows from a sharp, heavy pick.

In this, and in every instance where the rock is sufficiently pulverised to allow of the growth of plants, the land proves most fertile, wherever there is enough moisture the vegetation being luxuriant.

**Fossils.**—Fossils are by no means frequent, but are found both in Madeira and the Canaries, both animal and vegetable forms having been preserved.

In an excavation made in Santa Cruz, Teneriffe, the strata were as follows:—Basaltic lava, 30 feet; conglomerate, 6 feet; volcanic tuff, 6 feet. Fossils of the common snail (*caracol de viña*), still found on the vine and on the prickly pear, were found in the conglomerate below the basalt.

**Minerals.**—Amongst minerals, specular iron, iron pyrites, olivine, augite and a few others occur both in Madeira and the Canaries. In the latter (Peak of Teneriffe) there are deposits of sulphur and in La Palma globules of copper have been found. Obsidian is common in many parts of the archipelago and in almost all the islands there are mineral springs, of which the analysis has been given wherever possible. Both Mineral Springs and the Economic Value of Minerals is dealt with elsewhere. (See *Index*.)

**Denudation.**—It has been previously stated that the effects of denudation are less apparent than is the case in most parts of the British Islands or of the Continent.

The weathering of the rock has, however, been a material factor in the modelling of the contours and there are many instances where volcanic outflows have been precipitated into the channels of old water-courses, ravines having again been formed through the obstacles thus created, which in their turn have been filled up by the results of subsequent eruptions, through which the water has once more worn or is now wearing a passage.

The geological conditions are thus sufficiently complicated, but the steep incline of the mountains and the proximity of the sea to the centres where water is collected have prevented the accumulation of alluvial deposits on that vast scale common in countries of greater extent.

The vegetable or animal refuse, by reason of its lesser weight, is usually the first to be carried into the sea and is rarely to be found in any considerable quantity. The preservation of soil suitable for plant life is commonly due to local irregularities, which have hindered the rapid flow of the water, or to artificial obstructions raised for the purpose of creating arable land. The cultivated portions of the island are consequently lined with terraces, where the lava has often been removed to expose the former surface, or where soil has been carried and placed between restraining walls built of the same material.

**Elevation of the land.**—In those islands where the investigations have been most thorough, it has been shown that the rocks belong to distinct geological epochs and that some of the islands at least were lifted to a considerable height above their former level, possibly after a period of prolonged if partial quiescence.

The position of the limestone bed at São Vicente shows Madeira to have been raised to the extent of at least 1,300 or 1,400 feet. In Teneriffe marks of wave action at a high level are based upon less positive evidence, but the limestone beds of Grand Canary and Fuerteventura prove that these islands have been elevated above their former position. In Porto Santo there are evidences of elevation at three distinct epochs and it may be presumed that a series of seismic disturbances has agitated the bed of the ocean at irregular intervals. (Refer also to Santa Maria, Azores.)

Since the last upheaval or series of upheavals there is no evidence of further subsidence, if one excepts cases where portions of an island may have faulted away from the rest, as, for instance, in the Valley of Orotava.

The exposure of the islands may, of course, be due to shrinkage elsewhere and to the removal of the ocean to a lower level, but cannot well have been caused by any ordinary exhibition of force similar to that required for the mere raising of a volcano or of the ejection of a stream of lava.

If the rise of all the islands was simultaneous the movement now seems to have ceased, or if the land is still being lifted the motion must be exceedingly slow.

**Volcanic activity.**—The alteration in the levels was followed by a lengthened period of volcanic activity, during which the old



islands were partially covered by the rocks thrown out and their altitude thereby further increased.

Sir Charles Lyell came to the conclusion that Madeira was originally dome-shaped, the sides sloping at an angle of from 3° to 8° towards a flattened summit with an elevation of from 4,000 to 5,000 feet.

He thought that there were signs of two parallel systems of volcanoes, running from east to west, the southern chain being overwhelmed by the other to the depth of 2,000 feet or more.

The space between the two was filled up, part of it being now an elevated marshy tract known as the Paul da Serra. A smaller elevated plain on the east is known as S. Antonio da Serra.

This building up of the island did not continue uninterruptedly, but was retarded by periods of repose, during which denudation did its best to carry away the volcanic deposits. It was in one of these intervals that the lignite and leaf beds of S. Jorge in Madeira were formed, some 1,200 feet of rock being afterwards piled upon the top of them. Eventually, however, the lava flows ceased and the water was left to work its will on the accumulated masses of cinders, slag and detritus.

Exactly what the height of Madeira may have been at this time it is difficult to determine, though it probably did not much exceed that of the present day (Pico Ruivo, 6,059 feet). Even from the summit, however, much has been removed, the fantastic walls and columns forming so characteristic a feature of the centre of the island, being the exposed remains of what were once necks of craters or veins of intrusive rock (dykes).

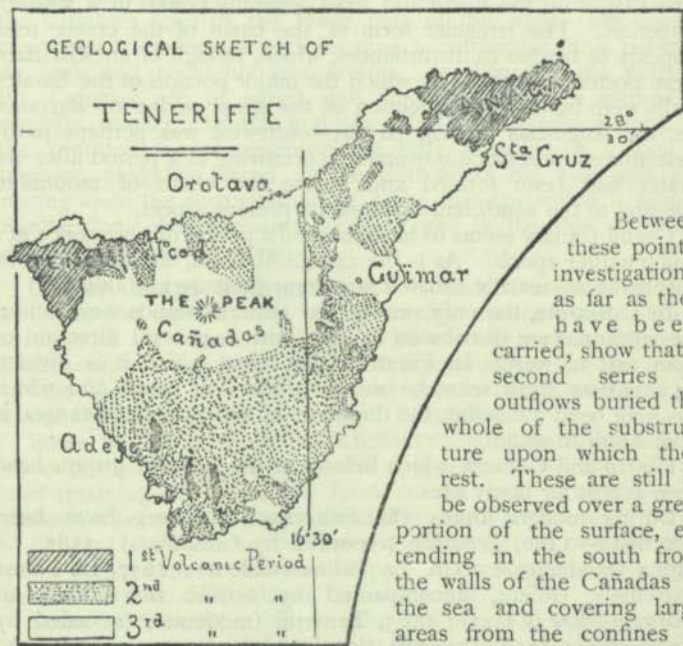
These few scattered fragments are constantly being robbed of their foundations and it is no longer disputed that the immense chasms of which the Curral and the Serra d'Agua are such conspicuous examples, are due to the wearing action of water. The first passes from the northern through the southern line of volcanoes, having doubtless been aided in its course by fissures in the rock, as was probably the case with ravines generally in all the archipelagos.

Both valleys are of immense size, even in Madeira, where the water-courses, taken in relation to the size of the island, are gigantic. Their only counterparts in the Canaries are the Barranco de Tejeda and the Barranco de Tirajana in Grand Canary, and the Great Crater (Caldera) in La Palma, the latter of which may have been partially shaped by other forces than those of erosion. In Teneriffe the hollows worn by the streams are comparatively small.

The original dome-like shape of Madeira has been described and reference has been made to the northern chain of volcanoes, which, as it overwhelmed its southern neighbour, may well have

entered into activity at a later date. It remains to be added that the latest exhibitions of volcanic force appear to have found their vent at a lower altitude, the surfaces characteristic of recent eruptions of lava indicating that the latest eruptions broke through the crust of the earlier rocks and were of a parasitic nature.

In Teneriffe the surface before the last great upheaval seems to have been more irregular than was the case with Madeira. It has been traced in the west at Teno; in the south-west near and about Adeje and in the north-east at Anaga and to the north of La Laguna. The last is the most extensive outcrop and exhibits a large area but little affected by the latest disturbances. In each instance the surface has been deeply scored by denudation and the summits have assumed a most bizarre and highly picturesque form.



neighbourhood of La Laguna on the east. The third and last series of strata includes the Peak and the plain upon which it stands. In all probability it once concealed nearly the whole of the northern slope from Teno on the west to Anaga on the east, the interruptions now existing in this formation being partly due to subsequent denudation.\* Volcanic rocks of the third

period are also present in isolated patches near the south coast. The ravines by which the third series is intersected are rarely of great depth.

The elevated plains in Teneriffe are two in number. One of them, about the centre of which La Laguna stands, is due to lava and detritus having filled up the space between two chains of hills. The other is the floor of the great crater surrounding the Peak, the form of which is probably due to plutonic forces.

In La Palma the newest formations lie to the south of the great crater, whose presence, since the time of Leopold von Buch, has justly caused La Palma to be regarded as one of the most interesting and wonderful of all oceanic islands. Recent outbreaks of lava stretch from near Fuencaliente on the south to Los Llanos on the north and have generally flowed in a westerly direction. The irregular form of the basin of the crater itself appears to be due to disturbances, which, though of ancient date, were posterior to those by which the major portion of the basaltic walls were built. The direction of the great ravine or Barranco de las Angustias leading to the south-west was perhaps partly determined by seismic movements, occurring at a period after the crater had been formed and before the chain of mountains running to the south had assumed its present aspect.

Grand Canary seems to have reached a period of quiescence at a much earlier epoch. As is the case in Madeira, the latest volcanic outbreaks are usually situated at a comparatively low altitude.

In Lanzarote, the only one of the eastern islands now active, the volcanoes are distributed in lines with a general direction of from east to west. In Fuerteventura, from which it is divided by a narrow strait scarcely twenty fathoms in depth and which has long been quiescent, the direction of the mountain ranges is from north to south.

Hierro and Gomera, which belong to the western group, have been at rest for many ages.

During modern times the following eruptions have been recorded:—1492, Teneriffe (recorded by Columbus); 1585, La Palma (moderate); 1646, La Palma (violent); 1677, La Palma (extremely violent, accompanied by terrific noise and an enormous flow of lava); 1705, Teneriffe (moderate, preceded by earthquake); 1706, Teneriffe (locally violent); 1733, Lanzarote (violent); 1796 and 1798, Teneriffe (moderate); 1824, Lanzarote (insignificant); 1909, Teneriffe (*see* page f17).

Madeira and the other islands have been undisturbed by eruptions, but shocks of earthquake are recorded in the former in 1748, 1755, and 1816, the first doing a certain amount of damage to the



cathedral and to churches in other parts of the island. In no case do there appear to have been any dangerous showers of ashes during historical times and, to judge from the position and apparent age of isolated pinnacles of rocks, earthquakes must generally have been local.

**Order of the rocks.**—It would be hazardous to make any definite statement as to the succession of rocks in the islands generally.

Basalt has been stated to be most common in the oldest formations and trachytic lavas in the more recent. Basaltic rock has, however, been poured out during some of the very latest eruptions and there are wide stretches of deposits of the third period in which trachyte is either absent or far from plentiful. In the valley of Orotava, for instance, the streams of lava flowing from the Cumbres towards the lower part of the valley are chiefly composed of andesite, a rock forming a connecting link between the basic and the highly acid groups. In Teneriffe the walls of the Cañadas are of basalt, but the Peak itself is formed of trachyte, pumice, obsidian and ashes. The *Montaña Blanca*, as the rounded hump adjoining the Peak is called, is a shell of trachyte, probably forced up the vent of an old blow-hole and resting upon the accumulation of ashes through which it issued. Similar dome-shaped craters are to be seen in the Puy de Dome district (Southern France).

**Cinder heaps and craters.**—Rounded heaps of cinders or *fumaroles* as they are called locally are common enough throughout the islands and are of all colours and consistencies. Those composed of black ash and scoriæ usually resist the action of the weather best. A good example is the *Montañeta*, just above the Grand Hotel in Orotava, Teneriffe.

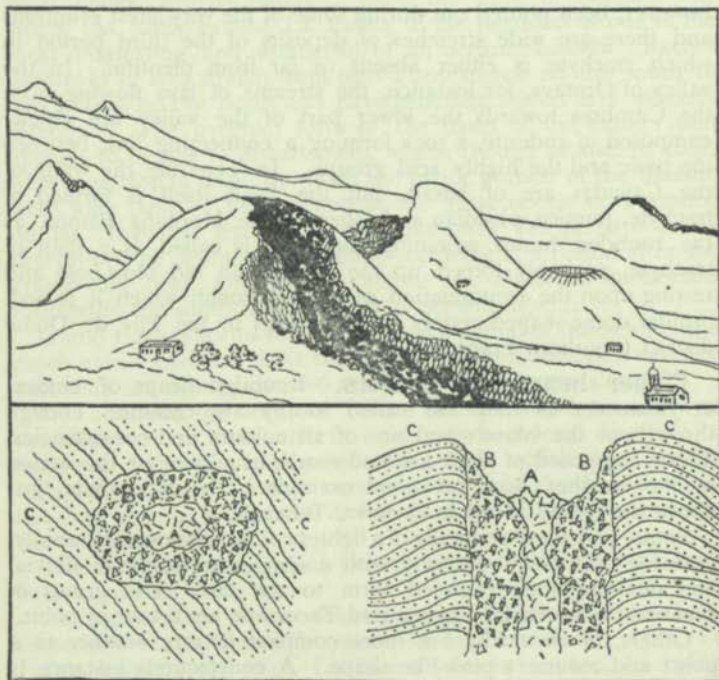
Some, and these generally of a lighter colour, disintegrate rapidly, covering the neighbourhood with a species of volcanic alluvial and retaining their rounded form to the last. The group of *fumaroles* between La Laguna and Tacoronte are a case in point.

Others, of an earthy but more compact nature, weather to a point and assume a peak-like shape. A conspicuous instance is that of the Pico de Gáldar in Grand Canary.

Some of the cinder heaps, after attaining a certain elevation, died away, leaving a circular rim at the summit enclosing a shallow depression. Such craters are to be seen in many places, notably at S. Antonio da Serra in Madeira and between Tacoronte and La Laguna in Teneriffe. In Madeira, the cup at the top is sometimes converted into a small lake during the winter. Hence the local name of *Lagõa*. Such lakes are frequent in the Azores. (See map.)

Blow-holes of this description are, however, usually broken down on one side by a flow of lava. The mass of igneous rock which overwhelmed Garachico (Teneriffe) proceeds from a group of cinder heaps and similar instances on a smaller scale exist in all the islands.

Such volcanoes are usually parasitic and are most common in the third series of eruptions, the earlier examples having been swept away or hidden by later deposits. Instances of hidden blow-holes have been found in the Socorridos ravine and near Boa Ventura in Madeira.



IDEAL GROUP OF SATELLITE VOLCANOES (FUMAROLES), WITH GROUND-PLAN AND SECTIONAL VIEW OF A CRATER NECK.

*A*—Lava. *B*—Slag and Detritus. *C*—Cinders, Pumice, etc.

There are a few cases in which the rock has welled up to the brim of the crater and then subsided without forcing an outlet.

In these craters the inside walls are usually steep, incrustated with rings of slag and cinders and corroded by the heat and motion of the molten lava they contained. The difference between the inside

of a cup from which the igneous rock has been suddenly discharged through a breach and that of a flawless crater of this order can be well observed by comparing any of the broken volcanoes with the Gran Caldera at Tafira in Grand Canary, where the sides are intact and the bowl is of colossal dimensions. (See *Index*.)

An excellent object lesson of the formation of a cinder heap is to be seen in South Kensington Museum.

Dr. Edward Hull, the author of "Volcanoes Past and Present," ascribes the force necessary for blowing out the materials of which the walls are formed to the ascent of igneous rock by fissures torn through water-bearing strata. The result of the impact is the rapid generation of super-heated steam, by which "ashes, scoriæ, and blocks of rock torn from the sides of the crater throat and hurled into the air, are piled around the vent and accumulate into hills or mountains of conical form. After the explosion has exhausted itself, the molten lava quietly wells up and fills the crater." He therefore formulates the general principle that "where water in large quantities is present, we shall have crater cones built up of ashes, scoriæ and pumice; but, where absent, the lava will be extravasated in sheets without the formation of such cones; or, if cones are formed, they will be composed of solidified lava only and will be easily distinguishable."

These quotations explain many of the phenomena frequently seen in Madeira and in the Canaries, showing us that the crater cones may be regarded as a series of subterranean borings by means of which we are enabled to ascertain to a certain extent the nature of the sub-soil lying beneath them.

For instance, if the ash cone on the summit of the Peak of Teneriffe is caused by the explosion of vapour beneath the Cañadas, it may be argued that the nature of the lower strata is at least partially reproduced in the rapilli by which it is crowned.

**Lava.**—The most remarkable example of the penetrative power of molten rock with which the writer is acquainted is to be seen on the western coast of La Palma, a little to the south of Las Manchas. The district is almost entirely covered by recent and furious discharges of lava, which falls in a succession of terraces towards the Atlantic. In one of the terraces or cliffs, a gully, some sixty feet or more in depth, has been created, the sides of which are almost absolutely precipitous. This gully evidently owes its origin to a later stream of lava flowing over solidified rock. To one accustomed to the characteristic furrows of a lava stream, such as those to be seen above Garachico, the cleft mentioned in La Palma is most noticeable.



The natures of the two rocks are somewhat different, that in La Palma having a greater tendency to weather concentrically than is the case near Garachico.

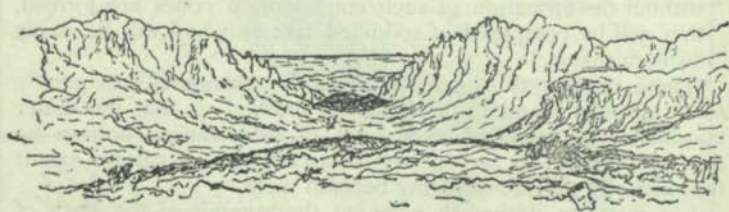
There are instances where the destruction of old volcanic walls or buttresses by later flows of rock has taken place on a gigantic scale.

A good illustration is afforded in Teneriffe, where about two-thirds of the walls encircling the Cañadas, which once were continuous and enclosed a lake of fire from six to eight miles in width, have been carried away.

On the west the demolition was due to the flows of igneous matter from the gaping volcano of Chahorra and its parasites. On the north-east the chief agency was probably water.

Looking towards Chahorra from the west, the mountain side is seen to be composed of masses of rugged stone, of which certain streams have run into the sea, forming the jagged bulwarks now serving as a protection to this part of the coast.

Viewed in this light the process of demolition cannot exactly be described as destructive, the material being merely removed from one site to another.



THE GARGANTA DE GUIMAR SEEN FROM ABOVE.

**Explosive eruptions.**—There is, however, at least one instance where a portion of the island seems to have been removed by volcanic agency.

This occurs in what is known as the Garganta de Güimar or "el Valle," on the south side of Teneriffe, a narrow gorge through which the pass is carried from Güimar to Orotava.

The bed of the Barranco is covered by volcanic ash and by the detritus of the neighbouring rocks, but the sides, which are from 500 to 700 feet in height, have been but little affected by the action of water and are interveined by an extraordinarily complicated system of dykes. The dip of the strata in the west has an angle of a little over  $35^{\circ}$ , and that on the east of rather more than  $32^{\circ}$ , the rock exposed belonging to the second series of eruptions and the portion missing having entirely disappeared.

The enormous force necessary to move so great a mass of rock may have been engendered by the contact of igneous rock with a subterranean deposit of water flowing from the Cañadas, the latter having some relation to the streams by which the valley of Güimar is now irrigated. The little volcano of Arafo, standing in the centre of the lower part of the cleft, was active in 1705, when it poured a stream of lava down the southern slope nearly as far as the coast.

**Lava-caves.**—This stream is one of the several instances to be found where the interior of the molten mass continued to flow after the crystallisation of the exterior crust, the result being the creation of a cave, sometimes of considerable length. That below Icod de los Vinos was used by the Guanches as a place of burial, and that beyond Haría in Lanzarote as a retreat during time of invasion.

**Faults.**—Among cases where denudation has been assisted by extensive faults, the valley of Orotava, which covers an area of some 45 square miles, may be mentioned. The faulting in the rocks is here most apparent to the west of Realejo.

Chasms, or depressions, similar to those of the Cañadas, Orotava, Güimar, or Icod, may result from subsidence, the matter supporting the solidified crust being extruded in a molten state from some neighbouring volcanic outlet.

It is also argued that they may have been created by explosive energy. If this were the case at Orotava and Güimar it must be presumed that the outer wall of each of these craters was afterwards destroyed by the action of the waves, the sea thus gaining an entry. The subsequent alteration in the landscape both at Güimar and at Orotava was largely dependent upon erosion.

The craters of the Cañadas and of Icod have been less subject to the action of water. Streams of lava and, in the former case, showers of pumice are mainly responsible for the nature of the surface now existing.

As examples of the energy required to achieve such stupendous results, the Val de Bove on Mount Etna and the eruption of Krakatoa in 1883 may be cited. The latter is one of the most remarkable outbursts of modern times and that of which the attendant phenomena were most accurately observed. A short description showing what may have occurred or might still take place in Madeira or the Canaries should prove of interest.

Krakatoa, which is situated in the Sunda Straits between Sumatra and Java, appears to have been dormant till 1680, when there was an eruption, after which it remained in repose until 1883, the traces of the former outbreak being again covered with forests and the volcano being regarded as extinct.

On May 20th, 1883, detonations, heard in Batavia, were followed by the ejection of flames and a great column of smoke, fissures being doubtless created about the same time, through which water gradually percolated. On August 26th, this must have come into contact with the igneous rock, for on that date faint explosions, first heard in Buitenzorg, increased in force as the night fell, soon becoming so loud that sleep in the western part of Java was rendered almost impossible. This growth of energy was probably due to the creation of fresh fissures, through which large bodies of water were admitted.

At seven in the morning there was a fearful report followed by shocks of earthquake; the sky became overcast and by 10 a.m. the straits and the surrounding coast were in darkness, the wind rising to hurricane force.

Eye-witnesses state that the island was covered by a wall of black cloud lit up by incessant shafts of lightning and that the air was momentarily shaken by a series of frightful detonations. A column of watery vapour rose to a height variously estimated at from twelve to twenty-three miles, at which altitude it spread into a huge canopy from which atoms of dust slowly descended. Even pieces of pumice stone were carried to an enormous distance and for some time navigation in the Straits of Sunda was hindered by the immense quantities left floating on the water. On August 29th, the day after the eruptions ceased, particles were collected from the deck of a steamer at a point 1,600 miles west of Krakatoa.

The dust itself was distributed over a far greater area, falling during September in British India, on the east and west coasts of Africa, in Trinidad, in Panama, in the Sandwich Islands, and elsewhere. During the latter part of 1883 and the earlier part of 1884, a corona, visible in Europe and the British Isles, surrounded both the sun and the moon, the magnificent tints assumed by the sky at sunrise and sunset being a matter of common observation.

The atmospheric wave due to the explosion was recorded at numerous meteorological stations. After encircling the globe, it met at the antipodes of Krakatoa, whence it was returned to its source, the action being repeated seven times, after which it became too feeble to affect the most sensitive instruments.

The sound was carried to a distance of more than 2,000 miles, that is to say, a similar explosion in the Canaries would have been audible almost all over England.

At the point from which it originated, the tidal wave caused by the eruption is said to have attained a height of about fifty feet. Its effects were felt all over the globe in decreasing ratio. Had it not been for the interruption caused by the two Americas, it



would have reached the English coast from the westward as it did from the south *viâ* the Cape of Good Hope.

The shape of Krakatoa and the surrounding bed of the ocean were completely transformed. The cone of Rakata, 2,622 feet high, and the little island of Verlaten, which formed the outer rim of what, before the eruption of 1680, is believed to have been a volcanic peak of majestic dimensions, are all that is now left. The central groups of mountains known as Danan and Perboewatan have sunk below the surface and a portion of Rakata itself has accompanied them. The Sebesi channel was partially filled up by banks of volcanic rock, which rose in two places above the sea, but have since been swept away.

One hundred and sixty-three villages were entirely and 132 partially destroyed, and 36,380 human beings perished.

The most complete descriptions of this eruption are those published by the Royal Society and by the Governor-General of the Netherland Indies (Chevalier R. D. M. Verbeck, 1886). The subject is also discussed at considerable length in "Volcanoes: Past and Present," by Dr. Edward Hull, to whom the writer is indebted for much of the above information.

It may be added that the distance between Verlaten Island and Rakata, the north and south walls of the crater as it now stands, is about five miles, or somewhat less than the breadth of the Valley of Orotava.

Those using this guide book will find that a great number of manifestations of volcanic and other forces have been dealt with locally.

**Teneriffe.**—Eruption of 1909 (Montaña del Decreto). This eruption, though of minor importance, was described in so exaggerated a manner by the European press, that it demands a few words.

On January 4th, 1909, a slight earthquake was noticed throughout Teneriffe and partially in Grand Canary. Subsequently at intervals and more especially on July 28th, September 13th and November 14th there were more shocks, most of them confined to the neighbourhood of the Peak. Curiously enough no movement was felt in Gomera or to the westward of Teneriffe.

On November 18th, a crater opened on a flat, cindery expanse on the north-west shoulder of the Peak immediately to the north-west of the M<sup>a</sup> de Chinyero, an extinct blowhole 4,928 ft. (1,502 metres) above the sea, not very far away from the volcano of 1705 and about 9 kilometres distant from the centre of disturbance of 1796-8. The eruption was accompanied by sharp, loud detonations, very audible at Orotava some 16 miles away and proceeding apparently from a great depth beneath the surface. The volcano

remained active for nine days and, during that time, the craters increased to four, the first crater however becoming almost quiescent after the appearance of the other three.

Stones were thrown up to a height estimated as 700 metres (2,300 feet) and it is calculated that the matter ejected in the form of cinders and lava reached a total of 15 million cubic metres.

A little light ash fell in the Valley of Orotava, but nothing palpable was carried to any great distance. The wind blew gently and constantly from the south-east, raising a bank (Montañeta) of ashes, cinders and dust in the order named (reckoning from the outlets as a centre), this bank being deposited to the north-west of the craters and rising to a height of about 500 feet.

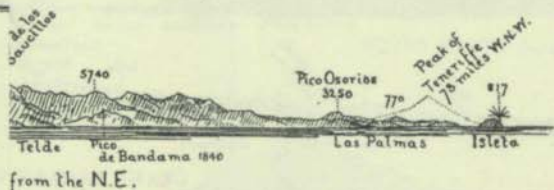
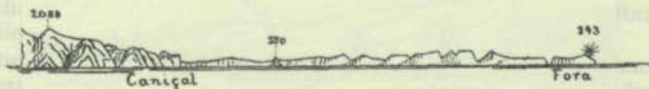
No damage at all was done nor, when the first panic had passed, was there any special reason to anticipate any.

The lava, which rose throughout from the level of the plain, was hard, brittle and black, but not so black nor so vitreous in appearance as the cinders themselves. It flowed first in a north-west direction, filling up a considerable depression to the east of the M<sup>a</sup> de la Cruz, but afterwards ran almost due west to the north of the M<sup>a</sup> de la Cruz and to the south of the M<sup>a</sup> de los Poleos, surrounding and isolating the M<sup>a</sup> Aguda, 5,131 feet (1,564 metres), and joining again into one stream until it reached the M<sup>a</sup> de Bilma, 4,429 feet (1,350 metres), where it was once more split into two, each stream, after running for about another kilometre, stopping for lack of new material.

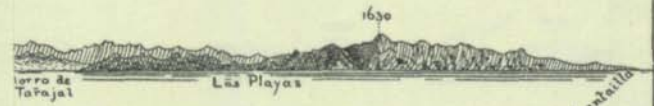
When the eruption ceased, the new bed of lava had an extreme length of about  $2\frac{3}{4}$  miles ( $4\frac{1}{2}$  kilometres) by an extreme breadth of about  $\frac{1}{2}$  mile (800 metres). Allowing for the various sinuosities and granting a total direct stream of say 7 kilometres, the average speed would be 32 metres (35 yards) an hour. The rate of progress was of course very largely determined by the flatness of the country surrounding the volcano.

There was a remarkable absence of sulphurous or evil-smelling vapour, nor is it recorded that any noticeable quantity of steam was ejected. It is, however, reasonable to suppose that some of the shocks of earthquake and a part of the force necessary to throw stones so high into the air, may have been due to the encounter of heated rock and subterranean deposits of water.

The results of the eruption seem, so far, to be almost identical with the last outbreak in Teneriffe in 1796-8, when lava flowed for a time in the direction of Guia. On that occasion also no damage resulted, nor would the flow of lava in 1705 have done much harm had its course to the sea lain a little on either side of Garachico instead of through the centre of the town.



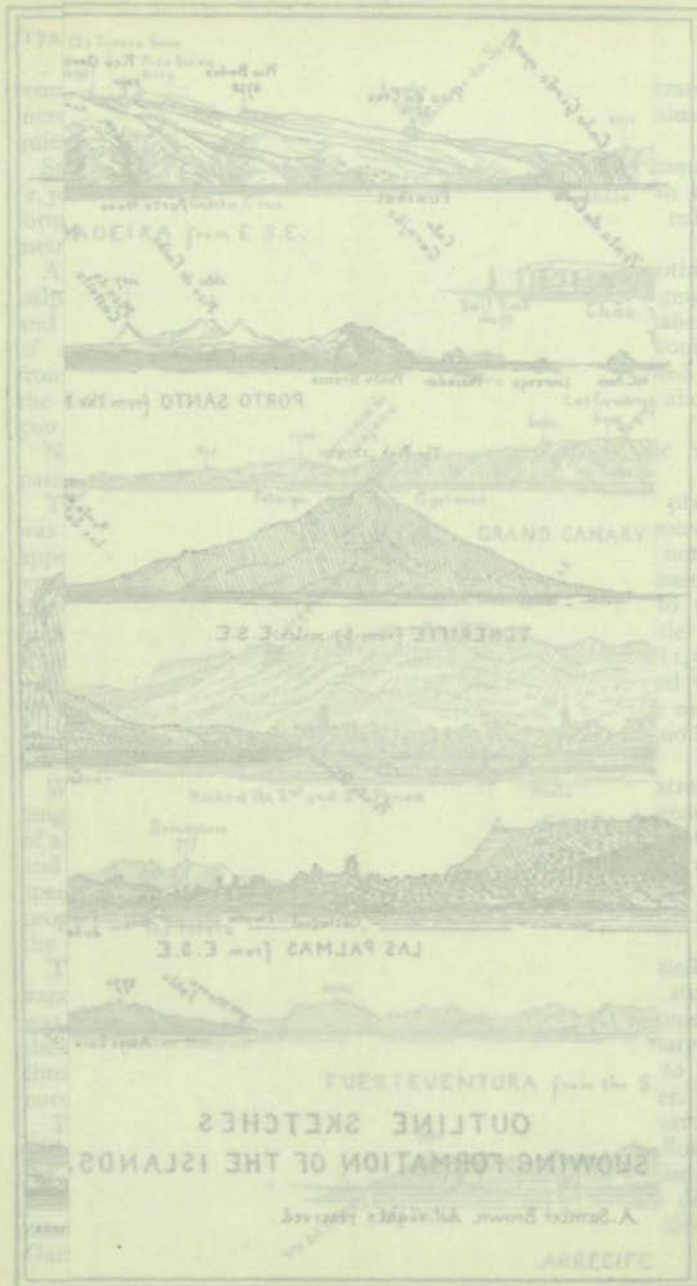
Rocks of the 1<sup>st</sup> Period  
**TENERIFFE** from the E.



**LANZAROTE** from the S.E.







For the above notes the author is partly indebted to Dr. Oscar Burchard of Puerto Orotava and to the staff of the Obras Publicas of Tenerife.

The name, M<sup>a</sup> del Decreto, was given to the volcano because the eruption took place just after the Spanish Government had passed a decree, very unpopular in Tenerife, granting certain rights to Grand Canary. The outburst was declared to be due to the indignation of the Island with the political alterations.

The volcano is best visited from Icod de los Vinos, from which it is distant some  $3\frac{1}{2}$  hours. The nearest village is Santiago. The way to it is rough.



## The Sunken Continent of Atlantis.

THE legends and traditions which found a concrete form in Plato's "Timæus," invariably deal with the fabulous continent as an inhabited country. Perhaps it is for this reason that those believing in its existence are so often held up to ridicule and that so few can approach the subject with an unbiassed mind.

Putting aside altogether the question of the presence of human beings, let us examine the matter simply from a geological point of view.

Attention is first called to two great parallel lines of volcanic mountains running from North to South, one through Western America (both North and South) and one through the Eastern Atlantic (the Azores, the Madeiras, the Selvages, the Canaries, St. Helena, Ascension, and Bouvet Island). These volcanic ranges are believed to stand above two of the great lines of cleavage traversing the crust of the Earth.

Such cleavages are probably due to the gradual shrinkage of the Earth through radiation of heat into space and to the consequent falling in of the crust.

This falling in or subsidence could not affect the whole surface of the Earth equally. Loss of heat would be more rapid in one place than in another. Even were this not the case, the varying character of the supports upon which the different portions of the surface rested, would render uniformity of movement impossible.

It cannot be doubted that the loss of heat is continuous and gradual. It does not, however, follow that the contraction of the Earth must proceed uninterruptedly and at exactly the same rate.

We know that the crust is never entirely at rest and we need not turn back many years to find cases where small areas of land have suddenly sunk far below their former level, as, for instance, when part of Kingston, in Jamaica, disappeared below the sea.

Where very extensive tracts of country have been covered by the ocean and there is no historical record to which we can turn, it is difficult to obtain any positive evidence upon which to make a precise statement. The investigation of coral atolls affords, perhaps, the most exact data upon which calculations regarding the rate of subsidence can be based. It is well known that coral atolls cannot possibly exist if the rate of subsidence is more rapid than their own abnormally slow growth.

In the case of elevation, however, it is far different. The character of the fossils contained by the rocks enable geologists to give an approximate age to many of the great mountain chains and to declare with a considerable amount of certainty the height at which they stood at various epochs.

Elevation is simply a comparative statement of the height of the land and the level of the sea surface. It is, therefore, possible for land to maintain the same position as regards the centre of the Earth, but to gain in elevation as regards the sea, by reason of the water running away from it into some newly-created depression. Much of the so-called elevation of our mountains is probably derived from this cause.

On the other hand, there is actual, true elevation due to two causes. One of these is the building up by volcanic discharges, as is the case in the Canaries, in Madeira and in the upper parts of the Andes, etc. The other is the crumpling of the crust of the Earth due to lateral pressure, which pressure, when exercised on a large scale, is probably brought about by shrinkage. Many of the extraordinary curves, folds and inversions of strata to be found, can scarcely be ascribed to any less potent influence.

Presuming that there is a line of cleavage intersecting Madeira and the Canaries and another parallel line on the western coast of America, these two great breaks in the Earth's crust may be complementary to one another, for, if elevation is mainly dependent upon contraction and subsidence, it is obvious that a great mountain chain such as that of the Andes could not be elevated without the creation of an accompanying depression, which depression would almost necessarily become the bed of an ocean.

But it is probable that enormous changes such as these in the relative position of different parts of the Earth's crust took place very gradually, from which it would follow that, at some intermediate period, America, Atlantis and Africa may all have stood at a more or less general level, in which case they must have formed either an immense continent divided by great inland seas, or an almost boundless group of islands.

But if such a state of things as this can be imagined, then, by a slight further stretch of the imagination, Atlantis might previously have been dry land with an ocean on either side of it. Such a species of see-saw motion, by which the ocean would be shifted alternately from one part of the surface to another, is consistent with the theory of contraction. Radiation of heat would be hindered by the interposition of a blanket of water covering an ocean bed. The process of cooling, with its attendant shrinkage, might therefore be expected to proceed more rapidly in those parts where the surface was fully exposed to the sky.



The best proof of the former existence of dry land in the Atlantic is afforded by the traces of marine action in South America and in South Africa.

Darwin's investigations showed that specimens of living marine shells are to be found at considerable altitudes along the whole western coast of America for a distance of 2,000 or 3,000 miles south of the Equator. The same writer calls attention to the successive terraces or foreshores in that continent, whose cliffs are the evidence of the rate at which the land was raised above the level of the sea, or, which is the same thing, of the speed at which the ocean was drawn away.

The extreme height at which such terraces may have existed in South America can only be ascertained by an exact and extensive examination of the rocks upon which the later volcanic deposits rest, a matter of much labour even in an easily accessible and fully civilised country.

In South Africa, however, which is traversed by no such line of cleavage and where the sedimentary strata has suffered less from violent seismic movements than is usually the case elsewhere, the same terraces are found in all parts of the continent and there are abundant evidences that even the highest mountains of Basutoland did at one time form part of the ocean bed.

The forces generated by the sinking of so vast a portion of the Earth's surface in its close vicinity seem to have affected South Africa but little, the force generated finding its point of least resistance to the west. That this was so is to be argued from the fact that South Africa rose from the sea in the form of a great oval, encircled by a chain of mountains which remained unbroken, not only during the formation of the coal deposits in that country, but for a long time afterwards. Had the lateral pressure been exerted in an easterly direction, fissures must have been created in the surrounding wall and the Orange and Zambesi Rivers must have drained the central plains of South Africa much sooner than is generally believed to be the case.

That the alteration in the disposition of the surface of the globe progressed very slowly cannot be doubted. Otherwise there could neither be a succession of terraces nor a series of coal-fields, both of which extend in South Africa from the level of the sea or thereabouts (Santa Lucia Coal Beds in Zululand) to an altitude of 5,500 feet (Cyphergat, Cape Colony).

Gradual, however, as the changes no doubt were, the terraces seem to indicate that the shrinkage was occasionally accelerated and that periods of comparative repose, such as those now existing, were followed by epochs of greater activity, when the bed of the ocean was rapidly or even suddenly depressed, and the continents were proportionately elevated.



Such an epoch would be so disastrous to all living things in those countries lying above the area of subsidence, that any inhabitants who might escape could be trusted to hand down traditions of the great deluge to the most remote generations.

After a period of rapid subsidence we might expect an outbreak of volcanic energy, partly due to the enormous heat engendered by the movement itself and partly to the change in pressure from one part of the surface to another.

The intensity of the heat that might be created by subsidence may be imagined when it is stated that the warmth shed by the sun is supposed to be derived from similar movements of the sun's crust.

The effect of the change in pressure may be demonstrated by comparing the weight of a column of sea water to that of a similar column of air and by remembering that so very slight a change as a fall of an inch in the barometer is sufficient to cause seismic movements in certain very disturbed parts of the globe. More than this, it has been stated that volcanic outbursts occur most frequently when the attractive force of the moon is at its greatest. In proportion, therefore, to the weight of the water as compared to the influence of the moon would be the probability of an ejection of igneous rock.

In the Andes Mountains, that is to say in the extreme west of the area affected, the line of least resistance would be by way of the crater necks lying above the line of cleavage. In the Eastern Atlantic the eruptions might be expected to occur exactly in the same sites.

At first the number of volcanoes along each of these lines might perhaps be about the same. Later on, as the weight of water above them increased, those craters in the bed of the Atlantic which remained passive for the greatest length of time would also be those where a recurrence of activity would be most unlikely.

One by one they would be closed up and covered by a dense body of water. Eventually the vents for igneous rock or for superfluous force would be limited to those volcanoes most constantly in eruption.

The result would be that volcanic energy would make channels towards these vents as water does towards a well from which the accumulated liquid is constantly abstracted. As the general level of the ocean bed sank down, these few points would receive all the outpourings of Mother Earth and would, in consequence, maintain their heads either very near to or far above the surface of the ocean.

The volcanic vents now remaining are necessarily situated on one or the other of the Atlantic Archipelagos. Were some

further great subsidence to take place, all or any of these islands might at once be expected to burst into flame.

In the Azores the struggle between the ocean and the subterranean forces is still apparent. The Almagrurin adventurers spoke in the twelfth century of stinking water in this direction. As lately as 1867, a crater, which has since disappeared, rose above the surface near Terceira. (*See Index*).

The subaqueous character of the archipelagos has been treated of in the chapter on "Geology," and need not be repeated.

Many of the readers of this work may be inclined to dispute the possibility of such great seismic movements as those on which the author bases the above deductions. The following quotation is therefore given from the writings of the American naturalist, James Dwight Dana.

"After the Cretaceous period, and in the Pliocene Tertiary chiefly, or the Tertiary and Glacial period, the whole region of the Rocky Mountains was elevated; the elevation was 16,000 feet in part of Colorado; 10,000 feet, at least, in the region of Sierra Nevada; 10,000 feet in Mexico and over 17,000 feet in British America, latitude 49° to 53°, and less to the north. The region of the Andes, at the same time, was raised to a maximum amount of 20,000 feet; the Alps, 12,000 feet; and the Himalayas, 20,000 feet. Moreover, at the close of the Champlain period there was another epoch of small elevation, introducing the recent period. These elevations, affecting a large part of the continental areas, could not have taken place without a counterpart subsidence of large areas over the oceanic basin; profound oceanic subsidence was hence in progress during the growth of coral-reefs. The subsidence cannot be questioned."

It will be noticed that Dana estimates the elevation of the Andes to have been perhaps 20,000 feet. The highest mountain in the Andes (Aconcagua) is said to have an elevation of 23,080 feet. Making allowance for an increase in height due to the accumulation of volcanic deposits ejected after elevation had taken place, it appears therefore that prior to the period of activity to which Dana refers the summit of Aconcagua cannot have been much above the level of the sea.

But the deepest part of the Atlantic between Madeira and Teneriffe is only 13,200 feet below the surface. It would therefore follow that if subsidence along the Atlantic cleavage was equal to elevation along the American cleavage, and if one movement was the counterpart of the other, before any movement at all took place, Madeira and Teneriffe were perhaps connected by a range of mountains over which the lowest pass had an altitude of some 6,800 feet above the sea (20,000 less 13,200), less whatever allowance may be made for subsequent oceanic deposit, etc.



Passing from the geological aspect of the question, which, if it does not absolutely prove anything, at least shows that such a country as Atlantis may have existed, let us consider for a moment why it may have had inhabitants.

Here again legends for the moment will be discarded and the reader's attention will be directed to the extraordinary fact that, although no school of philosophy has ever presumed to maintain that mankind is descended from a number of separate human creations, the races as they now exist have drifted so widely apart that they almost belong to separate species.

Such a proposition is not based merely upon colour, upon anthropological proportions or upon language, but upon the acknowledged truth that many of these races cannot be permanently mixed.

The result of the union of the horse with a donkey is a mule, which is never fertile. The result of the union of the Caucasian with the Asiatic or the Negro is the Eurasian or the Mulatto, which, if mated with its like, dies out in the second or the third generation.

It can only be imagined that the original human race was separated long ages ago and remained apart for such an immense length of time that its members, when they again met, were no longer blood relations. What drove them from one another and what prevented their reunion is a mere matter of guess-work, but it does not seem unreasonable to presume that the first movement was caused by great changes in the surface of the earth, the subsequent absence of communication being due to impassable barriers of ice, raised during the cold period of exhaustion which followed the wave of heat conjured up by the previous outburst of energy.

Dana says the elevation took place "after the Cretaceous, and in the Pliocene Tertiary, or the Tertiary and Glacial Period." It is by no means certain that man did not exist in the Cretaceous Period. Even if he were not born until long after this, there was still time for him to occupy the earth long before the Glacial Epoch commenced. If he had not established himself prior to this date, at what period could the immense distinctions between the different races have developed themselves? Presuming that he had come into existence, there seems no reason why he should not have lived in Atlantis, supposing, of course, that Atlantis was a country suitable for human beings.

One word more before passing to legends.

Allowing that a continent of Atlantis did exist; that it was inhabited and that it was gradually overwhelmed, is it reasonable to suppose that some of the people escaped?



The country was, perhaps, large; civilisation, for all we know, may have reached a far more advanced state than it has to-day and the authorities must have received warning after warning.

Such admonitions would, as a rule, be disregarded. The every-day man about town would have declared that each subsidence was the very last and the evening papers would have proved that the world was now so well consolidated and so completely shaken together that all alarm might be dismissed.

It would, however, be noticed that great movements of the earth were preceded by increased volcanic activity and observatories would be constructed in some of the mountains, perhaps already islands, where the most active volcanoes were situated.

In such observatories there would be a professor or so, his wife and family perhaps, students, helpers, servants, etc. When the final catastrophe occurred and the whole of Atlantis was swallowed up, some of these men or their descendants may have remained on their chosen watch-tower and from such as these the Guanches and Canarios might be descended.

Not purely, perhaps. Visitors from newly-arisen Africa, themselves the descendants of an Iberian folk and of common ancestry with the Guanches, may, centuries afterwards, have been driven on to the islands. Later on the Phœnicians came and so on down to the Spanish invasion and to the repulse of Nelson, but the old stock lived on.

Probably the mixed race, if left to itself, might have died out like the Eurasian or the Mulatto, but fresh blood has always come in.

The Spanish conquerors took many a Guanche maid to wife. From the marriage sprang a vigorous race in every way superior to the pure-blooded Spaniard of the Peninsula.

There were rovers and adventurers of all sorts who came to look for mummies or what not and found fair living creatures. Jack was ashore and went away again and was followed by the Negro, imported to work the plantations in the early sugar-days. Then came the Catholic persecutions in England, when emigration to the Canaries was fashionable for a time amongst the Irish gentry, who became owners of vineyards, intermarried with the race and brought fresh stamina with them.

Be this as it may it is obvious that if the bed of the Atlantic once was dry and dry at a time when there were living people on the earth, it is more than probable that some of these people occupied it and that, when it was swallowed up, a portion of the inhabitants escaped.

If such an event was followed by the great ice age, the scattered units would exist as best they could, meeting in later

ages when civilisation and commerce had once more brought them together, a hotch-potch of black, red, yellow and white; eyeing one another now strangely, now fiercely; each working out its destiny; the strongest fated, perhaps, to eventually exterminate all the rest.

Other arguments may be brought forward which, though they do not necessarily apply to Atlantis, still give strong reason to suppose that extensive inhabited continents, of which we have no record, did formerly exist.

One of these arguments is that since the earliest dawn of history all our domesticated animals had been selected and were being bred by man for his own purposes. The discovery of America, of Australia and of the most remote islands of the earth, has not added one new species to those in common use in the time of Abraham.

A second is that at some period wheat was evolved out of a wild grass, now unknown, and that the seed was carried to nearly all parts of the world and was cultivated there.

The progress from savagery to civilisation is so infinitely slow, that immense periods must have elapsed between the cave-dwelling, hunting stage and the epoch when such achievements as these could be accomplished.

Communication must also have been very general for wheat to have been disseminated as it was, and for man to have studied the nature of all the various animals from which he had to choose.

It is because of these past ages of experience that we have not hesitated to replace the countless antelopes of South Africa by the ox, the zebra by the horse or the Australian kangaroo by the sheep.

The extermination of the millions of buffalo and bison which lately roamed at large over North America could not have been permitted had it not been that animals already in our possession were obviously of greater economical value.

If geological, racial and social problems give some negative sort of support to the theory of Atlantis, it is in the realms of folk-lore that we must seek something more positive; in tales of deluges, in traditions of lands and peoples that have disappeared; in well-worn beliefs common to those living on the shores of the country submerged.

For these we naturally turn to Cornwall and Brittany where subsidence has been most rapid during the last few centuries and where it is still a feature by which the coast line is noticeably modified.

The old Brittany legend of St. Brendan is given under the "History of Madeira," and is a sort of compound of two beliefs, namely, that of a lost country and that of an Elysium. The idea of a land of the blest was probably derived from the mythology of Greece and Rome, which gave heroes and gods a final abode in the kingdom of the setting sun and consequently in some part to the west of wherever the believer might happen to be.

In Cornwall, however, matters are more precise. Anybody in St. Just will point out the place below the circular British tombs where there once stood a town and where the water now swirls with a little additional malignity. During calm weather dwellers in Penzance or Marazion can show the remains of a forest now lying at the bottom of Mount Bay and can tell the names of some of those swept ashore by the rising water, though evidence does not indicate that the occurrence took place within historical times.

Florence of Worcester, the Monkish writer, who died in 1118, says that the country of Lyonnesse, lying between the Land's End and the Scilly Isles, containing many fields, villages, towns, and 140 churches, disappeared in A.D. 1099, *i.e.*, the same year in which the Goodwin Sands were flooded. The legend, as it reached him, was probably so precise and clear that he could not imagine the event to have taken place at a very remote date.

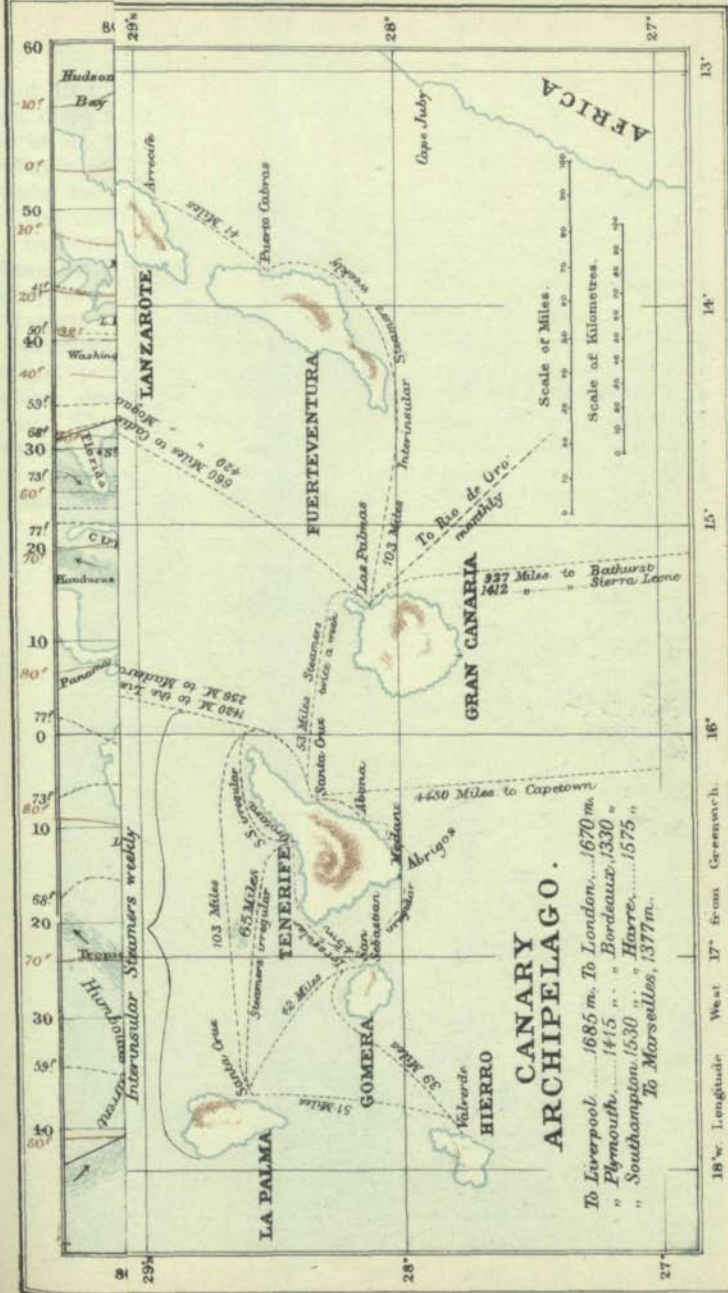
Yet we know that there was open sea between the Land's End and the Scillies at least two thousand years before his time and that the legend he wrote about was a tradition in the days of King Solomon. Solomon, by-the-by, lived some six or seven hundred years before Plato, whose description of Atlantis in "Timæus" was written about 380 B.C. Though declared by the author to be a true story and though based in all probability upon folk-lore collected by himself or by others, the description given by Plato is altogether too circumstantial to be admitted as evidence, unless, indeed, he may have written it when inspired, as the author of this book was once seriously assured by a spiritualist.

But in matters such as these, vague oral tradition is worth more than a written document, embellished with each fresh fancy conjured up by the busy author.

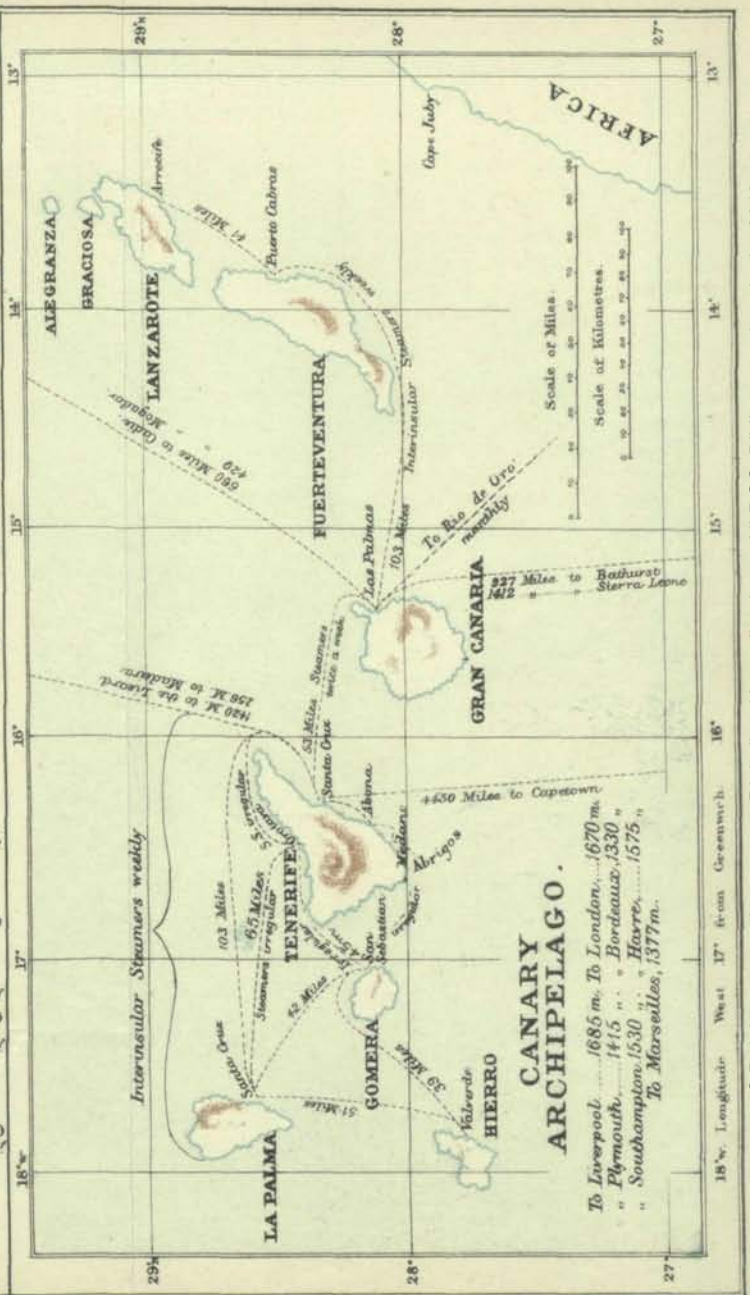
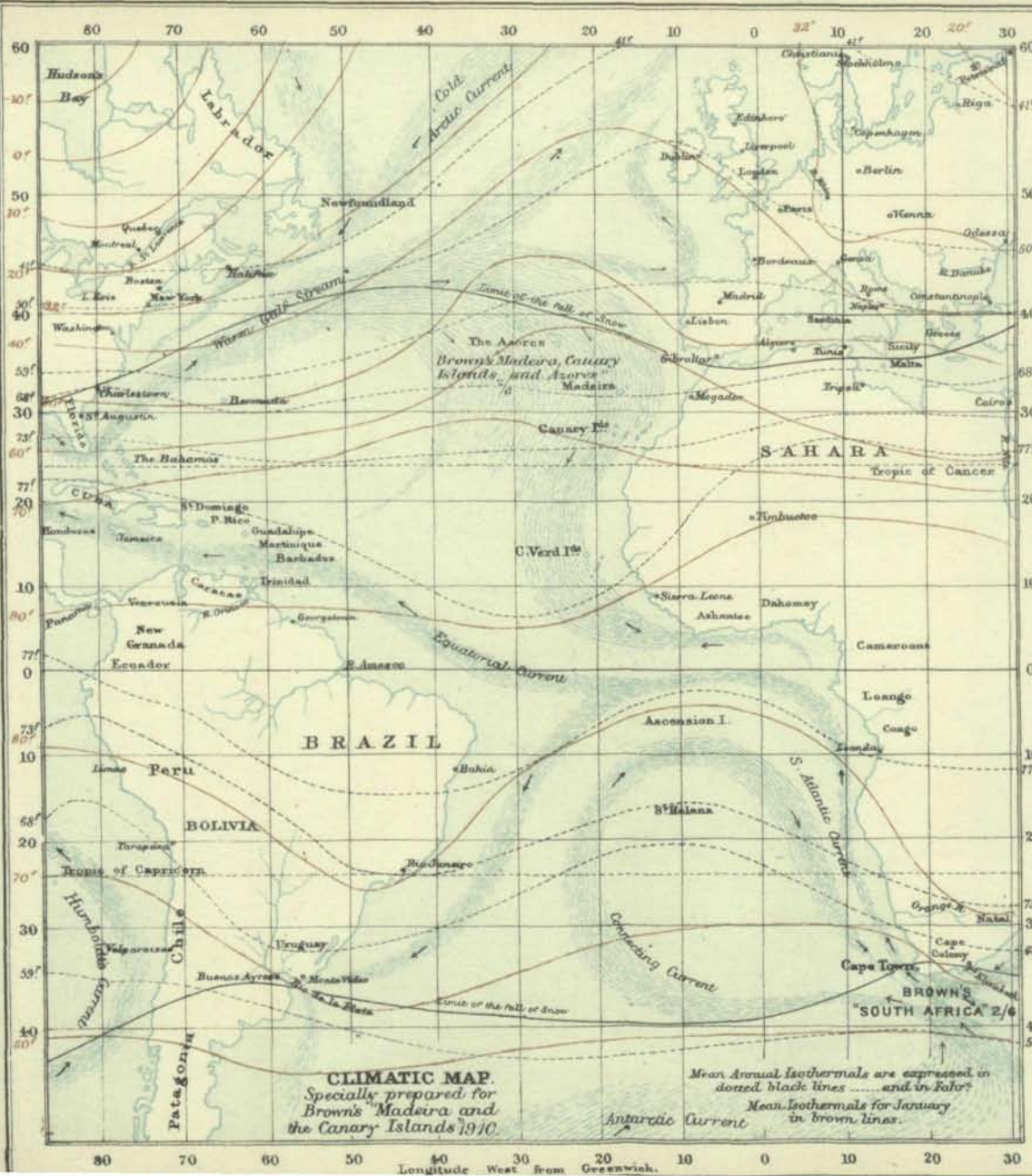
Scarcely a hundred years have passed since the sister of the Vicar of St. Erth actually poured a certain decoction of herbs into the sea at Land's End, believing, when she did so, that the Land of Lyonnesse would reappear with all its living inhabitants, its villages and its churches, as described by Florence of Worcester.

When the inmate of a clergyman's household, however rustic his curacy may be, is so firm a believer in a legend, what a hold the tale must have had upon the people generally! The student may

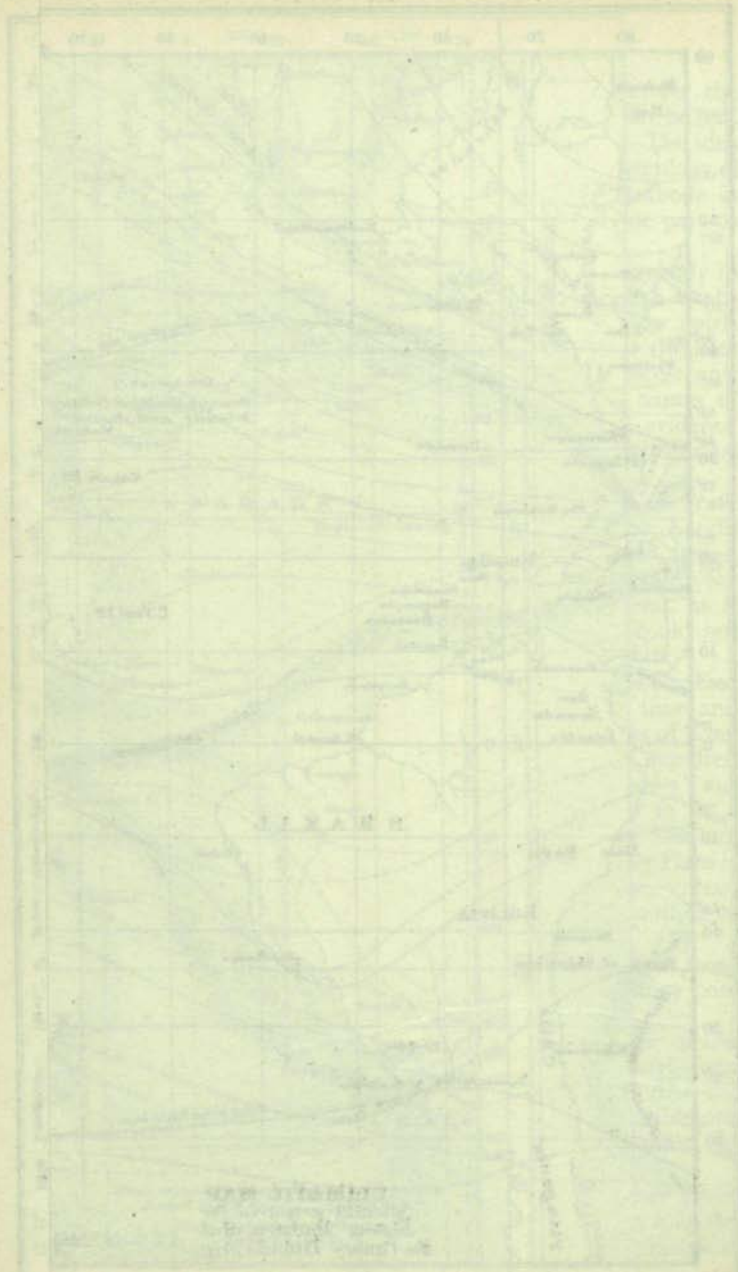




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read his Plato and admire the philosopher's arguments, but what are these to tradition which will take an educated woman to the rocks at midnight and bid her, regardless of influenza and ridicule, stand shivering in her nightgown in a gale of wind, whilst she awaits the arrival of a troupe of gibbering ghosts out of the vasty deep?

In Portugal and Spain the tale is much the same as that to be found in Brittany and Cornwall and it is probable that a similar story, in a more or less modified form, exists in the folk-lore of all parts of the world. A theory that would explain the disappearance of Atlantis would also apply in the Pacific Ocean and might, perhaps, account for the vanished race to whom or to whose descendants the ruined buildings in Easter Island are due. The writer believes that he is correct in saying that no race has yet been found whose legends do not contain some reference to a great and universal flood such as that described in the Old Testament.

## HISTORY OF MADEIRA.

THERE is no proof whatever that the Madeiras were visited by any of the early navigators. It has been suggested that they were the Carthaginian colony, known as the Cassarides, described about 250 B.C. as situated on an uninhabited island, but the description might apply to several places. The Portuguese on arrival found no traces of the former presence of man and it is probable that the group was quite unknown until its discovery in A.D. 1418.

As will be seen later on, Pliny's "Purpuriae" are much more likely to have been the Eastern Canaries. It is difficult to believe that the connection of this name with the Madeiras could have been long maintained were it not that so great an authority as Humboldt, full of admiration of the violet and purple clouds and hazy mountains before him, lent new life to the theory by subscribing to it personally.

Both the French and the Spaniards claim to have touched at the islands about the middle of the 14th century, but no proof of the fact has been forthcoming.

Madeira and Porto Santo appear on the Medici Map (Florence) under the names of "Porto Sto," "I. de lo legname," and "I. deserte." If inserted at the date when the chart was drawn, A.D. 1351, the Genoese must have been the true discoverers. Unfortunately, another map, made in 1385, does not include the group. There is strong reason to believe that they were drawn in on the earlier map after their present owners had taken possession of them and that their names, as given in Italian, are simply a translation from the Portuguese.

The Norsemen may have sighted them during their plundering expeditions of the 8th and 9th centuries. Their ships are known to have visited the African coast and to have called forth special defensive measures on the part of the Moors, both in Spain and in Morocco. Such forays, however, were usually made in galleys. The disposition of the sails did not allow of running at all close to the wind and their vessels rarely went far out of sight of land. The very name of "viking," king of the "wick" or inlet, implies that they were not navigators of the deep seas.

The Irish and the Arabs in their turn may have been more enterprising. Our own King Arthur, the stainless Knight (A.D. 500-530), whose kingdom, according to tradition, included Iceland, Norway, Ireland, Keltic-England, France as far as the banks of the Rhone and perhaps Poland, maintained a numerous fleet commanded by three admirals. Some of his ships may have made what is, after all, only a small journey to the south.

The love of exploration was alive in his day and finds its record in the legend of the seven years' voyage of St. Brendan the Elder, hero of the most popular romance of the middle ages and Abbot of Clonfert on the River Shannon, a monastery founded by him in A.D. 558. His beautiful old cathedral, which has been burned, plundered or destroyed on no less than ten occasions, is now in course of restoration.

Kingsley, writing of the legend, calls it a "Monkish Odyssey," saying that it is manufactured out of dim reports of fairy islands to the West of the Canaries and of the Azores; out of tales of Arctic winters, of icebergs and of frozen seas; out of Edda stories of the Midgard snake which lies coiled round the world; out of scraps of Greek and Arab fables and from myths of all sorts and of all ages, gathered by degrees and slowly woven together. As St. Brendan died in A.D. 578, aged 94, and the books which have to be consulted about him were written or printed as late as from the 11th to the 16th centuries, complete accuracy of detail is not to be expected.

After one of his return journeys from Brittany, St. Brendan received a visit from a hermit named Barintus of the royal house of Neill, who persuaded him to come away to an island in which he had lately been staying and in which he had founded a monastery. This island was described as a most delicious resort. The sun always shone, the fruit was always ripe and the birds, which wore golden crowns, sat on the trees and sang in harmonious concord, unless they were asked questions, when they left off at once and answered both civilly and to the point. There were no harmful animals nor noxious insects in this earthly paradise, which did indeed so nearly resemble the heavenly one, that on his, Barintus', return to Ireland, every one believed him to have come from heaven because of the delightful fragrance which, for the space of forty days, clung to the garments he wore.

St. Brendan made up his mind to go; built a coracle of wattle covered with hides, tanned in oak bark and softened with butter; loaded it with forty days' provisions and ordered his somewhat unwilling disciples to embark in the name of the Holy Trinity. Life in the beautiful island they eventually reached passed away like a dream. Though the absence from Ireland lasted seven years, the time seemed to be no more than a few months.

On his return St. Brendan built the monastery of Clonfert, in which there were at one time three thousand monks, all supporting themselves by the labour of their own hands. He then became a dispenser of miracles, and having visited Iona, the monastic metropolis of Western Scotland, which, a little later on, became the headquarters of Christianity, died and was buried at Clonfert.



Another legend states that he did not die but made his appearance much later on off the coast of Portugal, whither he had come on the famous floating island of Antilla, or Cipango, or, as the Spaniards call it, St. Borondon. At the moment of his arrival the Christians were on the point of being driven into the sea by the conquering Moors and were glad to avail themselves of the means of escape offered by S. Brandão, or Borondon, or Brandaines, as the French have it. They are still sailing about until the advent of the millennium, when they will reappear in perfect health and will help to bring peace back to an afflicted world.

This is the island which is supposed to reappear from time to time and whose mirage, fragile as all mirages are, has yet acquired the same circumstantiality that time and credulity have given to that of the "Flying Dutchman" or to that of the "Elysian Fields," of which latter the Island of Cipango is probably a better representative than any portion of *terra firma* yet discovered.

So strong was the belief in it at one time that Portugal, in the treaty of 1519, ceded it to Spain, calling it the "Ilha não truvota" or "Island not found." Viera y Clavijo publishes a picture of it in his history (1772), drawn by a Franciscan monk in Gomera in 1759. It is from his book that part of the above is extracted.

Many expeditions have been sent with the object of finding it and many a skipper, viewing it from the shores of La Palma or of Teneriffe, has set all sail in pursuit. Possibly the visitor may be fortunate enough to see it. Mirages are common enough in these latitudes at certain times. The writer has often seen portions of the coast reproduced on the horizon with an absolutely startling fidelity.

Whether St. Brendan visited Madeira or the Canaries or not, independent testimony shows that the Irish monks were very great explorers. It is said that on the colonisation of Iceland by the Norse, in A.D. 870, Irish hermits were found there. The Icelanders first heard of the existence of America from the Irish, who stated that they knew of a land far away to the West over the ocean (possibly Greenland), where Christianity had been introduced and where a small colony of Irish was established, of which the members had taught some of the natives to speak their own language.

The maritime history of the Moors must have commenced much later on so that the Irish were able to explore any part of the Atlantic at this time without fear of interruption, they may therefore have been the first to discover America, and were perhaps the earliest visitors to Madeira and the Canaries. It is even possible that the Moorish tradition that there was a land seven hundred leagues to the west, where the men and the women could not be distinguished apart because both of them had

smooth faces; a tradition which is said to have become known to Columbus and by which he is said to have regulated his sailing orders, may have had an Irish origin.

Be this as it may, traditions of some land to the west, commonly known as Brazil, Cipango or Cathay, were handed down in England and elsewhere. On July 15th, 1480, Captain Thyldes, an Englishman, left Bristol in an eighty-ton vessel to find it, returning unsuccessful on September 18th. Five years afterwards Christopher Columbus laid the plans of his voyage of discovery before the Government of Genoa, the date when he actually discovered the West Indies (Guanahani in the Bahamas) being October 12th, 1492. John Cabota, a Venetian citizen, sailing from Bristol in an English ship, manned by English sailors and despatched under letters patent of King Henry VII., discovered Newfoundland about June 24th, 1497. For his discovery of North America he was rewarded by the sum of £10 and afterwards by a pension of £20 a year.

In the spring of 1498, Cabota made his second expedition, during which he died. There were five ships, which, after his death, were commanded by their English captains, probably led by Lancelot Thirkill, by whom the whole of the Eastern coast of North America seems to have been discovered and marked out.

Though these facts do not precisely bear upon Madeira, they show that the archipelago may have been visited at a very early date; that the Irish believed in the existence of islands in the Atlantic with a warmer climate than that of England, and that our spirit of maritime adventure, though overshadowed for a time by that of Spain and Portugal, was never altogether dormant.

The possibility of discovery by the Arabs is rarely treated seriously. Belief depends upon the importance attached to a tale which may have some foundation, but which was certainly very "highly coloured" in the telling, namely, that of the Almagrurins, who are said to have sailed from Lisbon about the year A.D. 1100, or some century and a half prior to the expulsion of the Moors from Portugal.

These adventurers, whose name in Moorish meant the "finders of mares' nests," departed with the expressed intention of discovering something. The tale of their voyage, semi-fabulous as it no doubt was, yet agrees in time and distance very well with what might be expected from a badly built ship, driven across unknown seas, now in one direction and now in another. The district of the stinking and turbid waters which first frightened them back might well be the neighbourhood of the Azores, then probably in eruption. El Ghanam\*, the island of the bitter sheep,

\* Note resemblance to Gannaria. See pages 222 and 223.



where they went on shore, corresponds fairly well with Madeira, allowance being made for travellers' tales and for the vivid imaginations of a party of navigators, who half expected to meet dragons or monsters round every corner. The islands some few days further south, where they were taken prisoners and from which they were eventually conveyed blindfold to the African coast, might, with the same allowances, be an account of one of the Canaries. According to their own tale they were landed some six weeks distant from the Straits of Gibraltar, which they eventually reached on foot. Whatever deductions we may draw to-day, it is evident from the name given to them and from the ridicule to which they were subjected, that neither they nor their story were very well received by their contemporaries.

Although legends which cannot be proved may be of little value, there remains one which can scarcely be left out. Portuguese historians state that, in 1344, an Englishman named Robert Machin, eloping with a certain Anna Arfet or Harford from Bristol, was driven to Madeira by a tempest. He found the island of surpassing beauty and without inhabitants, the latter fact proving that at least he could not have visited any of the Canary Islands. The tale goes on to say that he and his bride subsequently died there and were both buried in the same grave near the little town of Machico, which is named after him (see note below), an altar and a cross being placed over them to perpetuate their memory. Another version, which seems more probable, taking into consideration the future importance of the island as a health resort, says that, a second storm arising, the ship, with all souls, was forced to put to sea and was eventually wrecked on the coast of Morocco.

As was the case with St. Brendan, Machin, whose surname still exists in England, became the hero of a number of stories and poems. His name was changed according to the fancy of the author, as, for instance, in the old village play of Merry England, entitled, "*The true and ancient story of Maudlin, the merchant's daughter of Bristol, and of her lover Antonio. How they were cast away upon the shores of Barbary, where the mermaids are seen, etc., etc.*"

Whether Machin or Anna Arfet died, or, landing with the rest, were sold with them into slavery, does not affect subsequent events, as none of the actors re-appear. Many years afterwards a Spaniard named Juan Morales, being ransomed from the Moors, set sail for his native country, was taken prisoner by the Portuguese and carried to Lisbon, relating there, to the great admiration of the King, Dom John I., and his energetic son, Prince

\* NOTE.—Curiously enough there is a small place called Machin in the Island of La Palma.



Henry the Navigator, the tale of the wonderful island which had been told him by his fellow-slaves.

Even then there was some delay. At last a ship, commanded by one Zargo, left Lisbon on the 1st of June, 1419, for Porto Santo, which had been discovered and colonised by the Portuguese for over a year. It speaks little for the enterprise of the time that Madeira should not have been discovered simultaneously. Zargo found the people, who had come so far, terrified by strange noises, occasionally heard to issue from the great cloud looming on the horizon only twenty-three miles away. Although dissuaded from doing so, he resolved to investigate the cause and, accompanied by the Spaniard, Juan Morales, landed in Madeira at the Ponta de S. Lourenço, afterwards visiting several parts of the coast. On July 2nd, another landing was made and a solemn service held, the island being formally taken possession of in the name of the King of Portugal.

Returning home Zargo was made governor of the part to the east of the Ponta de Oliveira, and was granted permission to fire the forest in order to render the ground more suitable for cultivation. The result was a conflagration, said to have lasted for seven years and to have done irreparable damage to the neighbourhood of Funchal.

Shortly afterwards the sugar-cane was introduced. In 1432 the first sugar-mill was erected. About 1460, the vine was brought to the island from Crete, by order of the indefatigable Prince Henry. In 1508, Funchal was created a city, and the cathedral was commenced. In 1514, the first bishop was appointed. From 1539 to 1547, when the authority was transferred to Goa, the city became the seat of an archbishopric.

In 1566, three French vessels, under De Montluc, ravaged and nearly destroyed Funchal. In 1582, Portugal, and with it Madeira, passed into the hands of Spain, their independence being once more recognised at the end of the protracted war in 1668. Madeira was, however, evacuated by the Spaniards in 1640.

After the marriage of Charles II. with Catharine of Braganza in 1660, special privileges were granted to English settlers. Since that time, England and Madeira have always been closely connected.

The advent of the English, however, did not greatly influence the inherited customs of the inhabitants, nor did the presence of the foreigners banish the lawless manners conjured up by the disturbances of the times. At the end of the 17th century, paid assassination seems to have been the ordinary method of obtaining redress and servants seem to have waited at table with swords by their sides.

In 1768, a frigate aided by Captain Cook in the "Endeavour," which had just started on its voyage round the world, battered the fort on the Loo Rock in revenge for some insult to the British flag.

From 1801 till 1802, and from 1807 till 1814, the island was garrisoned by British troops, under the Treaty of Alliance.

In 1815, the ship in which the Emperor Napoleon was conveyed to St. Helena called at Madeira for provisions, etc., on the way out.

Large exports of sugar and wine commenced early in the history of the island, the wine being in such request at the beginning of the nineteenth century that in the year 1800 as much as 16,981 pipes were shipped. England took a large part of this, the taste having been implanted in the country by the officers returning from the American war of secession. This consumption, however, fell off greatly as people began to acquire a liking for French clarets. Though other markets were opened, the trade suffered considerably long before the oïdium in 1852 and the phylloxera in 1873 came to destroy the vineyards and strike at the source of supply itself.

The commercial history of the vine will be found in greater detail elsewhere.

In 1834, monasteries and nunneries were placed under the control of the Government. Monks were ejected but nuns were allowed to die out, though some of the nunneries are still occupied by novices. At the time of the suppression there were four monasteries and three nunneries.

In 1856, an outbreak of cholera carried off some 7,000 persons, the population at the time being 102,800.

Telegraphic connection with Europe was established in 1874, and, a few months later, with Brazil.

In January, 1902, the right of self-government (autonomía) was granted to Madeira by Royal Decree.

## HISTORY OF THE CANARY ISLANDS.

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THEIR position between  $27^{\circ} 4'$  and  $29^{\circ} 3'$  N. and  $13^{\circ} 3'$  and  $18^{\circ} 2'$  W. (med. Greenwich), a few score miles from the African coast and on the extreme limit of the ancient world, is sufficient reason why so few records of their state in former times have descended to us. Whether they were really the abodes of the Hesperides; the scene of one of the exploits of Hercules; the garden of Atlas, King of Mauritania, in which grew the golden apple guarded by the dragon; whether the summits of a mountain chain now slowly rising or the remains of the sunken continent of Atlantis, mentioned elsewhere; or whether the Peak is the Mount Atlas of mythology, which is more than probable, it is impossible that they should have been quite unknown to the Ancients. They are almost visible from Cape Juby in Morocco and ships could scarcely pass along the coast of Africa without encountering them sooner or later.

Homer (B.C. 9th century) speaks of the discovery and colonisation by Sesostris, King of Egypt (about B.C. 1400), of an island beyond the pillars of Hercules to which the souls of departed heroes were translated, calling it Elysium, whence Elysian (probably derived through the Phœnicians from the Hebrew). Ezekiel says in *chap. xxvii., v. 7*, that the Tyrians were clothed in "blue and purple from the Isles of Elisha" (*mar. ref.*: "purple and scarlet.")

Hannon the Carthaginian, who is said to have circumnavigated a great part of Africa about 600-500 B.C., may have visited them, as may the Phœnician expedition which left the Red Sea by order of Necho, King of Egypt, about B.C. 680, and which did undoubtedly sail round the Cape of Good Hope, returning by the Pillars of Hercules or Straits of Gibraltar (*see Herodotus*).

Herodotus, in his description of the lands beyond Libya, says that "the world ends where the sea is no longer navigable, in that place where are the gardens of the Hesperides, where Atlas supports the sky on a mountain as conical as a cylinder." Hesiod states that "Jupiter sent dead heroes to the end of the world, to the Fortunate Islands, which are in the middle of the ocean."

Being re-discovered by the Romans shortly before Christ, they were without much question dubbed "Insulæ Fortunatæ," a name which has clung to them ever since. Juba II., King of Mauritania (about 50 B.C.), sent ships to inspect them, which returned with various curios, including two large dogs from Canaria. In a book, dedicated to Augustus, he must have



described them as islands clothed in fire, placed at the extreme limit of the world, as, though his writings are lost, he is freely quoted to that effect by Pliny, Plutarch and others.

King Juba seems to have placed factories for the extraction of the purple dye from the orchilla weed in the islands facing the country of Gætulia or of the Autololes. Many writers have suggested that the place indicated was Madeira, but it seems more likely that Pliny's "Purpuriae" were Fuerteventura and Lanzarote.

It is true Pliny says that the islands were uninhabited, but elsewhere it is stated that buildings were found. As it is known that the people of Lanzarote were accustomed to hide in the Cueva de los Verdes near where Haría now stands, it may be that the passage from which Pliny obtained his information was corrected after Juba's emissaries had become better acquainted with the country and that the alteration was not brought to Pliny's notice. Pliny again tells us that the date palm grew with extraordinary fecundity, a little fact which does not apply to Madeira.

The most accurate record of the geographical position of the Fortunate Islands is left us by Ptolemy, A.D. 150, who drew his imaginary meridian line on the extreme west of the known world and through the island of Hierro. This same meridian was afterwards used by the Arabs.

It can scarcely be doubted that the islands were well known to the Phœnicians and probably to the Carthaginians long before Juba's time. Both these peoples, more especially the former, pushed their researches to far greater distances than is generally believed, endeavouring to hinder others from following them by inventing all sorts of hideous travellers' tales about what took place in far-off countries; tales generally based on much the same description of circumstantial evidence as that of the gold-seeking ants in Herodotus.

It is, therefore, strange that no authenticated Phœnician inscriptions have been found and that all the writings or scratchings discovered as yet have been declared to be disconnected or frivolous marks. These marks, replicas of which have been fully discussed in Paris and elsewhere, do not seem in any instance to resemble the style of decoration fashionable among the aboriginals, as shown by their earthenware stamps (*Pintaderas*), their leather, their pottery, or their painted walls.

There is a tradition that St. Brendan (Spanish Borondon) came to the islands on an evangelising mission during the sixth century, but what foundation there can be for such a belief, if it be not the Brittany romances of the early middle ages, it is difficult to say. These romances and that of the Almagurin adventurers are treated more fully in the history of Madeira.

At the time of the conquest the natives were certainly unable to write and the Spanish invaders, in the intolerant spirit of their age, took little pains to preserve any records of the language, folklore or oral history of the country.

Later on Viana and others did their best to supply the deficiency, but the time for fulness or accuracy was past and our knowledge of what happened prior to the fourteenth century is exceedingly vague.

Ossuna, quoting the lost writings of the Arabian historian Ebu Fathymab (*see* Dr. Chil, p. 238), says that the Admiral Ben Farroukh, having received information of the existence of land to the west of the African coast, landed in A.D. 999, at Gando Bay in Canary, finding a people willing to trade and already accustomed to the arrival of visitors. He subsequently visited the other islands, which he designated by corruptions of the names given them by Ptolemy, whose meridian he adopted.

This opportunity is taken of calling the reader's attention to Gando Bay, the principal port of Grand Canary in historic as it probably was in pre-historic times. (*Refer* to Los Letreros near Agüimes and to the M<sup>na</sup> de las Cuatro Puertas.)

Edrisi, the Arabian geographer, A.D. 1099-1164, quotes Raccamel-Avez as authority that, in clear weather, the smoke issuing from the island of the two magician brothers, Cheram and Cherham (note resemblance to Cheyde or E'Cheyde the Guanche name for the Peak) was visible from the African coast, a truth which Humboldt (in *Cosmos*) proves to be mathematically correct. The islands are elsewhere described as "Gezagrel Khalidal" and "Al-jazir-al-Khaledat," translated as the Happy or Fortunate Islands.

It has been argued that the Canaries were visited by a Genoese expedition about A.D. 1291, but, as this fleet never returned, the matter is difficult to prove. They are again reported to have been discovered by a French ship about A.D. 1330. It is said that, on hearing of this, King Alphonso IV. of Portugal sent a party to take possession of them in 1334, which was repulsed at Gomera. This expedition was followed up by another from the same quarter in 1341, which seems to have been again without result, although the islands were visited and a considerable amount of information was gathered.

The little knowledge we possess about the Canaries during the early middle ages is accounted for by the turmoil and confusion into which the world was thrown by the fall of the Roman Empire and by the protracted struggles of Christianity against Mahomedanism. If one may judge from the traditions handed down, they must have been a sort of pastoral Arcadia, with the exception, perhaps, of Lanzarote and Fuerteventura, which were more exposed to attack from Africa and from European slave-hunters and where civil wars seem to have been frequent.



In an evil hour for them, Europe, recovering from the strain of the Crusades and filled with unemployed soldiers, turned its attention their way. In 1344, we find a certain Louis de la Cerda, a French nobleman of royal Spanish extraction, created "King of the Fortunate Islands" by Pope Clement VI., then resident at Avignon, with full power to Christianise them in the best way he could. This decree was much resented by the English Ambassador, who evidently considered the term "*Insulæ Fortunatæ*" to apply exclusively to Great Britain, which, under Edward III., was then at war with France. Not only in his time but throughout the middle ages, the name of Albion was generally believed to be derived from the Greek word *ἄβλιος*, meaning happy or blest. Nothing came of this flourish of trumpets, but, in 1360, missionaries, sent to Grand Canary, converted some of the natives and taught them many useful arts. The majority, however, subsequently suffered martyrdom. In 1393, an expedition from Spain was repulsed off the same island, but met with greater success further west, Lanzarote being sacked on the way home.

There is no doubt that the Islands must frequently have been visited during the fourteenth century for the purposes of pillage or of trade, but the modern history of the Canaries practically commences in 1402, when Jean de Bethencourt, a Norman gentleman, fitted out a ship with the express purpose of conquering them and settling there.

Lanzarote, in which, according to his own statements, he found the fighting population reduced by constant raids from abroad to some three hundred men, was peaceably occupied. Crossing the Strait, a small fort was built in the North of Fuerteventura, but Bethencourt's forces proved insufficient to bring the island into subjection. Leaving a garrison behind, he returned home in order to procure more means. These he obtained from Henry III. of Castille, who gave men and money, creating Bethencourt lord of four of the group in return for the promise that the archipelago should be conquered in his name.

Fuerteventura, Lanzarote, Gomera, and Hierro, none of which were capable of prolonged resistance, were thus brought under the dominion of the Kings of Castille.

In Gomera the Spaniards seem to have been treated most affectionately. When Bethencourt left, the people swam for miles by the side of his ship, imploring him not to go away. Many years later the Ghomerythes proved the staunchest of allies, the conquest of the island of La Palma being mainly due to help afforded by them.

In Hierro the newcomers were welcomed with outstretched arms for reasons given a little later on under the head of "Legends." The supplies of the island, however, were small and the guests



could not be supported for an indefinite length of time. The secret of a hidden spring being revealed by a native girl to her foreign lover, a quarrel ensued, which led to hostilities, a number of the Bimbachos being carried away into slavery. For further details, *see* under "Hierro."

Canary, La Palma and Teneriffe proved too powerful for attack by the forces at Bethencourt's disposal, and were not occupied till many years afterwards, the last named island holding out until the close of the century.

Bethencourt, who seems to have been a man of superior character, left in 1406 and died in France in 1425, bequeathing his property in the islands to his nephew, Maciot de Bethencourt.

Under the new owner affairs seem to have been utterly mis-managed. Prior to his disappearance from the scene, he sold his rights to the Infante Dom Henrique of Portugal. Before this time, however, his tyrannical and grasping behaviour had done much to alienate the goodwill of the natives.

Owing to priestly and other intrigues, the history of the next half century is a chronicle of mean and unsavoury deeds. The reader, desirous of full details, must turn to works where more space can be devoted to the subject.

In 1443, a body of Spanish troops under Guillem Peraza attacked La Palma, but Peraza was killed and the invaders were forced to retire.

In 1464, Diego de Herrera, Lord of La Gomera, made an unsuccessful attack upon Canary.

In June of the same year he landed at Santa Cruz in Teneriffe with 500 men and, without penetrating far into the country, made terms with nine of the Princes, taking possession of the island in the name of the King of Castille and Leon. He obtained a concession from Serdeto, Prince of Anaga, to build a tower, which, later on, was erected by his son and garrisoned with 80 men. The stipulations made were not observed by the Spaniards. The fort was subsequently attacked by 1,000 Guanches and razed to the ground, the Spaniards being driven away and many of them killed.

After leaving Teneriffe, Diego de Herrera, being reinforced by 800 Portuguese, resolved to attack Canary again. He landed at Gando Bay and marched along the North Coast with a detachment of 500 men.

The Canarios surrounded and drove him into a corner, whereupon Don Diego sent his son-in-law, Diego de Silva, and 200 men by sea to attack the enemy in the rear.

Silva landed near Gáldar, was met by 600 Canarios under Temisor Semidan and was forced to take refuge in a Tagoror or Place of Council. All escape being cut off, Silva offered to surrender, but quarter was denied.

The state of Silva and his men was absolutely hopeless, when Temisor, advancing as though for a parley, told Silva to seize him as a hostage and then to demand free passage to his ship.

This was done and the request was granted by the Canarios, but the path by which the Spaniards were conducted seemed to them so hazardous that they refused to proceed, imagining that the Canarios meant to take advantage of some precipice and to massacre them all.

To reassure them each Spaniard was allowed to cling to the cloak of one of the natives, so that if one were thrown down the other must go with him.

Arrived at the ship, Silva and his men voluntarily gave up their swords, vowing not to fight against the Canarios again. In spite of the objections of his father-in-law, Silva and probably many of the rest kept their word. Some of the men, however, joined Don Diego de Herrera, who renewed the attack.

The Canarios made prisoners of a few of those who had thus broken their promise and might well have put them to death. They were, however, allowed to remain alive, being condemned to brush away flies as creatures unworthy even of the honour of execution.

Don Diego met with little success, but, in 1466, made a treaty of commerce and was allowed to build a tower at Gando Bay, the fly-flappers being set at liberty.

This tower became a source of great annoyance to the Canarios. From it the *Harimaguadas* (vestal virgins) of the temple near Telde seem to have been molested and it was destroyed on more than one occasion.

The Spaniards, however, had resolved to take the island. Troops were landed near where Las Palmas now stands and, in 1478, Ferdinand V. of Castille sent Juan Rejon with 600 men to bring the matter to a conclusion.

Rejon commenced by making an intrenched camp which was attacked by 2,000 Canarios under the Guanarteme of Doramas. The natives were defeated with a loss of 300 men, the victory being principally due to the terror inspired by a small body of cavalry, now used for the first time in the islands, where horses had hitherto been unknown.

Some Portuguese ships happened to arrive at this juncture. Believing themselves to have strong claims to the sovereignty of Canary, a body of 200 soldiers was sent to the assistance of the Canarios. A second advance was then made, but the Portuguese were drawn into ambush and cut to pieces.

The Spaniards were no sooner established at Las Palmas than intrigues commenced among themselves. Fra Juan Bermudez, Dean of the Cathedral of Rubicon in Lanzarote, and an official named Algaba, contrived to throw Juan Rejon into prison, and it



was with the greatest difficulty that Rejon obtained permission to return to Spain and justify himself.

In the meantime the Dean assumed command and made repeated attacks on the natives, but his successes were dearly bought, the Spanish losses in engagements at Moya and at Tirajana being considerable.

Rejon then returned, reinstated in his command. The Dean was sent to Lanzarote and Algaba was promptly put to death, but Rejon's severity was disagreeable to the authorities at home and he was replaced by Pedro de Vera.

Vera defeated the Canarios in several encounters. In an attack on Gáldar, made from the sea, he was fortunate enough to capture Temisor Semidan, who was sent to Spain, became a Christian, returned to Canary and, in 1483, persuaded the miserable remnant of the Canarios to surrender, their number being by this time reduced to some 600 warriors and about 1,500 women and children.

Throughout the hostilities natives of the islands already pacified were brought as auxiliaries for the subjugation of the others. Taking advantage of this fact, Vera persuaded a body of Canarios to help him in an attack on Teneriffe, but, instead of carrying out the agreement, sent them to Spain for sale as slaves. The Canarios, becoming aware of his treachery, forced the sailors to put them on shore at Lanzarote, whence, however, they were never able to return to Canary.

About this time Francisco Maldonado, Governor of Las Palmas, in alliance with Pedro Fernandez de Saavedra, Lord of Fuerteventura, made an attack on Teneriffe, but was repulsed on the slopes above Santa Cruz.

A man now appeared upon the scene who was destined to carry to completion the work begun by Juan de Bethencourt. Don Alonso Fernandez de Lugo, el Conquistador and afterwards Adelantado (Governor) of the Province of the Canaries, was a Galician nobleman who had served with distinction against the Moors in the conquest of Granada and had been presented with the Valley of Agaete (Canary) in return for his services. Whilst there, he conceived the capture of Teneriffe and of La Palma, reconnoitring their coasts and acquainting himself with their geographical features.

He then went to Spain and made a report to the Court, which created him Captain-General of the Conquests in the Canaries from Cape Guer to Cape Bojador.

His first attack was made in 1491 on the island of La Palma, which had remained undisturbed by the Spaniards since the original and unsuccessful attempt in 1443. De Lugo took a number of Ghomerythes with him, whose assistance was invaluable. On May 3, 1492, after an arduous campaign of seven



months, the island was finally subdued. Further details will be found in the description of La Palma.

On May 1, 1493, de Lugo, accompanied by a force of 1,000 footmen and 150 cavalry, partially composed of Ghomerythes and Canarios, landed at Añaza (Santa Cruz) in Teneriffe. Owing to dissensions amongst the Guanches, he was able to effect an alliance with the Menceyes of Anaga and of Güimar. A tower of refuge was built and, early in 1494, an expedition was made to the north of the island. This fell into an ambush in the Barranco de Acentejo at the place now known as La Matanza or the Place of the Slaughter and was cut to pieces. The few left, most of whom were wounded, were pursued back to Santa Cruz. The Guanches even attacked the tower of refuge, but were beaten off with heavy loss. It is said that in the fight at Matanza 600 Spaniards and 200 Guanches were killed.

De Lugo was now so closely pressed by the enemy that on June 8, 1494, he evacuated the island.

Reinforced by fresh levies sent by the third Duke of Medina Sidonia, de Lugo landed again in Teneriffe before the close of the year, his force this time consisting of 1,000 foot and 70 cavalry.

The tower of refuge, which the Guanches had destroyed, was first rebuilt, after which an attack was made on the plains of La Laguna where a large body of natives had assembled. After a hard fight, these were defeated, but were not driven from the district, de Lugo being eventually compelled to fall back upon his base, where, for a considerable time, he lay inactive.

How long it might have taken, under ordinary circumstances, to overcome the resistance of the islanders it is difficult to say. Providence, however, interfered on behalf of the Spaniards.

Dispirited by prophecies of evil predicted by their sages for many years, the majority of the Guanches now lost heart. The Menceyes of Taoro and of Anaga had been killed in fight; other princes were faithless to the compacts made amongst themselves; old jealousies led to renewed dissension at this most critical moment and portions of their forces were withdrawn.

Worse even than this, a peculiar disease, known as the "Modorra," broke out in La Laguna and spread to other parts of the island. The nature of the malady is obscure, but its effects were appalling and ghastly in the extreme.

The Spaniards were spared, but the Guanches were seized with a frightful melancholia, which carried them off by thousands. Whole troops wandered hopelessly into the hills, hid themselves in caves and crouched down to die. Even at the present day such retreats are occasionally discovered, little heaps of bones or seated skeletons marking the spot where the despairing victims sank to rise no more.

It is said that some Spaniards, reconnoitring on the road to La Laguna, met an old woman seated alone on the Montaña de Taco, who waved them on, bidding them go in and occupy that charnel-house where none were left to offer opposition.

De Lugo, consequently, was able to advance to beyond La Matanza, where he was met by the Mencey of Taoro with about 5,000 followers. These were signally defeated at a place now known as La Victoria and about 2,000 warriors were killed. In spite of this, the Spaniards were, however, once more compelled to retreat to Santa Cruz.

In the meantime the ravages of the Modorra continued unabated and at last, in 1496, de Lugo marched into the Valley of Orotava, encamping where Realejo Bajo now stands. At Realejo Alto, separated from the Spaniards by the Barranco de Padronato, lay the last of the Guanches.

The native forces, too reduced to be capable of resistance, surrendered, every man, woman and child being promptly baptised into the bosom of the Church.

Several of the Menceyes were sent on a trip to Europe as an outward and visible sign of the triumph of the Spanish arms, but, after being duly exhibited, most or all of them returned to their own country.

After the conquest many of the horses on which the cavalry was mounted were sold and carried to America, which, as the reader will remember, was discovered by Columbus in 1492, the Canaries being used as a port of call both by Columbus and by those following in his wake. From these horses and from others embarked in Spain at about the same period, the wild American mustang was derived.

The subjugation of Teneriffe was so largely due to the Canario auxiliaries, that de Lugo is said to have been unable to refuse any request of their leader, Fernando Guanarteme de Gáldar, usually called King of Canary.

These Canarios were not always subject to the control of their nominal masters, especially when engaged with the enemy.

The following few incidents are of great interest, not only because they bear upon this point and upon the state of the islands immediately after the conquest, but because they show, better than any scientific discussions, statistical tables or anthropological measurements how the natives gradually intermarried with the new arrivals and how the present hybrid race was built up.

The attention of the reader is called to the fact that whereas in Teneriffe the conquered Guanches took two or three Spanish names and often seem to have dropped their old titles entirely, the Canarios continued to be known as of the family of Doramas, Guanarteme, etc., etc.



Imobac Bencomo (Son of Como), Quehevi (King) of Teneriffe, Mencey (Chief) of Taoro, was engaged in the chief of the battles at La Laguna. At the spot on which the chapel of San Roque now stands, finding escape to be impossible, he yielded himself to his pursuers. Unfortunately these proved to be Canarios. One of these, baptised into the Catholic Church under the name of Pedro Martin Buendía, ignoring the protests of the Spaniards near him, killed the Prince with a thrust of his lance. As an example of a noble Guanche the murdered man claims attention. Seven feet high and seventy years old, he was robust, strong, and active. Viana, who describes his points as Shakespeare described those of a war horse, says that his long white beard fell nearly to his waist, that his piercing black eyes were surmounted by heavy eyebrows meeting above the nose, and that beneath his widely opened nostrils a long, twisted moustache scarcely hid "the monstrous row of diamond-like teeth." That he was not alone and singular in his appearance may be gathered from the fact that his body was at first believed to be that of his brother Tinguaro, the two, according to Viana, being twins.

It may be added that though Imobac claimed the title of King of Teneriffe by virtue of his descent from Tinerfe the Great, his legitimacy was not universally recognised. A half-veiled hostility between the North and the South of the Island seems to have been due to this question, the claims of the King of Adeje conflicting with those of his cousin of Taoro.

When the natives joined the Catholic Church they were always baptised under new names. For this reason it is possible, as will be seen, for a family now living in the island to be of pure native blood, though their pedigree, down to the commencement of the 14th or 15th century, shows their ancestors to have borne Spanish surnames.

One illustration is sufficient. It is taken from Teneriffe, the last of the islands to be conquered, but applies equally well elsewhere.

Imobac, Mencey of Taoro, killed in La Laguna, had, by his wife Caseloria, one son and two daughters.

1st.—Ben Tahod (Son of the Valley), who opposed the Spaniards until the peace of Realejo, when he took the name of Cristóbal Hernandez de Taoro, his godfather being the so-called King of Canary. His first wife was called Sañagua and his second wife Inés Hernández Tacoronte, both women of Guanche birth.

By the first he had (*a*) Derimán (baptised as Cristóbal Hernandez), who married either Guaymina de Güimar or Guacimara de Anaga (baptised Ana Hernandez), (*b*) Ramagua or Rosalva (baptised Isabel del Castillo), who married Antón Martín of Abona, (*c*) Collorarpa (baptised María Hernandez), who married the Canary Auxiliary Juan Doramas.



2nd.—Dacil (baptised Mencía Bencomo), first wife of Adxona, Mencey of Abona (baptised Gaspar Hernandez), whose daughter, Catalina Bencomo, married the Captain of Spanish cavalry, Fernan García Izquierdo del Castillo and had by him four children, all bearing the surname of Izquierdo. For the legend concerning Dacil the reader will turn to the description of La Laguna.

3rd.—María Bencomo (Guanche name unknown), who married a Guanche of the baptismal name of Cristóbal Gonzalez Verano. Their daughter, Catalina Gonzalez, became the mistress of a Laguna priest and by him had several daughters. Provided by him with a dowry, she next married Hernando Gonzalez, apparently a Guanche of Buenavista, and their daughter again married a Guanche of the same place. One of the illegitimate daughters of the priest, María González del Castillo, married a Portuguese named Antón Yanes. A second illegitimate daughter married another Portuguese, Juan Fernandez Vasconcellos, settled in Realejo. Both marriages were fruitful.

Ben Tahod's second wife appears to have been a very handsome woman. Hernando Guanarteme de Gáldar, apparently nephew of Ben Tahod's godfather, fell in love with her and carried her away by force. The Guanches, under Ben Tahod, rose to arms and civil war commenced between them and the retainers of the Canario, whose uncle had received large grants of land from D. Alonso Fernandez de Lugo in return for extraordinary services rendered at the time of the invasion of the country.

The position of the Guanartemes was politically very important and apparently the Spaniards were not in sufficient strength to administer justice with much severity.

According to one account the seducer was banished to Spain but was allowed to take the woman with him. According to another, Ben Tahod was taken prisoner and kept in confinement by D. Hernando (the Canario), who had been appointed administrator of the district and was responsible for the general peace. The ex-Mencey continued in prison until 1521, in spite of a royal order, dated 1511, declaring that all men born free should be set at liberty. Tradition says that Ben Tahod was set at large but was eventually assassinated and that his remaining wife married a Canario named Alonso Ramírez Izquierdo.

The Guanarteme had sons by the woman he stole, who bore the name of Hernández Guanarteme; also one daughter, who married Juan Alonso, son of a Canario named Pedro Mayor.

As years went on, the native names fell out of use and the writer, although he has been assured by more than one person

that they were of pure indigenous blood, does not know any family surname now extant of unquestionable native origin.

Since the conquest the sovereignty of Spain has never been seriously disputed, though both Portugal and Morocco have laid claim to the islands.

The Moors, in fact, made several attacks, landing even in places so remote from the African coast as Gomera and the western side of Teneriffe.

Jarife, King of Fez, occupied Lanzarote in 1569 and again in 1586, claiming possession in virtue of his descent from Atlas of Mauritania. He was, however, forced to retire, carrying with him a number of prisoners. The last Moorish attack took place in 1749.

In 1595, a large English fleet, under Sir Francis Drake and Sir John Hawkins, was repulsed off Las Palmas and met with little success at Gomera. A Dutch fleet, which followed in 1599, did considerable damage to the first place, but was eventually driven away and was unable to land in the latter.

During Cromwell's Protectorate, in 1656, Admiral Sir Robert Blake, with 36 vessels, attacked Santa Cruz, Teneriffe, working great havoc amongst the forts and shipping and sinking 16 great galleons laden with treasure then lying in the harbour. In 1706, Admiral Jennings paid a visit without, however, opening fire. In 1743, Admiral Charles Winton made some unsuccessful attempts on La Palma, Gomera and Grand Canary. In addition to attacks such as those named, the islanders about this time seem to have been frequently molested by privateers.

In July, 1797, Santa Cruz was formally attacked by Admiral Nelson. Though unsuccessful, this combat has aroused an interest to which it does not seem altogether entitled. This is, perhaps, due to the fact that it was Nelson's one defeat, that our popular naval hero lost an arm on the occasion; and that two of Nelson's flags are still to be seen in one of the churches of Santa Cruz. Other trophies captured by the Spaniards were one cannon, two drums, some swords, rifles, etc., and a scaling ladder, which is preserved in the Museo Nacional de Artilleria. The history of the attack is the following:—

Vice-Admiral Nelson, who, under Admiral Jervis, was assisting in the blockade of Cadiz, was ordered to proceed to Teneriffe and take possession of a large treasure just landed there from the Spanish galleon *El Principe de Asturias*.

His force consisted of four ships of war, three frigates, one cutter, one mortar and one gunboat, carrying altogether 393 guns and about 1,500 men. The Spanish forts mounted some 90 guns.



Land was sighted on July 20th. On the same day, the delivery of the treasure was demanded from the Spanish authorities, who refused to give it up.

On the 21st, an attempt was made to occupy the heights above the town, but a strong Levante prevented the ships from supporting the landing party and on the following day these had to be re-embarked.

On the evening of the 24th, the ships were anchored off the Valle del Bufadero, about two miles to the N.E. of the town and a feint was made in order to draw the garrison away from the forts.

At midnight, about 700 men in boats were directed against the mole, arriving within half a gun-shot before their discovery by the enemy. About 40 guns at once opened fire. The cutter, containing about 200 men, and several boats were sunk, many of the remainder being dashed to pieces by the surf as the men jumped ashore.

Nelson's arm was shattered by a cannon ball as he stepped on to the jetty and he was carried back to his ship by the men. Though in great pain and weak from loss of blood, he refused help when climbing the side of the vessel, bidding the crew row back to the assistance of their comrades.

In the meantime those on the mole drove their opponents back, spiked their guns and, led by Captain Bowen and First Lieut. Mr. Thorpe, endeavoured to win their way into the town. The fire opened upon them from the Fort of San Cristóbal was, however, too fierce. Nearly all the officers were killed or wounded; the scaling ladders had been lost in the surf and the party on the mole were obliged to retreat, which they did in good order, after holding their position for the best part of the night.

The boats commanded by Captains Trowbridge, Miller and Hood, with some 340 men, having missed the mole, which they could not regain owing to the surf, were run ashore at the south of the town. The pickets were driven in and possession was taken of the Dominican Monastery (then standing on the site now occupied by the theatre and market), of the Plaza de la Iglesia in the lower part of the town, and of the area now known as the Plaza de la Constitucion. Not being able to meet with Nelson's command, which they imagined to be in possession of the mole, they sent a sergeant to demand the surrender of the fort. No reply was returned, the sergeant being either shot or taken prisoner.

When morning came, Trowbridge retreated to the monastery. Finding victory impossible, he demanded permission to leave the town with all arms, in which case he promised that the squadron should not again attack any part of the Canaries. In the event of refusal he threatened to sack and burn the town



His terms were granted, he was allowed to purchase provisions and to withdraw without molestation.

The British loss was heavy, namely, 44 killed, 201 drowned, and 123 wounded, as compared with 32 killed and 42 wounded on the Spanish side.

However rudely they may have handled one another during the fighting, the behaviour of both parties after the event was marked by an almost fraternal kindness. The volleys of compliments exchanged between Nelson and Don Antonio Gutierrez, the Comandante-General of the Canaries at the time, though they may seem to us very high-flown, did not lack a certain element of sincerity. Presents of beer, cheese and wine were exchanged between the two commanders. No Englishman can remember, without a glow of gratitude, the solicitude with which our wounded were treated, and the genuine hospitality which caused the Spaniards to present each of Trowbridge's men with a loaf of bread and a bottle of wine on which to break his fast before leaving the mole.

For the defence made on this occasion, Santa Cruz was granted the title of "Leal, Noble é Invicta."

In 1821, the Canaries were created a Province of Spain, with Santa Cruz, Teneriffe, as the capital and chief seat of government. Local jealousy has held the islands apart and has prevented much of the progress which might otherwise have been realised.

In 1852, the ports, however, were declared free; in 1883-4, submarine cables brought the archipelago into close connection with the rest of the world; since when modern coaling stations have been created and commerce generally has taken great strides. Information on the Coaling and Fruit Trades and on Industrial and Agricultural matters generally is given elsewhere.

In 1839, monasteries were declared illegal, but nuns are still allowed to take the veil on condition of depositing with the Mother Superior a small sum, about £150, to guarantee the means of livelihood. The ecclesiastical properties, which were numerous, were at the same time taken possession of by the Government in return for salaries to be paid to the bishops and priests on a scale agreed upon with the Pope.

However interesting the later history of the Canaries may be as a harbour for Spanish galleons; as a point of departure for Columbus on his way to the discovery of a new world; as the site of the only direct repulse which our greatest of admirals ever suffered, or as a group of islands which, under the somewhat lax rule of Spain, has yet developed into one of the most important coaling stations of to-day; such records, although far the most complete, precise and trustworthy, can scarcely arrest the

attention of the most prosaic mind so completely as must the many social and ethnographical problems presented by the earlier traditions, so rudely handed down by mediæval visitors or conquerors and enshrined in a halo of romance by the fanaticism or vivid imagination of the monkish writers by whom they were preserved.

The ancient names of the islands are given in this work under the description of each island. The accuracy of their application is, in some instances, open to question. An effort has been made to place them as correctly as possible, but neither Ptolemy nor the Arabian writers were very precise as to the particular places referred to. The generic term of "Canaria" is probably derived from "Gannaria," a name used by Ptolemy for that part of the African coast lying near Cape Blanco.

The populations, as estimated by Bethencourt and other visitors of the 15th century, were as follows:—Lanzarote, 300 fighting men; Fuerteventura, 4,000; Canary, which obtained its name of Grand Canary from the stubborn defence it made, from 9,000 to 14,000 warriors and a population of 90,000; Teneriffe, about 15,000 warriors, and La Palma, 1,200 inhabitants, with some 20,000 animals, both probably greatly under-estimated. These are the only early records the writer has met with. In Hierro, where war was unknown, there were no fighting men.

For the sake of convenience of reference, many of the facts known about the indigenous inhabitants, gathered by the writer from a number of historians, are placed under separate headings. Those wishing to study them *in extenso* will refer to the list of books given in the Bibliography.

**Origin of the Natives.**—Anthropological measurements of many hundreds of skulls show the natives to have been a *dolicocephalic* race of Iberians, those in the Western Islands, which were the least exposed to the introduction of negro blood from the African coast, being closely allied to the Basques and the Kelts of Western Europe.

Tradition and local feuds point to the occasional immigration of foreign settlers, some of whom were perhaps driven on shore and wrecked.

A colony of immigrants has been referred to as having perhaps come from Egypt about 1400 B.C. The reference comes from Homer, but the fact is not altogether dependent upon this somewhat questionable evidence. According to Ossuna, some of the natives carried to Rome about the commencement of the Christian Era expressed the greatest horror at the idea of dying abroad and of being placed in the earth without being previously embalmed. Their fear that decomposition of the body would



affect the immortality of the soul, may have been derived from an Egyptian source, as may their skill in the mummification of the dead, a matter discussed at length a little later on. If the islands were uninhabited in the times of Sesostris, the source from which the islanders originally came may well have been the banks of the Nile. On the other hand, their inability to write and their methods of worship, do not tend to support this view.

Whatever their starting point may have been, it is only natural that a people without literature or ships would soon differ greatly in their language and in their customs.

Their exposure to invasion from the coast, and the occasional advent of strangers, would also accelerate the inevitable changes brought about by time.

In Teneriffe it is said that sandals were used similar to those common in Valencia, which were copied from the Moors. One writer says that some of the natives were acquainted with the decimal system, which might indicate some connection with the Arabs.

**Language, Inscriptions, etc.**—The roots of the various dialects had a common origin and the earliest visitors were able to make themselves partially understood in one island by means of interpreters from the others.

A number of words and names of places in all the islands were almost identical with Berber words and names, as were also the names of the tribes inhabiting Hierro, Gomera and La Palma, viz., Ben-Bachir, Ghomerythes and Haouarythes.

Certain words were in general use; for instance, *Aemon* meant water in Lanzarote and Hierro and probably elsewhere; *Aho* was milk in Lanzarote, Canary and Teneriffe; *Chivato* meant kid in all the islands, and *Cigueno* was the name for a goat in Lanzarote and La Palma.

"The Language of Teneriffe" was very ably discussed by the late Marquis of Bute in a pamphlet of that name. The author calls attention to the difficulty of deciding the island from which the words he quotes have been derived, the collections handed down to us being very vague on this point. He proves the use of a definite article, which shows at once that the language had no connection with any of the American dialects. Professor Max Müller, discussing the Marquis of Bute's paper, stated that he "felt inclined to link it with a Semitic origin or with a Babel language."

In 1902, an old MS. in Italian and Portuguese entitled "Descrição é Historia das Ilhas do Mar Atlantico" by Leonard Toriano Cremonense was discovered in the National Library at



Lisbon. In it are two Cantos, one in the Canario (Grand Canary) language and one in the Bimbacho (Hiero) language.

The list of words given below are spelt according to the Spanish alphabet, which, for the sake of uniformity, the writer has adopted in similar cases throughout this book. The pronunciation can be ascertained by referring to the remarks following the vocabulary.

*T, to, at, atch, ash, as* or *ach* = the. *Mencey* = lord. *Achemency* = one of secondary rank. *Achacuca* = the masses. *Quehevi* = king. *Sigoñes* = gentlemen. *Tibicenas* = demoniacal apparitions. *Ejiquen* = temple. *Tubonas* = obsidian knives. *Ganigo* = an earthen vessel. *Xercas* = shoes. *Magado* = a pole about eight feet long, with heavy ends. *Chacerquen* = vegetable honey. *Yoya* = sap. *Mozan* = seed. *Banotes* = javelins. *Xacos* = mummies. *Cairomo* = a goat-skin knapsack. *Vaco guare* = I want to die. *Guanarteme* = chief. *Guayre* = one of secondary rank. (The last two are undoubtedly Canario.)

Names of places :—

*Guayonje, Ubaque, Izogue, Guamasa, Tijoco, Tejina, Adeje, Taoro, Chirindaque, Anambro, Anaga, Añasa, Guañaka, Asgua, Visogue, Vegeril, Marrajo* (all Guanche), *Telde, Tirma, Moya, Gáldar, Mogán, Taidia* (Canario).

Tribal or family names :

*Chimber, Korosma, Cherinda, Laravicho, Vigogia, Tajana, Afono, Chinobre, Icono, Vegio.*

The common call to a goat, still used in Teneriffe, is *jua-jay*, a fearfully guttural sound, which in English might perhaps be written *hououa haüyi*.

The inscriptions found on rocks in La Palma and in Hierro have been submitted to experts in Paris and have been declared to be mere arbitrary scratches, without connection and of different epochs. They do not appear to have been engraved by the inhabitants found at the time of the conquest.

**Form of Government, Laws, Marriage Laws, etc.**—At some indetermined date, the King or Quehevi of Teneriffe resided at Adeje. Tinerfe the Great divided his kingdom amongst nine sons, of whom the Mencey of Taoro was nominally the head. These matters are treated earlier in this history and under the description of Teneriffe.

The Mencey possessed rights of seigneurie over all his subjects ; the nobles were subservient to him, but enjoyed similar privileges over the serfs. There was a great distinction between the classes,

which dressed differently, were forbidden to intermarry and were buried separately, a convenient belief being maintained that the Creator first made the nobles and, finding the world would hold more, then peopled it with the common herd to wait upon them. A man of noble descent who sullied his hands by menial work or was discourteous to his inferiors was not received on coming of age as a member of the upper classes. All, however, worked in the fields or rallied during war at the points previously fixed, such as the great palm in Villa Orotava. A child born of a noble father by a peasant mother was *ipso facto* noble, but a woman lost caste by marrying beneath her. The daughters of the nobles were sometimes brought up apart (see "Religious Customs"), and their marriage required the sanction of the King. As a rule, only one wife seems to have been allowed, but she might be repudiated if barren. One writer states that a man might have as many as he pleased and that consent alone was sufficient to constitute marriage. The reader will have noticed a few pages back that both the Mencey of Taoro and the Guanarteme of Gáldar had more than one wife. The latter, in fact, seems to have had three. One, who was barren, was not repudiated but became the devoted nurse of the children born to her husband by the woman stolen from Ben Tahod.

The sign of authority was the *humerus* or bone of the arm of one of the deceased kings, or, according to Viana the poet, a skull. This was sworn upon at the coronation by both King and nobles and was used as a sceptre at the council. Justice was administered and laws made in councils, called together at some well-known point, such a council being known as a *taoro* or *tagoror*. The place of meeting might be simply a large cave, round which a rough seat would be cut in the rock, or an open space on which an army might be assembled. In most of the Menceyatos one or two such places can be pointed out and many still bear a name associating them with their former use.

Núñez de la Peña says that capital punishment was not inflicted in Tenerife. In this statement he may be wrong, as the records gathered by him and indeed by all writers on the early history of the Canaries are based upon somewhat untrustworthy evidence.

According to other writers a child was put to death for insulting its parents; adulterers were buried alive; robbery where the door was closed, if only by a wooden latch, being nearly always a capital offence. Homicide was revenged by the relatives, but there were a few places of refuge similar to those recorded in the Semitic writings. The culprit, if brought to justice, seems to have forfeited his property and to have been banished from his own district for life. It is, however, probable that a distinction was made between homicide and murder. Death was also



inflicted on those approaching too near to the spot used as a bathing-place by the Consecrated Virgins or *Harimaguadas*, as they were called in Canary.

In some of the islands the fear of over-population was so great that a man was liable to be put to death for merely joining or speaking to a strange woman on the public road. So very severe a law cannot have been always enforced; but some such restriction on intercourse did exist. At one time there seem to have been double pathways in some of the mountains of Teneriffe and Grand Canary, constructed in order to separate the sexes. Too rapid an increase of the population in such restricted spheres naturally led to child murder, a legal crime which had to be enforced at times in most of the islands. It seems however that the firstborn was always spared.

Execution was inflicted by means of crushing the breast with a heavy stone, beating with sticks, throwing from a rock or into the sea, or, in cases of treason, by burning, stoning or burying alive. In Lanzarote there was a pit into which the condemned was lowered, the choice being offered of either food or water. This pit was done away with because one prisoner, more artful than her predecessors, chose milk, remaining alive so long that this form of punishment had to be abolished. (*See under "Lanzarote."*)

A most admirable form of nationalisation of the land and one most suitable to a small and isolated country, was that all the property belonged to the Crown, to which it returned on the death of the head of the house, being at once re-distributed. This prevented any of the nobles from growing too powerful.

In Teneriffe, the title of a king or prince was hereditary from father to son.

It is rather difficult to locate all the above laws as belonging actually or entirely to Teneriffe. The conclusion the writer has drawn from what he has read is that similar necessities in all the islands has caused the fundamental laws of each to bear a great resemblance. Besides this, the inhabitants must have started on a more or less common basis, or at least with ideas bequeathed to them by a common race of predecessors, however remote. As they could only pass the laws on from one generation to another by word of mouth, it is reasonable to conclude that this was done by means of the priests, as was the case with the early Jews, and that the custodians of the law or scribes, if one may call them so, were forced to learn them by heart, possibly in a sort of rhythmic chant. This chant would be difficult to alter suddenly, but it might gradually change by the addition of new matter and by the deletion of old. As the priests were all chosen from amongst the nobles, any change of this description would not be likely to be in favour of the peasant.



The government in Grand Canary seems to have passed through the stage to which Teneriffe had recently arrived. The island had been divided amongst fourteen chieftains who endeavoured to take away the territory of the Princess of Gáldar, Andamana, a woman, from all accounts, remarkable for courage, beauty, intellect and power of intrigue. Coquetting first with one chieftain and then with another, she gradually organised her forces, then, choosing the bravest of her warriors as a husband, eventually subdued the whole island. It was owing to this fact that the Spaniards found Canary so hard to conquer. Had Teneriffe been equally united, it is difficult, even after making allowance for the *modorra*, to imagine how they could have taken possession of it at all.

Some writers state that both in Canary and Gomera it was customary for a host to present his wife to a guest, or to change wives during the stay of the latter, a refusal being regarded as a deadly insult. For this reason property descended to the brothers or, failing them, to the sisters or to their descendants. It is not unlikely that this was a custom in several of the islands, not merely from a feeling of hospitality, but because, in a restricted sphere, the introduction of fresh blood becomes a matter of primary importance. An example of this is to be seen in Lapland in the present day, where any traveller sleeping at one of the isolated settlements scattered about this frost-stricken country is expected to conform to what is nothing more or less than a law of race preservation.

In Lanzarote and Fuerteventura, which, as has already been pointed out, were much more subject to Arab or African influence, the women were jealously guarded and the royal descent was from male to male.

In Lanzarote one writer mentions a most curious custom, namely, that a woman was allowed three husbands. The husband was free for one month, was obliged to work about the house or on the land for another month and was master of the house on the third. In Hierro it seems to have been a very usual thing for the brother and sister to intermarry and the distinction of class, which elsewhere forbade intermarriage between the noble and the serf, seems to have been absent.

**Character, Social Customs, Habits, Appearance.**—Except in Hierro, where there was a small population under one king and where fighting was unknown, the clans were extremely warlike. This is proved not only by history but by the positions they chose for their habitations, of which the best examples are to be found in Grand Canary. Although they knew how to build houses, of which indeed a few are to be found even now (refer under Tirajana),

and though they are said to have been in the habit of squaring and smoothing stones, the bulk of the population no doubt lived in caves. Many of these are in the most inaccessible positions and must have been difficult to enter, even before the narrow approaches leading to them were worn away by the weather. Their colonies were also frequently situated in the centre of a most sterile district, neither the best for cultivation nor for the feeding of stock; in such places, for instance, as the Barrancos of Fatarga or of Tirajana in Grand Canary. One may incidentally remark that they must have been an extremely dirty people as a good water supply seems to have been a matter quite outside of their consideration. In Lanzarote and Fuerteventura, where they generally lived in houses, the entrance was always small and the building was surrounded by a wall into which the goats were driven at night. As a further security against attack the owner was allowed to kill anyone found inside this wall after dark, as is the case to-day in a native kraal in Central South Africa.

The warlike habits of the people made the task of conquest heavy. La Palma was only subdued by the help of the people of Gomera, both parties being, it is said, brave to rashness and indifferent to death or suffering. (For further details, *see* under La Palma.) The history of the reduction of Canary and Tenerife has already been given.

Children were trained as warriors by teaching them to throw mud and blunted javelins at one another, which they were made to catch and return if possible. Marvellous tales, not worth repeating, are told of their prowess when grown up.

Their agility in throwing, catching, and avoiding stones was considered almost miraculous by the Spaniards, who, however, are not very good judges, as very few Spaniards can catch a thing thrown to them. Admiral Sir John Hawkins himself was an astonished spectator of their skill, strength and intrepidity in jumping, lifting weights and climbing.

Games of skill were indulged in at stated times, during which, if at war, a truce was held. Much emulation was shown, though probably most of the records are absurdly exaggerated.

Their athletic competitions were sometimes carried to the bitter end, as was the case when two rivals committed suicide from the cliffs at La Paz in the Valley of Orotava, because neither would be outdone by the other.

They also met for the purpose of dancing. The dance known as the "Canario," now a favourite in Cuba, is said to have been learnt from the Bimbachos (Hiero). They were fond of declaiming poetry, which was declared by Viana to have been very



sweet. It described the achievements of the dead or of the living in a rude chaunt somewhat resembling the Saga of the Scandinavians.

The principal feast of the Guanches was known as the *Beñesmen*, and took place at midsummer, just after harvest.

By nature, the people were truthful and generous. Their conduct towards the Spaniards showed an abhorrence of treachery among themselves, which, if thrown away upon the greedy generals of the time, is as much admired by the Canary Islanders of to-day as the want of it is reprobated in their own forefathers. Had the Church of that day not demanded their conversion or extermination and had the greed of slave-hunters been less violent, it is probable that ordinary trade relations could have been established and the islands gradually won to civilisation without any rupture of the peace.

Prisoners of war were generally condemned to menial work, *i.e.*, such work as butchery, the preparing or cooking of meals, the cleaning of cattle sheds, etc., and probably any employment other than the tilling of land, the care of cattle or the pursuit of war.

Generally they seem to have been tall and well-made. In the western islands they may have been fair, but nearer Africa they were dark and thick-lipped. The women are reported to have been beautiful, but it must be remembered that the sailors describing them had been on board ship for some time and that allowance must always be made for travellers' tales and for distance, which would lend enchantment to the recollection. The standard of beauty in many parts of the Canaries to-day has a great deal to do with the distance round the body or limbs. In Canary at that time it was customary to fatten a girl up for thirty days before marriage, as the Moors do at present. It is also recorded that the people were very sensible, only taking as wives those women who, by their girth and their make about the hips, were most likely to have healthy children. One writer says that females were incapable of suckling from the breast, but did so from the lower lip, which reminds one of the men whose heads did "grow beneath their shoulders."

In spite of the tales of their immense strength, it is unlikely that a race left to itself for so long could develop that tremendous muscular energy attributed to them by the early writers. They were not all killed and the wives, mistresses and even husbands of the Conquistadores and their relations have left plenty of descendants now living. Even in those parts of the islands where the native race is known to have remained at its purest, the people do not come up to the ordinary English standard by any means, though naturally there are exceptional cases here and there where gigantic stature may be due to native ancestry.



The history of this people and of their supernatural prowess is in danger of becoming a sort of epic, handing down facts to posterity in a garbled and exaggerated form, in order to add lustre to the deeds of those by whom they were subdued.

**Religion, Priests, Vestal Virgins, Forms of Prayer, Legends, etc.**—The religion or religions were generally founded on the worship of an invisible god. In Teneriffe this was certainly the case. The summits of mountains were, as is usual, held as fitting places for worship. In Teneriffe the Peak, which was called *Teide* or *E'Cheyde*, probably meaning the seat of fire or hell, seems to have been regarded as the abode of the deity, who, however, there is no reason to suppose to have been a maleficent creation.

The inhabitants called their island *Tehinerfe* (*Tehin*—white and *erfe*—mountain), and themselves Guanches (possibly Vanches), supposed to mean “the sons of *che*,” short for *E'Cheyde*. Other names were “Achmech” and “Chinechi,” but whether these meant the whole or only a portion of the population is not clear. Their most solemn oath was by “E'Cheyde and Magec,” or by “Hell and the Sun,” a sufficiently expressive formula.

The names of the deities were—in Teneriffe, “Achaman,” meaning God Almighty; “Menceyato,” corresponding to our own Lord; “Achuchacanam,” highest; “Achuherahan,” trebly great; “Achguayaxerax,” preserver of all, and others describing Him in His various attributes. It is also said that “Acoran” and “Alcorac,” names commonly used in Canary, were employed in Teneriffe, but this is doubtful. The Supreme Being in Canary was known as “Atirtisma.” In La Palma “Abora” was the “God of all things.” In Hierro “Eraoranhan” was the “God of Men,” and “Moreyba” the “God of Women,” a fact which made the Bimbachos accept the Catholic ideas of Christianity much more readily than was the case elsewhere. In Teneriffe the devil, who lived deep down in the Peak, was called *Guayota*; in Canary he was *Gabio*, and in La Palma *Yrueñe*.

In Canary the two most sacred mountains were Humiaya, near Telde, probably that now known as the M<sup>na</sup>. de las Cuatro Puertas (*see* Index), and Tirma near Artenara. It was probably in these that the only images known to have been made by the aboriginals were found. One of these was of stone and represented a naked youth carrying a globe. The other, which was of wood, portrayed a naked and fully developed woman, before whom were a male and female goat, the propagation of species being evidently the object of worship. In front of the last it was customary to pour libations of goats' milk, the Spaniards describing the temple as being very filthy and malodorous.

André Bernaldez, writing about A.D. 1500, speaks of Teneriffe, Canary and La Palma as the three idolatrous islands. As regards Teneriffe he must have had the image of the Virgen de Candelaria (*see* Index) in his mind, but there seems to be no reason for his having included La Palma. The place of worship in the last was inside the great crater and at the base of a monolithic rock called Idefe, which fell down about the time of the conquest. One writer says that the Haouarythes had no conception of immortality, but such statements cannot be accepted without full corroboration.

The clergy were chosen entirely from amongst the nobles. In Canary they were called *faycayg* or *faycan*, a word bearing some resemblance to the Indian "fakir." Besides conducting the religious ceremonies, the priests assisted in council, had the monopoly of prophesying and were entrusted with the storage of the tithes, of which the surplus was preserved against times of scarcity. It was by them that the dead were embalmed, as was the case in Egypt. By their knowledge of antiseptics, they were probably physicians as well. Historians do not say whether they were allowed to marry or not.

They lived apart from the people in communities of their own. Some of these were seminaries in which novices were instructed and in which the daughters of the nobles received their education until they were married. Such seminaries or convents were jealously secluded. Access to the girls was made as difficult as possible and they were guarded by very strict laws when away from home, unchastity on their part being punished by the death of both parties. They were clothed in white like the Vestal Virgins of Rome and were taught to assist in the ordinary household duties of the convent, in the sewing of the skins in which mummies were wrapped, etc.

There is reason to believe that the priests were assisted by male and female communities whose lives were devoted to the service of the deity.

The best example in the islands of what was undoubtedly a combination of temple and retreat, shared, perhaps, by male and female devotees, is that of the Montaña de las Cuatro Puertas in Grand Canary. (*See* Index.)

Prayer was sometimes accompanied by a sort of frenzied dance, but the ceremonials of which the most accurate record has been preserved are those held at times of great drought. In Teneriffe, in La Palma, and probably elsewhere; when ordinary prayer failed it was customary to assemble a multitude of goats on one side of a ravine and to place their kids upon the other. Their cries and lamentations were supposed to invoke the pity of the angry gods. In Hierro there was a resource beyond this, namely, a little pig



kept in the cave of Astcheyta, in the district of Tacuetunta, which was regarded as of the most peculiar sanctity. When all other means failed the pig was released from its home and allowed to run about the island, a curious form of ritual of which it would be interesting to ascertain the origin.

In Teneriffe a ceremony existed greatly resembling our own baptism, namely, that the woman who first washed the head of a new-born child was afterwards looked upon as what we should call its god-mother. In La Palma, any one incapacitated for work by reason of age or illness could demand death, a request which the relations were not allowed to refuse. The moribund was placed in a remote cave with a little food by his side and allowed to die alone.

A few of the native legends have been preserved. It is said that a prophet of Taoro (Teneriffe) foretold the consummation of an old tradition and the conquest of the island by a people from beyond the sea. For this he was put to death by Bencomo the Good. In Canary they said that "in the beginning God made a number of men from earth and water. The first to be made were specially endowed, but, when God found that they were not enough, he made another race, condemned to perpetual servitude. To the first he gave all the flocks, to the second nothing." Another legend of Canary was that "God placed us in this island and then forgot us, but from the east a light shall come which shall re-awaken us." The same legend was current in Hierro but was more circumstantial. It was said that when the bones of a king called Yore, who answered to our own King Arthur, should be turned to dust, "white houses shall come from over the sea and shall be the salvation of the people." When Bethencourt's ships were seen to be approaching the island, the head priest went to this cave and found that the bones were dust, so that the arrival of the strangers was considered a matter for rejoicing.

In La Palma it was said that when the island was to be conquered the rock Idefe would fall. The form of prayer in consequence seems to have been a constant repetition of "Idefe, spare us." When the Spaniards attacked the interior of the Great Caldera from Tazacorte and Prince Tanaúsu, with a few followers, alone remained, they changed their prayer to "Idefe, fall." Idefe fell and is still said to serve as a sepulchre for the last heroic defenders of their country. At the risk of destroying another pretty romance it must, however, be added that a more trustworthy account declares that Tanaúsu was captured alive and sent to Spain, but that he starved himself to death on the way.



**Burial Customs, Mummies and Medicines.**—Both in Teneriffe and in Canary the bodies of kings and nobles were mummified. Even those of the lower classes were sometimes subjected to a sort of astringent process, consisting in the abstraction of the stomach and the insertion of certain berries.

Both in Teneriffe and in Canary the dead were placed in caves, though the custom was not so universal in the latter as it was in the former. The spots chosen for the burial of kings were usually most inaccessible and the people were not allowed to witness the actual interment. This precaution may have been due to fear that the ghosts of the departed might be summoned up to do injury to the living. A parallel case may be cited from South Africa. In Monomotapa (Rhodesia) chiefs were buried in the ruined Arab strongholds, places believed to be enchanted, in which few natives would dare to enter.

Thomas Nicols, writing about A.D. 1526, mentions a cave which he was allowed to visit near Güimar, and states that he was told of the existence of many others in which hundreds of mummies were to be seen, but says that he was compelled to secrecy, the favour being shown him in return for medical services rendered. The Guanche Kings were usually placed upright, their wives being seated by their side. The common people seem sometimes to have been placed one above the other. Caves still exist in which large quantities of bones are to be found.

A king remained unburied until the death of his successor. This was done in order that there might always be two kings, one living and one dead, though whether the mummy assisted in council or was treated as a sort of Delphic oracle is not known.

In Canary the graves were frequently hollowed out from the *scorie* near the sea, as, for instance, in the cemeteries on the Isleta near Las Palmas, at Agaete and at Arguineguin. If one may judge from the care with which they were embalmed, the most important people were laid north and south and their inferiors east and west.

The preparation of a first-class mummy was elaborate. The entrails, etc., were first cleaned out by the butcher and the body handed over to the priests. These dried it in the sun and treated it with various astringent vegetable extracts, preserved in resinous lumps and in a form greatly resembling modern hardbake. In Teneriffe the sap and bark of the dragon-tree were employed. A mummy, which took some fourteen days to prepare, was sewn in from one to six goat-skins, excellently tanned and sometimes joined together by needlework of the most delicate description (*see* Museum in Las Palmas). The arms of male mummies were strapped down to the side, but those of females were crossed over the stomach. It is probable that the entrails were burnt and the

ashes mixed up with the astringents left inside the body. In Teneriffe, food, such as jars of butter and milk, was placed in the caves by the side of the mummies. In Canary dried figs have been found.

Butchers and those engaged in cleansing the dead previous to embalming were regarded with loathing and, as was the case in Egypt, were compelled to live apart.

It may be interesting to recall the fact that pieces of Guanche mummies or of the dragon-tree were highly prized as medicaments in the Middle Ages, and that both were indispensable ingredients of the philosopher's stone. Later on the dye obtained from the bark of the dragon-tree was used to give that colour to the wood so much prized by the collectors of old violins.

Probably the medical men were acquainted with more vegetable drugs than those used in the preparation of mummies. Viana says that a present was made by the Mency of Anaga to Bencomo of Taoro of the portrait of a daughter of the former (Dacil), painted in charcoal, coloured ochres, vegetable juices and the sap of the wild fig-tree. The tree meant was probably one of the Euphorbias, as the fig proper was not known in Teneriffe.

One of the chief medicaments was butter, buried and preserved for a great length of time, the longer the better. It is likely that, in a country where surgery or bone-setting were both unknown arts, more benefit would be derived from the massage attending the application of an unguent than from any other course of treatment.

**Implements, Industries, Decoration, Clothing, Food, Agriculture, etc.**—Iron was unknown and implements were made of obsidian, other hard stones, wood, and bone, both fish and animal. Fish bones were used for sewing and for fishing; cloth was made from vegetable fibres; leather was tanned as soft as any in Morocco, and considerable skill was shown in the manufacture of pottery. This was shaped by a rounded stone and without the use of a potter's wheel, as is the case to-day in Atalaya (Grand Canary), where the method of manufacture has been handed down directly from the Canarios and where no change is likely to take place until the crack of doom, unless foreign influence finds it worth while to take an interest in the matter. Handmills were used and were made of basalt hollowed out, probably by means of obsidian.

In warfare, slings, stones, spears, javelins and clubs were employed. In Canary a light shield was also customary, but in Teneriffe this was replaced by a mantle wound round the left arm.



The points of the spears and javelins were either hardened by fire, or, as in La Palma, tipped with horn.

The musical instruments were confined to the drum and to a small reed pipe, but the people are said to have been very fond of music.

An earthenware implement, usually known under the Spanish name of *Pintadera*, was common. It was probably used as a stamp for printing leather, cloth, or, perhaps, the human skin. Various forms of beads made of burnt clay and other materials have also been found.

Those who could afford it, or who were allowed to indulge themselves, were probably fond of ornament. Some even decorated their caves by means of coloured geometrical patterns (*see* Gáldar). There were, however, sumptuary laws, such as that in Canary, which compelled the lower classes to wear the hair short. It is also probable that a restriction was placed on the use of the *Pintadera*, as though some writers say that tattooing was general in Canary and that it was customary to stain the skin permanently others maintain that this was only done during war.

Clothing must have varied very greatly. Kings are represented in monkish missals as naked with golden crowns on their heads. This was no doubt only a conventional way of depicting them as savages and it is far more probable that they wore at least skins in all the islands. In Lanzarote and Fuerteventura the kings wore a mitre of leather set with sea-shells. Cloth, as well as skins, was used as a covering. It seems that in Lanzarote and in Fuerteventura females were concealed almost from head to foot, as is the custom amongst the Arabs. In some of the other islands they were undoubtedly left entirely naked when young and possibly, in one or two, remained so even after marriage. In Tenerife the men wore a *tamarca* or sleeveless shirt of goat-skin coming to the knees. Women were clothed down to the ankles. Stockings (*huirmas*) were a mark of nobility.

The principal article of food amongst the islanders was and is *gofio* or *ahorén*, a preparation made of toasted grain, mixed with salt and ground in a mill. The result is highly nutritious. It can be made at little trouble or expense and from any sort of grain, and it is unfortunate that it should not replace bad bread made from bolted and adulterated flour in other places than in the country districts of the Canaries. *Gofio* is used in a few other parts of the world, for instance in India. In times of scarcity the seed of the ice plant (*barrilla*) or the root of the male fern are occasionally made into *gofio*.

From the position chosen to live in, agriculture must have been comparatively neglected. In Hierro it was unknown, but in other islands very good wheat was found by the Spaniards on



their arrival, as well as barley, beans, peas, yams and dates. Figs had also found their way at least as far as Canary but not to Teneriffe. Land was neither irrigated nor manured, the fields being tilled for a short time until the soil was exhausted, when the surface was broken in some other place. Here again the islanders resembled the negroes of Africa, who migrate at times for the same reason.

Their chief wealth lay in their flocks, the animals known being sheep, goats, pigs, dogs and rabbits. All of these were used as food, castrated puppies being considered a great delicacy in Canary, where it is said, by the bye, that the sheep had no wool. Fish and, in Hierro, a large lizard were also eaten. Food was cooked, fire being obtained by means of friction.

The most important of their animals was the goat which they had bred to great perfection. The progeny now to be found in the islands is a most prolific yielder of milk.

The shepherds, who included in their number both king and peasant, invented a method of whistling to one another across the ravines. Even to-day two men will carry on quite a long conversation in Gomera, though the art has not survived so well elsewhere. Dr. Sprat, Bishop of Rochester, a man of a very easy conscience, when writing to the Royal Society of London about 1650, says that he met an Englishman in Teneriffe, who, having persuaded a Guanche to whistle into his ear, was rendered deaf for fifteen days.

In Canary fish were driven on shore by men swimming out to sea and beating the water to frighten the fish, which were then caught by others with spears, baskets and nets. It has been stated that in Teneriffe the Guanches could not swim and that the people of La Palma did not fish. The first may be true but the latter is not, as it is now known that the Haouarythes eat fish.

Water was usually drunk, but in Hierro, if not elsewhere, a fermented liquor was made from the berry of the laurel (*visnea mocanera*). It is even possible that a spirit was distilled from the same, which perhaps accounts for the Bimbachos being so fond of dancing.

## HISTORY OF THE AZORES.

SPACE will not allow of the discussion of ancient maps and problematical voyages, one of which is mentioned in the History of Madeira.

The islands were discovered by the Portuguese between 1431 (Formigas Rocks) and 1452 (Flores). From the abundance of buzzards (*buteo ins : Floer*) found there, they were christened "Os Açores" (*Port. : Hawks*) an ornithological error, the Portuguese for buzzard being "milhafre." With the exception of birds, there were no vertebrate animals of any kind in the archipelago. The country was covered by dense woods, gigantic cedar trees, now extinct, being predominant.

The first party of colonists landed in the islands was placed in St. Michael's by the Portuguese Government in A.D. 1444. (*See under St. Michael's.*)

The abundance of timber helped greatly in the work of settlement. In spite of eruptions, earthquakes, piratical raids and wars, both civil and national, the islands have steadily progressed until an abundant population has reclaimed and brought into cultivation almost every available yard of ground.

The fortifications and walls by which many of the larger towns are dominated or surrounded were very necessary for their protection against the constant raids of English, French and Moorish rovers, who attacked most of them at various times, acting in many cases with all the wanton cruelty of the later middle ages. It was, however, in the wars between Portugal and Spain, by means of which the islands fell under Spanish dominion from 1580 till 1640, and during the struggle for the Portuguese throne between the partisans of Dona Maria II. and D. Miguel (1826-1834), that the people suffered most.

On July 14-20, 1582, São Miguel, then in the hands of Spain, was attacked and ravaged by D. Antonio, of Portugal, with a large force, chiefly recruited in France. A few days later (July 26-31), D. Antonio was defeated by a body of Spaniards under the Marques de Santa Cruz, who again overran the island, barbarously punishing the unfortunate people who had espoused the cause of D. Antonio.

On June 23, 1583, the Marques de Santa Cruz attacked Terceira, which fell into his hands and was given over to the mercy of the invaders during three days.

Queen Elizabeth of England then espoused the cause of D. Antonio and sent her admirals to harass and ravage the Azores, now belonging to Spain under Philip II. It was during one of these expeditions that Sir Richard Grenville made his famous fight in the "Revenge" off Flores, "the one and the fifty-three."

Actually he did not engage the whole but only fifteen ships of the Spanish fleet. Shortly after the engagement, the entire Spanish argosy met at the spot prior to its departure for Europe, when a fearful storm occurred and sank 107 ships out of 140, the "Revenge" also going to the bottom.

On September 17, 1597, Fayal was seized by Sir Walter Raleigh, but a subsequent attack by the whole fleet, commanded by Robert Devereux, Earl of Essex, on the island of São Miguel was less successful, Villa Franca alone being sacked.

In 1826, severe fighting took place in Terceira between the "Liberals," as the friends of Dona Maria II. called themselves, and the Miguelistas, resulting in favour of the former.

On August 11, 1830, a Miguelista fleet, which endeavoured to force a landing at Praia in Terceira, was repulsed with a loss of 1,000 men, and in July-August, 1831, the Miguelistas were finally defeated in São Miguel, the last of the Azores to remain faithful to the cause of absolutism and its attendant priesthood.

It was largely owing to the aid of auxiliaries from the islands that the adherents of D. Miguel were finally driven out of Portugal and the present Royal Family seated on the throne.

The Azores possess the right of self-government (autonomía)



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The following countries are represented in the centres named :—

In **Funchal, Madeira**:—Argentine, Austria-Hungary, Belgium, Bolivia, Brazil, Chili, Denmark, France, Germany, Great Britain, Greece, Holland, Italy, Norway, Paraguay, Peru, Russia, Spain, Sweden, Turkey, Uruguay, Venezuela.

In **Santa Cruz, Teneriffe**:—Argentine, Austria-Hungary, Belgium, Bolivia, Brazil, Chili, Columbia, Costa Rica, Cuba, Denmark, Ecuador, France, Germany, Great Britain, Guatemala, Haiti, Holland, Honduras, Italy, Liberia, Mexico, Nicaragua, Norway, Panama, Paraguay, Peru, Portugal, Russia, San Salvador, Sweden, United States of America, Uruguay, Venezuela.

In **Las Palmas, Grand Canary**:—Argentine, Austria-Hungary, Belgium, Bolivia, Brazil, Chili, Columbia, Costa Rica, Cuba, Denmark, Dominique, France, Germany, Great Britain, Greece, Guatemala, Haiti, Holland, Honduras, Italy, Liberia, Mexico, Nicaragua, Norway, Panama, Paraguay, Peru, Portugal, Santo Domingo, Sweden, Turkey, United States of America, Uruguay, Venezuela.

## MADEIRA.

MADEIRA is the largest of a small group of islands belonging to Portugal, situated in latitude  $32^{\circ} 37'$  to  $32^{\circ} 52'$  N., and longitude  $16^{\circ} 39'$  to  $17^{\circ} 17'$  W., and about  $10^{\circ}$  N. of the Tropic of Cancer. It is 1,164 sea miles (2,141 kils.) S.W. of the Lizard, 1,309 sea miles (2,304 kils.) from Southampton, and 520 sea miles (915 kils.) W.S.W. of Lisbon; is about 38 miles (60 kils.) long by 15 m. (24 kils.) broad, and its superficial area is about 240 sq. m. (574 sq. kils.). It is divided into 10 concelhos, and contains 151,125 inhabitants.

The form is oval, and the surface mountainous, a number of deep ravines radiating on all sides from the central ridge, of which the highest points are grouped around the water-shed of the Grand Curral (Curral das Freiras). A narrow neck of considerably less elevation connects the before-mentioned mountains with the Paul da Serra, an extensive elevated moorland on the western side of the island. The highest mountain of all is the Pico Ruivo, 6,059 feet.

The loose nature of the soil has led to great loss by denudation. Most of the ravines are more or less precipitous, especially on the north, where the greater power of the sea, and the greater prevalence of rain in the winter, both aided to a certain extent by the geological substratum, have worn away and hollowed out a succession of gorges, whose wooded summits, dripping rocks and bubbling streams are full of grandeur and beauty. Their loveliness is due to that wonderful fecundity seemingly peculiar to a volcanic soil, which is here aided by the mild climate, under which the yam and the sugar-cane at the bottom join hands with the pine-tree, the heather and the laurel at the top. The warm vapours surrounding the island, the almost hothouse-like air which generally prevails in its valleys, and the colder atmosphere of the unprotected mountains, naturally give a great latitude to the vegetation. All sorts of grain known to Northern Europe and all flowers and fruits not absolutely tropical or arctic can be grown, whilst the ferns, mosses, lichens and indigenous flora or fauna are a constant attraction to the student of nature. Cultivation is rarely seen above the 3,000 feet level.

The foregoing remarks might lead to the supposition that the valleys on the north are grander and more beautiful than those on the south, which is not altogether the case. Those unable from want of time or because of unsettled weather to be away from Funchal for more than a day will find an excursion up the Grand Curral and across the top of the Serra d'Agoa sufficiently impressive.

An abundance of moisture is derived from the clouds, which, during a great part of the year, hang round the mountain tops.



During the summer all the streams on the south are dry, but, on the north, many continue to run.

Only that water is allowed to run away, however, which is not required for irrigation, long aqueducts (*levadas*) catching and carrying streams for immense distances. The most noticeable work of the kind is at the Rabaçal, where the water is taken by means of tunnels to the southern slopes, a praiseworthy undertaking of great importance to the island.

Volcanic energy seems to have slumbered for many centuries. Evidences of it are to be seen all over Madeira, but many ages must have elapsed since it was so violently exerted as has been the case, even recently in the Canary Islands and in the Azores. Where cinders or slag are found, they are fast resolving themselves into earth, their sharp edges are usually rounded off and they are generally hidden beneath a carpet of moss or a mantle of verdure.

Sugar was once the staple product of the island—witness the arms of Funchal, five sugar loaves—but this was later on almost abandoned for the vine. More detailed information on this and similar subjects will be found under "Industries and Agriculture."

There is only one macadamised carriage road, namely, the New Road, which leads to Camara de Lobos, 6 miles ( $9\frac{1}{2}$  kils.) west of Funchal. Sledges drawn by bullocks (*carros*) are, however, able to penetrate the country for a few miles from the city along certain tracks. Hammocks are largely used and good horses may be had, but the healthy pedestrian is best off if he does not mind roughing it a little. The natives, in fact, rather than drive mules, prefer carrying goods on their shoulders and may sometimes be met with in large parties, the leader playing a *machète* and the rest singing as they walk. Saddle-bags are unknown and the guide insists on carrying the rider's luggage, which he does not seem to find an encumbrance.

The peasants are thrifty, obliging and honest; their habits and manner of living simple. Naturally ingenious, they have learnt how to make a number of small articles to sell to visitors or to the wealthier classes.

**Native Curiosities, etc.**—Amongst these are an enormous variety of goods made of wicker-work, including chairs, baskets, etc.; embroidery; lace; inlaid-wood work; feather-flowers; jewellery and silversmith's work; walking-sticks and other articles too numerous to mention.

On the east of Funchal there is a pottery, interesting to visit, though its productions are not so good as the glazed ware imported from Portugal and sold in the town, some of which is very quaint.

Some of the country dresses worn on feast days are little altered from those worn a century or more ago. In fact, the carapuça (peaked cap) is a direct but degenerated descendant of the form of turban worn by the Moorish labourers formerly employed in Madeira.

In spite of overcrowding, the people, on the whole, are fairly prosperous, and the quantity of black broadcloth and more or less carefully groomed top hats to be seen on a Sunday or feast day, bespeak a desire for respectability almost British in its intensity.

Our own countrymen have been visitors to the island for so long that they are regarded almost as natives. Many of the Portuguese can make themselves fairly well understood by those ignorant of their language.

Leprosy is found chiefly in the west. It is not present in a virulent form, nor is the disease known in these islands believed to be contagious.

There are no harbours in Madeira, even Funchal being no better than an open roadstead. A little shelter, however, is provided by the Pontinha, a stone causeway connecting the Loo Rock (Ilheo) with the shore, where tugs can lie at anchor and rowing boats can land in rough weather. There is also a short landing pier with steps.

Those remaining in Madeira for a few hours only are advised to take the railway up to the Mount Church (20 minutes) and to descend by *carrinho de cesta*, i.e., toboggan (about 10 minutes). The little tramway (*carro Americano*) runs from the centre of the city to the Pombal (lower terminus of the railway), or the same place can be reached in carro or on foot in about 10 to 15 minutes. For times, fares, etc., see at the end of Madeira or in the advertisement (Madeira) section. This is the trip usually included in the "coupon" excursions sold on board the ships.

Inside the city there are many objects of attraction, amongst which the Casino, the Cathedral, the Fruit and Fish Markets, the Gardens, Shops and Museum may be included.

The journey up by the cog railway is both picturesque and convenient. The railway in fact, utilitarian as it may seem in a place like Madeira, is an undoubted godsend both to visitors and residents, allowing them to reach the higher levels easily and at little expense. At the top of the railway is a group of hotels of which the names and tariffs are given under "Funchal." It is proposed (1910) to continue the railway to a further elevation of 1,000 feet above the sea and to provide a restaurant, etc., at the new terminus.

Those ascending by the railway will find the Mount Church itself of little attraction. Their time, whilst at the top, will be better spent by walking to the view platform overlooking the Curralinho from the neighbourhood of the Chapel of the Immaculate Conception (about 8 minutes from the terminus on foot); by wandering about the grounds of one of the neighbouring hotels, or by paying a visit to that most charming and characteristic estate known as the Quinta do Monte, permission to enter which can, however, only be obtained by means of an introduction to the owner. The gardens command an almost unequalled view of Funchal and the neighbourhood and are a veritable little paradise, of which those who have never visited the fertile and exquisite island of Madeira can scarcely form a conception. Lovely as it is, the Quinta do Monte is, however, only one of those enchanting residences for which Funchal is justly famous and which form so constant a delight to all lovers of the beautiful.

The walks, etc., to be made from the Mount Church as a starting point are described more fully under "Walks, Rides, etc.," further on.

The journey up by rail is much pleasanter than the road taken by the *carros* to Mount Church, where the view is greatly obscured by walls and trees.

Visitors to the Mount, able to walk well, are recommended to follow the bridle path from the view platform across the Curralinho (properly *Curral dos Romeiros*, *i.e.*, Pilgrims' Fold) to a place known as Choupana on the Caminho do Meio, a little below the Pico do Infante. The path is hilly and leads through very fine scenery. Time across on foot, either way, about one hour. From Choupana toboggans can be hired down past the Quinta Reid to the town, a very exciting journey. Time about 20 minutes. For fares, etc., see end of Madeira.

The direct ascent from Funchal to Choupana can also be made by *carro* in about one hour. The vegetation about Choupana is remarkably luxuriant and the fern tree and eucalyptus grow to perfection.

Other pleasant and shorter drives out of the town are to go past the Convent of Santa Clara to the Peak Fort, whence there is a very fine view, or up the Hortas Road, along the whole length of the Levada, and down the Saltos Road. Many other drives and excursions are given in sufficient detail a few pages further on.

The following excursion is recommended to those wishing to get a good idea of the island in a short time. From Funchal *viá* the Poizo and Ribeiro Frio to Santa Anna, one day. From Santa Anna to Boa Ventura or São Vicente, two days. Back in



the first case *viâ* the Torrinhas, or in the second *viâ* the Encumiada and down the Grand Curral (Curral das Freiras) to Funchal, three days.

The last day (São Vicente to Funchal) is a very long, hard day and may be shortened by going directly from the Encumiada *viâ* the Serra d'Agoa to Ribeira Brava and thence to Funchal by steamer.

Horses can be used along all these routes. Outside the limits of Santa Anna and São Vicente on the N., travellers should use hammocks or go on foot, as the roads are very steep. In order to ensure accommodation it is advisable to give notice of arrival a day or two beforehand. Telegrams can be sent all round the island except to Seizal. There is also a daily post out of Funchal.

Where accommodation cannot otherwise be obtained, it is often possible to find an empty room and to sleep in the hammock, when one is taken. (*See also Index, "Houses of Refuge."*)

Visitors stopping some time in the island will soon exhaust all the excursions immediately round the town. It is unnecessary to enumerate each of these in their order of merit, as they are all given, with the time necessary to make them, in their proper places.

To any wishing to extend the three days' trip spoken of above, attention is called to the fact that the sunny side of the island, both east and west of Funchal, is drier and less beautiful than the north. That is to say, that the neighbourhoods of Santa Cruz, Machico, etc., on the one side, and Calheta, Paul do Mar, etc., on the other, do not repay for the trouble taken in getting there, although the villages themselves and the methods of cultivation adopted, etc., may be worthy of study.

Instead of going directly to Santa Anna by the Poizo Pass, it can be reached by the Lamaceiros Pass, Porto da Cruz, the Penha d'Agua and Fayal. By taking this route, the beautiful views of the Ribeiro Frio and R. do Metade are lost, but the valleys of Santa Cruz and Machico are seen. In order to include the country missed out, a one day's excursion to the Pico Arrieiro should be made. A description of this will be found elsewhere.

On the west of the island the coast can be followed to Porto Moniz, and a return made along the south side of the Ribeira da Janella, past the Rabaçal, the Paul da Serra and São Vicente, *or* São Vicente can be left out and a decent be made to Ponta do Sol, *or* to Ribeira Brava, *or* the road home from São Vicente be joined at the Encumiada. In the last two cases it is most convenient to take a tent or to sleep in one of the Government Houses of Refuge; for instance at the Tanquinhos, at the Lombo de Moiro or at the Chão de Caramujo. *See Expedition 7.*

If there is no wish to see the south of the island, by turning to the left before reaching Porto Moniz and by keeping to the north bank along the Fanal, the distance is considerably shortened. In either case at least five days are necessary, and, in order that a little rest may be enjoyed and places of interest visited, it is much better to allow a week or more. The time of any journey can, of course, be shortened by using the steamers (Vapores Costeiros). Enquire at agents.

**FUNCHAL**, with 44,049 inhabitants, contained in nine parishes, is the capital of Madeira, the centre of Government (Civil Governor and Military Governor), the seat of a Bishopric and the only port where ocean-going steamers call. British residents in 1908, about 325.

**Landing Charges.**—Passengers are landed in steam-launches or boats on the steps of the little stone jetty, except in very rough weather, when they are disembarked on the Pontinha under the shelter of the Loo Rock.

All ships are met by the hotel agents, to whom luggage may be entrusted. (Special charges.)

Some of the lines of steamers land the passengers free of expense; but where this is not the case, the port charges are:—passengers, without luggage, one shilling each way, or, when an ordinary amount of luggage is taken, 800 reis each.

Customs House Officers, for superintending boats loaded with luggage or goods, 265 reis each, and 250 reis for stamps, etc. For leaving a package in bond, and reclaiming same, 610 reis. Worn linen, clothes, etc., for personal use and travellers' samples enter duty free. Commercial travellers require no license. Goods or parcels weighing over 22 lbs. or with a value of over £9 require a Consular Declaration costing 10s.

Passengers landing at night cannot always obtain their heavy baggage till next morning. They should therefore carry necessaries in a handbag.

A licence is required to carry a parcel on shore to be posted. Cost about 100 reis.

The Customs House officers are most obliging to visitors and special orders have been given to treat foreigners on very lenient terms.

**Coupons.**—Those on shore for a few hours can purchase coupons from the Hotel Agents on board, which include boat, railway, lunch, etc.

**Custom Duties.**—All goods for use in the island pay duty according to a fixed scale. Such duties are exceedingly high, and are according to the law passed in February, 1892, with subsequent modifications.

The duties are remitted on furniture, plate or any other household requisite showing signs of wear (Law of Jan., 1898). Such goods must be accompanied by the owner, must be certified by the Portuguese Consul nearest to the point of departure and must absolutely be landed within thirty days of arrival, without grace. Carriages, etc., may remain for eighteen months under bond. After this they pay duty. Household requisites include furniture, linen, crockery, carpets, etc., etc.

It is not advisable to carry more than a small quantity of tobacco and on no account should visitors run the risk of trying to smuggle anything. (200 grammes, *i.e.*, about 6 ozs. of tobacco pass free.) Duty may be paid on parcels forming part of luggage up to 5 kilogrammes, but not over. Tobacco may not be sent by post nor imported as merchandise in packages of less than 40 kilos. Not more than two packs of playing cards (used) may be introduced and not more than two boxes of matches.

Passports, Cedula (Police Tickets), etc., are no longer necessary. Visitors enter and leave tax free.

**Hotels.**—*Inside or near the Town:*—Reid's Palace Hotel (late New) and annexes, with fine gardens, in a commanding position on the cliff to the west of the town, bathing pools and landing place from 10s. a day upwards; Reid's Carmo Hotel, to the east of the Cathedral, with garden, from 8s. 6d. a day; Jones' Hotel,



"Bella Vista," elevated, open situation, near the Casino and a few minutes from the town, attractive grounds, good views, from 8s. a day; Adams' Hotel Royal, on way to the New Road, with garden, from 8s. a day; Grand Hotel (Central), just above the landing stage, 1,500 reis upwards per day; Quisisana, well situated above the New Road, from 7s. 6d. per day.

**Hotels.**—*Behind and above the Town (in order of succession on the Mount Railway):*—Monte Palace Hotel, 1,550 feet, new building, large grounds, lake, fountains, etc., fine views, 8s. to 15s. a day; Hotel Bello Monte, 1,700 feet, with shaded gardens, 8s. a day upwards; Reid's Mount Park Hotel, 1,750 feet, with shaded gardens, 7s. 6d. a day upwards.

Besides the above there are one or two Portuguese Hotels inside of the town.

**Boarding Houses.**—Pension Christina, from 7s. a day; Pension Almeida, 42s. a week. Both to west of the town. Residents occasionally take paying guests.

**Restaurants.**—The Phenix, close to the Mole; Bentham's Café Monaco, facing approach to gardens. All the Hotels also provide separate meals.

**Newspapers.**—Diario de Noticias, Diario Popular, Heraldo, O Jornal, Correio da Tarde, O Direito, and others.

*(For Advertisements relating to Funchal, see under Funchal at the end of the book.)*

**Clubs.**—The English Rooms, between the jetty and the Customs House, with billiard, card, reading rooms, etc., and a library of several thousand volumes, admit temporary members. Novo Club Restauração and Casino, upper floors of the Golden Gate, corner of the Estrada da Cidade and the Praça da Constituição, with banqueting hall, billiard and card rooms, etc. Commercial Rooms (*Associação Commercial*), facing the mole, subscribers admitted. English Masonic Lodge. Sailors' Rest, facing the Public Gardens.

The Quinta Pavão (Strangers' Club), west of town, with fine dancing hall, beautiful gardens, tennis court, etc., provides the amusements usually to be found in similar Casinos and has become a favourite rendezvous of visitors and residents. A small entrance fee is usually charged.

From the Municipal Cemetery to the Palace Hotel just beyond the Ribeiro Secco, a group of villas face the sea which, for the beauty of their gardens and the position they occupy, are almost

without a parallel. A great variety of sub-tropical plants and creepers, growing luxuriantly in this mild and equable climate, spread themselves in masses of colour or banks of tender green about the buildings or shade the grounds by a foliage whose unaccustomed aspect or delicate verdure is both surprising and attractive to the new-comer. Towards the sea the gardens abut on a precipice, from which, or from the summer houses built by the edge, there is a most wonderful bird's-eye view of the town and harbour.

Amongst them is the well-known Quinta Vigia, formerly the residence of the Empress of Austria, the Prince of Oldenbourg, etc. At the Quinta Lambert, the house next below the Quinta Vigia, Queen Adelaide, Dowager of King William IV., after whom the *Strelitza* is named, passed two winters.

**Water Supply.**—Those living in the town usually fetch their drinking water from the fountains below the Governor's Palace, but water is also brought to some of the public fountains in 3-inch iron pipes from the Corujeira, a point not far from Mount Church and well above all houses. Some of the hotels also have private supply pipes from the hills. See advertisements.

A scheme for an efficient supply and a good system of drainage has been approved by the Government and is in course of construction (1910).

**Lighting.**—Since the beginning of 1898, the town has been most excellently lighted by electricity. The enterprise is owned by an English company.

It is proposed to establish a system of telephones, which is much wanted.

**Railway.**—The railway running to just below Mount Church is a great convenience. It is 3,000 metres long and rises at a gradient of 20 $\frac{1}{10}$  per cent. It is proposed to carry the railway to a further 1,000 feet above the sea and to provide a restaurant at the top (1910). Further particulars will be found at the end of the description of Madeira and amongst the advertisements.

**Tramway.**—A tramway connects the jetty with the lower terminus, fare 50 reis (3d).

**Horses, Hammocks, Carros, Motor Cars, etc.**—For fares, etc., refer to the special pages placed at the end of Madeira.

**Public Buildings.**—The Town Hall or Camara Municipal, in which the Courts of Justice are held and where the meetings of the Concelho take place, is situated near the Collegio Church and is of little interest.—The Prison, just below the Cathedral, in the centre of the town.—The Governor's Palace, or Palace of São Lourenço, a peculiarly constructed building, suggestive of the walls of the Castle at Osaka (Japan), contains the Meteorological Observatory. Below are the Fontes de João Diniz, from which



many of those living in the city fetch their drinking water.—The general Hospital, facing the Praça da Constituição, where medical classes are held.—The Leper Hospital of São Lazaro.—The Empress's Hospital (Hospicio), on the way to the New Road, built at a great expense by the late Dowager Empress of Brazil in memory of her only child, the Princess Amelia, who died of consumption in Madeira in 1853; adjoining this is an orphanage where the inmates are trained to become domestic servants.—The Asylo da Mendicidade or Poor House, where the indigent poor receive relief and to which all visitors should make a donation according to their means, so that they may afterwards conscientiously refuse to give alms to the impudent and importunate beggars in the streets.—The Peak Fort or Forte São João do Pico, built by the Spaniards early in the 17th century, overlooking the town, and worthy of a visit on account of the view it commands.—The Fort on the Loo Rock (Ilheu), connected with the shore by the Pontinha since 1888.—The Custom House, Alfandega, commenced very early in the 16th century and formerly an ecclesiastical building.—The Fish and Vegetable Markets below the Alfandega, which are worthy of a visit in the early morning.—The Opera House, a fine new building with a handsome interior, where performances are held at intervals.

Besides the public buildings proper, there is a small but very interesting Museum in the Seminario, moved in 1909 to the site of the old Convento da Encarnação in the Mount Road near the lower terminus of the Railway. The museum was founded in 1882 by Father Ernesto Schmitz and is open to visitors. Portuguese, English, French, German and Esperanto are spoken.

The contents are well arranged and intelligibly displayed, most of the space being devoted to Madeira objects. There is an excellent raised map of Madeira in plaster of paris, one of three specimens made in 1863. The collection includes many objects of great rarity. A few may be named:—Amongst corals, *Paragorgia Johnsonii* Grey; amongst sponges, *Merlia Normani*; amongst birds, a young *Oestrelata feae* (salv), and a number of valuable and almost unique specimens of crustaceans, butterflies, etc., etc.

The Seamen's Hospital (seamen only), near the Pontinha, owes its origin to the English residents. A nominal charge is made to those able to afford it.

The walls of the city were commenced in 1572 and practically completed in 1637, though the Varadouros gateway, leading up from the beach to the centre of the town, bears an inscription stating that they were absolutely finished in 1689. Their demolition began about 1700. The Fort of São Thiago on the east of the town, now used as a barracks, was built in 1614.

Churches.—The Cathedral or Sé (1485 to 1514) is of little architectural merit. The interior is gaudily decorated. The fretted ceilings at the chancel end are indifferent examples of



the style of decoration almost peculiar to Madeira, the Canaries and certain parts of the Spanish Peninsula. (The earliest and best example known to the writer is that to be seen in the old Jewish Synagogue at Toledo, which owes its wonderful preservation to the fact that it is made of cedar wood (from Lebanon) and was hidden by plaster for centuries, probably from the time of the expulsion of the Moors, or in any case since Torquemada drove the Jews from Spain.) A large silver crucifix of the early part of the 16th century, which can only be seen on application, is of considerable merit.—The Igreja do Collegio (built by the Jesuits) has a handsome façade, and the interior is decorated in an effective and imposing manner. The adjoining monastery is now used as a barrack.—S. Pedro.—Carmo.—N.S. do Socorro, the oldest church in the city (the last three are of no special interest). In the Socorro, however, is the shrine of São Thiago Menor (St. James the Less), the patron saint of the city, to which there is a procession of notables every year on the 1st of May. The procession commemorates the cessation of a plague in 1538, immediately after the despairing authorities had handed over the wand of office to the keeping of the saint. There are also several chapels, both public and private.

Besides the churches there are several Convents, some with chapels, and some still used as retreats for novices and as places of worship. First among these is the Santa Clara, founded in 1492, for centuries famous for sweetmeats, feather-flowers, etc. These may still be purchased through intermediaries or directly from the inmates by means of the turnstile. The chapel is well worth a visit for itself, besides which it contains the tomb of Zargo, the discoverer of the island (see History). The Conventos da Encarnação das Mercês (Seminario and Museum since 1909).—do bom Jesus.—de Santa Izabel.

During the British occupation of Madeira, the troops were quartered partly in the present barracks next to the Jesuits' Church (up to that time the Seminario), and partly in the Convento da Encarnação, the students and nuns being removed elsewhere to make room for them.

Foreign Churches.—English Church, Rua de Bella Vista, built in 1814 somewhat on the model of the Pantheon at Rome, because of a law which then forbade any building not destined for a Roman Catholic place of worship to resemble a church.—The Scotch Church, Rua do Conselheiro, facing the Gardens.—The Methodist Episcopal Church of America, Mission Hall, a little below the Scotch Church.

Cemeteries.—The Municipal Cemetery (*Cemeterio des Angustias*) on the way to the New Road and the British Cemetery (*C. Britanico*) a little more inland are both beautifully kept and are

full of flowering plants and handsome shrubs. The latter dates from 1770, prior to which date Protestants dying at Madeira had to be buried at sea. The Jewish Cemetery (*C. Hebraico*) is near the Lazaretto.

**Lazaretto.**—This lies close to the sea a little to the east of the town.

**Squares, etc.**—The broad *Entrada da Cidade* leads up from the beach to the *Praça da Constituição*. The latter occupies the space between the Cathedral and the Governor's Palace. Both are planted with trees and are much frequented. Adjoining the *Praça* are the **New Public Gardens**, on the site of an old Franciscan monastery. The band plays here twice a week. The *Praça Academica*, to the east of the Custom House. The **Stone Jetty**, provided with seats, communicates by a level carriage road or esplanade with the *Pontinha*. It is proposed to connect the esplanade with the **New Road**. From the *Pontinha*, the **Loo Rock** (*Ilheu*) may be visited on foot by those obtaining permission to do so.

Funchal is a picturesque town, beautifully situated in a species of vast amphitheatre, the summits covered with verdure, and the sides with villas, gardens and orchards. The houses gradually approach one another, form themselves into streets and descend to the sea-level, where the dark **Loo Rock**, the Governor's Palace, the line of houses, the signal tower, the custom house and the black beach form a fine contrast to the deep blue of the arena or sea. The gladiators and wild-beasts are replaced by a straggling group of ships and coal-lighters, and by an infinity of little boats, their occupants hurrying out to meet some newly-arrived steamer, or speeding away the parting guest by endeavouring to sell him a basket deck-chair or some other knick-knack. These floating bazaars are accompanied by still smaller boats, each containing two little boys, shouting and gesticulating for money to be thrown into the water for them to dive and fetch up.

The many charming residences scattered about the slopes; the gardens gorgeous with colour; the terraces covered with flowers; here and there a wall crimson with one creeper or orange with another; the sound of the church bells as a relief from the monotonous four bells or eight bells on board ship, all invite the passer-by to spend at least some hours on *terra firma*. Those who have not time for more generally ascend to the Mount Church and return by running *carro*.

In all directions, and perhaps more especially on the east, the town is gradually extending further and further into the hills, the choice of *quintas* (villas) being thus constantly increased.

The climate is referred to elsewhere. It need only be added that at no time of the year will those who land find it cold on

shore. They should, in consequence, wear light clothing. As the cobble-stones with which the streets are paved are very slippery, they are also advised to use their india-rubber deck shoes.

Curiosity being generally awakened by the tower on the beach (Banger's Folly) near to where people are landed, it may be mentioned that it was built in 1796 to facilitate the discharge of cargo. Since then the beach has extended itself a good deal, thus rendering it useless for the purpose. It is now a signal station.

The aerial tramway running up the Ribeira Sta. Luzia near the Carmo Church was erected in 1909-10 to cope with the immense quantity of sugar cane carried from the beach to Messrs. Hinton's factory at harvest time. The extraordinary increase in the growth of the cane, entirely due to a curious combination of fiscal regulations, is a most interesting commercial problem.



## Walks, Rides and Drives near Funchal.

(For cost of horses, boats, hammocks, etc., refer to the end of Madeira.)

Times are given for riders without allowing for stoppages.

Those on foot or taking hammocks must add to the time in about the proportion of six to four.

Those descending into Funchal by any of the main steep tracks are advised to wear rubber-soled foot-gear or to hire toboggans.

**A. To the East of Funchal.**—The direct road, or that *viã* the Lazaretto, both lead to **Palheiro** (1,700ft. ;  $3\frac{3}{4}$  m. = 6 kil.) in about an hour. An order must be obtained to enter the Quinta, of which the park-like grounds command good views. A return may be made by the road which leaves the main track a little on the Funchal side of the Quinta gates and crosses the face of the hills, after which descend the **Caminho do Meio** in running *carro*, altogether about two hours out and home.

Or the ride may be prolonged to **Camacha** (2,203ft. ; 6 m. =  $9\frac{1}{2}$  kil.), the chief summer resort of residents, in  $1\frac{3}{4}$  hours, and back by the **Pico da Silva** and the **Caminho do Meio**, altogether  $3\frac{3}{2}$  hours, or home from Camacha *viã* **Canico** (less attractive) in the same time.

Or instead of returning from the Pico da Silva, the **Poizo Road** may be followed to the summit, some very good scenery being enjoyed, and the road past the Mount Church taken on the way home ; time, five hours. Various excursions can be made by those living in Camacha, for which see under Santa Cruz. From Camacha to the church of **S. Antonio da Serra** takes about two hours each way.

**B. Behind the Town.**—The railway to the Mount Church has already been mentioned on page 114.

To residents and to those staying in the town, however, it is not merely a quick and easy means of going to a height of 2,000 feet and sliding down again in a toboggan. From it paths branch out on either side and allow of many enjoyable walks at different levels, walks which are not merely a pleasure to all but are of paramount importance to invalids requiring gentle exercise and change of air.

The first station is that at the **Levada**, a level road crossing the town at an elevation of some 500 feet and commanding a succession of beautiful views of the City, Harbour, etc.

The next station is the **Livramento**, which gives access to a second level road at a higher elevation connecting the **Saltos Road** with the **Mount Road**.

Other stations are Santa Anna and the Flamengo in the order named, after which comes the Mount Terminus.

Those who prefer to ascend to the Mount Church by *carro* will find the prettiest route to be that along the Saltos Road. In the morning numbers of peasants will be met on this, as on other roads to the mountains, running down to the town, their sledges piled high with fuel, vegetables, etc.

For hotels at the Mount, *see* under Funchal; for railway, *carro*, toboggan fares, etc., *see* at the end of description of Madeira and amongst the Madeira advertisements.

The church (Nossa Senhora do Monte) was built about 1470, and is 1,965 feet above the sea. (Distance from the city, one hour by *carro*; 20 min. by train,  $2\frac{1}{2}$  m. = 4 kil.) The façade, which is approached by a long flight of steps, is flanked by two towers and has a somewhat imposing appearance. The interior is roughly decorated with indifferent paintings. The image of the Virgin on the high altar is much venerated on account of the miracles she is said to have performed. Tradition relates that she appeared, about the year 1700, at the fountain situated some one hundred and twenty yards down the path, to the N.W. of the façade. A shrine and a money-box will be found at the spot whence the water issues.

As stated on page 44, it is possible to return from the Mount by the Curralinho, the wildest piece of scenery near Funchal, and to descend the Caminho do Meio, also by toboggan. This is a very fine excursion.

A beautiful extension to this walk is to go on nearly to the spring just below the Poizo House,  $1\frac{1}{2}$  hours from the railway terminus and to take the path to the right across the downs to Choupana, descending the Caminho do Meio (preferably by toboggan, engaged beforehand) and home. Total about  $4\frac{1}{2}$  hours.

A much longer ride past the Mount Church is to the Pico Arrieiro (5,750 feet), eight hours there and back. An early start should be made and guides should be taken. The summit, which shows evident traces of volcanic action, abuts on the Grand Curral, of which, as well as of the central group of mountains, splendid views are obtained. Amongst the latter are the Pico Ruivo, As Torres, Cidrão, etc., and a beautiful bird's-eye view of the Metade and adjacent ravine. Near the summit are some holes (*poços*) in which snow and ice are stored during the winter for use in the summer months. On the way, Government Refuge House, 4,980 feet. Fine position in summer. Water close by.

Those fond of mountaineering can descend from near the Refuge House by way of a goat path to the Government Refuge at Fajã da Noqueira and thence by the Levada do Furado to the Metade Valley, Ribeiro Frio, etc. (*see* page 420).

**C. To the North-west.**—The road *viâ* Santa Clara and the Peak Fort leads to S. Roque Church, built in 1579 (1,129 feet), and ascends to the little chapel of the Alegria, which stands in a picturesque situation. The double journey occupies about  $2\frac{1}{4}$  hours. To vary this walk, the bed of the Ribeiro de S. João can be crossed and the Church of S. Antonio (951 feet) visited. Time necessary, a little under three hours.

Another ride is across the bridge of S. João, past the Maravilhas to S. Antonio, returning *viâ* S. Amaro and S. Martinho (764 feet) in  $1\frac{3}{4}$  hours, or as far as the Trapiche or the valley of Vasco Gil, in  $2\frac{1}{4}$  and  $2\frac{3}{4}$  hours respectively, or descend to the left beyond the Church of S. Amaro, which dates from 1460, and home by the New Road in about the same time. The last-mentioned rides command some fairly good views of the Grand Curral, especially if the hills are ascended.

Some of the most recent signs of volcanic action are to be seen in this part of the island. In the Pico da Cruz, which is close to the city, the breaking away of the crater-wall and the stream of lava issuing towards the sea are vivid and plain to the eye without the trouble of leaving the road.

The upper part of the village of Camara de Lobos is reached by the road past S. Martinho. This is the route followed when going to S. Vicente. (*See Expedition No. 5.*)

**D. To the West.**—A pleasant ride or drive, for carriages can pass all the way, is along the New Road, which is fairly level, and the greater part of which is macadamised.

Trees have been planted for some distance along this Rotten Row of Madeira, as it has been proudly called. Certainly, this tardy acknowledgment on the part of the Portuguese Government of the benefits of civilisation has greatly improved Funchal, giving an outlet and a means of transport to those anxious to live in the healthy, breezy atmosphere to be found on the cliffs.

The R. dos Socorridos, crossed by a three-arched bridge between Funchal and the Palace Hotel, was a flowing river when the island was first visited. It derives its name from the rescue of two of Zargo's men, who were nearly drowned whilst crossing it.

At the bottom of the cliff near Gorgulho and at a short distance from the New Road, there is a rock with a natural archway known as the Cano de Folle or Blacksmith's Forge, whence, in rough weather, a good-sized water-spout is often ejected.

About a mile beyond the Palace Hotel and below the road is a large factory where quantities of tunny are dried and tinned for export. A visit is of considerable interest.

In the cuttings further along the New Road many beds of fresh cinders and volcanic mud will be observed. The fishing village



of Camara de Lobos, where the road terminates, is quaint, but of little interest (pop. 17,250), no inn, about  $5\frac{1}{2}$  miles or 9 kil. from the city. Time of ride, out and back,  $2\frac{1}{2}$  hours; motor cars about one hour.

Passing through the village, a steep ascent leads to the summit of Cabo Girão, a magnificent headland, 1,920 feet high. Those wishing to visit the brink of the precipice must go a little to the left. Time, both ways, six hours from Funchal.

A little over an hour from here is the Achada do Campanario,  $8\frac{1}{2}$  miles =  $13\frac{1}{2}$  kil., where, until a few years previous to the close of the 19th century, a hollow chestnut tree over thirty-five feet in girth, said to be the oldest and largest in the island, used to stand. The interior was used as a summer-house. This spot commands a good view of the western mountains, Paul da Serra, etc. A descent can be made to the beach by a pathway cut in the cliff. Beyond this point, *see* Expedition No. 6.

## Expeditions from Funchal.

Parties of more than three should send a telegram, say two or three days beforehand, to acquaint hotels with their arrival.

For times by Steamer (Vapores costeiros) to harbours on the coast consult Agents.

**No. 1.—To the East.** (Santa Cruz, Machico, Caniçal, the Fossil Beds, etc., with excursions from the same places in small print, including the Portella and Lamaceiros Passes to Porto da Cruz and Fayal.)

The road passes the Fort of S. Thiago, the Church of N. S. do Socorro, and the Lazaretto (1 m. =  $1\frac{1}{2}$  kils.), crosses the R. Gonzalo Ayres, runs past the chapel of N. S. das Neves, ascends to a height of 1,245 feet, and so over the Cabo Garajão (Brazen Head), which is not visible from the land side, to Caniço ( $4\frac{3}{4}$  m. =  $7\frac{1}{2}$  kil.).

At Porto Novo there are the remains of an old fort, the site of an engagement and of the only bloodshed which took place in Madeira during the Miguelista troubles (1826-31). Next comes Gaula, then the chapel of S. Pedro, after which Santa Cruz (three hours; 11 m. = 18 kil.). The scenery is uninteresting.

**Santa Cruz.** A small town largely devoted to the fishing interest, population, 16,274. Church of S. Salvador with tombs. Beds possible.

**Excursions from Santa Cruz.**—To *Madre d'Agoa* (1,411 feet), three hours both ways. Horses cannot go quite up. The point aimed at lies on the E. side of the R., where the *levada* leaves the bed. A pretty spot, a short distance above which there is a good waterfall.

**To the Lagoa, the Church of S. Antonio da Serra, and through the Portella to Porto da Cruz and Fayal.**—Ascend to the left a little beyond Santa Cruz to the *Lagoa* (about  $1\frac{1}{2}$  hours). This is an unbroken crater where a pool of water will be found in the winter. It commands a good view of the Lameira or marsh and of the surrounding country. A quarter of an hour further on is the Church of S. Antonio, 2,059 feet, scarcely worth visiting.

From the paths which join near here, the following selection of routes can be made:—To *Machico*, see Machico, or to the *Lamaceiros Pass*, see next paragraph, or to the *Pico de Suna*, 3,416 feet,  $1\frac{3}{4}$  hours, whence there are good views as far as Santa Anna, Pico Ruivo, etc., or past the P. d'Aboboras, 4,769 feet, to the *Poizo House*, in  $1\frac{3}{4}$  hours, and so on to Funchal or Santa Anna. (See Expedition No. 3.)

The track leads on to the *Portella Pass* (1,800 feet,  $2\frac{1}{2}$  hours), whence there are good views, though less extensive than those from the Lamaceiros Pass; passes through the narrow little cutting, and descends to *Porto da Cruz* in  $3\frac{1}{2}$  hours from the start (distance, 10 m. = 16 kil.). No inn. A rough road leads on the south of the *Penha d'Agua*, a remarkably bold mass of rock, 1,915 feet high, commanding good views (see Excursions from Santa Anna, Expedition No. 3) to *Fayal* in  $1\frac{1}{2}$  hours (6 m. =  $9\frac{1}{2}$  kil.). From *Fayal* to Santa Anna,  $1\frac{1}{2}$  hours, see Expedition No. 3.

**To Fayal via the Lamaceiros Pass.**—The same road is followed as far as S. Antonio da Serra. From here branch off to the *Lamaceiros*, the summit of which (2,180 feet) commands a magnificent view, infinitely finer than that from the Portella. The *Penha d'Agua* is especially prominent from here. Time up from Santa Cruz, about  $2\frac{3}{4}$  hours. From here descend to *Porto da Cruz*, total four hours. For *Fayal*, see above, or a shorter way to Santa Anna may be taken, which does not touch Porto da Cruz.

Camacha can be visited from Santa Cruz in from one hour and a half to two hours.

**To the Poizo House.**—A direct road leads from Santa Cruz to the Poizo in about three hours. For the Poizo, *see* Expedition No. 3.

Leaving Santa Cruz, a barren country is passed through to Machico (four hours; 15m. = 24kil. from Funchal). Pop., 11,918.

**Machico** is a fishing village with an inn (2000 reis) in which accommodation can be obtained for a limited number. The Chapel of S. Isabel is said to be built on the spot where Machin and his wife, referred to in the history of Madeira, were buried. A cave, known as the Furna, the largest yet found on the island, can be visited.

**Excursions from Machico.**—**To the Portella Pass.**—A direct road leads to the summit in two hours. Rather over half-way up a turning to the left leads to S. Antonio da Serra. For further information refer under Santa Cruz.

**To Porto da Cruz by the Cliffs.**—A path leads eastward up the mountains and crosses the Pico Clerico. Later it joins the track leading to Porto da Cruz. Time, about 5 hours. The scenery is very fine. The Curral do Mar, a picturesque ravine about 3 hours from Machico, can be visited on the way.

**To Caniçal.**—A footway, where horses cannot pass, leads along the coast in about an hour. There is no object in coming here.

**To the Fossil Beds.**—These should be visited by boat. (*See* Boat I.) Time from Machico about an hour. There is a small ascent to make from the beach on the east side.

A great deal of discussion has taken place about the origin and date of this curious sandy stretch with its apparently fossilised trees. The most generally accepted theory is that the stone branches are casts or stalactites formed in the sand by the gradual action of rain water, which has dissolved the calcareous matter and caused it to harden into the peculiar shapes found. Similar beds are to be seen in many places. Refer under Socorro, Teneriffe. The sand is supposed to have been blown to its present position from a beach formerly existing on the north of the island.

The spot is a pleasant one for a picnic and the north coast, as far as S. Jorge, may be seen from the neighbouring rocks.

**No. 2.—To the N.E.** From Funchal to Porto da Cruz and Fayal, through Choupana or *viã* Camacha and thence over the Portella (*a*) and Lamaceiros (*b*) Passes.

**Direct Route.**—Go to Choupana either by the Mount Railway (*see* page 44) or up the Caminho do Meio, about 1½ hours, and then straight to the Lamaceiros Pass (*see* under Santa Cruz), about 4 hours, and so down to Porto da Cruz, *or* from Choupana take the path *viã* the Figueirinha, Venda de Meia Serra and down the ridge between Fayal and Porto da Cruz to Terra Baptista, total time about 5½ hours. No inn, but beds possible.

Other routes, not recommended from Funchal and both sufficiently described under Santa Cruz and Machico, are the following:—

(*a*) To Camacha, 1¾ hours; S. Antonio da Serra, 3¾ hours (*see* Ride A); to the Portella, 4½ hours; Porto da Cruz, 6¼ hours; Fayal, 7¾ hours; and Santa Anna, 9¼ hours (*see* Expedition 1, Excursions from Santa Cruz); *or*, up to the Poizo House (2¼ hours), and past the Pico d'Aboboras to S. Antonio da Serra, 4 hours (*see* Expedition 3), and so on as above.



(b) The Camacha route can be taken as before, but the road is left before arriving at S. Antonio. Time to the top of the Lamaceiros,  $4\frac{1}{4}$  hours (refer to Expedition 1, Excursions from Santa Cruz); *or, viâ* the Poizo house and along the ridge to the Lamaceiros pass, about  $4\frac{1}{4}$  hours, after which, refer as above to Excursions from Santa Cruz; *Viâ* the Lamaceiros Pass is a trifle shorter than *viâ* the Portella Pass.

Mention may here be made of the fact that a path along the top of the hills connects the Poizo with the Lamaceiros and eventually with the Portella Pass.

No. 3.—From Funchal *viâ* the Poizo and Ribeiro Frio to Santa Anna, with the Coast Roads from Santa Anna, to Fayal on the E., and Boa Ventura on the W., and Excursions from Santa Anna. The best road in the island.

Quit Funchal by the straight road to the Mount Church,  $\frac{3}{4}$  hour (if by the Saltos road, one hour. For description, *see* Ride B), and, leaving the church behind, pass over the Pico Arrebentão, whence a good view of the Curralinho, the Pico da Silva, Pico do Infante, the Desertas, etc. At  $1\frac{1}{2}$  hours a gate is passed through and the sheep-grazing district or downs are entered. The pine trees are left behind and bilberries, etc., take their place, the road beyond the Poizo being only paved where the streams render it necessary. At  $2\frac{1}{4}$  hours ( $6\frac{1}{4}$  m. = 10 kil.), the House of Refuge on the Poizo is passed.

Accommodation is free but arrangements must be made beforehand as regards food.

The path which turns to the right a little above the house leads to the Lamaceiros and Portella Passes, S. Antonio da Serra, Machico, Santa Cruz, etc. (*See Expedition No. 2.*)

A few hundred yards above the house, the summit (4,553 feet) is gained, and the north coast appears with the Penha d'Águia below and Porto Santo in the distance. On the left the mountains of As Torres and the Pico Ruivo. The road, which is here well paved, now descends sharply, first laurel and later other woods are entered, and at three hours the bridge over the Ribeiro Frio is crossed, a most charming spot (Govt. Refuge).

After passing the bridge, a bridle road, made in 1909, leads to the Levada do Furado,  $\frac{1}{2}$  hour, where one of the most magnificent views in the world is below, around and above the enchanted traveller. In the depths beneath, the stream of the Metade valley winds in and out like a silver thread; poised above are the Picos Arrieiro, Ruivo and As Torres, and on all sides the most luxuriant vegetation, availing itself of every crevice and cleft which the precipice affords. (Govt. Refuge, Fajã da Noqueira,  $2\frac{1}{2}$  hours up Levada, *or viâ* path by Rio Metade,  $3\frac{1}{2}$  hours.)

From the Fajã da Noqueira a goat path leads to the Refuge House on the Pico Arrieiro (*see* page 115), affording a splendid excursion for those fond of mountaineering.

Continuing the road, scenery is passed through only inferior to that on the Levada. At  $3\frac{3}{4}$  hours, the Cruzinhas is reached and the road divides. That to the right leads to Fayal in two hours; that to the left descends sharply and several ravines are crossed. The quaint little houses, with their ridged thatch and universal yam gardens lend a character of their own to the valleys, whilst the woods higher up are often scarcely to be distinguished from those of our own country. In wet weather the paths are sometimes very slippery. At  $6\frac{3}{4}$  hours, the Cortado ridge is crossed with a fine view of the Penha d'Aguia, after which a gradual descent brings us once more to hydrangea hedges and cultivation. The paved upper road to São Jorge is passed leading away to the left, and at  $7\frac{3}{4}$  hours the inn at Santa Anna is reached (1,090 feet).

**Santa Anna**, pop. 9,348, is a scattered village of which the chief charm lies in the number of walks around it and the excursions which can be most conveniently made from it. Inn, 2,000 reis a day. About 6 beds. Good.

**Excursions from Santa Anna.**—**To the E.**—The coast road, which is fairly good, leads to Fayal in  $1\frac{1}{2}$  hours. From Fayal to Porto da Cruz,  $1\frac{1}{2}$  hours, see Expedition No. 1, Excursions from Santa Cruz.

**To the W.**—The coast road to Boa Ventura starts immediately below the Hotel, crosses the valley, and descends sharply to P<sup>o</sup> S. Jorge in half-an-hour, ascends the other side to S. Jorge Church, after which the paving suddenly becomes worse. At  $1\frac{3}{4}$  hours it falls abruptly, crosses a fertile valley, and at  $2\frac{3}{4}$  hours passes round a precipice at about 600 feet above the sea. Again the road leads down and at three hours the Ponta de Boa Ventura is crossed, after which another headland is rounded, a sharp turn is taken up to the left, the path dives round the church, and at  $3\frac{1}{2}$  hours Boa Ventura and the hotel are entered ( $12\frac{1}{2}$  m. = 20 kil.). For description, etc., see Expedition No. 4. The scenery along this route is wild and beautiful and the proximity of the sea most agreeable. The lignite beds of S. Jorge, formerly visible in the R. do Meio, three hours from Santa Anna, have been buried by a landslide.

**To the Penha d'Aguia.**—Time, six hours there and back. Follow the coast road through Fayal and towards Porto da Cruz as far as the Terra de Batista ridge. Here branch off to the left and ascend by a steep path this wonderful isolated cliff. From the top are seen the Arrieiro, Torres and Ruivo Peaks, the whole of the coast from S. Lourenço, and the lesser mountains as far as the Pico do Arco de S. Jorge on the W.

**To the Levada dos Vinhaticos.**—This lovely Levada starts from high up in the R. Secco. From Santa Anna it takes rather over two hours to reach the point from which the walk along the aqueduct commences. After another forty minutes a long tunnel is passed through. The course can be followed up as far as desired by those accustomed to precipices. The views are most striking and the excursion well repays any trouble taken. (Owing to breakages this Levada was impassable in 1910.)

**To the Pico Ruivo.**—This, the highest point in the island, is best ascended from Santa Anna. An experienced mountaineer can reach it with much labour, however, either from the Curral or across from the Torrinhas mountains. Time required from Santa Anna,  $3\frac{1}{2}$  hours up and three hours down. Hammocks can go to the summit but horses must stop a little below. On the way, the Homem-em-Pé (man on foot) is encountered, a basaltic



column bearing witness to the great loss by denudation even at this height. The road passes the base of the Encumiada Alta, which may be ascended if desired (5,893 feet), crosses the neck and commences to climb the Pico Ruivo itself. From the top (6,059 feet) there is a marvellous panorama. On the S. a thin wall of rock connects the Ruivo with the Torres Peaks (highest point, Pico do Gato, about 6,000 feet). Further eastward appear the mountains and ridges through which the Poizo, Lamaceiros and Portella Passes are conducted, with the Serra de S. Antonio and valley of Machico beyond. To the E. lies the ravine of the R. Secco. To the N. the deeply seamed slopes and mountains between Fayal and Boa Ventura. To the W. are the Canario (5,449 feet) and Torrinhas (5,980 feet) Peaks, beyond which again the high moorland of the Paul da Serra (4,611 feet)—see Expeditions 5 and 7—with its own Pico Ruivo, some 730 feet higher than the moor itself. Continuing our panorama, we encounter the Pico Grande (5,390 feet), and lastly, the Pico Cidrão (5,500 feet), after which come the Torres again.

The Curral is only partly visible.

**To Bocca das Voltas.**—Five hours both ways. A beautiful excursion to a point some 2,500 feet high, whence a descent can be made into the valley of Boa Ventura. The ridge crossed is that of the Torrinhas, which connects the Pico do Arco with the P. Canario. The summit commands a very fine view.

**To the Pico Canario.**—Four hours up. The road to this mountain lies past the Church of S. Jorge. The view from the summit (5,449 feet) is perhaps the finest to be obtained of the Grand Curral, but towards the S.E. is not very extensive.

**No. 4.—To the N.N.W.** From Funchal past S. Antonio over the Serrado, along the E. side of the Gran Curral and across the Torrinhas (Turrets) Pass to Boa Ventura and Ponta Delgada, with excursions from Boa Ventura, including the Coast Road to S. Vicente. For Coast Road to Santa Anna, see under Excursions from Santa Anna, Expedition 3.

Leaving Funchal the Church of S. Antonio is reached in  $\frac{3}{4}$  hour, and at two hours a point on the Serrado, 3,365 feet high, whence a good view into the Curral Ravine, one of the grandest sights in the island. This is the most convenient spot for visitors from Funchal who have but little time to spare and who wish to see the Gran Curral.

A descent is now made to the Church of N. S. do Livramento (three hours; 11 m. =  $17\frac{1}{2}$  kil.), after which the climbing recommences. Good views are obtained and the outline of the mountain-tops, which resembles a sleeping woman's head, should be noticed. The following panorama is visible: Commencing at the Pico Ruivo (6,059 feet) we find the Pico Canario (5,449 feet) immediately on its left. Next the Pico da Trincka, then the Torrinhas (5,986 feet), then the Pico de Jorge, Pico da Empenha, Pico Grande (5,390 feet), Pico dos Bodes (3,725 feet), Pico Serrado, Pico de S. Antonio (5,706 feet), Pico do Cidrão (5,500 feet), Pico Arrieiro (5,750 feet),



Pico As Torres (6,000 feet), and again the Pico Ruivo. At five hours the summit of the pass (5,042 feet, 16 m. = 25½ kil.), where the Curral is lost sight of and the descent, *viâ* the narrow Ribeiro do Poço, commences.

From the top, as stated in Expedition 3, Excursion from Santa Anna, the Pico Ruivo can be ascended.

The path downwards leads through a succession of rugged rocks and gorgeous vegetation. If clouds have gathered the surroundings may be half hidden by a rainbow. Another day they stand out clear and sharp against the sky. Further down the ravine widens and at eight hours the little hotel of Boa Ventura is entered immediately above the church (26½ m. = 42 kil.).

**Boa Ventura** is a scattered little hamlet. The hotel, which is some 1,400 feet above the sea, is beautifully situated and commands extensive views. Good accommodation, several beds, 2,000 reis a day. Telegrams, 300 reis portorage.

**Excursions from Boa Ventura.**—**The Arco de S. Jorge to the E.** can be ascended in a little over an hour and commands good views.

**The Pico de Moranha** on the W. can be ascended in about ¾ hr., and from here the Torrinhas Peaks, etc., are visible.

**To the W.**—**The coast road to S. Vicente.** Descend sharply from the hotel and in ten minutes cross the little bridge on the left, from which times are reckoned for the convenience of those going through from Santa Anna to S. Vicente.

The track passes round the cliff at a giddy height above the sea, which is seen beating immediately beneath. The W. portion of the N. coast first comes into view. In the extreme distance is P<sup>o</sup> Moniz with its island in front and nearer in Seizal. S. Vicente, not yet visible, is round a bend and **Ponta Delgada** just below. This pretty village is presently passed through, half-an-hour (no inn, but beds, about 1,000 reis each, are obtainable; enquire at Funchal). After this the road, which is rough and wet, alternately leads round cliffs or descends to the beach. At 1½ hours, Porto S. Vicente, a wine-shop with two or three houses around it, then a sudden turn to the left, where the path leads through a couple of tunnels, and across a large stone bridge into S. Vicente proper (two hours; 8½ m. = 13½ kils.). For description, etc., of S. Vicente, *see* Expedition No. 5.

**No. 5.—To the N.W.** From Funchal past Jardim da Serra, up the west side of the Gran Curral, across the Serra d'Agoa and the Encumiada to S. Vicente, with excursions from the last-named place to the Pico Ruivo do Paul, etc., along the coast road to Porto Moniz, etc. For the coast road to Boa Ventura, *see* paragraph just above.

Take the bridle road past S. Martinho Church, ¾ hr.; cross the R. dos Socorridos by the upper bridge and bear to the right past the Estreito Church (2 hrs., 1,617 ft.), ascend through the chestnut woods past the Jardim da Serra (2,532 ft., 9¼ m. = 15 kil.), to the Cova da Cevada (3½ hrs., 4,300 ft.), with a beautiful

view of the Curral. At  $3\frac{3}{4}$  hrs. the thin ridge separating the Curral from the Serra d'Agoa is crossed and the latter is first seen. At  $4\frac{1}{4}$  hrs. the summit of the comb, Bocca dos Corregos (4,420 ft.), is gained.

From here the prospect on either side is magnificent and the eye wanders from crag to precipice and mountain to hollow in bewildered ecstasy. This is also the best point from which to ascend the Pico Grande (5,390 feet).

By those wishing to explore the Curral a descent can be made and a few nights spent in **Fajã Escura**, a small collection of cottages three-quarters of an hour down a steep path from the Bocca dos Corregos. The view from Fajã Escura itself is particularly fine, and the following is the panorama:— Prominently in front stands the Pico do Cidrão (5,500 feet); next on the left comes the Pico do Canario, 5,500 feet, the Pico da Trincka, the Torrinhas (5,986 feet), the Pico do Jorge, the Pico da Empenha, the Pico Grande, and finally the Pico do Meio.

Leaving the Bocca behind, the road winds across and around precipices, amidst the remains of an ancient forest, descends, and at  $6\frac{1}{2}$  hours strikes the junction whence the left-hand road leads down to **Ribeira Brava** (see Expedition No. 6), on the west side of the Serra d'Agoa in  $2\frac{1}{4}$  hours. Following that to the right, the Encumiada is soon reached (3,338 feet,  $21\frac{1}{2}$  m. =  $34\frac{1}{2}$  kil.), where the best views are obtained by walking for a short distance along the footpath leading to Paul da Serra on the W. The two glens almost seem to divide the island and the mountain scenery on both sides is extremely fine.

By continuing along this footpath westwards the Government Refuge at the Lombo de Moiro, immediately below and to the south of the Paul da Serra is encountered, after which the path leads in the direction of the Rabaçal, etc. (see Excursion No. 7).

Going down towards S. Vicente, the giant heather disappears at  $7\frac{1}{4}$  hours. At 8 hours the village of **Rosario** is passed through, and at 9 hours (30 m. = 48 kil.) São Vicente is reached.

**São Vicente** is on the sea level, is a good centre for excursions and is a village with shops; population, 8,139. There are many pleasant walks along the bed of the stream up the ravine behind the village.

No inn, but beds obtainable, 1,000 reis. Advise beforehand and arrange about food and cook.

**Excursions from S. Vicente.**—To the W. The coast road to **Seizal** and **Porto Moniz**. This path leads round the face of the cliff across several beautiful glens and should only be followed on foot. Seizal is reached in two hours. The town stands on a small promontory of somewhat recent lava. There is no inn, but accommodation may be had.

(There are a few excursions from Seizal and paths lead upwards (1) to the House of Refuge on the Paul (see Expedition 7) past the base of the Pico Ruivo do Paul in  $3\frac{1}{2}$  hours, and (2) to the Pass over the **Fanal** from the House of Refuge to **Porto Moniz** (see Expedition 7), which is entered at a point known as the Cruzinhas in  $2\frac{1}{2}$  hours. Both these paths are rough and steep.)

Leaving Seizal the track still winds above the sea. At  $3\frac{1}{4}$  hours (from S. Vicente) **Ribeira da Janella** (no accommodation), where the Fanal route touches the coast, and at  $3\frac{1}{2}$  hours **Porto Moniz**. No inn, but accommodation can be had.



(From Moniz the **Lagõa de Fanal** can be visited, an extinct crater in which water is found during a great part of the year. From Moniz to the S. of the island, *see* Expedition 7.)

**In the Valley.**—Opposite the hotel and distant about three-quarters of an hour is the limestone quarry (**Mina de Cal**), the only one known in the island and as such of great interest to geologists. There is also a lava tunnel to be seen. Lights are required. Besides these the waterfalls, with which the stream abounds, offer many nooks and corners as attractive to the photographer as to the artist.

**To the House of Refuge at the Tanquinhos, with the ascent of the Pico Ruivo do Paul.**—A long ascent of  $2\frac{1}{2}$  hours leads to the spring at the Tanquinhos. Close by is the House. (*See* Expedition 7.)

The summit of the **Pico Ruivo do Paul** (5,336 feet), which can be surmounted on horseback, is reached from here in quarter hour. Eastward the view extends as far as the Pico Ruivo de Santa Anna and includes nearly the whole of the Central Group of mountains. On the N. the cliffs and gullies, even the sea itself, seem to lie at one's feet. To the W. are the grand Ribeira da Janella with the ridges which bound it, and to the S. the deep solitude of the Paul or Marsh. (*See* Exp. 7 for description of the Paul or for prolongation of excursion to the Rabaçal.)

#### No. 6.—To the W. From Funchal along the S. coast as far as Calheta.

From Funchal to Achada do Campanario,  $4\frac{1}{4}$  hours, *see* Ride D. Half an hour further on is the village of Ribeira Brava (16m. =  $25\frac{1}{2}$  kil.). Comfortable inn, beds 500 reis, food extra.

From here a path leads up the W. side of the Serra d'Agoa to the pass over the Encumiada, 3,338 feet,  $2\frac{1}{2}$  hours, and thence down to S. Vicente in five hours total. (*See* Exp. 5.) This is the route recommended as an alternative to those taking the three-day trip mentioned on page 44, but in the reverse direction. Those merely visiting the Encumiada may return to Ribeira Brava by another path which leads across the Ribeiro do Poço and the Ribeiro de Pico Grande.

At  $5\frac{3}{4}$  hours, Ponta do Sol ( $20\frac{1}{2}$ m. = 32 kil.), pop. 19,044, where there is some accommodation to be had and near which there is a richly-decorated little Church. Presently Calheta is sighted, Magdalena is left behind, and the road, which is very uninteresting, enters Calheta in  $8\frac{1}{4}$  hours (30m. = 48 kil.), pop. 18,237. There is no accommodation, but one or two persons can find sleeping room.

No. 7—From Calheta *viã* the Rabaçal to the Tanquinhos House of Refuge on the Paul da Serra; over the Fanal to Porto Moniz, and round the coast back to Calheta. From the Tanquinhos down to S. Vicente, *see* Expedition 5 (Excursions from S. Vicente).

Leaving Calheta the slopes are ascended and a tunnel is passed through into the R. da Janella, 3 hours. From here to the two principal fountains ( $9\frac{1}{4}$ m. = 15 kil.) is another half-hour. Some



time may be spent in this place admiring the beautiful scene down the valley and the dripping fern-clothed rocks. The rain-bows formed by the spray hanging round the waterfalls may be advantageously viewed from various points.

Attractive as the natural loveliness of the spot may be, the visitor will also examine with interest the manner in which the water is caught and carried away for the benefit of the S.W. district. The higher *levada* was commenced in 1836 and finished in 1860. The men, who were suspended by ropes from 700 feet above, worked under the dripping water. The cutting is 300 feet from the base of the cliff, but, in spite of the danger, it is stated that only one life was lost. The lower *levada*, commenced in 1863 and opened in 1884, receives the water from the Fontes do Cedro and the Vinte Cinco Fontes. Each *levada* has its own tunnel through to the S. The upper passes through the ridge at an altitude of 3,430 feet, the lower at 2,975 feet, and they are 1,400 and 2,575 feet long respectively.

Leaving the Rabaçal behind, cross the head of the R. da Janella and enter upon the Paul, literally "marsh," a large elevated moor, similar to no other part of the island. Here and there it is bare, but generally there is an undergrowth of heather, etc. The silence of the Shades reigns over this desolate region, often enveloped in mist, which renders a guide who knows the country well extremely necessary. It is mentioned in the article on "Geology." At 6 hours, the Tanquinhos Government Refuge, 4,840 feet, is reached. (For ascent of the Pico Ruivo do Paul, or descent to S. Vicente, see Expedition 5.) There are also Government Refuges on the Lombo de Moiro on the south side of Paul da Serra (see Expedition 5) and at the Chão de Caramujo, the latter about half-way between the Tanquinhos and S. Vicente and the best halting place for those visiting the Levada do Inferno, a very fine excursion.

Permission to pass the night in either of these houses must be obtained at the Obras Publicas in Funchal. At such an altitude the nights are cold and wraps, candles, food, wine, etc., must all be brought up.

Leaving the Tanquinhos behind, the ridge to the N.E. of the Janella valley is followed. At  $7\frac{1}{2}$  hours from Calheta, the Cruzinhas road to Seizal (see Expedition 5) is passed, and the route continues through a wooded country, known as the Fanal, to Ribeira da Janella,  $10\frac{1}{2}$  hours, and P<sup>o</sup> Moniz, 11 hours (pop. 4,475). The scenery is splendid, and the valley is equal in its way to anything in Madeira.

From P. Moniz the road crosses the N.W. spur of the island to the Church of S. Magdalena (1,709 feet,  $11\frac{3}{4}$  hours); dips into the R. do Tristão; leaves the Achada da Cruz high up on the left, and, after many an ascent and descent, which are thought little of after those encountered elsewhere, arrives in  $14\frac{1}{2}$  hours at the Church of Ponta do Pargo, 1,510 feet. Accommodation may be obtained but not for a large party.

A road down the cliff leads to the Port.

Continuing about midway between the cliffs and the mountains through pretty country, at 16½ hours, the road to Paul do Mar branches off on the right.

The descent to the Port occupies a little over an hour. The Church of Fajã d'Ovelha is passed and a zig-zag path soon leads to the coast, which is here particularly bold and beautiful.

The main road continues *viã* Prazeres (1,750 feet, 17½ hours), where accommodation may be had; crosses a deep ravine, and descends past the Church of N.S. da Graça to Calheta, eighteen hours. From Calheta to Funchal, *see* Expedition 6.

No. 8.—From Porto Moniz over the hills to the S.W. of the R. da Janella, to Paul do Mar, Prazeres or Calheta.

Leaving P. Moniz, keep S. Magdalena well on the right, and bear along the W. side of the ridge. For Paul do Mar, 5½ hours, descend shortly before arriving at the P. dos Bodes (4,271 feet); *see* Expedition 7. For Prazeres, 5½ hours, descend about ¾ hour further on. For Calheta, seven hours, continue to keep for rather over ½ hour along the heights. From Calheta to Funchal, *see* Expedition 6.

#### EXPEDITIONS BY ROWING BOAT OR STEAM LAUNCHES.

The time by the latter is about one-third of that given for the former. Nearly all these excursions can be made in the Public Steamboats (Vapores Costeiros), for which consult agents.

**BOAT I.—To the East.** Past Santa Cruz and Machico to the Fossil Bed.

Time occupied, about two hours to Santa Cruz, 2¾ hours to Machico, and four hours to the Fossil Bed. The coast scenery is not particularly fine, but the men will row close in if desired and the view up some of the valleys is very pleasing. For further information, *see* Expedition 1.

**BOAT II.—To the West.** Past Ponta do Sol, Calheta and Paul do Mar, to Porto Pargo.

Shortly after leaving Funchal remember to look out for the Cano da Folle, especially if the weather be rough (*see* Walk D., Funchal). At ¾ hour, Camara de Lobos is passed. The coast now becomes very bold and the gigantic Cabo Girão (1,920 feet) arrests the eye. Next in order is the village of Ribeira Brava, which is decidedly seen to the greatest advantage from the water. At a little over two hours Ponta do Sol, where the first view is



obtained of Calheta. The cliffs here are very lofty. At three hours Magdalena (do Mar), and at four hours Calheta. (For the Rabaçal, see Expedition 7.) It may interest some to know that the magnificent headlands under which the boat pursues its way are the seaward boundary of the Sercial (wine) district. At five hours Paul do Mar, and at six hours Porto Pargo. For further information, see Expeditions 6, 7, and 8.

**BOAT III.—To Porto Santo.** The journey will, of course, be made in the Vapor Costeiro, which carries the mails twice a month.

Porto Santo, lat.  $33^{\circ} 3'$ , long.  $16^{\circ} 20'$ , 23 miles N.E. of Madeira, pop. 2,301. The highest point of the island is the Pico da Facho, 1,665 feet. The air is dry and affords, when desired, a pleasant change to that of Funchal. The accommodation is almost *nil*. Unless a tent is taken, it is advisable to obtain introductions before going. Dragon-trees were once plentiful, but now there is little verdure. Vines and corn are chiefly grown, a certain amount of wine being sent to Madeira. The peasants live in huts. The Villa, a town on the south of the island where most of the people live, has suffered frequently from English and French privateers. Christopher Columbus, who married the daughter of Perestrello, the Governor of Porto Santo, lived here for some time previous to his residence in Funchal.

Most of the lime used in Madeira is taken from quarries on the Ilha do Baixo, one of the satellites of Porto Santo. There is a Lighthouse on the Ilheu de Cima.

**BOAT IV.—The Desertas.** These islands may be visited by boat, or in the steam-tug, which must be hired for the purpose.

There are a good many rabbits and wild goats, but the shooting is private and leave must be obtained from the owners if landing or camping on the islands is contemplated. Orchilla weed still abounds, but does not now pay for the gathering. Puffins are plentiful, several thousand birds being secured annually for the sake of their feathers, oil and flesh.

The Desertas, eleven miles S.E. of Madeira, are three uninhabited islands composed of basaltic and trachytic rock. The largest, the Deserta Grande, is 1,610 feet high and  $6\frac{1}{2}$  miles long by about one mile in width. The next in size is called Bugio, 1,350 feet, and the smallest Ilheu Chão, 340 feet. There are still a few pine trees growing. At one time, probably when orchilla stood at a higher price, a few houses and a little chapel were built, but they have long since fallen into decay. There was always a great scarcity of water.

The Sail Rock, noticed by everyone visiting Madeira, is situated off Ilheu Chão, and is 160 feet high.



**The Salvages** are a group of three small islands, half way between Madeira and the Canaries, latitude 30° and longitude 15° 54' W. The two larger are called the Great and Little Piton. They belong to Portugal and are quite uncultivated. They are now of little value, though once they were visited annually in search of orchilla. Puffins are even more abundant here than in the Desertas.

The Great and Little Piton are little more than sand-banks, the surfaces of both, with the exception of the small hills in their centres, being covered at high tide.

The Great Salvage has good landing on the S.W., but the approach is very dangerous owing to rocks. From the house on the beach a road leads to the well which receives the rain-water caught up from the two hills behind it. The water is quite sweet. To the W. of the well are many traces of search for the treasure supposed, because of the dying confession of a sailor in the year 1820, to have been buried here by Captain Kidd, the Pirate. In 1830 the British Government tried to find it, and in 1890 a private expedition again made an attempt. See "Voyage of the Falcon."

**Prices of Horses, Carros, etc., in Funchal.**—Most of the prices quoted are according to the official tariff of 14th May, 1909. When taken by time, fractions of hours less than quarters are reckoned as quarters. One child under 7 years does not count, but two are reckoned as one adult. Luggage free up to 10 kilos. Between 10 and 20 kilos, 150 reis extra.

It is usually advisable to give a tip in proportion to the total paid. Production of a tariff card can be demanded as a right.

**Horses** (*Cavallos*).—400 reis an hour inside Funchal. By the day 3,500 reis. By the month about 36,000 and 1,500 a day extra if taken to the North side of the island. Expeditions, 2,500 to 3,500.

To Quinta Reid (Caminho do Meio) 600 single, 1,000 return; Mount Church, 800 and 1,500; Palheiro, 800 and 1,500. To S. Martinho; S. Antonio; or S. Roque and back, 800. To Camara de Lobos or the Curralinho and back, 1,500. To the Alegria and back, 1,500. To Camacha, 2,400 return. To the Poizo, 1,500 single, 2,500 return. To the Grand Curral (east side) and back, 2,500. Cabo Girão and back, 3,000. To the Pico Arrieiro and back, 3,000. To Santa Cruz, 2,500 single, 3,500 return. To Ribeiro Frio and back, 3,000. To Machico, 3,000 single, 4,000 return. To Santa Anna, 4,500 single, 6,000—7,000 return (2 days). To the Grand Curral *viã* Jardim da Serra and back, 3,000.

**Mules** (*Mulas*).—These are only used for carrying cargo on expeditions and about 2,500 reis per day is a fair price, including the man, of course, as with the horses.

**Hammocks** (*Redes*).—500 reis per hour, etc., or about 2,500 to 3,000 per diem inside the town. For expeditions, from 2,500 to 6,000, and 500 reis each man. Per month about 30 dollars, and more when on expeditions. On the N. side men can be found for less.

**Carros grandes** (two oxen). In town, a corrida not exceeding 15 minutes, 300 reis; per time, first hour, 400 reis; succeeding hours, 350 reis. To S. Martinho, S. Antonio, or S. Roque and back, 1,500. Camara de Lobos and back, 4000. On the steeper journeys it is always better and cheaper to take basket cars than a carro with four oxen.

**Luggage Sleighs** (*Corças*).—Same price as carros.

**Basket Cars** (*carros de cesta or vimes*) with two oxen (up to three persons). By corrida or by hour the same as carros grandes. To S. Martinho, S. Antonio, S. Roque, S. Gonçalo (one to four persons), single 600; return 1,200. To Mount Church, Caminho do Meio (Curralinho), Palheiro and Alegria (one or two persons), single, 1,500. To the Quinta Reid, single, 1,000; return, 1,800. To Camara de Lobos and back, 4,000. To Camacha, 2,500, return, 4,000. To the Grand Curral and back, 5,000.

**Running Sledges** (*Carrinhos de cesta*). Toboggans.—One passenger: Down from the Mount Church, 500 reis; from the Pico do Infante down the Caminho do Meio, 500 to 600 reis. From the Quinta Reid, 300 reis. A little extra at night. Large sledges to hold two persons cost a little less per head. Sledges may be engaged beforehand to meet parties returning from excursions to the mountains or from the N. of the island.

**Boats or Launches** (*Barcos o Lanchas a vapor*).—With two rowers, about 500 reis an hour. With four rowers, about 800 reis. To the Fossil Bed on the E., about 3,000 to 5,000. To Calheta on the W., about the same, and for longer or shorter journeys in proportion, and according to the weather or number of passengers. Steam launches can also be hired at about 12s. 6d. per hour. Times about one-third of that given for rowing boats (*see p. h27*).

The writer has been asked to say that visitors will oblige the hotel proprietors and do better for themselves by making their own bargains in all cases, whether for horses, carros, etc., or boats.











**Steamers** (*Vapores costeiros*).—Steam tugs run several times a week to Machico, and nearly daily to Calheta. Twice a week to the N. of Madeira, and once a fortnight to Porto Santo. They may be hired to go round the island. Further particulars as to time and fares, etc., may be obtained at the agencies.

**The Railway** (*Caminho de Ferro do Monte*) starts from the Pombal, which is some ten minutes from the beach, and is reached by ascending the Rua das Dificuldades.

The time occupied from the Pombal to the Monte (Mount Church) is about 20 minutes. For further details see advertisement.

It is nearly always used by those starting for excursions for the Mount Church, etc., and has been the means of opening up some lovely stretches of country where visitors will find some excellent hotels.

**A Tramway** (*Carro Americano*) runs from the Jetty to the bottom terminus of the Railway, fare 50 reis (or 3d.). It is proposed to drive it by electricity.

**Carriages** (*Carruagens*).—A *corrida* inside the town, 600 reis. Camara de Lobos and back, 4,000 reis.

Carriages run at intervals from the Entrada da Cidade westward to a little beyond the Palace Hotel on the new road and eastward to the end of the Estrada Nova do Campo da Barca; fares, 100 reis (not less than four fares).

**Motor Cars** (*Automoveis*).—These start from the same place and run in and about the city. There are six zones, fares 90 to 600 reis single and from 150 to 800 return per person. By time: For the first hour, four persons, 3,000 reis; following hours, 2,500 reis; five persons, 5,000 reis and 4,000 reis respectively; eleven persons, 8,000 and 6,500 reis.

Specimen single fares:—*Westwards*: To the Casino, 90 reis; Palace Hotel, 150 reis; Camara de Lobos, 600 single, 800 return. *Eastwards*: Campo da Barca (Caminho do Meio), 90 reis; Church of São Gonçalo, 250 single, 400 return.

Not less than four or five fares according to the car. For further details demand tariff card.



## LA PALMA.

THE island was formerly known as *Junonia Mayor* or, according to Ben Farroukh, as *Aproposito*. The inhabitants at the time of the Conquest called themselves *Haouarythes*. It contains 41,994 inhabitants in one city, one town and sixty-nine villages or hamlets; is divided into thirteen districts; is 29 miles ( $46\frac{1}{2}$  kils.) long,  $17\frac{1}{4}$  miles ( $27\frac{1}{2}$  kils.) broad, 318 square miles (814 square kils.) in superficial area; is situated to the N.W. of Teneriffe and Gomera and to the N. of Hierro; is the furthest west of all the Canary Group with the exception of Hierro, and lies between lat.  $28^{\circ} 26'$  to  $28^{\circ} 51'$  N., and long.  $17^{\circ} 43'$  to  $18^{\circ}$  W. of Greenwich.

Commercially the third in importance of the Canary Archipelago, this island is by many considered the first in point of beauty. Possibly the western slopes facing the Atlantic, if provided with proper accommodation at different levels, might become a favourite resort for invalids and other residents, both during the winter and during the summer. The atmosphere is certainly no damper than that of the N. of Teneriffe and, whilst the wind lacks the dryness of that in Grand Canary, it seems more beneficial in cases of irritation of the throat. The high wooded mountains do not attract the clouds nearly so much as those of Madeira and the air is pleasantly soft without being relaxing. If a hotel could be built high up among the pines, the wonderful scent of the native tree could not fail to exercise a very healing influence in cases of lung disease.

The general aspect of the island would lead those who had not thoroughly explored it to expect it to be watered by a number of small streams. This is unfortunately prevented by its size and formation and by the proximity of the watershed to the sea. The shape can be almost exactly imitated by cutting a pear in half lengthwise and laying it, flat side downwards, on a table. The round end of the pear should be laid to the north, the stalk to the south. A large hole must be scooped out where the core would be to represent the Crater or Gran Caldera and a deep trench should be cut from this to the sea on the west. Now tear out the stalk and the small hole left is the Crater of Fuencaliente.

The bottom of the Gran Caldera is less than 1,000 feet above the sea. The highest part of the surrounding walls is the Roque de los Muchachos, 7,768 feet, which overlooks the Crater from the north. The broadest part of the pear is only  $17\frac{1}{4}$  miles, of which the Crater accounts for about  $4\frac{1}{2}$ . This leaves only some  $6\frac{1}{2}$  miles on each side to serve as a catchment for the water, that is to say, a declivity with an average gradient of one in  $3\frac{7}{8}$ , from

which the rain naturally soon runs off. In addition to this the deep ravines furrowing and draining the slopes and the porous nature of a volcanic soil must be taken into account.

As a matter of fact, by far the greater part of the island relies upon rain water for drinking purposes, a matter which must be remembered by those thinking of camping out. The best place for this is the interior of the Crater, whence some good springs are carried by stone water-courses (*atarjéas*) to Los Llanos, Argual, etc. The surplus water, when there is any, runs away down the bed of the Barranco de las Angustias. There are also springs outside the Crater on the E. and N.E. slopes, which supply Santa Cruz, Los Sauces and San Andres, and there are a few dripping rocks here and there.

In spite of all hindrances, the great extent of forest does collect a fair quantity of moisture which is always to be found in sandy places by kicking up the surface. A great deal of this filters through into the sea at short distances from the coast line.

There are also mineral springs, of which the most notable is El Charco Verde below Las Manchas. A famous mineral spring at Fuencaliente, in the S., disappeared, in 1646, in consequence of a volcanic eruption. Another, called the Fuente Santa, vanished, in 1677, from a similar cause.

The highest mountains are those grouped round the Gran Caldera. The upper part of the inside of the circle is principally composed of precipices of from two to three thousand feet in height. The outside is simply a slope of which the upper half is by far the steepest part. This slope has been worn into a succession of water-courses, several of which are over 1,000 feet in depth, making the coast roads most laborious. The sides, as a rule, are thickly clothed with heather, laurels or pines.

The Cordillera connecting the Caldera with the S. of the island is steep and narrow and runs down to the sea at a great angle. The western side is covered with rough lava for many miles. In fact in the whole Canarian group there is no island where volcanic fury has been more extravagant or where its effects are more apparent than in La Palma.

The chief object of interest is the Gran Caldera, a cauldron so vast and of such colossal proportions that it is often able to enjoy a weather of its own, without reference to what is taking place in the island of which it forms a part. The Haouarythes used to say that the Peak of Teneriffe, which they saw standing white and fair on the unknown horizon, was thrown from the Caldera during some unusually energetic outburst.

It is over four miles across, between 6,500 and 7,000 feet deep and circular in shape, except where broken by a great outlet



towards Argual. It was the last part of the island to submit to the Spaniards and was vigorously defended by its Prince Tanaúsu. The sacred rock Idate was situated near the centre.

After the Caldera, which is believed by some to be the remains of two or more craters whose individuality has been lost by denudation, the Time (pronounced Teemay, a black precipice facing Argual) and the wide stretch of lava commencing to the S. of Las Manchas and terminating near the crater of Fuencaliente, are the most startling examples of plutonic force. No disturbances, however, have taken place since 1677. In 1585, the lava ran down into the sea and killed all the fish for three miles around the coast, the noise being so great that the people in Tenerife are said to have been frightened by it.

There is a good carriage road ascending from Santa Cruz at a very low gradient and leading *viâ* Mazo to Fuencaliente, whence it turns up the Western Coast and reaches Los Llanos.

**Native Curiosities:**—Next to the inhabitants of Madeira and of the Azores, the people of La Palma show the most ingenuity in the manufacture of various articles worthy of the attention of visitors. Silk is grown, spun, woven and dyed. Knives and pipes, curiously mounted in brass, and diminutive barrels for carrying water are made. Also brushes, baskets, lace-work, embroidery, etc. The lastnamed art is now of some importance.

Endeavours have been made to establish an industry in tobacco and cigars. Seed is imported from Havana and grown in La Palma, the result being a cigar which, when carefully made, can scarcely be distinguished from the tobacco of Havana.

The people have retained the old Canary costumes once worn in some of the other islands. The Breña Baja dress and cap (*gorra*) are now quite unique. In Garafia the *gorra* is replaced by the *mantera*, a sort of sou'wester made of cloth woven in the district from the wool of the native black sheep. The cap is turned up in front like that of Breña Baja, but fits closely to the head. The flap hanging down behind is lined with red flannel and, when not required to protect the shoulders, is brought forward by means of buttoning the two corners over the peak in front. A better headgear was never invented. The cap worn by the women has no flap and is most unbecoming. The apron is even more *de rigueur* on gala days in Garafia than it is in Breña Baja. It will be noted with interest that the people living in the north are of an entirely different stamp from those of the south and are evidently descended from other ancestors. The little round hats made from the pith of the palm tree, so common among the latter, are never seen to the North of the Gran Caldera.



On the whole the island is prosperous and the population industrious. Much of the linen used in the country is woven from flax that is grown locally, and most of the *mantas* (blanket cloaks) used in Garafía are made of native wool. There are a number of large shops in the capital which seem to do a good trade, though what those living in the north of the island import beyond soap and red flannel for lining their caps it is difficult to say. Tinned fruits and almonds are exported.

A constant intercourse is kept up with Cuba, to which a number of the inhabitants emigrate. Many of the schooners run as far as New York.

Those who merely land at Santa Cruz should go to the Barranco del Rio on mules or on foot. This is a most beautiful excursion occupying from one-and-a-half to three hours. Description further on. Those who do not care to ride or walk should drive to El Mazo and back, visiting Buena Vista, the summit of the Crater (la Caldereta) overlooking Santa Cruz. From the chapel, a few minutes to the left of the road, is a very fine view.

Those stopping in the island during the time occupied by the inter-insular boats in visiting Gomera and Hierro, will naturally wish to see the Gran Caldera. This can be done by visiting the Pico del Cedro or the Roque de los Muchachos, a return being made the same day. The crater is thus seen from above. Those who wish to see it from the Cumbrecita must do so from El Paso. If the crater is to be entered, it is best to go to Los Llanos and to spend the whole of the next day in the crater, returning on the third. The aspect of the crater when viewed from the interior is infinitely more picturesque than when seen from above. Los Llanos can also be reached by taking one of the steamers to Tazacorte.

As it is strongly urged that those visiting La Palma should miss a boat and stay ten days, many will be able to make the above and several more excursions. There is a beautiful drive through El Mazo to Fuencaliente, where the small crater should be visited and whence the journey can be continued in the direction of Los Llanos. El Mazo can also be reached on foot by way of the beach and along the paths below the *carretera*, or by crossing the Cumbre Vieja from Los Llanos and dropping down into the Mazo road.

Other excursions are from Santa Cruz to Garafía over the Roque de Los Muchachos and back through Los Llanos or round the N. of the island. The last route is of no great interest and the constant succession of ravines is most tiring. Travelling is more toilsome than in any other part of the Canaries. It is

only in El Paso and Los Llanos that accommodation can be relied upon. Elsewhere a tent should be taken or not more than two should travel together. All the excursions given above are properly detailed later on.

**Santa Cruz de La Palma**, about 10,000 inhabitants. East side of island. 103 miles (165 kilometres) from Santa Cruz de Tenerife.

Passengers landed in boats at the mole, which is being extended and is to attain a length of 500 metres. Steamers will run alongside as soon as possible. Charges: One peseta each person; half a peseta each package.

Already there are several lines of steamers running direct to La Palma. It is confidently expected that more will come when the mole is completed and that La Palma may even become a coaling station.

**Hotels.**—Hotel Patria, 5 to 8 pes. a day; There is a Spanish Club (Casino), and Nuevo Club Real (Nautical).

**Newspapers.**—*Germinal* and others.

For the prices of horses, mules, carriages, motor-cars, etc., refer to the special page at the end of the description of La Palma. Excursions are organised by written arrangement with D. Baldomero Cervia, of 40a Santiago, Santa Cruz de la Palma. There is telegraphic communication from Santa Cruz to Los Llanos.

**Water Supply, Lighting, etc.**—The city water supply is as pure and as abundant as any to be found in the Canary Islands.

The town was the first in the Canaries to be provided with the electric light. All the streets are paved.

**Public Buildings.**—The Town Hall, a fine building faced with arches, finished in 1563. When the French corsair Sombreuil (Jambe de Bois) attacked the town with 700 men in 1553, the Town Hall and Archives were burnt before the invaders could be driven away.—The Circo de Marta is a circular building in the centre of the town used for cock-fights.

**Churches:** San Salvador, facing the town hall, with a good tower and doorway. In the interior there is a handsome ceiling, a richly gilded pulpit, some fairly carved woodwork and a praiseworthy picture above the high altar.—Santo Domingo, with a picturesque tower and an old convent.—San Francisco, with a convent now used as a barracks.—San Francisco Javier.—Iglesia de la Luz.—San Sebastian.—Santa Catalina.—De la Encarnación, with good view towards the hills. La Virgen de las Nieves ( $\frac{3}{4}$  hour) above the town; interesting.

There is also a small but very well-arranged Museum a short distance above San Salvador Church. It is most carefully classified and will be found of great interest, especially to those who desire information on the geology of the island.



Santa Cruz is a cheerful and most artistically built little town, situated in a valley facing the sea and immediately to the north of a large extinct crater, of which the crest, known as Buena Vista, dominates and protects the town from the south. The position much resembles that of Funchal, Madeira, but egress from the town is much easier. Part of the principal street is called O'Daly, many Irish seeming to have migrated here as well as to Teneriffe.

The country around is very fertile and large quantities of water are obtained by means of covered-in aqueducts and iron pipes.

There is generally a pleasant breeze from the N.E.

There is one public garden, or Alameda, which is little used. Owing to the beautiful vegetation and barrancos in the neighbourhood there are numerous walks and excursions.

The peasants in speaking of Santa Cruz always call it la Ciudad.

**Walks.**—Towards the Alameda, a turning to the left, called los Molinos, leads into the Barranco de la Madera. Follow the left-hand side of the same until crossed by a wooden aqueduct, when cross and bear to the right. The bridle road is met with just below a church, which is close above and slightly to the left ( $\frac{3}{4}$  hour, 630 feet). The church (16th century) is prettily situated and the interior worth visiting; good gallery. The Virgen de las Nieves (to whom it is dedicated) is represented by an ancient and much-venerated image, which is carried in procession down to the town in the April of each fifth year beginning at the decade, when Spaniards congregate from all parts of the world. A ship made of stone, to be seen at the bottom of the barranco, is then rigged, general rejoicings taking place for two weeks, during which the town is crowded. A return can be made along the paved road, bearing a little to the left, past the Iglesia de la Encarnacion, or by a short cut from the same road down into the barranco to the back of the town, past the hospital. Either way about fifty minutes.

From above the church (Virgen de las Nieves) a path through a garden climbs the slope at the back and leads in half-an-hour to the entrance of the Barranco del Rio. Here the aqueduct can be followed up the gorge as far as desired through most beautiful rocks and precipices, clothed with innumerable plants and ferns, this being one of the most lovely places in the islands. Only persons with strong nerves must go, as the path is at times dangerous. The Barranco del Rio can also be explored by bearing up to the left by the wooden aqueduct and by following the bed of the ravine. This is the way taken by mules and all



danger is avoided, but the views looking down from the aqueduct are lost. If the Church is included on the way up it is necessary to return again to the bottom of the barranco.

Those descending the Bco. del Rio by the aqueduct need not return to the church on their way home, but may follow the continuation of the aqueduct round the mouth of the next barranco on the N. side. They can then pass through the *finca* de Miraflores and return past the Iglesia de la Encarnacion.

A path leads to the south, one hundred yards above the Iglesia de las Nieves, across several barrancos to the carriage road above Buena Vista (one hour), whence a return can be made by the old road to Santa Cruz in forty minutes, or by the *carretera* in one hour, or the walk may be prolonged to San Pedro ( $1\frac{1}{2}$  hours from las Nieves) and a descent made by a rough bridle path down the Bco. de Agua Censia, on the S. side of the Caldereta to the sea ( $2\frac{1}{2}$  hours from Nieves), whence home *viá* the Playa (beach) and round the bottom of the Caldereta, impassable at high tide, to Santa Cruz ( $3\frac{1}{4}$  hours or four hours altogether). At Buena Vista there is a *venta* where wine and biscuits can be had.

Another walk is to leave Santa Cruz by the *carretera* or by the old paved road to Buena Vista, one hour. A turning to the left leads from the *carretera* to the Iglesia de la Concepcion, 970 feet, in about three or four minutes. The view from the church, which is visible from below, is extremely fine. The *carretera* can then be followed to San Pedro, half-an-hour further on, and a return be made round the Playa as before. Total time about  $3\frac{1}{4}$  hours.

Towards the N. a road leads straight through the town along the shore to the Bco. del Carmen (twenty minutes) and so up the barranco past the little Church to Miraflores ( $1\frac{1}{2}$  hrs.) and back by some other way, in all  $2\frac{3}{4}$  hours. There are *fêtes* here in July.

Immediately behind the town the pretty Bco. de los Dolores may be ascended to the Ermita de S. Vicente in three-quarters of an hour. By bearing to the right a return can then be made by N.S. de las Nieves or, by bearing to the left, by Buena Vista, etc.

A somewhat longer walk is to the Mña. de Tagóje, 3,150 feet, best reached by passing the Iglesia de la Encarnacion. The scenery becomes very beautiful towards the end of the walk which takes at least three hours both ways. This route is recommended to be taken on the return from the Pico del Cedro on the R. de los Muchachos.

### Excursions.

**Round the N. of the Island to Los Llanos.**—An interminable succession of deep barrancos may be avoided by taking a boat, the best scenery being after passing los Gallegos. A

landing can be made at S. Andrés, Barlovento and, in calm weather, at the Bco. del Poleo below Los Franceses (bargains must be made) *or* the direct rough mountain track, possible for mules, past the Roque de los Muchachos (*see* elsewhere) entails a climb but is much shorter and easier. Round the coast, unless on foot, the Camino Real in all its detours must be followed. A guide in the upper parts is indispensable.

**Bridle Road along the N. Coast.**—Follow the beach to the Bco. del Carmen, twenty minutes, whence ascend and descend to the Bco. Seco, one hour and twenty minutes (half-an-hour may be saved on foot by clambering under the cliff at low tide, very rough work). At two hours, the Cruz de Tenagua, 990 feet, venta. Soon the bed of the Bco. de Sta. Lucia,  $2\frac{1}{4}$  hours, after which, at three hours, the entrance to the village of Punta Llana.

Here the bridle path bears to the left, passes through the village and ascends past the chapel of S. Bartolomé, below rocky wooded views to Los Sauces in about seven hours. (If the laborious foot path is taken, wild bare country is traversed, San Andrés, 100 feet, six hours, fair church and altar is passed, and los Sauces reached in  $6\frac{1}{2}$  hours.)

Los Sauces, 800 feet, pop. 3,409 (Fonda. 5 pes.), is pleasantly situated and possesses a church and pretty plaza. Water is here obtained from springs in a barranco about two hours above the town and the Roque de los Muchachos may be visited in about  $4\frac{1}{2}$  hours up.

The next place reached is Barlovento, 1,700 feet, pop. 1986, church, beds possible,  $1\frac{1}{2}$  hours (the lighthouse may be visited in about  $1\frac{1}{2}$  hrs.). Next las Toscas de Barlovento, 1,530 feet,  $1\frac{3}{4}$  hours, thickly planted with dragon trees (no beds); then the bed of the Bco. Gallegos with a long descent of 1,200 feet is crossed, and at  $3\frac{1}{2}$  hours the venta of Los Gallegos, 900 feet, beds possible. After this the scenery improves, especially by the footpath.

Those following the bridle road must bear down to the right, the following being the *approximate* times:—Los Franceses, beds possible,  $1\frac{1}{2}$  hours; Santo Domingo de Garafia, pop. 2,718, beds,  $6\frac{1}{2}$  hours; Punta Gorda, beds, twelve hours; Tijarafe (Candelaria), beds,  $15\frac{1}{2}$  hours. This road which is monotonously precipitous will probably be taken by very few.

The shorter footpath from los Gallegos to Tijarafe is as follows:—Bearing to the left the gigantic and beautiful Bco. del Poleo is crossed. An ascent of 1,350 feet from the bed leads to the Cruz Preñada, 2,400 feet,  $1\frac{1}{2}$  hours, where the Camino Real, coming up from los Franceses, is rejoined and followed through enchanting woods of heather, laurels, pines, etc., past the Cruz del Castillo, 3,130 feet,  $2\frac{1}{4}$  hours, until at  $3\frac{1}{4}$  hours the footpath again branches off to the left. At  $3\frac{1}{2}$  hours Machin, 3,850 feet,



where rough shelter may be obtained and whence the Roque de los Muchachos may be reached in about two hours, or a descent made to Santo Domingo in about the same time. At  $4\frac{1}{4}$  hours, the undergrowth ceases and water becomes scarcer than ever. At  $5\frac{1}{4}$  hours, El Revolcadero, 3,650 feet, a few houses, whence a path to Santo Domingo. At 7 hours, los Redondos (water), 4,200 feet, where a path leads down to Punta Gorda in about three hours, or up to the Roque de los Muchachos in about the same time, many paths both down and up being in fact crossed on the way, only the principal of which are mentioned. Passing through pines, at  $7\frac{3}{4}$  hours, the top of the Lomo de la Castellana, 3,400 feet, whence a steep descent leads to Tijarafe, 2,000 feet, nine hours, the Camino Real being joined close to the village.

**Candelaria de Tijarafe**, pop. 2,552 (beds), has a small church with a fair altarpiece, A.D. 1588. Following the Camino Real the Bco. Agujerado, with curious natural basaltic archways, is crossed and the Ermíta del Buen Jesus passed (half-an-hour). At two hours, the edge of the precipice of the Time, 1,760 feet, a most remarkable volcanic eccentricity with an extensive view of the Caldera and the W. side of the island.

A long descent follows to the bed of the Bco. de las Angustias,  $3\frac{1}{4}$  hours, 200 feet, the outlet from the Great Caldera. At the bottom there is a chapel containing the famous image of N.S. de las Angustias, said to be the first before which High Mass was held in La Palma. The opposite slope is now climbed and at  $3\frac{3}{4}$  hours Argual, 900 feet, followed at four hours by Los Llanos, 1,000 feet.

**Over the N. of the island to Tijarafe, etc.,** passing the summit of the Caldera at the Roque de los Muchachos.—A steep bridle road, where guides are necessary, leads up past Miraflores 850 feet,  $\frac{3}{4}$  hour, to the top of the Asomada Alta, 2,540 feet,  $1\frac{3}{4}$  hours; el Llanito de la Barrera, ordinary resting place, 3,850 ft.,  $2\frac{1}{2}$  hours; the Fuente Nueva, water generally,  $2\frac{3}{4}$  hours; the Llanos de Olen, 5,350 feet,  $3\frac{1}{2}$  hours; and the Roque de los Muchachos, 7,768 feet, in about seven hours. (Very fine view. Good two-day trip in summer. Shelter obtainable in Cuevas de los Frailes. Take mattresses. All points on the N. of the island are accessible from here.) The path leads a little inside of the Roque and descends to Tijarafe, Garafia, etc., in about another four or five hours.

To the Pico del Cedro and back in one day, with bird's-eye view of the Caldera.—Follow the path as given above as far as the Llanos de Olen, when bear to the left past the Pozos de la Nieve,



6,330 feet, some pits where snow is stored for summer use, and on to the Pico del Cedro, 7,470 feet, so called because of the stump of a dead cedar tree close to the summit,  $4\frac{3}{4}$  hours from the city. The view is rather better than that from the Roque de los Muchachos.

The survey height given is 7,680 feet. The writer, using a new aneroid, made it 7,280 feet, and Dr. Simony's careful measurements declare it 2,150 metres (7,465 ft.). A return, slightly farther, should be made by bearing a little to the N., past the Mña. de Tagóje, 3,150 feet, where the views are very fine. Mules can be of assistance on this journey, but a considerable part must be done on foot.

It must be understood that in islands where the roads are so mountainous as is the case in the N. of Palma, it is nearly always easier to ascend to the hills, or even to the extreme summit, and then to drop down on to the point aimed at, than it is to try and travel along or near the coast. On the Camino Real between Garafía and Barlovento, for instance, there are scarcely a hundred yards of level ground throughout the whole distance. It is much easier to climb some 5,000 feet or more at once and have done with it, than to pile up an enormous total by 500 or 1,000 feet at a time.

Although the expedition to the N. of La Palma is not recommended, it is in some ways full of interest. The people are handsome and well made; the men lithe, active and tall. There can be few places in the world where there is less dependence upon outside help for the ordinary necessities of life. How so much physical excellence is maintained by a people who must intermarry so much and who are so very abstemious by force of circumstances is a matter worthy of study. Rye is one of the chief articles of food and the peasants seem to contemplate the alternative of being reduced at times to living on the roots of the bracken as though such a contingency were by no means infrequent.

**To the Gran Caldera and back via El Paso, two days, or Los Llanos, three days.**—Follow the *carretera* or the old road past Buena Vista and go up the lane at the back of the wine shop, 1,000 feet. Soon heather, laurel and the chestnut make their appearance, the Barranco de los Mimbres is crossed, in which a small wine shop, the last till El Paso, is passed on the left. The road winds through the most enchanting woods until the laurel gradually disappears and the giant heather alone is left. Soon the top, or Cumbre Nueva (4,750 feet), is reached ( $2\frac{3}{4}$  hours). From here there is a most magnificent view, embracing the whole country from the Montaña de Mirca to Mazo, with

Santa Cruz sparkling at the foot of the plain, and Teneriffe and Gomera in the distance. To the S. in the Cumbre Vieja from a mountain in which, the Volcan de Tacande, a stream of lava issued in 1585. The last flow of lava is upheld by another stream, overgrown with vegetation, which must have flowed down at some very remote epoch from the same crater. Beyond the black stream is Las Manchas; on the horizon is Hierro, and due W. are the group of villages above Tazacorte. Beyond them is the mountain range of Time, a black and forbidding precipice bounding the Barranco de las Angustias on the N.W. Beyond this Tijarafe and Garafia lie and, further to the right, a break in the mountains, called the Cumbrecita, discloses a view of the interior of the Gran Caldera.

On the W. slopes pines soon commence and increase in size until the Pino de la Virgen is reached—a giant measuring rather over twenty-five feet round. A little shrine is placed at its foot and numerous offerings are to be seen. A money-box for the support of the shrine is placed in the trunk. The splendid avenue passed through belongs to the Government. No trees may be felled until dead, which is, however, the time when the wood is worth most. The road now becomes level (2,900 feet), and the Barranco de las Cuevas de los Llanos is entered with some old native caves up a small barranco to the right ( $3\frac{3}{4}$  hours).

From here a path leads up to the Cumbrecita (3,800 feet) whence there are some exceedingly fine views of the Crater. Three hours there and back. Visitors unable to bear any great amount of exertion can see the Caldera most easily from this spot.

A tunnel, 234 metres long, pierces the wall of the Caldera and carries the water from the interior to the general watercourse leading to El Paso, etc. From the inside mouth of the tunnel a good path leads to Los Rodaderos near La Fayita. A walk of about 1 hour from the tunnel to a spot where names of visitors will be found written up, is recommended because of the magnificent views disclosed. Allow a total of from 5 to 6 hours for this excursion, or add 2 hours if starting from El Paso.

There is water a little lower down, the first good drink to be had. Bearing to the left El Paso,  $4\frac{3}{4}$  hours, 4,038 inhabitants, is reached.

At present (1910) there is no Fonda in El Paso (beds can be had).

El Paso is a pleasantly situated little village whence excursions can be made to the Gran Caldera, etc. The village is a good centre for the purchase of knives, pipes, native silks, miniature drinking barrels and various articles in mulberry wood.

For road from El Paso to Las Manchas and Fuencaliente reverse Santa Cruz to Los Llanos *via* Mazo and Fuencaliente.

(A return from El Paso to Santa Cruz can be made over the arid summit of the Cumbre Vieja by a path which joins the Mazo *carretera* near the



**Bco. Aduares**,  $6\frac{1}{2}$  m.  $\approx$   $10\frac{1}{2}$  kil. from the city. This route is rather further but not so steep as the Cumbre Nueva. The pretty **Bco. Aduares** with its springs (about 1 hour above the road) forms in itself a pleasant excursion from Santa Cruz. In coming from Los Llanos, Mazo might be used as a stage on the way to Fuencaliente.)

Below the straggling little town turn sharp to the right and cross the barranco near a stone aqueduct. The straight road leads to **Tazacorte** ( $1\frac{1}{2}$  hours). From here to Los Llanos the traveller passes through a succession of gardens and orange groves, almond, quince and other fruit trees, the beauty of which must be seen to be appreciated.

At  $5\frac{1}{2}$  hours, **Los Llanos**, 1,000 feet, 6,638 inhabitants, the chief centre of the Valley of Aridane, connected with Santa Cruz by telegraphic wire, and a pleasant village where the night should be spent by those who intend to explore the interior of the Gran Caldera. Hotel Palma, about 6 pesetas a day.

The *carretera* leading round the south of the island from Santa Cruz to Los Llanos is to be continued to Argual, 1 m. ( $1\frac{1}{2}$  kils.), and Tazacorte, 3 m. (5 kils.). In connection with a new water conduit, it is also proposed to make a road to the centre of the Caldera.

**Argual**, 900 feet, is a small village twenty minutes further down. The *Mña. Redonda*, some ten minutes from the road, commands a good view and is a good hunting ground for visitors who wish to carry home mementos in the shape of small volcanic bombs. There is no inn.

**Tazacorte** is another village half-an-hour below Argual. Small inn. Visitors can, if they wish, make the voyage to Tazacorte direct by fruit steamer. (*See Agents.*) The harbour where the Spaniards, under D. Alonso Fernandez de Lugo, landed in 1490, is half-an-hour away from Tazacorte and at the mouth of the Bco. de las Angustias. A boat can be taken from here to the **Cueva de Candelaria**, a basaltic cave in the cliff both ends of which communicate with the sea. Time necessary about three hours.

The road to the Gran Caldera de Taburiente leaves Los Llanos a little below the Fonda and then passes the cemetery on the way to Tijarafe *viá* the Time.

The zig-zag path on the opposite side of the Bco. de las Angustias ( $\frac{3}{4}$  hour) can be seen ascending the black and precipitous slope of the Time, 1,760 feet, two hours. For the road and times round the N. of the island, reverse the Excursions from Santa Cruz headed "**Round the N. of the island to Los Llanos, etc.**"

At 150 yards beyond the cemetery, the road crosses the small Barranco de los Barros and eventually strikes the S. edge of the Bco. de las Angustias, descending to the stream in its bed (670 feet, one hour).

From here the bottom of the Caldera (950 feet) can be reached by climbing and wading up the stream and active mountaineers can emerge by the Cumbrecita. Ropes and guides should be taken for this and all the neighbouring mountains.

The cart track crosses the stream, then ascends on the left. At last the Caldera is entered at a point below the caves of the



former Kings of Taburiente, now inaccessible. At four hours a point called **Tenera** is reached (3,650 feet), with fine views of the crater. Lunch may be taken here. Twenty minutes further is the little farm of Taburiente. The return occupies rather less time than the ascent.

The interior of the great crater is in every way most interesting. The dimensions have been roughly given as from four to five miles across and the depth as from 6,500 to 7,000 feet. Whether the basin is the site of a single cauldron or of more is difficult to determine with exactitude. There is, however, strong reason to suppose that the Barranco de las Angustias and the structure of the S.W. wall between that Barranco and the Cumbrecita are at least partially due to a second series of eruptions, subsequent to those stupendous disturbances which gave birth to the remainder of the basin.

The outer walls are basaltic, but in the interior, throughout a vertical distance of 1,200 feet, there are deposits of hypersthenite, a rock that is far from common in the Canaries and seldom seen in Madeira.

In the Museum at Santa Cruz are a number of geological specimens collected inside the crater, which include some of the older formations found in such districts as Scotland, in curious juxtaposition with recent plutonic rock. Amongst minerals copper ore and pure copper globules have been discovered.

The present depth of the crater is chiefly due to denudation. The lava flowing from the Caldera was probably diverted by the Time along the present course of the Bco. de las Angustias and was subsequently undermined and carried away by water. As the bed of the stream became deeper, the quantity of material taken from the crater would progressively augment and the precipitous walls would gradually increase in depth, as they have done since the days of the Haouarythes, whose caves, now inaccessible, may be seen some distance above the mounds of detritus piled against the bases of the cliffs. When standing on the slopes of Tijarafe and gazing from the summit of the Time over the *vega* (plain) of Los Llanos, it seems hard to believe that the two districts were not once united and that the Time itself is not a great fault cutting them asunder.

As might be expected the ravines in the bottom of the crater are often very deep. Many of these are covered with great pine woods, which shed their needles in a thick slippery carpet and render passage amongst the rocks difficult or even dangerous. Although, from above, the trees seem far apart and look no larger than pins, they really enclose many delightful and shady spots of great service to those bringing a tent and camping out. As a camping ground, in fact, the Caldera is particularly well suited. It has never been thoroughly investigated and it is quite possible that payable copper ore might be found, though the Canaries generally do not offer a very promising field to the prospector. In pitching a tent, for which permission must be obtained, it is as well to keep away from the bed of what may suddenly become a stream. Near the exit towards Tazacorte there is a mineral spring.

A return can be made from Los Llanos to la Ciudad *viâ* the Cumbre Vieja, *see* El Paso, or Fuencaliente can be reached *viâ* las Manchas by reversing the next route.

**From Santa Cruz to Los Llanos *viâ* Mazo and Fuencaliente.**—The *carretera* to Mazo forms a delightful drive. On foot or on mule the distance at the start may be shortened by following the old road. Ascending the hill behind the town

the back of the Caldereta (Buena Vista) is passed in about one hour. The district of the Breña is now entered and numerous tracks are crossed, those to the right leading up to the Cumbres, those to the left to the villages on the coast. Presently the church of S. Pedro,  $5\frac{3}{4}$  miles, 9 kils., a little beyond and below which the village of S. José.

It is proposed to make a carriage road from near here to El Paso, which will pass through a tunnel underneath the Cumbre Nueva. It is also proposed to make a road from Santa Cruz to Mazo by way of the Breña Baja. The branch will leave the old road on the left about 1 kil. above Santa Cruz, and will run round the inside of the Caldareta.

At  $6\frac{3}{4}$  miles,  $10\frac{1}{2}$  kils., the Bco. Aduares (mentioned under El Paso), after which several extinct volcanoes are passed and

Mazo is entered,  $11\frac{1}{2}$  miles, 18 kils., 1,400 feet, beds possible. Pop. 4,081.) Connected by telephone with Santa Cruz.

From here Los Llanos may be reached *viâ* the Cumbre Vieja in about  $5\frac{1}{2}$  hours from la Ciudad, *see* El Paso.

A return to town can also be made on foot or mule by leaving the *carretera* just beyond the windmill and keeping along the old lower road amidst a labyrinth of walls and gardens. The church of San José is passed in  $1\frac{1}{4}$  hours, a sharp descent is made for a time, the road turns to the left past some dragon trees and reaches the beach just beyond the fort, two hours, whence home *viâ* the Playa, round the rock, etc.,  $2\frac{1}{4}$  hours. The Playa is only passable at low tide.

The *carretera* passes the Mña de los Rios (1 mile,  $1\frac{3}{4}$  kil. beyond Mazo). At about  $12\frac{1}{2}$  miles, 20 kils. from Santa Cruz, a path to the right leads to the Fuente del Roque de Niquihomo, about fifty minutes above. At  $13\frac{1}{4}$  miles, 21 kils., 1,900 feet, a path to the left leads to the famous cave of Belmaco,  $1\frac{1}{2}$  hours below, residence of the former Kings of Tedote, in which are two stones engraved with what may be writing, supposed to be of great antiquity and as yet undeciphered.

As stated in the history a *facsimile* of the characters has been examined at Paris and has been declared to have had no meaning. The larger stone is 132 inches long by 99 broad and the smaller 58 long by 41 broad.

There are several more caves in the neighbourhood, some with deposits of goat guano.

The country continues to be green and agreeable, although there are no springs. At 15 miles,  $23\frac{1}{2}$  kils., 2,100 feet, a path to the left leads down to Tígalate. There is a *venta* here. Shortly afterwards, at 2,300 feet, the lava or *mal país* commences. Soon a beautiful pine forest with grassy glades and occasional vineyards. At  $18\frac{1}{4}$  miles, 30 kils., the Pino de la Virgen with shrine, whence a bridle path to the left leads down to Las Galetas. Keeping to the right the land becomes gradually more cultivated and vines increase. At  $20\frac{1}{2}$  miles, 33 kils., the church of S. Antonio, beautifully situated as in a gentleman's park, 2,150



feet is passed. On the left is los *Canarios* (beds), one of the four divisions (*pagos*) of *Fuencaliente* (pop. 1,650), the district in which the best wine of the island is said to be produced (beds).

At a quarter of an hour below the church is the volcano of 1677 which buried the *Fuente Santa*, the position of which is still indicated by a piece of the old wall. The cindery sulphur-streaked cup of the volcano, which so far has scarcely given a foothold for vegetation, is very perfect and about 250 feet deep. The scenery in the neighbourhood is somewhat plutonic, but the views from the summit, 1,900 feet, are extensive and reach to *Mazo* on the E. and *Punta Gorda* on the W. coasts. It is well worth visiting.

At the southernmost part of the island (*Punta Fuencaliente*) there is a lighthouse.

Leaving *Fuencaliente* the road passes near the church and skirts the forest, keeping below the old *bridle path*, which crosses the pass, 2,850 feet, over lava streams covered with pines amidst good scenery. Afterwards the forest is left behind and the road crosses a dreadful succession of naked grey lava streams, which ran apparently with great fury. At 26 miles, 42 kils., is the junction whence a *carretera*, 3 miles, 5 kils. long, is to be made to the *Charco Verde*, a medicinal spring (purgative) much visited by local invalids in the summer. The mineral water runs away below the rocks at low tide.

The water has been analysed by Dr. Adam, of *Liverpool*, who states that it closely resembles that of *Carlsbad* and is of use in case of gout, rheumatism, diabetes and liver and kidney complaints.

The main road passes *Las Manchas*, 31 miles, 50 kils., the country now being better cultivated and more agreeable and terminates (1910) at *Los Llanos*, 36 miles, 58 kils. Between *Las Manchas* and *Los Llanos* a carriage road to the right leads to *El Paso*. The west of the island from *Fuencaliente* to *Los Llanos* is only worth visiting for scientific purposes.

#### *Approximate Prices of Carriages in Santa Cruz.*

*Carriages*.—*Amargavinos* (close to the *Montaña de la Breña*), 10 to 20 pes.; *El Mazo*, 15 to 25 pes.; *Fuencaliente*, 30 to 40 pes.; *Los Llanos*, 50 pes. or more, according to the number of passengers, size of carriage, etc.

*Public Coach* twice a week to *Los Llanos*, fare 10 pes.

*Motor Omnibus*.—To *Los Llanos*, viâ *Fuencaliente*, thrice weekly. Fare, 6 pes.; time, about 3½ hours

*Mules*.—For short rides, about 3 pes. 75 c.; per day, about 7½ pes. to 10 pes. To *Los Llanos* about 8 pes.

The prices for mules are more than should be asked in country places outside *Santa Cruz*.



## HIERRO.

THIS island is further to the W. than any of the Canaries. The imaginary meridian line conceived by Ptolemy about A.D. 150 would have intersected it at Punta Dehesa. Reckoning from Greenwich, it lies between long.  $18^{\circ} 10'$  to  $17^{\circ} 53'$  W. and lat.  $27^{\circ} 37'$  to  $27^{\circ} 51'$  N., *i.e.*, S. by W. of La Palma and S.W. of Gomera and Tenerife.

Its ancient name was Ombrios, or, according to Ben Farroukh, Hero. The natives called themselves Ben-Bachir, corrupted to Bimbachos by the Spaniards. It is  $18\frac{1}{4}$  m. ( $29\frac{1}{4}$  kils.) long by 13 m. ( $20\frac{3}{4}$  kils.) broad, and its superficial area is 122 sq. m. (312 sq. kils.). There are 6,508 inhabitants, contained in one town and eleven hamlets, the whole island constituting one district. Valverde, the harbour, is 51 miles from La Palma and 39 miles from San Sebastian, Gomera.

The coast is steep and uninviting, all the anchorages being mere open roadsteads. The cliffs rise so suddenly from the sea that there is no room for houses on the coast and consequently no seaport town to find the means of building a mole. Before the present services of steamers it was almost impossible to visit the island.

The interior is a sort of table land along which most of the paths are conducted and where most of the inhabitants own patches of land, on which they grow cereals, pasture their cattle, and where they live during the harvesting season. The Golfo, facing N.W., is a great vineyard, stretching from Sabinosa to Tigadaye, cultivated by the same owners, who move from one residence to the other at stated intervals, affording a curious sight as they wend their way with all their household furniture balanced on the top of a mule, followed by the family and by the family cow, goat, fowls, pig, dog, cat, etc.

The mountains, of which the Alto del Malpaso (4,990 feet) is the highest, are only partially wooded and there is far less sylvan scenery than is to be found in the other islands of the western group, although in some places, and more particularly in the neighbourhood of El Golfo, there are a fair number of trees.

There are practically no springs and the people depend for water on the rain, which is preserved in tanks. The air which passes, however, is sufficiently laden with moisture. Were the question properly studied and plantations made in judicious positions, it is probable that an increased supply could be obtained.

On the arrival of the Spaniards there appears to have been a tree near Valverde called *El Garoe*, which, according to legend, distilled enough water from its leaves to supply all the people

with what they required. Although the Bimbachos were friendly, they covered this tree with dried grass so that the Spaniards should know nothing about it and, thinking the island barren and dry, should sail away and leave them in peace. However, a Bimbacho young lady fell in love with a caballero and revealed the secret. This led to a quarrel. The result was that a number of Bimbachos were carried away as slaves. On the departure of her lover the young woman was condemned to death, the only instance of capital punishment in Hierro of which there is any record.

If the above tale be true the tree could not have been very large. It has now disappeared, but, if the exact site could be ascertained and a few laurels or pines planted, it is not unlikely that the new trees would distil water in the same way that the other did. Indeed it has been stated, apparently with truth, that it was nothing more than a laurel or group of laurels standing at the head of a ravine up which the moist sea-breeze generally blew.

Fr. Juan de Abreu Galindo gives a most circumstantial account of it, but his ignorance of natural laws led him to look upon the tree as being something quite special, or even as a miraculous favour granted to the people because of their form of worship, which, as remarked in the history, bore some external resemblance to that of the Roman Catholic Church.

The products of the island are the same as those to be seen in the others, but all parts are not cultivable and the land can only support a limited number. The chief export is figs which are of delicious flavour and most of which are grown in the neighbourhood of El Pinar.

The white wine produced in El Golfo, mentioned above, is of peculiar vinosity and can be kept without the addition of spirits. The annual output is about 1,000 to 1,500 pipes.

There is a very famous mineral spring at Sabinosa, apparently most useful in cases of skin and other malignant diseases. It resembles that of the Charco Verde in La Palma, in that it is close to the sea and that it rises and falls with the tide. This does not necessarily imply that the rise is due to the infiltration of sea water, as the barrier presented by high water outside would tend to prevent the escape of that yielded by the spring.

Invalids usually visit it in an organised party during May or June and remain about a fortnight, during which time they occupy some small stone huts built for the purpose. It is necessary to live near the spring, as the water is drunk copiously and baths are taken frequently. The taste of the water, which acts at first as a strong aperient, is not unpleasant.



The customs of the inhabitants call for no special remark. The only sport is wrestling, at which many of the men are very expert. Occasionally a parti-coloured cricket cap is worn, otherwise their dress is common-place.

Before the discovery of America this island was regarded as the end of the world and from Punta Dehesa, in the W., the longitude of most countries was reckoned. Louis XIII. of France even passed a law to this effect in 1634 and Cardinal Richelieu called a conference on the subject in the same year.

War being unknown in the island before the arrival of Europeans, the inhabitants were an easy prey to the freebooters and in a few years were nearly all killed or carried away.

They seem to have been a happy, careless folk, fond of dancing and ignorant of agriculture. Some method was probably adopted for keeping the population within limits so that the island might support those imprisoned in it. The cave of the pig mentioned in the history under "Forms of Prayer" was situated by the rocks now known as los Santillos de los Antiguos de Bentayga, which were supposed to be the seats of the male and female deities already mentioned. The people were altogether pastoral. They used to dry goats' flesh in the sun and make biltong, which they called *jocinte*, a custom and a name retained by the present race until quite recent years.

The custom of dancing has also, in a measure, survived. Every fourth year, early in May, the image of the Patron Saint is brought from the Ermita de los Reyes across the island to Valverde and carried back at the end of nine days. On each occasion it is accompanied by a number of dancers who, like David before the ark, dance the whole time.

The large lizards found on a rock off El Golfo and once used as an article of food are mentioned under Fauna (Reptiles).

**Valverde.**—From the landing-place, a tiny cove protected by some masses of fallen rock, where it is proposed to build a mole, a steep pathway leads in two hours on foot, or one and a quarter on mule, to the little capital of Valverde (1,750 feet).

Mules up 2½ pesetas, or 5 pesetas both ways.

Those on foot should follow the bridle track all the way, as the short cut to the left, which may be pointed out, is most laborious, saves very little in the distance and does not lead across any pretty or interesting tract of country. The whole walk is in fact very dull and is so rough and abrupt that visitors are warned against descending from Valverde to the Estaca after dark.

There is a small Fonda, about 5 pesetas a day, in addition to which the *Cura* is often kind enough to provide a meal and some



ten beds might be had in the village. Feeding fair. Valverde itself is not worth a visit for its own sake.

Outside of Valverde there are no Fondas but, by means of letters of introduction, limited accommodation may be obtained at Sabinosa and Tigadaye.

There are no roads but the bridle paths along the elevated plateau, which averages about 2,000 feet in height, are fair and present few difficulties. It is possible to see the best part of the island in from two to three days. A tent should be taken by those spending any length of time. As elsewhere, the price of mules, etc., should be arranged before starting.

To the south, a path leads upwards past Tinor and across a plain to San Andres (two hours), near which is a spring, the Fuente de Asofa. At 3,500 feet, heather commences and shortly after thin pine woods. A precipice here overlooking Las Playas commands a fine sea view. At five hours the village of El Pinar (2,600 feet), with view of the Puerto de Naos, is reached. The descent to the Port takes about  $1\frac{1}{2}$  hours.

To the S.W. of the village of El Pinar and about two miles from the coast is a place called *Los Letreros*, so named because of some characters engraved on the rocks, of which a copy was forwarded to Paris at the same time as the copy of the characters scratched on the stones found in the cave of Belmaco in La Palma. The marks, which are almost effaced by time, were declared to be merely idle scratches. They are near what was apparently at one time a *tagoror* or ancient place of assembly and are very difficult to find. The site is reached by passing the Pinos de Julian along a difficult and dangerous path.

Proceeding westwards from El Pinar the path again ascends and leads through gradually thickening forests, past **Los Reyes**, to the summit of the **Alto del Malpaso** (4,990 feet), whence there is a fine view of El Golfo. Cinders and lava here take the place of the trees for a short time, but, descending the W. side to **El Golfo**, giant heather and laurel are found growing luxuriantly here and there, interspersed with patches of Monte Verde. At 9 hrs., **Sabinosa** is entered, or from the Alto del Malpaso a path leads *viâ* the Ermita de los Reyes to the **Puerto de los Reyes** on the extreme W. of the island is  $3\frac{1}{2}$  hrs. A return may be made from here to **Sabinosa** in about 2 hrs. Twenty minutes below the village is the mineral spring previously mentioned.

The return road follows the lower part of **El Golfo**, a huge crescent facing N.W., partially wooded and fairly fertile. At 2 hrs., **Los Llanillos** is passed and at 3 hrs. **Tigadaye** (750 feet).

The best way from here to Valverde is up the precipitous ascent by way of Jinama and Tinor, a total of about  $4\frac{1}{2}$  hrs. Leaving the curious church at the bottom, where the tower is on the top of a hill some hundreds of yards from the actual church,

the path, which was re-built in 1907, leads through beautiful woodland scenery and commands fine views of the whole extent of the Golfo, that from the half-way halt being particularly lovely.

The vegetation is of great interest to botanists.

The coast road from Tigadaye to Valverde leaves Belgara on the right, passes Los Palos and Guimar, and ascends the cliffs on the N.W. corner of El Golfo by an extremely steep and rather narrow path. The Virgen de la Peña (2,200 feet), on the summit, is passed at 5¼ hrs. The path now leads along the plateau, past S. Pedro and Mocanal, and descends to Valverde in 7½ hrs. through fair but not very interesting scenery.

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A shorter excursion is from Valverde to Alto del Malpaso direct. About 6 hrs. must be allowed for this each way.

## GOMERA.

GOMERA lies between lat.  $28^{\circ} 1'$  to  $28^{\circ} 13'$  N. and long.  $17^{\circ} 5'$  to  $17^{\circ} 22'$  W. of Greenwich; is S.E. of La Palma, N.E. of Hierro and W.S.W. of Teneriffe, from which it is divided by less than 20 miles of sea.

It was formerly known as Junonia Menor and its inhabitants called themselves Ghomerythes.

It is  $15\frac{3}{4}$  m. ( $25\frac{1}{4}$  kils.) long by 13 m. ( $20\frac{3}{4}$  kils.) broad, and covers 172 sq. m. (440 sq. kils.). The population is 15,358 spread over one town and 36 villages or hamlets, divided into six districts.

The shape of the island is almost circular and the coast generally is extremely precipitous, especially towards the west. Villages are scattered here and there on the slopes, generally at a considerable height above the sea. The summit of the island undulates and the surface is mostly composed of a rich, fine earth. There is an abundance of verdure and every available space is cultivated. The highest point is 4,400 feet, and the country in the Cumbres is often thickly covered with splendid woods, the heather growing to a height almost unknown in the other islands.

Accommodation is poor, which is unfortunate, as the climate is good.

Water is plentiful and the land is fertile. Silk, cereals, cochineal and the ordinary crops seen in Grand Canary and Teneriffe are cultivated. Dates ripen in the neighbourhood of San Sebastian and palm trees are found up to 3,000 feet.

There are no carriage roads, communication being carried on by mules and horses and by means of bridle paths, which are very slippery in wet weather.

A custom of the former inhabitants still survives, namely, talking by means of whistling. Not only can a peasant make himself heard at a distance of three or four miles, but a sufficiently rich language has been developed to enable conversation to be carried on.

The town people can rarely do this, but in the country, and especially in the neighbourhood of the Montaña de Chipude, where the best whistlers are said to reside, all messages are sent in this way.

For instance, a landed proprietor from San Sebastian, with farms in the south, secretly took lessons. The next time he visited his tenants he heard his approach heralded from hill to hill, instructions being given to hide a cow here or a pig there and so on, in order that he should not claim his "*medias*" or share in the same.



The same gentleman, when entertaining a foreign tourist in another part of the island, whistled across to his *medianero* to get them a partridge, these birds being so plentiful as to be almost looked upon as vermin. Some little time after, the tourist objected that it was out of season and that, in any case, only a cock should be shot. The next whistle found the *medianero* stealthily creeping towards his prey, but he understood what was said and picked out a male bird.

Other messages that can be vouched for are, "There is a Caballero here who wants to send a letter to San Sebastian. Tell Fulano to take this place on his way and fetch it." This was understood at once and acted on. Another message: "Come here at sunrise to-morrow and take the Caballero's bag, who is staying with me, down to the beach (*playa*)." The answer came to repeat, which was done, when the usual reply of "Aye, Aye," was given. It appeared that the recipient was not sure the first time whether the last word was "playa" or "valle."

The best whistlers do not use the fingers at all, and convey their meaning apparently by intonations and variations of intensity on two or three notes. It is said that there is a tribe in the Atlas Mountains which talks in the same way.

**San Sebastian.**—3,187 inhabitants; E. coast; 42 miles from Santa Cruz, La Palma, and 39 miles from Hierro. The construction of a small harbour is contemplated.

Passengers are landed in boats and carried on shore. Charges (nominally), one peseta each person; packages extra; small inn, about five pesetas a day. At Punta de San Cristobal a lighthouse, below which there is a landing stage, has been erected.

San Sebastian is a village situated at the mouth of a large, green barranco. There is a quaint old church, with painting of the repulse of the Dutch fleet from the harbour in 1599. The few walks round the town are of no interest. Horses are difficult to procure, and bargains should be made.

When Columbus started on his voyage for the discovery of the Indies he took in water and provisions at San Sebastian and attended Mass in the church. An old house is still pointed out as having been occupied by him during his stay. He left Gomera on September 7, 1492.

The point to which excursions are generally directed is Valle-Hermoso. This can be reached in several ways, the most direct from San Sebastian taking about 10 hrs.

Leaving San Sebastian the barranco is crossed. Bear to the left up the ascent to Mona, 2 hrs. (water), then on to the *Ermita de las Nieves*, 3½ hrs. (water). After this there is less climbing. At 4¼ hrs. thick woods are entered and the track leads round the S.W. base of Alto Garajonay (4,400 ft.).

In fine weather the forest scenery in the Cumbres is unsurpassed in the Canaries and the Alto Garajonay, or the Montaña de Chipude, 3,947 ft., are well worth visiting. The latter is situated about an hour to the W. of the route to Valle-Hermoso. To thoroughly enjoy an excursion of this sort the visitor is advised to camp out during the fine weather towards the end of the summer and to take a gun. Partridges are more plentiful in Gomera than is the case elsewhere in the Archipelago.

The woods are now left behind for a time and at about 7 hrs. the **Laguna Grande** is passed. Keeping to the right, a descent is made through other beautiful woods below which a spring (**La Fuente Santa**) is situated, near a chestnut tree (2,200 ft.), then along a ridge, through the little village of **Puestelagua**, down the **Barranco del Ingenio** and into the village of **Valle-Hermoso** (500 ft.), pop. 5,027, 10 hrs. Accommodation may be had here (4 to 5 pesetas a day), but is not to be relied on.

At the little harbour which serves Valle-Hermoso there are two wooden jetties for the use of passengers and cargo.

Below the village a road leads towards the sea. From here, if a boat can be procured, the peculiar basaltic rocks, known as **Los Organos** (the organ pipes), may be visited in about 2 hours. An excursion can also be made to the summit of the **Montaña de Chipude** and back in 8 hrs. The peculiarly bold character given to the scenery by the alternate rock and soft earth so prevalent in the island, the one remaining harsh and erect where the other has gradually melted away, cannot fail to delight and surprise the tourist who sees them for the first time. A carriage road is to be made connecting **Valle-Hermoso** with the **Playa del Palillo** near **Los Organos**.

From **Valle-Hermoso** a return to **San Sebastian** may be made in even less time than is necessary for the route given above by means of a path which is impracticable for horses. Guides must be taken.

A more pleasant way is *viâ* **Hermigua**. The old track ascends the **Barranco de las Rosas**, leaving the **Roque del Valle**, one of the upstanding rocks mentioned above, on the left, and ascends very steeply to a point called **Buena Vista**, subsequently passing **La Cruz Eterna**, a cross about 2,300 ft. above the sea, the road being good and well shaded. The **Roquillo Pass** is surmounted and a deep descent made to **Agulo**, a well-cultivated district about 550 ft. above the sea, with a village and church, pop. 1,522.

Below **Agulo** at the **Puerto de la Piedra Rosa** there is a wooden jetty 67 metres long (passengers and cargo) to which fresh water is brought by pipes.

An easier, better and rather shorter path of recent construction connects **Valle-Hermoso** with **Agulo**. The descent into **Agulo**, however, is still bad.

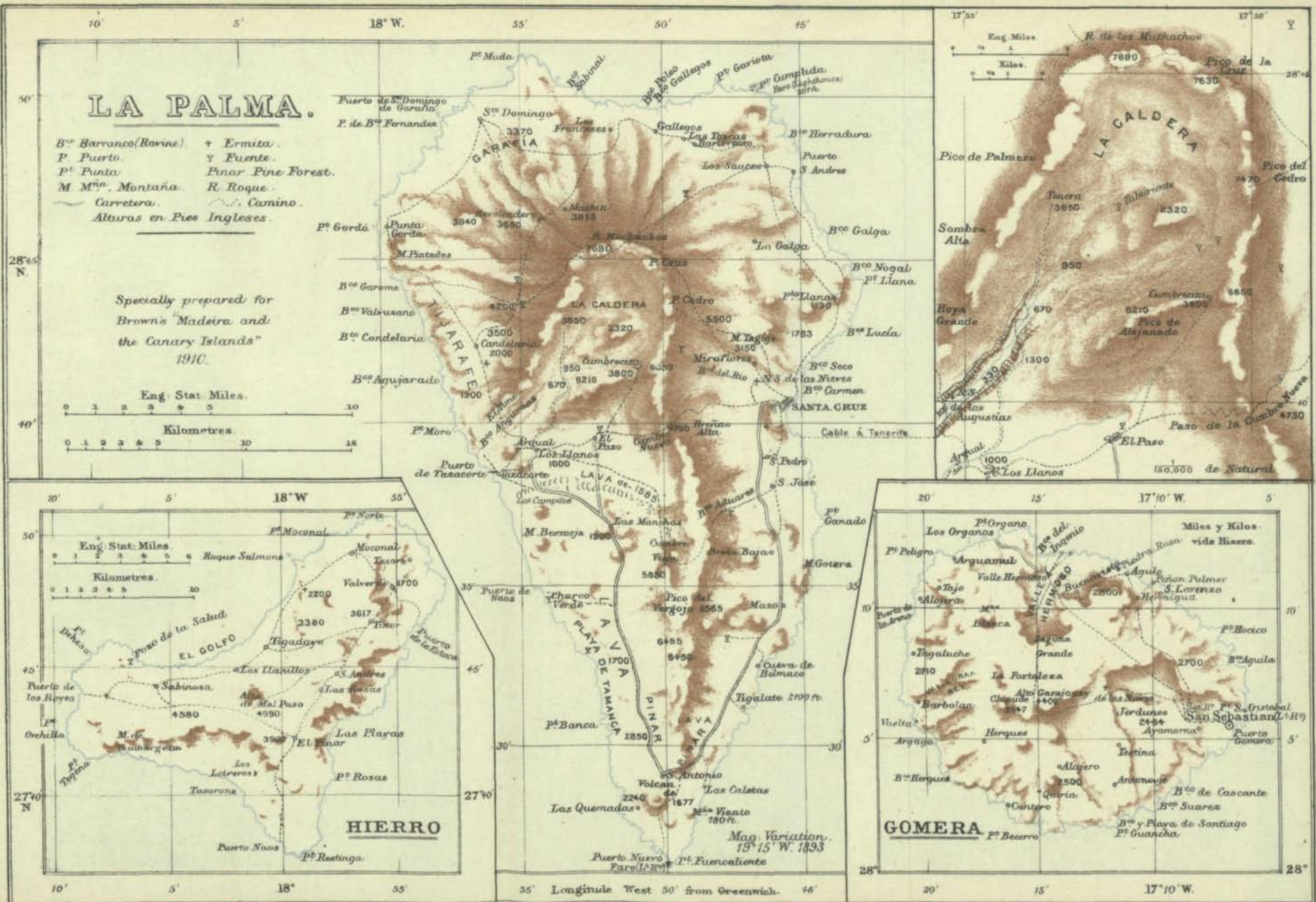
A little further on is **Hermigua** (5 hrs.), pop. 2,868. Accommodation may be had, but there is no inn.

A road is being constructed (1908) from **Hermigua** to the sea at **Peñon** where a jetty is being made.

From **Hermigua** a path ascends the mountains, which are crossed at an altitude of rather over 2,700 ft., and **San Sebastian** is reached in about 6½ hrs. The scenery is very good, though not quite so fine as that around the **Valle-Hermoso**.



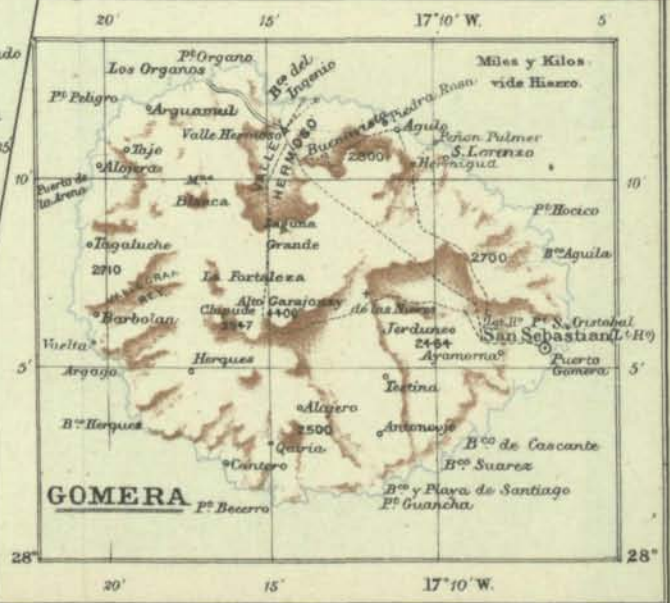
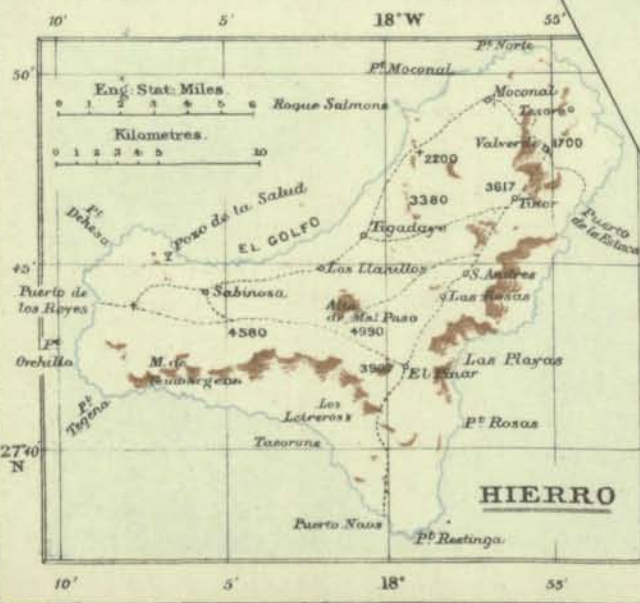
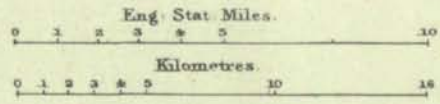


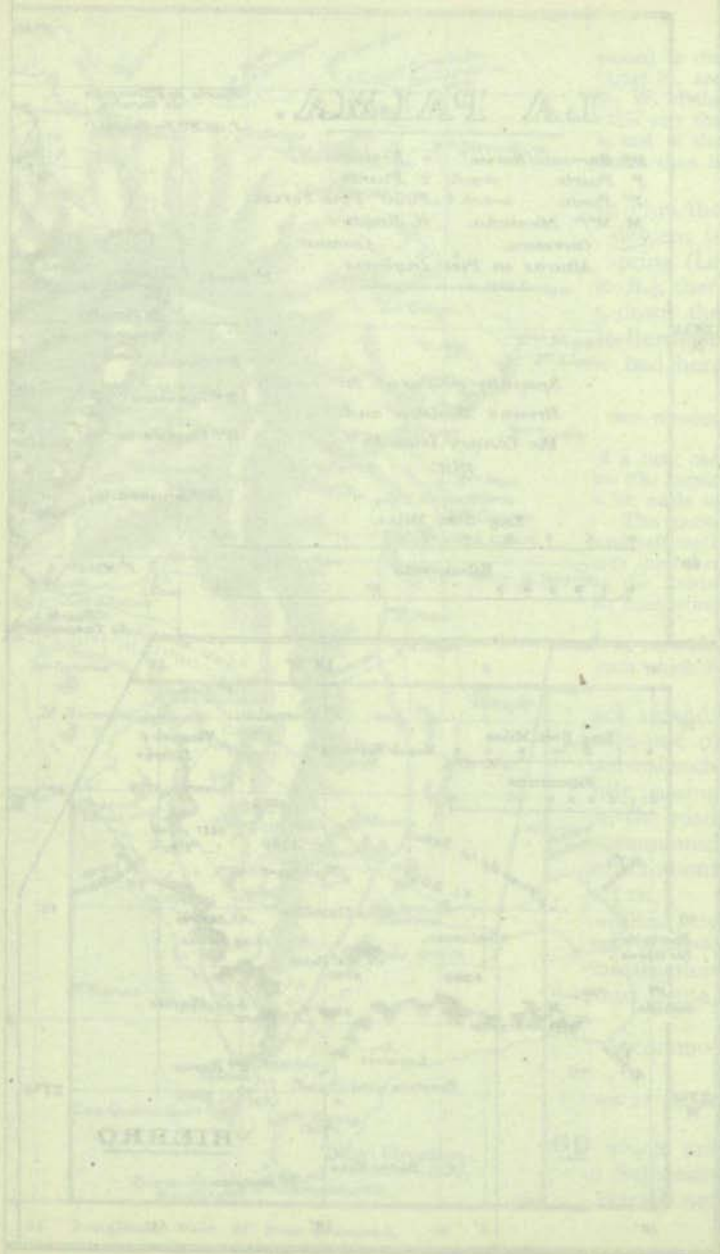


# LA PALMA.

- B<sup>co</sup> Barranco (Rovine) + Ermita.
- P Puerto. y Fuente.
- P<sup>t</sup> Punta. Pinar Pine Forest.
- M. M<sup>ta</sup>, Montaña. R. Roque.
- Carretera. Camino.
- Alturas en Pies Ingleses.

Specially prepared for  
Brown's "Madeira and  
the Canary Islands"  
1910.







## TENERIFFE.

THIS island is shaped like a shoulder of mutton, of which the broad end faces S.W., and the thin end points N.E. The Peak rises in the centre of the broadest part.

It lies between lat.  $28^{\circ}$  to  $28^{\circ} 37'$  N., and long.  $16^{\circ} 7'$  to  $16^{\circ} 56'$  W. of Greenwich; is  $52\frac{1}{4}$  m. ( $83\frac{1}{2}$  kils.) long by  $31\frac{1}{4}$  m. (50 kils.) broad; has an area of 919 sq. m. (2,352 sq. kils.), and contains 138,008 inhabitants, spread over 2 cities, 4 towns, and 152 villages or hamlets, divided into 33 districts.

Leaving the above inhabitants to discuss the question of commercial and political supremacy with those of Grand Canary, Teneriffe is, by virtue of its height, the meteorological centre of this part of the world. The term "Satellite," applied in a climatic sense, cannot be justly resented by the most enthusiastic advocate of Las Palmas *versus* Santa Cruz.

The celebrated Peak, whose majestic summit may well be said to support the sky, generally thrusts its snow-clad cone far above the clouds into the glittering sunlight, there to serve as a beacon and a guide to the wandering sailor. When the atmosphere is clear, its apex can be seen from an enormous distance, though, because of the clouds hanging round the island, it is often invisible to ships when close under the land. Humboldt calculated that it was mathematically visible from the *M<sup>ñ</sup>as Negras* on the African coast, and that it must have often been seen by the Mauritians when in eruption. The writer has seen the last 3,000 feet of the cone, outlined against the setting sun, from the deck of the ship off Morro Jable Point in the S. of Fuerteventura, 125 sea miles (230 kils.) away, long after all but the highest points of Grand Canary had sunk below the horizon, and has no doubt that it would be visible under the same circumstances from the hills in Lanzarote.

It is still active, but the more recent volcanic disturbances have found a vent much below the sulphurous little crater, 12,192 ft. above the sea, whence puffs of steam occasionally float away as evidence of its fiery origin. The island was formerly called *Tehinerfe*, *Nivaria* and the "Isla del Infierno." The early Spanish settlers evidently imagined that there was some connection with the infernal regions. "E'cheyde" or "Teide," meaning Hell, was the name given by the Guanches to the Peak. Curiously enough, this people chose the mountain as the seat of the Deity. One must presume that "Achaman" (God Almighty) sat on the sunny crest, and prevented "Guayota" (the Devil) from leaving the bowels of the mountain, to which he had been condemned.



Some of the ancient maps adopted the Peak as a meridian. A conference was even summoned by Cardinal Richelieu with the view of inducing the various European nations to recognise it as such by common accord.

The indigenous inhabitants have been fully discussed in the history. It is only necessary to add that the nine kings who succeeded Tinerfe the Great reigned in the following districts:—Taoro, Güimar, las Lanzadas, Anaga, Abona, Tacoronte, Tegueste, Icod and Daute. Of these, the King of Taoro (Orotava) was the chief. There was also an illegitimate Prince who lived beyond Tejina, in the part still known as the Punta del Hidalgo. In Guanche, his title was "*Archimencey*," which is equal to "Hidalgo pobre" in Spanish, or "Poor Knight" in English.

Returning to our shoulder of mutton, it must be understood that the whole island is little more than a long mountain ridge with steeply sloping sides. Commencing with the narrow end at Anaga point, where the ridge is sharpest, there is a depression and a broad saddle-back, or rather plain, at La Laguna. This is followed by a narrow and constantly rising *cordillera*, running S.W., and breaking about Pedro Gil into two walls which form the boundaries of the Cañadas, the name given to the undulating floor of a crater, eight miles broad, on which the Peak itself is built. The island then slopes away on the W. towards a large group of volcanoes and a more or less wooded tract of mountainous country, terminating in the cliffs of Teno Pt. and the fertile little plain of Buena Vista. Towards the S. there are more mountains and volcanoes, the valleys and barrancos here being particularly precipitous and deep.

A great part of the island is able to obtain a never-failing source of water from the huge basin of the Cañadas and the melting snows of the Peak. Little of this is allowed to go to waste, all that can be caught up being conducted to the land by means of open channels, which often run along the tops of walls.

To the N.E. of La Laguna and in the extreme W. near Teno, most of the land is uncultivated. The mountains in these districts are extraordinarily razor-backed. These tracts are composed of the earlier lavas. Fuller details are given in the Geological Section. It will be noticed that the candle-shaped *Euphorbia* (*E. Canariensis*) is most common and most prolific where the surface is composed of basic lava.

Because of the abundant moisture, La Laguna itself is the most fertile spot in the island, but, were a better system of forestry

and a more comprehensive means of storing water adopted, a great deal of land might be reclaimed which is now practically worthless. This applies particularly to the S. of the island, but, even on the N., there are most extensive tracts of country entirely dependent on rain.

In addition to a few isolated forests, there is a belt of pine trees stretching almost continuously from La Esperanza round the top of the slopes overlooking the S. of the island, past Guia and los Partidos on the W., to Agua García on the N. The belt is very thin in some places and in others has been swept away or cut down. Up till quite recently, the peasants were allowed to take away the pine needles for manure. However, the pines, laurels and heather collect a great deal of water, but the slope is so steep and the barrancos so short, that any surplus moisture due to heavy rain soon runs into the sea.

All climates are to be found and most plants can be cultivated, for which reason the Spanish Government has granted a small subsidy for the maintenance of a botanical garden near Orotava, originally intended as a sort of half-way house for the acclimatisation of tropical fruits, etc.

Agriculture has only recently recovered from the widespread ruin consequent upon the discovery of aniline dyes, the resultant collapse of cochineal and the blow given to the wine trade by the disease which attacked the vineyards in 1852. The growth of the fruit trade, to which the present prosperity of the islands is due, is discussed in the section entitled "Industries and Agriculture."

The most picturesque buildings in the Canaries are to be found in Teneriffe and in Santa Cruz de la Palma. Wood was largely used in their construction and the balconies, windows, patios (courtyards) and galleries are often most attractive.

The most peculiar dress is that of the peasants near La Laguna, whose leggings, coloured waistcoats, white knickerbockers and black woollen saddle protectors look effective and manly. The *manta*, an English blanket doubled and gathered into a leather collar, is the common overcoat of the peasant, as the *capa*, a circular piece of black cloth, faced with some bright colour, is of the well-to-do Spaniard.

Native Curiosities, etc.—Amongst knick-knacks to be purchased are drawn linen (*calado*), an industry which, commenced on a small scale, has now developed into a matter of insular importance; Vilaflor lace, somewhat difficult to procure, and imitation flowers made of fishes scales. Good cigars can be obtained at moderate prices.

The dragon-tree (*dracena draco*) is a plant, native to the Canaries, of which the dead branches serve as a support for the tufts or crowns, the roots of which encircle and conceal the original stem, which gradually rots away inside. Those roots which fail to grasp the stem, or rather to attach themselves to the bark of the stem, may be seen hanging withered in the upper tree. Owing to this peculiar method of growth, the inside of the trunk is hollow. That of the old tree in the Villa was open, and made a very spacious chamber. Dragon's blood is an article of commerce and was used as an ingredient by the Guanches for preserving their mummies, etc. (*See History.*)

It is supposed that dragon-trees, still to be found in various parts of Africa, were once more common on that continent, and that those left represent a species of African flora abundant about the time of the Ice Age when the climate was much colder, but since gradually replaced by more tropical plants.

The famous dragon-tree of Villa Orotava, estimated by Humboldt, perhaps erroneously, as being at least 6,000 years old, was finally destroyed by fire in 1867. A cutting is still growing in one of the conservatories at Kew. Many dragon-trees are to be seen in the island, notably at Icod and at La Laguna.

The first recorded ascent of the Peak was made by some members of the Royal Society of London at the instigation of King Charles II. and the Duke of York for the purpose of weighing the air and of taking other observations. The conduct of the Spanish Ambassador on the occasion became a European joke. He treated the deputation calling to ask his permission as a couple of madmen, then hastened to the King and related the matter with shouts of laughter.

There are several ports but all the large through steamers land their passengers at Santa Cruz. A few steamers touch at Orotava, but even the inter-insular boats do not run there regularly, the recognised means of approach being to disembark at Santa Cruz and cross the island. Out of the way ports can sometimes be reached by means of a fruit steamer. (*See Agents.*)

A road, commenced in 1852, leads from Santa Cruz past La Laguna, Orotava and San Juan de la Rambla to Garachico. During 1910-12 it will be completed to Buena Vista. A branch, commenced in 1864, leaves this road on the way to La Laguna, and runs through Güimar to Fasnía. It is proposed to carry this round the island, and connect it with the Orotava road, *viâ* Santiago and Palmar.

There is a road from La Laguna to Tegueste and Tejina, where it connects with a road from Tejina to Tacoronte.

A small branch from the main *carretera* leads from Santa Ursula to Villa Orotava; a little further on a second branch



is being made past the Botanical Gardens to Puerto Orotava, and from the Icod road a third branch has been made to Realejo Alto.

A road also leaves Santa Cruz for San Andres and is to go on to Taganana.

Much inconvenience can be avoided where there is no high road by using the boats engaged in the fruit trade when available. Roads lead from San Juan to Guia; from Medano to Granadilla and from Abono to Arico on the South, and from San Marco to the Garachico *carretera* on the North.

There are so many excursions to be made in Teneriffe, that it is difficult to place any one as first in order of merit.

The electric tramway runs from Santa Cruz to La Laguna and Tacoronte and motor cars can be hired, preferably from the two last centres named, to any place on the main *carreteras*. Güimar is best reached from either Santa Cruz or La Laguna. If no motor cars are available, carriages can be hired, by the day if desired. The time consumed by motor car is, of course, far less than by carriage. The times given below are for carriages. General prices will be found at the end of the description of Teneriffe.

The best short drive for those on shore for two or three hours is to San Andres,  $1\frac{1}{2}$  hrs. return, or by electric tramway to La Laguna,  $\frac{3}{4}$  hr. single, or Tacoronte,  $1\frac{1}{2}$  hrs. single (terminus). From La Laguna to the Forests beyond Las Mercedes, *see* under La Laguna.

A two days' drive is to Orotava and back the next day, or, if this has already been taken, to Güimar and back the next day, (Tram and motor car, one day).

A three days' drive is to Orotava and sleep; to Icod and back the next day, and back to Santa Cruz on the third. (Tram and motor car one day).

A five days' drive can be made by returning to La Laguna to sleep, and on to Güimar the next day to sleep. (Tram and motor car, two days). It is possible to drive to Güimar and back in a day, either from Santa Cruz or from La Laguna, but it is really too much for pleasure and for the horses.

The places which ought to be seen if possible *en route* are:—

From La Laguna: the forest of Las Mercedes as far as the Cruz de Taganana, a most lovely ride or walk. From 3 to 8 hrs.

From Tacoronte: the woods of Agua García, which are most beautiful.  $2\frac{1}{2}$  hrs.

From Orotava: the Peak (2 days), the Cañadas (1 day), the woods and rocks near Agua Mansa. The valley itself can be seen in a day's drive, whether the Villa, the Grand Hotel or the Puerto be taken as a centre. The carriage can be abandoned in Realejo Bajo, and the two Realejos visited on foot, or the new road taken to Realejo Alto, and the carriage rejoined below Realejo Bajo. The beautiful drive to San Juan de la Rambla can be extended to Icod if desired. The mule track to Icod *viâ* Icod-el-Alto is very beautiful. The footpath between the same places which leaves Realejo Alto, climbs to La Corona and, keeping on the 3,000 feet level, descends through the Pine Forests to Icod, is one of the most lovely excursions imaginable. It is best taken from Icod home. The pass over Pedro Gil, or by the Pilgrim's track to Güimar is magnificent.

From Icod de los Vinos: Garachico; La Culata; the Pine Forests; Valle Santiago; the Crater of Chahorra (desperately rough); the Crater of 1909 (Montaña del Decreto).

From Güimar: The Bco. Badajoz; the Bco. del Rio; the pass over Pedro Gil, etc., to Orotava.

The passes to Vilaflor, Adeje, etc., will all be found in their proper places, as will the detailed description of all the above excursions. The scenery below Vilaflor, between Güimar and Adeje, is not attractive.

Telegrams can be sent, booking accommodation to any station between Santa Cruz and Garachico and, along the south coast, as far as Adeje (being extended from Adeje to Buenavista).

**Santa Cruz de Santiago.**—Capital of the Canaries since 1821, and a city by decree since 1859; 38,419 inhabitants; N.E. corner of Teneriffe; 256 m. from Madeira; 53 m. from Las Palmas, and 1,420 m. from the Lizard; formerly called Añaza by the Guanches (Ang., *see Ships*). Telegrams:—"Tenerife." British pop. about 165.

The city has been the chief military centre of the Province since A.D. 1700, and is also seat of the Diputacion Provincial.

Passengers are landed in steam launches and boats on the Mole, which is to be extensively lengthened. All ships are met by the hotel agents, to whom the luggage may be entrusted (special inclusive charges).

Charges for boats (official) from vessels inside the port, each passenger, 1 pes. each way, unless more than three in boat, when 75 c.; children under 10, half price. If the vessel lies "within the roadstead," the charges are 1.50 pes. each up to three persons, and 1 pes. each when more than three. Steam launches usually charge 1s. each way. Boxes, etc., 1 pes., 75., or half a pes., according to size. Handbags free. At night-time charges are doubled.

There are no customs duties on passengers' luggage but cases are often opened on the Mole. Since 1852, Santa Cruz has been declared a free port, but there are customs and municipal duties on certain specified articles.

**Coupons.**—Those on shore for a few hours can purchase coupons, franking all expenses to and from ship and including meals, tramway to La Laguna or Tacoronte, carriage to Tejina or Las Mercedes, motor car to Orotava, etc., and back. Inquire of Hotel Agents on board.

**Hotels.**—*Above and outside of town.*—Grand Hotel Quisisana, commanding position, large grounds, fine views, 400 feet above sea, 12s. 6d. upwards during season; 10s. upwards during summer. Grand Hotel Battenberg in the Camino de los Coches, open position just above town, from 9s. a day; Pino de Oro, overlooking town, with large garden, 9s. to 12s. 6d. per day. None of these hotels are more than 15 minutes' drive from the Mole.

*Inside of town.*—Camacho's English Hotel, central position, established many years, 9s. to 12s. a day; Olsen's Alexandra, conveniently situated at top of the Calle Alfonso XIII. (formerly Castillo), 7s. 6d. a day upwards; the Orotava, overlooking the Plaza de la Constitucion, 10s. a day upwards; the Victoria, at the top of the same Plaza, 6s. a day upwards.

**Spanish Hotels:**—Panasco, facing the top of the same Plaza, from 5 pes. a day; Colon, 27, Calle Alfonso XIII., from 5 pes. a day; El Continental, facing sea, from 5 pes.; Internacional, Calle Candelaria, 6 pes.; Peninsular, Calle Cruz Verde, 5 pes.; El Teide.

**Boarding Houses:**—English Tea Rooms and Restaurant, Calle Cruz Verde 18 (take boarders); Restaurant Villa Benitez, 2½ miles (4 kils.) up Laguna Road, 620 feet, from 7s. a day.

**Newspapers.**—*El Diario de Tenerife; El Tiempo; La Opinion* and others.

(For advertisements, see under Santa Cruz, Teneriffe, at the end of the book.)

**Clubs.**—The Casino Principal (Spanish), facing the Plaza de la Constitucion. Monthly members admitted. A number of dances are given during the winter. The English Club, next to the Gobierno Civil in the same square. Weekly members admitted. Circulo de Amistad. Lawn Tennis Club, with courts at the back of the town. Temporary members admitted. Real Club Tinerfeño, sporting and aquatic, Playa de San Pedro, facing harbour. Introductory (15 days) and monthly members admitted. Salon Fregoli and others.

**Water Supply, Lighting, etc.**—Plans are being carried out with the object of bringing water from the Roque Negro to the City, a distance of 6 miles. It is proposed to create an efficient system of drainage.



Santa Cruz is provided with a good system of telephones which connect with La Laguna.

Since the end of 1897, the town has been lighted by electricity from the dynamo works near the Iglesia de la Concepcion. In 1907 coal gas for lighting and cooking purposes was laid throughout the town.

There is an ice factory with freezing chamber, etc.

The iron towers near the gas works, 75 metres high, were erected in 1909 as a wireless station, *Système Popp*. See "Telegraphic Communication."

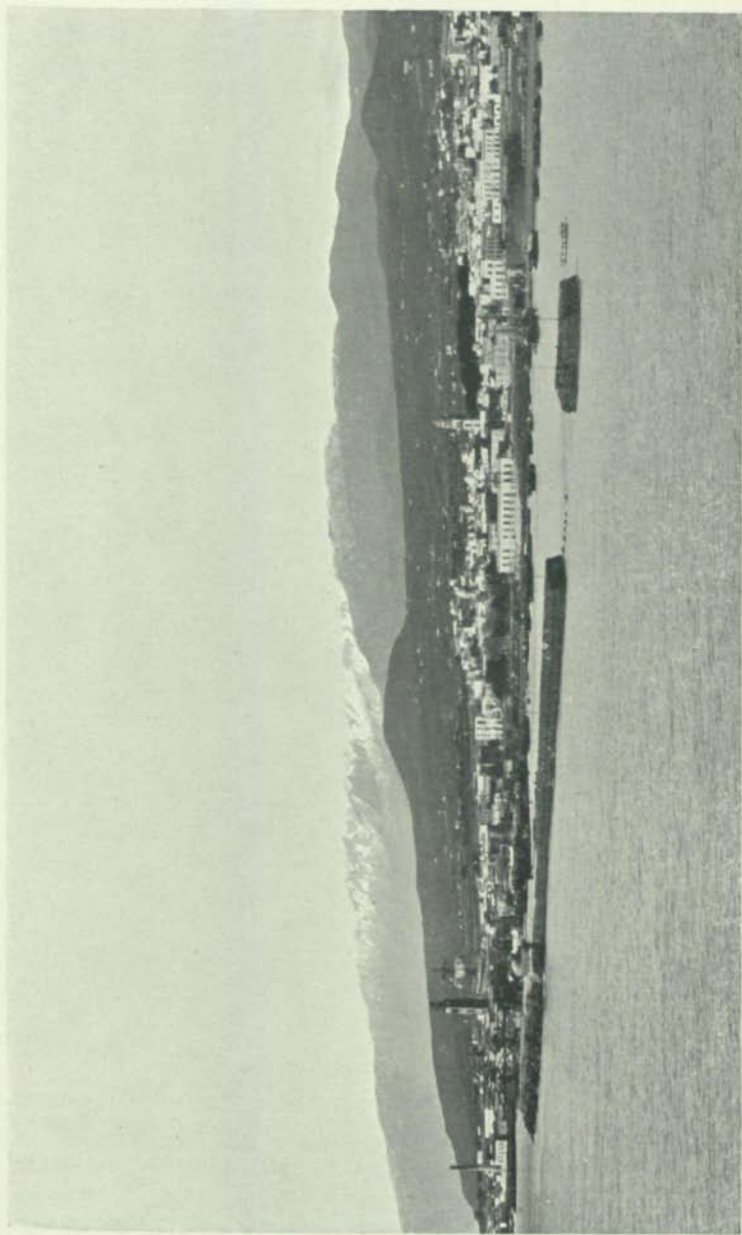
**Electric Tramway.**—This starts from the Mole at the bottom of the town and runs to La Laguna, 11 kils. (7 miles), 45 min., and Tacoronte, 20 kils. (12½ miles), 1½ hrs. Cars up and down each hour. Fare to Laguna, 1'45 pes.; to Tacoronte, 2'80 pes. For motor cars, etc., beyond Tacoronte see p. 152.

**Cabs for Hire** (*Coches de Punta*).—Fares inside town, 50 centimos each person; by time, 1 or 2 persons, 2 pes. per hour, and each additional person, 50 centimos. From 8 p.m. till 12 p.m. 50 % extra. During night, double. Children under 7, free. Outside town make special arrangements. Approximate fares: (from the Plaza or Mole) to the Valle Bufadero, 3 pes.; San Andres, 10 pes. If ordered to time, 1 pes. extra. Further charges for waiting about. For urban limits demand tariff card.

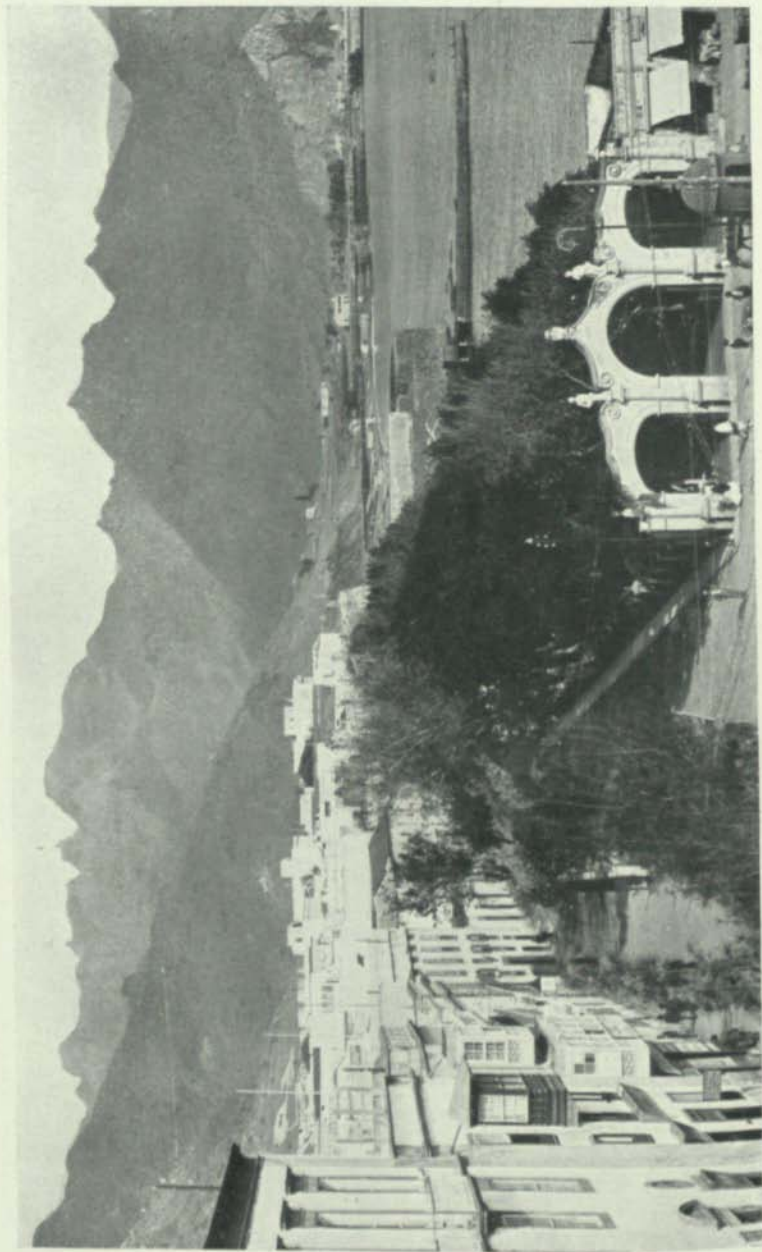
For conveyance of luggage, hired carriages, etc., etc., see at the end of the description of Tenerife.

The main street is indifferently known as the Calle del Castillo (old name) or Alfonso XIII. (new name).

**Public Buildings.**—Palacio Municipal (Town Hall), a fine building in the upper part of the town, erected in 1906, frequently called the Ayuntamiento.—The Gobierno Civil, on the Plaza de la Constitucion. The *patio* is one of the best designed courtyards in the island.—The Captain-General's Palace (Capitanía General), facing the Plaza de Weyler at the top of the town.—Hall of the Diputacion Provincial, Calle Teobaldo Power.—Municipal Court (Juzgado Municipal), in the ex-Convento de San Francisco.—Custom House (Delegacion de Hacienda), a little to the South of the Mole.—Juzgado de 1ª Instancia, etc., next to the Custom House.—The Theatre and Market Place (*Recoba*), close together on the site of the old Dominican monastery. The Theatre will hold 764 people.—Bull Ring (*Plaza de Toros*), a large stone circular building at the top of the town (Salamanca).—Cock-pit (Circo gallera), in the Calle de Santa Clara.—Museum, in the ex-Convento de San Francisco, open daily 1 to 4, Sundays 9 to 11, with a few good pictures and a collection of Guanche remains, etc.; Library (Biblioteca), in the same building, about 14,000 volumes, week-days, 1 to 4 and 7 to 9. A new building in the upper part of the town near the Town



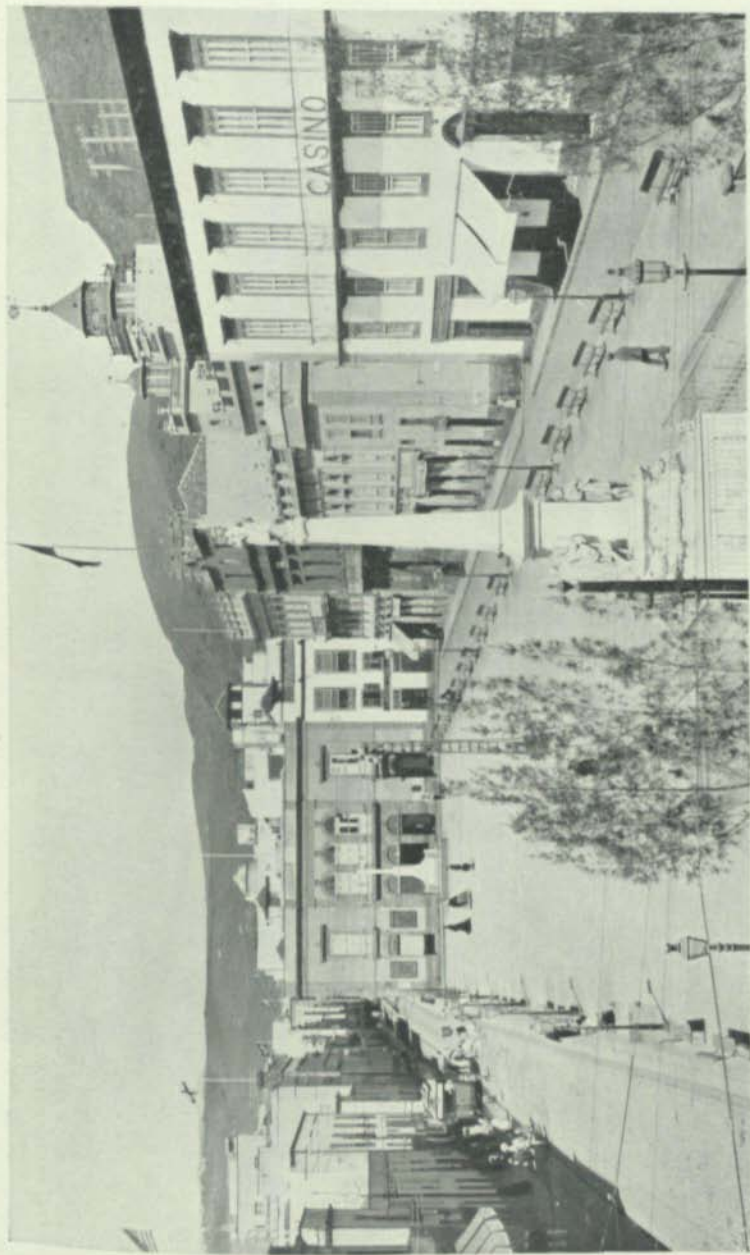
*From a photograph by the Fotografía Alemana.*



*Figura 4. Photograph by the Fotografía Alemana.*

La Marina, Santa Cruz, Tenerife.  
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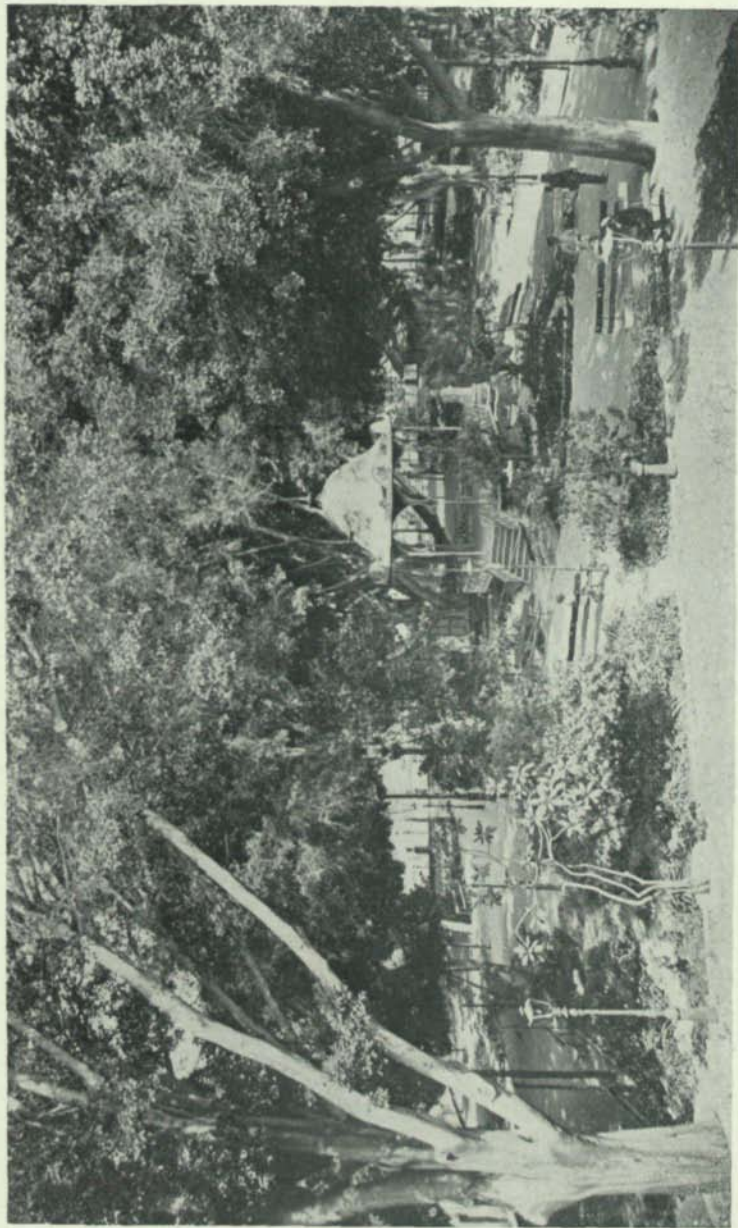




*From a photograph by the Fotografin Alemana.*

Plaza de la Constitución, Santa Cruz, Tenerife.

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*From a photograph by the Fotografía Alemana.*



*From a photograph by D. Lucio de Aguilar.*

The Mole and Harbour, Santa Cruz, Tenerife.



*From a photograph by D. Lucio de Aguilar.*

The Bull Ring (Plaza de Toros) Santa Cruz Tenerife.





*From a photograph by D. Carlos Schwarz.*

Plaza de Weyler, Santa Cruz, Tenerife.



*From a photograph by D. Carlos Schwarz.*

Hall is being erected to serve the purpose of Museum, Library, Picture Gallery, etc., mainly from funds bequeathed by the Marques de Villasegura.—Masonic Lodge, near the Town Hall.

Hospitals.—The Civil Hospital, a large building on the south of the town, admirably managed and open when free to foreigners. The charge for a private room and medical attendance is moderate.—Hospital de Niños (children), an institution ably supplying a much-felt want.—The Military Hospital, a little to the West of the Plaza de Weyler.—The Lunatic Asylum (Manicomio), in the open country to the N.W. of the city.—The Cruz Roja (Red Cross) Society has its premises at the top of the Plaza del Principe.

Schools, etc.—The Public Elementary Schools (Escuelas Publicas Elementarias) (both sexes); the Instituto de Enseñanza, both near the Town Hall; Escuela Superior de Comercio, in the upper floor of the Town Hall, and others in the town. To the S.W. of the town the Convento de la Asuncion (one of the many branches of the Convent de Val Notre Dame at Liège), a handsome building with large grounds (for girls only).

There are several forts commanding the bay and protecting the town. Entrance, etc., strictly prohibited unless permission be obtained.

Churches—Iglesia de la Concepcion (often called the Cathedral) is a rambling building with five naves and a square tower 166 feet in height. Commenced early in the 16th century, *i.e.*, just after the conquest, it gradually increased in size as the town grew. In 1652, it was burnt down. There has never been any attempt to improve it architecturally and its only charm lies in the interior, where there is some excellent carved woodwork, both on some of the altars and in the unfinished Capilla de Carta. Amongst the sacred relics are two of Nelson's flags, taken in 1797. They are enclosed in a glazed case, which hangs in the central chapel on the north side. There is also a piece of the true cross, which may be seen and kissed on May 3rd; part of the thigh-bone of Pope Clement; the cross planted by the Conquistadores on their arrival in the island and other relics. The vestments and plate are worth seeing.—The Iglesia de San Francisco, founded in 1680, tower in 1777, about which time the whole building was restored, is of pleasing appearance and has a good frontage. The interior, which is paved with marble, has three naves. The monastery adjoining is now used as a prison, a court of justice, a school, etc., etc. The Capilla de Dolores faces the Calle del Tigre, and adjoins the Church just described.—Iglesia Del Pilar, A.D. 1774, a Church with a very well-designed roof.—Ermita de San Telmo,—de N.S. de Regla,—de S. Sebastian.

The English Church is in the upper part of the town. It is a well-designed, grey, gothic building. Subscriptions are received by Messrs. Hamilton and Co. At present services are held during the winter only.

**Cemeteries.**—To the south-west of the town. The old Spanish cemetery dates from 1811. It took 12 years to bring the necessary depth of earth. A new cemetery was commenced in 1909. The Protestant cemetery dates from 1837.

The Lazareto lies away beyond the cemeteries near the sea.

**Squares and Gardens.**—Plaza de la Constitucion, paved with stone, and the favourite promenade of an evening, when it is a blaze of electric light. The marble group at the lower end is supposed to represent the lost image of the Virgen de Candelaria (*see* Candelaria), supported by the four Guanche Kings first converted to Christianity. The old fort of San Cristóbal, just below the Plaza, is that in which George Glas was imprisoned in 1776. There is some talk of knocking it down and leaving the Plaza open to the sea.—Alameda del Principe de Asturias (or de la Libertad), behind the Iglesia de San Francisco, a shady square planted with Indian laurels. The band plays occasionally in this square, and in the Plaza de la Constitucion.

The Plaza de Weyler, at the top of the Calle del Castillo, planted with trees and adorned with a handsome marble fountain.—Alameda de Ravenet or de la Marina, adjoining the Mole.—

El Muelle (the Mole), where the air is always deliciously cool of an evening, even during the hottest part of the summer. It was commenced soon after the arrival of the Spaniards, and was repaired in 1585; but, until the nineteenth century, was only a few yards in length. Though greatly extended of late years, for some time it has been quite unable to meet the demands of the vastly increased commerce of the island. Various proposals have been made for the completion of the harbour, including the construction of an enormous break-water at San Andres, 5 miles away, but so far no definite scheme has been accepted.

Santa Cruz is a picturesque and pleasing town, full of handsome balconies, cool shady patios and quaint nooks and corners. The "miradores" or "view-towers" placed on the roofs prevent any idea of uniformity, whilst the projecting eaves of inverted gutter-pipes and long wooden gargoyles help to lend shade, effect and depth to the sunny streets and lanes.

Unfortunately there is a tendency to destroy or remove the old and the beautiful, and to substitute buildings that are pretentious and inappropriate. Still the "Plaza" and the Calle del Castillo are bright and agreeable by day, and by night, especially when the band plays, they are animated to a degree. Of a fine evening



they are sometimes crowded with laughing, chattering groups of ladies and girls, as smart and as pretty as any of their Andalusian cousins to be seen in Seville or in Cadiz. Needless to say there are also men there on these occasions.

Altogether it is a well-recognised fact that the Spanish society of Santa Cruz is the most lively to be found in the Canary Islands.

Towards the back of the city, which is connected with the Mole by a well-paved road conducted at an easy gradient, the land rises gradually to the *Camino de los Coches*, the name given to a pleasant avenue of pepper-trees, oleanders and geraniums commanding a good view of the town, with the two church towers conspicuous in the foreground and Grand Canary dimly visible on the horizon. A soft breeze generally makes itself felt up here and a stroll along the avenue is agreeable at all times.

Just above the English Church and on the steeper slopes behind the *Camino de los Coches* is a group of hotels and gardens, the construction of which has given a new importance to Santa Cruz, converting it into a first-class winter sanatorium where those may stay who find the warm, dry climate beneficial to their health and comfort.

During late years a number of new buildings have been erected just below this avenue in what is known as the Barrio de Ensanche or Toscal (los Hoteles), connecting the lower town with Salamanca, the name given to the quarter where the Bull Ring (Plaza de Toros) stands. The surroundings are pleasant and salubrious. The cheerful and excellent positions on the Marina fronting the sea, however, have been somewhat overlooked.

On the N. and N.W. of Santa Cruz lie the arid ridges of Anaga Promontory. On the W. and S. the land rises in a great slope towards La Laguna and the mountains round the Peak, the latter being scarcely visible from the city.

The public gardens are shady, and the view of the harbour from the town animated and picturesque. Visitors wishing to gain an idea of the town and neighbourhood without much trouble are recommended to ascend the tower of the Concepcion Church.

The climate is very good, but, for various reasons, chiefly because of the want of water, Santa Cruz has only just begun to receive the attention it deserves. The inside of the town is certainly very hot in the summer, but the heat rarely approaches that commonly experienced in London or Paris during the dog days, though it extends over so long a period that it becomes trying. There is, however, no reason whatever why people should not live there all the year round. The mean summer day maximum is about 80° F.

In the winter, the few additional degrees of warmth, as compared with that to be found in other resorts on the sea level such as Puerto Orotava, Las Palmas or Funchal and the very large average of bright sunshine are, to many, a great advantage. Illnesses complicated by rheumatic or asthmatic symptoms will probably find Santa Cruz particularly adapted to their cases. The percentage of clear sky and the consequent radiation of heat into space are reflected in the daily range of the thermometer as given in the Meteorological Tables. See page *e3*.

The chief *fiesta* in Santa Cruz is on the third of May, the anniversary of the day when the cross was first planted on the shores of Teneriffe.

**Walks and Excursions from Santa Cruz.**—The Laguna road is described later on.

The water course (*atarjía*) which crosses the hills behind and above the town can be followed in either direction. It is reached from the back of the Quisisana Hotel or by keeping up the road past the Pino de Oro Hotel at the back of the town. At about 10 min. to the right, keep on through a deep cutting and some short tunnels. The masonry affords a level and most charming walk, overlooking the Barranco de Ameida and eventually leading to the Aguirre springs in about 3 hrs. It is possible to reach La Laguna by bearing off to the left at the top in about 5 hrs., or Taganana, by bearing to the right in about 6 hrs. total.

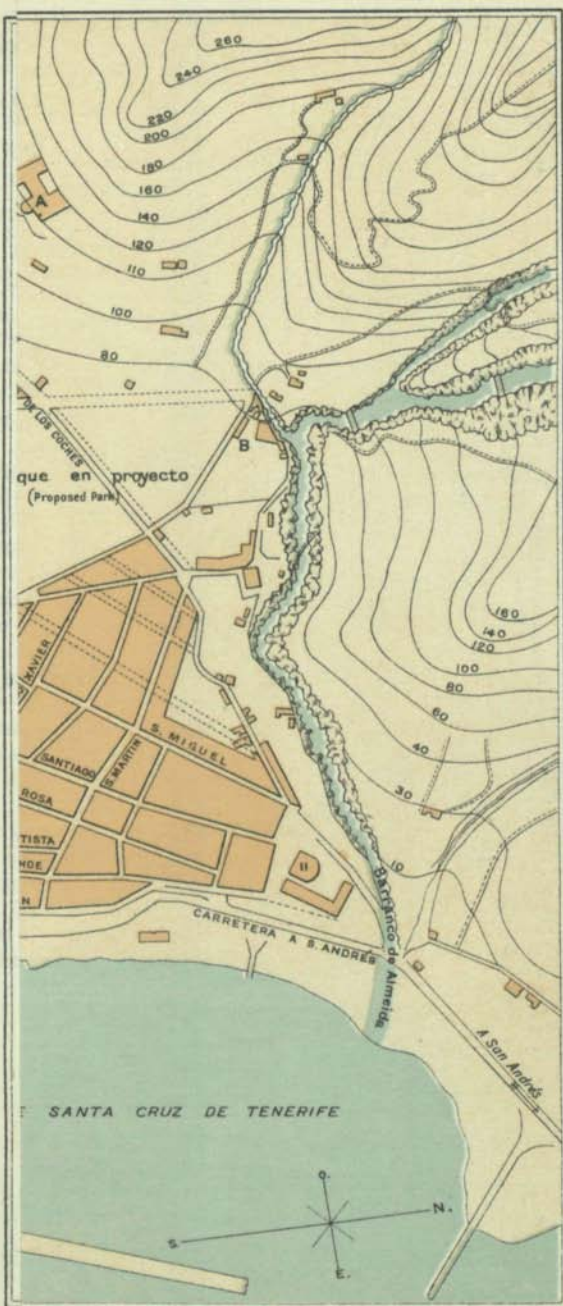
The level carriage road leading to San Andres is a beautiful drive. At  $2\frac{1}{2}$  m. (4 kils.) is the Valle del Bufadero, the spot where the Spaniards first landed and which has more than once been used as a base of operations against the city. It is now defended by a battery.

The hill on the city side of the barranco, 1,500 ft., 1 hr. from the road, commands a magnificent view of the Peak, etc., and is well worth climbing. The path ascends from the telegraph hut.

The path leading up the valley divides at about twenty minutes from the road. To the left is a pretty walk by a stream. Crossing this at about 1 hr. up, an easy ascent leads to the summit of the ridge, 2,680 ft., in about  $2\frac{1}{2}$  hrs. To the right a steeper but more direct path leads to the top in about  $2\frac{1}{2}$  hrs. (After passing through about half-a-mile of heather, a narrow and insignificant track which turns to the right through some rushes is that which must be taken for the Lighthouse.)

Keeping straight on, a slight ascent leads to 2,980 ft. (whence a fine view of the Peak), and the path descends to the Cruz de Taganana, 2,800 ft.,  $2\frac{1}{4}$  hrs., see under La Laguna. The path along the ridge connecting La Laguna with the Lighthouse is more fully given under excursions from La Laguna.

The above are the prettiest ways from Santa Cruz to Taganana. That on the left is more or less practicable for horses and donkeys. The right hand valley is, perhaps, to be preferred by those on foot. Times are given as from the *carretera*.

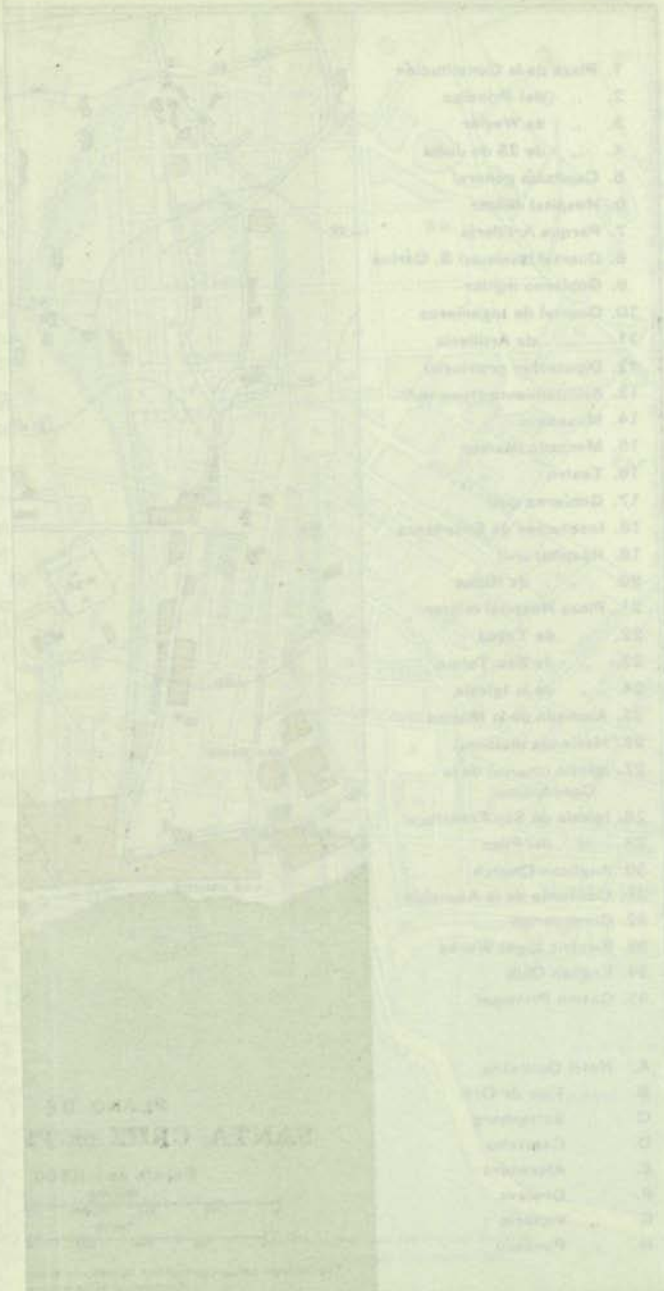




1. Plaza de la Constitución
2. .. del Principe
3. .. de Weyler
4. .. de 25 de Julio
5. Capitanía general
6. Hospital militar
7. Parque Artillería
8. Cuartel (Barracks) S. Carlos
9. Gobierno militar
10. Cuartel de Ingenieros
11. .. de Artillería
12. Diputación provincial
13. Ayuntamiento (Town Hall)
14. Museos
15. Mercado (Market)
16. Teatro
17. Gobierno civil
18. Institución de Enseñanza
19. Hospital civil
20. .. de Niños
21. Plaza Hospital militar
22. .. de Toros
23. .. de San Telmo
24. .. de la iglesia
25. Alameda de la Marina
26. Hacienda (Customs)
27. iglesia (Church) de la Concepcion
28. Iglesia de San Francisco
29. .. del Pilar
30. Anglican Church
31. Convento de la Asunción
32. Cementerios
33. Electric Light Works
34. English Club
35. Casino Principal

- A. Hotel Quisiana
- B. .. Pino de Oro
- C. .. Battenberg
- D. .. Camacho
- E. .. Alexandra
- F. .. Orotava
- G. .. Victoria
- H. .. Panasco





PLANO DE  
 SANTA CRUZ DE TENERIFE  
 DISEÑADO POR DON JUAN DE  
 MORALES Y FIGUEROA  
 EN EL AÑO DE 1763

- 1 Plaza de San Francisco
- 2 Plaza de San Juan
- 3 Plaza de San Pedro
- 4 Plaza de San Pablo
- 5 Plaza de San Agustín
- 6 Plaza de San Mateo
- 7 Plaza de San Sebastián
- 8 Plaza de San Carlos
- 9 Plaza de San Juan de los Rios
- 10 Plaza de San Antonio
- 11 Plaza de San Andrés
- 12 Plaza de San Jerónimo
- 13 Plaza de San Basilio
- 14 Plaza de San Vicente
- 15 Plaza de San Juan de la Virgen
- 16 Plaza de San Mateo
- 17 Plaza de San Sebastián
- 18 Plaza de San Carlos
- 19 Plaza de San Juan de los Rios
- 20 Plaza de San Antonio
- 21 Plaza de San Andrés
- 22 Plaza de San Jerónimo
- 23 Plaza de San Basilio
- 24 Plaza de San Vicente
- 25 Plaza de San Juan de la Virgen
- 26 Plaza de San Mateo
- 27 Plaza de San Sebastián
- 28 Plaza de San Carlos
- 29 Plaza de San Juan de los Rios
- 30 Plaza de San Antonio
- 31 Plaza de San Andrés
- 32 Plaza de San Jerónimo
- 33 Plaza de San Basilio
- 34 Plaza de San Vicente
- 35 Plaza de San Juan de la Virgen
- 36 Plaza de San Mateo
- 37 Plaza de San Sebastián
- 38 Plaza de San Carlos
- 39 Plaza de San Juan de los Rios
- 40 Plaza de San Antonio
- 41 Plaza de San Andrés
- 42 Plaza de San Jerónimo
- 43 Plaza de San Basilio
- 44 Plaza de San Vicente
- 45 Plaza de San Juan de la Virgen
- 46 Plaza de San Mateo
- 47 Plaza de San Sebastián
- 48 Plaza de San Carlos
- 49 Plaza de San Juan de los Rios
- 50 Plaza de San Antonio
- 51 Plaza de San Andrés
- 52 Plaza de San Jerónimo
- 53 Plaza de San Basilio
- 54 Plaza de San Vicente
- 55 Plaza de San Juan de la Virgen
- 56 Plaza de San Mateo
- 57 Plaza de San Sebastián
- 58 Plaza de San Carlos
- 59 Plaza de San Juan de los Rios
- 60 Plaza de San Antonio
- 61 Plaza de San Andrés
- 62 Plaza de San Jerónimo
- 63 Plaza de San Basilio
- 64 Plaza de San Vicente
- 65 Plaza de San Juan de la Virgen
- 66 Plaza de San Mateo
- 67 Plaza de San Sebastián
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- 87 Plaza de San Sebastián
- 88 Plaza de San Carlos
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- 90 Plaza de San Antonio
- 91 Plaza de San Andrés
- 92 Plaza de San Jerónimo
- 93 Plaza de San Basilio
- 94 Plaza de San Vicente
- 95 Plaza de San Juan de la Virgen
- 96 Plaza de San Mateo
- 97 Plaza de San Sebastián
- 98 Plaza de San Carlos
- 99 Plaza de San Juan de los Rios
- 100 Plaza de San Antonio



San Andres, 5 m. (8 kils.) is a dirty, uninteresting fishing village where nothing beyond wine and biscuits can be procured. There is an old martello tower by the beach, which partially fell down in 1895.

From San Andres a path leads up the valley to the central ridge, 2,680 ft., in  $2\frac{1}{2}$  hrs. Owing to the finely divided condition of the basalt in this ravine, the scenery is tame. The descent to Taganana is much finer. Time  $3\frac{1}{2}$  hrs. This is the route generally taken by those riding from Santa Cruz to Taganana. A track to the right half-way up joins the central path along the ridge and leads to the village of Anaga (no inn, no food), and to the Lighthouse. San Andres to Anaga about  $3\frac{1}{2}$  hrs.

Beyond San Andres a path, best on foot, leads to Igueste in 1 hr. No inn. After this the coast must be left and the track up the barranco takes to the central path, 2 hrs., and Anaga, 2,000 ft.,  $2\frac{1}{2}$  hrs. (from Igueste). For the descent to the Lighthouse and Taganana, *see* excursions from La Laguna.

The scenery along the ridge is some of the finest in the archipelago, and the Barrancos del Bufadero, de Igueste, and de Chamorga (between Anaga and the Lighthouse) are all beautiful. Many of the paths are bad and slippery after rain, and a guide is advisable in the hills.

The Semaphore, visible from Santa Cruz, stands 730 ft. above the sea.

A *précis* of times on foot is:—Bufadero,  $\frac{3}{4}$  hr.; San Andres,  $1\frac{3}{4}$  hrs.; Igueste,  $2\frac{3}{4}$  hrs.; Anaga,  $5\frac{1}{4}$  hrs.; Lighthouse,  $6\frac{1}{2}$  hrs.; Taganana,  $9\frac{1}{2}$  hrs.; (Anaga to Taganana direct, 3 hrs.); up the Vueltas to the Cruz de Taganana, 11 hrs.; Laguna,  $14\frac{1}{4}$  hrs. (or from the Cruz de Taganana *viâ* the Valle del Bufadero to Santa Cruz, 14 hrs.) total. From Santa Cruz to the Bufadero,  $\frac{3}{4}$  hr.; to the Cruz de Taganana,  $3\frac{1}{2}$  hrs.; to Taganana,  $4\frac{1}{2}$  hrs. total.

It is proposed to continue the *carretera* from San Andres to Taganana, *i.e.*, to add another  $10\frac{1}{2}$  miles ( $16\frac{1}{2}$  kils.). At the 14 kil. post, a branch,  $2\frac{1}{2}$  kils. long, would be carried to Igueste.

The population of all the villages between Santa Cruz and the Lighthouse are included in the figures given for Santa Cruz.



## To the South of the Island.

(For Public Coaches, see Table at the end of the description of Teneriffe.)

Santa Cruz to Candelaria, Güimar, Vilaflor, Adeje, Valle Santiago, and round to Icod de los Vinos.

Take the Laguna road up the Cuesta, where the electric tramway works are, 40 minutes driving, 960 feet,  $3\frac{3}{4}$  miles, 6 kils., or by electric tram, 20 minutes. For further details along the way, see road to La Laguna. From the venta bear round to the south along the Güimar road.

The country passed through is dry and not particularly interesting. The woods on the right (La Esperanza) are best reached from La Laguna itself. At 8 miles (13 kils.) San Isidro is passed, and at 11 miles (17 kils.) the half-way house, 875 feet.

At 12 miles the village of Barranco Hondo (1,312 ft.) is seen well up on the right, followed shortly after by the romantically situated village of Iguete de Candelaria, 13 miles (21 kils.).

A bridle path leads from the *carretera* to Iguete in about  $\frac{1}{2}$  hr.; to the Cumbres in about 2 hrs., and down to Tacoronte in about  $3\frac{1}{2}$  hrs. total. The views from the top are very fine. Described more fully under Tacoronte.

The broad valley of Güimar is now fully exposed. At 16 $\frac{1}{2}$  miles (26 kils.), 282 feet, a path leads down to Candelaria and the sea ( $\frac{1}{2}$  hr.). Pop. 2,345. Beds possible. Candelaria is to be connected with the high road by a *carretera* 3 kils. long.

On the Playa (beach) de Chimisay (Socorro) the famous image of the Virgin and Child, found in possession of the Guanches, is said to have appeared in 1393 to two Guanche goatherds, who suffered from trying to drive it away. Certain miracles having convinced the Guanches of its sanctity, it was held in great reverence. Sancho de Herrera stole it in 1464 and carried it to Fuerteventura, but, plague breaking out, was forced to bring it back again. In 1826, it was lost in a flood which broke from the mountains and carried the image and part of the monastery into the sea (see "Storms"). The image was probably the figure-head of some ship. At the feast of the Candelaria (August 15), and again on February 2, large numbers of pilgrims visit the village, in which there are an old church and Dominican monastery. The monastery was founded in the 16th century and contained cells for some 30 friars. It was never completed. The cave of San Blas (Guanche *achbinico*) in which the Guanches kept the image may still be seen. The pictures are interesting. Mass is occasionally held there. A few of the villagers are employed in making pottery.

A little further on the main road crosses a stream of lava and at 17 miles (27 kils.) passes the carriage road leading up to Arafo, a large village some two miles above the *carretera*, 1,570 ft. above

the sea and situated on the so-called Pilgrims' Route between Candelaria and the neighbourhood of Orotava. There is no inn but beds may be had with difficulty. Pop. 1,604.

Above Arafo a path leads in 35 minutes to the **Bco. Cambuesa** where a tunnel has been sunk for about 500 yds. in search of water, but without result. Keep to the right up the narrow precipitous cañon known as the **Bco. Anavingo** to the tunnelling works ( $1\frac{1}{2}$  hrs.) where water has been struck. The surroundings are of a terrible and imposing grandeur.

Legend says that all hope of finding water had been given up and work stopped, the very future of the village being endangered by the fact that a spring, previously existing, lost itself in some crevice unfortunately broken into by the workmen. However a solemn procession was held and the images of the saints were carried up the ravine. On the way the cortège was joined by a miraculous blackbird, which marched solemnly in front, pointed out the stone which had to be removed, and disappeared in a cloud of glory at the same moment that the much-desired water gushed forth from the rock.

From Arafo a pass leads over **Pedro Gil**, 6,800 ft.,  $3\frac{1}{2}$  hrs., to **Villa Orotava**, 6 hrs., joining the Güimar route just below the Volcan de Arafo, *see* Güimar.

Another pass known as the **Pilgrims' Route** leads over the Cumbres, 5,650 ft., to **Victoria** in about 6 hrs. It is not so beautiful as that over **Pedro Gil**, but there is less climbing. A descent from the summit can be made to **Villa Orotava** *via* la Cuesta de Bacalao and Florida,  $6\frac{1}{2}$  hrs., or the *carretera* can be joined at **Sta. Ursula, Victoria, Matanza, etc.**, in about 6 hrs. There is a path along the saddle back to the N.E. leading to **Tacoronte, La Esperanza, La Laguna, etc.**, which is easy enough when fine, but dangerous in foggy weather. Those losing their way in a fog should choose some well marked track and bear N. not S., because the barrancos to the S. absolutely prevent further progress. See also under Tacoronte.

Leaving the Arafo road behind, a more recent stream of lava (A.D. 1705) is crossed, a remarkable example whose hollowness in parts admits of entrance. At 20 m. (32 kils.),

**Güimar**, 985 ft., a scattered village of 5,120 inhabitants and one of the most popular winter resorts in the Islands is reached.

**Hotels.**—El Buen Retiro, English Hotel, finely situated well above the town, with pretty characteristic garden, 9s. to 10s. a day; small Spanish inn, about 5 pes. a day.

Pension Sunnyside, well-chosen position, inside own grounds, facing south, monthly terms from 6/6 per day.

(For advertisements, see under Güimar at the end of the book.)

The climate of Güimar is sunny, dry and of the gently stimulating order. It has proved of great service in several cases of pulmonary affection. Both the hotels occupy airy positions some 1,200 feet above the sea.

From the hotels in Güimar, 1,200 ft., there is a very fine view of the valley and the course of the two lava streams emanating from the volcan de Arafo is easily traced. With the exception of these streams and a few distinctly recent deposits, the grit beds forming the surface of the valley and of the neighbouring slopes to a height of at least 5,000 feet would seem to have been laid in



their present position at a time when the country was covered by water, perhaps by the sea.

It is proposed (1910) to make a *carretera* from Güimar down to the sea and to establish a service of boats.

**Excursions from Güimar.**—To **Arafo**, 40 minutes on a mule.

To the **Barranco Añavingo** (2 hrs.), see below Arafo.

To the wild and precipitous **Bco. Badajoz** ( $1\frac{1}{2}$  hrs.), inside which the Cueva del Cañizo of the Guanches is to be seen far up on the left. The original beams are plainly visible, but access is now very difficult. The Madre del Agua (source) is about 2,500 feet above the sea. This is a very fine walk.—To the **Bco. del Río** ( $1\frac{1}{2}$  hrs.), a very beautiful ravine from which most of Güimar water is derived, in which the vegetation is particularly luxuriant and includes many rare plants and ferns. All these barrancos are mere chasms worn by water.

The atarjea connecting the waters of the two barrancos crosses the Lomo at a height of 2,370 feet. It can be followed from one ravine to another in about  $\frac{1}{2}$  hr., or a rather longer but less dangerous path, coming from the bed of the Barranco Badajoz, can be taken.

**To the Peak.**—A track to the N. of the Barranco del Río leads to the Cumbres, then swerves to the left and descends to the Cañadas which it crosses to the Montaña Blanca where it meets the track from Villa Orotava. Time to Alta Vista about  $9\frac{1}{2}$  hrs. For further details see under Villa Orotava. The keys of the hut can be obtained at the Hotel Buen Retiro, Güimar.

**To Villa Orotava, etc., viâ Pedro Gil.**—A steep climb leads through the Monte Verde and to the junction with the path leading up from Arafo,  $2\frac{1}{4}$  hrs., 4,950 ft. A wide expanse of black sand is crossed and the remarkable gorge known as the **Valle** is entered, one of the most stupendous efforts of eruptive force to be seen in the world. A sketch and a description of this will be found in the "Geological" article. (See Garganta de Güimar.)

The gap appears to have been absolutely thrown into space. Attention is called to the direction of the strata exposed on each side and to the want of similarity between the two surfaces. The N. side of the gate is strangely intersected by a perfect network of dykes.

The interest does not diminish on the way up to the summit of **Pedro Gil**, 6,800 ft.,  $3\frac{1}{2}$  hrs., whence there is a good view of the Peak and Cañadas.

Turning to the left, a descent amidst barren rocks leaves **Agua Mansa**, 3,930 ft., 5 hrs., about a mile to the right, and enters the **Villa** at the extreme top. Time, about 6 hrs., total.

Instead of descending into the valley of Orotava, a path to the left leads from Pedro Gil into the Cañadas in about 2 hrs. and so on to Vilaflor, see elsewhere. It is also possible to reach La Laguna, etc., by turning to the right, see Pilgrims' Route under Arafo.

**To Villa Orotava, etc., viâ Arafo and the Pilgrims' Route.**—To Arafo, 40 minutes. For further details, see Arafo.

**To Mña. Grande, Socorro and Candelaria.**—Some  $\frac{1}{2}$  hr. below Güimar, to the right of the path to Socorro, is the cup-shaped fumarole known as the Mña. Grande, 960 feet, 1 hr., easy of ascent. The unbroken crater is about 200 feet deep and 1,025 yards in circumference. Volcanic bombs are scattered plentifully round the edge. The bird's eye view of the valley is very fine.

About 1 hr. from Güimar is Socorro (Guanche, *Chimisay*), where there is a deposit of the fine tufa from which the celebrated drip-stone filters are made. The famous Virgen de Candelaria was found here and was first conveyed to the Cueva de Chinguaro, in a barranco,  $\frac{3}{4}$  hr. from Socorro, and near the old *camino real* from Güimar to Candelaria. The Cueva was then the residence of the Mencey of Güimar, and is now an Ermita with a tiled roof. The most prominent object near it is a round tower-like building.



Leaving Socorro the path crosses dry, barren slopes, where there is a small fossil bed. Calcareous casts of plants are numerous, and the method by which they are produced can be observed in its several stages. The living plant, gradually buried by drifting sand, dies and rots away, the vacant space being filled up by calcareous matter. The peculiar poisonous plant known as the Verolillo, very rare in the island, grows abundantly here.

At about  $2\frac{1}{2}$  hrs. Candelaria is entered.

Beyond Güimar the road crosses a wide stony barranco and ascends the Ladera de Güimar, a steep volcanic wall bounding the south of the valley, of which latter there is a very fine view at the bend ( $2\frac{1}{2}$  m., 4 kils.).

The country from here to Adeje is dreary and arid to a degree, a thin fringe of forest land above being a very inadequate reservoir for the dry tufa plains below, which are generally of the second period of formation. Botanists will find the vegetation of interest, but the travelling is hard and the scenery nil. The few points worth seeing will be noticed in their proper places. The productions are a quantity of white wine, potatoes, tomatoes, grain and formerly cochineal. The easiest way to reach any given point is to go by boat to the respective port, generally 1 to 2 hours below the village, or to come over the Cañadas. Some of the fruit boats touch at Abona, Medano and Abregos, on their way to and from Gomera.

At 28 m. (45 kils.), 2 hrs. on foot from Güimar, the *carretera* passes Escobonal, 1,530 ft.

Those going on beyond Escobonal must now accept the times given in this book as being on foot from Güimar.

Passing below Escobonal the deep Barranco Herques, 3 hrs., is crossed by a bridge (water is generally to be found by digging a hole in the sand at the bottom). At  $3\frac{1}{2}$  hrs., Fasaia, pop. 1,796, 31 m. (50 kils.) (wine shop), where the *carretera* ends, and whence a path descends through an absolute desert to the sandy beach,  $4\frac{3}{4}$  hrs., where the bathing is excellent.

The desert is not without its interest and the gnarled and twisted plants of the *tabaiba dulce*, whose age is often apparently far greater than that of the oldest dragon trees, are a conspicuous feature. The calcareous deposit accumulated on the surface of the various strata of the tufa, which was perhaps deposited in its present position whilst this part of the island was covered by the sea, cannot fail to attract attention. It is always impervious to moisture and in some places so hard that the traffic of centuries has failed to break through half an inch of it. Water will be seen oozing from above it in the roadside cuttings and it must be an important factor in preventing the escape of water into the sea by means of subterranean filtration.

According to the proposed route of the *carretera* to be carried round the south of the island, the approximate distances from Güimar to the principal places passed through will be as follows:—

Icor, 35 m. (56 kils.). Arico Junction, 38 m. ( $60\frac{1}{2}$  kils.), whence to village  $2\frac{1}{2}$  kils. Lomo Junction,  $39\frac{1}{2}$  m. ( $63\frac{1}{2}$  kils.), whence to village 4 kils. Rio, 41 m. (66 kils.). Granadilla, about  $47\frac{1}{2}$  m. (76 kils.). San Miguel, about  $52\frac{1}{2}$  m. (84 kils.). Valle de S. Lorenzo, about 55 m. (88 kils.). Arona, about  $57\frac{1}{2}$  m. (92 kils.). Adeje, about 64 m. (102 kils.). Guía, about 75 m. (120 kils.).

It is proposed to carry a road from Guía to Villa de Santiago, 20 kils.; E. Tanque, 25 kils., and Icod de los Vinos, 31 kils., where it will effect a junction with the *carretera* now serving the north of the island. Should this project ever be completed, there would be a drive round the slopes of Tenerife of 132 m. (211 kils.), which would carry visitors past a strange diversity of scenery, varying from the sterile deserts below Arico to the verdant garden of the valley of Orotava, and from the orange groves of Granadilla or pine forests of Guía to the leafy shades of the laurel and heath trees at Agua García and beyond Las Mercedes.

At 6½ hrs., Arico, 1,188 ft., pop. 3,724 (beds), and at 7¼ hrs. Lomo de Arico, 1,765 ft. (beds), a few houses with a church. A *carretera* has been made from Arico to the Puerto de Abona, 4 m., 6½ kils., and a lighthouse has been built on Pta. Abona.

At 8¼ hrs., Rio, 1,419 ft. (venta) and at 10¼ hrs. the pretty village of

Granadilla, 2,026 ft., pop. 3,376. Fair inn with several beds, 4 to 5 pes. a day. The village is prettily situated on fertile soil, where some of the best oranges in Tenerife are grown. It has the advantage of being large enough to kill a beast occasionally and is the first place of any importance stopped at after leaving Güimar. A *carretera* has been made between Granadilla and the Puerto de Medano, 7 m., 11¼ kils.

**Excursions.—To the Coast where the Cable Hut stands.**—A 2 hrs. walk leads to Tejita, which is not at all a bad summer camping ground. The people living on the S. side do not go up the hills during the summer as is generally supposed, but down to the beach, where the eddy, caused by the deflection of the trade wind round the sides of the island, blows in cool from the sea. Higher up it is heated again by passing over the land. (See "Atmospheric Currents.") The fishing and bathing is also an inducement. There is a fresh-water spring near the beach.

**To Vilaflor, Orotava and Icod.**—A climb of about 2 hrs., foot or mule, leads to Vilaflor, 4,543 ft., pop. 1191, the highest village in the Canaries and a favorite summer resort. Fonda Amador, 5 pes. a day. At present there is little accommodation and access is difficult. There is a large church in the village, in which the marble statue of St. Peter is a good work. To the N.E. of the town are two mineral springs, of which the water is said to be a good tonic. The name Vilaflor is modern and has replaced that of Chasna, by which the village was formerly known. Telephone to San Miguel.

It is said that some Bishop, holy man, making the round of his diocese, came to Chasna and saw an extremely pretty girl in the street. Describing his experiences later on, he could not remember the name of Chasna, but said:—"Next I came to Granadilla and after that *vi la flor* (I saw the flower) de Tenerife." It will therefore be remembered that Vilaflor exists by sanction of the Mother Church.

A mountain called the **Sombbrero**, about 8,000 ft., commanding a magnificent view of the Peak and Cañadas, can be reached in about 4 hrs. from Vilaflor. There are also many romantic walks along the mountain sides and through the pine woods.

For ascent to the Cañadas, etc., 3½ hrs., from Vilaflor and routes to Orotava (10¼ hrs.) or Icod de los Vinos (9¼ hrs.), see under Orotava, Icod, etc. The distances from Vilaflor to such points as Santiago or Santa Cruz are also less by the Cañadas or Cumbres than they are by the lower road.



Bridle paths descend from Vilaflor to **San Miguel** and **Arona**, as well as to **Granadilla**, in about 2 hrs.

It is possible to reach **Arico** *viá* the **Pinar** and the **Bco. del Rio** in about 3 hrs., or **Adeje** direct from Vilaflor in about 3 hours by paths crossing the upper slopes.

Plans have been made for a *carretera* to connect Vilaflor with **Orotava** by way of the **Cañadas**. The necessary zig-zags would make this road about 60 kils. in length.

Leaving **Granadilla** the land passed through becomes more productive.

**San Miguel**, 1,950 ft., 11½ hrs., a substantially built village with an inn; about 5 pes. a day. A quantity of square paving stones (*losas*) are produced here for export to **Cuba** and **America** and for use in the islands generally. Pop. 1,785.

A path leads up to Vilaflor in about 2 hrs., and down to the coast in about 1½ hours. A *carretera* is to be made down to **Abrigos**.

Passing below **El Roque** and by the **Ermita de S. Lorenzo**, 12¼ hrs., the path crosses the fruitful volcanic valley **de los Hijaderos**, and enters

**Arona**, 2,085 ft., 13¼ hrs. (beds). Pop. 1,971.

Path up to Vilaflor about 2 hrs. Down to the **Port**, about 1½ hrs. (*Carretera* proposed.)

On leaving the village the **Roque del Conde** is left on the right and the path becomes very bad as far as **Adeje**.

**Adeje**, 990 ft., 15¼ hrs. **Fonda**, about 5 pes. a day. Distance from the sea, 1 hr. Pop. 1,705. Telegraphic terminus, 1910.

This village was formerly the residence of the **Guanche King Tinerfe the Great**. To-day nearly all the houses and the surrounding country belong to the family descended from the former **Counts of Gomera**, who were also at one time supreme lords of **Gomera**. They lived in the so-called **Casa Fuerte**, once one of the most interesting sights in the islands, but unfortunately destroyed by fire on April 9, 1902. It contained a handsomely decorated oratory, a few pieces of cannon, weapons, etc., also some of the utensils formerly used by the black slaves who worked in the sugar factory, which were still allowed to remain in the rooms where they lived. The owners were possessed of rights of *horca y cuchillo*, i.e., summary judgment and execution. An old rule mentioned in their archives states that all strangers must be granted hospitality for three days, after which they were to be shown where the door lay.

The church, built by the above-named family, contains a good altar and some handsome old tapestry, badly cared for and quite thrown away on the villagers. Unfortunately it is entailed. There are some curious old wall-paintings and some very old images, one of which, **N.S. de la Candelaria**, dates from the **Conquest**.

**Excursions from Adeje.**—To **Vilaflor** *viá* **Arona**, about 4 hrs. This route can be followed to **Santa Cruz** or to **La Laguna**.

To the **Boca de los Taucés (Cañadas)** *viá* **Teresme**, about 3 hrs., a road which is rarely used.



Up the **Bco. Infierno** to the waterfalls, 1,848 ft., 1 $\frac{1}{4}$  hrs., a grand walk through one of the most stupendous and remarkable chasms in the island. The left-hand waterfall, at the top, filters through a soft white rock, of which the solution deposits itself in the form of stalactites and as a horny pink or yellow covering on the stones.

Leaving Adeje, the Finca de la Hoya Grande, a large farm, is passed at 16 $\frac{3}{4}$  hrs. Below it a road leads to Los Mozos on the beach where there is a stone jetty. At 17 hrs. **Tijoco**, after which a wearisome succession of barrancos. At 18 hrs. the church of **Tejina** and, at 19 $\frac{1}{4}$  hours,

**Guia**, 1,800 ft. a large village with a church and an inn (about 5 pes. a day) about 2 hrs. above the sea. Pop. 3,323.

From here a path leads to the Cañadas, which are entered a little to the N. of the **Fuente del Cedro** in about 2 $\frac{1}{2}$  hours. A *carretera* is being made to the coast at the Playa de San Juan (1910).

Beyond Guia there are a number of lava streams to be crossed. At 20 hrs. **Chio**, 2,227 ft., is left a little to the right and a long ascent commences. The fringe of the pine forest is entered and the views of the western extremity of the island, with Gomera in the distance, become more and more imposing.

The traveller can, if he wishes, take paths from the neighbourhood of Guia or of Chio, which ascend at once and leave Arguayo to the left, entering the Valley of Santiago nearer to Chahorra, or bearing across the base of this mountain more directly to Icod. It is advisable to engage a local guide.

At **Arguayo**, 3,006 ft., 21 hrs., the Peak at last comes fairly into sight.

A path to the left, just below Arguayo, leads to the lower part of the Valle de Santiago, whence **Masca**, **Carrisal**, **Palmar** and **Buena Vista** can be reached.

Climbing to the base of the **Risco de Arguayo**, 3,729 ft., the mountain is encircled by a path commanding a wide and magnificent view. A rapid descent follows, the upper part of the valley is crossed and at 22 hrs. is the village of the

**Valle de Santiago**, 3,000 ft., 1,432 inhabitants. No inn but beds can be had. Lying as it does in a broad, windy gully, the place offers few attractions and the lack of accommodation does not invite travellers to stay long. It is, however, one of the best centres from which to explore this part of the island. The crater of 1909 can be reached in about 2 hrs. (see page 117).

**Palmar**, 1,650 ft., lies two hours to the N.W. and the track over the pass, as well as that leading to **Masca**, 2,070 ft., and **Carrisal**, 2,115 ft., command splendid views. For **Palmar**, **Icod de los Vinos**, 3 $\frac{3}{4}$  hrs. and neighbourhood, see under Icod de los Vinos and under Buena Vista.

It is advisable to take guides in the hills, but they are not wanted in the *camino real*.

N.W. road from Santa Cruz to La Laguna, Tacoronte, Orotava, Icod, Garachico and Buena Vista, with subsidiary excursions, etc., etc.

(For Carriages, Public Coaches and Luggage, see at end of Teneriffe. For Tramway, see under Santa Cruz. Those leaving Santa Cruz for Orotava are advised to start not later than 10 a.m. Lunch can be had at La Laguna, Tacoronte or La Matanza.)

The road leaves the back of the town and winds up the slope through terraces planted with cereals and the cochineal plant.

On leaving the town the Bull Ring and Salamanca are seen on the right. By bearing to the right either just by or just above the *fielato*, a pretty walk can be taken past a succession of water-dams and up the barranco as far as may be thought convenient. The country to the left of the *carretera* is not interesting.

A little further on, the old paved road, along which horse and foot passengers travel, leaves the *carretera*.

At 500 ft. and close to the *carretera* are some caves which may be entered and followed for some distance. Lights required.

At  $2\frac{1}{2}$  m. (4 kils.), 620 ft., the Restaurant Villa Benitez to the right of the road.

Half-way to La Laguna (40 min. driving, 20 min. by tram), the Café de la Cuesta, 960 ft.,  $3\frac{3}{4}$  miles (6 kils.), is reached, where the horses are generally rested. The main road to Güimar branches off here. Close by are the electric tramway generating works.

A little higher than the Cuesta a path on the right leads to the Valle de Jimenez, an isolated glen bounded by a precipice on the S. and separated from the vale of La Laguna by a range of bare basaltic hills on the N.

Still a little higher a second path leads to the Valle de Tabarez, a valley which is almost equally isolated, but which is broader, is provided with a small church and has a rather larger population.

At  $4\frac{1}{2}$  m. (7 kils.) an old house on the left, known as Macario is passed, in which Captain Cook slept when on his voyage round the world in 1772.

A little above this is the church of Sta. Maria de Gracia, the oldest in the island, founded by D. Alonso Fernandez de Lugo, the Conquistador. This is the spot where the Mencey of Anaga was killed in 1495. The Ermita de S. Roque, higher up in the hills to the right, is the place where Imobac Bencomo, King of Taoro, lost his life. (See "History.")

Gradually the air becomes colder and the eye turns from Santa Cruz, glittering in the sun with its white houses in strong contrast to the deep blue sea, and encounters the sombre towers of San Cristóbal de la Laguna. The keen air and grass-topped walls show how greatly the climate differs from that of the coast. The invalid should be well provided with wraps. The district was once the bed of a lake or marsh, and, although there is now no standing water, a great amount passes below the surface. The



land is extremely rich and free from stones, crops of all sorts growing most luxuriantly. On account of the low temperature the city is much frequented in the summer. During the winter the air is fresh and invigorating.

**La Laguna**,  $5\frac{1}{2}$  m. (9 kil.), 1,774 ft., 13,074 inhabitants. Seat of the Bishopric of the Teneriffe and the Western Canaries since 1819.

**Hotels.**—Hotel Aguerre, in the Calle Carrera, from 7s. a day.

Prices of Carriages, Horses, &c., at the end of Teneriffe.

La Laguna is connected with Santa Cruz by telephone.

The Casino (Spanish Club) is in the Calle de la Carrera.

**Public Buildings.**—The **Town Hall**, with some curious old paintings on the staircase, representing scenes from the Conquest. In the hall above is the standard of the Conquest, embroidered by Isabel the Catholic. The original embroidery has been transferred to a new piece of crimson damask.—The **Instituto** (formerly Convento de San Agustín) and **Universidad de San Fernando**. The interior of the large church is plain. The convent is the present official centre of instruction, and contains, among other things, a **Public Library** of nearly 20,000 volumes, open from 10 a.m. till 4 p.m. A curious manuscript (Dutch) of the fifteenth century, in good preservation and some early printed works of the sixteenth century may be seen. The patio is characteristic and picturesque.—The **Bishop's Palace** (No. 28), a little further down the street, is a handsome building with decorative stone façade. In the interior there is a staircase with well designed hip-roof. The beautiful iron gate at the entrance of the patio is a piece of local work.

**Churches.**—The **Cathedral** (commenced in 1513) in course of re-construction:—The interior, which will be very fine, will contain the tomb of Don Alonso Fernandez de Lugo, the conqueror of the island, who died in 1525, and whose remains rested until 1860 in the Convento de San Francisco. Amongst the treasures of the Cathedral is a highly valued marble pulpit, brought from Genoa.—The **Iglesia de la Concepción**, with high tower. The oldest church in the city (commenced in 1511). There is some handsome carved wood-work, especially about the pulpit. In the altar to the north of the chancel is a small picture of St. John the Evangelist, greatly prized owing to the face having been covered with what appeared to be human sweat during a period of forty days. This miracle happened in May, 1648. In the Baptistry is the "Piedra de los Guanches," a green glazed basin erroneously stated by some authors to have been made by the aboriginals.—The **Convento de las Monjas**, still inhabited, contains in the public church some good altars and a few curious old pictures. One end of the church is composed of a heavy iron grille, separating it from the chapel of the nuns, who remain invisible. A portion of the grille is arranged as a confessional box, and a small hole serves for administering the Eucharist to the inmates.—The **Convento de San Francisco**, now the Barracks. The church contains a curious altar in silver with a famous crucifix.—**Iglesia de Santo Domingo** and the **Ecclesiastical Seminary**, with an old *dragon tree* in the garden of which the age is



unknown, but which was large enough at the time of the Conquest to cause the land on which it stood to be described as the *finca del drago*.

**Squares.**—The Plaza del Adelantado, well planted and ornamented with a large marble fountain. It is here that the band plays in the summer.

Upheld by many as a winter resort for the first stages of pulmonary disease, La Laguna is unquestionably a pleasant residence in the summer, although probably too cold for the majority of invalids from January to April. When the weather becomes warm, the wealthier classes assemble here in great numbers. To the inhabitants of Santa Cruz it is a godsend during the hot weather, being comparatively close to their doors. All the high officials migrate upwards, bringing with them the military band, etc., the quietude of the winter being replaced by what must almost seem dissipation by comparison. There is more level country about than is the case anywhere else in the island and many rides and drives may be taken, the first not being confined to those stated below, as branch roads permit of many a canter when desired. Those who are not absolutely invalids will find La Laguna a most agreeable centre for a time, some of the spots to be visited from here being of most extraordinary beauty.

La Laguna, the Guanche paradise and the point whence the first and chief defensive operations were directed against the Spanish invaders, was the scene of many of the early legends and tales of the Conquest.

Some of these are mentioned in the historical section, but space cannot be given in this work for a tithe of the romances so ably treated by the poet Viana and others.

The chief and most sentimental is that of Dacil, daughter of Bencomo of Taoro. Tradition says the damsel lay hid in the boughs of a laurel tree overhanging the spring at Las Mercedes, when the Spanish knight, Fernan Garcia Izquierdo de Castillo, who had come to spy out the land, drank from the pool, saw her beautiful face and form reflected in the water and loved her at first sight. It had been prophesied that, after the country was ruined, she should marry a man from over the seas.

The girl, whose choice may have been influenced by the prediction, does not seem to have been unduly coy. The poet says that she saw him coming and waited with bright, expectant eyes. He also adds that she had a string of beads round her neck and that, as with the young lady in the song, "her golden hair was hanging down her back."

Subsequently the poem says that they were married and lived happily ever after, the knight probably squatting on Dacil's land.

It is a pity to disturb so pretty a picture, but readers of the historic section will have noticed that the lady the knight really married was Dacil's daughter.

Possibly the story of the love-making is not an invention and the gentleman, after making love to the mother, married one of the next generation. Such things have been done. The son of our own good King George III. by his marriage with Hannah Lightfoot, bought a black slave in Cape Town, lived with her for several years at the Knysna, then turned her adrift and lived with her daughter, whose father, a white man, formerly owned the mother.

**Excursions from La Laguna.**—To Tegueste and Tejina.—A good carriage road shaded by eucalyptus, cork and other trees leaves the town on the east, and skirts the fruitful basin of La Laguna, which is left on the right. On the left the mountains, such as the Mesa de Mota, can easily be ascended. A short distance from the town a bridle road bears to the right and leads to Las Mercedes in about  $\frac{1}{2}$  hr. At 3 kils. (2 miles), 1,890 feet, the road turns to the left and passes through a deep cutting. From near this point paths lead away into the hills, where there are a number of delightful walks or whence points

in the forest, such as that known as La Mina, where there is a large spring, can easily be reached.

Beyond the cutting, the road enters the upper ramifications of a broad and picturesque valley, down which the road passes at a gradient of  $9\frac{1}{2}$  per cent., the descent being known as the Cuesta de San Bernabé. At  $6\frac{1}{2}$  kils. (4 miles), 1,270 feet, Tegueste is passed, a small village with a large church and a population of 1,859 people. The road continues to descend and at 10 kils. ( $6\frac{1}{4}$  miles), 490 feet, reaches the little church of Tejina. No beds.

From Tejina the coast can be reached at Bajamar by a carriage road,  $4\frac{1}{2}$  kils. in length. A short distance beyond the terminus of the road is the little fishing village of the Punta del Hidalgo.

From just above Tejina a carriage road has been made to the Valle de Guerra,  $2\frac{1}{2}$  m., 4 kils., and Tacoronte, 7 m., 11 kils. This crosses the barranco to the west of the town and continues to the Ermita del Rosario in the Valle de Guerra,  $1\frac{1}{4}$  hrs. on foot, 690 feet, whence to Tacoronte in another  $1\frac{1}{2}$  hrs. on foot (see Tacoronte), or any of the paths to the left can be followed and a return to La Laguna may be made on foot in from  $1\frac{3}{4}$  to  $2\frac{1}{2}$  hrs., according to the road selected. If desired, the Mña. de Guerra or the Mña. de la Atalaya, both of which command good views, may be climbed on the way to Tacoronte. (For details, see under Tacoronte.) Those returning to La Laguna by the Ermita del Socorro and the Mña. del Pulpito can leave the bridle path and climb the Caldera at the foot of the Mesa de Mota.

**To the Mesa de Mota, etc.**—This is the name of the chief of a group of mountains bounded by the plains of La Laguna and of Guama on the South, and by the slopes of Tegueste, Tejina, and the Valle de Guerra on the North. Its eastern boundary is the cutting through which the *carretera* passes on the way from La Laguna to Tejina, and its western a bridle path connecting the main *carretera* at a point near the Mña. del Pulpito with the Ermita del Socorro in the Valle de Tegueste. The mountains, 2,493 feet, command magnificent views, the precipices to the north being covered with hanging woods, which afford some slight protection from the wind. At the foot of the group is a mountain known as the Caldera, an extinct *fumarole* or blow-hole, of which the crater has remained quite perfect. The geological characteristics of the group and of the Mña. de Guerra to the west belong to the north-eastern or older portion of the island, and not to the more recent formation surrounding the Peak.

**To Las Mercedes and the Forest of La Mina.**—Las Mercedes can be reached by following the *carretera* to Tejina from the Cathedral and by turning to the right into the fields at the second branch road, or by passing through the Plaza de San Francisco and by following the straight track. The distance by either way is about  $2\frac{1}{2}$  miles, and the latter road is quite practicable for carriages during dry weather, when, indeed, it is possible to ride right up to Las Mercedes, 2,010 feet, on a bicycle.

On leaving the village of Las Mercedes, follow the aqueduct to where the path forks close to a small bed of rushes (*junquillos*), climb up the path to the left from here and enter the forest. At 25 min. from Las Mercedes, 2,455 feet, is the Casa del Agua, where a round stone table and seat have been provided for those wishing to picnic. The names of visitors will be found adorning the table and the grove of laurel and chestnut trees in the midst of which the table stands. A little above the table, 2,505 feet, the spring itself issues from the clefts of a basaltic rock, which probably lies upon a bed of more or less impervious tufa and has been shifted or crushed by some movement of the surrounding rocks subsequent to crystallisation and cooling down. The gallery sunk in the neighbouring tufa has not been successful. It is curious to see how the original gallery, excavated probably by the Guanches, has been stopped at a point where the tufa seems to sink below the level of the floor.



There are several other smaller springs in the forest which are carried to the main aqueduct. Any little boy will show the way to these for a penny or so.

To Las Mercedes, Cruz de Afur, Taganana, the Lighthouse, Anaga, Iguete, San Andres, the Valle del Bufadero and Santa Cruz.—The same as above, but on leaving Las Mercedes bear up to the right. At 1½ hrs. the Ermita de Sta. Maria del Carmen, 3,160 ft., after which the scenery becomes most magnificent and, when seen in a good light between drifting clouds, is best described as a cross between a Dante's Inferno, a Doré's Heaven and a very first-class transformation scene at a theatre. The highest point reached by the path is 3,300 ft.

At 2¼ hrs. the Cruz de Afur, 3,230 ft., whence it is possible to descend to Afur. A little further on is one of the ways (2,680 ft.) up from the Bufadero, which is, however, very difficult to hit off. The path runs as near as convenient to the top of the ridge and at 3¼ hrs. passes the Cruz de Taganana, 2,800 ft., which may be known by the small round cave under the cross.

(From here to the Bufadero and Santa Cruz refer Bufadero. The same reference will also show which is the path to the Lighthouse. Times to the Lighthouse are—¼ hr. from the Cruz de Taganana to the Cruz de San Andres, 2,680 ft., where the ascent from San Andres crosses the summit; 3 hrs. to the point where the path leads down to Iguete; 3½ to Anaga, 2,000 ft., no inn, no food; and down the beautiful Bco. de Chamorga to the Lighthouse, 4¼ hrs., or a total of 8 hrs. from La Laguna. For further information turn to Exc. from Santa Cruz.)

The road from La Laguna to Taganana leaves the Cruz on the right. The first turn to the left (see above) leads to Afur, the second to the Vueltas de Taganana, a steep picturesque zig-zag, 1 hr. down, 1½ hrs. up. It is not worth descending unless Taganana is to be taken *en route* for further on.

Taganana, 700 ft., 4¼ hrs., is divided into two groups of houses. Inn with a few beds, about 5 pes. a day. The neighbourhood is uninteresting, but there is a church, A.D. 1530, with an old altar-piece and Virgin, and there is a fine old dragon tree in a garden a little above it. It is proposed to connect Taganana with San Andres by a *carretera*, 10½ miles (16½ kils.) long.

A descent to the sea leads round the steep Roque de las Animas to Armásiga (venta), 4¼ hrs. from La Laguna, and so to the sandy shore, where the breakers are sometimes very fine.

(At 1 hr. a path to the right leads through very fine scenery and wooded cliffs to Anaga, 3 hrs. total.)

Further along the path another ascent to the right goes round the coast to the Lighthouse (*el Faro*), 810 ft., 7¼ hrs. total. The closer in of the Anaga Rocks can be visited at low water.

From the Lighthouse to Anaga, 1½ hrs., and for further details, see Excursions from Santa Cruz to the Bufadero, etc.

Beyond the Cruz de Taganana a guide is advisable, but no one visiting Teneriffe should omit to make the excursion as far as this. Dry weather should be chosen as the paths are sometimes very slippery.

Excursions to the S.W. of La Laguna.—A bridle path reaches La Esperanza, 3,280 ft., in 1½ hrs., and may be continued along the Cumbre or ridge as far as the Cañadas and so on to Vilaflor, etc. Times:—Las Lagunetas, 4,600 ft., 3 hrs., Cañadas about 8 hrs., or by turning down to the south, Arafo, 6 hrs., and Güimar, 7 hrs. If the ridge is descended on the northern side, Tacoronte or La Matanza can be reached in about 5 hrs., and Villa Orotava in about 7 hrs. The climb from La Laguna is fairly gradual and the scenery, when clear, most beautiful. The saddle back itself nearly always affords capital travelling. Guides are advisable in case of clouds, as the precipices which terminate many of the mountain spurs on



the S. are impassable even with ropes and the pine needles render the descents very slippery. The highest point of the path is about 7,000 feet. See also under Tacoronte.

To Agua García, Tacoronte, Matanza, Victoria, etc.—The old *camino real* leaves the *carretera* at the 14 kils. milestone on the N. side of La Laguna passes the fountain below the woods of Agua García,  $1\frac{1}{4}$  hrs., 2,350 ft. (see Tacoronte), and gradually descends to the *carretera* again, which it joins near Victoria, about  $3\frac{1}{2}$  hours. Numerous paths connect the bridle road with the *carretera* between La Laguna and Victoria. La Matanza can be reached in a little less time by bearing to the right, or a lovely walk, terminating at the same place, can be taken by climbing up through the woods of Agua García to 3,200 ft., and bearing off to the right along that level. About 5 or 6 hrs.

To Güimar, Arafo, etc., by the *carretera*.—See *S. of the island from Santa Cruz*.

About a mile to the N.W. of La Laguna is the Convento de San Diego de Monte, probably the oldest monastery in the island. This formerly stood in the forest, on the border of the lake, across which the friars used to pass in boats.

**Main Road.**—Leaving La Laguna behind, a long avenue of eucalyptus trees is entered and the summit of the pass, 2,066 ft., is reached. Directly after this there is a pleasant glimpse of the Valley of Tegueste and the sea beyond, the road swings round to the left and the long descent to Orotava is commenced.

Just by the turn is a mill standing a little to the west of a rounded hill known as the Pulpito, a name given because it stands a little in advance of a mountain slope (the Altar), on which the form of a cross is depicted by the exposure of two transverse dykes of white stone. The path down past the Pulpito leads to the Ermita del Socorro, Tegueste, Tejina, etc. (See excursions under La Laguna.)

The pine-clad hill a little beyond the mill is known as the Montaña de Cifra. It is 2,075 feet high, commands magnificent views and is a favourite spot for a picnic (permission required). The subsoil is a volcanic tuff, and affords good building material.

The slope to the west of the Mña. de Cifra is known as Guamasa, 1,855 feet. Many of those living in this picturesque little village are well-to-do people.

The volcanic cinder-heaps now passed on the right are described in the excursions from Tacoronte.

As the road descends, the plants become more varied and a delightful succession of green terraces and orchards, houses and flower gardens are passed, whilst there is a magnificent view of the Peak in clear weather.

At  $12\frac{1}{2}$  m. (20 kil.), Tacoronte, 4,204 inhabitants, a pretty village a little below the road.

**Hotel.**—The Tacoronte (Camacho's), a large building with a fine view just above the *carretera*, 9s. to 12s. a day. (Connected by private telephone with Santa Cruz.)

(For advertisement, see under Santa Cruz at the end of the book.)

The hotel, 1,695 feet, is one of the best centres for excursions in Teneriffe and the climate is usually bracing enough to make walking or riding a pleasure. A meteorological table is given.

The tramway terminus lies at the junction of the Tejina road just beyond the hotel. Time by tram from Santa Cruz, 1½ hrs., single journey. Trams every hour. For coaches, carriages and motor cars further on see pages 152, 154.

### Excursions from Tacoronte.

**Walks, Excursions, etc.**—The village of Tacoronte can easily be reached in a few minutes from the hotel. To the right is the Church of the **Convento de San Agustín**, founded A.D. 1662, with a stone façade bearing the arms of the Castro family in marble. The interior is plain, with the exception of the chancel, which has a handsome roof. Behind the altar is the famous wooden Christ of Tacoronte, made in Genoa probably during the 17th century, to which a great number of miracles are attributed. Once a year it is carried round the neighbourhood, which is then crowded with sightseers and worshippers. In the sacristy is a curious portrait of the Virgen de la Candelaria. (See Candelaria.) The church is well paved with black and white marble and the Plaza in front is a pleasant place to sit in. Height above the sea, 1,540 ft. A small branch of the *carretera* leads from the Plaza to the Calvario.

The Parish Church (**Iglesia de Santa Catalina**) is about 10 minutes from the hotel and more on the left. It is a good specimen of a country church and well worth visiting. The roofs at the chancel end, though not in the purest style, are attractive and combine with the altars to lend an air of great richness to the interior. This is not inappropriate, as the church has one of the largest collections of gold and silver plate in the province of the Canaries. Especially noteworthy are the silver candelabra before the altar, which weighs 80 lbs.; the front of the altar itself, which is entirely covered with beaten silver; a large number of solid silver candlesticks, cups, beakers, etc., etc.; a chalice of solid gold; and especially a magnificent repoussé silver lectern, generally locked up in the sacristy. Some of the silver is very old, the largest part dating back to the Spanish conquest of Mexico. Much of it no doubt was beaten out in that country. The statue of St. Catherine behind the altar came from Italy in the 17th century and is well executed. The two holy water basins near the *coro* are of antique design, but the stone appears to be local. The picture of San Jeronimo to the S. of the *coro* was brought to the island by the Conquistadores in the 15th century.

The picturesque village of Tacoronte is intersected by a labyrinth of winding lanes, sometimes bordered by houses, sometimes by sloping fields and orchards. The architecture is simple but pleasing. Many of the cottages are kept gay by flowers, the rose, carnation, fuchsia, etc., reaching considerable perfection. The three fountains, from which the whole population fetches its scanty supply of water, are centres of life and chatter from morning till night, and lastly a good glass of wine can be obtained from almost any of the *ventas*. In fact the people of Tacoronte pride themselves on growing the best red wine in Teneriffe and the best cabbages in the whole universe, as far as they know it.

The new carriage road to Tejina is described further on.



**Barranco de las Higueras.**—This picturesque ravine is reached by following the path immediately to the W. of the hotel for about  $\frac{3}{4}$  mile. The walk is recommended.

**To the Sea.**—This can be reached in about  $1\frac{1}{2}$  hrs. by almost any of the roads leading downwards from the village. Those on foot can find paths through many of the fields, but most of the paths and bridle roads below the village are very bad. The cliffs, which closely resemble those to the north of Camborne in Cornwall, are some 700 to 800 feet high. The shore is provided with a number of natural breakwaters, consisting of streams of lava, the little harbours between which are occasionally used. The sheltered caves and holes in the beds of lava afford some good bathing-places. One of the largest and deepest coves, the Puerto de San Fernando, can be reached in the saddle. In one or two places there are springs of fresh water, that known as Guayónja retaining, no doubt, the original Guanche name. The caves in the cliffs were inhabited by this people at one time and a steep path leading down to the rocks is still known as the Callejón de los Guanches.

An easy path can be followed along the edge of the cliffs from below Tacoronte into the village of Sauzal in about one hour. In places the rocks are very precipitous and at one point, known as La Garañona, a stone can be lobbed from a height of 935 feet into the water below. The place is easily identified, as a large colony of white vultures builds its nests between the edge and the sea, numbers of the birds being usually about. Some of the vistas down the gullies are very beautiful, especially where advantage has been taken of some little terrace or spring to cultivate the soil. These little hanging gardens where the vine, the cane (*arundo donax*), the yam, etc., form a little oasis amongst the surrounding euphorbias or other indigenous scrub are common in the mountainous parts of the Canaries and always add greatly to the charm of the view.

**To the Group of Mountains to the North East.**—Follow the Tejina *carretera* past the Convent Church, to the foot of the *Mña. del Picon* or *de la Atalaya*, as it is called, 1,580 ft.,  $\frac{3}{4}$  hr. Go straight up to the wood, then bear to the left and presently climb up a steep path on the north side of the hill. The summit, 1,875 feet, commands a good view of the north coast from Punta del Hidalgo to beyond Buena Vista. Villa Orotava is not visible, but there is an extensive view of the Cumbres from the Rodeos de la Laguna to the Peak. The hill is really an extinct blow hole and the crater at the top, which has a diameter of 180 yards, is quite perfect. Heather grows round the rim; shade can be obtained under the trees, and altogether the spot is a good one for a picnic. Animals can go to the top.

The small round hill due south, the *Mña. de las Palmas*, 1,965 feet, can easily be ascended by beasts from near the Ermita de la Caridad on the north side. The crater at the top is small but quite perfect. The view is not quite so good as from the Picon, but the terraces of vines so noticeable from the main *carretera* are interesting as an example of enterprise and industry.

The broken crater between the *Mña. de las Palmas* and the hotel is called the *Mña. de las Retamas* because of the broom growing on its slopes. It can easily be ascended by beasts during dry weather and is a happy hunting ground for mushrooms about October or November. The best view of Tacoronte is from near the palm tree on the western slope, but both the summits command extensive views. The heights are:—West summit (25 minutes from the Hotel) 1,985 feet; Eastern or Crater summit (5 minutes further away by easy path) 2,100 feet.

The mountain further to the N.E. is called the *Mña. de Guerra*. Those visiting the *Mña. del Picon* can descend from the top to the path crossing the north slope of the same and ride directly across the fields. The ascent of the



Montaña de Guerra must then be made on foot. The pleasantest and shortest way to reach it from the hotel is to follow the *carretera* to the bridge whence the footpath crosses the fields to the Ermita de la Caridad (next to the large white house), whence pretty bridle paths lead between the two hills to the western slope of the Mña. de Guerra,  $\frac{3}{4}$  hr. Thence on foot to the top, 2,085 feet, about 1 hr. total. Of all the short walks round Tacoronte this is the best. By driving towards La Laguna and turning in at the *fielato*, a road, passable for carriages, leads past the quarry known as the *Cantería de la Huerta Trobisca*, whence there is a path to the top along which horses can pass. Total time to the top a little over one hour. The view far surpasses that from any of the other hills, nearly the whole valley of Tegueste being visible and the plain between the mountain and the coast lying apparently under one's feet. The crescent-shaped precipices on the north, which are geologically very distinct from the rounded slopes of the *fumároles* described above, are covered with vegetation. From their exposure to the trade wind, the trees, etc., are all bent in one direction, and the various lichens, leeks and mosses assume most gorgeous tints as the dryness of summer begins to be felt. Picnic parties can always obtain shelter from the wind, but there is no shade. A few yards to the east of the pinnacle rock and on the edge of the precipice, is a cave, easily entered, where a numerous party could take refuge in case of rain.

The slopes, precipices and hanging woods beyond the Mña. de Guerra afford countless climbs and rambles. The passes through them are usually provided with paths, leading from the Valle de Guerra, etc., to La Laguna or to some point in the Rodeos, but such paths can be left at any time and the walk can be extended in accordance with the climbing capabilities of the walker.

The large group of hills beyond Guamasa, chief amongst which is the Mesa de Mota, are given amongst the excursions from La Laguna, but can be reached easily from Tacoronte.

**To the Valle de Guerra, Tejina and La Laguna.**—Pass the Convent Church, and follow the Tejina *carretera*. At  $2\frac{1}{2}$  miles (4 kils.), 1,580 feet, pass the base of the Mña. del Picon, leaving same on the right. At 5 miles (8 kils.) is the Ermita del Rosario in the Valle de Guerra, 690 feet. From here it is possible to reach La Laguna by bearing to the right and passing through Guamasa. Tejina, 490 feet, is 7 miles (11 kils.) from Tacoronte. From here to La Laguna there is a *carretera*, 10 kils. ( $6\frac{1}{2}$  miles) in length. (See under La Laguna.) Another *carretera* leads to Bajamar on the coast, 3 miles (5 kils.).

**To Sauzal.**—Pass the Parish Church, and bear to the left along a rough road where animals can pass to Sauzal,  $\frac{3}{4}$  hr., 1,000 feet, a small village, pop. 1,478, with a plain church (A. D. 1514) with dome and tower. Just below the houses is a spring, known as Los Lavaderos and almost immediately under the village is a small natural harbour sometimes used by schooners. A return can be made by a path running along the upper edge of the valley and commanding good views. The *carretera* is reached in  $\frac{1}{2}$  hr. at the Finca de Don Sixto, about  $22\frac{1}{2}$  kils. from Santa Cruz. The walk along the edge of the cliffs is given elsewhere.

**To Agua Garcia, the Cumbre and beyond.**—A good bridle path leaves the *carretera* about 100 yards east of the hotel and ascends by a fairly easy gradient to the Fuente de Agua Garcia, 2,350 feet, in  $\frac{1}{2}$  hr. on foot. From here to the spring or *madre*, 2,600 feet, another  $\frac{1}{2}$  hr. (follow the water-course). Before and after entering the wood a most remarkable diversity of trees is met with, including the willow, laurel (*vinatigo*), cork, broom (*codoso*), wild orange, sweet orange, pear, mulberry, walnut, chestnut, palm and others, the giant heath, which finds its counterpart in Eastern Africa on the slopes of Kilima n'jaro, being most abundant at the

commencement of the forest. Some of the heath trees are over five feet in girth and as much as fifty feet high, but these are utterly dwarfed by the immense laurel trees around them.

The tall heather commonly met with in the island, which sometimes attains a height of 20 feet or more, is mingled with the blackberry, the bracken and a variety of ferns. Altogether the walk along the water-course is most beautiful and the little triangular forest will be found fairly extensive by those exploring its ends and depths.

By leaving the woods of Agua García on the right and by keeping the Mña. de Cerro also on the right, paths lead to La Esperanza, 3,280 feet, in about 2 hours from the hotel, *or*, by bearing more to the left, La Laguna can be reached *viâ* Los Ortigales in about 3 hrs., *or* by bearing to the right above the Mña. de Cerro any part of the Cumbres can be ascended.

By turning sharp to the right below Agua García and by keeping more or less along that level, La Matanza can be reached in about 1½ hours. The groups of thatched cottages passed on the way are very characteristic. About ¾ hr. from Agua García there is a small spring issuing from below a grove of giant heath and chestnut trees (Barranco de las Higueras). Fortunately the water makes the grove sacred or the heath trees would long since have disappeared.

The most direct route to the top of the island and one that is quite practicable for animals, leaves the woods of Agua García on the left and climbs across the Monte Verde to a stone beacon, 3,200 feet, in 1 hr. from the hotel. From here there is a most magnificent view of the peak and of the wooded slopes above La Matanza, etc., this being a good spot for a picnic. From the beacon a path leads in 1¼ hrs. to the Ermita de la Esperanza and in 2½ hrs. to La Laguna on the left, and down to La Matanza, 1½ hrs., on the right.

Following the direct path, the Monte del Gobierno is entered, and a gradual climb through scented laurels, etc., which bears slightly to the left, leads to the foot of the pine forest, 1¼ hrs. from the hotel, 4,000 feet, when turn to the left up a small barranco and climb up a steep path through the pines, leaving the red mountain (Mña. de la Fuente Fria) to the left, and so to the Fuente Fria, a constant spring of water, 4,400 feet, 2 hrs. total. A further climb of 10 minutes now leads to the broad, stony plain of Las Lagunetas, 4,600 feet.

The plain is crossed by numerous paths leading from La Laguna, 3 hrs., La Esperanza, 1¾ hrs., etc., to La Matanza, 2½ hrs., etc. By bearing to the left round the Cabeza del Toro and the Mña. de Cerro, a return to the hotel can be made in about 2¼ hrs., *or* by travelling due south the top of the Barranco Hondo (South Side) is crossed, the little spring known as the Fuentiña is passed, and Iguete de Candelaria is entered in about 3¼ hrs. from the hotel. The path runs through a pine forest and commands good views of Santa Cruz, etc. A few minutes below Iguete is the *carratera* connecting Santa Cruz with Güimar.

Those travelling to Güimar, etc., should keep more to the right, crossing the plain of Las Lagunetas and climbing straight through the pine-clad hills in front. An uninterrupted ascent leads, in 3¼ hrs. total, to the little spring on the N. side of the Mña. de los Chupaderos, 5,270 ft. Leave the path and climb for 5 minutes straight up to the summit of the Montaña, 5,400 feet, the remains of a vigorous blow-hole, still covered with slag and volcanic bombs and almost destitute of vegetation. From here there is an extensive view embracing both coasts from Candelaria to the Lighthouse at Anaga Point on the south and from the Lighthouse to Punta de Teno on the north. Orotava Valley and the Puerto lie far below, but the Villa is hidden by the Cuesta de Bacalao.

The path now crosses a curious ridge of white tufa and at 3½ hrs. ascends to the higher Cumbres, leading to Pedro Gil, 6,800 ft., in about another 1½ hrs., whence paths lead down to Arafo, Güimar, Villa Orotava or to the Cañadas,



for which refer elsewhere. In case of losing the way in this part of the island, bear to the north, as all but a few descents towards the south are dangerous.

From where the white tufa ends a descent can be made on foot only by the ridge to the right. Visitors will not fail to notice the terraced barranco at this point. Those acquainted with South Africa will be struck with its resemblance to Bushman's Kop between Molteno and Queenstown, the *codeso* with which the slopes are covered being scarcely distinguishable at a short distance from the South African mimosa. Artists in search of effect will be delighted with the extraordinary and gorgeous colouring of the surrounding rocks. The surface water runs into the Barranco Hondo (North Side), crossed by the main *carretera* between Victoria and Santa Ursula.

A descent of 1,000 feet leads to the bed of the barranco, whence Victoria or La Matanza can easily be reached, or paths through the forest lead past the aqueduct above Victoria, 4,000 feet, 1 hr. from the top, to Tacoronte (hotel) in about 3 hrs. It is well to have a compass here, as the paths are too numerous to give in detail.

**Main Road.**—A little beyond the hotel the Tejina *carretera*, mentioned in the excursions, branches off to the right (tramway terminus).

At  $14\frac{1}{2}$  m. ( $22\frac{1}{2}$  kil.) a path leads in 20 min. down to Sauzal.

At  $15\frac{1}{2}$  m. ( $24\frac{1}{2}$  kil.) La Matanza, 1,420 feet, pop. 2,030, is reached. Two fondas.

It was at La Matanza that the Spaniards, after driving the Guanches from La Laguna, were repulsed and had to retreat to Santa Cruz. (See History.) The village itself is some 200 ft. above the *carretera*. The neighbourhood commands good views of the Peak.

At San Antonio, a small village  $\frac{3}{4}$  hr. up the hills, a curious *fête* is held in January, when all the beasts in the neighbourhood are brought round to be blessed.

Victoria, pop. 2,787, 1,350 ft., is  $1\frac{1}{2}$  m. further along the main road,  $17\frac{1}{4}$  m. ( $27\frac{1}{2}$  kils.) from Santa Cruz.

The church lies prettily embowered in trees a little above the road and near the spot where the Spaniards, on their return to the north of the island, revenged their losses at La Matanza.

**Pilgrim's Pass.**—A badly-kept bridle path leads from here to Arafo in about 6 hrs. See Arafo for further on, or for diversion along the central cordillera.

At 18 m. (29 kil.) a *carretera* branches off to the left, crosses the Barranco Hondo by a bridge 40 metres high (1909) and rejoins the old road at Santa Ursula, the distance by either way being about the same.

At 19 m. ( $30\frac{1}{4}$  kil.) the old *carretera* dips into the deep Barranco Hondo at a gradient of  $9\frac{1}{2}\%$ , descends to the bridge, which lies some 800 feet above the sea, and ascends to a grove of palms, immediately after which (20 m. = 32 kil.) Santa Ursula, 920 feet, with square and church. Population 2,113.

Below the village is a large villa commanding a very fine view of the Orotava Valley, which is considered by many to be the remains of an immense crater, corresponding to the valley or



crater of Güimar. The site is fresh, sunny, has a good water supply and offers considerable residential advantages.

At the Barranco del Pinito, about 33 kils. (20½ m.) from Santa Cruz, a *carretera* branches off to the left, crosses the Barranco de Larena and leads to the Villa 2 m. (3¼ kils.), at a very easy gradient. It rejoins the old *carretera* at the Calvario a little below the Plaza de San Sebastian. The views from the new road are very fine and there is a great saving to those going to the Villa.

It is proposed to continue the road through La Perdona and La Cruz Santa, to the church at Realejo Alto 6¼ m. (10 kils.) total. Here it will meet the Realejo Alto branch, 4 kils. (2½ m.) in length, allowing a return to the *carretera* of Icod at a point just below the Mña. de Chaves, 41½ kils. (25¾ m.) from Santa Cruz. (See under Realejo.)

It is also proposed to make a road from Realejo Alto across the Barranco del Patronato to Realejo Bajo and thence to the existing *carretera* below the last-named town at 44 kils. (27½ m.) from Sta. Cruz. The completion of this section will make the new upper road through the Villa part of a high level through route from Santa Cruz to Icod.

Beyond the junction the old main road turns to the left, Orotava, and the valley being seen from what is generally called by foreigners "Humboldt's Corner," as it was near here that the great traveller threw himself on the ground and saluted the sight as the finest in the world.

A slight description of the panorama as seen from Humboldt's corner, or from the new upper road, may be of service. Close below, on the left, some 4 m. from the sea, are the spires and domes of Villa Orotava. On the same level the eye can trace, by a broken line of houses, a road leading across the upper valley through La Cruz Santa to the two Realejos, which are only partially visible. Beyond these are the black cliffs of Tigaiga and on the heights is the little village of Icod el Alto (1,720 ft.). In the far distance are the white houses and the rock of Garachico. Returning along the coast, San Juan de la Rambla is seen, rather beyond the extreme W. of the valley or crater and about 9 m. away. There are scattered groups of houses everywhere, the local names for which are of little importance, and lastly the Puerto itself on a little surf-encircled promontory.

Above the Puerto is a crater or cinder heap (the Mña. de las Arenas), behind which is another, the M. de Chaves, and, in a straight line, yet another much smaller one, the M. de los Frailes.

The opposite wall of the valley (Tigaiga) rises to the Cañadas, which are immediately beyond the Fortaleza, so called from its resemblance to a military glacis. The back of the valley is formed by the northern slopes of the central ridge of the island. The mountains on the left are thickly wooded and numerous fires may usually be seen where the charcoal burners are at work. This part of the valley is very rough riding, but some beautiful excursions may be made.

Beyond the Fortaleza is the Peak, which, although more hidden here than in La Matanza or Tacoronte, still forms a majestic pyramid of colossal dimensions.

The angles of the incline of the Valley of Orotava are:—In the lower part,  $5^{\circ}$  to  $10^{\circ}$ ; at about 1,600 feet the slope increases to  $20^{\circ}$  and over, but at 3,000 feet again falls to about  $10^{\circ}$ . The steep mountain slopes of the Cumbres commence at about 5,500 to 6,000 feet, but these are not inclined at so great an angle as the walls to the west and to the east of the Valley, where the angle in some parts is from  $30^{\circ}$  to  $40^{\circ}$  or even  $50^{\circ}$ .

The direct Santa Cruz-Icod *carretera* now descends and crosses the Bco. del Pino and the Bco. de Llarena, which may be explored both up and down, as well for the sake of the scenery as for the numerous ferns, etc., to be found.

From near the Bco. de Llarena a new branch *carretera* is being made past the Botanical Gardens and La Paz, across the Barranco Martianez to Puerto Orotava, a considerable saving in distance over the former route and a great convenience to residents in the Puerto. The gradients will be much easier than by the old road.

Reverting to the Icod *carretera*, at 23 m. (37 kils.) the *Empalme* or Junction is reached, 900 feet, where the roads to the Villa and the Puerto separate.

The Villa, 24 m. ( $38\frac{1}{2}$  kils.), is a little higher on the left.

The Puerto, 27 m. (43 kils.), is reached by a winding road which passes to the W. of the *Mña. de las Arenas*; separates there from the road to Icod (Junction 500 feet above the sea,  $24\frac{1}{2}$  m. =  $39\frac{1}{2}$  kils.), skirts the Bco. de las Cabezas and, bearing to the left where the private drive leads to the Grand Hotel, enters the town.

The pavement has been improved of late years, and all the hotels can now be reached by carriage.

The Public Coach follows the new road to the Villa. Passengers from Tacoronte to the Puerto, Icod, Garachico, etc., and *vice versâ*, must change at the Villa.

Puerto de la Cruz, Orotava, 5,562 inhabitants, N. side of Teneriffe, is 27 m. (43 kils.) from Santa Cruz; 4 m. ( $6\frac{1}{2}$  kils.) by the *carretera*, and  $3\frac{1}{2}$  m. ( $5\frac{1}{2}$  kils.) by bridle road from the Villa, and  $15\frac{3}{4}$  m. (25 kils.) from Icod. British pop. about 98.

Letters must be addressed Puerto Orotava; telegrams—Puerto-cruz.

Passengers by sea are landed by boats on the mole. 1'25 peseta each person each way. Passengers with luggage 2'50 pesetas.

There are no customs duties on luggage, but cases may be opened at the fielato.



**Hotels (European):**—Grand Hotel Humboldt, about 350 ft. above the sea. Airy situation, fine views and extensive grounds, from 10s. a day; Hotel Martianez (old Grand), good position and large gardens near Bco. Martianez, 10s. to 12s. 6d.; Hotel Monopol, facing the Plaza de la Iglesia, 8s. upwards; the Marquesa, also facing the Plaza de la Iglesia, 5s. to 6s. a day.

**Boarding Houses:**—The Misses Nicol (private), 6, Calle de Iriarte, centrally and pleasantly situated, from £10 a month. Pension el Ciprés, near Botanical Gardens.

**Newspapers:**—Arautapala.

(For advertisements, see under Orotava at the end of the book.)

**Clubs:**—The principal Spanish Club is the Casino. Others are the Iriarte and the Nueva Unión. In a central position near the gates of the Grand Hotel, there is a good circulating and reference Library (English), contained in a building erected for the purpose.

Close to the Library are the Recreation Club Grounds, bowls, lawn tennis, badminton, croquet, etc. (temporary members admitted).

**Museo Gomez (private).**—Interesting collection of Guanche remains, fauna, flora, old maps, etc.

Bathing takes place on the Martianez Beach near the Hotel. Swimming dangerous. The stretch of sand is provided with seats, etc., and provides an agreeable, cool resort at all seasons of the year.

**Water Supply, Lighting, etc.:**—The water from the Fuente Martianez at La Paz is carried to the Puerto by means of iron pipes. The Patronato supply has also been carefully covered in.

Electricity is generated by water power at a point between the Villa and Agua Mansa. Both the Villa and the Puerto are provided with the electric light.

There is telephonic communication all about the Valley of Orotava which it is hoped to link later on with that of Santa Cruz.

**Horses, Carriages, Hammocks, Motor Cars, etc.**—Fares and particulars are given at the end of the description of Tenerife, under Puerto Orotava and Tacoronte.

Public Coach to and from the Villa, changing at the Villa for Santa Cruz or Icod. (See Time Table.)

**Public Buildings and Churches:**—The Convento de las Monjas, an old convent now used as a town hall, as a school and as a cock-pit (*circo gallera*). Iglesia (Church) de N. S. de la Peña de Francia. Fair interior; the tower was completed in 1897.

The English Church with parsonage adjoining is in the grounds above the Grand Hotel. The stained glass windows are really excellent modern productions; there is a good organ and a great part of the church is well paved with encaustic tiles. The chaplain is resident all the year round



**Cemeteries:**—These lie to the West of the Puerto and close to the sea. The British Cemetery is prettily laid out and carefully tended by the Foreign Residents.

**Squares.**—The Plaza de la Iglesia; de Victor Perez; de la Constitucion, with flowers and trees.

**Puerto Orotava**, the most widely-advertised health-resort in the Canary Islands, has already been so much written about that it is almost impossible to venture an opinion without contradicting some one. Having spent one whole winter there, and other winters, or portions of them, in various parts of the Canaries and Madeira, the writer begs to relate his own experiences, which he hopes may be of service.

In normal weather clouds form against the mountain slopes shortly after sunrise and descend more or less into the valley in accordance with the temperature. In mid-winter the shadow should not reach the Puerto in fine weather. It may thus be raining in the Villa whilst the sun is shining over the mile or so of land next the coast. In the evening the Peak should again be clear. It is repeated that this is normal weather, such as lasts at times for weeks, but there are seasons when, for days at a stretch, no clouds at all are formed.

In a good winter there is but little cold weather, but what cold there may be is felt, as it is accompanied by damp. From the middle of January to the end of February is the worst time and, in a bad year there may be a few disagreeable days. In cases of widespread disturbance, the normal weather, induced and governed by local influences, is naturally overcome, but both here and elsewhere in the islands a day when there is no sunshine or when one cannot be out of doors for at least three or four hours is almost unknown.

The Grand Hotel and all the hotels in or about the Puerto lie within the coast-belt or line of mid-day sunshine, which indeed extends for some distance up the slope beyond and is certainly the pleasantest zone of residence during the winter months.

Such statements are scarcely more than a repetition of what has already been said in the chapter for "Invalids," to which the reader will turn for further details. Orotava, like Funchal, Santa Cruz, Las Palmas, etc., is only one of the units out of which an efficient oceanic sanatorium is being gradually evolved.

Mention must here be made of the new carriage roads projected in the upper part of the valley. When completed they will be of inestimable value from a medical point of view, as the invalid will be able to enjoy a daily drive in a bracing atmosphere and thus to shake off the feeling of depression and inertia which a long sojourn in a somewhat relaxing situation frequently entails. Nor will the bracing air be the only advantage. Change is almost as necessary mentally as physically, and the contrast between the geological contours and laboured vegetation of the lower valley and the expansive slopes, precipitous ravines and superabundant verdure of the higher levels must be a daily delight to any man with eyes to see, and especially so to the sufferer fresh from home or newly emerged from a sick room.

To the chronic invalid who must live constantly in a warm climate, the valley is certainly a charming if somewhat relaxing spot. To those desirous

of recuperating from a serious illness by passing two or three years under favourable conditions, it offers very great advantages. But to those who are young enough and strong enough to make themselves of use in the world, its somewhat effeminating atmosphere is not altogether suitable for purposes of permanent residence.

The town itself is rather pretty, especially near the mole, where the groups of old houses and balconies offer some capital opportunities to the artist. One of the most lovely views of the valley is to be had from the smaller jetty. Permission would readily be given to any one wishing to sketch from some particular roof or *mirador*. The rocks at low tide are full of interest to visitors and bathing may be indulged in in places, in spite of the magnificent breakers constantly rolling in. It is to be hoped that the authorities will shortly see their way to provide proper accommodation for bathers of both sexes.

At one time the Puerto was the centre of a flourishing wine trade, and, in 1812 to 1815, was at the height of its commercial prosperity. When steamers replaced sailing vessels, the ports to the south of the islands soon took the place of the old ones to the north, although the neighbourhood of the latter is usually the most productive.

The centre of the valley has been opened up by the construction of the Grand Hotel, by its gardens and by a group of English villas. These crown a bluff where formerly there was an inaccessible and useless stream of lava.

In the grounds of the hotel is a private course where *corridas de sortija* are organised by the Grand Hotel during the season. (The public *corridas* are held in the bed of the Barranco Martianez.)

On the day of S. Juan (June 23), there is a great fiesta in the Puerto.

**Walks and Excursions inside the Valley.**—On the E. of the town is the Bco. Martianez and, immediately beyond, the cliffs of La Paz, once a rendezvous where games of skill were held by the Guanches and where it is said that the articles of peace between the natives and the Spanish invaders were formally ratified.

The path which crosses the Bco. near the sea leads up the cliff by a steep path below an old Guanche burying-cave, where the bones may still be seen sticking out. It then passes the Fuente Martianez ( $\frac{1}{4}$  hr.), and follows the face of the cliff by a small path (perfectly safe to careful walkers) below and above the most extraordinary volcanic rocks and air chambers in the lava, now exposed owing to the inroads of the sea. There is also a deposit of red ochre and many wild flowers and maiden-hair ferns can be picked. Altogether this is a most interesting walk and may be prolonged indefinitely towards Sauzal, crossing the mouths of the barrancos, many of which are exceedingly deep, or ascending the bed of any of the same to the *carretera*, whence a return home may be made.

If the bed of the Bco. Martianez itself is ascended from the Puerto, the cinder heap (Mña. de las Arenas) is skirted and the *carretera* gained just above



and to the E. of the same,  $\frac{3}{4}$  hr., grand basaltic rocks; or a path crosses the same Bco. and ascends by bridle road in  $\frac{1}{2}$  hr. to the **Botanical Gardens**, about 400 feet above the sea. One-third up the last, a road to the left leads to **La Paz**, and may be followed along the top of the cliff. Less interesting than the lower path.

The Botanical Gardens, founded in 1795, are a most agreeable resort. All the plants of the Archipelago suitable to a garden may be seen here, and a few pleasant hours be spent under the shade of a cosmopolitan group of trees and a collection of flowers and creepers scarcely to be found elsewhere. (The nearest way from the Grand Hotel to the Gardens passes partly through private grounds.)

Passing the Gardens the road from below bears to the right, then to the left, the *carretera* is crossed, and the **Villa** is reached in a short hour from the start.

On emerging from the Barranco Martianez and gaining the *carretera*, by bearing to the right the **Mña. de las Arenas** is passed. On the west side of this a private carriage road leads to the summit, 850 feet, whence there is a good view. Permission to ascend this can be obtained from the owner.

**Carretera from the Barranco Martianez to the Barranco de Llaena.**—This road, still in course of construction, will open up a stretch of country formerly somewhat inaccessible, will save wear and tear of horse-flesh on the way from the Puerto to Santa Cruz, etc., and will add to the attractions of the Valley by allowing carriages to make a very charming little round drive, which will include the Botanical Gardens, the Villa, etc.

**To Realejo on foot.**—Towards the W. a long street leads from the Puerto and along the coast, passing the Chapel of San Telmo, below which is the mineral spring discovered in 1895. Walking easily the **Cemetery** and an old fort are reached in 10 min.; the Lazaretto and Punta Brava in 20 min. (Punta Brava is a garden and farm which has been prettily laid out and can be visited by those obtaining permission.) A little further on are some handsome clumps of *euphorbia canariensis*. At 30 min., the path turns up to the left, but it is possible to walk for a considerable distance round the cliff or to descend to the fine, bold rocks. At 45 min., the old road is entered, by which a return can be made direct to the Puerto in  $\frac{1}{2}$  hr. or the walk continued to the right through **El Toscal de la Gorvorana** and across the **Bco. del Patronato** to the *carretera* below **Realejo Bajo** in  $1\frac{1}{2}$  hrs. total. Just below the junction of the roads but above the *carretera* is a very handsome young dragon tree.

On the cliffs, about  $\frac{1}{2}$  hr. below the dragon tree, are the **Gordejuela Waterworks** which, considering their position, are a most extraordinary example of engineering skill. They were erected by Capt. Engineers José Galban, and are capable of raising 16,000 pipes of water a day from the source, 50 ft. above the sea, to an altitude of 951 feet (290 metres).

Realejo can also be reached by leaving the *carretera* just beyond the **Cabezas** (the houses immediately above the Puerto), crossing the **Bco. de las Cabezas**, and keeping along the old road for 35 min., when turn to the left and rejoin the *carretera*,  $1\frac{1}{4}$  m. from Realejo. Time on foot,  $1\frac{1}{2}$  hrs.

The bridle path leading up the Bco. de las Cabezas to **La Cruz Santa**,  $\frac{3}{4}$  hr. (and eventually to the Cañadas) can be followed to the right to Realejo,  $1\frac{1}{2}$  hrs., or to the left to the Villa,  $1\frac{3}{4}$  hrs. The Barranco changes its name above the Puerto to the Bco. de la Vera and afterwards to the Bco. de la Cruz Santa.

The **drive to Realejo** along the main road occupies about  $\frac{3}{4}$  hr. See further on.

Any of the cinder heaps in the valley can be climbed, and all command extensive views.

Besides the above there are several walks amongst the farms, where those can go who are not afraid of dogs. As all these walks are on other people's



land, visitors chancing to meet the proprietor should adopt the Spanish standard of courtesy, which is far more formal than our own. (*See index under "Behaviour."*)

**Excursions** to the Peak, Cañadas, Agua Mansa, etc., follow the description of the Villa. To la Corona, Icod el Alto, etc., follow Realejo. Most of the excursions to Icod de los Vinos are given in the reverse direction for the convenience of those driving to Icod in the early morning and returning on foot or on mule. For drives on the main road, *see* the large print.

**Villa Orotava**, 9,192 inhab., 1,000 to 1,300 ft. Formerly Arautápala, the capital of the Menceyato of Taoro, 24 m. ( $38\frac{1}{2}$  kils.) from Santa Cruz by old *carretera*, and  $22\frac{3}{4}$  m. ( $36\frac{1}{2}$  kils.) by new; 4 m. ( $6\frac{1}{2}$  kils.) by the *carretera*, and  $3\frac{1}{2}$  m. ( $5\frac{1}{2}$  kils.) by bridle path from the Puerto, and  $15\frac{1}{2}$  m. (25 kils.) from Icod.

**Hotels.**—Del Suizo, about 6 to 7 pes. a day; Victoria, with very fine gardens, 6 pes. upwards a day. Both near entrance of town.

**Clubs.**—The Casino (Spanish Club) near the Plaza de la Constitucion.

The Villa has been lighted by electricity since 1894.

**Public Buildings.**—For the convenience of visitors from the Puerto, these are arranged in the best order in which to take them when ascending the Calle del Agua, *i.e.*, the bridle road.

On the left the old Convent and Church de Santo Domingo. Pretty patio, and interior of Church handsome. Ascend to the Casino and bear to the left to the Plaza de la Constitucion, whence there is a fine view of town and valley. At the end of the Plaza, the Church and Convent of San Francisco (now a barracks).

Walk on a little further, turn down to the left and return across the town by a lower street to below the Church. In one of the gardens passed the famous dragon-tree of Villa Orotava stood until its destruction by fire in 1867. (*See index.*) The hollow trunk after having served the aboriginals as a temple for ages, was put to the same use by the Spanish conquerors, who held Mass there. According to Mrs. Murray it measured in 1843,—girth, near the ground, 52 ft.; height to lowest branches,  $16\frac{1}{2}$  ft.; to the top,  $65\frac{1}{2}$  ft. According to other writers it was from 75 to 95 ft. in height. In another garden is a chestnut tree planted by the Spaniards in 1496, which measures  $27\frac{1}{2}$  ft. round. Opposite is the Convent and Church de las Monjas, now a theatre. A few paces higher is the Iglesia de la Concepcion, a fine building with a good interior and a fair marble pulpit. Some of the silver plate in this church formerly belonged to old St. Paul's Cathedral in London. It appears to have been sold in the time of Oliver Cromwell.

This is the fashionable part of the town. At the back, a little higher than the Church, are a group of large buildings with admirable balconies, more particularly that of the last on the left, which is painted. Now descend again to the left, pass the **New Town Hall and Gardens**, and turn up the hill to the right. At two-thirds up, the **Church of San Juan**, with good roof to nave and worthy of a visit, and at the top a most picturesque conjunction of aqueducts.

From the aqueducts turn down to the right and, descending a steep street, pass the hospital with beautiful vista of three arches in the entrance, formerly a convent. The projected *carretera* to Realejo would leave the Villa from a spot near here.

A return to the Puerto can now be made past the Church or, by turning to the right and passing the prettily laid-out Public Gardens at the entrance of the town, the *carretera* can be taken if desired.

In the lovely gardens of the Hotel Victoria (tickets sold at Hotel) is a large white marble tomb, erected by a late lady of title. The gardens are well worth visiting. Visitors may enter elsewhere by obtaining permission from the proprietors, but most of the gardens in the Villa are small and admission is only granted by courtesy. (*See index under "Behaviour."*)

No one can enter the Villa without being struck by its quiet exclusive character. Many of the residents live here on account of the climate, which is much cooler than that of the port.

Every year, on the eighth day after Corpus Christi, a religious *fête* is held in the Villa, when the streets are carpeted with flowers, elaborate designs being carried out in a most curious and remarkable manner.

The new carriage road already mentioned connecting the Villa with the *carretera* near Santa Ursula, and its proposed continuation to the Church at Realejo Alto, *viâ* La Perdoma and La Cruz Santa, will be a great convenience to residents and visitors.

The proposed *carretera* to lead across the summit of the island to Vilaflor, a distance of about 60 kils., though apparently an extravagance, would really be of great benefit to the island.

**Walks and Excursions.**—*Viâ* La Perdoma and La Cruz Santa to Realejo.—A bridle path, which is level for some distance, leaves the Villa just above the Hospital and leads across the valley to **La Perdoma** 1,470 ft. ( $\frac{3}{4}$  hr.), **La Cruz Santa**, 1,500 ft. (1 hr.), **Realejo Alto**, 1,110 ft. ( $1\frac{1}{2}$  hrs.), and across the Bco. Patronato to **Realejo Bajo**, 890 ft. and the *carretera* 780 ft. in  $1\frac{3}{4}$  hours. This road communicates at more than one point with both the upper and lower parts of the valley.

Another bridle path, parallel to the above, leaves the Villa below the Church and crosses just above the Mña. de Chaves (where it joins the branch *carretera*), leading through pleasant country to Realejo Alto in  $1\frac{1}{2}$  hrs.



**To La Florida, Sta. Ursula, Victoria, etc.**—Passing through the aqueducts at the top of the town and bearing to the left **La Florida** is passed in  $\frac{3}{4}$  hr.; the **Bo. de Liarena** and the base of the **Cuesta de Bacalao** are crossed, and the main *carretera* is entered when desired in about 2 to 3 hrs. or less. This walk can be modified by using the new branch *carretera*.

**To Arafo, etc., via the Pilgrim's Pass.**—Follow the same path and join the pass above Victoria in about 3 hrs. and to Arafo in  $6\frac{1}{2}$  hrs. (See Arafo.)

**To Arafo or Güimar via Pedro Gil.**—Ascend straight up the Villa leaving **Agua Mansa**, 3,930 ft.,  $1\frac{1}{4}$  hrs., a good spot for a picnic, where permission to pass the night in the farmhouse can be obtained, about a mile to the left, and so on to **Güimar**, 7 hrs. (See Güimar.) One of the very finest excursions in the Archipelago.

**To the Pinar.**—The **Pinar** above **La Florida** and the Villa, bounded on the W. by **Agua Mansa** and on the S.E. by the **Mña. Blanca** (not that adjoining the Peak) is full of romantic beauty and affords numberless climbs and walks. The paths are steep and easily lost in foggy weather. A guide should be taken as this part of the island, at the height where the forest is found, is very subject to the sudden formation of clouds. The paths in this direction communicate with those described under **Tacoronte**.

**To the Cañadas and the Peak.**—From the **Puerto**.—Since the construction of the branch *carretera* to **Realejo Alto**, a good way, especially in wet weather, is to drive up the **Realejo Alto** road and to mount the mules at the barranco. The path is then taken to the **Palo Blanco**,  $1\frac{1}{2}$  hrs. from the **Puerto**, 2,200 ft., where water can be obtained. This is at the foot of the **Monte Verde**. At  $2\frac{1}{2}$  hrs., the top of the **Monte Verde** is reached, the slope so far being at about  $12^\circ$ . The road now becomes more even and passes among rough hillocks where the heather has given place to the codeso, pumice-stone being occasionally seen. At  $3\frac{1}{2}$  hrs. the codeso ceases and the **retama** begins. Passing through the **Portillo** (7,150 ft.,  $4\frac{1}{4}$  hrs.), the **Cañadas** appear as a glaring desert with ranges of mountains in the distance and the Peak standing grim and solitary in the centre. The path now leads to the S.E. side of the **Montaña Blanca**, a round trachytic hump, 8,985 ft. high, adjoining the E. base of the Peak, and thickly covered with small pieces of pumice, a certain quantity of which was formerly extracted and shipped home to Europe.

The foot of the **Lomo Tiezo** or cone, which rises at an angle of  $28^\circ$ , is reached in 7 hrs., time being given for lunch. A well-marked path climbs the E. face of this, over lava blocks and loose cinders, to the **Estancia de los Ingleses**, 9,710 ft. ( $7\frac{3}{4}$  hrs.). If there is time before sunset, after which it becomes suddenly cold, a short rest may now be taken, then on to the **Alta Vista**, 10,702 ft. (8 $\frac{1}{4}$  hrs.), a small space below a bifurcation of lava on which a stone hut has been built.

This hut is the result of the philanthropy of Mr. G. Graham-Toler. It has three rooms, stoves and other necessaries and stabling for about ten beasts. Its construction has conferred a great benefit on those ascending the Peak. A small charge is made for the use of the hut. Visitors are advised that there is still a heavy debt on the building which should, in all fairness, be gradually liquidated.

As **Alta Vista** faces the E., it is not necessary to climb to the top before sunrise. In this matter travellers will of course please themselves, but the cold is often severe, more so than at sundown when the rocks continue to shed a little warmth. As the sun rises it is seen reflected in the sea as a round ball; the waves are invisible from so far away and any clouds there may be seem rather to rest upon the water than to be three or four thousand feet in the air. At sunset the shadow of the Peak is thrown like a great



pyramid to an immense distance. When the track is in order, mules can be used for a short way above Alta Vista, except when there is deep snow, when they must often stop much lower down.

Leaving the camp, tell the guides to keep to the right on the large blocks of lava. At 1 hr., the **Rambleta** (11,700 ft.) is reached. This is the crater from which the Pilon or Sugar Loaf rose. It is now only distinguishable by the temporary decrease in the steepness of ascent, by the change of colour and by the fact that no lava streams are to be found issuing from higher up. The stones and dust rolling down the Sugar Loaf gradually widened its base till it covered the parent crater. One hundred feet below this side of the Rambleta, which, by the way, is considerably lower on the W., is the **Nariz**, the first blow-hole encountered. The angle of the **Pilon** itself is from  $33^{\circ}$  to  $38^{\circ}$  and the **summit** (12,192 ft.), which is of a whitish colour and which is believed to contain a large percentage of sulphur, is reached in about  $\frac{1}{2}$  hr. from the Rambleta, or  $10\frac{1}{2}$  hrs. altogether. For the purposes of comparison it may be mentioned that the angle of the cone of Vesuvius is from  $40^{\circ}$  to  $45^{\circ}$ .

The little crater at the top is about 80 ft. deep and 150 ft. in diameter. The centre is smooth and in colour white and bright yellow, tinged with red here and there. Many of the blow-holes, which are about two or three inches across, emit a sulphurous vapour of such heat that it is impossible to bear the hand near them. Any one may safely walk about the inside, but care must be taken or the chemical deposits will spoil the clothes. Birds, bees, flies and spiders are sometimes found congregated here for the warmth.

As regards the view, those who cannot ascend the mountain would probably greatly help their imagination by looking at a lunar crater through a telescope. The surroundings are the essence of desolation and ruin. On one side the rounded summit of the **Montaña Blanca**, on the other the threatening craters of the **Pico Viejo** (Monte Vence) and of **Chahorra**, the latter,  $\frac{3}{4}$  of a mile in diameter, 10,500 ft. high, once a boiling cauldron and even now ready to burst into furious life at any moment. Below the once circular basin of the **Cañadas**, seamed with streams of lava and surrounded by its jagged and many-coloured walls. Around a number of volcanoes standing, as **Piazzi Smyth** says, like fish on their tails with widely gaping mouths. On the upper slopes the pine forest and far beneath the sea, with the "Six Satellites" floating in the distance, the enormous horizon giving the impression that the looker-on is in a sort of well rather than on a height which, taken in relation to its surroundings, is second to none in the world. The sun rises  $12' 55''$  earlier on the top of the Peak than it does on the coast immediately below.

A descent is made over large lava blocks to the N.E., and the **Ice Cave** (11,040 ft.) is visited. An entrance can be made from above by means of ladders. The cavern is divided into three long passages, snow and ice remaining unmelted inside all through the summer. The natives believe that it is connected with the interior of the mountain and the **Guanche burial cave** below **Icod**. Alta Vista is reached again in about 1 hr. from the summit.

**Other roads from the Puerto to the Peak are:**—By the bed of the **Beo**, de las Cabezas through **La Cruz Santa**, 1,450 ft.,  $\frac{3}{4}$  hr., to the **Palo Blanco**,  $1\frac{1}{2}$  hrs., and through the **Portillo** as before, or drive to **Realejo Bajo** and ride up to **Icod el Alto**, 1,720 ft.,  $1\frac{1}{2}$  hrs. from the Puerto, across the **Corona** (magnificent view) and pass the **Fuente Pedro**, a spring marked by two trees,  $2\frac{3}{4}$  hrs., up the **Monte Verde**, and over the **Fortaleza**, 5 hrs., into the **Cañadas**, the tracks followed by those coming *viâ* the **Portillo** being joined at about  $5\frac{1}{2}$  hrs. This route is rather longer than the others and is best taken on the return journey, but should not be used in rainy weather.

**The best road from the Villa** is to take the **Perdoma** Road above the Hospital, turn up through a gate sharp to the left at  $\frac{3}{4}$  hr. and make for the

**Fuente de la Cruz**, 3,350 ft., 1½ hr. The path from the Palo Blanco to the Portillo is then joined. Time a little less than the first route given. This track should also be avoided in wet weather. There are other paths known to the guides which need not be described.

**Hints to those Climbing the Peak or the Cañadas:**—It is possible for a very active man to walk up the Peak and back at a stretch. To do this a moonlight night should be chosen and the walk so timed that the summit is gained as near sunrise as possible. The usual time of departure is in the forenoon so that there is time to make things comfortable in the hut before nightfall.

The ordinary plan is to take a mule and a man to each traveller, with extra beasts and men to look after the wraps, water, and other necessaries. Plenty of clothing is wanted during the night which is sometimes very cold. Care should be taken that the men do not drink all the water.

A firm hand is necessary with the guides, who cannot be trusted in any but the finest weather. When snow is on the ground they are of very little use. Any attempt to shirk their duties should be stopped at once. Matters cannot be left in their hands as is customary in Switzerland. Taking it as a general rule, only very strong and experienced climbers should attempt the Peak in mid-winter.

The observations given regarding the ordinary height of the trade-wind clouds, etc., in the article on "Permanent Currents of the Atlantic," should be read by those wishing to explore the upper part of the island.

According to *Piazz Smyth*, the dust haze exists up to 9,000 feet. Beyond this point the shadows are very dark and distance is very difficult to estimate, whilst photographers will find details faithfully reproduced from very far off. Fires can easily be made from the dead retama, a broom which is only found on the Cañadas and which is very odoriferous. The native palm-tree bee-hives are often taken up in the summer in order that their inmates may extract the honey from the flower.

*Von Buch* suggested that the Cañadas are the floor of a crater of elevation formed under the sea and *Piazz Smyth* thought that he found evidence of the action of waves on the outside of the S.W. wall at about 7,000 ft., leading him to believe in a slow and unequal rise of the whole island. Signs of great heat are visible at times in the basaltic side walls of the crater, which vary in height from 1,900 ft. at Guajara on the S.E. to seven or eight hundred feet at other places, the N. wall being lower than the S. From the Fortaleza on the N., to where they recommence on the S.W., the Cañadas and their walls have been destroyed and carried away by successive floods of lava. In addition to this large gap, the gateway or Portillo above Orotava would allow easy egress to any stream of lava or flood of water coming in this direction. In fact the whole remaining basin of the Cañadas slopes towards it. It is probably owing to this fact that the disastrous rush of water, which so enlarged the Bco. de las Cabezas, burst upon the unsuspecting valley on the 6th November, 1826. (*See under "Storms."*)

The Cañadas or crater itself, about 7,200 ft. high, is an undulating plain partially overspread by yellow pumice-stone, which, in conjunction with the hard blue shadow, has, from a distance and in certain lights, a green appearance almost like grass. This fact has led to some very erroneous statements about the vegetation by others besides *Père Feuillée*. Lava streams intersect or cover the greater part of its surface. Progress is made between these where the crevices are filled up with soft rubble, or by skirting the outside wall. Other remarks will be found in the "Geological" article.

Obsidian is common but is generally very friable. Almost the only plant that grows is the retama, which is found from about 6,000 to about 10,000 ft. and of which the bushes are sometimes very large. An interesting evidence of the rate of descent of the hills of rapilli may be seen in the distances separating



the withered branches of the dead retama from the parent root, the state of the branches showing how regular is the progress. An indigenous violet (*Viola Teydensis*) is to be found. Lavender, grass and a few other plants slightly relieve the monotony of the desert and in one or two instances a pine-tree just shows its head over the top of the wall.

**From the Valley of Orotava to Vilaflor, etc.**—Take the road to the Peak a short distance beyond the **Portillo**, then bear to the left. (At  $4\frac{1}{2}$  hrs. a path climbs the hills on the left in the direction of La Laguna.) At about 5 hrs. is the Cueva de Diego Hernandez, in which shelter can be found.

At about  $6\frac{1}{4}$  hrs. is the **Fuente de la Grieta**, a perpetual spring of excellent water. Close by is the **Meteorological Observatory** and dwelling house erected in 1909, where an important series of observations of the upper-atmospherical currents, etc., etc., are being made. Refer to page 229.

At 7 hrs. the spring below **Guajara** is reached, another convenient spot for camping.

In fine weather any one can sleep out in the open, but it is advisable to keep a good fire going all night. The guide will soon find a sheltered corner in amongst the lava. Wraps must be taken and insect powder is advisable.

The character of the Cañadas is here different to what it is nearer Orotava. The pumice-stone desert interspersed with lava has become a desert of lava with a fringe of pumice, along which it is alone possible to make headway. The surrounding walls are very high. Up these the path is carried to Vilaflor, passing only a short distance below **Piazzi Smyth's** astronomical station. From here the road descends through a constant succession of cinder heaps, dolomite rocks, pumice stone, etc. At  $8\frac{3}{4}$  hrs. the **Fuente de Ucanca**, after which the pines above **Vilaflor** are seen, and the town is entered  $10\frac{1}{2}$  hrs. (Beds can be had.) (From here to Icod or for the S. of the island, see the journey from Santa Cruz round the S. of the island.)

As there is not much inducement to descend to Vilaflor for one night, those on the way to **Guía, Santiago** or **Icod** can continue along the path inside the Cañadas past **Los Azulejos** and the **Peñones de Garcia**, to the **Boca de los Taucés**, where the pass from Vilaflor to Icod is joined in about  $1\frac{1}{2}$  hrs. and a saving of over 4 hrs. is effected.

Those camping out on this side can easily ascend the Peak.

**Main Road.**—Leaving Orotava for the west, at  $25\frac{3}{4}$  m. ( $41\frac{1}{3}$  kils.) from Santa Cruz, and 2 kils. from the point where the Puerto and the Icod roads divide, a branch *carretera* to the left leads to Realejo Alto,  $2\frac{1}{2}$  m. (4 kils.) from the junction (about 5 m., 8 kils., from the Grand Hotel). It keeps the Mña. de Chaves a little on the right and, if the road from the Villa through Realejo Alto should ever be made, will form part of a very pleasant circular drive through La Cruz Santa, etc.

**Realejo Alto**, 1,160 feet, 4,077 inhabitants, now best visited *viâ* the new *carretera*, is divided from its sister town by the deep Barranco del Patronato. Both towns suffered severely from a flood in 1820.

The Church of **Santiago**, is the most noteworthy object in the town. The part of this building next the spire is said to be one of the oldest churches in the island. The whole of the



interior is quaint and well worth visiting. The ceilings and fretted beams are particularly good and should be of interest to architects, or to those concerned in the construction of churches.

The old altar with curious statues of St. James and St. Isidro is most interesting, as are two recumbent *repoussé* tombs to the left of the chancel, both dating from the 17th century, one of bronze and the other of wood. The candelabra in front of the altar is of solid silver. Artists fond of painting interiors are recommended to visit this church.

A return can be made on foot or mule by crossing the Barranco del Patronato and descending through Realejo Bajo to the main *carretera*. There is no inn or accommodation worth mentioning, nor can lunch be procured. It may be of interest to state that the Guanches were finally subdued in this neighbourhood and that the last kings were baptised on the site of the old church.

**From Realejo Alto to the Villa.**—There are two paths, both more or less level, one leading through La Cruz Santa and La Perdoma, and the other along the new *carretera* and above the Mña. de Chaves. Time either way about 1½ hrs.

The paths up to the Peak and to the Cañadas are mentioned below the description of Villa Orotava.

**Realejo Bajo**, 830 ft., 2,962 inhabitants, is 27½ m. (44 kils.) from Santa Cruz, and about 5 m. (8 kils.) by road, either from the Villa or from the Puerto, the drive occupying something under the hour.

Entering from the old *carretera* at the bottom of Realejo Bajo, the Church of S. Augustin with good carved ceiling (notice chancel and S. chapel, also tombs and wood-carving) and the adjacent Convento de las Monjas are encountered. Keep to the right below these, and ascend to the Parish Church, a large plain building of which the small door on the north side is noticeable. Without fixing a date to this, it may be mentioned that some of the ecclesiastical work in the Realejos was executed in the early days of the Spanish occupation and that the gothic decorative stone work round this doorway and round the similar doorway in the Church at Realejo Alto, is probably due to the same hand. The writer cannot recall any similar examples in the Canaries.

A steep climb now leads to the dragon-tree, 1,060 feet, a younger but at least as fine a specimen as that in Icod, measuring 15 ft. 8 in. in girth at 4 ft. from the ground, although less than 200 years old. There is a good view of the valley.

From here Realejo Alto can be reached in a few minutes by crossing the Barranco del Patronato.

**Excursions from Realejo Bajo.**—From the parish church in Realejo Bajo a paved road leads in 1 hr. to Icod el Alto, 1,720 feet, and in 1¼ hr. to the

**Bco. de Castro.** This beautiful excursion can be continued through La Guancha to Icod. (See Icod.)

**To the Corona, etc.**—When crossing the Bco. Patronato between the two villages, a turning to the right ascends the cliffs known as the **Mña. de Tigaiga** and leads to the top of the **Corona**, 2,800 ft., in about 1½ hrs. from the *carretera* (very lovely view). This magnificent walk can be continued along fairly level paths at the 3,000 ft. level to **Icod de los Vinos** which is reached through the pine woods and past the Ermita Sta. Barbara. Time about 6 hrs. total.

Below the Corona it will be noticed that there is an enormous fault in the rock, the wooded hump above Realejo having slipped down several hundreds of feet. The fault which extends for some distance up is mentioned in the "Geological" article.

**Main Road.**—Leaving the Realejos the road rapidly descends to the bottom of a high cliff, though it still remains at some height above the sea. This part of the drive is very beautiful and does not suffer at all by comparison with the very best parts of the Corniche Road on the Riviera. The distances marked on the mile-stones are those from the junction where the Puerto and the Icod *carreteras* separate. Those given in this book are as from Santa Cruz.

After passing the Barranco Espinosa, up which a track leads to Icod el Alto in about 2 hrs., the road passes the **Barranco Ruiz**, 31½ m. (50½ kils.), where there is a fine stone bridge. The barranco itself is very beautiful and a good place for picnics, though apt to be wet under foot. The ordinary visitor will not get very far up, but it is possible to reach Icod el Alto by a somewhat dangerous path in about 1½ hrs.

**San Juan de la Rambla**, 32½ m. (52 kils.), is a small town lying just above the sea at the western extremity of the Orotava valley. Pop. 2,024.

Fonda, about 5 pes. a day. The old church has a quaint, picturesque interior. Notice the curious old clock. The lattice-work balcony over the door of No. 2 is by far the best specimen of its class still existing in the Canaries and, being made of *téa*, it is trusted that it may continue to stand for a good many years to come.

The road now leads through dry volcanic valleys and ravines. Presently the Peak is sighted, a splendid view being obtained at Buen Paso.

When entering the outskirts of Icod, the *carretera* to Garachico will be seen descending on the right.

**Icod de los Vinos**, 700 ft., 37½ m. (60 kils.); 6,706 inhabitants.

Fonda Internacional, small, 5 to 8 pes.



**Churches.**—**San Marcos**, a building of little interest. Attention is called to the handsome silver cross to be seen in the Capilla de la Cruz—**San Francisco**, formerly a convent. The chapel, now used for cock-fights, has a good ceiling. The cells are occupied by the police.—**San Agustin** and convent.

The chief attractions of Icod itself are the views of the Peak which are magnificent, the best being obtained from the roofs of the houses around the plaza; the dragon tree near the church, the largest in the island and said to be 3,000 years old; and the Guanche burying cave below the town. In 1881, the dragon-tree was measured with the following results:—Height, 44' 8" (13 m. 60 c.); circumference of trunk at base, 47' 5" (14 m. 45 c.).

The great stream of lava which overwhelmed Garachico, as well as that town itself, can be easily visited. Icod is prettily situated, being built on a great slope intersected by many streams of lava now covered with earth and vegetation. The water supply is excellent.

Silk is made in the town on a small scale, also straw hats.

On the coast below there is a small harbour known as the Puerto de S. Marcos. At a point on the *carretera* to Garachico, 3 kils. from Icod, a branch *carretera*, 2 kils. in length, will connect the port with its hinterland.

A *carretera* is proposed from Icod to El Tanque, 6 kils. 3 $\frac{3}{4}$  m.; Villa de Santiago, 11 kils., 7 m.; and Guia, 31 kils., 19 $\frac{1}{2}$  m.; where it will join the projected *carretera* round the south of the island from Santa Cruz. (See below Fasnía.)

### Excursions from Icod.

To the *Mña del Decreto*. Volcano of 1909.—Can be reached on mule *viá* la Vega in about 3 $\frac{1}{2}$  hrs. It lies a little to the West of the most direct route to Guia. For description see page *f*17; also refer to excursion Icod to Adeje, etc., page 49.

To Garachico, Los Silos, Buena Vista, Palmar and Santiago.—Those driving must return to the entrance of the town and take the Garachico *carretera*. At 40 m. (63 kils.) from Santa Cruz is the branch *carretera* for the Puerto de S. Marcos (2 kils); at 41 $\frac{1}{2}$  m. (66 kils.) Garachico; at 45 m. (72 kils.) Los Silos; at 47 $\frac{1}{2}$  m. (76 kils.) Buena Vista. Carriages cannot pass beyond Garachico, but a road to Buena Vista is being constructed.

Those riding or walking may take the old road down the Calle Hercules, past the church, and join the *carretera* thus.

Those wishing to visit the **Guanche Burial Cave** must go the same way but must bear away to the right. It takes about 20 minutes to get there and it is best to take someone to show the way. Visitors are not allowed to enter without permission from the owner. Torches should be taken.



The walking inside is rough but the cave may be followed to a hole in the cliff overlooking the sea. A few little bits of bone are still mixed with the earth near the end, but the rest have been carried away. The cave is supposed to communicate with the Peak, but can only be followed upwards for about 400 yards.

The *carretera* below Icod is much more picturesque than the old bridle road, and is more direct.

Garachico, 41½ m. (66 kils.); 2,929 inhabitants. No inn, but beds can be had (with difficulty). Formerly the chief port of the island but now unimportant. The black streams of lava to be seen descending the cliff behind it rushed upon the town in 1706, destroying a great number of houses and a quantity of property, in addition to filling up the harbour and finally ruining the town. This had already suffered severely in 1645 by a flood of water, which carried away eighty houses and upwards of a hundred people, and again by a fire in 1697, when the Convento de S. Agustin and 109 houses were burned down.

**Public Buildings.**—Church of Santa Ana, with handsome interior and roof.—Church and Convent of San Francisco, now the school. The double church is poor, but the pair of patios with old picture are well worth visiting as good specimens of their class. A cross over the church door is made of old Delft tiles.—Church and Convent of Santo Domingo; Church now used for burials and convent as a hospital. A "torno," or turnstile for founding infants may still be seen.—Convento de Monjas de la Concepcion still contains a few nuns; Church without interest.—Convento de San Agustin burnt down and façade only left.—Castillo de San Miguel with five heraldic shields over the door.

From the long list of convents and churches still remaining some idea may be gained of the former importance of the place. It is easy to trace the descent of the lava, but not to divine all the damage done until gazing through the so-called Puerta de Tierra, a small *cul de sac* passage, just to the right of the running fountain in the Plaza de la Fuente. This passage formerly led down to the sea, but now abuts on to a confused mass of lava piled high in the air. The houses above crown a bluff on which was once an iron hook to which vessels could be made fast, the harbour being at the mouth of a barranco of which no trace remains. (Garabato (hook), chico (small) whence the name of the town.)

The wine trade has fallen away so much that the necessity for a port near Icod, formerly a great centre for wine, is not so great, but nevertheless the Puerto de S. Marcos has been constructed. Doubtless Garachico could be made into a fair harbour by connecting the rock in front with the shore.

The *carretera* beyond Garachico traverses the lava slope and proceeds across a fruitful plain, where a quantity of sugar is grown for the large factory at Daute.

Los Silos, 1,452 inhab., no inn, 1 hr., lies beneath a gigantic cliff. The *carretera* continues fairly level, passes to the south of the Mña. de Taco, and crosses a sterile tract of country, chiefly composed of volcanic detritus, to

Buena Vista, 47½ m. (76 kils.), 2,113 inhab., 1¾ hrs. from Garachico on mule. Accommodation very poor, 5 pesetas.

Buena Vista is an unattractive village where a quantity of good wine is still grown.

From here to **Palmar** (1,650 ft.), a steep climb by bridle path of  $1\frac{1}{4}$  hrs. No inn, but a bed may be had. Palmar is a pretty valley, from which the **Pico de Barracan**, a mountain to the W., about 3,400 ft. high, can be ascended in  $1\frac{1}{4}$  hrs. A fine view is obtained of the Peak and the group of volcanoes to the N.W. of the same. Excursions can also be made towards **Punta de Teno**, **Carrisal**, etc. This part of the country belongs to the same formation as the Punta de Anaga and the scenery of both is somewhat similar.

The track then ascends the valley and the scenery becomes more volcanic, **Santiago** (3,000 ft.) being reached in about 4 hrs. from Buena Vista or a total of  $7\frac{1}{4}$  from Icod. Refer elsewhere for details or continuation of journey to **Gula**, **Vilaflor**, **Güimar**, etc.

Buena Vista can be omitted and a more direct road followed from **Los Silos** to **Palmar** over the Cumbre de Volico in 2 hrs. Very pretty views.

**From Icod to Valle de Santiago viâ La Culata.**—Leaving Icod cross the **Boo. de la Hacaña**, go through the tunnel and keep along the top of the cliff to **La Culata** (1,625 ft.), a small village, 1 hr. on mule,  $1\frac{1}{2}$  hr. on foot. The cliff can be descended to **Garachico** on foot from La Culata or from the Fielato,  $\frac{1}{2}$  hr. from Icod.

Immediately after the village the stream of lava which overwhelmed **Garachico** is encountered. This frightful exhibition of volcanic fury takes twenty minutes to cross. It is a succession of ravines, where the hot lava in the centre has ploughed great furrows in the partially cooled mass which preceded it. It is only after seeing this that the country as far back as San Juan de la Rambla can be properly appreciated by those unaccustomed to a volcanic country. It will now be recognised that the whole distance is covered by a succession of similar outbreaks, now more or less disintegrated or overgrown, but perhaps equally destructive in their time. The lava of 1706 is only commencing to decompose, and it would seem that much of the igneous rock ejected during the third period is of a less friable character than that which immediately preceded it. It is difficult therefore to estimate the antiquity of that which passes through **Buen Paso** or the town of Icod itself by comparing it with this newer example.

The path now bears slightly to the left and at 2 hrs. **El Tanque**, pop. 1,189, is passed. At  $2\frac{1}{2}$  hrs. **Rigomaz**, and  $\frac{1}{4}$  hr. further **Las Tronqueras**. A few minutes further **Los Dornalos de Erjos**, where there are several springs, and at 3 hrs. the **Summit** or **Cumbre del Valle** which commands a good view. Passing the **Iglesia Vieja** the village of **Santiago**, 3,000 ft., pop. 1,432, is entered,  $3\frac{3}{4}$  hrs. total. For further details refer under journey round the S. of the island.

The landscapes in this part of the island are greener than those usually to be seen in Tenerife and the land is fertile. There is a certain amount of sport to be found as well as a succession of mountains and valleys which can only be explored properly by those taking a tent.

A lighthouse has been built at the Punta de Teno.

**From Icod to Santiago viâ la Vega.**—A rough and somewhat longer road leaves the top of Icod, passes the **Ermita San Antonio**,  $\frac{1}{4}$  hr., the **Ermita del Amparo**,  $\frac{1}{2}$  hr., crosses the **Boo. de la Vega**, 1 hr., on mule, passes through some houses to the **Cruz del Almorzadero**,  $1\frac{1}{2}$  hrs., situated just below the **Mña. de Serrogordo**, and so viâ **Los Partidos** to **Santiago** in about 4 hrs. Guide necessary.



**From Icod over the Cañadas to Adeje, Vilaflor, etc.**—Ascend past the Ermita San Antonio, pass the turning to the right and keep on up to the Fuente de la Vega where there are a few heath trees (1½ hrs. mule). The Mña. de Serrogado is kept on the right.

The Monte Verde is now entered and heath, jara, laurels and pines gradually succeed one another. At 3 hrs. El Llano de los Hermanos, near which seven travelling friars were once frozen to death. Close by is a mountain (La Caldera) from which there is a fine view of the N.W. group of eleven volcanoes.\* Soon the road climbs an old lava stream, and at 4½ hrs., about 4,500 ft., the lava stream, coming from the base of Chahorra and flowing towards Garachico, is crossed. From near here Chahorra can be ascended. It is a hard rough climb and takes about 8 hrs. from Icod. The crater is ½ mile wide and about 150 ft. deep.

At 4¾ hrs. the Cruz de Téa, 7,612 feet, a half-way mark is met with. The stones only remain, however, as the cross has disappeared. Close to this are the Hornillas del Teide, two holes in the lava, apparently very deep and supposed, of course, to communicate with Hell. The travelling on this part of the journey is very bad.

At 5 hrs. the lava stream which runs towards Guia is crossed, the last eruptions of lava in Teneriffe having taken place up here in 1796 and 1798. (Those going to Adeje will here descend to Guia unless they prefer to take Adeje *vid* Vilaflor. For times, *see* Guia.)

There is a good view here and there of the coast and the lower volcanoes with Palma and Gomera in the distance, the Peak, which is at first quite close, being gradually hidden by Chahorra. At 5½ hrs. the Peak again becomes visible, the slag and clinkers at length give way to the smooth pumice floor of the Cañadas and the S.W. extremity of the walls of the same commence. Here and there, however, lava is again crossed, and at last, at 6½ hrs., the path leads through the Boca de los Taucos, 6,680 ft., to the outside slope.

It is a very bad road from here, along coarse pumice and rocks, to the Bco. del Dornajito, where good water may sometimes be found a little to the left of the path (7¼ hrs.). From 2 minutes beyond the spring the path descends all the way to Vilaflor, 4,543 ft., passing the Ermita San Roque immediately before arriving. Total time, 9½ hours, not allowing for stoppages.

(For Vilaflor and excursions or for the other side of the Cañadas *vid* los Azulejos, *see* elsewhere.)

A return from Vilaflor to Icod can be made *vid* Guajara Pass, 7,700 ft., 4 hrs., to the spring, across the Cañadas, and under the Fortaleza, 7¼ hrs.; down through the pine forest over rough rolling lava, pass the Fuente Pedro, 9½ hrs., where the water is caught up and carried into Icod by an iron pipe, and so through the Monte Verde and amidst a number of intricate paths to Icod in about 14 hrs. The night must be passed on the Cañadas and the journey is a most villainous one, though there are some good views on the descent.

(For the best way to reach Icod from the Fortaleza, *see* the next excursion.)

**From Icod to the Fortaleza *vid* La Guancha.**—Leave Icod by the Orotava end and ascend to the Ermita Santa Barbara, ¾ hr., to La Guancha, 1,950 ft., 1,697 inhabitants, no inn, 2 hrs. Keep to the right by little frequented paths up to the Fortaleza, 7,300 ft., in about 5½ hrs. It is not necessary to go through La Guancha. The way is difficult to find and a guide is required. A return can be made to Orotava by La Corona and Realejo.

The side of the Fortaleza exposed to the Cañadas is very fine. This is the only part of the wall from the Portillo on the N.E. to the Mña. de Chabao on the S.W. that has fought the fight and survived. Its many coloured scars

\* NOTE.—The Volcano of 1909 lies amongst these. *See* page 517.



and fire-eaten front are a standing record of the high temperatures of which they have borne the brunt.

**From Icod to La Corona, Realejo and Orotava.**—Pass the *Ermita Santa Barbara* and work straight up to the pine woods. Keep along the 3,000 ft. level to **La Corona**, from which there is one of the most astonishing views in the world. Then drop down to **Realejo** and on to **Orotava**. This journey is best done on foot without guides, is extremely lovely and occupies some  $7\frac{1}{2}$  hrs. No guides would take the paths referred to.

**From Icod to La Guancha, Icod el Alto and Orotava.**—To **La Guancha**, as above, 2 hrs., whence cross the top of the lovely *Bco. Ruiz*,  $3\frac{1}{4}$  hrs., to the church of **Icod el Alto**, 1,720 ft.,  $3\frac{1}{2}$  hrs. A few minutes later the spring in the *Bco. de Castro* is passed and at  $3\frac{3}{4}$  hrs. the splendid view over the valley is reached. Descend to **Realejo Bajo**,  $4\frac{1}{2}$  hrs., and on to **Orotava**,  $5\frac{1}{4}$  hrs. This is a regular mule track. The distance is about  $17\frac{1}{2}$  miles and has been walked in  $4\frac{1}{2}$  hrs.

## Approximate Prices of Horses and Carriages.

From the livery stables. For cabs (*coches de punta*) see under SANTA CRUZ.

(In Santa Cruz).	Carriage to hold Four (with hand-bags) (Three Horses).
San Andres ... ..	10 pes. Return.
La Laguna (return 15 pes) ... ..	12½ „ Single.
Villa Orotava ... ..	35 „ „
Puerto Orotava ... ..	35 „ „
Realejo Bajo ... ..	35 „ „
Icod ... ..	60 „ „
Garachico ... ..	70 „ „
Arafo (end of <i>carretera</i> ) ... ..	35 „ „
Güimar ... ..	30 „ „

Where “single” is written above, those wishing to return the next day must add 10 pes. to the prices given, or in case of Icod and Garachico, 20 pes. more.

Donkeys, 1.25 pes. an hr. or 5 pes. a day.

Horses and mules for expeditions should be hired further in the country. They differ in price in different localities and in accordance with the work to be done. (*See over leaf.*)

When carriages or horses are kept waiting for an unreasonable time an extra charge is made.

### Electric Tramways.

See under SANTA CRUZ and under LUGGAGE.

### Luggage.

Special carts with luggage to Orotava, about 25 pes., or by arrangement with the proprietor of the Tacoronte Motor Car Service.

Carts also carry luggage by the piece and charge according to size and distance. These carriers are constantly coming and going where the *carretera* runs, or mules can be engaged elsewhere. Private carriages will take as much as possible and the tramway will carry small handbags and so on.

Carts with luggage from the Mole to any part of the town, from 30 centimos to 2½ pesetas, according to quantity, distance, size of carro and hour. Donkeys with luggage, 35 to 50 centimos. Demand tariff card.

The electric tramway also takes luggage from Santa Cruz to Tacoronte and *vice versâ* once a day. When the quantity is sufficient a special luggage car can be chartered.

**Prices in La Laguna.**—Horses for short rides from 5 pes. upwards according to time. Horses are very difficult to procure but donkeys can be hired. Per hour, 1 pes.

Carriages with three horses: To Tegueste, 12½ pes.; Tejina, 15 pes.; Las Mercedes, 10 pes.; Santa Cruz, 12½ pes.; Güimar, 30 pes. (return, 40 pes.); Tacoronte, 12½ pes.; Matanza, 15 pes.; Villa Orotava, 25 pes. (return next day, 30 pes.); Puerto Orotava, 25 pes. (return, 35 pes.); Icod (single or return), 50 pes.; Garachico (single or return), 60 pes. Tejina, Tacoronte and back or *vice versâ*, 20 pes.

**Prices in Tacoronte.**—Carriages to La Laguna, 12½ pes.; Santa Cruz, 20 pes. (single); Puerto Orotava (single), 25 pes.; (return), same day, 30 pes.; next day, 35 pes.; Villa and back, 25 pes.; Tejina and back, or return *via* Laguna, 20 pes.

Private motor cars, according to tariff card. Approximate examples: One person to Puerto Orotava, 25 pes.; four persons, 30 pes.; to the Villa, 20 and 25 pes., etc. Some motor cars are more expensive than others. Time to the Puerto or back about one hour. For luggage see under Santa Cruz.

Motor bus.—Runs at certain hours to Orotava and Icod at fixed fares, see tariff card. Approximate examples: Tacoronte to the Villa, 4 pes. each; to Icod, 8 pes. It also runs at other hours according to separate arrangement.

The accuracy of fares by motor cars cannot be guaranteed at present (1910).

**Donkeys.**—To Agua García, 3 pes.; Las Lagunetas, 5 pes.; to the Cumbres (Mña. del Chupadero), 7½ pes.; to La Esperanza, 5 pes.; to Iguete de Candelaria, 10 pes.; to Güimar (single), 15 pes.; short rides, 2½ to 5 pes.

**Prices in Puerto Orotava.**—Hammocks, to Botanic Gardens, 5 pes.; Villa, 10 pes.; Punta Brava, 8 pes.; Tacoronte, 60 pes.; Vilaflor, 240 pes.; between Puerto and Grand Hotel, 3 pes., return 5 pes. Extra if taken into the hills or for very heavy passengers.



**Horses or Mules.**—Short rides of about 2 hrs., 5 pes.; short day inside valley, 6—8 pes.; per wk., about 45 pes.; per mnth., 150 to 175 pes. Expeditions, including man and horse, per day, about 10 pes. For the Sortija, 20 pes.; for practice for same,  $7\frac{1}{2}$  pes.

**Named rides.**—Sta. Ursula, 7 pes.; San Juan de la Rambla, 10 pes.; Florida,  $7\frac{1}{2}$  pes.; Fuente de la Cruz, Agua Mansa, 10 pes.; Icod de los Vinos, 15 pes.; returning from Icod next day *viâ* Icod el Alto, 20 pes.; Icod el Alto and La Corona, 10 pes.; Mña. Blanca, Las Cañadas, 15 pes.; Pedro Gil, 15 pes.; Güimar (single), 15 pes.; The Peak, 20 pes.; Vilaflor, 25 pes.; Güimar and back next day, 20 pes.

Horses hired by the month are at the responsibility of the hirer unless otherwise arranged. Owners expect half the extra fee when their horses are used in the Sortija, or when used in practice for same.

**Donkeys.**—Up to 2 or 3 hrs., 3 pes.; whole day, 5 to  $7\frac{1}{2}$  pes.; by the week, 25 pes.; by the month, 100 pes.

**Guides.**—Special guides are only necessary when climbing the Peak. In other cases the mule drivers are all that is required. Although guides in Orotava now ask fairly high prices, they can in no way be compared to Swiss guides, and cannot always be depended upon even to show the way.

**Carriages** to hold 4 persons: Short drives, 10 pes.; To the Villa or Realejo Bajo, 10 pes.; Realejo Alto, 15 pes.; Rambla de Castro,  $12\frac{1}{2}$  pes.; Barranco Ruiz, 15 pes.; San Juan de la Rambla, 15 pes.; Icod, 25 pes. (return next day, 35 pes.); Garachico, 35 pes.; Sta. Ursula,  $12\frac{1}{2}$  pes.; Victoria, 15 pes.; Matanza, 15 pes.; Tacoronte, 25 pes.; La Laguna, 30 pes.; Santa Cruz, 40 pes.

**Motor Cars.**—Some cars commenced running in the 1909-10 season, but there was no organised service at the time of going to press.

**Prices in Güimar.**—Mules, 2 to 3 hrs.,  $3\frac{1}{2}$  pes.; 4 to 6 hrs., 5 pes.; to Orotava, 15 pes.; to Alta Vista (for Peak), 20 pes. Carriage to Fasnía (end of *carretera*), 15 pes.

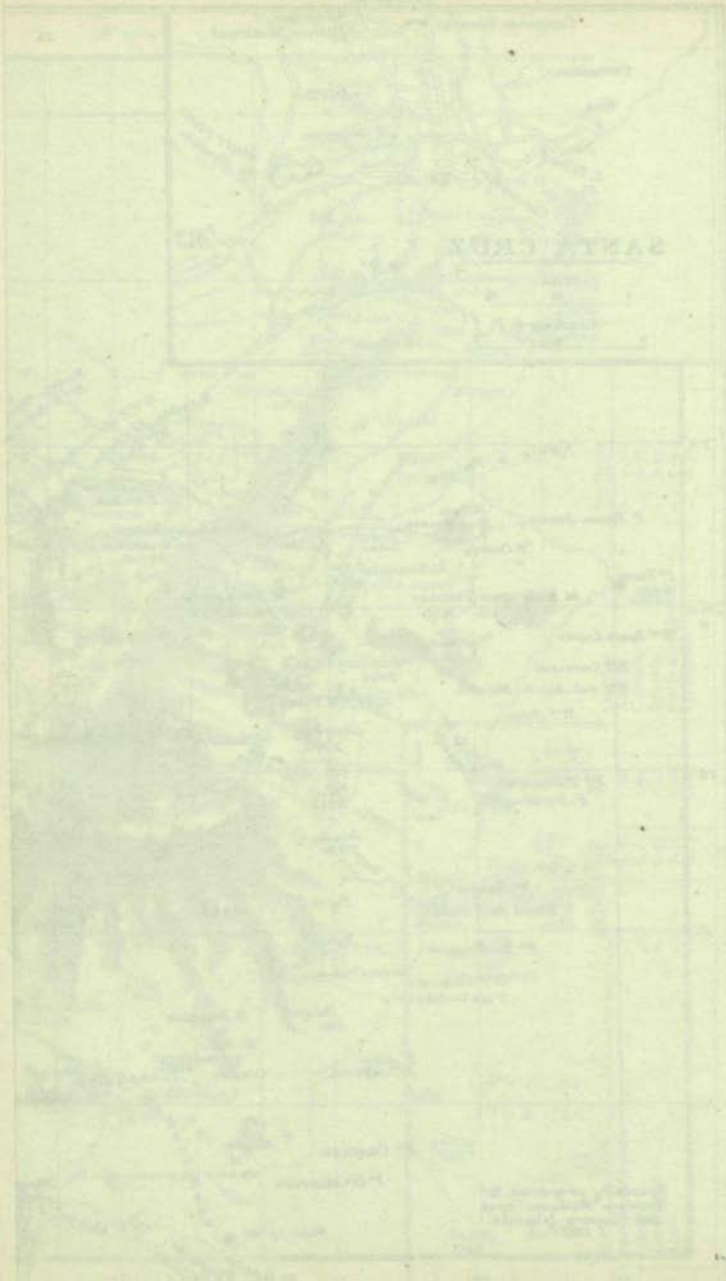
**For Public Coaches, see next page.**













## GRAND CANARY.

THE island was formerly known as Canaria, the name being altered to Gran Canaria because of the heroic defence made by the aboriginals, who called themselves Canarios. Some connection has been inferred between this name and a supposed breed of large dogs, of which a pair are referred to by Pliny as having been presented to King Juba II., of Mauritania. Ptolemy speaks of a part of the neighbouring African coast under the name of Gannaria.

The island is situated between lat.  $27^{\circ} 44'$  to  $28^{\circ} 12'$  N. and long.  $15^{\circ} 21'$  to  $15^{\circ} 50'$  W. of Greenwich, is  $34\frac{1}{2}$  m. (55 kils.) long by  $29\frac{1}{2}$  m. (47 kils.) broad, and covers an area of 634 sq. m. (1623 sq. kils.). There are 127,471 inhabitants spread over 3 cities, 3 towns and 178 villages or hamlets, which are divided into 22 districts, and its geographical position is E.S.E. of Teneriffe and W.S.W. of Fuerteventura.

The form of the island is nearly circular, and greatly resembles a saucer-full of mud turned upside down, with the sides furrowed by long and deep ravines. The highest point is a swelling upland known as los Pechos, 6,401 ft. (1,951 metres).

Of the ravines, the Bco. de Tejeda is the greatest. It is indeed so large that, as seen from Granadilla in Teneriffe, it seems to split the island in two. Other large Barrancos are those known as the Bco. de Tirajana, de Fatarga, de la Virgen, etc.

The ravines and watercourses of all the islands greatly resemble one another. As is the case elsewhere, some of the ravines are exceedingly picturesque. At times the water runs between steeply swelling banks; in other places it is confined by dangerous and forbidding precipices. Where moisture is present these banks and precipices are clothed with verdure and forests, the woods being sometimes very extensive, as for instance in the case of the country surrounding the Barranco de la Virgen. (See under Firgas, Moya, Guia, etc.) Occasionally, midway up some inaccessible precipice, a tiny spring gives fertility to the soil, and the laurel, the pine and the dragon-tree may be seen disputing the possession of some minute ledge, amidst a bed of luxuriant maidenhair fern, brilliant cineraria or gorgeous semper-vivens.

Whether these ravines commenced their existence as volcanic fissures or are entirely due to denudation, is a question of minor interest.

On the S.E. coast of Grand Canary there is an exceptionally wide plain, stretching from below Agüimes to Arguineguin, and consisting of the *débris* washed down from the hills, which terminate abruptly at some distance from the sea. The formation is so different from that found elsewhere, and the



cleavage of the rocks so marked and so widespread, that the curiosity of all who pass cannot fail to be excited. As far as the writer's very cursory examination indicated, the centre of disturbance would probably be found in the Bco. de Tirajana, but there are outcrops of cinders, etc., in other places which are not immediately noticeable, as they have been reduced to the level of their surroundings, perhaps by the action of the sea.

There are many places where the crust of the island has been penetrated by volcanoes. Amongst these, that known as the Caldera de Bandama, near Tafira, can be easily visited. The rim of the crater was never broken by the lava, and is now a great cup, of which the bottom has subsided to a level floor, leaving the walls exposed to sight.

That part of the island known as the Isleta is thought to be of more recent creation than the mainland. The isthmus by which the two are connected is formed of sand, drifted across from the African coast by the action of the wind and tide. A similar growth of sand is to be seen at Maspalomas, also in Grand Canary.

The length of the Barrancos in Grand Canary is much greater than is the case in Tenerife, and a great part of the water, which gradually filters from the Cumbres, is caught up and carried on to the land. The quantity of water available might be largely increased by the planting of forests. The island, however, is better off as regards water than either Tenerife or La Palma, although the climate is undoubtedly drier. A good deal of energy has been shown in the construction of tanks, without which cultivation during the summer months would often be impossible.

There are several mineral springs, notably those at Firgas, Agaete and Santa Catalina.

Beyond the Pinar between Tejeda and Tirajana, and the widely spreading woods in the upper part of the Bco. de la Virgen already mentioned there are few wooded tracts in Grand Canary. In fact, the destruction of forest land has been so reckless, that there is nothing left from which charcoal can be made, and all that is used has to be imported. The pine, the laurel and the heather will grow as well as elsewhere, but, unfortunately, only the eucalyptus is planted, if one excepts the *escobón*, a species of broom from which faggots can be cut about five years after the seeds are put into the ground. The various euphorbias, etc., are, of course, well represented, and the chestnut, fig, olive, almond, vine and orange thrive luxuriantly.

Cochineal is still cultivated to a certain extent, but the tomato, banana, potato, sugar-cane, maize and other cereals are now the principal crops. The oranges are particularly fine.

The history of the island prior to the arrival of the Spaniards has been sufficiently entered into elsewhere. It only remains to

add that the most perfect examples of ancient caves and dwelling places are to be found in Grand Canary.

The modern history is chiefly commercial. As a coaling station, and as a business centre, Las Palmas has made enormous strides during the last few years.

The customs of the Canarios of to-day call for no special remark. The only peculiarities in their dress are the white shawls worn by the women, which have a somewhat Moorish appearance, and the *mantas* worn by the men. The latter, instead of being made of English blankets, as is the case in Teneriffe and La Palma, are woven by the women from wool grown in the island. The black stripe is the natural colour of the wool.

The villages and towns are very plainly built, and are far from picturesque. There are, however, some handsome houses in Las Palmas built of blue stone (lava basalt). Of this stone there are several quarries, notably one at Atalaya, and the art of stone cutting is far more advanced in Canary than elsewhere in the archipelago.

**Native Curiosities, &c.** :—The special local industries are embroidery, drawn linen (*calado*), native tanned goat-skins, rough red pottery, drip-stone filters, coarsely woven cloths, and very handsome knives with ornamented handles.

Palm leaves are used for making a number of articles, for instance, the *seron*, in which manure, etc., is placed when carried on horse-back.

A speciality of Grand Canary is a cheese known as Flor de Canaria. The milk is curdled by means of the flower of the *cardo*, a wild artichoke with a handsome thistle-like blue flower, of which the leaves can be scraped and eaten like a vegetable.

The chief port is the Puerto de la Luz, 4 m. (6 kils.) from Las Palmas, with which it is connected by an electric tramway. The port at Agaete is only used by schooners, and that at Punta de Gando has been sacrificed to the Lazaretto.

There are several main roads which radiate from Las Palmas as a centre, and connect it with Telde, Agüimes and Santa Lucia, an uninteresting village a few kilometres short of S. Bartolomé de Tirajana, on the South; San Mateo (Monte Road) on the S.W. with a branch from Santa Brigida to Telde, completed as far as Atalaya; and Arucas, Guia and Agaete (North of the Island) on the W. The last road has a branch to Teror and another branch is being made to Moya, with a subsidiary branch leading to Firgas. From Gáldar another branch leads to the Puerto de Sardina. It is intended to continue the S. road to Tirajana, and probably further later on. A direct road has also

been made from the Puerto de la Luz to Tamaraceite, where a branch is to be made *viâ* San Lorenzo to Tafira on the Monte Road. Unfortunately the roads have been allowed to fall into a very bad state of repair.

Owing to the want of good accommodation in most parts of Grand Canary, it is more difficult to explore the island than it should be. There is, however, a group of English hotels in the Monte and some of the native inns are fairly good; but a little more enterprise is wanted before the latter can hope to secure a very large custom.

The two points from which a good idea of the island can be most quickly secured are the summit of the Pico de los Osorios, near Teror, and of the Pico de Bandama in the Monte.

The prettiest road is that leading up to San Mateo. Taking the **Monte** as a centre, the best excursions from here are:—To the **Gran Caldera** and **Atalaya**, or across country through **Teror**, **Firgas**, and **Moya** to **Guia**. On the last journey the best halting-place is **Firgas**.

Taking **San Mateo** as a centre (it is easily reached by motor car) the best excursions are:—To the **Cumbres** on a clear day, taking care not to omit the view of the **Bco. de Tejeda** from above, one of the most magnificent sights in the islands; to **Tirajana viâ** the **Cumbres**, and back to **Las Palmas viâ Agüimes** (no inn), or *viâ* **Tejeda** (beds); or to **Agæte** or **Guia** (inns) across the upper part of the **Bco. de la Virgen**.

It is also possible to make a centre of **Firgas**, in the neighbourhood of which there is some very fine scenery, or of **Agæte**, if one is not too particular. **Teror** also offers many attractions. **Gáldar** and **Guia** are rather climatic resorts than centres for exploring the country.

It is not impossible that at some future time **Agæte** will be the leading health resort of Grand Canary. The country between it and **Tejeda** or **San Mateo** is often charming but very mountainous, which is the case with that lying between **Tejeda** and **Mogan**.

The **Bco. de Fatarga** and the upper part of the **Bco. de Tirajana** are both beautiful, but the accommodation is either *nil* or is villainous. The villages on the S. swarm with fleas and flies to such an extent that life is only endurable under canvas.

For a short run over the island the following is recommended. Drive to **San Mateo**, and back to the **Monte**. See the **Gran Caldera** and **Atalaya** in the afternoon, and sleep at the **Monte** (1 day). Engage mules, and ride to **Firgas**, taking **Teror** and the



top of the Mña. de los Osorios on the way (2 days). Ride past Moya and Los Tilos to Gáldar or Guía (3 days). Rest and drive over to Agaete and back (4 days). Return by coach or motor car to Las Palmas (5 days). Drive to Telde and the Mña. de las Cuatro Puertas (6 days). If desired, an early start can be made from the Monte and the Cumbres be visited from San Mateo, returning to the Monte in the evening, this adding one day to the tour, or the total time can be reduced by omitting Agaete or by using motor cars or motor busses.

Accommodation can be booked by telegram as far as Telde, Teror and Agaete. Wires are not laid elsewhere, but there are telephones to Santa Brigida and Arucas.

The Puerto de la Luz is a harbour formed by the Isleta on the N., the Isthmus of Guanarteme on the W., and two moles, commenced in 1883. The eastern or principal of these measures over 1,500 metres. Passengers are usually landed on the smaller (Santa Catalina) mole. The entrance between the moles is about 300 yards wide and the depth of the fairway  $42\frac{1}{2}$  ft. There are slips capable of taking vessels up to 1,500 tons, and some large engineering sheds, allowing of extensive repairs being executed.

Houses are rapidly rising in the neighbourhood of the harbour, and the township of the Puerto de la Luz will soon cover the whole of the isthmus. The population is about 10,000. There is a Sailors' Institute. For Hotels, etc., *see* under Las Palmas.

The direct carretera from the Puerto to Tamaraceite,  $4\frac{1}{2}$  m. (7 kils.) is the shortest route from the Puerto to Teror, Arucas, etc.

**Landing Charges:** All passengers are landed on the mole, and all ships are met by the hotel agents to whom the luggage may be entrusted (Special inclusive charges). The steam-launches (fare 1/- each way) are recommended in preference to the rowing boats.

The **official port charges** are, each passenger each way, by day with one handbag, one peseta; each trunk, one peseta. After dark double fares may be demanded, though this right is rarely enforced.

There are no **custom duties** on passengers' luggage, but cases are opened at the **fielato** on the mole. When the quantity is large, a declaration must be made, and a ticket taken at the same place. Otherwise the guardian at the **fielato**, opposite the Santa Catalina Hotel, may refuse to let the carro pass.

**Coupons** can be purchased from the hotel agents on board, which include boat and carriage (both ways) to the Monte, etc., and one meal at an inclusive charge.

### Conveyances in and about Las Palmas.

**Electric Tramway** connecting Las Palmas (Market Place) with the Santa Catalina Mole and the Puerto de la Luz. Distance 4 miles (6 kils.). Trams run about every 10 to 15 minutes. Fare (City Terminus to end of either Mole), first, 40 c.; second, 30 c.; third, 20 c. Also by stages: minimum stage, first, 15 c.; second or third, 10 c. Books of tickets at reduced prices.

**Tartana and Carriage (Cab) Tariff:**—There are three zones, 1, Central; 2, Extended Central; 3, to Puerto de la Luz on one side and to 5 kils. along Telde road on the other. For limits of zones demand tariff card from driver. The conveyances are, Tartanas (2 wheels and 1 horse); Coches (4 wheels and 2 or 3 horses). In the table, A stands for Tartana, B for Coche. Prices in pesetas and centimos.

	ZONE 1.		ZONE 2.		ZONE 3.	
	A.	B.	A.	B.	A.	B.
One to three adults ...	1'00	1'50	1'50	2'50	2'50	4'00
Each additional adult ...	0'25	0'50	0'50	0'50	0'50	1'00
By time, per hour ..	1'75	2'50	1'75	2'50	2'50	4'00
Each additional adult ...	0'50	0'50	0'50	0'50	0'50	1'00

Return journey between City and Port with one hour's detention, A, 4 pes.; B, 6 pes.; each additional adult, 1 pes. Between the Harbour and the Santa Catalina Mole, same as Zone 1. Between the Harbour and the Santa Catalina Hotel, same as Zone 2. From dark to midnight, 50 per cent. extra. From midnight till morn, double.

**Private Carriages, Mules, Donkeys, Public Coaches, Motor Cars, etc.**—For these refer to the end of the description of Grand Canary, pages *m35* and *m36*.

**LAS PALMAS**, 44,517 inhabitants, capital of Grand Canary and the seat of a bishopric since 1485, is situated on the N.E. of Grand Canary, 53 m. by sea from Santa Cruz de Tenerife; 262 miles from Madeira; 1,425 miles from the Lizard, and 103 miles from Fuerteventura. British residents about 300.

**Hotels.**—On the road between the Port and the City.—The Hotel Santa Catalina, standing in its extensive grounds with a fine sea view, from 10s. 6d. a day upwards; the Metropole, well situated on the sea shore, with gardens and a good glazed patio, 9s. to 12s. 6d.; El Rayo, 6 pes. upwards.

**Inside the Town.**—The Continental Hotel (late Quiney's), old-established, with garden, facing open square, from 8s. 6d. a day; Quiney's English Hotel, corner house facing same square, from 7s. 6d. per day; Monopol Hotel, central, facing the Circulo Mercantil, from 5s.; Moniz' International, centre of Triana, from 5s.; the Cuatro Naciones and the Europa, both facing the Alameda; the Central, a new building in the Triana; the Inglaterra, and others, all about 5 pes. upwards a day.

**Boarding Houses.**—Of these there are a few, most of them in or near the Puerto de la Luz, terms from 30s. a week.

For hotels in *Tafira* (page *m19*) and in the *Monte* (page *m20*), etc., see under the description of the district.

**Newspapers.**—*El Diario de las Palmas*; *La Mañana*; *Union Liberal* and others.

(For advertisements, see under *Grand Canary at the end of the book.*)

**Clubs.**—The *Gabinete Literario* in the Alameda, a well-fitted club with Casino, admits monthly members. *Circulo Mercantil*, Plaza de la Democracia, a most admirable example of decoration in blue basalt. *English Club*, opened in 1909, in the Puerto de la Luz. *Sailors' Institute*, at the Puerto de la Luz.

*Real Club Nautico*, aquatic sports, etc., with fine dancing hall, salons de jeu, etc., adjoining the Santa Catalina Mole (visitors admitted).

The *Beach Club* (opened 1908) for tourists and visitors, on the beach in front of the Santa Catalina Hotel, recreation, bathing, etc., and the usual amusements to be found in a Casino.

The *Golf Club*, with links above and behind the Santa Catalina Hotel. The links (earth) are 2 miles round, with 18 holes, and are kept in very fair order. There are several championship cups, a monthly medal and other prizes. The *Cricket Club*, with ground and pavilion near the Metropole Hotel. *Lawn Tennis Club*, with several concrete courts. The game is also played at most of the hotels. Championship Cups open to all comers (both sexes). Temporary members admitted to the Golf, Cricket and Lawn Tennis Clubs.

It may here be mentioned that general social intercourse is further facilitated by the hotels, by the Beach Club, by the Real Club Nautico, etc., which maintain the admirable custom of inviting guests from all the hotels, etc., when dances or entertainments are given.

A battle of flowers usually takes place in the spring.

**Water Supply, Lighting, etc.**—Drinking water is laid on in the city and down to the Port by iron pipes which communicate with the Fuente Morales, a spring some distance above the town, in such a manner that contamination is prevented. A supply is laid on to the hotels and larger houses directly from the main.

A telephonic system exists throughout the city, and as far as the Monte and Arucas.

The town, port and port road are lighted by electricity.

**Public Buildings.**—The *Town Hall (Municipio)*, at the top of the Plaza Sant' Ana, and facing the Cathedral; erected in 1842. The Reception and Council Chambers may be visited by request.

On the first floor is the *Public Library*, open every day from 11 till 3, with some 5,000 vols. and a good collection of historical works.

On the second floor is the *Museum*, the largest in the islands and richer in remains of the aboriginals than any other Museum in the world. There is also a fair collection of objects of natural history. Open daily from 11.30 till 3. If closed, the key can be obtained of the porter at the Municipio (see expected). The contents are not catalogued and are imperfectly arranged.



Some help is afforded by the colour of the labels affixed to the specimens. Objects marked with a Green ticket come from Grand Canary; Red from Teneriffe; Blue, La Palma; Yellow, Fuerteventura; Cream, Lanzarote; Rose, Hierro; Violet, Gomera; White, foreign to the islands. This arrangement is only partially carried out and the colour has faded out of a good many labels.

Room No. 1.—The cases are mostly occupied by a collection of Geological specimens, which are not very well grouped and are badly sorted.

Rooms Nos. 2, 3 and 4.—Rooms 2 and 3 contain objects collected in the Archipelago; Room 4, objects from elsewhere. Amongst a considerable collection of pottery should be noted the "*Pintaderas*," or earthen dyes, which were used for stamping patterns on the skin, on leather, etc. The ornaments, tools and implements made from bone, shells, stone, etc., will also be remarked.

Room No. 5.—The insects and Crustaceans are well arranged and the land and sea shells are classified on an M.S. catalogue. The fish would repay more attention. The "*manta*," or devil-fish, which is said to embrace its victims and carry them away under water, is not uncommon round the Canaries.

Room No. 6.—The Anthropological Department is by far the richest and best arranged and contains the best collection of Canary Island mummies in the world. Printed measurements of the skulls, etc., will be found hanging on the walls. Amongst the specimens of leather work are some wonderful examples of sewing.

On the North side of the Plaza is the Bishop's Palace.

The **Gobierno Militar**, completed in 1894, a substantial stone building facing El Parque de San Telmo and occupied by the Military Governor of the Eastern Portion of the Archipelago.—The **Law Courts (Audiencia Territorial)**, in the disused Convent of San Agustin (with plain chapel adjoining). This tribunal is superior to all others in the Province of the Canaries. Appeal cases go to Madrid.—**Customs House (Delegación de Hacienda)**, near the Cathedral.—**Prison**, to be replaced by a more modern building.—**Market Buildings (Mercado)**, at the end of the Calle de la Triana and across the lower bridge. Both the fish and fruit markets should be visited, especially early of a Sunday morning. The oranges are particularly recommended.—**Opera House (Teatro)**, a large building, well designed, with a good interior, capable of holding 1,400 spectators.—**Cockpits (Circo Gallera)**, there are two.—**Cuartel (Barracks) de Infantería**, Calle de San Francisco.—**Comandancia de Marina**, a large, unfinished building near the Plaza de la Feria.

**Hospitals.**—**Hospital de S. Martin**, above the Santo Espiritu, where there is a torno or receptacle for foundlings. Children placed by their parents into this turn-stile are well taken care of by the ecclesiastical authorities. Even married women sometimes dispose of their offspring in this manner. The custom no doubt serves as a check to infanticide.—**Leper Hospital (San Lazaro)**, in the old monastery of Santo Domingo. The only one in the Canary Archipelago.—**Queen Victoria Hospital** for

seamen, facing Confital Bay, where sick sailors and a few private patients are received at moderate rates.—**Sanatorium San José**, also fine, breezy situation, facing Confital Bay, moderate charges

**Schools, etc.**—*Escuelas Publicas Elementarias* (both sexes).—*Colegios de Segunda Enseñanza* (two), affiliated to the Instituto de Tenerife.—*Escuela de Industrias*.—*Convent of the Sacred Heart* (girls), and others.

**Churches.**—The Cathedral de S. Cristóbal, a large heavy building with an imposing façade, commenced in 1497, but pulled down and rebuilt in 1781. The interior and main part of the structure, including the handsome groined roof, were designed and executed by Canon Edwards, a Teneriffe priest of English descent. The façade (105 ft. high; 285 ft. broad; towers 167 ft. high) is by a Canary architect named Lojan Perez. The interior is high, but sombre and far from pleasing. The building is still unfinished, but even as it stands it is one of which those living in the Canaries may well be proud. A *porta-paz* in silver gilt by Benvenuto Cellini may be seen by special order to be obtained from the President of the Cathedral. There are the usual vestments and church plate, which are shown in return for a small fee. Some of these once belonged to Old St. Paul's Cathedral in London and were sold about the time of Oliver Cromwell. The lectern is said to have come from the same place.—**Iglesia de San Francisco**, in the Alameda, 1689, an old church with a curious and irregular interior.—**del Seminario**, built by the Jesuits in 1756, with some curious masked galleries. The south altar-piece is supported by four columns, which are very fine pieces of wood-carving indeed.—**San Telmo**, a quaint old church, most frequented by sailors and by fishermen. The interior is richly decorated and the effect at night, when the lights are reflected by the heavily gilded wood work, is striking.—**Santo Domingo** (Leper Hospital), at the west end of the town, possesses some very good specimens of carved wood.—**San Antonio**.—**San José**, by the same architect as the Cathedral.—**San Antonio Abad**, where Columbus attended Mass in August, 1492, before setting out for America. The present edifice dates from 1756. The building previously occupying the site was the first church erected in Grand Canary.—**San Agustin**.—**del Padronito**, both near the Port Road. There are also a number of Ermitas or Chapels, few of which are of any special interest.

The English Church is a substantial stone building, about half-way between the Port and the Town.

Near the Church and next to the Santa Catalina Hotel is the Convent of the Sacred Heart, a fine building erected in 1906-7, with Educational Section for girls.

**Cemeteries.**—The Roman Catholic Cemetery is near the sea on the Telde side of the town. The Protestant Cemetery lies in the same direction, but above the road.

**Squares and Promenades.**—Plaza de Santa Ana, between the Cathedral and the Municipio;—the Alameda de Colon, where the band plays, well planted with trees and ornamented with a bust of Columbus. It occupies the site formerly belonging to the Convento de Santa Clara. In the garden below the Alameda and in front of the Casino, is a bust of Bartolomé Cairasco de Figueroa, a native poet, 1540-1610. This is the favourite rendezvous of an evening;—el Parque de San Telmo, a garden near the Mole.—Plaza de la Feria, where the electric lighting works are built.—The Mole itself, which was to have been greatly extended, but failed to stand against the sea. It is proposed to build a promenade on the sea front between the Mole and the Theatre.

Las Palmas is a town of flat roofs and low houses, from which the Cathedral and the new Theatre rise conspicuously, in a manner somewhat opposed to its generally Oriental appearance. It is slightly above the level of the sea, faces east, and mosquito curtains should be used all the year round. On the west it is protected by hills, but the heat is always tempered by a breeze from the N.E., to which the stretch of sand connecting the town with Puerto de la Luz and the Isleta offers no obstacle. The country in the immediate neighbourhood is dry, but a fair supply of water is obtained from the mountains by means of small stone channels.

The principal street is the Triana, a continuation of the road from the Port, where the largest shops are situated.

In the angle formed by the Triana and the Arucas road, a fresh quarter has been built of late years and a number of streets, well laid out and lined by substantial residences and other buildings have sprung into existence.

The older and most fashionable part of the town is beyond the Cathedral at the foot of the Monte Road. In the triangle known as the Santo Espíritu, some of the houses are handsomely designed and constructed. In one of the houses on this side of the city the great Columbus is said to have died.



The temperature on the sea level during the autumn is sometimes high, but visitors do remain at times all through the hot months, although the season for invalids does not really commence until October or November. The climate in the hills, however, is most delightful and it is to be hoped that suitable accommodation in several places, as well as in the Monte, will soon be supplied.

The public gardens and squares are provided with seats where a pleasant hour or two may be passed occasionally. A walk on the Mole during the middle of the day is also enjoyable on account of the refreshing breeze.

Owing to the enterprise of the English residents and to the facilities afforded by the stretches of level ground available, a very fair cricket ground, a golf-links and several lawn-tennis courts have been laid out in convenient positions, a fact of the utmost importance to most of the visitors.

Since the American war the town has been fortified, and visitors should not approach the batteries without permission.

The arid slopes behind the town give a very misleading idea of the interior of the island, many parts of which are green and well watered.

**Drives, Walks, and Excursions near the town.**—Several drives have been mentioned under Puerto de la Luz with the view of allowing those with little time to make their plans without unnecessary trouble. All the short drives round Las Palmas are there named. The prices of carriages from the town or from the hotels outside it are given with the other prices at the end of the section referring to Grand Canary. If it is desired to go further afield, reference should be made to the pages devoted to the particular road selected. A time table of the public coaches and their fares is given.

**To the Puerto de la Luz, Confital Bay, the Isleta and the Lighthouse.**—The methods of reaching the Puerto have been detailed under the space allotted to the Puerto itself.

The road is too full of traffic to form a favourite promenade, but the sands between the town and Santa Catalina are very agreeable.

About a mile out of the town, the Santa Catalina and Metro-pole Hotels, the English Church, the Golf-links, Cricket-ground, Beach Club, etc., are passed.

A few paces further on is the Santa Catalina bathing establishment with 10 baths, charge 1 peseta. The spring is situated between the road and the sea, and the temperature of the water is

some 10° warmer than the latter. The analysis shows that one kilogramme of water contains

Chloride of Sodium	...	grammes	6'049
"    " Potassium	...	"	0'108
"    " Calcium	...	"	0'281
Bicarb.    " Lime ...	...	"	0'147
"    " Magnesia	...	"	1'157
Sulphate    "    "	...	"	0'870
Silicate    ...    ...	...	"	0'108
Free Carbonic Acid	...	"	1'004

A direct road has been made connecting the Puerto with Tamaraceite, 4½ m., 7 kils., and consequently with Arucas, Teror, etc.

Until recently, the dismantled remains of a Canario burial-ground were to be seen not far from the base of the long Mole. The Isleta appears to have been regarded by the natives as a spot of peculiar sanctity, in somewhat the same way as was the case formerly with our own Isle of Anglesea.

By bearing to the left at the entrance of the Isleta, Confital Bay is reached in a little over a mile. The rocks, if permission to visit them can be obtained, are a good hunting ground for shells and sea-weeds, and a pleasant spot for a picnic. A little beyond are some salt pans.

A road along which carriages can pass leads across the Isleta to the Lighthouse (Faro) in about 2 hrs. The summit commands a very fine view of the N. of the island. Paths lead out of the road to the signal stations. (Owing to military precautions the whole of the Isleta is now practically closed to the public.)

**Main Road, North Side of the Island.**—Tamaraceite (Teror), Arucas (Firgas, Moya), Bañadero, Guia, Gáldar and Agaete, with excursions from the same. (For Public Coaches, see end of Grand Canary.)

The road leaves the Mole and ascends the barranco, leaving the fort on the left. The country is dry, but there are several tanks and a great part of it is under cultivation. Mounting the hills to the right, 650 ft., a descent is made to Tamaraceite, 580 ft.,  $4\frac{1}{2}$  m. ( $7\frac{1}{2}$  kils.), where a small sugar mill (*trapiche*) is to be seen.

From here a path leads in about  $1\frac{1}{2}$  hrs. by **San Lorenzo**, the Vega de Abajo and the Bco. del Dragonal to **Tafira** and the **Monte**. The direct *carretera* from the Puerto de la Luz to Tamaraceite,  $4\frac{1}{2}$  m., 7 kils., is to be continued to San Lorenzo,  $2\frac{1}{2}$  m., 4 kils., and Tafira, 5 m., 8 kils.

A little further on a branch of the *carretera* to the left leads to

**Teror**, 13 m. ( $20\frac{1}{2}$  kils.), 1,750 ft., 4,794 inhab. Small inn, abt. 5 pes. a day

Teror is a large village situated in the midst of an attractive valley. In the Barranco de la Fuente Agria, a few minutes below the houses, are some mineral springs dedicated to Our Lady of Lourdes, where there is a bathing establishment with 4 baths.

The **Church** (N.S. del Pino), A.D. 1740, is the chief object of interest in the village. The *exterior* is good of its kind. The tower to the left is a part of the old church, now pulled down, and almost the only good example of Gothic renaissance in the whole island. The church is dedicated to the Virgen del Pino, who is said to have appeared in the branches of a pine tree which once stood in the square in front of the church, on the spot now marked by a cross. The pine tree close by is said to be a direct descendant of the original pine. Formerly a holy spring issued from near the tree, of which the waters are said to have been very efficacious. In consequence of a proposal that the water should be sold, the spring appears to have dried up. The *interior* of the church is handsome and the group of five altars at the chancel end cannot fail to attract attention. The church was very wealthy before the confiscation of ecclesiastical property by the State, and the robes and jewels, many of which are very valuable, are well worth seeing. The image of the Holy Virgin is upstairs above the chancel and stands in a large shrine of beaten silver. The picture of St. Joseph and Child opposite the shrine is above the ordinary standard of art to be seen in the Canaries.

The **Bishop's Palace**, formerly a convent, stands behind the church and is of no particular interest.

The **Convent**, some  $\frac{1}{4}$  mile on the way to Firgas, is occupied by about 25 to 30 nuns. The church is plain and without merit.

**Walks and Excursions from Teror.**—A most beautiful walk is to the woods of **Los Osorios**, 2,480 ft.,  $\frac{1}{2}$  hr., where there is a spring. This is a good spot for a picnic. From it the **Pico de los Osorios**, 3,250 ft., can be ascended in about  $\frac{3}{4}$  hr., and the walk can be continued to **Firgas**,  $1\frac{3}{4}$  hrs. (See Firgas.) The Pico commands a marvellous view, which stretches from the Mña. de Gáldar on the N.W. to the Pico de Bandama on the S.E.

**To Santa Brigida and the Monte** *viã* the Vega del Centro,  $2\frac{1}{4}$  hrs. (See Excursion from the Monte.)



To **Valleseco**, 3,150 ft., 1 hr., and the **Cumbres (Cruz de Tejeda)**, 4½ hrs., is a pretty excursion. Valleseco is an uninteresting group of houses with a large church. Pop. 2,689. No inn but beds possible. For continuation to **Tejeda, Tirajana, etc.**, consult index.

To **Firgas**, 1¾ hrs., **Moya**, 3 hrs., **Mña. de Doramas, los Tilos**, 4 hrs., and **Guia**, 6¼ hrs. (For description of route see *Guia*.)

To **Artenara** *viâ* **Valleseco, etc.**, about 4 hrs., whence on to **Tejeda**, about 5½ hrs., or down to **Agæete**, about 8 hrs. total. All fine but tiring excursions.

To **San Mateo** *viâ* the **Vega de Arriba**, about 3½ hrs. Not so fine as to **Sta. Brigida** *viâ* the **Vega del Centro**.

To **Tafira** *viâ* the *carretera* to **Tamaraceite** and through **San Lorenzo**, about 2 hrs. The easiest road to the **Monte**, but only picturesque when the **Bco. del Dragonal** below **Tafira** is reached. This is known as the route by the **Vega de Abajo**.

To **Arucas**, about 2½ hrs.

**Main Road.**—After passing the junction for **Teror** the *carretera* is carried through a tunnel, 6¼ m. (10 kils.), passes the little village of **Tenoya** and descends into the picturesque barranco of the same name. This is perhaps the most beautiful part of the whole of the N. road. A long climb then leads to

**Arucas**, 770 ft., 9,367 inhab., 10½ m. (17 kils.). Two Spanish inns, charges about 5 pesetas a day.

**Arucas** is a fairly large town with a market place and is the chief centre of the cochineal and sugar industry. There are two sugar mills which may be seen and several large quarries. The country round is highly cultivated and an extensive area is brought under irrigation. The springs of which the water is carried to **Arucas** or to its neighbourhood are said to yield some fifteen million litres (about 3,300,000 gallons) per day. The mountain, ¾ hr. to the N. of the town, commands a good view.

**Excursions from Arucas.**—To **Teror** by the *bridle path*, 2½ hrs. The country passed through is pleasant and the scenery improves towards the end. (See **Teror**.) A return can be made *viâ* **Firgas** or the **Mña. de los Osorios** can be ascended. Mules for the round can generally be obtained in **Arucas**.

**Branch carretera to Firgas and Moya.**—An unfinished carriage road leaves the main road at **Arucas** and bears to the left. At 14½ m. (23 kils.) a subsidiary road, 1½ m. (2½ kils.) long, will lead to **Firgas** when completed. At present this part must be passed on mules or on foot. The main **Moya** branch descends from the junction into the bed of the **Barranco Azuaje**, 15½ m. (24½ kils.) some two or three hundred yards below the bathing establishment. From here it will be carried on to **Moya**, 18½ m. (30 kils.) (1908).

**Firgas**, 1,625 ft., is a prettily situated village and a good centre for excursions or for a summer residence. Population, 2,088.

Spanish *Fonda*, charge about 5 pes. a day.

The village is best known as the site of a mineral spring which affords a wholesome and palatable drinking water. The spring, however, is really some half-hour up the barranco.

Analysis shows that a gallon of water contains

Calcium Carbonate	..	12·6	grains
Magnesium	..	11·2	..
Sodium	..	1·5	..
.. Sulphate	..	1·2	..
.. Chloride	..	5·0	..

In the same barranco but immediately below the town is the warm spring known as the Fuente de Guadalupe. A steep path leads to the bathing establishment, 760 ft., in  $\frac{1}{2}$  hr. Temperature, 85° F. An analysis shows that 1 kilogramme of water contains

Chloride of Sodium	...	0·116	grammes
Bicarb. .. Soda	...	0·797	..
.. .. Potash	...	0·020	..
.. .. Lime	...	0·422	..
.. .. Magnesia	...	0·265	..
Sulphate .. ..	...	0·107	..
Silicate .. ..	...	0·118	..
Free Carbonic Acid	...	1·058	..

#### Excursions from Firgas.—To los Osorios, Teror, the Monte, etc.

—Teror can be reached by a path which leads below the Pico de los Osorios, crossing below the Pico at a height of 2,220 feet, but the usual route and by far the most attractive one is that which strikes almost due S. This leads in one steady climb to the Pico de la Laguna, as the southern spur of the Pico de los Osorios is called. The cumbre of this, 2,800 ft., is reached in  $1\frac{1}{2}$  hrs., and commands fine views. Visitors, however, should make time to go to the top of the Pico de los Osorios itself, 3,250 ft., twenty minutes away from the path, whence there is a magnificent bird's-eye view of nearly the whole of the N. of the island. The Mña. de Doramas is best seen from here and the Cumbres seem to lie close at hand; Teror is just below, with Valleseco a short distance above it, and the Mña. de Galdar and the Pico de Bandama form landmarks on either horizon.

A return can be made to the path and a descent made directly into Teror,  $1\frac{3}{4}$  hrs. from Firgas, not allowing for the above digression, or Teror can be reached from the Pico *viâ* the avenue of pine trees and the chestnut woods of los Osorios be taken on the way. The difference in time is not great.

From Teror to the Monte  $2\frac{1}{2}$  hrs., *see* Monte. For excursions from Teror, etc., *see* Teror. Most of the paths in this district are very muddy in wet weather.

To Moya for Los Tilos, Guia, etc.—The same path that leads to the bathing establishment crosses the bed of the Bco. Azuaje,  $\frac{1}{2}$  hr., 760 ft., and ascends to Moya,  $1\frac{1}{4}$  hrs., to Los Tilos,  $2\frac{1}{4}$  hrs., Guia,  $4\frac{1}{2}$  hrs. (*See* Guia.)

Besides the above excursions there are a number of beautiful walks in the Bco. de la Virgen as the upper part of the Bco. Azuaje is called. The woods in this neighbourhood are very extensive and diversified and the possible excursions are so many that they cannot be given in detail.

Moya, 1,530 ft., pop. 7674, no inn, is a small village on the precipitous edge of the barranco. It is neither so pleasant nor so good a centre for walks as Firgas.

A descent can be made from Moya to Pagador near Bañadero by bridle road in  $\frac{3}{4}$  hr.

**Firgas** can be reached in  $1\frac{1}{2}$  hrs., **Teror** in 3 hrs., and the **Monte** in  $5\frac{1}{2}$ , or **los Tilos** in 1 hr., and **Guia** in  $3\frac{1}{4}$  hrs. Refer elsewhere for descriptions of route. When the road to Moya is finished it will be the nearest spot from which **los Tilos** or the **Mña. de Doramas** can be visited.

The **Mña. de Doramas** is a wooded mountain covering an extensive tract of country and affording many spots suitable for picnics. The path up from Moya to **San Fernando**, 1 hr., and past the **Finca Corvo**,  $1\frac{1}{2}$  hrs., is easy to find. In the **Finca Corvo** is a very interesting collection of plants, especially of trees from Fernando Po and the neighbourhood.

From Arucas the main road winds down to the coast, and passes the seaside villages of **Bañadero** (14 m. =  $22\frac{1}{2}$  kils.) and **Pagador** a mile further on, both uninteresting and dirty. Keeping close to the sea for a mile or two, a long ascent is commenced amidst wild and rocky surroundings. At 20 m. (32 kils.) there is a deep cutting called the **Roque del Moro**, immediately below some caves formerly occupied by the Canarios. The side of the mountain is known as the **Cuesta de Silba**. It was near here that **Diego de Silba** was surrounded by the Canarios, for which story refer to the history. The caves may be easily reached from the road and are well worthy of a visit. A guide should be procured and torches and candles taken.

The number of caves is said to be 364 and to correspond almost exactly with the number of days in the year. This may be a coincidence or an untruth, as the writer has never counted them.

Shortly after passing the caves, the top of the hill (750 ft.) is reached and the wide slopes of **Guia** and **Gáldar** lie stretched in front. To the right is the great mountain of **Gáldar**, a monstrous mass of volcanic mud, of which, indeed, with the exception of the mountain to the west of **Gáldar**, the whole of the surface rocks of this corner of the island are composed.

**Guia**, 580 ft. (22 m. = 36 kils.), 5,247 inhabitants. Spanish **Fonda**, 5 pesetas upwards.

**Guia** presents little of interest. The soil is fertile and well irrigated. Sugar is now largely cultivated, and one of the best mills in the island is situated half-way between the town and **Gáldar**.

Coaches run from **Guia** to **Agate** and back twice a day. Refer end of **Grand Canary**.

**Excursions from Guia.—To Agate.**—A tiresome ride leads across the slope and joins the main road a little before **Agate**,  $1\frac{1}{2}$  hrs.

**To Los Tilos, Mña. de Doramas, Moya, Firgas, etc.**—The bridle path leaves the *carrretera* a little on the **Las Palmas** side of **Guia** and passes the **Ermita de San Juan**,  $\frac{1}{2}$  hr. At the second water-mill, 1,600 ft., 1 hr., take the path to the left and cross the **Bco. Calaboso**. At  $1\frac{1}{4}$  hrs., 1,950 ft., another path goes off to the right (either of these paths can be followed to **Artenara**, **Tejeda**, the **Cumbres**, etc.).



Keeping to the left the track leads amongst heather, laurels (til), chestnuts, etc. At  $1\frac{3}{4}$  hrs. **Santa Cristina**, a few houses, 1,920 ft. A descent is now made into the precipitous **Bco. de los Tilos** and a shady spot at the bottom, 1,450 ft.,  $2\frac{1}{4}$  hrs., forms a good halting place. (If the Bco. is ascended a scattered wood is entered, the Ermita de S. Bartolomé is passed and eventually the Cumbres, etc., are reached.)

Ascending the other side of the Bco. the path to the right leads up the **Mña. de Doramas** (see Moya), that to the left turns down to **Moya**,  $3\frac{1}{4}$  hrs., 1,530 ft.

From Moya to **Pagador**,  $\frac{3}{4}$  hr., or to **Firgas**,  $1\frac{1}{4}$  hr., **Teror**, 3 hrs., etc., refer under Moya.

The main road turns to the right at Guia and leads across a fertile plain to

**Gáldar**, 500 ft. 25 m. (40 kils.), 5,278 inhab. Spanish Fonda, about 5 pes. a day.

Gáldar is a small town of very Eastern appearance, and possesses a large church of little interest which is said to occupy the site of the former palace of the Guanarteme, once the headquarters of the Princess Andamana. It is said that a font in this church is the original from which the Canarios were baptised immediately after the conquest.

Close by the church is a small cave, the entrance to which was accidentally discovered in 1881. Owing to the air and light having been excluded, the interior is well preserved and the greater part of the wall is still decorated by a geometrical pattern worked out in red and white ochre and charcoal.

Many of the drip-stone filters used in the Canaries and the West Indies are made in the vicinity. In the patio of the Casino is a small dragon-tree.

A *carretera* leads from Gáldar to the Puerto de Sardina,  $3\frac{3}{4}$  m. (6 kils.).

The **Montaña de Gáldar**, 1,533 ft., the mud mountain previously mentioned, which commands a good view, can be ascended in about an hour. A number of caves in its sides were once used by the Canarios. In some the beams, placed by the natives, were to be seen until comparatively recently.

The *carretera* is continued through arid scenery to **Agæte**,  $30\frac{1}{2}$  m. ( $48\frac{1}{2}$  kils.), 2,837 inhabitants. Small fonda.

**Agæte** is prettily situated a short distance from the sea. There is a small harbour with mole 1 m. ( $1\frac{1}{2}$  kils.) from the town, which can be reached by the main road, of which the jetty is the terminus. On the beach is a Canario burial ground in which many scores of graves yet remain unopened.

The church at Agæte seems very large for the village, but it is possible that at some time the place may grow up to it. A trade

is carried on with Teneriffe by means of schooners, considerable quantities of butter and oranges, which grow very well here, being shipped across. Great damage was done by a flood which swept down the barranco in February, 1896. There are two houses in Agaete said to have been built by the Canarios. (*See Webb and Berthelot.*)

**Excursions from Agaete.—To the Mineral Springs of Berrazales and Artenara, etc.**—A climb up the fertile, mountainous ravine at the back of the town leads to the springs, 1,650 ft., in about 2 hrs. There is a small bathing establishment. The water is highly charged with mineral matter and is said to be of great use in skin diseases.

The water issues at a temperature of 77° F., and is strongly charged with carbonic acid gas. The following analysis has been made:—

	Grains per Gallon.
Silica ... ..	8.0
Ferrous Carbonate... ..	10.0
Calcium ,, ... ..	3.0
Magnesium ,, ... ..	33.5
Sodium Sulphate ... ..	2.5
,, Chloride ... ..	4.5
Total Salts ... ..	
	61.5

It is said to resemble the Lower Soda Spring (No. 1) at Salem, Or., U.S.A., and to be adapted for those suffering from anæmia.

Following up the barranco, **Artenara**, where a bed may be found, can be reached in about 6 hrs.; the **Cumbres** in about 7, or **Valleseco**, **San Mateo**, etc., can be reached in a little more. Guide required. There is a remarkable basaltic wall, or exposed dyke, to be seen in the Valle de Peñones. Several detours can be made from the barranco by those stopping in Agaete, and a number of very fine excursions can be made. The barranco itself is very beautiful.

**To Aldea de San Nicolas, Tejeda or Mogan.**—A path leads along the cliffs to the Aldea in about 6½ hrs. The rocks passed through are very fine and at one time a height of 2,300 ft. is gained. It is from this path that the **Mña. de Tirma** is visited, one of the two most sacred mountains of the Canarios. A guide must be taken, and care must be exercised that he knows what mountain he is to go to, as very few indeed are acquainted with the place.

There is no inn, but beds can be procured in the **Aldea**. Pop. 1,860. From here a rough path leads to **Tejeda** (beds possible) in about 6½ hrs., or another path along the coast leads to **Mogan** (beds possible) in 5 or 6 hrs. A very rough journey, part of which passes through wild, fine scenery.

**Aldea de S. Nicolas** can be reached more conveniently in a boat from Agaete in about 2½ hrs. Fare about 4\$.

**Central Main Road from Las Palmas to Tafira, the Monte, Santa Brigida and San Mateo, with side excursions and routes from San Mateo to the Cumbres, to the S. of the island, etc. (For Public Coaches see at the end of Grand Canary.)**

The road crosses the stone bridge over the Bco. de Guinguada and turns up to the right. Passing through a grove of palms, past some banana gardens and under some quarries from which the white tufa is taken out of which the best part of the city is built, a long climb leads up to the Pico del Viento, 820 ft., a spot a little on the right of the road, which commands a view of San Lorenzo, etc., and allows an idea to be formed of the lie of the land.

A little further on the left a turning leads to **Jinama** in about  $1\frac{1}{2}$  and to **Telde** in about  $2\frac{1}{2}$  hrs. The journey is best made on foot or horseback. The path is rather intricate and it is frequently necessary to ask the way. It is possible to climb the **Gran Caldera** or to ascend to **Atalaya**. The *Telde carretera* is joined at a point  $6\frac{1}{2}$  m. ( $10\frac{1}{2}$  kils.) from Las Palmas.

The view now gradually opens out and the drive becomes more enjoyable. To those who may be exploring the islands later on the barranco down on the right affords a good lesson in local nomenclature.

At this particular point it is called the Bco. del Dragonal, lower down it is known as the Bco. de la Ciudad and at its mouth it becomes the Bco. Guinguada. Higher up the name changes successively to the Bco. Angostura, Bco. de Alonso, and ultimately Bco. de Utiaca. This succession of names in a long barranco is of common occurrence. It is in the Bco. de la Ciudad that the Fuente de Morales, which supplies the town and ships with drinking water, is situated.

At 5 m. (8 kils.) the village and church of **Tafira**, 1,080 ft.

**Hotels.**—The Victoria, about 350 yards up a turning below the church, beautifully situated, good garden, from 9s. to 12s. 6d. a day.

**Boarding House.**—The Friars, just below the village, good situation with gardens, near the high road; from 35s. a week.

(*For advertisements, see under Grand Canary at the end of the book. For excursions refer under the Monte.*)

The village is of no interest and need only be mentioned as the starting point for the path which descends into the Bco. del Dragonal, and leads *via* **San Lorenzo** and the **Vega de Abajo** to **Tamaraceite**, about 1 hr., and so on to **Teror**, etc. A *carretera* is to be made from Tafira to San Lorenzo,  $2\frac{1}{2}$  m. 4 (kils.) and to Tamaraceite, about 5 m. (8 kils.). This will be the most direct route from the Puerto de la Luz to the Monte district.

Near the Hotel Victoria is a private garden, well worth seeing (permission required).

On leaving Tafira the view down into the Bco. del Dragonal is very striking, the air becomes cooler, the vine-clad hills greener



and the eucalyptus trees by the side of the road straighter and more stately.

This part of the island is known as the Monte or Ex-Monte de Lentiscal, because, until the beginning of the nineteenth century, the cindery expanse, now covered with vines, was given up to euphorbia and the native scrub. It is now the chief and best source of the canary wine (red).

**Hotels.**—At 6 m. ( $9\frac{1}{2}$  kils.), 1,320 ft., Quiney's Bella Vista Hotel, from 2 gns. a week, pleasantly situated with good views.

At 7 m. ( $10\frac{1}{2}$  kils.) the Hotel Santa Brigida, 1,360 feet, in a commanding position, with fine views of the Cumbres, etc., charges from 10s. 6d.

Both hotels have good gardens and are excellent centres for excursions.

The opening up of Grand Canary by means of isolated country sanatoria is a distinctly progressive step in the right direction.

(For advertisements, see under *Grand Canary at the end of the book.*)

**The Monte** is the chief summer resort of the residents in Grand Canary, and is also regarded by competent authorities as a very favourable position for those suffering from pulmonary and other complaints. Dr. Brian Melland in his work, "Climatic Treatment in Grand Canary," speaks loudly in its praise. This gentleman not only lived in the Monte himself, but practised in the island for many years, and had opportunities of studying the progress of his patients. As an alternative to Las Palmas, the bracing, pure atmosphere of this semi-mountainous resort is of great advantage to invalids visiting the island.

Strangers wishing to reside in the Canaries for some time are advised to give the Monte a trial before building or acquiring a house elsewhere. Those having no business to call them constantly into the town can go as high up the road as they like and can choose pleasant, sheltered situations amidst the most fertile surroundings.

**Walks, Rides and Excursions from the Monte.**—Along the Bco. Angostura to Santa Brigida.—From either hotel paths leading down to the Bco. which is here some 300 ft. below the road, in about 20 min. In starting from the Bella Vista Hotel the turning to the left is taken at the bottom and is followed past the Finco de los Laureles to Sta. Brigida in about  $1\frac{1}{4}$  hrs. total, whence return by the *carretera*,  $2\frac{1}{2}$  m. (4 kils.). At about 2 m. (3 kils.) above Sta. Brigida, a private carriage road connects the bed of the barranco with the main *carretera*. See under Sta. Brigida.

**Down the Bco. to Tafira or to the Bco. Del Dragonal, etc.**—Turning to the right at the bottom of the Bco. the gorge known as the Angostura is passed through. Presently the caves and cottages of Los Frailes and then La Calzada, whence a path to the right leads to Tafira, total 1 hr., or following the Bco. a wooden bridge is passed and El Dragonal is entered. Lower down at  $1\frac{1}{2}$  hrs. is a farm where there are two shrivelled old dragon

trees. From here the path leading from Tafira to San Lorenzo (*see* Tafira) can be taken and Tafira regained in a total of two hours. From Tafira to the Bella Vista Hotel is about 1 m., and to the Santa Brigida about 2 m.

**To San Francisco, Telde, etc.**—Another walk is to **San Francisco**,  $\frac{1}{4}$  hr. on the Telde side of Tafira. This can be reached by taking any of the turnings to the right as the *carretera* is descended from the hotels. It is possible to reach Telde by the same path, which leaves the *carretera* below the Half-way House, or a return may be made by the road leading to the Gran Caldera. Donkeys or mules can be used if desired.

**To the Gran Caldera, Atalaya, Valsequillo, etc.**—At  $6\frac{1}{2}$  m. (10 kils.) from Las Palmas and between the two hotels, a rough carriage road descends to the left and leads to the foot of the **Gran Caldera de Bandama**. Turning to the right, ascend (on foot or on mule) to a group of cottages, pass through these and bear to the left a few yards along the path leading down into the crater,  $\frac{1}{2}$  hr., 1,350 ft. A glass of the wine made from vines grown inside the crater can be obtained in one of the neighbouring cottages.

The crater is one of the most perfect known. There is no outlet; the width is over a mile and the bottom, which has gradually subsided, is nearly 1,000 ft. below the crest of the walls. The layers of cinders around the lip and the vivid colours of some of the rocks sufficiently attest its origin. The bottom is cultivated and a descent can be made on mules,  $\frac{3}{4}$  hr. down and up.

From the cottages a path (safe for animals) leads to the top of the **Pico de Bandama** 1,840 ft. in  $\frac{1}{2}$  hr. This is well worth climbing, not merely for the view of the crater but for that of the surrounding country, forming as it does the complement to that visible from the Pico de los Osorios above Teror.

On the N.E. is the Isleta, floating in the sea like a separate island, and the houses of the Puerto de la Luz. Nearer in, part of Las Palmas and the villages of San Lorenzo and Tafira, with innumerable groups of houses scattered about. To the E. is the valley of Jinama, and to the S.E. Telde, Los Llanos, the Mña. de las Cuatro Puertas and the Lazareto at Gando Point. The crater is close below, then follows a somewhat dreary stretch, until a few of the houses of Valsequillo are seen to the S.W. Running the eye along the Cumbres, Atalaya is the only inhabited place visible. The Pico de los Osorios is prominent on the W. horizon; part of Arucas is seen to the N.W. and the circle is completed at San Lorenzo. The best time to photograph the Gran Caldera is about 2.30 p.m.

From the cottages another path leads along the ridge of the hill and up a deep, hilly lane to **Atalaya**, 1,482 ft., in  $\frac{3}{4}$  hr. The most important quarry in the island is passed just before arriving at the village.

**Atalaya** (Watch Tower) is the most perfect collection of troglodyte dwellings in the Archipelago. It overlooks the picturesque Bco. de las Goteras and was formerly a native stronghold. The present inhabitants manufacture pottery out of clay found in the neighbourhood, fashioning it with a round stone and without a wheel, in precisely the same manner as the Canarios themselves. For some reason the people are unfavourably regarded by their neighbours, who rarely intermarry with them. Whether this aversion is a legacy left from before the conquest or not is difficult to ascertain.

Those who have driven from Las Palmas can make their way home as they came or by turning to the left out of the path leading back to the Caldera and by rejoining the carriage near a little wine-shop at the foot of the hill.

Another good method is to send the carriage round to Atalaya itself by the new *carretera* which branches off the main road 2 kils. below Santa Brigida, and to meet it there. Those lunching at the hotels can engage mules or donkeys, and regain the carriage at the hotel.



From Atalaya a path leads to **Valsequillo** in 2 hrs., **Telde**, 4 hrs., or up to the Cumbres from Valsequillo.

**To La Gloria and beyond.**—La Gloria is a pleasant, shady picnic resort, lying to the left of the *carretera* a little above Santa Brigida and about one hour from the hotels. The barranco behind it, down which the water runs, is very picturesque. It is possible to follow the *acequias* to a very curious subterranean tank and to return to the *carretera* at about  $14\frac{1}{2}$  kils. from Las Palmas, where there is a *venta*. (This is the easiest point whence to visit the tank.) From the mountain ridges behind La Gloria,  $2\frac{1}{2}$  to 3 hrs., there are good views. A return can be made *viâ* San Mateo or the excursion continued in the direction of Valsequillo, Telde, etc.

**To Teror, Firgas, Guia, etc.**—The most attractive route to Teror is by the **Vega del Centro**. Ascend the *carretera* to **Santa Brigida**, 1,580 ft., whence on foot or mules. Times from Santa Brigida. (It is also possible to drive to the bottom of the barranco by a private carriage road, about 2 m. long, which leaves the main *carretera* at about 2 m. (3 kils.) above Santa Brigida. This road terminates near the dragon-tree mentioned below.)

Descend into and cross the **Bco. de la Vega** and as due N.W. as possible. A rock with some beautiful specimens of basaltic crystals, some 45 ft. long, will be noticed. Near it a few caves and a large dragon tree. The orange and chestnut groves in this vicinity afford several pleasant resorts for picnics, etc. At  $\frac{1}{4}$  hr. the bed of the **Bco. de Alonso**, 1,410 ft., which is impassable during heavy rains. An ascent is made and then the **Bco. del Pino Santo** is crossed, 1,820 ft.,  $\frac{1}{3}$  hr.

[Instead of descending to this barranco, a path to the left can be followed which leads through the beautiful chestnut woods of San Isidro,  $2\frac{1}{2}$  hrs., interesting old church (private property), whence return to Santa Brigida or bear to the right down to Teror,  $3\frac{1}{2}$  hrs. total. A very fine excursion.]

A long climb follows to just below the **Caldera de la Vega**, 2,450 ft.,  $1\frac{1}{4}$  hrs., a small, unbroken crater invisible from but close to the path. On the upper side are a small group of trees and a spring, which in fine weather would form a capital camping ground.

A short distance further on is the **Cruz de Lobrelar**, 2,430 ft., whence there is a very fine view of the upper part of the amphitheatre of **Teror**, etc. (Those who do not intend to sleep at Firgas may return from here.) A steep descent now leads into **Teror**; total time,  $2\frac{1}{2}$  hrs. For further on, refer to **Teror**, etc. **Firgas** is the best place to sleep. **Other routes from the Monte to Teror** are *viâ* San Lorenzo and Tamaraceite (*see* **Teror**, etc.), about 2 hrs., or by San Mateo and the **Vega de Arriba** in about  $3\frac{1}{2}$  hrs. (*See* San Mateo.) The **Vega del Centro** is the most picturesque.

For **Artenara**, the Cumbres and S. of the island, *see* San Mateo.

The **Main Road** leaves the **Monte** and ascends to  $7\frac{1}{4}$  m. ( $11\frac{1}{2}$  kils.), whence a road leads to Atalaya, 2 m. (3 kils.), and the **Barranco de las Goteras**,  $3\frac{1}{2}$  m. ( $5\frac{3}{4}$  kils.). Thence the road is to be extended *viâ* the **Barranco de las Higueras** to **Telde**,  $8\frac{1}{2}$  m. ( $13\frac{1}{2}$  kils.) total.

At 8 m. (13 kils.) a path to the left leads to Atalaya,  $\frac{1}{2}$  hr., Valsequillo,  $2\frac{1}{2}$  hrs., etc. (*See* Atalaya.)

At  $8\frac{1}{2}$  m. ( $13\frac{1}{2}$  kils.) **Santa Brigida**, 1,398 ft., pop. 4,917, a village built on the edge of the barranco. The church is not of much



interest. There are one or two fondas, 4 to 5 pesetas a day. Accommodation poor. The excursions from here are given under the Monte. There is a pretty walk to the left just above the town. (*See* under La Gloria.)

At about 10½ m. (16 kils.) a private carriage road, 2 m. long, branches off to the right. (*See* excursion to Teror under the Monte.)

At Los Pasitos, 11 m. (19 kils.) there is a grove of trees with one enormous chestnut standing close to the road, said to be the largest in the island. It is not very high but measures 25 ft. 7 in. round.

At 13 m. (21 kils.) **San Mateo**, 2,680 ft., 4,168 inhab. Fonda Peninsular, 5 pes.

The town is beautifully situated. In the neighbourhood are groves of walnuts, chestnuts, pines, etc. The place offers attractions as a mountain climatic resort and as a centre for a number of excursions. It is also the best point of departure for the Cumbres and for the S. of the island generally. The village itself, where the *carretera* ends, is of no interest.

**Excursions from San Mateo.—To los Chorros.**—A path up the Bco. between the town and the Mña. de Cabreja leads in 20 min. to the springs. A little higher up is a waterfall some 120 ft. high. The bed of the stream is followed and crossed and the walk is altogether a very pretty one. The Mña. de Cabreja can be climbed if desired, about 1 hr. of rather rough work.

**To El Charco de la Higuera, Valsequillo, etc.**—Turning to the left at the top of the village, a good path leads in 25 min. to El Charco de la Higuera, a waterfall 60 ft. high, prettily situated. The slopes beyond command a fine view of the plains of **Valsequillo**, which can be reached on foot or mule in about 1½ hrs.

**To Teror.**—A path to the W. leads under the Mña. de Cabreja, across the **Vega de Arriba** and down to **Teror** in about 3½ hrs.

**To Tejeda direct.**—The direct road is taken past the **Cruz de Tejeda**, 5,740 ft., about 2½ hrs. and down the Bco. de la Culata to **Tejeda**, 3,160 ft., about 4 hrs. Poor accommodation, about 5 pes.

The view of the Barranco de la Culata from the Cruz de Tejeda with the isolated Roque Nublo, 6,110 ft., boldly defined on the left; the vast succession of precipitous ravines in front and on the right, in strong contrast to the startling verdure of the cultivated patches below; the blue sea in the distance, and the lofty mountains and majestic Peak of Tenerife towering above and crowning the whole, form a picture never to be forgotten and second to none in Switzerland or the Alps.

The Peak is visible almost all the way down to Tejeda. Its great height is never so well appreciated as when it soars higher and higher over the adjacent cliffs, which appear to shrink away as the traveller descends, as though reluctant to hide it from sight.

About an hour below Tejeda is an isolated rock known as the **Roque de Bentaguaya** near which are some Canario caves.

**Excursions from Tejada.**—To **Artenara** in about 1½ hrs. and thence to **Agaete** in about 6 hrs. The scenery along this route is very fine indeed.

To **Aldea de S. Nicolas** in about 6½ hrs. whence boat to **Agaete**, 2½ hrs., or by the cliffs in about 6½ hrs. (see **Agaete**), or to **Mogan** in 3 or 4 hrs. along the coast. Very rough work, but scenery good along all these routes.

To **Mogan direct** in 6 or 7 hrs. An arduous journey. Scenery again good.

To **Tirajana**.—Ascend the Bco. de la Culata, leave the Roque Nublo on the right, cross the Cumbres and descend the Paso de la Plata to **Tunte**, 5 hrs. (See **Tunte**.)

**From San Mateo to Agaete, Artenara, etc.**—Pass below the **Mña. de Cabreja**, descend into and cross the **Bcos. de Utiaca**, 40 min., **Ariñes** and **San Isidro**, in the last of which a fiesta is held once a year, to just below the **Caldereta de Valleseco**, where turn to the right for **Valleseco**, about 3 hrs.; to the left for **Artenara**, about 4 hrs., or the **Cruz de Tejada**, about 4 hrs.; or continue to **Agaete**, about 7 hrs., etc. (See **Map**.) These roads are practicable for animals, but a guide is absolutely necessary.

**From San Mateo to the Cumbres.**—The path up to the **Cruz de Tejada**, 5,740 ft., 2½ hrs., has already been mentioned.

The most direct and most frequented track is that known as the **Paso de la Cueva Grande**, which leaves the top of the village and ascends the ridge dividing the Bco. de los Chorros from the Bco. de la Lechucilla. At about ¼ hr. there is a good view of San Mateo and of the whole country between it and Las Palmas. Eventually a projecting wall of basalt is passed through, where a cross marks the spot on which a man was frozen to death, and the **Cumbres** are reached in a little over 2 hrs.

The most picturesque route (slightly longer) is to bear to the left at the top of the village.

The Barranco de la Lechucilla is then followed one-third up. The stream is crossed and a zigzag path leads directly to the summit of the ridge, dividing this barranco from the Bco. del Rodeo. Fine view. Pedestrians may now keep up the ridge and skirt the cinder mountain on the left side, pass between the summit and the **Roque de los Saucillos**, and the **Cumbres** lie in front, 2½ hrs. That surmounted by a cross, the **Montaña de la Cruz Santa**, 6,068 ft., may be climbed, but the highest point, **Pico de los Pechos**, 6,400 ft., is near the "**Pozos**," further to the right. The "**Pozos**" are a depository of snow and ice, which can be descended by a wooden ladder. They are sometimes locked up.

Those on mules must cross the head of the Barranco del Rodeo (fine view as far as Telde and the sea), and ascend the mountain side, leaving the **Roque de los Saucillos** on the right. The two parties can meet at the place of the fiesta, at the W. foot of the Holy Cross, where twice a year there is a religious gathering and a small fair (Saint days of St. Peter and St. John).

From here the **Pico de los Pozos** is crossed and the Paso de la Cueva Grande is met at a point marked by a cross.

Those ascending the **Cumbres** will understand that on arriving at the summit there is no difficulty in moving about. The summit of the island is a shallow undulating basin with an inclination towards the Bco. de Tejada. Here and there the surface is broken by such projections as the **Mña. de la Cruz Santa**, the **Roque Nublo** (a most remarkable stone pillar easily visible from Tenerife and some 370 ft. in height), and by basaltic walls or dykes exposed by denudation, but the general impression left on the mind is that of a great shadowless waste, covered with loose stones and silent as Hades.

The magnificent view from near the Cruz de Tejada has already been mentioned. Whether the ascent be made by the Cueva Grande or by the Roque de los Saucillos route, it is suggested that a return be made which shall embrace this view.

The Caldera de los Marteles (or de las Cumbres) lies about  $\frac{3}{4}$  hr. East of the Montaña de la Cruz Santa. It is a very fine example of an unbroken crater, but is not quite so large as that to be seen in the Monte.

Times for the above trip (on mules, no allowance for stoppages) may be calculated as  $2\frac{1}{2}$  hrs. up, 1 hr. to cross the Cumbres and 2 hrs. down.

**South of the Island from San Mateo.**—The route *viâ* Tejada to the Aldea de San Nicolas and Mogan has already been given.

**To Tirajana (Tunte), Mogan, etc.**—Ascend by the Paso de la Cueva Grande,  $2\frac{1}{2}$  hrs., cross the Cumbres,  $3\frac{1}{4}$  hrs., and descend the paved Paso de la Plata to the cross, 3,950 ft., 4 hrs. total.

From here to Mogan about 7 hrs. and Aldea about 10 hrs. A wild rough road.

From the cross, the path descends through the Pinar, as a number of scattered pine-trees are called, passes the Cemetery and enters Tunte (S. Bartolomé de Tirajana), 2,937 ft., beds possible, accommodation bad, in  $5\frac{1}{4}$  hrs. (See Tunte.)

**To Santa Lucía, etc.:** Leave San Mateo by the Roque de los Saucillos route,  $2\frac{1}{2}$  hrs., cross the Cumbres,  $3\frac{1}{2}$  hrs., descend by the Vueltas de Taidía past Taidía, where the circular Canario house once stood (refer Taidía), to the bottom of the Barranco de Tirajana, 1,850 ft.,  $5\frac{3}{4}$  hrs., and turn to the left to Santa Lucía,  $6\frac{1}{4}$  hrs., 2,231 ft. (refer index), or cross the bed of the barranco and ascend to Tunte,  $7\frac{1}{2}$  hrs.

Both the above routes command very fine views, but the first is the best for travelling. On the second the road down the Vueltas is difficult to find, but the bird's-eye view into the Bco. de Tirajana, described elsewhere, is magnificent.

Maspalomas can be reached from Tunte in 5 hrs. Details elsewhere. Refer index. The present terminus of the new *carretera* to Tirajana is at Santa Lucía and the remaining portion to S. Bartolomé itself is being constructed (1910). For distances along this *carretera* refer under Agüimes.



## Main Road to the South of the Island.

From Las Palmas to Telde, Ingenio, Agüimes, Santa Lucía, San Bartolomé de Tirajana (Tunte), with continuation to San Mateo, Tejeda, etc. (Public Coaches, etc., see end of Grand Canary.)

The high-road leaves the stone bridge, turns up by the Municipio and bears to the left into the Telde *carretera*, leaving the Protestant Cemetery on the right and skirting the coast by the side of a number of banana gardens.

At 4 m. (6 kils.) a tunnel is passed through, and at 5 $\frac{3}{4}$  m. (9 kils.) is the village of Jinama, 210 ft., a scattered group of houses spread over a valley lying below the Gran Caldera, bounded on one side by a wide stream of lava and on the other by a black cinder wall. In spite of its volcanic surroundings, good limestone is found close to the village.

A number of paths lead inland from here and *Tafira* can be reached in about 1 $\frac{1}{2}$  hr. or *Atalaya* in about the same time. Refer index.

A walk of about  $\frac{1}{2}$  hr. from the road leads to *La Oisma de Gallego*, a volcanic hole or perpendicular lava cave supposed to be unfathomable. The hole is dangerous.

The four iron towers near the Punta de Jinama are a wireless installation, *Système Popp*, see page a13.

At 6 $\frac{1}{2}$  m. (10 $\frac{1}{2}$  kils.) a stream of lava crosses the road and allows those driving to Telde to examine the *Euphorbia Canariensis*, an indigenous euphorbia peculiar to the Canaries (see index).

A path leaves the road at the foot of the hill from which the lava flows and leads to *Tafira* in about 2 $\frac{1}{2}$  hrs. (see *Tafira*) or, by bearing to the left, the *Boo de la Higuera de Canaria* can be reached, a little higher up than the orange groves mentioned under Telde.

Very soon Telde comes into view, the groves of palm trees, Moorish dome of Los Llanos, and groups of white houses seeming to realise one's ideal of an old Syrian city rather than that of a town in the Canaries. The barranco is next crossed by a handsome stone bridge, on the right of which are a number of old Canario caves, and the town is entered.

**Telde**, 390 ft., 8 $\frac{1}{2}$  m. (13 kils.), 8,978 inhabitants. Small fonda.

With better accommodation Telde might form a good centre for visitors. The rainfall is scanty and the climate good, added to which there is generally a refreshing breeze. The scenery in the neighbourhood is far less attractive than that to be found on the N. of the Island.

There are two churches, San Juan and San Pedro, neither of much interest. A good supply of water is obtained from the hills and there are several well cultivated farms in the neighbourhood. There is also a sugar-mill and a certain quantity of cane is grown.

A pleasant walk is to follow the bed of the Barranco de la Higuera de Canaria to the W. of the town for about  $2\frac{1}{2}$  m., to the far-famed orange groves, where the best fruit of the Archipelago is produced. Little care is taken of the trees. The soil is a sandy loam and all the trees are planted on the N. slope.

A *carratera* is to be made leaving Telde by the Barranco de la Higuera and ascending to near Santa Brigida,  $8\frac{1}{2}$  m. ( $13\frac{1}{2}$  kils.), by way of the Barranco de las Goteras and Atalaya. The upper part is in course of construction. (*See Atalaya.*)

Leaving the main street of Telde by the Calle de Cubas and turning to the right at the bridge, some 300 yds. up, the adjacent village of Los Llanos is reached, about  $\frac{1}{2}$  m. from Telde proper. It is here that the best country knives are made, but it is rarely that the makers have any in stock. The Church is large but of no interest.

A tiresome bridle path leads from here *vid Valsequillo*, 2 hrs., an uninteresting village where a quantity of almonds are grown (no accommodation), to **Atalaya** or **San Mateo**, about 4 hrs.

By the Church a turning to the left leads into the main road to Agüimes. The drive is very dull and barren, but the land gives large crops of wheat in rainy years.

At  $12\frac{1}{2}$  m. ( $19\frac{1}{2}$  kils.), the **Montaña de las Cuatro Puertas** (four doors) is passed on the left. It is within ten minutes of the road and is the most perfect example left of what was undoubtedly an aboriginal place of worship; probably that known to the Canarios by the name of **Humiaya**. (Refer index.)

On the N. side of the summit is a large and carefully excavated cave with a square platform in front, both facing directly towards the Isleta, where the most sacred burial ground of the Canarios was situated. Owing to the protected position and to the fact that this is one of the driest parts of the island, everything has remained nearly intact.

The four entrances which give the mountain its name are only separated by columns, thus allowing free entrance to the wind. As this part of the island is nearly always windy, this alone is sufficient to prove that the place was never intended as a shelter. The socket holes in the platform were probably used for erecting some timber structure to support the body during the funeral ceremonies, before the procession set out for the burial ground.

Keeping the top of the hill on the right and proceeding to the sheltered side, a well-cut path in the rock leads to a succession of caves. Acting on the supposition that this was a residence of priests (*faycans*) and consecrated virgins (*harimaguadas*), these can be explained as follows.

The path is superior to that usually leading to Canario caves, and such as might be made in a case where a heavy body had to be carried carefully.

The small caves on the right probably belonged to the sentries who guarded the entrance.

The first large cave on the right, with the three trenches pointing towards a common centre, was probably used for drying the bodies in the sun after they had been cleaned and prepared, the bodies being placed in the trenches so that they could easily be covered up in case of rain. The space behind would suffice for the chief mourners, who would accompany the body round to the temple. The small caves in the side may have served for litters, etc.



The small cave below, on the other side of the path, was probably devoted to the preparation of the dead body, the three receptacles in the wall being used to hold the various medicaments required.

The passage leading from the drying trenches to the caves inside must be presumed to have been closed by a door, allowing of communication between the inmates and the outside world without actual contact. It will be noticed that there are no steps descending into the interior.

The large cave which this passage overlooks with the three small chambers in its walls, across one of which the sockets for the beams are to be seen, was no doubt partly used as a store chamber. The dry position it occupies would make it very suitable. It should be remembered that it was one of the duties of the priestly order to store what remained over from their tithes against times of scarcity. Grain was usually kept in pots or in holes in the ground.

In the next cave the beams were evidently carried right across. It seems likely, from the shape of the western buttress, that this was the kitchen. The men of the establishment would have slept on the beams as it would have been dangerous to place stores so close to the fire.

The next cave is small and the beams must have been so near to the roof that they could only have served as an ornament. This indicates that it was occupied by some dignitary, such as the chief priest, who would thus sleep between the men and the rest of the colony. If this supposition be correct, the passage above would generally be closed.

Following the path to the barrier of stones, doubtless placed there to shut in the goats at night, a large semi-circular cave in the background, which is too low to allow of a man standing upright, appears to have been the shelter for the goats. The small cave on the right, into which a goat could easily be driven, would serve as a milking shed and for making butter and cheese. It is perhaps well to remind the reader that butter, kept for several years in a pot, was one of the chief medicines used by the natives. It was rubbed in for sprains, bruises and wounds, and probably for broken bones and obscure internal maladies. (See History.)

The goats would be milked and the leather for covering the mummies would be sewn by the *Harimaguadas*. The window in the goats' cave and the look-out above would both afford some little recreation to a number of young girls, kept for years secluded from all intercourse with the outside world.

One cave remains to which access is more difficult than to the rest. This may well have been the sleeping place of the maidens. It is the most remote of all. The sockets in the walls point to the erection of several beams on which a sufficient number would find room to lie down. Finally, the curved socket-holes in the window, from which the beams could be immediately lifted, indicate a last means of escape in case of imminent danger. The window was timbered, but the Canarios knew little about carpentry and space enough would have been left to spring through. Springing through meant falling down a precipice, but, as a last means of escape, this sacrifice would probably be expected of an *Harimaguada*.

Returning along the path, a low natural wall must be surmounted and another small group of caves is found. One of these is much blackened by fire. It is not unreasonable to suppose that this discolouration dates, at least partially, to some period prior to the conquest. It is again called to the attention of the reader that butchers, as in Egypt, were outcasts. To them belonged the duty of first cleaning the body of the dead and of burning the entrails preparatory to putting the ashes back into the corpse. That the cave now being discussed was not the general kitchen is apparent. From its careful construction in comparison to the adjoining caves, it seems much too good for the ordinary work of a butcher, whilst the smooth walls and the small aperture



into the open air would indicate care, such as would be necessary to prevent any portion of the sacred ashes of the dead from falling into apertures or from being blown away.

Those who have studied the subject more deeply may differ from the writer's conclusions, but, in any case, the mountain is worth ascending. It is 923 ft. high and commands a view which includes Ingenio, Carrisal, the Lazareto, Telde, Las Palmas, Puerto de la Luz, the Pico de Bandama and the Cumbres. The sheltered caves are also a capital spot for a picnic. Water must be brought.

Further along the **Main Road**,

At  $13\frac{1}{4}$  m. ( $21\frac{1}{4}$  kils.) a track to the left leads away to Maspalomas, etc. (Refer under Carrisal (Can).)

At Agua Tona there are a few palm trees, and the country looks a little greener. Between here and Ingenio a road to the left, along which carriages can pass, leads to **Punta de Gando** and the buildings of the **Lazareto**, which can be seen below.

Travellers by ships coming from infected ports can perform quarantine here. The authorities might have been more generous with the space allotted. Gando Bay was the point at which the Spaniards were allowed to trade prior to the conquest. The natives permitted D. Diego de Herrera to build a fort here in 1466, which was eventually destroyed owing to excesses on the part of the Spaniards. (See under Gando Bay.)

At  $16\frac{1}{2}$  m. ( $26\frac{1}{2}$  kils.) a path leads up on the right to **Ingenio**, 860 ft., 3,486 inhab. ; no inn,  $\frac{1}{2}$  m. from the road.

Ingenio was the name given to a place where sugar used to be cultivated. An ancient sugar-factory existed in the village and some of the houses are very old. The foundations on which one or two of them rest are attributed to the Canarios, but are much more likely to have been made by the early Spanish settlers.

A little further on the deep Barranco de Guayadeque is crossed and the road terminates at

**Agüimes**, 18 m. ( $28\frac{1}{2}$  kils.), 810 ft., 2,889 inhabitants. No inn, accommodation miserable.

The village is of no interest and has a destitute, poverty-stricken appearance. In the Bco., about  $1\frac{1}{2}$  hrs. above the town, are a number of caves where the Canarios lived, in some of which bones and mummies have been found. There are also a few caves in the Bco. below the town. Agüimes can never become a favourite resort as it is almost constantly swept by a high wind.

Leaving the village the road traverses a bare windy plain. The village of **La Pileta** is left to the right, and at  $3\frac{1}{2}$  m. ( $5\frac{1}{2}$  kils.) **La Mina** (water-tunnel) in the entrance of the Bco. **Angostura** is passed, 440 ft.

The new Tirajana *carretera* now separates from the bridle path. There are no towns or villages for some distance up, the official

points being Barranco Angostura, 24 m. ( $38\frac{1}{2}$  kils.) (10 kils. from Agüimes), Llano de las Piedras,  $30\frac{1}{2}$  m. (49 kils.), and Santa Lucia. The remaining part of the road to Tunte (S. Bartolomé de Tirajana) 36 m. (58 kils.), is in course of construction (1910).

The old bridle path crosses the Bco. in a slanting direction. At 100 yards from the point where the path leaves the bed is a rock rising from the middle of the Bco. known as **Los Letreros**.

On the side of this rock which faces up the Barranco a number of names are written. Of these the earliest bears date 1854 and is some  $3\frac{1}{2}$  ft. above the bed of the Barranco. Others are higher up, more lower down and, by scratching away the soil, still more can be found. The reason of this is that the rocks in the surrounding country are very much broken up by cleavage and are constantly carried down by the rain, whilst the rock under discussion is of a much harder nature, so that it has remained intact and is gradually being buried.

The name **Los Letreros** has belonged to this rock for centuries. There is a tradition that a Bishop, in making the round of his diocese, stopped here and made his mark above some other Pagan writing in order to show that Paganism had been succeeded by Christianity. In process of time the Pagan mark would first be buried, then the Christian and lastly those now visible, which, worthless in themselves, serve to show more or less the rate of the growth of the bed of the Barranco.

Amongst these modern marks is a peculiar hieroglyphic formed by an equilateral triangle standing on its apex, surmounted by a perpendicular line crossed by two horizontal lines, of which the upper one is the shorter. At first sight it appears to be a rough way of drawing a ship, but enquiry at the British Museum shows that it bears a close resemblance to some of the early mediæval trade marks formerly stamped on pottery, etc. It may be that this sign was repeated in recent years on different parts of the rock by idlers copying marks unknown to them, which they saw disappearing by degrees, or it may be that it was a species of advertisement cut in several places by the early traders, with the object of attracting the attention of the natives and of inducing them to deal only in goods protected by that particular trade mark.

The point marked by the rock was probably the recognized market place for the merchants using Gando Bay, as all traders seem to have done up till the conquest. The country above Agüimes, in Tirajana and in the Bco. de Fatarga was thickly populated, and it is unlikely that strangers would be allowed to enter the native settlements. The rock still makes a good half-way mark easily discernible from the coast.

It is possible that by moving the gravel away Phœnician or other inscriptions might be found which have been preserved from the effects of the weather. If any visitor to the Island should be sufficiently curious to stop on the spot and dig, it is to be hoped that he will have wax and all that is necessary with him, so that if the sailors who passed round the Cape by the order of Necho, King of Egypt, ever landed here and wrote the fact on stone, the world may obtain an undoubted replica of what they had to say.

Following the path up the Cuesta de los Cuchillos, past a point where a track to the left leads away to Sardina in  $\frac{1}{2}$  hr., the plateau known as **Las Mesas de la Burra** is crossed, and a gradual ascent is made to 1,980 ft., when, by bearing to the left, a descent is made to the edge of the **Barranco de Tirajana**.

At 2¼ hrs. a path leads away to **Juan Grande** in about 1¼ hrs., crossing the **Barranco** and passing **Los Gallegos**, where there is a settlement of negroes, probably descended from slaves imported in the early sugar days. Their black blood has been freely mingled with that of the surrounding peasantry.

At 3¼ hrs. **Santa Lucía**, 2,231 ft. (pop., 2,713,) no inn, bad accommodation, is prettily situated, and is surrounded by cultivated land and groves of trees, but the village is dirty and swarms with fleas, etc.

Close to the village the bottom of the **Vueltas de Taidía** leading to **San Mateo**, etc., is passed.

There was once a large circular native house at **Taidía**, said to have been built of squared stones. It was so strongly supported on solid timber that the roof was used for centuries as a threshing floor. This was unfortunately destroyed some years ago and the proprietress built another house partly out of the stones of the old one. The new house is plastered over. In front of the site is a mountain of which the side is honeycombed with caves, now inaccessible.

Crossing the bed of the **Barranco**, 1,850 ft., a pretty ascent, through almond and pear trees, leads to (4½ hrs.) **Tunte** (**S. Bartolomé de Tirajana**), 2,937 ft., beds possible. Pop. 4,644.

The village is beautifully situated in the midst of delightful scenery and would make a good centre for excursions if accommodation were provided.

The enormous valley in which it is placed has been called a crater. It probably was so originally and seems to have been the centre of disturbance mentioned in the next route under **Juan Grande**. At present all prominent signs of the crater itself have been swept away or buried.

The church is of little interest. It contains an image of **Santiago**, said to have appeared miraculously where the **Ermita** now stands on the other side of the **Paso de la Plata**.

At the top of the village there is a circular hut which there is every reason to believe to be of **Canario** origin. It is still inhabited and is in perfect repair. The form is circular and the foundation is of very large stones, the diameter of the interior being about 20 ft. None of the stones were shaped and earth was used as mortar, as it often is to-day by the **Spaniards**. The lintel of the door and of the two chambers built in the wall are of large mis-shapen pines, as is the span roof and nearly the whole of the last two or three feet of the building. The style of architecture is most primitive. The roof is covered with mud, as has probably always been the case. The number of fleas inside is stupendous. Anyone who has studied the old **British** circular dwelling still intact on the **Bodmin Moors** in **Cornwall** will at once notice the resemblance. Until late in the 19th century there were five more of these round huts in **Tunte**.



**Excursions from Tirajana.**—To the Cumbres, San Mateo, etc., by the Paso de la Plata.—Leave the top of Tunte and pass the cemetery, then climb through the Pinar, amongst scattered pines, to the cross on the Paso de la Plata,  $1\frac{1}{2}$  hrs., 3,950 ft. On the opposite hills is the Ermita de Santiago, where the miraculous image mentioned above is said to have first appeared.

(From here a path to the left leads to Mogan in about 7 hrs., which can be continued to Aldea de S. Nicolas in another 5 or 6 hrs. A most fatiguing journey. Scenery good.)

Bearing up to the right the road proceeds by zig-zags and the pavement leaves off at the entrance to a shallow barranco where water can generally be procured, 4,800 ft. This is followed until the basin of the Cumbres is reached in about  $2\frac{1}{2}$  hrs. total. (See index, under San Mateo.)

Times.— $2\frac{1}{2}$  hrs. to the Cumbres,  $\frac{1}{2}$  hr. across them and about 2 hrs. down to San Mateo or Tejeda. Total 5 hrs.

**To the Cumbres and San Mateo by the Vueltas de Taidía.**—Descend from Tunte into the Barranco and cross same, passing through Santa Lucia, 2,231 ft. Refer under San Mateo. Time, 1 hr. to the top of the Vueltas, 3,360 ft.; 2 hrs. to Cumbres, 1 hr. across same.  $1\frac{1}{2}$  hrs. down. Total  $5\frac{1}{2}$  hrs. By bearing a little to the right in the Cumbres, the Caldera de los Marteles (page m25) can be visited.

**To Maspalomas by the Bco. de Fatarga.**—Leave the top of Tunte and swing round to the left just below the cemetery. Top of ridge with very fine view, 2,758 ft.,  $\frac{1}{2}$  hr.; Fatarga, 1 hr.; Maspalomas, 5 hrs. A rough road, refer to Maspalomas for details.

From Las Palmas *viâ* Telde to Carrisal, Juan Grande, Maspalomas, Arguineguin, Mogan and Aldea de San Nicolas or Tejada, or from Maspalomas *viâ* the Bco. de Fatarga to Tirajana.

Leaving the Agüimes *carretera* at 13½ m. (21¼ kils.), a road to the left leads in 1 hr. to Carrisal, 340 ft., a little village where there is a spring in the Bco. de Guayadeque below Agüimes. There are several Canario caves in the neighbourhood, but nothing of any particular interest except the out-crops of sandstone along the track.

A long straight road leads to the S. The country is very flat and is built of the *débris* washed down from the hills on the right. Areynaga with its salt pans is passed on the left and Sardina is left on the right. In the neighbourhood there is workable lime.

A path leads past Sardina, ½ hr., to Santa Lucía, about 3 hrs.

At 1¾ hrs. the bed of the Bco. de Tirajana is crossed (times taken from the *carretera*), and at 2¼ hrs., Juan Grande, 100 ft., is reached, a miserable cluster of houses with no accommodation.

A path from here leads *viâ* los Gallegos up to Santa Lucía in about 3½ hrs. (See elsewhere.)

The road again continues over flat, dull country where little more than euphorbia and balo are met with.

The interest of this part of the journey is confined to the geological formation of the surrounding country. Owing to some great pressure brought to bear, the rocks are laminated almost like slate, and are rapidly crumbling away. The ground is strewn with stones which have been but little worn, as though the eruptive force had made itself felt when this part of the land was too much below the surface of the sea for the action of the waves to have any effect, and had then been raised quickly above them. In one place the schistose rock is interrupted by a large patch of cinders, probably the remains of a blow-hole, but the direction of the principal line of force seems to have been from near Tunte. Were it not for the caps of lava protecting the mountain spurs, all the country, from the coast to the Cumbres, would probably be a great swelling plain. It is not unlikely that most of the land could be rendered fertile by the aid of wells and windmills.

At 3¼ hrs. a small spring is passed, the road becomes more and more covered with sand blown up by the southerly winds and at 4¼ hrs. Maspalomas, 100 ft., is reached. No inn. A bed or two can be had. Letters of introduction should be taken.

A certain amount of interest attaches itself to the sandy plain and to the Lighthouse,  $\frac{1}{2}$  hr. from the village. The country also affords a happy hunting ground to the naturalist. Carriages can be driven as far as this but the jolting is tremendous and foot or saddle are to be preferred.

Carts can be driven round the coast to Arguineguin,  $6\frac{1}{4}$  hrs., accommodation the same as in Maspalomas. Near the village is an old Canario burial-ground on the beach, but the tombs have been rifled. Arguineguin or Alguin Arguin is said to have been the name of some Canarian chief, who came, at some very remote period, from the opposite African coast. There is a factory near here for tinning tunny (now shut, 1910).

From Arguineguin it is best to take a boat to the Bco. de Mogan, about  $2\frac{1}{2}$  hrs., 1\$ to  $1\frac{1}{2}$ \$, whence Mogan, 2 hrs., is easily reached.

The land journey takes about 6 hrs., and the road is very bad. The route from Mogan *viâ* Veneguera and Tasártico to Aldea de San Nicolas takes another 5 or 6 hrs.

Mogan, 1,732 ft., pop. 768, is a very small village in the mountains where beds may be procured with difficulty. There is an old burial cave near the village. Tunny fishing gives good sport here. Fish run up to over 500 lbs. Boats anchor above a shoal about 5 miles from the shore. The best bait is a live mackerel or 4 or 5 sardinas (pilchards).

**Maspalomas to Tirajana.**—A path leaves Maspalomas to the N., and descends into the rocky and magnificent Bco. de Fatarga. Keeping the *acéquias* on the right, a number of Canario caves are passed on both sides, many, without doubt, unexplored. Progress is very difficult in wet weather, but, when fine, it would be easy to camp here and hunt for mummies. There is good water and plenty of pigeons to be had for the shooting. The *acéquia* ends at  $1\frac{1}{2}$  hrs., 450 ft.

At 2 hrs., just after passing a small farm, a path leads up out of the barranco and, at  $2\frac{1}{2}$  hrs., 900 ft., another farm, nestling in palm trees, is passed. At 4 hrs., Fatarga, 1,785 ft., a village most picturesquely placed on a hill, surrounded by a fruitful valley full of almonds and olives.

The ascent now becomes rapid and at  $4\frac{1}{2}$  hrs., 2,758 ft., the summit of the ridge dividing the Bco. de Fatarga from the Bco. de Tirajana is reached. The view is magnificent. Santa Lucía is seen a little on the right, part of Tunte on the left, the houses of Taidía in between and the Paso de la Plata on the left.

Bearing to the left, and swinging sharply round to the right below the cemetery, the path enters Tunte (S. Bartolomé de Tirajana), 2,937 ft., 5 hrs. (See elsewhere.)



### Approximate Prices of Carriages, Horses, etc.

**In Las Palmas:** Carriages to hold up to 4 or 5 persons—  
To the North: Puerto de la Luz,  $7\frac{1}{2}$  pes.; Tamaraceite, 10 pes.; Teror, 20 pes.; Arucas, 15 pes.; Firgas, 20 pes., and 1s. each for a mule up to the village; Bañadero, 20 pes.; Cuesta de Silba, 25 pes.; Guia, 35 pes.; Gáldar, 35 pes.; Agaete, 45 pes. (return next day, 65 pes.); on the central road: Tafira, 10 pes.; the Monte, 15 pes.; the Gran Caldera, 15 pes.; Santa Brigida, 15 pes.; San Mateo, 20 pes.; on the South road: Jináma, 10 pes.; Telde, 15 pes.; Mña. de las Cuatro Puertas, 20 pes.; Agüimes, 25 pes.; Santa Lucía, 70 pes. (return next day 80 pes.). An additional charge is made for landaus.

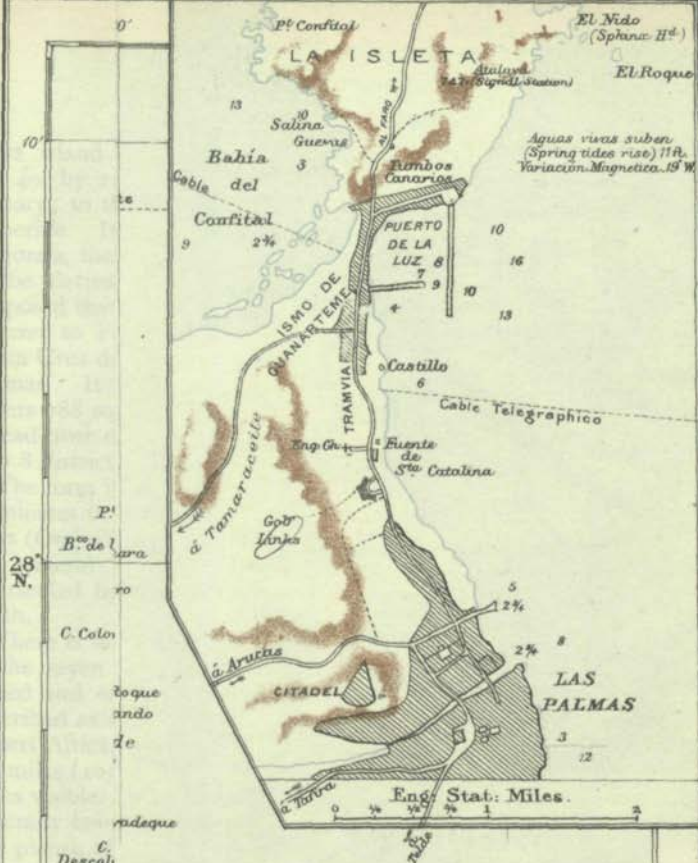
Saddle-horses, about 10 pes. a day, but not easy to obtain. Mules, best hired in the country, about 5 to  $7\frac{1}{2}$  pes. a day with guide. Donkeys, about 5 pes. a day. Short rides a matter of arrangement.

All the above prices are for return journeys on the same day, with the exception of Agaete. Those taking such long journeys as Guia and back in a day (44 miles), will of course take care to allow so much time that their horses need not travel more than 6 m. an hour not including stoppages.

## PRICES AND APPROXIMATE TIMES OF THE PUBLIC COACHES AND MOTOR 'BUSES.

	COACHES.			MOTOR 'BUSES.			COACHES.			MOTOR 'BUSES.		
	A.M.		P.M.	A.M.		P.M.	A.M.		P.M.	A.M.		P.M.
	Prices.			Prices.			A.M.			A.M.		
Las Palmas	7	2.30		7.0	3.0		2	10 a.m.	6.0	1.0		
Tamaraceite	8	3.30		7.30	3.30	1.00	4	12	6.20	1.20		
Aruacas	9.30	5		8.0	4.0	2.00	4.30	12.30	6.30	1.30		
Bahadero	10	6		8.15	4.15	2.50	6.15	2.15	7.5	2.5		
Guia	12.0	8.0		9.10	5.10	4.00	7	3	7.50	2.50		
Gáldar	12.30	8.15		9.20	5.20	4.50	8	4	8.30	3.30		
Agate	1.30	9.0		9.50	5.50	5.50	9	5	9.0	4.0		
Las Palmas	7	2.30					6.30	3				
Tamaraceite	8	3.30				1.00	8.30	5				
Terror	10	5.30				2.00	9.30	6				
Las Palmas	7	3.0		7.0	2.0	5.30	7	3	7.0	8.30	3.45	
Tafra	8	4.0		7.30	2.30	6.0	8	4	7.15	8.45	4.0	
Monte	8.15	4.15		7.45	2.45	6.15	8.45	4.30	7.25	8.55	4.10	
Santa Brígida	9	5.0		7.50	2.50	6.20	9	4.45	7.50	9.20	4.35	
San Mateo	10	6.0		8.15	3.15	6.45	9.30	5.30	8.15	10.0	4.50	
Las Palmas	7	2.0	3.30					a.m.				
Telde	8.15	9.45	4.0			1.00	6	7				
Agüimes	11.30	6.0				2.00	7.45	2				
Santa Lucia	p.m.					4.00	9.15	6				
	5							5.30				

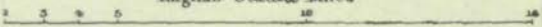
NOTE.—On Sundays and Holidays extra coaches are often put on, and the regular coaches frequently start  $\frac{1}{2}$  an hour earlier.  
 Motor Cars: fares for short distances, 50 centimes. There are other motor 'buses which run irregularly to Telde, etc., etc.  
 Every effort has been made to get correct information, but the regularity of the motor car service cannot be guaranteed.  
 Tourist motor cars can be hired for private trips.



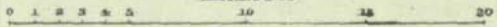
# GRAN CANARIA.

- |                    |                                              |            |              |
|--------------------|----------------------------------------------|------------|--------------|
| B <sup>co</sup>    | Barranco (Ravine).                           | Pinar.     | Pine Forest. |
| P.                 | Puerto                                       | Fuent.     | Fountain.    |
| P <sup>o</sup>     | Punta                                        | Carretera. | Road.        |
| M. M <sup>ta</sup> | Montaña                                      | Camino     | Path.        |
| +                  | Ermita                                       | R.         | Roque        |
|                    | Alturas en Pres Ingleses. (F <sup>co</sup> ) |            |              |

English Statute Miles



Kilometres



0'

10'

28° N.

20

30

40

50'

20'

El Nido (Sphinx II<sup>d</sup>)

El Roque

Aguas vivas suben (Spring tides rise) 11 ft. Variacion Magnética. 19 W.

10

16

13

6

5

2%

8

2%

3

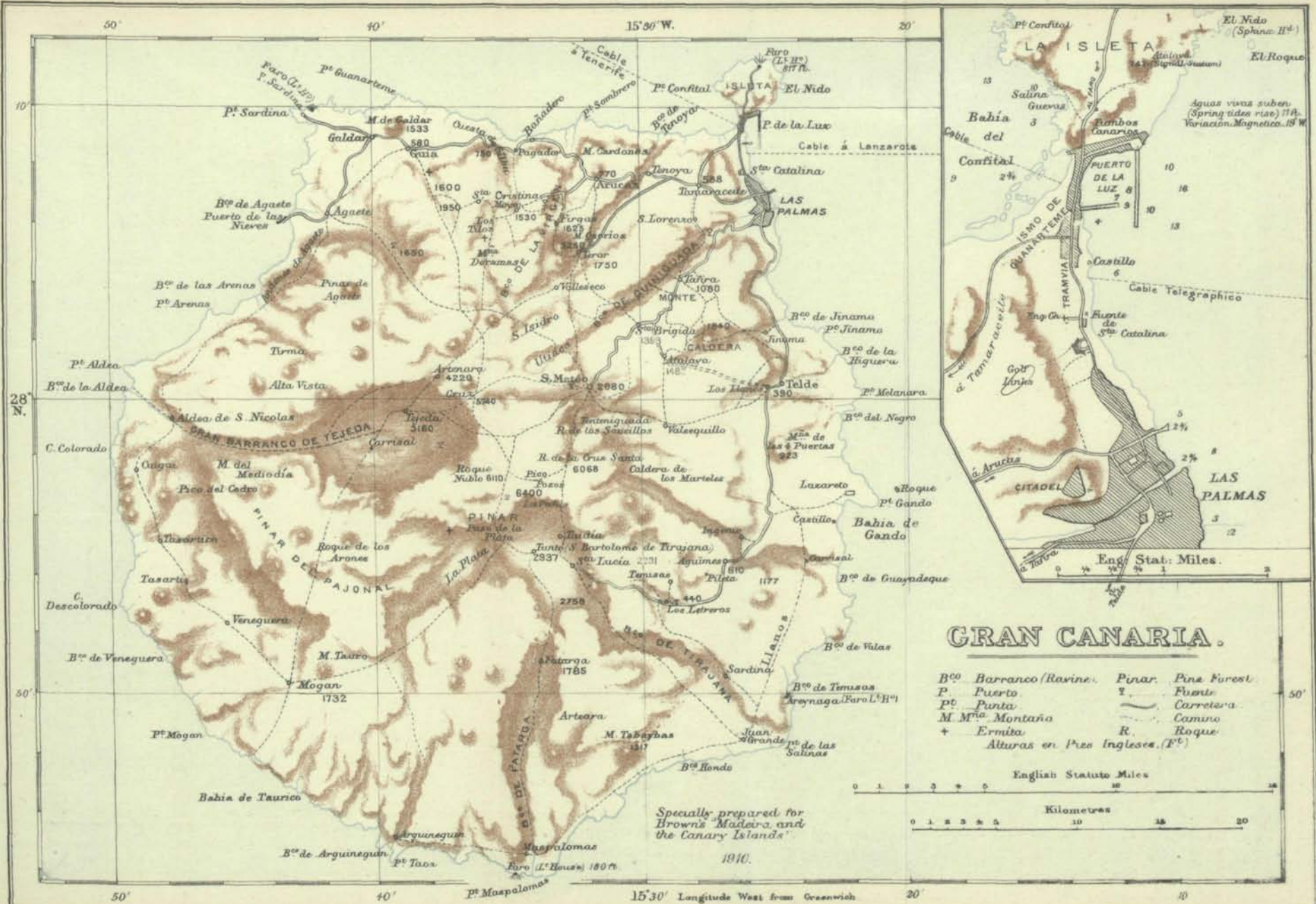
12

1

2

50'

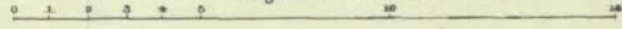




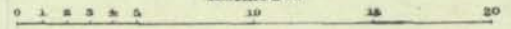
# GRAN CANARIA.

- |                   |                                             |        |             |
|-------------------|---------------------------------------------|--------|-------------|
| B <sup>co</sup>   | Barranco (Ravine).                          | Pinar. | Pine Forest |
| P.                | Puerto                                      | ?      | Fuente      |
| P <sup>o</sup>    | Punta                                       | —      | Carretera   |
| M. M <sup>o</sup> | Montaña                                     | —      | Camino      |
| +                 | Ermida                                      | R.     | Roque       |
|                   | Alturas en Pies Ingleses. (F <sup>o</sup> ) |        |             |

English Statute Miles



Kilometres



Specially prepared for  
Brown's "Madera and  
the Canary Islands"

1910.





## FUERTEVENTURA.

THIS island lies between lat.  $28^{\circ} 1'$  by  $28^{\circ} 43'$  N. and long.  $13^{\circ} 49'$  by  $14^{\circ} 32'$  W. of Greenwich; to the E.N.E. of Grand Canary; to the S.W. of Lanzarote, and 2 degrees to the E. of Teneriffe. It was formerly called Herbania or Planaria, or Majorata, the people being known as Majos, a name supposed to be derived from a tribe of African invaders. It is also supposed that Ben Farroukh, in describing the Island of Capraria, referred to Fuerteventura. It is 156 sea miles (287 kils.) from Santa Cruz de Teneriffe, and 103 sea miles (190 kils.) from Las Palmas. It is 63 m. (101 kils.) long by 21 m. (34 kils.) broad; covers 788 sq. m. (2,019 sq. kils.) and contains 11,669 inhabitants, spread over one town and 13 villages or hamlets and is divided into 8 districts.

The form is long and narrow, especially at the S. end, which terminates in a sandy peninsula, on which are situated the Ass's Ears (Orejas de Asno), 2,770 ft., the highest point in the island, the general plan of which is a sandy, rocky, barren plain, intersected by two lines of extinct volcanoes running north and south.

There is less water and consequently less verdure than in any of the seven islands. What vegetation there is, is exceedingly varied and of the greatest interest to the botanist, having been described as a miniature reproduction of certain parts of Northern Desert Africa, the coast of that continent being distant only 60 sea miles (105 kils.) from point to point and Cape Juby being at times visible. There are no forests and very few trees, cultivation generally being confined to cereals, cochineal, orchilla, barrilla (ice plant), aloes, etc.

In spite of the scarcity of fresh-water springs, this island grows more wheat in a wet year than all the others put together, but, although the population is so scanty, emigration alone enables the inhabitants to survive in a succession of bad seasons. The climate is very dry and, were accommodation available, might be of advantage to some invalids. Cultivation might be extended were full advantage taken of the limestone beds running through the island, where water can usually be found by sinking wells and erecting windmills, though most of the wells and many even of the springs yield water that is brackish. Where water is present, even though it be brack, the soil is fertile enough, producing good crops of bananas, tomatoes, onions, etc.

The aspect of the island is uninviting in the extreme. Vegetation is in many instances almost microscopic. Drinking water is scarce, occasionally nasty and must often be paid for.



The natives live largely on *gofio*, sometimes made from the seed of the barrilla (ice-plant) which is gathered when ripe and toasted.

Fuerteventura is, however, fortunate in possessing extensive beds of lime-stone from which lime and plaster (yeso) are supplied to the rest of the archipelago. Cattle, camels, goats and sheep, wool, hides, etc., are also an article of export.

As yet there are few roads and communication is carried on by rough, uncared-for paths, well adapted to the camel or the donkey, the former being always used for long distances.

As this is one of the largest of the group, being in fact second to Teneriffe, distances from point to point are often very great, but travelling is easy.

When rainfalls occur they are usually very heavy, but the intervals are occasionally long. The prevailing wind is from the N.E.

On the arrival of the Franco-Spanish filibustering expedition in 1402, it is said that there were thick groves of palms and other trees and much more water. The country was divided by a wall, the inhabitants on either side of which were hostile and warlike in the extreme. Bethencourt estimated the number of warriors as about 4,000.

**Puerto de Cabras.**—800 inhabitants. East coast; 103 sea miles (190 kils.) from Las Palmas, and 41 sea miles (72 kils) from Arrecife (Lanzarote).

Capital of Fuerteventura, Postal and Telegraphic centre and the only Customs Station in the island, facing a wide, open bay. The town contains a Church, Club (Casino) and is provided with Catholic and Protestant Cemeteries. The water supply consists of rain-water stored in sealed, underground tanks, supplemented by wells.

Passengers are landed on the Mole. Charges for private boats, 50 centimos each passenger, luggage extra.

There are two Fondas, charges from 4 to 5 pesetas a day.

Tartanas or carros can be hired at about the following rates: to Tetir, 10 pes.; Oliva, 15 pes.; Casillas, 10 pes.; Antigua, 15 pes.; Tuineje, 20 pes. Camels and horses cost about 5 to 6 pes. a day.

**South Road.**—A carretera leaves Puerto de Cabras and runs *viâ* Tejuate to Casillas del Angel, 7 m. (11 kils.), population 1,229, lying in a valley above the *carretera*. Further on is La Antigua, 13 m. (21 kils), 886 ft., population 2,387; where a certain amount of land is irrigated by means of wells and wind-mills.

From here a track leads to Betancuria,  $3\frac{3}{4}$  m. (6 kils.), 820 ft., population 586; founded by the Conquistador, Juan de Bethencourt, and the original Capital of the Island. The village lies in a wide, cultivated barranco and possesses a large church in which the Standard borne by Bethencourt is still preserved.

At  $17\frac{1}{2}$  m. (28 kils.) from Puerto Cabras a track leads to Pajara,  $3\frac{3}{4}$  m. (6 kils.), 1,377 ft., population 1,182. Some of the scenery in this neighbourhood is wild and rough.

The carretera (still incomplete) terminates at Tuineje, 21 m. ( $33\frac{1}{2}$  kils.), population 2,205, where the scanty water supply permits of but little cultivation. The principal industries are the quarrying of lime-stone and plaster (yeso) and the breeding of camels. Signs of volcanic activity are abundant and streams of petrified lava stretch from some of the craters away to the coast.

A track leads from Tuineje to Puerto Tarrajal in about  $2\frac{1}{2}$  hrs.

**North Road.**—At a few kilometres from Puerto Cabras a branch (incomplete) from the same carretera runs northwards *via* Tetir,  $5\frac{1}{2}$  m. (9 kils.), 852 ft., population 1,110; to Oliva,  $13\frac{1}{2}$  m. ( $21\frac{1}{2}$  kils.), 1,706 ft., population 2,561; situated in the most fertile, or rather least barren, part of the island. Cereals, ice plant, goats, sheep, etc.

## LANZAROTE.

THIS island lies between lat.  $28^{\circ} 50'$  by  $29^{\circ} 15' N.$  and  $13^{\circ} 26'$  by  $13^{\circ} 53' W.$  of Greenwich; is N.E. of Fuerteventura, and  $2\frac{1}{2}^{\circ}$  W.N.W. of Teneriffe, being 197 sea miles (362 kils.) from Santa Cruz (Teneriffe) and 144 sea miles (283 kils.) from Las Palmas. It is  $36\frac{1}{2}$  m. ( $58\frac{1}{2}$  kils.) long by  $13\frac{1}{4}$  m. ( $21\frac{1}{4}$  kils.) broad, with an area of 380 sq. m. (973 sq. kils.) and contains 17,546 inhabitants in one town and 63 villages or hamlets. It is divided into 8 districts.

The name Lanzarote is derived from that of Lanzarote (Lancelot) de Malvoisel, a Genoese captain who constructed the tower found in the island on the arrival of Bethencourt. In the middle ages the island was marked on the map with the Genoese coat-of-arms as a token that it belonged to that municipality. Ben Farroukh seems to have alluded to it under the name of Pluitana.

The surface is less mountainous than that of the Western Islands and there are broad sandy or stony plains, quite as fertile in wet years as those of Fuerteventura. A curious phenomenon, frequently to be observed, are the moving sandbanks, which emerge from the sea, march across a tract of country in the shape of a demi-lune and finally disappear in the W. (see "Blown Sand").

There are many extinct volcanoes. One group, called the *Montañas del Fuego*, which were active in 1733, are still so heated that wood will burn in some of the crevices. There were violent seismic disturbances about this time in many parts of the island. The forests are extinct and even the euphorbia is scarcely seen, the nature of the indigenous plants being not unlike that of those found in the Desert of Sahara.

The southern part of the island is barren and cultivation is almost confined to wheat, barley and the cochineal plant, which depend entirely upon rain for the necessary moisture. In the north, where a quantity of tomatoes are planted, there are a few springs, but none of sufficient size to be used for irrigating purposes at any distance. Owing to the paucity of water the barrancos are of no depth or beauty. The highest mountain is the *Risco de Tamara*, 2,244 ft., near N.S. de las Nieves. Good white wine is grown and from 800 to 900 pipes are exported every year. A capital road connects Yaiza on the south with Arrecife on the east and is continued on the N. as far as Haría.

On the N. are the little islands of *Alegranza*, *Montaña Clara* and *Graciosa* and on the S. that of *Lobos*. None of these are inhabited, but all are used by the fishermen at certain times of the



year. On Graciosa are some extensive sheds erected for the purpose of drying and curing fish, and on Alegranza and Lobos there are lighthouses.

The towns are uninteresting and dirty and communication is almost entirely carried on by camels, which are also used for agricultural purposes. Donkeys may sometimes be hired at about one-third the price of camels.

According to some of the old writers the island was formerly divided into two kingdoms by a wall running N. and S. It is, however, questionable whether this statement is correct.

It was the first to be victimised to European influence in 1393, when one king alone ruled. So great were the barbarities of the earliest visitors that, when Bethencourt arrived in 1402, only 300 warriors were left.

The people lived principally in circular houses built of stone and surrounded by a wall. These were described as very evil-smelling, even by the sailors of the time, accustomed as they were to all the filthy customs introduced and encouraged by the bigoted monks of the middle ages. Glas, writing of the island in 1764, says that most or all of the inhabitants of his day suffered from the itch.

The reigning king when Bethencourt arrived was Guadarfia, son of Yeo, daughter of King Nuazama, in whose house Martin Ruiz de Avendano lived whilst in Lanzarote. He was driven to the island, in 1377, by a storm when in command of a fleet despatched by Don Juan I. of Castille against the King of Portugal, who was supporting the Duke of Lancaster in his claim to the throne of Castille by virtue of his marriage with the eldest daughter of King Pedro.

Nuazama's wife gave birth to a daughter, Yeo, whose hair was suspiciously fair. Guadarfia, son of this daughter, was consequently not allowed to ascend the throne after his grandfather's death until his legitimacy had been proved. Yeo was tried by ordeal. She was placed in a house with three other women and a fire was lighted. All were suffocated but her, her escape being due, it is said, to the use of a wet sponge with which she covered her nostrils. However this may be, her purity was acknowledged and her son became king.

In 1824, a volcano burst through the middle of a maize field near Teguisse, but soon quieted down again.

S. Berthelot, about 1825, published a sketch of a piece of wall near Zonzamas, which he believed to have been built by the aboriginals or the Phœnicians.

**Arrecife**, 3,082 inhabitants, east coast, 41 miles from Puerto de Cabras (Fuerteventura).

Passengers are landed in boats on the quay, which is well protected by a broken range of rocks extending some miles up the coast and serving as a natural breakwater to the numerous ramifications of the harbour. Port charges : Each person, 1 peseta ; packages extra.

There is a fairly good fonda with eight beds ; charge, 4 to 5 pes. a day, including wine.

The appearance of the town is eastern and the greater part is extremely dirty and badly built, the houses rarely exceeding one story in height. The Church is uninteresting and the market, where the cock-fights are also held, is poorly supplied with a few vegetables and tomatoes, neither oranges nor bananas being usually procurable.

The visitor is first struck by the number of camels lying or standing about and by the old fort on the right, still connected with the town by a wooden drawbridge. If his time is limited, an excursion can be made by camel to the old capital of San Miguel de Teguisse,  $6\frac{1}{2}$  m. ( $10\frac{1}{2}$  kils.) on the N. road (5 to 7 pesetas). A good 4 hrs. must be allowed.

At  $1\frac{1}{2}$  m. from Arrecife, the road crosses a startlingly fresh stream of lava running some distance into the island. In the interstices fig and other fruit trees are planted, the moisture beneath the lava being thus utilised, whilst walls are built above the lava as an additional protection from the sun. Numerous villages are dotted on the surrounding slopes. In the neighbouring volcanoes large holes may be seen, from which cinders have been extracted and spread about the land for agricultural purposes.

For a long time the road is level, this part of the country being sometimes 5 ft. or 6 ft. under water when the rain is heavy.

Further on a hill is climbed and the old castle of Guanapay is seen on the right. Presently the neglected little town of San Miguel de Teguisse, 2 hrs., is entered (population 3,786). The Church is quaint and the roof of the sacristy good. There is also a fair picture on the N. side of the choir. The old Convent of Santo Domingo contains an image of the Virgin which is said to have stopped the flow of lava in 1824. There are also some tanks on which a large tract of country depends for water during the summer months.

Further along the N. road is another much revered image called the Virgen de las Nieves which is said to have left the church during the night to save the crew of a shipwrecked schooner which had implored her aid. She was found in the morning, her robes dripping with sea-water and the doors still locked. The same tale is related of many images, both in the Canary Islands and Madeira.

Still further to the N., at  $17\frac{1}{4}$  m. ( $27\frac{1}{2}$  kils.) from Arrecife, is a village called Haría (population 3,101), situated in a more or less fertile valley (no inn), whence (about 2 hrs. to the N.E.) the celebrated Cueva de los Verdes may be visited, the stronghold to which the ancient inhabitants retreated in cases of invasion. This is said to be the largest lava grotto known. The writer has been told that there is a subterranean deposit of water somewhere in this neighbourhood in which there is a race of fish without eyes. So far he has not been able to verify the fact. About  $1\frac{1}{2}$  hrs. to the N. of Haría is a cliff known as El Risco, 1,523 ft., where there is a fine view of the Islands of Graciosa, Alegranza, etc. The extinct crater, known as La Corona, near Haría, is 1,940 ft. high.

There is a *carretera* from Haría to the Puerto de Arrieta, 4 m. (6 kils.).

Should the visitors' time admit of it, an excursion across country may be made to the W. of the island to the Montañas del Fuego, already mentioned. Time required, from 5 to 6 hrs. each way. A guide advisable. Rough sleeping-quarters may be procured in the vicinity.

The same excursion may be made by the road to Yaiza, population 1,302, where there is a small fonda, 14 m. (22 kils.). The volcanoes are distant from the village about  $1\frac{1}{4}$  hrs. About  $2\frac{1}{2}$  hours from Yaiza in the same direction is a curious lava grotto, known as the Cueva del Mojon.

A few miles S. of the same village is the Torre del Aguila, a tower built by Bethencourt near where he landed in 1402.

The Strait known as El Rio, separating Lanzarote from Graciosa, would make by far the best harbour in the Canaries. It suffers, however, from want of fresh water and could never be more than a coaling station, as the country in the vicinity produces and consumes too little to afford any freight to merchant vessels.

A *carretera* has been made from Arrecife viâ San Bartolomé,  $4\frac{1}{2}$  m. ( $7\frac{1}{2}$  kils), to Mozaga,  $6\frac{1}{2}$  m. ( $10\frac{1}{2}$  kils.), which is being continued to Tinajo, population 1,688,  $11\frac{1}{4}$  m. ( $18\frac{1}{2}$  kils.).



## THE AZORES OR WESTERN ISLANDS.

### Shipping Facilities.

Travellers from Europe, from the Canaries or from Madeira, can reach the Azores best from Lisbon or Madeira by the boats of the "*Empresa Insulana de Navegação.*" For fares and details, see Table of Steamships. The same Company runs a boat monthly to and from New York, 1st class fare, \$50. (N.Y. Agents, G. Amsinck & Co., 6, Hanover Street.)

The "Royal Mail Steam Packet Company," Transatlantic Main Line (Southampton, Cherbourg, West Indies and New York) Steamers call at St. Michael's fortnightly both ways and offer facilities for a 19-day inclusive trip.

The "White Star Line" runs a winter service between Boston, New York and the Mediterranean ports and touches at St. Michael's and Madeira Eastwards only in accordance with the Company's itinerary. The "Cunard S.S. Co." boats call during the winter months on their way from New York to Madeira and the Mediterranean. Both of these services carry a number of tourists during the winter season.

Besides this a great number of boats come to the islands for coal, provisions or repairs, but these cannot be relied upon as a means of locomotion.

Communication between the islands depends almost entirely on the steamers of the "*Empresa Insulana de Navegação.*"

*(For advertisements of steamers see at the commencement of the book.)*











## General Information.

Tourists staying for some time in the Azores will find St. Michael's the largest and most attractive island in the archipelago. Next in order is Fayal, from which Pico is easily visited. Angra do Heroismo, in Terceira, is decidedly the most picturesque and interesting town. The Lisbon-Madeira boat, in making its round, usually stays here the whole day, both going and returning, and thus gives sufficient time for ordinary exploration. For further information, refer to the separate description of the islands, of which there are nine in all with a population (1900) of 257,452, all of whom are of white origin and speak Portuguese.

Accommodation, Amusements, Water Supply, etc., etc., are dealt with elsewhere in the front part of the book.

In all the principal islands there are roads along which carriages can pass, and in many instances long drives can be made from place to place along a surface which leaves nothing to be desired. Those riding into the interior generally employ donkeys, but horses can be obtained. Bicycles and motor cars are much more useful in the Azores, especially in St. Michael's, than in Madeira or in the Canaries.

The English communities are too small to allow games or sports to be organised on a large scale, but in St. Michael's, and especially in Fayal, where large staffs are employed both on the English and German cables, matters are better than elsewhere. Several of the Portuguese gentry have constructed tennis courts, but the damp, enervating climate is not in favour of brisk outdoor exercise.

Shooting is better than in the Canaries or Madeira and there is good deep sea fishing to be had in Fayal Channel, etc. There is also a little fresh water fishing in some of the volcanic lakes in St. Michael's.

The climate has already been discussed in its proper place (*see Climatic Conditions*). The even temperature and absence of drought are very favourable to plant life. Lovers of horticulture will find some of the gardens, especially at Ponta Delgada, most wonderful examples of cultivated beauty and botanical interest, whilst the indigenous flora is very varied and extensive.

The agricultural history of the country has shown the usual vicissitudes common to lands where the climate will admit of the cultivation of almost any product of the temperate or torrid zones. Advantage has been taken from time to time of fiscal

regulations to introduce industries more economically conducted elsewhere, of which the most conspicuous instance is sugar, now rarely or never to be seen.

The manufacture of sugar from beetroot (chiefly in St. Michael's and Terceira), and the growing of pine-apples under glass, now furnish the basis of a large export. Oranges, of which in 1859 no less than 261,700 boxes of 800 each were sent to England, are still grown, but the lower prices now obtainable make their cultivation unprofitable. The old vineyards, which formerly yielded some 20,000 pipes per annum, were nearly destroyed by the *oidium tuckeri*. Disease-resisting stock has been introduced and, in spite of the arrival of *phylloxera*, the yield is again of some importance. This is especially the case at Pico, where, however, the wine pressed from the *Isabella* grape has a peculiar, and to many, an unpalatable, flavour.

Tobacco, flax (*phormium tenax*), coffee and tea, almost exhaust the list of what may be described as exotic crops. The last-named shrub is now largely grown in the island of São Miguel and is there prepared for the market, the export to Lisbon and Oporto being considerable.

Many varieties of fruit are to be found, but in none of the islands is the quality particularly excellent.

All vegetables can be grown well, and all cereals, some of the land yielding three and even four crops a year without irrigation. Beans are planted very largely and shipped chiefly to Lisbon, whither a number of cattle and quantities of cheese and butter are conveyed.

Woad, which was grown largely during the 17th century, ceased to be planted after indigo became known, and has now entirely disappeared.

The forests, formerly of great value, have been practically destroyed, but are being re-planted.

With the exception of the cereals and crops specially adapted to the islands, nearly all imported plants have been attacked at some time or another by insect pests or disease, by which, if they have not actually been destroyed, they have sometimes been brought to the verge of extinction. Similar misfortunes have occurred elsewhere; but, in colder latitudes, farmers are aided in their efforts to control them by the frost in winter, whilst in such a climate as the Canaries exposure of the dry land to the summer sun by constant ploughing is of material help. In the Azores, where it may be said that there is neither winter nor summer, eradication of any insect pest or fungoid growth is more difficult.

The nature of the climate has led to a curious method of storing maize, which is left in the cob and hung to a pyramidal



structure of laths, such an erection being found in the yard of nearly every cottage passed along the road.

Commerce has been materially assisted by the erection of efficient harbours of refuge at Ponta Delgada (S. Miguel) and Horta (Fayal) where ships can coal, provision or repair, whilst all the smaller islands have landing stages provided with cranes. For internal communication some hundreds of miles of carriage roads have been constructed.

The whale fishery, of which Fayal is the chief centre, still employs a number of hands and the visitor may be fortunate enough to witness a capture. Capellas in São Miguel is another centre of what was once a most important industry.

Socially the people are quiet, honest and industrious. In common with their compatriots of Portugal they are very staid and respectable, and do their best to give the lie to that very erroneous proverb, "Les Portugais sont toujours gais." The etiquette observed on board the steamer at meal-times; the ceremony and quietude maintained on deck and in the saloons throughout the day; even the carefully selected apparel of passengers embarking or landing at some insignificant port, are matters of constant surprise to the hardened traveller.

On shore contradiction follows on contradiction. An iron crane of modern construction lifts goods into a cart, apparently similar to those used by the Romans. A small heavy platform, generally round in front and square behind, runs on solid disc wheels united by a wooden axle which turns along its whole length in wooden bearings. The weighty pole rests on a yoke, lashed to the horns of two oxen. The sides of the cart are sometimes made of strong woven basket work, spreading out at the top. When such a vehicle is full of some heavy material, the noise it makes on its laborious passage closely resembles that made by a pack of hounds in kennel as feeding time approaches. When going down hill a pair of oxen is often tied on behind and taught to serve as a brake.

Passing under the gateway of a battlemented wall, dating probably from the 16th or 17th century, when its erection was necessitated by the constant attacks of foreign rovers, one encounters a group of women dressed in the "Capote e Capello." This costume consists of a falling cloak which completely conceals the figure, surmounted by a monstrous hood, both fashioned on rigorous and definite lines as is usually the case with any local costume, and the latter puffed out by strips of whalebone in such a way that the face of the wearer is scarcely visible to the passer-by. This apparently uncomfortable dress, said to be of remote Flemish or Algarve origin, is jealously retained by what may

be described as the Azorean middle class. In Terceira, where the shape is rather different, it is known as the "Manto," and is of black stuff. Elsewhere it is dark blue. The most extravagantly large hoods are worn in Fayal.

The "Carapuça," a male head dress protecting the head and neck, is only worn by the peasants in São Miguel and is dying out even there.

In Terceira, where there is a peculiarly savage race of cattle, said to be of Spanish origin, bulls are sometimes baited in the public streets. A long rope is attached to the animal's horns and it is the duty of the lookers-on to hinder the movements of the bull, whilst some enterprising amateur parades in front of it and evades its furious charges. Fatal accidents occasionally occur.

Feast days are frequent, when there are usually religious processions. A curious ceremony is that known as the "Imperio do Espirito Santo," which takes place at Whitsuntide or Trinity Sunday, an emperor and sometimes an empress with their proper retinue being elected for the occasion.

Except in Terceira the style of architecture adopted is somewhat commonplace, although the façades of the churches are sometimes extravagantly ornate. In Terceira and the islands further west, the curious pyramidal form of the chimneys is worthy of notice.

**Native Curiosities.**—In São Miguel there is a speciality in small articles made of terra-cotta and both here and in Fayal a number of things are manufactured:—Drawn linen (crivo work), straw and Peniche lace, feather flowers, straw hats, wicker work, etc., etc.

**Telegraphic Communication.**—All the islands of the Archipelago are connected by cable or by wireless installations.

## Geological Features.

The subject of the formation of the groups of islands in the Atlantic has already been discussed in the article on geology (Madeira and the Canaries). For this reason it is not necessary to deal with the Azores at all exhaustively.

The archipelago consists of the visible summits of a chain of submarine volcanoes, all of which, with the exception of Santa Maria, Flores and Corvo, have been disturbed by eruptions or earthquakes within historical times. A list of dates when these occurred is given in the descriptions of the separate islands.

Superficially, the results of geologically recent discharges of cinders and volcanic grit are much more apparent than is the case in Madeira or the Canaries. Records exist of the creation of beds of ash many feet in thickness. Though these are generally cultivated at present and though the damp atmosphere favours the rapid growth of vegetation on everything but the hardest or most precipitous of rocks, those viewing the islands will aid the eye by remembering that many of the green slopes spread before them have been deposited almost within the memory of those now living.

Cup-shaped craters with unbroken rings are numerous. Several of these contain pools or lakes of fresh water, sometimes, as at Sete Cidades, of considerable extent. Many similar craters lying on the coast, which, in Madeira or in the Canaries, would long since have been destroyed by the rain or by the sea, are here displayed in segment, the successive layers of cinders and the neck through which they were forced being laid bare.

In some instances a boat can be rowed into these divided craters and the inside explored, or some cave can be entered, caves both on the beach and in the interior being far more common in the Azores than in the other archipelagos.

In the Caldeira at Graciosa there is a cavern of colossal dimensions which is geologically of the greatest interest.

Those making the round trip can visit a splendid cave and divided crater in a boat from Horta. (*See Horta.*)

One of the most beautiful excursions in the islands and one which fortunately lies near to Ponta Delgada, being therefore easily accessible, is that to Sete Cidades. A description is given elsewhere.

Although many parts of the Azores are precipitous and the views extremely grand, the most recent volcanic deposits are generally of a more friable nature than those to be seen in the Canaries. The outlines as seen from the sea are usually more undulating, especially when comparison is made with Teneriffe or with La Palma. The culminating point of the Azores, known as Pico, 7,460 feet, 2,274 metres, rises, however, more abruptly from



the sea than the Peak of Teneriffe and has a slope on the north and east of over  $40^{\circ}$ , the earlier deposits on this side having been destroyed and torn away by subsequent disturbances. Its summit can be seen from any point on the west end of São Miguel which has an altitude of more than 400 feet (122 metres) above the sea.

Reference is made elsewhere to one of the most distinctive features of the Azores, namely, the mineral waters of Furnas in São Miguel, where there are a great number of springs and geysers, some of which issue from the ground at the temperature of boiling water.

It has also been mentioned that seismic disturbances have been frequent within the last few centuries. In connection with this, considerable interest attaches to the appearance and disappearance of volcanic islands. One of these, Sabrina, rose in 1811 about a mile off Ponta Ferrária, to the west of São Miguel, attained a height of 410 feet and disappeared by erosion after an existence of 119 days (18th June to 15th Oct.). Its birth, life and extinction were witnessed and carefully noted by Captain Tillard, of H.M.S. "Sabrina," who happened to arrive in the Azores at the moment. (See "Philosophical Transactions," of 1812.)

Strangely enough, in the island of Santa Maria, though so near to São Miguel, records show earthquakes to be few and scarcely perceptible. For this reason the island seems to lie outside of the more active sphere above which its neighbours are placed. That this is so is also suggested by the fact that on it are found calcareous deposits some twenty feet in thickness, containing great quantities of fossilised marine mollusca, some of extinct, some of living and some of hitherto unknown species.

## SANTA MARIA.

**SANTA MARIA**, 11 miles ( $17\frac{1}{2}$  kils.) long by 5 miles (8 kils.) broad, contains 6,393 inhabitants, and an area of 42 square miles. It is 480 miles from Madeira and 53 miles from São Miguel. Lisbon boats call once a month and usually remain from two to three hours. There is a wireless telegraphic installation on the Barreiro da Faneca.

**Villa do Porto**, the chief town, lat.  $36^{\circ} 56' N.$  by long.  $25^{\circ} 8' W.$  has been built, for the purposes of defence, on the crest of a hill. Formerly the forts were provided with some 30 guns. The ship lies in an open roadstead and passengers are landed on a small mole. Accommodation and meals can be had and carriages can be hired.

Columbus stopped at the island in 1493 on his return from the discovery of the West Indies. The church can be seen at Anjos,  $1\frac{1}{2}$  hours on foot, where part of his crew returned thanks in a semi-nude condition in fulfilment of a vow made during a heavy storm.

The geological formation, though volcanic, is, generally speaking, much less recent than that of the islands further west and there are none of the lake-bearing craters so common in other parts of the archipelago.

There is every reason to suppose that certain parts of Santa Maria have gradually risen to their present level. In several places, especially at Santa Anna and at Figueiral,  $\frac{3}{4}$  and  $\frac{1}{2}$  hour respectively from Porto, there are some most interesting calcareous deposits mentioned in the article on Geology. Again in the Ilheu do Romeiro, to the N. of the island, there is a cave of which the roof and floor are coated with calcareous stalactites and stalagmites.

The climate is drier than that of the rest of the Azores and the crops sometimes suffer from drought, but in ordinary seasons the land is fruitful, both cereals and cattle being exported.

A red volcanic clay found in the island is used in the manufacture of hydraulic cement and a small industry is carried on in pottery and in the export of potter's clay. The Portuguese spoken in Santa Maria is softer than that used in the other islands.

The highest point is the Pico Alto, 1,870 feet, 570 metres.

The **Formigas Rocks**, or Ants, lie some 20 miles N.E. of Santa Maria and were the first part of the Azores to be discovered (Cabral, 1431). They are 800 yards long by 150 broad. Calcareous deposits, similar to those in Santa Maria, are to be found in them. The dangerous shoal known as the Dollabarets lies about  $3\frac{1}{4}$  miles S.E. of the Ants.

## SÃO MIGUEL.

**SÃO MIGUEL** (*St. Michael's*), 41 miles (66 kils.) long by  $9\frac{1}{4}$  miles (15 kils.) broad, is the largest and richest of the islands. It contains 127,726 inhabitants, and has a superficial area of 269 square miles (688 square kils.). It is 53 miles from Santa Maria; 98 miles from Terceira; 830 miles from Lisbon; 1,147 miles from the Lizard, and 2,228 miles from New York.

It was discovered by Gonçalo Velho Cabral in 1439, but no colonists seem to have been landed until 1444. The first settlers deposited there, most of whom were negro slaves, narrowly escaped destruction in the frightful volcanic eruption of 1445, which destroyed and totally altered the shape of one of the groups of mountains in the W. of the island.

The population rapidly increased and, in 1522, Villa Franca, then the capital, contained some 5,000 people. On 22nd October of that year, this town was overwhelmed by a great earthquake, a hill, some 450 yards from the beach, sliding down upon the city, the rush of earth being followed by tumultuous streams of water and the work of destruction being completed by a tidal wave. The new town was rebuilt above the ruins of the old one. There is a tradition that, in the early part of the 16th century, the negro population became a menace to the whites and that all the males were massacred.

In 1538, an island rose from the sea three miles from Ponta da Ferraria, but soon afterwards was washed away. In 1563, a series of earthquakes and eruptions lasted throughout the whole of July and great quantities of cinders were ejected, but there was little loss of life. In 1591, and again in 1630, Villa Franca and other towns suffered greatly from earthquakes, part of the island being buried during the latter eruption under from five to seventeen feet of volcanic dust. Dust also fell in Terceira and was noted, it is said, even in Portugal.

Other eruptions or earthquakes occurred in 1638\*, 1652, 1682, 1713, 1719\*, 1720\*, 1755, 1773, 1810, 1811\*, 1849, 1852, 1853, 1862, 1882, and 1884, those marked with a \* being submarine and attended in more than one instance by the temporary elevation of islands. In at least one case, and perhaps more, flames rose from the water.

The highest mountain in the island is the Pico da Vara, 3,569 feet, 1,088 metres.

In the 16th and early 17th century, alum factories were established at Caldeiras (Ribeira Grande) and, on a small scale, at Furnas, but the industry has long since disappeared.



**Ponta Delgada**, the capital and chief port, situated in lat. 37° 44' N. by long. 25° 39' W. of Greenwich, has a population of 17,620, and ranks third amongst the cities of Portugal. The *concelho* contains 18 parishes and villages, and has a population of 52,436. British residents (1910), 14.

Lisbon steamers stop twice a month, and usually remain one day both outwards and homewards.

Landing Charges.—About 250 reis each way, but more if the ship moors outside the harbour, or if at night or if the weather is bad. No official tariff.

Hotels.—Brown's Hotel, Pinheiros, back of town, 2\$500 reis a day; Hotel Açoriano, near the landing stage, about 1\$250 reis; Hotel Fernandes, about 1\$000 reis; also the Restaurant Jeronymo (winter only).

A company has been formed (1910) to erect hotels, a casino, etc., at Ponta Delgada and to construct an electric tramway to As Furnas. (Note, all prices are given in reis *fraco*. See article on currency.)

Clubs.—Michaelense. Strangers temporarily admitted on introduction.

Newspapers.—*Diario dos Açores*; *Açoriano Oriental*, and others.

(For advertisements see at the end of the book.)

Carriages.—Inside town: per course, two persons, 250 reis; 4 persons, 375 reis, or per hour, 750 and 1,000 reis. To the Pico do Fogo, 1,750 reis; Capellas, 2,000 to 3,000 reis; to Ribeira Grande and Lombadas, about 3,000 reis; to Lomba da Cruz (for Sete Cidades) 3,750 return; *viã* the Arrife Road to the crater itself, about 6,000 reis (return); to Mosteiros, about 6,500 reis; to Furnas, 5,500 reis to 8,250 reis, single. (To avoid disputes, arrange prices before starting.)

Motor Cars can be hired at any time for a minimum of 6 tickets. See tariff card. Service to Furnas thrice weekly. Return fare, 10/- each.

Omnibuses run daily to Ribeira Grande. Fare, 250 reis.

Water Supply, Lighting, etc.—The water supply is abundant. The town is lighted by gas and electric light.

The work of which the inhabitants of Ponta Delgada are justly proud is the breakwater, by which an open (and sometimes dangerous) roadstead has been converted into a safe harbour of refuge. When completed, the Mole will have a length of 4,231 feet and will have consumed twice as much stone as Plymouth breakwater. Present length (1910) 3,343 feet.

There is a wireless telegraphic station near the town at Vordella.

The landing place is singularly picturesque as compared with the rest of the town, which is uninteresting and conventional.

There are three parish churches and several minor churches, none worthy of a visit except the *Igreja do Collegio*, where there is some good carving. The image of the Christo dos Milagres, in the *Igreja da Esperança*, is only remarkable for the extraordinary number of gems with which it is decorated (Festival Rogation Sunday).

The public buildings call for no special remark, excepting perhaps the **Prison**, which is an enormous pile of masonry overlooking the sea, and the **Hospital**, where paupers are received free, and sick sailors, etc. at a moderate daily charge. There is also a **Theatre**, a **Museum**, **Meteorological Observatory**, and a **Library**, the three latter in an old Monastery, now a Lyceum, known as the *Graça*. The Museum is well stocked with objects of natural history collected in the islands.

Permission can be obtained to enter the Sugar Factory of Santa Clara, or the Tobacco Factory "Michaelense."

Behind the town matters improve and there are some imposing palaces belonging to rich members of the nobility. The gardens attached to some of these are very fine. The best worth visiting is that of the late S<sup>r</sup> José do Canto, which contains a collection of several thousand different species of trees and is most admirably laid out. That of the Marques de Jacome Corrêa is next door and is well worth seeing, some of the palms having attained colossal dimensions. The garden of S<sup>r</sup> Antonio Borges, below Brown's Hotel, is chiefly remarkable for a most lovely arrangement of rockeries and tree ferns. A visit should not be omitted. Permission to enter these gardens, the volcanic cave in the Rua Formosa, or any of the numerous pine-houses in the neighbourhood is usually accorded.

The band plays in the Campo de São Francisco, where trees have been planted and seats provided.

### **Drives, etc., from Ponta Delgada.**

The best short drive is by the Arrifes and Grotinha Road to the Pico do Salomão, or to the Pico do Lima, from both of which there are good views. Times 1 hour and 2 hours return, respectively. As is the case with many of the drives near the town, travelling is somewhat tedious owing to the height of the walls bordering the roads.

To the Caldeiras da Ribeira Grande and Lombadas.—A drive of three hours from Ponta Delgada leads to the Caldeiras, a valley where there are some thermal springs and a small bathing establishment. From here a good path leads in about an hour through picturesque scenery to Lombadas, where there is an establishment for bottling the water of that name.

To the Lagoa de Fogo.—This can be reached on foot from the carriage road by those making a circular drive to Villa Franca and Ribeira Grande. The lake, one mile long by half-a-mile

wide, lies in an extinct crater formed in 1563, and is surrounded by lofty peaks, with an altitude in one case of over 3,000 feet.

Other drives are to Capellas, 9 miles, population 2,828, the head-quarters of the whale fishery of São Miguel;—the Pico do Fogo, 1,023 feet:—Mosteiros, *viã* Feteiras or *viã* Capellas and Bretanha.

### Excursions from Ponta Delgada.

**Excursions.—To Sete Cidades.** No visitor to the island should omit this. A tedious drive of 2 hours leads to **Lomba da Cruz**, whence a bridle path leads in  $\frac{3}{4}$  hour to the summit of the crater wall. Donkeys are usually hired in Feteiras,  $1\frac{1}{2}$  hours, but the ascent is easy on foot. The loftiest part of the wall has an altitude of no more than 1,880 feet. The level of the water below is 866 feet above the sea and the diameter of the crater about three miles. Accommodation can be obtained in the little village at the bottom by those in search of plants or who wish to thoroughly explore the various craters.

The lakes are known as the Lagoa Grande and the Lagoa Pequena, the latter being of a dull, muddy emerald green and the former of a bright deep blue. Though separated, when the lakes are full, by a mere causeway, through which there is an opening, the colour of each, due to deposits and to the seeds of aquatic plants, remains clearly defined, even in the neighbourhood of the junction. The slope of the crater walls is somewhat uniform, a fact due to the generally friable nature of the surrounding rock. The scene is beautiful and interesting to a degree. A great variety of ferns can be found and boats can be had by those descending to the lake (about  $\frac{3}{4}$  hour down).

By following the Arrife Road from Ponta Delgada it is possible to drive right down into the crater, but the time occupied is much longer and the drive tiresome.

**To Furnas.**—The celebrated Valley of Furnas lies at an altitude of 600 feet above the sea, and 27 miles (43 kils.) from Ponta Delgada. It can be reached either by the North or South road. It is also possible to go by launch to Ribeira Quente or to Povoação on the South coast whence the ascent to Furnas, on donkeys or in a carriage, can be made in  $1\frac{1}{2}$  to 2 hours.

The Northern road is the most picturesque. It passes by **Ribeira Grande**, 10 miles, 16 kils., population (concelho) 25,183; crosses the island and descends past Pedras do Gallego, whence the view is very fine, into the Valley of Furnas.



The Southern road passes Lagoa,  $6\frac{1}{2}$  miles,  $10\frac{1}{2}$  kils., population (concelho) 11,486, where there is a large distillery, some pottery works and a number of pine-houses, which are scattered all along this part of the coast. At 15 miles, 24 kils., Villa Franca do Campo, capital of the island until 1522. Population (concelho) 10,453.

This pretty little town has more than once suffered severely from earthquakes and has been invaded and raided on several occasions. Sugar, which at one time was extensively cultivated, has disappeared. Oranges, of which large crops were grown, are no longer a source of revenue, but the inhabitants have turned to new industries and are again prospering.

The road now leaves the coast and climbs to the beautiful Furnas Lake, 865 feet above the sea, whence it descends  $1\frac{1}{2}$  miles further on to the Furnas Valley, a fertile and picturesque spot, 600 feet above the sea and some 4 miles in length by 3 in breadth, surrounded by the lofty walls of the crater in whose bed it lies. Population 2,100.

Hotel:—Atlantic, 1\$500 per diem; also Restaurant Jeronymo (summer only).

During the summer many visitors from Ponta Delgada and Portugal come to the valley, partly because of the cooler air, lovely excursions and agreeable surroundings and partly because of the numerous mineral springs to be found. These issue in many parts of the valley at various temperatures, cold and boiling water being ejected in close proximity, sometimes gently and sometimes in the form of a geyser, of which the most conspicuous instance is that known as the Caldeira de Pedro Botelho. This vent vomits turbid water and blue mud, which are thrown up at intervals and again recede. The action is accompanied by a throbbing, rumbling noise, which has caused the vent to be regarded as one of the channels connecting us with the infernal regions. There are bathing establishments, which can be used free of charge. For an analysis of several of the springs of which the characteristics differ greatly, the reader is referred to "The Azores or Western Islands," by W. F. Walker, F.R.G.S., etc. (Trübner & Co.)

Waters are found which are beneficial in cases of rheumatism, rheumatic palsy, chorea, psoriasis, skin and throat affections, asthma and chronic diseases of the mucous membrane.

There are a number of beautiful gardens and parks to be seen in and near Furnas and some very fine collections of trees and shrubs, the best being perhaps that in the park of the late Sr. José do Canto. The little Gothic Chapel, on the shore of the lake, was designed by M. Berton, of Paris. There are numberless walks and excursions, the points commanding the best views being

the Pico do Canario, Salto do Cavallo, Pico do Gafanhoto (2,300 feet), and the Pico do Ferro.

On September 2, 1630, a furious eruption broke out near Furnas and large quantities of ashes were ejected, many houses being buried and cinders falling as far away as in Santa Maria and Terceira.

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Between Ribeira Grande and the solitary lakes known as Fogo and Congro, round Furnas and in the neighbourhood of the Pico de Vara, 3,570 feet, there are numerous walks and excursions, in many of which it is advisable to take a guide in case of the sudden appearance of fogs.

## TERCEIRA.

**TERCEIRA.**—19 miles (30 kils.) long by 9 miles (14½ kils.) broad, contains 32,194 inhabitants. It is 98 miles from São Miguel and 45 miles from Graciosa.

Whenever fighting has been going on, Terceira has taken a prominent position amongst its sister islands.

When Philip II. of Spain caused Terceira to be attacked in 1581, his troops were routed and driven away by the peasants of S. Sebastião, who massed a number of the savage breed of cattle reared in the island, kept them out of sight until the Spaniards were all on the beach and then drove them headlong at the enemy, following up the charge themselves, killing nearly all the invaders and capturing several guns. In 1583, however, a Spanish force of 13,000 men returned to the attack and the island fell temporarily into the hands of Spain. For other facts, *see* History.

The highest point in Terceira stands at 3,435 feet (1,047 metres) above the sea.

Earthquakes or disturbances are recorded in the years 1614, 1761, 1800, 1801 and 1841. In 1867, a volcano rose from the sea 12 miles (21½ kils.) N.W. of the island, but became inactive and was soon swept away by the sea.

The land is fertile and the cattle particularly fine, cheese, butter, maize, wheat and beans being exported in considerable quantities.

The Alice Reef, located and delineated by means of observations made from the Prince of Monaco's yacht, lies some little distance to the south of Terceira. The highest part of the reef is about 42 metres below the surface.

**Angra do Heroismo**, the principal town, pop. 10,788, the headquarters of the Bishopric of the Azores, and, until 1832, the capital of the archipelago, lies in lat. 38° 38' N. by long. 27° 16' W.

The Lisbon steamers touch twice a month, and usually stay all day going and returning.

Landing charges about 125 reis each way. There are three moles and ocean going vessels can anchor within reasonable distance. The harbour is only exposed to gales from the S.E.

**Hotels.**—The Açoreano; the Angra. Both about 1\$250 reis a day.

**Carriages.**—Two hours' drive, about 1,000 reis; whole day, about 4,000 reis.

**Public Buildings, etc.**—The Casa da Camara has a fine hall where sessions are held. The Memoria de D. Pedro IV., a



pyramid overlooking the town and commanding a fine view, was erected in memory of the King whose name it bears. It is best approached through the Public Gardens, which are small but prettily laid out.

The old Castle of S. João Batista, built by the Spaniards in the 17th century, is picturesque and worthy of a visit. The walk should be extended to the extinct crater of the Monte Brasil (555 feet), the name of the hill commanding the harbour. A round form of volcanic bomb to be picked up there is said to be almost peculiar to this volcano. Those acquainted with Rame Head near Plymouth, will note the strong resemblance between the mediæval Spanish and the ancient British or Danish lines of fortification.

**Churches.**—The Igreja da Sé (Cathedral) is uninteresting, but possesses some curious vestments. Misericórdia; S. Francisco with Seminario, and others, call for no remark.

Without any question Angra is the most picturesque and interesting town in the Azores. The impregnable nature of its fortifications long rendered it the chief and safest rendezvous for the ships of Portugal or Spain. Though it now lies at the mercy of any passing gunboat, the afterglow of old-world military romance hovering about it is apparent to the dullest eye. Its bright and orderly streets and decorated house fronts, shaded by their over-hanging eaves of brightest vermilion, glaring blue and emerald green; the fortified slopes by which it is surrounded; the winding ways wandering above the sea front and leading insensibly to the gates and pitted moat of the old castle, still smack of times gone by. Down the main thoroughfares the spurred commanders of the Spanish galleons clanked noisily. In the side streets the motley crews of the crowded vessels in the harbour lounged and loved, swore and fought, or, leaning over the low walls, apparently built on the cliffs for their special convenience, discussed the merits of the high-pooped craft below.

**Drives.**—The best short drive and the prettiest is along the Rua de Baixo to S. Carlos, thence round the back of the town at an altitude of about 500 feet. (Fare about 1\$200 reis.)

Those wishing to take a long drive of about five or six hours should leave the town on the N.E. and cross the Paul, a long, flat, green moor, to Praia, about  $12\frac{1}{2}$  miles (20 kils.). The air is invigorating and the scenery, before descending into Praia, is good. The drive along the coast homewards from Praia is wearisome. (Fare 3\$000.)

Another good drive of about 6 hrs. is to the Pico da Bagacina (centre of island), Biscoitos and Agualva (north of island), and home. In the centre of the island the road winds through hilly country and, just before entering Biscoitos, passes an immense flow of lava, a most curious sight to those unaccustomed to volcanic countries.

It is possible to drive round the island in about ten hours, but much of the scenery is uninteresting.

### GRACIOSA.

**GRACIOSA**,  $8\frac{1}{2}$  miles ( $13\frac{1}{2}$  kils.) long by 5 miles (8 kils.) broad, contains 8,394 inhabitants. It is 45 miles from Terceira and 35 miles from São Jorge.

**Santa Cruz**, the chief port,  $39^{\circ} 6' N.$  by  $28^{\circ} W.$ , is a pretty little town to the N. of the island facing the open sea. Praia, where the Madeira boats touch, faces east. The Lisbon service calls fortnightly, staying about three hours.

The chief sight in the island, and one of the most interesting in the Azores, is the Furna do Enxofre, an enormous volcanic cave, situated inside the Caldeira about  $1\frac{1}{2}$  hrs. from Praia.

### SÃO JORGE.

**SÃO JORGE**, 36 miles ( $57\frac{1}{2}$  kils.) long by  $4\frac{1}{2}$  miles (7 kils.) broad, population, 16,138, is 35 miles from Graciosa, 11 from Caes do Pico, and 24 from Horta (Fayal). Steamers fortnightly. Stay about three hours.

**Villa das Vellas**,  $38^{\circ} 41' N.$  by  $28^{\circ} 14' W.$ , is the chief port to a somewhat uninteresting island, population, 8,944.

### PICO.

**PICO**, 30 miles (48 kils.) long by 10 miles (16 kils.) broad, contains about 25,000 inhabitants.

**Caes do Pico**, where the Lisbon steamers call once a month (stay about three hours), is 11 miles from S. Jorge and 15 miles from Horta (Fayal), and lies in lat.  $38^{\circ} 32' N.$  by long.  $28^{\circ} 22' W.$  Steamers also call at Lages on the south side. Both are connected by carriage road with Magdalena.

There are several small coast towns where passengers or goods can be landed in fine weather, but much of the trade of the island

is carried on by way of Fayal, which is separated from Pico by a channel scarcely four miles (six kils.) in width. A considerable amount of wine is produced in the island, of which the climate is considered particularly good. On the N. it is well wooded, but on the S. and W. a great part of the surface is covered by streams of lava.

Those visiting Pico for the sake of climbing the mountain generally cross from Fayal, landing at Area Larga or Magdalena. The ascent is usually made from the S.W., the night being spent at Serra, about halfway. To within a short distance of the Serra donkeys can be used, after which a stiff climb on foot, especially up the little Peak at the top, which is very steep, leads to the summit, 7,460 feet, 2,274 metres. As is the case at Teneriffe, hot gas still issues from the crevices in the little crater. (Temperature  $165^{\circ}$  F. =  $74^{\circ}$  C.) The view is very fine. The sea, washing the very base of the cone on three of its sides, seems to lie almost vertically beneath one's feet. A tent should be taken if possible. Cost of expedition for one or two persons, including boat, donkeys, guides, etc., about 8\$000 to 10\$000 reis. A strong walker can easily accomplish the journey in one day.

### FAYAL.

**FAYAL**, 14 miles ( $22\frac{1}{2}$  kils.) long by  $9\frac{1}{2}$  miles (15 kils.) broad, population, 23,630, lies 4 miles west of Pico, and is visited by the Lisbon boats twice a month, which usually remain all day. It forms the terminus for the boat touching at Madeira. Other steamers call occasionally. The climate is damper than that of Pico.

**Horta**, the chief town and port, pop. 6,575 (English and German colony about 100),  $38^{\circ} 33'$  N. by  $28^{\circ} 38'$  W., is a pleasant little town, alongside of which large ships can anchor in all weathers within 300 yards of the landing place. Pauper patients are treated free at the Hospital; sick sailors at a moderate charge.

Fayal is an important telegraph centre, with cables running to Porthcurnow (England), Waterville (Ireland), New York, Canso, Emden, Lisbon, St. Vincent and the neighbouring islands of the Azorean Archipelago, except Santa Maria, Flores and Corvo, which are connected by wireless installations.

**Landing Charges:** About 250 reis, according to distance, etc.

**Hotel.**—Fayal, 1\$500 a day, accommodates a limited number.

**Clubs.**—Amor da Patria; Sociedade Luz e Caridade.

Nature was kind in giving to Fayal one of the best sites for a harbour in the whole Atlantic. The shore at Horta is exposed to



the ocean on the S. E. only. To make it a complete harbour of refuge, a breakwater has been erected 800 yards in length, which has created a perfect haven of refuge.

On a fine day, the view from the slopes above the town, with the placid channel of Fayal in front; the imposing mass of the Pico in the near distance, and the neighbouring coast lines of S. Jorge and Graciosa on the horizon, is pleasing in the extreme.

Should the isthmus of Panama ever be pierced by an effective water way, the future of this land-locked sea, beautiful as an Italian lake, and of the sunny slopes by which it is surrounded, cannot fail to be brilliant, if only as a station for coaling and provisioning ships.

Whaling was formerly an important industry. Though temporarily checked by the export duties imposed, it is still carried on.

Boats can be hired for a row round the Monte da Guia, 488 feet as the crater is called which protects the harbour from the west. At  $\frac{1}{2}$ -hour the Furna is a fine example of a cave hollowed out by the action of water. A little further on, the boat can be rowed into the heart of the crater itself (Caldeira do Inferno). By continuing the journey, the passengers can be landed at Porto Pim, close to the town (one hour), or they can return with the boat to the harbour.

The best drive (fare according to distance), is up the Lomba on the way to the Caldeira, which forms the centre of the island. There are fine views of the Valley of the Flamengos, originally peopled by Flemish emigrants, of the Valley of Praia and of the city of Horta. The hydrangea (*hortensia*) hedges lining the road are particularly fine.

From the end of the road donkeys can be ridden to the Caldeira, about four hours total, from the walls of which (3,350 feet, 1,021 metres) views of the whole island can be obtained. To walk round the Caldeira, the most perfect crater in the Azores, with a diameter of nearly a mile, takes about two hours; to descend to the bottom, 1,300 feet, and return, a steep climb of about two hours.

Another drive is to Ribeirinha, about  $2\frac{1}{2}$  hours return, fare about 2\$500 reis

37°  
55' N

5' 10" W

P. N. E. R.R.

37°  
50'

S. de Rosario &  
S. Jorge

Nazarete

M. Cortes

P. de Bartolomeo  
2527

Agua  
Rosario

37°  
45' N

S. de S. Juan  
2220

Retoria

6 feet.  
bt. 24° 12' W.

27° 5'

Espartal Pt

Nova  
Esp.

Prayada

Comps 1852

1042

751  
443

S. Juan

Quindim

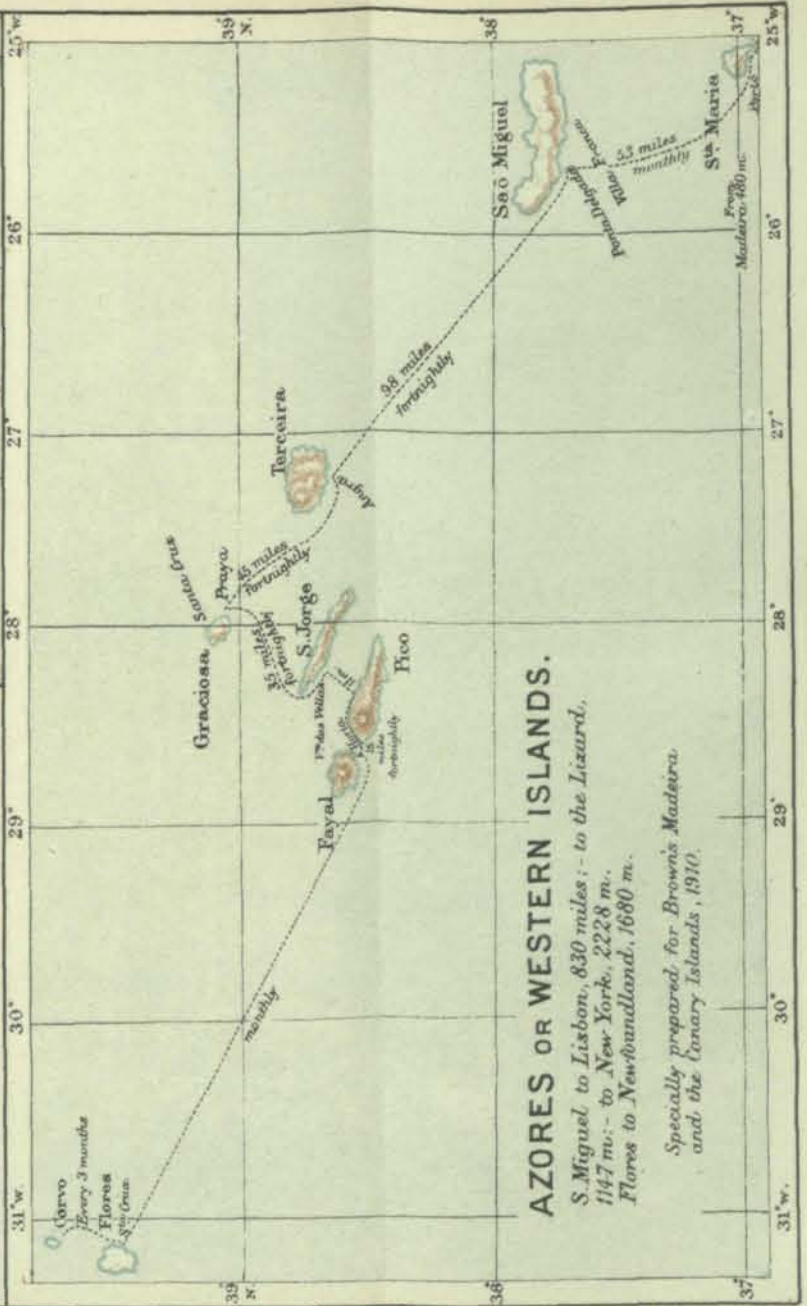
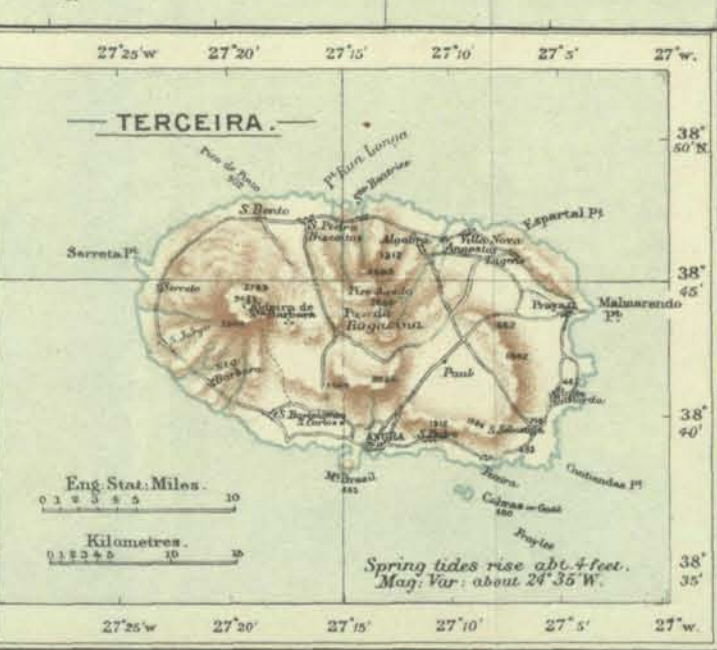
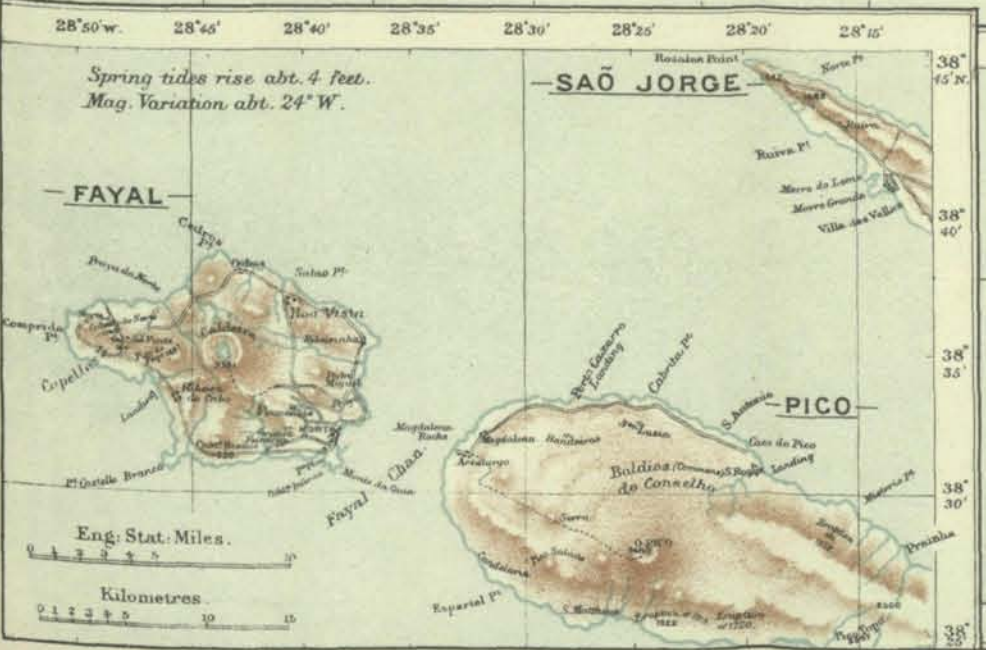
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Rios

Francia

ise abt. 4 feet  
but 24° 35' W.

27° 5'









**FLORES.**

**FLORES**, 12 miles (19 kils.) long by 9 miles ( $14\frac{1}{2}$  kils.) broad, is the most westerly of the Azores, and lies only 1,680 miles from Newfoundland. It is visited by the Lisbon boat once a month. Population, 8,141. The chief town is **Santa Cruz**, pop. about 1,000, which lies in lat.  $38^{\circ} 38'$  N., by long.  $31^{\circ} 8'$  W. The highest point is 3,087 feet, 941 metres. The scenery is as fine as any to be seen in the Azores, but the accommodation is not very good. Wireless communication since 1910.

**CORVO.**

**CORVO**, 12 miles to the N. of Flores, population, 750, is little more than a rock whose centre is a great crater. It is  $4\frac{1}{2}$  miles ( $7\frac{1}{2}$  kils.) long by 3 miles (5 kils.) broad, and is visited by the Lisbon boat once in three months. Wireless communication since 1910.

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Those intending to visit the Azores will do well to provide themselves with Admiralty Charts before leaving home. The following are issued:—

Azores (whole archipelago on a small scale), 1/6; Corvo and Flores, 1/6; Terceira and Graciosa, 1/6; Fayal, Pico and S. Jorge, 1/6; St. Michael's, 1/6; Santa Maria, 1/6; Fayal Channel, 1/6.

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# ADVERTISEMENTS.

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## NOTICE.

Advertisements of Steam Shipping Companies and of Firms domiciled in Europe are usually to be found at the commencement of the book. Those of Houses trading in Madeira or in the Canaries are grouped together after the text in the same order as that followed by the Guide itself, Madeira being first and the Canaries second, each Town being kept separate. The two portions of the book are thus kept in touch with one another. Steamship Companies' advertisements are indexed in the Itinerary.

Readers should refer to the advertisement pages, as they form part of the scheme of the Guide, giving information about ships, hotels, shops, wine, tobacco, medicines, etc. By consulting them Travellers are able to dispense with a large amount of luggage and Merchants or Shipping Firms are enabled to select the most enterprising Agents.

It can be taken for granted that those who advertise are anxious to secure the patronage of Visitors and that Visitors are most likely to obtain what they want by dealing with Firms desirous of securing their custom, be they Shipping Companies, Bankers, Hotels or Stores. As nearly all of his Advertisers either trade in the Islands or are closely connected with them, the author feels justified in emphasizing this fact.

All applications for advertisements should be made to the author,

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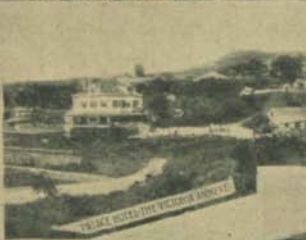
Visitors to both Madeira and the Canaries are advised to visit the shops advertising in this book and not to put themselves into the hands of the so-called guides, known in Madeira as *ciceroni* and in the Canaries as *pláticos*. Readers are warned that, should they do so, the commission due to the guide is added to the price paid for the article purchased and that this commission is sometimes equal to the original price of the article itself.

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**HOTELS**



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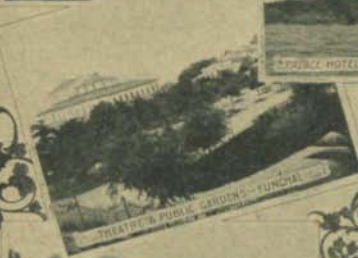
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PALACE HOTEL-VIEW FROM THE SEA



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**MADEIRA.** Mean Winter Temperature, 61 degrees  
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Pension terms from 10s. to 25s. per day per person; for two, occupying same room, from 20s. to 37/6 per day, the prices being dependent upon the size and situation of the room.

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*These FIRST-CLASS HOTELS afford every comfort for families and travellers. Excellent Cuisine and Choice Wines. Tennis Courts, Large Gardens, Baths, Reading and Smoking Rooms. English and German Newspapers. Billiards. The water supply is from a pure mountain spring, laid on direct in iron pipes to the Carmo and Palace Hotels. The SANITARY arrangements are by the Banner Sanitation Company of London. All Steamers met.*

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*Passengers can obtain COUPONS on board at 10s. each, which frank the purchaser from and to the ship, include a trip by rail to the Mount Church by special Train, toboggan down, and a breakfast or lunch either in the town or in the country at Reid's Hotels.*

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 London, W.C. Telephone: "GERRARD, 8816."

HOTEL TARIFF BUREAU, 275, Regent Street, London, W.

MESSRS. T. COOK & SON, Ludgate Circus, London, E.C.;

or to any of the Steamship Companies.

**Proprietors—W. & A. REID.**

**Telegraphic Address—"REID, FUNCHAL."**

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*THIS HOTEL HAS BEEN RECENTLY RENOVATED WITH  
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Sanitary arrangements perfect. 150 feet above sea level and standing in Three Acres of Gardens. New Balconies 210 ft. long, commanding magnificent Views all round. Tennis Courts, &c. Electric Light throughout Hotel and Grounds.

Healthiest situation in Funchal. Seven minutes' walk from the English Club and close to the Casino.

EVERY ATTENTION PAID TO INVALIDS.  
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ELECTRIC LIGHT THROUGHOUT. EXCELLENT SANITATION.

Charges from 8/- per day upwards, according to Room, including Meals, Lights, Attendance, &c.

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Proprietor—A. ADAMS.

CLOSE TO THE RAILWAY STATION.

# MONTE PALACE HOTEL,

✻ MADEIRA. ✻

2,000 FEET ABOVE SEA LEVEL.

20 MINUTES BY TRAIN.



The best and most beautifully situated Hotel in the delightful locality of the Mount. Extensive grounds covering 35 acres, and including Tennis Courts, Croquet Lawns, Lake, Boating, Water-falls, Water Chute, Ornamental Cascades, Grottos, Fountains, &c., &c., &c. Magnificent views of sea, town, country and mountains. Excellent accommodation for guests. First-class attendance.

This establishment, which is by far the finest building at the Mount, has been erected to meet the want of a large modern Hotel at an altitude of nearly 2,000 feet above sea level. It is situated in the best part of the district, fitted with every modern comfort, and is first class throughout. The public rooms include some palatial drawing rooms, smoking and billiard room, dining room, bar and restaurant; a dark room for use of photographers has also been fitted. There are a large number of excellent bedrooms. Hot and cold baths are provided. Sanitation is perfect. The surrounding scenery is amongst the finest in Madeira and embraces some lovely walks among pine woods and mountains. There are delightful walks in every direction. The grounds contain a variety of flowers, plants, and forest trees. Splendid cuisine.

**Restaurant**—All kinds of Liquors of finest quality, specialities in genuine Madeira Wines, articles of Madeira industry, photographs, picture post-cards, albums, &c. &c. **Moderate Prices.**

Representatives meet all steamers, who will furnish Excursion tickets for ten shillings without any extra, including Launch or Boat to and from Pier, Tram-car to the Railway Station, Railway to the Mount, Breakfast or luncheon in the "Monte Palace Hotel," and Toboggan to the Town.

# GRAND HOTEL CENTRAL,

Just above the Landing Stage, facing the Entrada da Cidade,

FUNCHAL, MADEIRA.

The most conveniently-situated Hotel in the Town.

Excellent accommodation for Families, Visitors and  
Commercial Travellers.

BEST WATER SUPPLY IN FUNCHAL,

**MOUNT WATER DIRECT FROM THE HILLS**

used throughout the Hotel.

**BEST SANITARY ARRANGEMENTS.**

SPECIAL ATTENTION PAID TO THE CUISINE,

which is constantly maintained at the HIGHEST LEVEL  
OF EXCELLENCE.

Tel. Address: "BAZARES FUNCHAL."

MANAGED BY A SWISS LADY.

## . . . **QUISISANA,** . . . **First-Class Family Hotel,** **FUNCHAL, MADEIRA.**

*Most splendid Sea and Land View. Situated in open country in the  
western part of the Town (New Road).*

*Built four years ago, with Separate Apartments and a Dependence.  
All Rooms facing South with large Verandahs.*

MODERATE TERMS.

Proprietor—TH. REUTER.

## **BENTHAM'S Café Monaco,** **THE LEADING TEA ROOMS OF FUNCHAL.**

One minute from the landing place at the entrance of the Town.  
The ONLY English shop in the Island.

High class Refreshments, Light Meals, Tea, Coffee, Cocoa, Ices, etc., etc., always Ready.

**BREAKFASTS AND LUNCHEONS AT SHORTEST NOTICE.**

**COOKING AND MANAGEMENT ENTIRELY ENGLISH.**

A large and varied selection of Picture Post Cards, View Albums, Photos, Tauchnitz Novels,  
etc., Chocolates, Sweets, Cakes, Biscuits, etc., etc., always in stock.

**CIRCULATING LIBRARY.**

Ask for "BENTHAM'S," 19 to 27, Praça da Constituição,  
*Opposite the little gardens, FUNCHAL.*



BATH ROOMS.

**"PHENIX"**

Praça da Rainha (next to the Landing Pier),

**RESTAURANT.**

PENSION.

*Meals at all hours. Irreproachable Service at Moderate Prices. The First and Only Restaurant of its kind in Funchal. Billiard Tables.*

Various brands of Foreign Tobaccos. Complete assortment of Foreign Wines, Beers, Spirits and Liqueurs. Madeira Wine a Speciality, Retail and Wholesale. All orders are promptly executed at the lowest prices, f.o.b.

Proprietors—**COSTA & LOMELINO**, Funchal, Madeira.

WHOLESALE

**AFRICA HOUSE,**

17 North of the Cathedral,  
19 and 24 Rua das Queimadas de Baixo,  
**WINE MERCHANTS.**

RETAIL

Importers of the best brands of Tobacco, Cigars and Cigarettes; English and German Beer; Scotch, Irish and American Whiskies; Cognac; Liqueurs; Champagne; Port, etc.

A well-matured Stock of Madeira Wines.

A large assortment of Native Curios, Embroideries, Silk Shawls, Wicker-work, etc.

**LOWEST PRICES AND FREE ON BOARD.**

**REFRESHMENTS** of all kinds.

French Billiard Table.

**PERESTRELLO'S STUDIO,**

Rua Hermenegildo Capello

(Opposite the Public Gardens),

**Funchal, MADEIRA.**

**ALL THE LATEST IMPROVEMENTS IN PHOTOGRAPHY.**

Daily Attendance from 10 a.m. to 4 p.m.

Hotels attended for Groups, Bullock-Cars, Hammocks, Horses, &c., in the Gardens.

Amateurs' negatives developed and printed.

A large choice of Photographs, views of Madeira, Lisbon, and the Canary Islands. Also Post-Cards and Coloured Panorama of Madeira.

The above Establishment has a constant and large supply of Photographic Materials; KODAK FILMS, Papers, Plates, Developing Solutions, &c. Specialities in Bromide Enlargements.

# GOLDEN GATE.

The Leading  
CAFÉ, RESTAURANT & LOUNGE  
OF FUNCHAL.

Corner of the ENTRADA DA CIDADE and the PRAÇA DA  
CONSTITUIÇÃO, a few yards above the Landing Jetty.



FRENCH AND ENGLISH BILLIARDS.

TOBACCO, CIGARS AND CIGARETTES OF THE MOST FAMOUS BRANDS.

**BAR** provided with a varied assortment of the best  
wines, spirits and liqueurs obtainable.

PORTUGUESE, ENGLISH, FRENCH, GERMAN and SPANISH SPOKEN.

The Proprietors will have great pleasure in giving any  
information that Strangers may require.

**João Carlos d'Aguiar & Ca.**

# NOVO CLUB RESTAURAÇÃO & Casino.

Open all the Year round.

Above the Golden Gate, close to the Landing Stage and overlooking the Praça da Constituição and the Entrada da Cidade.



*Salons de jeu, Billiard and Reading Rooms, Great Banqueting Hall, Dining and Grill Room, Bar, &c., &c.*

*Music and Concerts in the Great Banqueting Hall and the Spacious Verandahs surrounding it. Tea and Refreshments served at all hours.*

The American Roof Garden, which dominates the Town and commands a magnificent and uninterrupted panorama of the Sea and Mountains, occupies one of the coolest and most lovely situations in Funchal.

Admission free to Visitors, Transit-Passengers, and to Captains and Officers of Ships by application to the Secretary of the Club, who is always on the premises. Residents' subscriptions, £1 per annum.



# MADEIRA WINES.

The Vines of Madeira have for many years yielded Wines as fine if not finer than any formerly produced on the Island.

The undermentioned SPECIAL MADEIRAS are strongly recommended as representing some of the finest shipped by

**MESSRS. COSSART, GORDON & Co.**



	per doz. case.
Finest (LUNCHEON) Madeira ...	24/-
„ (TABLE) Madeira ...	30/-
„ (EXTRA TABLE) Madeira ...	36/-
„ (DESSERT) Madeira ...	42/-
„ (SERCIAL) Very Dry Madeira ...	48/-
„ (BUAL) Rich Madeira ...	54/-
„ (MALMSEY) Very Rich Madeira ...	60/-
„ (CLUB SOLERA) Madeira ...	72/-
„ (ROYAL SOLERA) Madeira ...	96/-
„ (IMPERIAL SOLERA) Madeira ...	120/-

The above 10 Special Madeiras are guaranteed by MESSRS. COSSART, GORDON & Co.'s own Black Capsules, Labels, and Branded Corks.

**COSSART, GORDON & CO.,**  
ESTABLISHED 1745.  
**MADEIRA.**

The Oldest and Largest Shippers of Madeira.

These Wines can be obtained of all Wine Merchants, Stores, etc.

# HENRY P. MILES,

## Wine Exporter,

# MADEIRA,

POSSESSES A VERY LARGE

## Assorted Stock of Fine Wines

*From Good Young to Finest Old Reserve, at prices ranging from £20 to £250 per pipe of 92 imperial gallons, i.o.b.*

*These Wines are shipped, at customers' option, in pipes, hogsheads, quarter-casks, or octaves.*

## COG-RAILWAY to the MOUNT CHURCH FUNCHAL, MADEIRA.



Several trains a day, and an additional down train on Sundays and Holidays at 2 p.m.

Ordinary Fares to the top of the Railway, single fare 1/4, return fare 2/-. Special trains (minimum 10 persons) 25s., or 6,000 reis. Single tickets up (beyond first 10 occupants) 2/6 each. Time occupied in the ascent 20 minutes, descent also 20 minutes.

Those wishing to do so are able to return from the Mount Railway Upper Terminus in running cars (toboggans) in about 10 minutes, or a total of about half-

an-hour for the whole trip. The views from the Railway itself are most magnificent. Trams from the landing place to Railway Station, fare -/3d.

### TIME TABLE (Winter Months).

Regular trains, Up—8.0 a.m., 11.0 a.m., 12.30 p.m., 3.30 p.m., 5.0 p.m., 6.0 p.m. and 7.0 p.m.

Regular trains, Down—9.0 a.m., 12.0 noon, 1.0 p.m., 4.0 p.m., 5.30 p.m., 6.30 p.m. and 8.0 p.m.

During the Summer Months the last three trains run half-an-hour later.

Ordinary fares in reis:—Up from the Pombal to the Levada, 100 reis; to the Livramento, 160 reis; to Sant' Anna, 200 reis; to the Flamengo, 220 reis; to the Monte, 300 reis. Return fares, 50 per cent. less.

# ROCHA MACHADO & Co.,

## FUNCHAL, MADEIRA.

**BANKERS, General Banking and  
Exchange Business.**

The highest current rates of the day given for Gold, Bank  
Notes, Circular Notes, Cheques, Bills, etc.

Credits negotiated on best terms.

**CORRESPONDENTS** for the Deutsche Bank (London  
Agency); J. Henry Schroeder & Co., London; Berliner  
Handels Gesellschaft, Berlin; Henrotte & Muller,  
Paris, etc., etc.

Telegraphic Address: "Rochamachado, Funchal."

Codes used A B C, 4th and 5th Edition.

# REID, CASTRO & Co., Ltd.

## BANKERS,

LARGO DE S. SEBASTIÃO (CHAFARIZ), FUNCHAL, MADEIRA.

Telegraphic Address: "Banker," Funchal. Codes used: "Ribeiro," A.B.C. 5th Edition.

**Every branch of Banking business conducted.**

Notes, Gold, and all kinds of Foreign Money exchanged at favourable rates.

Circular Notes, approved Cheques and Drafts cashed, and Bills granted  
on all Parts of the World.

# JOÃO DE FREITAS MARTINS,

Manager of—Companhia Madeirense & Açoreana de Navegação a Vapor, Ltda., Madeira,  
STEAMSHIP AND GENERAL COMMISSION AGENT.

**FUNCHAL, MADEIRA; AND AT PONTA DELCADA, ST. MICHAEL'S (AZORES)**

Agent for—  
 Norddeutscher Lloyd S.S. Co.  
 Messrs. Frederick Leyland & Co. (1900) Ltd.  
 Koninklijke Hollandsche Lloyd.  
 Also for— Lloyd del Pacifico and a number  
 of other lines of Steamers.

Banco Español del Rio de la Plata,  
 Buenos Aires, Paris and London.  
 Wiegman's Bank, Amsterdam.  
 Bureau Veritas, Paris and London.

Codes used— } Watkins, & Watkins revised Edition, 1904.  
 } Lieber's, Ribeiro & A. B. C. 4th and 5th Editions.



# BLANDY BROTHERS & CO.,

Madeira, Las Palmas, and London,

## BANKING AGENTS AND SHIPPING AGENTS,

AGENTS FOR "LLOYD'S."

Foreign Money Exchanged. Bank-Notes, Bills, and Cheques cashed.  
Bills granted on London, Paris, Berlin, Hamburg, Lisbon, &c.

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## WINE MERCHANTS.

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*A LARGE STOCK OF MADEIRA WINES DATING BACK TO  
BEFORE THE 1850 WINE-DISEASE.*

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## CARLOS FERREIRA,

10, Rua do Conselheiro Vieira (formerly Carreira),  
Funchal, Madeira,

*Telegraphic Address: "Ferry," Funchal.—A B C Code, 5th Edition.*

SHIPPING, COMMISSION, INSURANCE AND BANKING AGENT.

*Madeira Wine Grower and Shipper.*

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ORDERS  
PROMPTLY  
EXECUTED.

OLD  
SABINO'S  
GOLDSMITH  
SHOP.

VERY  
MODERATE  
PRICES.

In this Establishment a very large assortment of OLD JEWELLERY  
is always to be found.

**RODRIGUES & BARROS** (Successores),  
FUNCHAL: 3 and 5, Rua do Aljube, and 6, Rua João Tavira.

---

## MANCHESTER BAZAAR,

LARGO DE S. SEBASTIÃO (CHAFARIZ), NOS. 18, 19 & 19<sup>a</sup>,  
Opposite the Fountain.

*(Following the Tram-line, within 2 minutes' walk of the Cathedral.)*

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## MANOEL M. FERNANDES,

Ship-Chandler & Manufacturer of Madeira Wicker-work,  
and Dealer in Madeira Wine, Blue and White Embroidery, Jewellery,  
and Fancy Goods. A large assortment of Wicker Chairs, Sofas, Tables,  
Linen Baskets, Silk Shawls, &c., always kept in Stock. Very moderate  
prices.

Orders carefully executed and delivered on board.

### ALL STEAMERS MET.

*When wishing to place any orders for wicker-work, etc., to be ready on arrival of  
steamers at this port, please communicate previously to that effect.*

*Also Ship's Stores supplied at moderate prices.*

Telegraphic Address—"MERCANTIL," Funchal.

Branches also at Las Palmas, Grand Canary, and at 1, Cooper Street, Manchester  
(latter for Orders only).

---

## "MADEIRA HOUSE,"

16, RUA DO BETTENCOURT.

### PERMANENT EXHIBITION.

*High class novelty of the finest Madeira hand-made embroidery.*

*Varied assortment of Ladies' Dresses, Blouses, Collars, Chemises, Night-  
dresses, Corset-covers, Drawers, Handkerchiefs, Tea-cloths, Doilies, &c., &c.*

*Also a large assortment of white clothing and dresses for children.*

*Qualified Designers and Dressmakers on the premises to execute any  
work according to the latest English and French fashions.*

---

### F. A. FIGUEIRA,

Proprietor of "MADEIRA HOUSE,"

On Tramway Line near the Bridge.

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*The Embroideries of this House may now be had at*

12, Buckingham Palace Road, 1st Floor, London, S.W.

*(Near Victoria Station, opposite Messrs. Goringe's)*

And in PARIS, 26, Rue N. D. des Victoires.

**BAZAR DO POVO,****Largest Establishment of its kind.****Arranged on the most modern system.****LARGO DO CHAFARIZ, FUNCHAL, MADEIRA.**

THE above Establishment has a constant and large supply of goods, both of native manufacture and imported;—Stationery and Office Requisites; Jewellery; English and French Perfumes; Violins, Guitars, and Machetes, also Strings for the same Instruments; Glass, Crockery, Cutlery, and a variety of those articles generally to be found in a Store of this description.

PRINTING. Visiting Cards and other printing orders executed,

PHOTOGRAPHY. Ilford Dry Plates; Sensitized Paper; P.O.P.; Eastman's Films; Kodaks; Developing Solutions, and all necessaries.

*A large choice of Photographs, Views of Madeira, Native Costumes, Scenery, &c., &c.*

**DENTISTRY.****A ZEVEDO RAMOS,****FRENCH AND AMERICAN DENTIST.**

Bridge-work, Crowns, Inlays, &c., &c.

LARGO DE S. SEBASTIÃO, 20 (near the Bazar do Povo).

FUNCHAL, MADEIRA.

**DIARIO DE NOTICIAS****ESTABLISHED IN 1874.**

This newspaper has the largest circulation in Madeira, and in consequence is the best medium for advertisers.

It has subscribers in England, France, Brazil, Africa, Demerara, Honolulu, and all over Portugal, with correspondents in all of these places.

**DIRECTOR AND PROPRIETOR:****J. E. MARTINS.**



# VISITORS TO ST. MICHAEL'S IN THE AZORES

are respectfully informed that the  
**SOCIETY FOR PROMOTING THE PROPAGATION ABOUT  
THE ISLAND OF ST. MICHAEL'S**

will have the greatest pleasure in replying to enquiries received from any part of the world from those requiring information about St. Michael's.

This Society consists of an Association of Patriots, under the high patronage of H.S.H. Prince Albert of Monaco, constituted with the aim of affording all the information possible about this magnificent portion of the Azorean Archipelago.

Visitors to Ponta Delgada should call upon the Secretary, Mr. Evaristo Ferreira Travassos, L. Matris, 23.

Correspondence should be addressed to the

**SOCIEDADE PROPAGADORA DE NOTICIAS MICHAELENSES,  
Ponta Delgada, St. Michael's, Azores.**

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VIEW OF FUNCHAL, MADEIRA, FROM THE WEST.

CABO GARAJÃO (BRAZEN NOSE) IN THE RIGHT BACKGROUND.



THE FINEST AND BEST APPOINTED HOTEL IN THE CANARY ISLANDS.



**High-class Cuisine and Wines. Luxuriously furnished.**  
**The only Hotel in the Islands with a lift.**

"Situated in its own beautiful grounds and terraced gardens, on a hillside 400 feet above the sea, overlooking the Bay and the Town of Santa Cruz, and only twenty minutes' walk from the Landing Mole, the Grand Hotel Quisisana forms the landmark of Tenerife."

Telegrams: "QUISISANA, TENERIFFE."

Under entirely new management.

Passages booked; rooms reserved; and all information as to steamers, &c., free from  
**CANARY ISLANDS & MADEIRA AGENCY, 11, Adam St., Strand, London, W.C.**

Telephone:—GERRARD. 8616.

# MILLER, WOLFSON & CO.,

SANTA CRUZ DE TENERIFFE.

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## BANKERS.

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CORRESPONDENTS for the PRINCIPAL BRITISH,  
SPANISH AND CONTINENTAL BANKS.

*DRAFTS AND LETTERS OF CREDIT ISSUED ON  
ENGLAND, FRANCE, GERMANY AND SPAIN.*

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STEAMSHIP, INSURANCE AND FORWARDING  
AGENTS.

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Representatives for the following Steamship  
Lines:—

ALLAN LINE.

HAMBURG-BREMER AFRIKA-LINIE.

BUCKNALL STEAMSHIP LINES.

LAMPART & HOLT.

BULLARD, KING & CO.

ROYAL MAIL STEAM PACKET CO.

*AND OTHER LINES.*

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TELEGRAPHIC ADDRESS: "MILLER, TENERIFFE."  
CODES USED: A.B.C. 5TH ED. A.1. SCOTT'S & LIEBER'S.

*London Agents:*

Messrs. MILLER BROTHERS & CO.,  
5, LLOYD'S AVENUE, LONDON, E.C.





## CAMACHO'S ENGLISH HOTELS.

### SANTA CRUZ.

The oldest, best, and most centrally situated Hotel in Santa Cruz.

Forty large well-ventilated bed-rooms; sitting, billiard and smoking rooms, &c.

Bath-room on each floor, and every convenience.

Sanitary arrangements superintended and examined by Dr. Paget Thurstan.

Visitors in either Hotel have the privilege of using both Hotels without extra charge.

### TACORONTE.

Half-way between Santa Cruz and Orotava, 1,700 feet above the sea. The Resort par excellence for those desiring a bracing mountain climate. Extensive views. Grand Excursions, see Brown's Guide. Thirty-six fine airy bed rooms. Dining, drawing and billiard rooms, &c.

Direct Telephonic and Electric Tram communication with Santa Cruz. Messages sent at any time of night and carriages provided for those departing by steamers, thereby avoiding all risk of missing same.

Private water supply direct from the Aqua Garcia Spring.

*All Steamers are met by a representative of the Hotel, and Passengers' Luggage, &c., taken in charge and landed, thus saving much trouble and inconvenience.*

*Camacho's Motor Car Service.*—For details see pages L27 and L52.

*Camacho's Excursion Coupons* for trip from Santa Cruz to Tacoronte and back (four hours), including one meal, boat, train, carriage, &c., both ways, 10s., to be had on board.

**Terms: ROOMS FROM 9s. TO 12s. PER DAY.**

*Special arrangements made for Families or Persons staying for a prolonged period.*  
For Particulars apply to The Manager, CAMACHO'S ENGLISH HOTEL,  
SANTA CRUZ DE TENERIFFE.

Telegraphic Address—"CAMACHO'S HOTELS, TENERIFE." Telephone 128.



**Specially built for a splendid Hotel and  
provided with all Modern Comforts.**

This new Hotel, situated within two minutes' walk from the English Church, with large Verandahs all round (Ground and First Floors) commends itself to Visitors for its Great Comfort, Sanitary Conditions, and its Excellent French and English Cuisine.

*TERMS FROM 9s. A DAY.*

**Special arrangements for those staying over a week.**

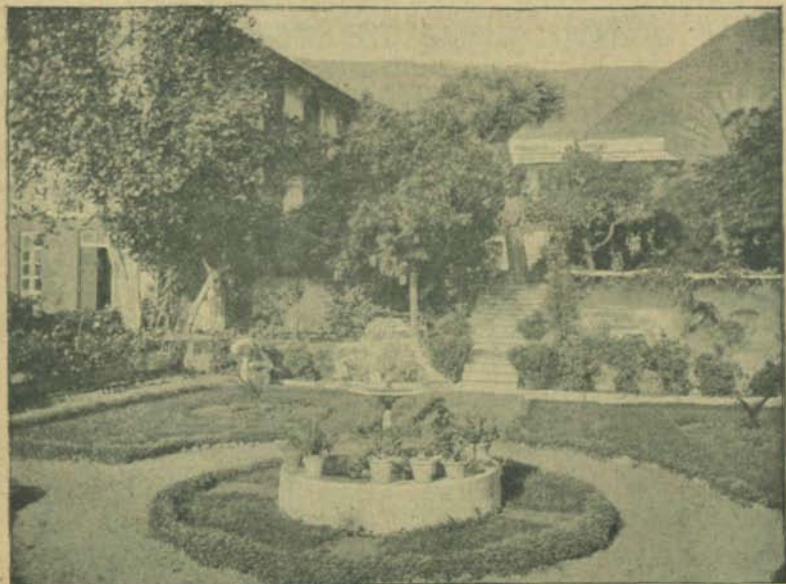
Telephone 331. Telegraphic Address: "Batenrife, Tenerife,"  
*French, English, German, Italian and Spanish spoken.*

The GRAND HOTEL BATTENBERG is managed on the most liberal scale and is a first class and up-to-date Hotel.

**C. O. de MONGAILLARD,**  
*Proprietor.*

# HOTEL PINO DE ORO, TENERIFFE.

## SANTA CRUZ, TENERIFFE.



**T**HIS Hotel occupies an unrivalled position, being situated just outside the town, at an altitude of 300 feet above the sea level, and commanding excellent views of the Harbour and shipping.

The fine old gardens are a great attraction, being most extensive, and the best laid out in SANTA CRUZ. Here visitors in search of health and repose may spend the whole day in absolute privacy enjoying the open air and sunshine, the tropical and semi-tropical flowers, plants, and fruit trees which abound, forming a never-ending source of interest.

The Hotel is lighted throughout by electricity. The drainage has been arranged on the most improved sanitary principle by an English sanitary engineer.

Baths—Hot and cold.

The landing and embarking of visitors is personally superintended by the Manager, the cost of same being 5/- each person for landing and conveyance to the Hotel and 5/- each person from the Hotel and embarking.

Photographic dark-room, tennis, croquet and Badminton for the free use of visitors.

The English Church is in close proximity to the Hotel.

A B C & A1 Codes used.

TELEGRAMS: "PINO, TENERIFFE."

**J. LL. LEWIS, Manager.**



# OLSEN'S

## ALEXANDRA HOTEL AND PENSION,

### SANTA CRUZ DE TENERIFE.

(Under Danish Management.)



This Establishment commands the finest views, is the most healthily situated Hotel in the town, and affords First-class accommodation for Visitors. It is the only Hotel in Santa Cruz with a Palm-Garden on the roof.

#### HOTEL TARIFF.

*Single Bedrooms, including Board, from 7/6 upwards per day each person.*

SPECIAL TERMS FOR A PROLONGED STAY.

ENGLISH, FRENCH AND GERMAN SPOKEN.

*Electric Lights and Bells throughout.*

Steamers met on arrival and luggage taken in charge. Visitors wishing to visit any part of the Island will find this Hotel very convenient.

For full particulars apply to—

**H. P. OLSEN, Proprietor.**

Telegraphic Address—"HOTEL OLSEN, TENERIFE." Telephone No. 27.

Passengers booked, rooms reserved, and all information as to steamers, &c., free from  
**CANARY ISLANDS & MADEIRA AGENCY, 11, Adam Street, Strand, London, W.C.**  
 Telephone: GERRARD, 8616.

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## English Tea Rooms & Restaurant, CALLE CRUZ VERDE, 18.

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The only establishment of its kind in the Island. In direct Telephonic communication with all the Steamship Agencies.

PRICES MODERATE.

BOARDERS TAKEN.

Proprietress - Mrs. C. G. SLEE.

---

## HOTEL OROTAVA, Plaza de la Constitucion.

Branch House of Grand Hotel Humboldt, Orotava.)

---

Airy, Pleasant Position overlooking the Harbour  
and Plaza.

Nearest Hotel to the Landing Stage, the Post and  
Telegraph Office.

---

CAFÉ RESTAURANT, AMERICAN BAR, ENGLISH BILLIARDS.

Pilsen Beer on Draught. Ice Creams. Fine Pastry. Fruits  
and Cream Tarts.

French Cuisine. Choice Teneriffe and Foreign Wines.

---

## HOTEL PANASCO, Plaza de la Constitucion, Santa Cruz de Tenerife.

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This old-established Hotel, both because of its Situation and the Careful Attention accorded to its Visitors, is one of the best known Establishments in the City.

Spacious and Elegant Dining and Reception Rooms.  
Large, airy, well-ventilated Bedrooms.

Moderate Terms.

# HAMILTON & CO.

ESTABLISHED 1799.

## BANKERS.

Correspondents for the principal British, Continental and United States Banks.

Credits negotiated at favourable rates.

## STEAMSHIP, TELEGRAPH AND FORWARDING AGENTS.

*Representatives of the following Lines:—*

UNION-CASTLE MAIL S.S. CO.	JOHN T. RENNIE, SON & CO.
SHAW SAVILL & ALBION CO. LD.	HAMBURG AMERICAN LINE.
NEW ZEALAND SHIPPING CO.	KOSMOS S.S. CO.
GEORGE THOMPSON & CO.	DAVID MACIVER, SONS & CO.
WHITE STAR LINE.	NAUTILUS S.S. CO.
&c.	&c.

## STEAMSHIP OWNERS.

Regular Service to Orotava, South Coast Ports, La Palma and Gomera.

## STEAM COAL DEPÔT.

A large supply of best South Wales Steam Coal always in stock. Every facility for Supply and Quick Despatch of Steamers day or night throughout the year.

**LLOYD'S AGENTS. REUTER'S AGENTS.**

## WINE MERCHANTS.

Oldest exporters of the choicest qualities of Teneriffe (Vidonia) Wine.

*Telegraphic Address:—“HAMILTON, TENERIFFE.”*

Codes used:—SCOTT'S, WATKINS', A.B.C., A1, UNIVERSAL SHIPPING and LIEBER'S.

## GENERAL AGENTS IN LONDON.

Messrs. SINCLAIR, HAMILTON & CO.,  
17, St. Helen's Place, E.C.

Santa Cruz de Tenerife is a Free Port. No vexatious Customs regulations regarding luggage. It is the landing place for visitors to Orotava. Santa Cruz is also the central station in the Canaries for cables to Europe, South America and West Coast of Africa.



# HAMILTON & Co.

ESTABLISHED 1799.

## WINE-GROWERS & SHIPPERS,

*Holders of the Largest Stock of Fine Old Matured Wines in the Islands.*

**Bodegas and Offices : Nos. 15 & 51 MARINA.**

### Agencies :

**UNITED KINGDOM.**—LEAKEY & CO., Eastcheap Buildings,  
London, E.C.

**GERMANY.**—H. GEVENICH, Gr. Reichenstrasse, 48, Hamburg.

**SWEDEN and FINLAND.**—PAUL CARAVELLO, Gothenburg.

**DENMARK and NORWAY.**—MARINUS MÖLLER AND  
CO., Copenhagen.

**AUSTRIA.**—STONE & BLYTH, Praterstrasse 17, Vienna.

# JACOB AHLERS,

BANKER AND SHIPPING-AGENT,

SANTA CRUZ DE TENERIFE, MARINA 31.

### *Representative of the following Banks :—*

Direction der Disconto Gesellschaft, Berlin.

" " " London.

Norddeutsche Bank in Hamburg, Hamburg.

Deutsche Afrika Bank, Hamburg.

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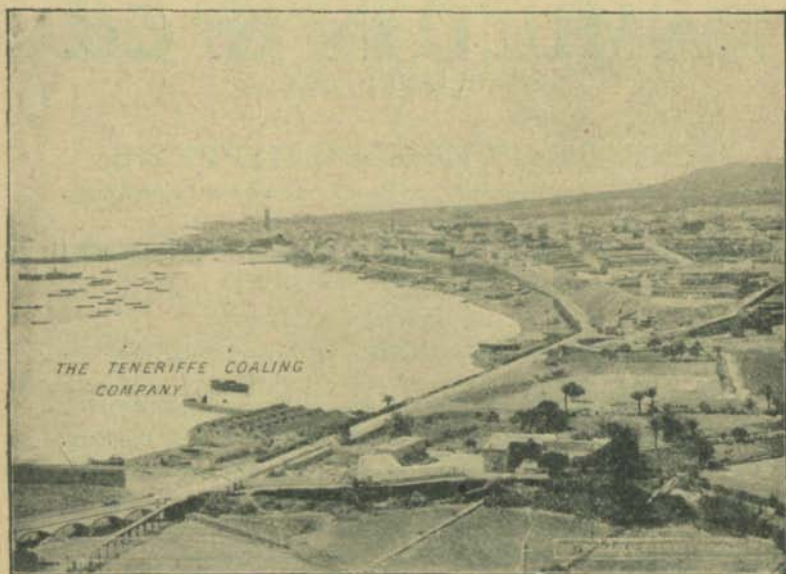
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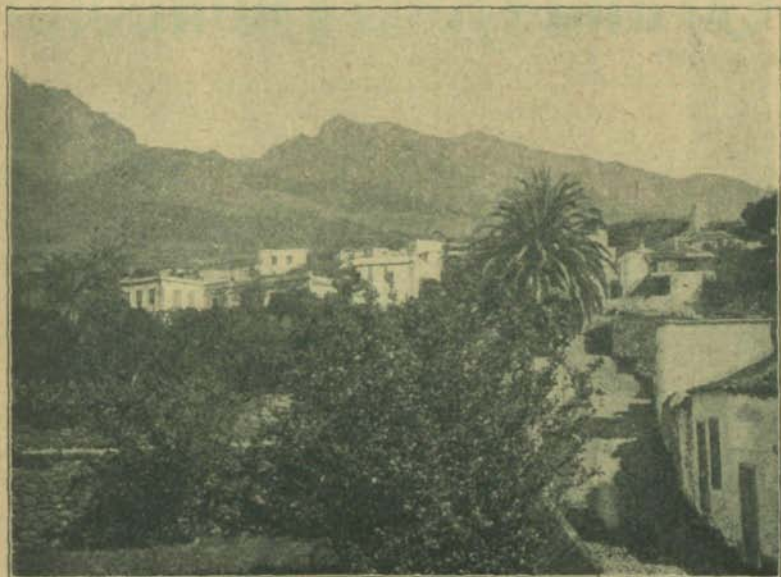
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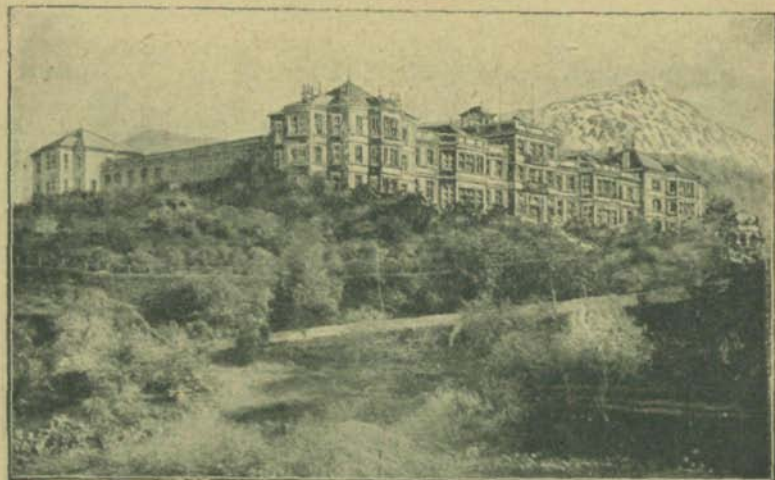


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Telegraphic Address: METROPOLE, LAS PALMAS. A.B.C. and A.I. Codes used.

An important addition has been made to the resources and comfort of the Hotel, by the erection of a complete refrigerating and ice-making plant, ensuring a constant supply of fresh provisions and ice throughout the year.



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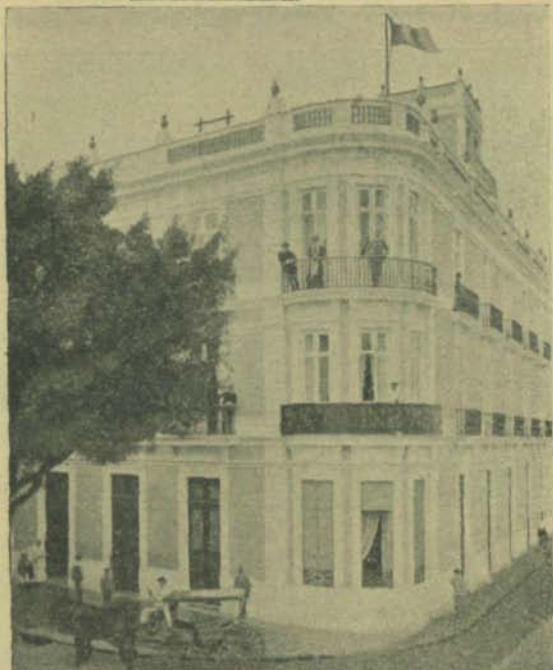
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*Under the same Proprietorship, the "Constant Spring Hotel," Jamaica.*

# QUINEY'S ENGLISH HOTELS, GRAND CANARY.



## **THE ENGLISH HOTEL, LAS PALMAS.**

THE oldest established English Hotel in the Canary Islands. Five minutes' walk from the sea, of which beautiful views can be obtained. First class accommodation for Visitors. Electric Light throughout. Table d'Hôte, separate tables. Hot and Cold Baths. Large, cool and comfortable bedrooms, each with a balcony and facing south. Large Patio or Courtyard. Every comfort. Terms from 7/6 a day.

## **THE BELLA VISTA HOTEL, MONTE.**

THIS well-known English Hotel is situated 1,250 feet above sea level and six miles from Las Palmas, in the Monte District, which is recognised as the healthiest and loveliest in the Island, and allows of a delightful change for those requiring bracing mountain air. Close to the Crater and Caves of Atalaya. Beautiful walks and drives in every direction. Lawn Tennis Courts and extensive Gardens. Terms from 2 Guineas a week.

Both Hotels are under the personal direction of the Proprietor, who is English. Visitors can change from one Hotel to the other at will.

SANITARY ARRANGEMENTS IN BOTH HOTELS EXCELLENT.

Terms at either Hotel from 7s. 6d. a day. All Steamers are boarded by a representative of the Hotel, who attends to the safe landing of Visitors and their Luggage.

Telegraphic Address:—"QUINEYS, LAS PALMAS."

Agent in London:—Mr. A. E. QUINEY, c/o The African Lands and Hotels Co.,  
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**THE ONLY HOTEL IN THE TOWN WITH A LARGE AND BEAUTIFUL GARDEN.**

In connection with the Hotel Santa Brigida, Monte, Grand Canary.

**PROPRIETOR:—OTTO NETZER.**

**T**HE oldest-established English Hotel in the Canary Islands. Recently considerably enlarged. Stands within its own grounds, within five minutes' walk of the sea. First-class accommodation for visitors. Electric light throughout. Table d'hôte, separate tables. Hot and cold baths. Spacious Dining, Drawing, and Billiard Rooms, Library, &c. Cool and comfortable Bedrooms. Cuisine Excellent.

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**Telegraphic Address:—"CONTINENTAL, LASPALMAS."**

Full information can be obtained from THE CANARY ISLANDS AND MADEIRA AGENCY, 11, Adam Street, Strand, London. W.C., who will book passages, reserve rooms, &c., free of charge.

Tel.: GERRARD, 8616.



**Mrs. JAMES,**  
**The Friars,**  
**TAFIRA, GRAND CANARY.**

PAYING GUESTS received from 35s. per Week inclusive.

Healthiest part of the Island. 1,000 ft. above the Sea.

4½ Miles from Las Palmas. Croquet Ground. Milk from own Farm.

CARRIAGE, MULES, AND DONKEYS ON HIRE. TELEPHONE 214.

*All information as to this House, Steamers, &c., Free of Charge from Canary Islands and Madeira Agency, 11, Adam Street, Strand, London, W.C. Tel. "Gerrard, 8676."*

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**MONOPOLE,**

PLAZA DE LA DEMOCRACIA (facing the Circulo Mercantil).

First Class Hotel with four frontages, most centrally situated, and commanding magnificent views. Roomy and well-ventilated Bed-rooms provided with every modern comfort.

Electric light and bells. Baths. Meals à la carte at any hour. French and Spanish Cuisine. Meals supplied.

**MODERATE TERMS. PENSION FROM 5s. A DAY.**

**VIUDA DE TOMAS LOZANO PEREZ,**

Triana (Corner of Calle General Bravo), Las Palmas.

Wholesale and Retail Store of Drapery, Millinery, Haberdashery, Imported Goods and Island Manufactures.

*Fixed Prices.*

Customers visiting this Establishment will find a great variety to choose from.

**VISITORS TO GRAND CANARY can obtain**  
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Always in stock the largest and finest collection of Photographs and Post Cards of Grand Canary, Tenerife, La Palma, &c. Hotel attendance for groups, &c., from 10.0 a.m. till 5.0 p.m. Amateurs' Films developed and printed. All work neatly executed. English and French spoken.

**MODERATE PRICES.**

**STUDIO AT PUERTO DE LA LUZ (near the Santa Catalina Mole).**

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The Leading Daily Paper in Grand Canary.

The “Diario de las Palmas” has the largest circulation of any local newspaper, and has subscribers in all parts of Spain and in all the Spanish Colonies. As a medium for advertisement it is unsurpassed, and those wishing to push their business, fruit or otherwise, to hire or let houses, or to effect sales and purchases of any commodity, will find its pages the best for their purpose.

*Special attention paid to local news and to telegraphic intelligence from all parts of the world. Correspondents in the principal towns of Europe and America.*

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Corner of Perez Galdós, LAS PALMAS.

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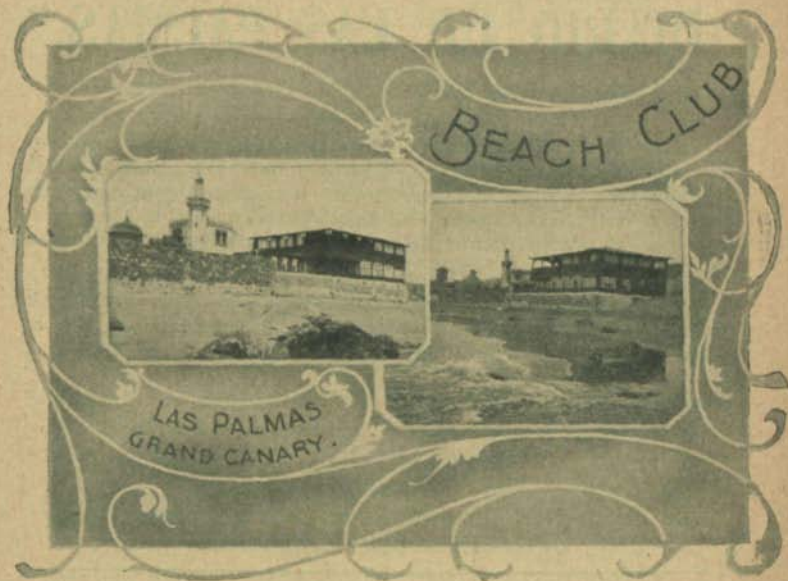
# “LA MAÑANA.”

—\*—  
**Journal of Social Reform,  
 General News, Intelligence,  
 and Advertisements.**

*Largest Circulation and best medium for  
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Single copies, 10 centimos. Subscriptions in the Canary Islands and in Spain: per month, 1 pes. 50 centimos; per quarter, 6 pes.; Abroad per half-year, 17 pes.

**Editor's Offices:** { **Galle de San Pedro,  
 Las Palmas, Grand Canary.**



The object of this Establishment is to provide  
**AMUSEMENT, SPORT and SEA-BATHING,**  
 to those visiting or staying in Grand Canary.

The Spacious Halls and Verandahs facing the sea are designed as a  
**CLUB and CASINO** with which are combined a  
**RESTAURANT, BAR,**  
**AFTERNOON TEA LOUNGE,**  
**READING and WRITING ROOMS, &c.**

The leading Newspapers of all nations are provided.  
**SKITTLE ALLEY, TARGET and CLAY PIGEON**  
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The only completely installed Sea-bathing Establishment in the Archipelago,  
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Access by Tourists to the **Ladies' Dressing and Toilet Rooms,**  
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*Close to the SANTA CATALINA MOLE,*  
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The Real Club Nautico, specially designed and erected for Aquatic and Sporting purposes, was opened in 1909. It stands on concrete piles in a sheltered corner of the Harbour, ensuring Calm Water around it during all Weathers, and is readily accessible from the Town or the Port by Carriage or by Tramcar.

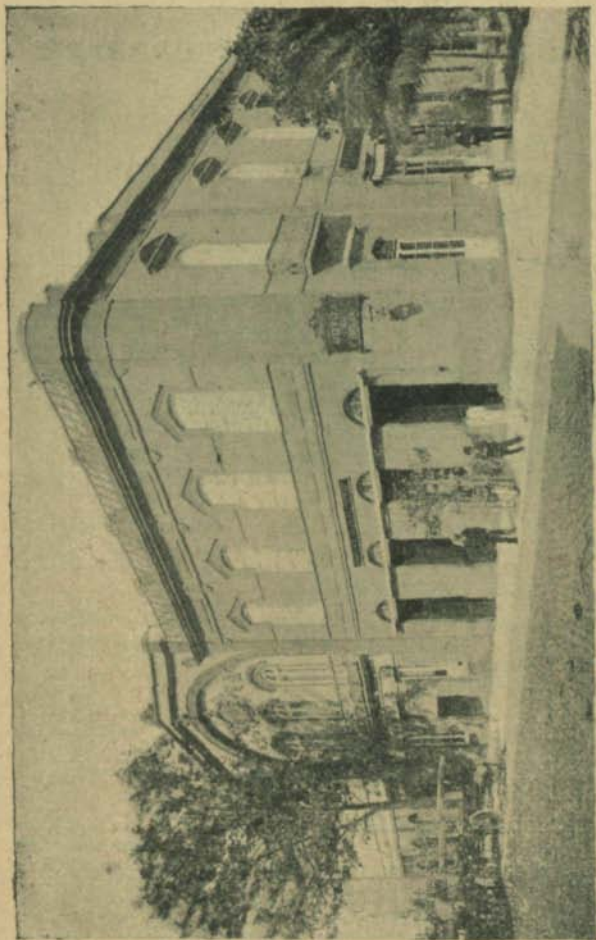
By virtue of its position and of its many attractions, it became, from the first, a favourite rendezvous. In its spacious Saloons and airy Corridors; on its Balconies and Roofs, Resident and Visitor meet to enjoy the charms of Social Intercourse, or to gaze upon the ever-varying Life and Movement of the busy Harbour.

In the Salons de Jeu or in the Card Rooms on the upper floor, a Cosmopolitan Throng finds the Mecca which custom and Monte Carlo have taught us to associate with Sunshiny Winters in the South, though the sunshine of Monte Carlo pales before the Genial Tempered Warmth which is so marked a feature of the Winter Climate of the Fortunate Islands.

In the Central Hall, with its fine parqueted floor, Cinderella Dances are held on Wednesday and Saturday nights to which **all Visitors are welcomed**, these meetings being both well attended and exceedingly popular.

But Rowing Boats, Sailing Boats, Salons de Jeu, and Dancing Halls do not suffice to meet the requirements of all, so that to these has been added a First Class Restaurant and Bar, where the most Recherche Meals and the most carefully selected Liquors, Wines, Cigars, Tobacco, &c., &c., can be obtained at all hours.

**The Committee** trust that their efforts to provide a means of amusement will be appreciated and **cordially invite the presence of all Visitors to Grand Canary.**



(Late FERNANDO BOJART.)

# GASPAR MELÉNDEZ,

CHEMIST AND DRUGGIST,

Calle de Muro and Plaza de la Democracia, LAS PALMAS; also at Triana, 53.

English and Foreign Prescriptions carefully prepared, according to — All Prescriptions are registered and numbered, and repeat their respective Pharmacopœias and from the purest drugs. — orders can be made up from the number only.  
 PATENT MEDICINES, MINERAL WATERS, PHOTOGRAPHIC CHEMICALS AT SPECIAL PRICES.  
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In which will be found the  
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**DRUGS, PERFUMERY AND  
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and the most elaborately fitted  
**CHEMICAL MICROSCOPICAL  
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# VIUDA DE MARTIN É HIJOS, MERCHANTS, BANKING AND SHIPPING AGENTS.

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MANUFACTURER OF MADEIRA WICKER WORK,  
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Fancy Goods. A large assortment of Wicker Chairs, Sofas, Tables,  
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VERY MODERATE PRICES.

ORDERS CAREFULLY EXECUTED AND DELIVERED ON BOARD, ALL STEAMERS MET.

*When wishing to place any orders for Wicker work, etc., to be ready on  
arrival of Steamers at this Port, please communicate previously to that  
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Branches also at FUNCHAL, MADEIRA, and at  
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**DOMINGO ALVARADO,**  
*General Merchant.*

**WINES, SPIRITS, AND BEER IMPORTER.**

Tobacco, Cigars, and Cigarettes of all kinds. Bass's Ales and Guinness'  
Stout. Canary, Madeira, and Port Wines. Liqueurs.  
Scotch and Irish Whiskies.

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Native Hand-drawn Threadwork, Curiosities of the Islands, Madeira and  
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**TENERIFFE DRAWN THREAD WORK**

In best Irish Linen, Silk, and other materials. Large Selection.

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*REASONABLE FIXED PRICES.*

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MANUFACTURERS AND DEALERS IN THE  
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Sale of Native Cigars and Cigarettes. Maltese Lace  
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AT LAS PALMAS,

(Taking Vessels up to 1,250 tons deadweight).



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ESTABLISHED IN 1891.

SUPPORTED BY VOLUNTARY CONTRIBUTIONS.

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THE  
**GRAND CANARY COALING CO.,**

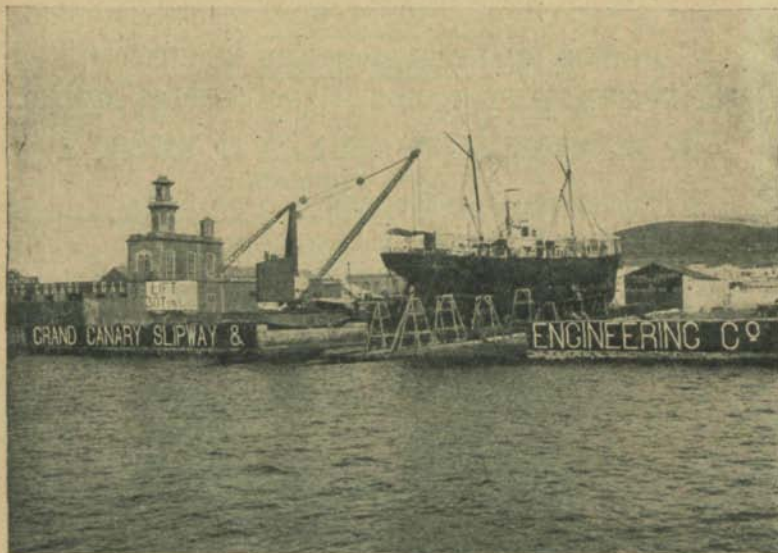
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for Vessels 250 ft. long, lifting weight 1,500 tons.

Steam Crane to lift 30 tons.

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**THE CHOICE WINES OF ABOVE  
FIRM CAN BE HAD FROM ALL  
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*FOR PRICES SEE ADVERTISEMENTS  
AT END OF BOOK PAGE 12.*

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*READ PAGES D6, D7 AND D8.*