

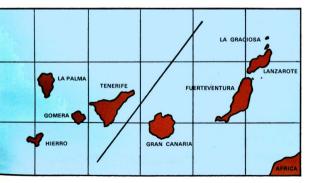
SEA-FISHING GUIDE TO THE CANARY ISLANDS



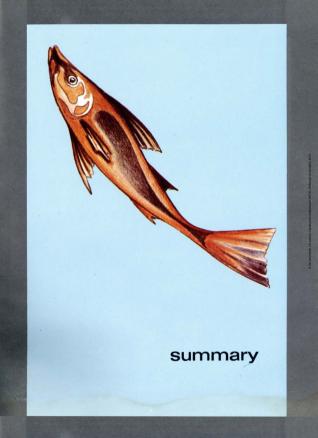
SEA-FISHING GUIDE TO



THE CANARY ISLANDS



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Swordfish
Swordfish
Mameater - Mackerel Shark
White Marlin - Mediterranean Spearfish

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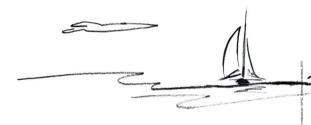
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introduction



In the ancient past the Canary Islands used to be an arrival point for those who sailed off from the Mediterranean Sea southwards across the Hercules' Columns and finally reached the Archipielago, which loomed mysteriously on an obscure sea in which the Sun itself wrecks every day...

The Canary Archipielago consists of seven islands: Gran Canaria, Lanzarote, Fuerteventura, Tenerife, La Palma, Gomera and Hierro. Apart from them, some small, uninhabited barren islands are to be found in the Archipielago's domain.

The Canary Islands constitute the two most westerly Spanish provinces as well as the southern extreme of Spain. The Archipielago's boundaries are defined by the 27 N an 29 N parellels and the 13 W and 19 W Greenwich meridians. Their average latitude, which situates them near the northern boundary of the Tropic of



Cancer, is much the same as the Florida's one in the U. S. A. Local temperature of water is mildly warm, without reaching tropical characteristics.

Ocean currents of different sources join in this frame. Hence an extraordinary rich ictiology is to be found here. Through the Little Antilles Caribean warm water receives the current which crosses the South Atlantic. After being born in the Caribean Sea, the Gulf Stream drives around the Sargazo Sea, slides along the American coast northwards, turns to the east at the latitude of Terranova and finally descends towards the south by passing Ireland, Spain and Portugal. At this very end it is designated as the Canary current. It becomes warm again while being in the Archipielago's domain and afterwards moves away in the west direction.

COMMENT ON THE CHARACTERISTICS OF THE CANARY ARCHIPIELAGO'S WATER AND MARINE FAUNA

The Canary Islands are located in the Mesoatlantic marine region, actually Lusitanic subregion.

Today biologists use to divide this subregion into three biological provinces, as regards to the observed biotopical differences:

LUSITANICA, which extends from the English Channel to the Gibraltar Strait;

MEDITERRANEA, which embraces the whole Mediterranean Sea;

and MAURITANICA, that develops between the Gibraltar Strait and the Tropic of Cancer's boundaries.

Therefore, the Canary Islands' location belongs to the Mauritanica oceanographic region, iberomoroccan subdivision. Mediterranean and Atlantic species, both northern and southern ones, constitute their fauna.

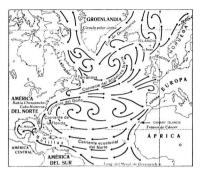
Although this accurate classification of the marine environment responds to actual differences between regions, it cannot avoid those circumstances which give the oceans their biological continuity and rather common fauna.

Onshore climate borders are much more defined than in the marine domain. Faunistic cantonments are thus denser and more permanent on land. Hence the appearance of intraspecific variants as well as the so-called endemisms are rather easy to happen here.

On the other hand, climate borders cannot be defined as strictly in the marine domain. Water continuity and its circulation lead to very smooth environmental transitions. This fact is to be seen in marine migrations: the largest ocean curents move slower than winds and their directions are more permanent. A great deal of fishes travel with currents so as to accompany either a change of season or some salinity variation that currents may provoke in a certain biotope. Apart from that, the oceanic bottom topography is not as steep as the earthy one. Continental shelves require special attention at this issue, for depressions are being filled up with sediments since thousands of vears.

In fact only birds manage to move easily to convenient biotopes onshore thanks to their ability to fly, which gives them so big independence.

These premises determine the fact that continuity in the marine environment shows clearly in the coatal zone and even more in the pelagic system, though in certain places very obvious borders might appear. As a consequence of that, the number of existing biotopes in the sea is smaller than onshore and they are much larger here. Hence the marine fauna changes gradually and slowly throughout the sea water.



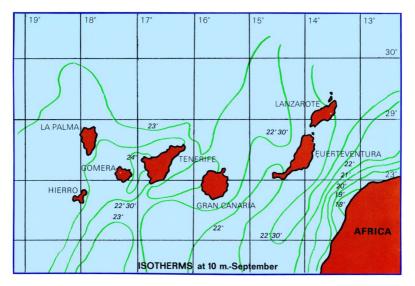
This is why a great number of the species which travel on currents that drive off the Mediterranean Sea is to be found in the Archipielago's domain just as some other ones whose points of departure are either northern or western or southern seas.

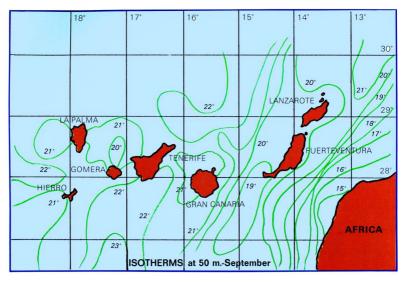
The volume enclosed by the sea bottom, the 27 N and 29 N parallels and the 13 W and 19 W meridians must be regarded as a huge oceanic stock of food. Not only its bottom's characteristics contribute to its always improving biological quality, but mainly its subtropical location, which leads to days that last less than 14 hours at the summer solstice -june 21— and less than 10,5 at the winter solstice -december 22—. These figures are respectively 1.5 hour shorter and 1.5 longer than in the Gulf of Biscay. Shorter days in summer and longer ones in winter give as a result a climatic regime that assures a permanent tepidness in the Archinelado's water.

As regards to the january and june isotherms, the fact that water temperature values keep between 15° (lowest value in winter) and 25° (hisghest value in summer) is to be emphasized. Spring inhabits the Islands permanently...

On the other hand, the Canary Islands are located in the 3/4-over-10 tropical strip of clear skies. Hence it is no surprise that the Archipielago's water behave as an actual «fish farm».

Obviously coastal species differentiate from sea to sea, since they are largely conditioned by the dominant land climate. Nevertheless, there is no big difference between the species to be expected in the Carary Islands and the ones that belong to the South Atlantic Spanish zone, which acts as a transition domain between the biological provinces Lustanica and Mauritanica. But such difference appears evident







TUNA (THUNNUS THUNNUS) WEIGHTING 300 KGS. CAUGHT TO THE SOUTH OF THE GRAND CANA-RY ISLAND IN SEPTEMBER OF 1971.

when compared those with the Mediterranean species. This fact is not due to climatic influences, but to the so high salinity values that the exceptional Mediterranean evaporation regime as well as the almost inexistent communication of the Sea with the Atlantic Ocean through Gibraltar provoke.

The Archipielago's water is thus mildly warm and surprisingly clean. It presents salinity values which resemble the Atlantic water's ones very much. As regards to sporting fishing, it contain a large amount of highly appreciated species.

SPECIES

The most world appreciated sporting fish species abound in the Canary Islands. Following ones must be underlined:

Bluefin tuna	Sail-fish
Yelowfin tuna	Albacore
Big-eye tuna	White martin
Swordfish	Blue martin
Wahoo	

This guide you now have in your hands is a State Secretary or Turism's brochure and informs the sporting fisher about the characteristics of an ictiological paradise which remains open all year. Fishing in the Canary Islands is a delightful activity that offers many additional charming possibilities just as keeping seeing the coast line while fishing at an ideal temperature and with a splendid sunight.

As a complement to what has been already explained, we supply following statistical data on registeres captures:

AL	BACORE	BIG	EYE TUNA	BLU	EFIN TUNA	YELLO	WFIN TUNA	BL	UE MARLI
BONIT	D DEL NORTE		ATUN	Р	ATUDO		RABIL	F	ODUDIO
	Average	0.0	Average	1000	Average	5.05	Average	205	Average
No.	wt. kgs	No.	wt. kgs	No.	wt. kgs	No.	wt. kgs	No.	wt. kgs
2	23.2	60	50.7	5	249.2	-		-	
4	22.8	80	51.1	5	255.3	-		-	
2	23.0	79	58.3	8	240.0	-		-	
2	23.5	63	83.9	12	245.9	3	72.5	1	137.0
-		32	101.7	1	250.0	22	78.9	3	106.5
-		17	144.4	1	254.7	44	75.5	7	207.3
-		1	140.0	24	254.1	2	77.3	4	184.5
-		4	152.1	14	253.9	2	87.2	-	
-		13	65.9	14	255.9	18	84.1	-	

CANARY ISLANDS WORLD RECORDS

M-20 ibi (10 kg) 78 ib 4 or (255 Fkg) Nov. 20 M-30 ibi (15 kg) 72 ibi 2 or (33 kg) March. W-30 ibi (15 kg) 90 ib 6 or (41 kg) March. W-50 ibi (24 kg) 244 ibi 10 r (111 kg) March. M-80 ibi (36 kg) 27 1 ibi (122.9 kg) July. 24 M-80 ibi (36 kg) 352 ibi 10 r (160 kg) July. 24 M-80 ibi (36 kg) 352 ibi 10 r (160 kg) July. 24 M-80 ibi (36 kg) 322 ibi 13 or (182 kg) July. 24 M-130 ibi (60 kg) 321 ibi 4 or (151 kg) June 16 W-130 ibi (60 kg) 321 ibi 4 or (151 kg) June 16 BLUEFIN TUMA. Thrunnas thrumats 897 ib 4 or (407 kg) March.	1977 Joyce Chrivelman 1974 Ants Peeker 1977 Sighied Dickemann 1977 Sighied Dickemann 1977 Genevieve Margouhas 1977 Genevieve Margouhas 1977 Joaquin Onsés 1977 Joaquin Onsés 1977 Gunther Landsmann 44, 1977 Hans Hübner 1977 Charles Chrivelman 1797 Charles Chrivelman
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M.=80 big (36, a) B8 big 2 or (40, 6) Nov. 16 W.=80 big (36, a) 63 big 4 or (29, 6) Oct 11 All tackle 74 big 3 or (34, 6) Oct 20, 6) All tackle 74 big 3 or (34, 6) Oct 30, 6) All tackle 74 big 3 or (34, 6) Oct 30, 6) All tackle 80 big 3 or (34, 6) Oct 30, 6) All tackle 80 big 3 or (34, 6) Nov. 19 All tackle 81 big 3 or (40, 6) Nov. 19 All tackle 81 big 3 or (40, 6) Nov. 19 All tackle 91 big 3 or (40, 6) Nov. 19 All tackle 91 big 3 or (16, 6) Nov. 19 All tackle 91 big 3 or (16, 6) Nov. 19 M-20 big 10 big 3 or (13, 4) March. Nach. M-30 big 15 big 3 or (13, 4) March. Nach. W-30 big 10 big 3 or (12, 12, 9, b) July. 24 March. W-30 big 10 big 3 or (12, 12, 9, b) July. 24 July. 24 M-80 big 3 big 3 or (12, 12, 9, b) July. 24 July. 24 M-80 big 3 big 3 or (14, 4) July. 24 July. 24	1977 Sieghied Dickemann 1977 Genevieve Margouhas 1973 Genevieve Margouhas 1973 Olf Idegren 1977 Siegfried Dickemann 1979 Gunther Landsmann 24, 1977 Hans Hübner 1977 Charles Chtiveliman 177 Charles Chtiveliman
W-80 bi (30 kg) 63 bi 14 oz (28 kg) 0ct 11 All tackle 74 bi 13 oz (34 kg) 0ct 18 All tackle 76 bi 34 5 kg) 0ct 38 All tackle 80 bi 5 oz (48 kg) 0ct 30 All tackle 80 bi 5 oz (40 kg) Nor. 19 All tackle 86 bi 2 oz (40 kg) Nor. 19 All tackle 95 bi 4 oz (16 kg) Feb. 33 M-12 bi 5 kg) 35 bi 4 oz (16 kg) Feb. 33 M-20 bi (10 kg) 61 bi 10 (28 kg) March. M-30 bi (15 kg) 72 bi 12 ox (33 kg) March. M-30 bi (15 kg) 72 bi 12 ox (33 kg) March. M-30 bi (15 kg) 20 bi (10 kg) 90 bi 6 ox (41 kg) March. M-50 bi (24 kg) 20 bi (10 kg) 20 bi (10 kg) July. 24 M-80 bi (36 kg) 20 bi (10 kg) 32 bi 11 ox (160 kg) July. 24 M-80 bi (36 kg) 32 bi 14 ox (15 kg) July. 24 M-80 bi (36 kg) 32 bi 14 ox (16 kg) July. 24 M-130 bi (60 kg) 32 bi 14 ox (16 kg) July. 24 M-130 bi (60 kg) 32 bi 14 ox	1977 Genevieve Margouhas 1973 Olof Idegren 977 Gerhard Wunsche 1977 Jaquin Onsés 1977 Siegfried Dickemann 1979 Gunther Landsmann 24, 1977 Hans Hübner 1977 Charles Chtivellman 27, 1977 Charles Chtivellman
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M-50 lb (24 kg) 897 lb 4 oz (407 kg) March 2	
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BLUEFISH, Pomatomus saltatrix	
• M-80 lb (36 kg) tie 15 lb 5 oz (7 kg) Dec. 16	1967 Clew Hughes
* M-80 lb (36 kg) 22 lb (10 kg) July 19	1971 Kenneth Oulton
BLUE SHARK, Prionace glauca	
* M-130 lb (60 kg) 341 lb 8 oz (155 kg) Oct. 30,	1966 John D. Nixon
WHITE MARLIN, Tetrapterus albibus	
M-80 lb (36 kg) tie 143 lb 4 oz (65 kg) July 26	
Deleated.	1977 Alan James Roscoe

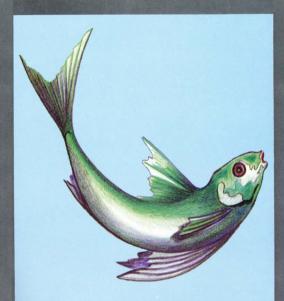
Likely, in this present guide some 16 itineraries, which are highly interesting from the sporting point of view, are described with special emphasis on their particular characteristics.

Finally, this guide provides diverse information that somehow facilitate and complement the pleasure that both sea and the always emotioning marine fishing provide.

In this extraordinary bunch of singular circumstances, species from all over the Atlantic Ocean seem to come to a standstill when they reach the calm Archipielago's water. Mediterranean species are supplied there by the continuous flow of eastern water towards the Atlantic Ocean through the Gibraltar Strait.

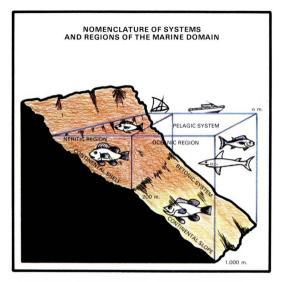
An incredibly large variety of species is to be seen in the Archipielago's domain: 1500 (out of the 20000 ones classified all over the world at present) can be found there. The reasons why they do not move away from there are the so mild water's temperature, the continental shell's characteristics and its overwhelming submarine vegetation. The water that surrounds the Canary Islands –classics used to designate them as the Lucky Isles-offers optimal conditions for ictiological life and its Atlantic cicle to develop and consequently produce a faune of the utmost interest to sporting fishers.





classification of the fishing zones





Life in oceans is definitely conditioned by accurate ecological relationships. Animal life depends on vegetable life and this one on water's and bottom's characteristics. Sunlight does not manage to pervade deeper than -200 m Beyond that level, almost no vegetable life is to be expected, but it works somehow differently in animal life's case. In fact, the bulk of the maxine fauna lives far away from the coast and feeds itself with plancton and minor specimens.

The basic biological clasification of seas is built up by taking into account both waters and bottoms: the *pelagic* province and the *bentic* one. The pelagic province is said to be *nertic* near the coast line and *oceanic* away from it. There is some other «vertical» classification which is mainly defined by the intensity of sunlight penetration: *euphotic* zone, which is widely lightened and does not embrace too low levels in coasts and estuaries due to the so thick density of planctor, *disphotic* zone, which extends beyond the level – 100 m down to - 200 m. and is poorly lightened; and *aphotic* zone, which is completely plunged into darkness and whose fauna consists of detritus-and-other zones' carnivores eaters.

As regards to the littoral, some other classification could be assayed:

1. Supralittoral stage

It is inhabited by beings which can bear long emmersion periods and are able to live off waves' splashing only.

2. Mesolittoral stage

Living beings, which need water permanently but that may resist shortterm baut continuous emmersions are to be found here.

3. Infralittoral stage

Two levels delimit this layer: the upper one is intimately related to the previous stage and its fauna lives in permanent immersion (apart from some exceptions). The lower one lies between – 20 m and – 30 m levels but might reach deeper values. It contains algae and marine phanerogamous plants.

4. Circalittoral stage

It corresponds to the domain embraced by the submarine vegetable meadows' lowest limit and the deepest reachable level for betonic vegetation, though such vegetables may not exist here.

5. Batilittoral stage

It extends down to the lowest depths that are still compatible with vegetable life.

6. Epibatial stage

It generally reaches the limit of the marine continental slope or extends even deeper (this is the Mediterranean Sea's case) down to rather undefined limits. Depending on the slope, this stage is characterized by the kind of existing substracts.

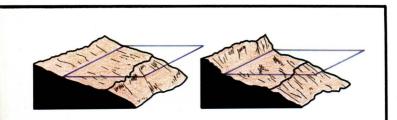
7. Mesobatial stage

It is defined by the existence of terrigen or pelagic sediments and corresponds to the very end of the continental slope.

In relationship to sporting fishing, a proper zonal classification must be carried out in terms of biotopes and biocoenosis. That means, the domain-and its zonal particularities-where submarine life develops and the species that cohabit there. In this sense we shall refer to harbours and bights; submarine meadows and rocky zones; sandy zones; limit of the continental shelf or top level of the slope; and pelajc; coastal and oceanic zones.

HARBOURS AND BIGHTS

Many different biotopes and cosequent biocoenosis are to be found in these ambits. In spite of their diversity, some common characteristics can be enumerated such as rocky zones, artificial breakwaters, muddy bottoms, phanerogamae and algae meadows, sandy sectors and a more or less wide collection of



Diagrams of three floors showing the differences in bathmetry of the floors of the Shelf and Slope, according to the height of the relief.



permanent or seasonal pelagic species. Depths are commonly not very important here. The kind of fishery to be expected here will be defined by the bottoris nature in terms of species and habitat.

SUBMARINE MEADOWS AND ROCKY ZONES

As sporting fishing zone it is the most characteristic and well-known one. It does not always count with the same kind of species, and this fact defines different biocoenosis. Such bottoms are to be found either in bights, harbours and creeks or in open sea, and may reach considerable depths.

Meadows that alternate with sandy or rocky zones are a very interesting kind of submarine prairies. They use to enjoy a sort of biocoenosis which is very attractive from the sporting fishing's point of view.

All coastal or littoral rocky bottoms should be regarded separately from deeper bottoms. Both are such interesting fishery zones that an eventual loss of the lead (it happens very frequently, by the way) is always balanced by the variety and average size of what will be fished.

SANDY ZONES

They extend from inside harbous, bights and beaches to open sea and have big dimensions in certain areas. Likewise, they may extend down to maximal depths on the continental shelf. These are biotopes of great interest to sporting fishers. Although they cannot offer us a wide variety of species, they do produce high-quality specimens.

BORDER OF THE CONTINENTAL SHELF

This region must be regarded as the division between the continental shelf's bottom and the slope. Its average depth may be evaluated in -150 m to -200 m. It is a very interesting fishery zone specially when existing rocky zones. Obviously proper boats must be used to acceed to such bottoms, which sometimes are very far away from the coast line, as well as some navigation knowledge and adequate equipment.

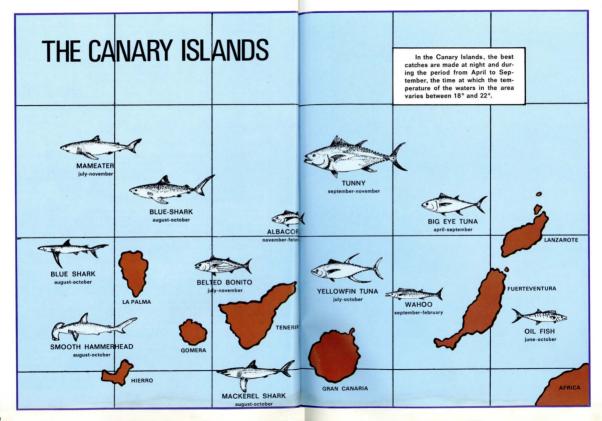
PELAGIC AND OCEANIC FISHERY ZONES

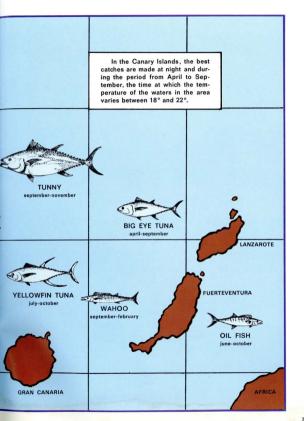
Unlike the demersal fishery, this kind of fishery is not attached to bottom's nature. Each single zone may be eventually suitable to practice the pelagic fishing. It only depends on the season and the existing depth, no matter how far from the coast line it is. As indicated below, an exact knowledge of season; baits, tackles and day times is critical to success.

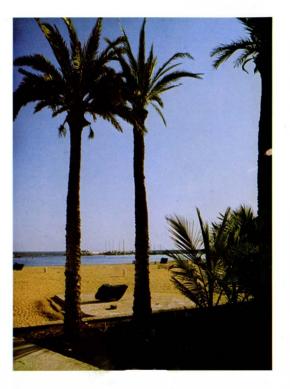
Finally we should conclude that a definite series of species is always associated to a certain kind of bottom as well as to certain fishing procedures, which will be described in next chapters by zones and species.

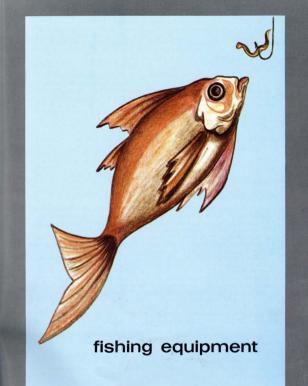
No doubt that the best guarantee of success in each case and region is some proper application of the present information as well of marine and fishery charts.

By means of these pages we shall try to satisfy what we regard as a sporting fisher's major goal. At the same time we are perfectly conscious that such fisher is not thet «fish extractor» that a professional fisher is. Sporting fishing means to some people emotion in fighting against a potential capture, curiosity in classifying what has been fished, tasting one's own prizes, some special sort of navigation after fisheries... These different aspects of the sporting fishing will figure out at some extent in following chapters.









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In the Canary cities there is no difficulty in obtaining any kind of Spanish or foreign fishing equipment.

No exhaustive dotation of fihing tackles is needed, but it should always be composed of sufficient, high-quality articles.

FISHING RODS

As regards to heavy throwing, fishing rods must have a considerable length. Old rods made of bamboo, cane, bambusa or japanese bamboo have been overcome by the fibre-glass ones, either massive or hollow. Being like that, telescopic hollow rods are the best ones at present.

From onshore, a 4.50 m rod is sufficiently adequate to get involved with any kind of minor fishing as well as with heavy throwings while fishing large specimens.

More consistent rods are required to pratice the semi-heavy throwing, which is frequently performed with considerable weights and no need of reaching long distances.

As sais, hollow fibre-glass rods have proved to be excellent. They offer a resistance that is similar to the steel's one. a 2.50 m rod with some robust puntal is the adequate tackle to succeed in such kind of fishing.

On-boat fishing requires strong, short rods ($1.50 \text{ m to } 2^{2}$ m at most) that must have small flexibility and such a robust puntal allows very fast tiron de clavados without flexion This way, any example that may beat the hook, either at a deep level or at a far distance, will be turned over and successfully moved away from any cave where it might take refuge.

This dotation of rodas shows sufficient to practice sporting fishing in the Canary Islands.

REELS

Reels with fixed spindle (no matter if it is a heavy or semi-heavy one) should be used when fishing from onshore. They must have a wide spindle and be made of such materials that prevent them from oxidazing. Marine oxidation often damages mechanisms that otherwise would produce excellent results.

Anyway, reels must be able to lodge more than 200 m of 60/100 nylon line. It means that spindles must be quite big and have adequate characteristics in order to endure any eventual fight with large examples. It may be more convenient to on-boat fishing to dispose of reels with moving spindle, for the boat's movement itself reduces the tackle's length and the weight is always located in depth tackles.

However, on-boat captured specimen will be probably larger ad provoke some previous harder fight against them than else.

DECOYS

A decoy's purpose is to push fished to beat something that looks appealing to them. Fishers' inventiveness has been here more free than in any other field, obviously. When the fisher throws the line form on land and then brings it back by means of the reel, decoys begin to act and thus they present themselves to fishes as easy captures. The fact that any fished species is on the same time a hunting one (this is why they attack anything that may resemle some eventual victim) is to be taken into account here. Golden or silver, long threemetered cucharillas with anchors at their very end (they look like olive leaves and have a shape similar to that of tiny fishes) work successfully. At present decoys can imitable perfectly a wide variety of fishes that are usually swallowed up by the big examples which are being looked for. Decoys should be always protected against marine corrosion.

LINES

Both nylon and dacron lines' thickness is determined by the kind of fishing to be carried out.

A 35 to 50/100 nylon line is sufficiently adequate for from on-land throwing.

On-boat fishing requires a 60/100 nylon line. With such a thickness, dacron lines can be handled more easily than the nylon ones. On the other hand, a dacron line does not get tangled as easy as a nylon one and both of them have the same resistance and thickness.

In shark and tuna fishing, 110 to 120/100 lines are the ones to be used. Such lines are the ones that almost any beginner uses at first.

HOOKS, EXTRATION TACKLES, BUOYS, ETC.

Hooks: a hook's dimensions must be adequate to the sieze of the sought specimen. Biggest, steel-ended hooks are to be used with sharks and barracudas. They should have some protection against corrosion.

Extraction tackles: When fished from on boat, they must be used (with no possible exception). The gaff is the proper tackle for big captures.

Buoys: With some species they should be specially sensible so that any stress on the line can be inmediately noticed. However, sensibility should be smaller with some other sorts of fish so as to avoid being cheated by unreal bites.

Gloves, scissors and hooking pincers must be taken with, as well. And do no forget the fundamental fight tackle if big examples are sought.

SUBMARINE FISHING

In the Canary Islands there are extraordinary interesting zones for submarine fishing, since their water is limpid and thus they have a characteristic wide variety of tepid sea's fishes. But as a matter of fact, submarine fishing means hunting rather than fishing. Therefore it is submitted to several regulations that both prohibit the use of oxigen tottles and determine the allowed mixtures to be used in harpon releases.



BOATS

A list of suitable boats to practice sporting fishing is described just below (from the smallest to the biggest ones). The possibilities that each model offers should be checked and evaluated carefully since an overestimation of them may lead to disagreably dangerous consequences.

CHINCHORROS

They have short lenght and light weight. Propulsion is carried out by means of oars or an outboard motor of low potency. They are only useful for inside —harbours or calm— bights fishing and in some offshore excursion with an exceptionally good weather, at most.

A typical chinchorro may have following characteristics:

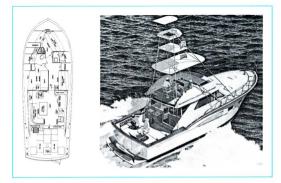
Length	3.00 m
Breadth	1,40 m
Height	0.50 m
Weight	55 to 60 kg
Engine	3 CV

BOTES (boats)

Apart from the chinchorro's conveniences, botes permit coastal fishing in open sea, provided there is good weather.

Such are the bote's typical characteristics:

Length	5.00 m
Breadth	1.65 m
Height	0.73 m
Weight	140 kg
Engine	4 to 9 CV



RAPID MOTORBOATS

This kind of boat is being used more and more for sporting fishing, since it supplies such a velocity that suppresses longterm displacements while looking for the fishing zone.

Their velocity gives them a wide range. However, they do not offer more security than the previous two kinds of boats. Hence, the fishing zones to be recomended here are the same ones as above (with regards to the boat's length). Endlowing characteristics are rather fereuent to be found on such boats.

Length	3.99 m	Length	5.12 m
Breadth	1.70 m	Breadth	2.02 m
Height	0.80 m	Height	0.89 m
Weight	190 kg	Weight	440 kg
Engine	40 to 60 kg	Engine	90 to 115 kg

«CRUISE» BOATS

Such kind of boat is most suitable to acceed to deep-sea sporting fishing. In any case it should be more than 7 m in length. «Cruises» are fast and comfortable vessels. They have generally V-cross shape. Sporting and nautic superior diploms are required to pilot them as well as some complete navigation equipment that enables us to keep sailing without seeing the coast line.

Let us review a typical example of «cruise»:

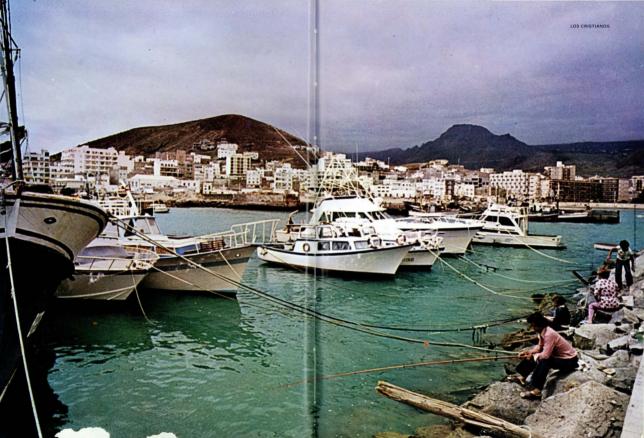
Length	13.40
Breadth	4.00 m
Height	1.58 m
Weight	10,000 kg
Engines	2×275 CV

This model can eventually reach a top speed of 25 knots and an average one of 15 knots.





licences and prohibitions in sporting fishing licences



An official fishing licence is needed to be entitled to practice sporting fishing in Spain. The kind of licence depends on the sort of fishing to be carried out.

1. Class Licence: it authorizes deep-sea fishing from on such recreative boats that figure out in the official list of vessels as pleasure boats.

 Class Licence: it allows marine fishing with non-assisted respiration, either swimming or diving.

 Class Licence: It corresponds to surface fishing (either from onshore or from on boat) that does not require a 1. class licence.

These three kinds of licences are issued by the Subsecretaría de Pesca y Marina Mercante. All of them have the same format and fit certain models which are included in the Regulations with different colours.

We enclose here the application form that should be filled up to obtain any marine fishing licence as well as models of the three mentioned varieties of licence, on whose back a complete list of eventual infractions is to be found.

Following activities are regarded as infractions:

 A non-immediate delivery to Authorities of any object that has been found in the sea.

To be lacking the compulsory licence or using some autonomous diving equipment.

Collecting molluscos or crustaceans whenever such activity is banned.
 Fishing fishes whose size is smaller than the regulation one.

Fishing is prohibited:

To under-sixteen childre.

To professional autonomous divers.

 At a distance of less than 100 m to floating or fixed tackles and of less than 250 m to frequented beaches.

From sunset to sunrise.

Using instruments that professional fishers are not allowed to manipulate.

Following activities are banned:

Borrowing the licence from a third person or lending it to someone.

· Holding a live gun out of the water.

 Such activities that do not submit to rules established by the Recreation Marine Fishing Regulations.

- Using explosives without previous authorization.
- Drawing up plans and maps of marine bottoms.

 Selling what has been fished to a third person or exchanging it for some other species.

No accomplishment of Authorities' requirements.

Giving no help to any person who may need it offshore.

Any sort of Recreative Marine Fishing Licences can be obtained from any Comandancia Militar de Marina. Likely, this is the official institution where any kind of information on fishing regulation as well as any convalidation or renewal of one's licence can be got. MINISTERIO DE COMERCIO

SOLICITUD DE LICENCIA DE PESCA MARITIMA DE RECREO

SUBSECRETARIA DE LA MARINA MERCANTE

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Form for requesting a fishing license

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FISHABLE MARINE SPECIES

harbours and bights characteristic species

Since this zone's land border is artificial, this domain has characterisctics of rocky coast (around its rocky blocks and artificial breakwaters) and of muddy bottoms with generally so contaminated water that it cannot offer much interest to sporting fishers. Obviously, this zone varies a lot if compared commercial harbours with small coastal, clean-watered fishing ports. On the other hand, such a harbour uses to enjoy a wide variety of bottoms that may enclose natural rocky zones, sandy bottoms and meadows, and eventally some kind of seasonal, coastal pelagic forms.

Port zones correspond to unimportant scarce depths, obviously.

000

Next we include a brief account on each most characteristic local species.

Sporting fishing inside harbours or bights can be performed either from on land or on board of chinchorros or on any other sort of small boat. Success possibilities should be regarded in terms of bottom, depth, season and tackles here.

Black-tail, Morme Sabaris can be fished with small rods all year, specially in clear zones in submarine meadows. At the end of the summer, such fishing may be specially successful because of the capture's big quantity and size.

Bases, Shaxpsnouted, Sparus and other similar rocky species are to be fished either with line and cork buoy or with lead foot in harbours.

Any variety of gilt head, bass, yellow tail, which live permanently in similar muddy or sandy bottoms, can be fished by means of a proper rod.

Nevertheless, gilt heads and basses are usually fished in a way that consists of attaching some line-with a hook at its very end, to a buoy and letting it sink. The tackle is revised periodically after that.

1. BASS (Dicentrarcus Labrax) Fam.: SERRANIDAE

Spanish: LUBINA

French: BAR COMMUN

Italian: SCORFANO

German: MEERBARSCH



HABITAT. Littoral. Very coastal littoral on rocky bottoms. Frequently living for several months in the same area. NOURISHMENT: Voracious predator of pelagic schools as well as of littoral crustaceans. REPRODUCTION: January to March. FISHING: Fishing line and gun. SIZE: I m at most. AOUARIUM: No adequate adaption.

2. COMBER (Paracentropristis L.) Fam.: SERRANIDAE

Spanish: LUBINA

French: SERRAN CABRILLE

Italian: SCIARRANO CABRILLA

German: SAGEBARCH

Portuguese: ALECIRM



HABITAT: From the littoral down to deep shelf levels, in rocky and sandy zones. NOURISHMENT: Molluscs, crustaceans and worms. REPRODUCTION: Spring. FISHING: Fishing rod with buoy throwing. Line with several hooks.

3. CONGER EEL (Conger conger L) Fam.: CONGRIDAE

Spanish: CONGRIO

French: CONGRE

Italian: CONGRO COMMUNE

German: MEERAAL



HABITAT: 2 to 200 m in depth on diverse bottoms, depending on depth. NOURISHMENT: Voracious canvore. REPRODUCTION: Summer FISHING: Line tackles. SIZE: 3 m in length at most. AQUARIUM: Good adaption. It grows rapidly.

4. DURDO (Labrus berggylta) Fam.: LABRIDAE

Spanish: MARAGOTA (local name) or DURDO

French: LABRE VIELLE COMMUNE

German: GEFLECKER LIPPFISCH

Portuguese: BODIAO



HABITAT: Coastal. Sandy or rocky bottoms. Sedentary. It keeps restrained to a rather small area usually. NOURISHMENT: Carnivore. Molluscs, in general. REPRODUCTION: April to August. FISHING: Throwing, fishing rod, deep-fishing tackles and submarine gun. SIZE Up to 60 cm.

5. DUSKY PERCH (Epinephelus guaza L) Fam.: SERRANIDAE

Spanish: MERO

French: MEROU BLANC

Italian: CERNIA

German: MEERSCHLETE



HABITAT: Bentonic species. Rocky zones. Very sedentary. Between – 5 m and – 150 m levels or even deeper. NOURISHMENT: Carnivorze. Mainity molluscs and cephalopods. REPRODUCTION: Probaby in summer. FISHING: Submarine fishing. Big difficulties with line and hook tackles. SIZE It may reach 40 kg in weight. AQUARIUM: No problem. Specially good adaption when captured with fish traps.

6. BASE (Diplodus vulgaris) Fam.: SPARIDAE

Spanish: MOJARRA

French: SARGUE ORDINAIRE

Italian: SARGO COMMUNE

German: MATRELLE



HABITAT: Coastal litroral, in rocky and sandy zones or around isolated rocks on sandy bottoms. NOURISHMENT: Carnivore. Small crustaceans, molluscs and worms. REPRODUCTION: Autumn. FISHING: Rod and line with several hooks. SIZE: 30 cm at most. AOUARIUM: Good adaption.

7. MORAY (Muraena helena L.) Fam.: MURAENIDAE

Spanish: MORENA

French: MURENE

Italian: MURENA

German: MURAENE



HABITAT: Coastal species: On rocky bottoms, inside caves, etc. NOURISHMENT: Voracious carnivore. Molluscs, crustaceans and fishes. REPRODUCTION: Winter. FISHING: Gun and line. SIZE: 1.5 m at most. AQUARIUM: Good adaption provided it is a good-quality example. Other species in the same aquarium will be in permanent danger.

8. KING OF THE BREAMS (pagellus erythrinus L) Fam.: SPARIDAE

Spanish: PAGEL O BRECA

French: PAGEL COMUN

Italian: FRAGOLINO

German: ROTER MEERBRASSEN



HABITAT: Coastal bentonic spacies. Battween 15 and 150 m depths. On rocky bottoms at a small depth. On sand or mud at deeper levels. NOURISHMENT: Carnivore. Bentonic organisms. REPRODUCTION: April and May. FISHING: Line with several hooks. SIZE: 60 cm at most. AOUARIUM: No successful adaption.

9. ROCK GURNARD (Trialuporus Lastovitza) Fam.; TRIGLIDS



HABITAT: It frequents depths of 50 meters approximately, with rocky or sandy bottoms NOURISHMENT: Carniverous FISHING: Hook and line or nets. SIZE: 35 cm maximum length.

10. RED MULLET (Mullus barbatus) Fam: MULLIDAE

Spanish: SALMONETE

French: ROUGET BARBET

Italian: TRIGLIA

German: ROTHRART



HABITAT: Bathimetric distribution according to sizes. From very littoral places down to under 100 m levels. On rocky bottoms and at the boundary of sandy zones.

NOURISHMENT: Crustaceans, molluscs, equinoderms and fishes. **REPRODUCTION: April to August.**

FISHING: Line with several hooks and rod. Difficuty in capturing it with sunlight, for it moves away and hides in the bottom. In the afternoon it moves to look for nurture.

SIZE: Max 40 cm.

AQUARIUM: Young specimens adpt well, but senior ones may have some trouble, though they do not suffer any traumatism.

11. BASE (Diplodus sargus L.) Fam.: SPARIDAE

Spanish: SARGO

French: SARD

Italian: SARGO

German: GREIBRASSEN



HABITAT: Coastal species. On rocky bottoms, preferably in zones with natural or artificial caves. NOURISHMENT: Molluses, crustaceans and equinoderms. Specially chitonidae, holothuridae and gasteropods. REPRODUCTOR: April to June. FISHING: Line and guit tackles. AOUARIUM: Not too bad adaption.

12. SEA SCORPION (Scorpaena porcus L.) Fam.: SCORPAENIDAE

Spanish: RASCACIO NEGRO (local name) or SCORPA

French: RASCASSE

Italian: SCORPAENA NERA

German: BARUNE DRACHENKOPF

Portuguese: RASCASSO



HABITAT: Coastal species. Sedentary. It usually inhabits rocky caves. REPRODUCTION: May to August. NOURISHMENT: Very voracious carnivore. FISHING: Throwing rod and deep-fishing tackles. SIZE: Up to 25 cm.



BEACH AND CONTINENTAL SHELF'S SANDY BOTTOMS CHARACTERISTIC SPECIES

Due to water's drag capacity, sandy beaches may occasionally reach important depths. However, species that inhabit sandy or muddy bottoms are very interesting from the sporting point of view, even though the amount of them is not very large. As an example, umbrines can be fished from onshore if water is cloudy or turbid (and even more easily than in any other case).

When these zones are sandy ones, they use to content a great deal of prawns. They are no sporting species, but they can be easily captured by means of trammel-nets and hauling tackles either just beside the coast or in the open sea.

13. KHENENA (Sciaena Umbra L) Fam.: SCIAENIDAE

Spanish: CORVALLO or CUERVO DE MAR

FRENCH: CORB

Italian: CORVO

German: Meerall



HABITAT: Not very deep water, occasionally in estuaries. Rocky bottoms and sandy zones. NOURISHMENT: Little finhes and crustaceans. REPRODUCTION: May to July: FISHING: Line tackles and gun. SIZE: 50 cm at most. AQUARIUM: Very good adaption of young and senior examples. They may manage to reproduce there.

1.4. EEL (Anguila Anguilla L.) Fam.: ANGUILIDAE

Spanish: ANGUILA

French: ANGUILLE

Italian: ANGUILLA

German: FLUSSAAL



HABITAT: Littoral species of both freshwater and seawater. Muddy bottoms and submarine meadows.

NOURISHMENT: Crabs, worms and any sort of invertebrates. It attacks its victims at sunset.

REPRODUCTION: It follows the well-known, complex cicle between the Azores Archipielago and Bahamas.

SIZE: Variable.

AQUARIUM: Very good adaption, even in freshwater aquariums.

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15. SEA SCORPION (Scorpaena Scrofa L) Fam.: SCORPAENIDAE

Spanish: CABRACIO

French: RASCASSE

Italian: SCORPAENA ROSSA

German: GROSSEN DRAKENKOPF



HABITAT: 20 to 200 m depths, in rock; zones with muddy substratum. NOURISHMENT: Voracious carnivore. Fishes, crustaceans and molluscs. REPRODUCTION: May to August. FISHING: Line tackles. SIZE: Max. 50 cm. AOUARIUM: sog od adaption.

16. MEAGRE (Argyrosomus regius) Fam.: SCIANIDAE

Spanisch: CORVINA

French: AIGLE

Italian: BOCA D'ORO

German: ALDER FISCH

Portuguese: CORVINA



HABITAT: Nertic species. Surface and middle-depth water. Generally on sandy and muddy bottoms. NOURISHMENT: Voracious carnivore. Sardines, muglidae and cephalopods. REPRODUCTION: Summer. FISHING: Throwing rod and deeps-fishing tackles. SIZE: Up to 1.5 m.

17. UMBRINE (Umbrina cirrosa L) Farm.: SCIAENIDAE

Spanish: CORVINATO or VERRUGATO

French: OMBRINE

Italian: OMBRINA

German: BART-UMBER



HABITAT: Lonely sedentary species. Sometimes it is seen to inhabit small banks near the coast line. On sandy bottoms, in river mouths and in some littoral salty lagoons. NOURISHMENT: Preferably molluscs. worms and crustaceans.

REPRODUCTION: June.

FISHING. From onshore with fishing rod. Best success with cloudy water. SIZE: Up to 1 m.

AQUARIUM: Young specimens manage to survive for two years. Senior examples only live for some months.

18. GILT HEAD (Sparus aurata L.) Fam.: SPARIDAE

Spanish: DORADA

French: VRAIE DAURADE

Italian: ORATA

German: GOLDBRASSEN



HABITAT: Littoral. Max. depth of – 30 m in submarine meadows. NOURISHMENT: Mainly molluscs and crustaceans. REPRODUCTION: October to December. FISHING: Rod, line, throwing and gun. SIZE: Max. 70 cm.

19. LONGFINED GREY MULLET (Mugil auratus) Fam.: MUGLIDAE

Spanish: LISA DORADA or GALUPE

French: MUGE DORE

Italian: MUGGINE DORATO

German: GOLDASCHE



HABITAT: Littoral species: At a very little depth on muddy bottoms. They use to swin against current in big groups. NOURISHMENT: Small organisms and suspended organic matter. REPRODUCTION: Autumn and winter. FISHING: Rod and line tackles. Good success with marine worms and flour pasts as bait, specially if water is cloudy or it rains. SIZE: 40 cm at most. AGUARIUM: Yey assy daption if convenient acclimatization is carried out.

AddAmow. Very easy adaption in convenient acclimatization is carried t

20. GOLDLIN (Sarpa salpa L.) Fam.: SPARIDAE

Spanish: SALEMA

French: SAUPE

Italian: SALPA

German: GOLDSTRIM



HABITAT: Coastal, gregarious species. Max. depth of – 15 m in rocky zones with a lot of vegetation. NOURISHMENT: Herbivore. REPRODUCTION: September and October. FISHING: Gun and line tackles. Baits of bread and algae. SIZE: Max. 45 cm. AUQJARIUM: Young examples adapt better than senior ones.

21. COMBER (Serranus scriba L.) Fam.: SERRANIDAE

Spanish: SERRANO

French: SERRAN ECRITURE

Italian: BOCACCIA

German: HEILIGBRUT



HABITAT: Coastal sedentary species. Deeper than – 30 m domains in rocky zones and litoral meadows. NOURISHMENT: Voracious carnivore. REPRODUCTION: Hermaphrodite. May and June. FISHING: Line with several hooks and rod. SIZE: 20 cm at most. AOUARIUM: Very good adeption.

22. ELECTRIC RAY (Torpedo Marmorata) Fam.: TORPEDINIDAE

Spanish: TEMBLADERA

Italian: TREMATORE



HABITAT: They live on sandy and muddy bottoms where they bury themselves slightly, lazily awaiting their prey.

NOURISHMENT: Animal or larva detritus and small fish. The main characteristic of the Electric Ray and the Torpedos, both of the Torpedo group, is their electric discharge which they use both for catching prey and as a defense mechanism. They rarely take the hook.

SIZE: Up to 60 cm.

DEEP CONTINENTAL SHELF AND CONTINENTAL SLOPE SPECIES

The concept continental shelf refers to bottoms that reach the limit depth of -200 m. From the sporting point of view, it encloses the kind of seawater where relatively big boats must be used. Although any attempt at trying to delimit marine sectors cannot be very successful, the coastal pelagic fishing should be included here just as the ocean pelagic one, at some extent. Both are practised in this bentonic domain, in the so-called *nertic zone* and *oceanic zone*.

The continental slope begins between the levels -100 m and -200 (batilittoral domain). This biotope is submitted to commercial fishing of dreep crustaceans at present.

The continental slope itself offers hardly any interest to sporting fishers. However, the ledge, which is located at a depth of some -200 m, offers very much interest provided it has a rocky bottom. In such cases, *deep-sea demersal fishing* (it corresponds very much to oceanic pelagic fishing, on which we shall expand later) can be carried out.

Deep continental shelf bottoms use to be muddy and rocky from a certain distance to the coast line on. Rocky bottoms are located at depths of – 30 m to – 80 m. and muddy ones down to the top depth of deep water.

Those sediments formed by a successive accumulation of stones and shells on a substratum which is generally composed of muddy sand are known as gravel.

These bottoms lodge characteristic animal colonies of fixed shape. Inhabitants may sink in the mud or live independently.

In this section we are going to review some deep continental shelf fishes that present sporting interest and live attached to the mentioned environment, as well as some other forms that use to develop nearer the coast.

23. TOOTHED GROUPER (Epinephelus caninus Valenciennes) Fam.: SERRANIDAE

Spanisch: CHERNE

French: MEROU

Italian: CERNIA

Portuguese: MERO



HABITAT: - 100 to - 120 m in rocky zones about the end of the shelf, as well as in banks surrounded by slopes. NOURISHMENT: Very voracious. Fishes and cephalopods. REPRODUCTION: No available data. FISHING: Bottom line with several hooks. SIZE: 1,57 m at most nowadays. Some reported 200 kg examples. AOUARIUM: Decompression kills them immediately.

24. FALSO ABADEJO (Epinephelus alexandrinus) Fam.: SERRANIDAE

Spanish: ABADEJO (local name) or FALSO ABADEJO

Frech: BADECHE

Italian: CERNIA DORATA

Portuguese: GAROUPA AMARELA



HABITAT: Littoral and sublittoral species. Down to – 300 m on rocky bottoms. They usually gather in groups. NOURISHMENT: Cephalopods and fishes. REPRODUCTION: No available data. FISHING: Deep fishing tackles and submarine gun. SIZE. Up to 15 kg.

25. SMALL-SPOTTED DOG FISH (Scylliorhinus canicula Fam: SCYLLIOBHINIDAE

Spanisch: PINTARROJA

French. GRANDE ROSSETTE

Italian[.] GATUCCIO

German: KATZENHAI



HABITAT: Depths between - 200 m and - 400 m, on diversely-natured bottoms. Nocturnal habits

NOURISHMENT: Carnivore, Fishes and invertebrates. In particular hermit crabs, snails and sand worms,

REPRODUCTION: Ovipare with internal fertilization. In sexual activity all year. FISHING: Bottom lines. Best success by night. SIZE: Max. 80 cm

AQUARIUM: Very good adaption. Fertilized ovules develop perfectly.

26. COMMON STINGRAY (Dasvatis pastinaca L) Fam.: DASAYATIDAE

Spanish: CHUCHO (local name) or RAYA PASTINACA

French. PASTENAGUE

Italian: PASTINACA

German STECHROCHE

Portuguese: UGE

> HABITAT: Sandy and muddy bottoms. Sometimes in submarine meadows Depths between - 20 m (in summer) and - 500 m (in winter) NOURISHMENT: Cephalopods, crustaceans and other invertebrates. **REPRODUCTION: Autumn.** FISHING: Deep-fishing tackles, throwing and submarine gun (dangerous). SIZE: Up to 1 m.

COASTAL PELAGIC SPECIES

The species that sporting fishers seek and capture in the littoral or coastal pelagic domain do not live attached to the bottom neither in terms of nurture nor of habitat. Such species inhabit seas that are allocated on the continental shelf. They rarely measure more than 2 m.

Most coastal pelagic species migrate seasonally in a very characteristic way (e.g. they move perpendicular to the coast). This fact explains the seasonal character of this kind of fishing.

Coastal pelagic species approach to the coast during the warm months. In the Canary Islands that means that they do it almost all year unless in the most wiesterly islands which receive cold Atlantic currents.

In winter these species move away from the coast and migrate towards deep waters. In doing this they escape from being fished.

Coastal pelagic fishing can be partised from onshore or several miles away from then coast line. Boats must navigate slowly and with silent engines.

27. MACKEREL (Scomber scombrus L) Fam.: SCOMBRIDAE

Spanish: CABALLA

French: MAQUEREAU

Italian: MACARELLO

German: MAKRELE



HABITAT: Gregarious pelagic species. When spring begins, it migrates along the coast. NOURISHMENT: Small pelagic fishes and planctonic crustaceans. REPRODUCTION: May to July. FISHING: Pelagic line tackles. SIZE: Max. 50 cm. AQUARIUM: Only adaption in big aquariums.

28. LEERFISH (Lichia amia L.) Fam.: CARANGIDAE

Spanish: PALOMETON DORADO

French: LICHE

Italian: LECCIA

German: GABELMAKRELE



HABITAT: Pelagic migrator. Continental sheff waters. NOURISHMENT: Preferably pelagic fishes, sardines, anchovies, etc. REPRODUCTION: Spring, Next to the coast. FISHINC: Spring-table and similar tackles. AQUARIUM: Young examples adapt well, but they are extremely sensible to under 13° C temporatures.

29. YELLOW-TAIL (Seriola dumerilii) Fam.: CARANGIDAE

Spanish: SERVIOLA or PEZ LIMON

RICCIOLA

HABITAT: Good swimmer. Seasonal migrator off the coast down to deeper levels. Young specimens travel in crowded groups and senior ones do it in more reduced groups or even alone. Surface swimming on rocky bottoms in summer.

NOURISHMENT: Predator, carnivore. It runs after cephalopod banks up to the coast, almost.

REPRODUCTION: Spring and Summer.

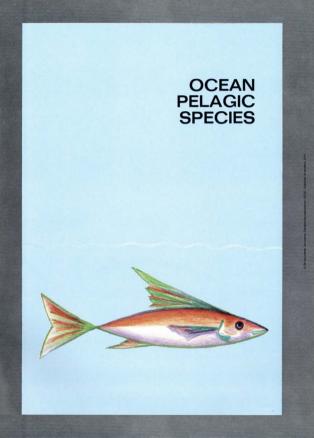
FISHING: Spinning-tackle, pelagic tackles and gun.

SIZE: Max. 2 m.

AQUAIRUM: Quite good adaption, specially with young examples. Big aquariums and over 13.° C temperatures.







The pelagic domain is one of the most interesting zones to practise sporting fishing, since it lodges swimming species that do not depend on the bottom. Such fishing can be only carried out with surface or middle-depth tackles on board of safe, powerful boats.

This domain also contains a wide variety of the so-called oceanic pelagic fishes, which are very goog swimmers and realize large-scale migrations. Tuna and swordfish are species that will reviewed with special attention.

RED TUNA

It is the biggest member of the SCOMBRIDAE family. Its scientific name is *Thunnus Thynnus* (L). It grows very fast. Its geographic distribution embraces all tepid seas and oceans. It carries out migrations of a magnitude that is similar to its distribution's one (e. g: 20 N to 70 N in the western sector of the Atlantic Ocean). Apart from red tuna, there is no other Thunnus species that reaches such a northerly latitude.

This distribution in a so wide range of latitudes is determined by the seas temperatures. Thunnus cannot endure either under 10° C temperatures (this is the actual temperature of the German Ocean in summer) or over 27° C ones (this value corresponds to Caribean Sea water temperature).

30. TUNNY (Thunnus thynnus L.) Fam.: SCOMBRIDAE

Spanish: ATUN

French: THON ROUGE

Italian: TONNO

German: THUNY



HABITAT: Pelagic migrator in small surface banks, looking for over 10°C water.

NOURISHMENT: Very voracious, specially in the inter-reproductive period. Preferably gregarious pelagic fishes in deep-sea waters. They also filter seawater and retain tiny young fishes. They may eat bentonic fishes sometimes.

REPRODUCTION: May and June. FISHING: Diverse surface tackles. SIZE: Up to 3 m. AQUARIUM: No.

NOTE: Blue tuna is one of the biggest species in the Canary Islands. It abounds in the summer months. Tuna fishing is very appreciated both by sporting and professional fishers. Apart from tunny, yellowfin tuna and big-eye tuna can be found in the Archipielago's domain, too.





FISHING

Live baits: red tuna began to be captured by means of live baits in Spain and Portugal in the fifties. This variety of fishing is specially successful with young specimens whose age is 1 to 4 years. Such fishing produced 1300 Tn of fish in 1979.

Surface spinning-tackle: it is very difficult to obtain examples of more than 2 kg in weight with this technique. However, it has recently reached very much importance. Over 9000 specimens were fished this way in 1979.

Hook red tuna can be fished with hook in the Canary-Saharian zone from September until February. Some years ago, this particular kind of fishing seemed rather accidental. However, this zone has become a giant ten-aged tuna fishery of the utmost importance. Weights of captured giant tunas added up more than 1900 Tn in 1979.

BIOLOGY

In its first age, tuna grows up very fast. Its growing process depends on its organic structure just as on the intensity of its nourishment.

As said, very important ictiological exchanges between the Western Atlantic and the Mediterranean Sea take place through the Gibraltar Strait. The Mediterranean Sea might be the most important reproduction area of the Thunnus species and it is probably where most Atlantic tuna species come from (through the Strait, hence).

J. C. Rey defends this hypothesis of exchange through the Strait. It is based on the observed Strait's hydrological structure as well as on its currents dynamics. He reaches following conclusions:

1. Intrusion of Atlantic surface water into the Mediterranean Sea.

2. Outlet of Meditterranean water as deep currents.

3. Surface coastal cross-currents on both sides of the Strait.

Their intensity oscillates with tides.

This exchanging dynamics through the Strait make us think that reproductive tunas cross the strait from the Atlantic Ocean to the Mediterranean Sea while young tunas do it the other way round. In both cases, tunas travel with tepid currents.

WHITE TUNA OR ALBACORE

It is known as Thunnus Alalunga and has a distribution that extends on the domain defined by Ireland, Azores and the Canary Islands. Canary local designations for it are «albacora» or «bonito del norte».

FISHING

Until 1953, albacore had only been fished by means of spinning-tackles. At this point live baits began to be used. At present, albacore is the most important Spanish pelagic species.

BIOLOGY

Albacore's distribution spreads over all warm seas. In the Atlantic Ocean it is to be found between the 55 N parallel and the 45 S latitude. In this huge area, the distribution of young and senior examples is rather unequal.

Senior albacores prefer the warm waters of the 40 N to 30 S domain, while young specimens grow up out of this zone. Two large groups of albacores are regarded separately: those who live above the 10 N latitude and the ones who live south from the 10 N parallel. In general terms, young specimens swim in the surface or gathering into schools, but senior examples prefer deeper waters (between - 50 and - 150 m).

The top reported size ever captured is 122 cm in length and about 38 kg in weight. Albacore's life seems to last some 15 years.

Albacore is an omnivorous species. However, it always repeats a very simple nutritive scheme: its nourishment reaches top activity at sunset, at sunrise and just after noon. By night they seem to look for deeper lavers.

Albacore's migrations depend on its age. Until the age of five, it descends from the North Atlantic down to the Biscay Gulf in spring.

At the end of May, large albacore banks can be seen about the Azores'latitude. They swin on surface and coat themselves with tepid currents that move southwards at that time. Average values for these currents'temperatures are 17 to 2^{+1} C. The fact that the albacore's body temperature is some 5 or 6°C higher than the surrounding water's one reveals much about this species'physical and metabolic activity.

By now we have enough evidence of some existing reproduction and laying place somewhere between the Canary Islands and the Savage barren islands, which are located at the north of Tenerife.

A communication on the albacore deep-sea sporting fishing and this species migratory habits was presented to the «Jornadas Nacionales de Turismo Náutico», which took place in Santander in June, 1981.

31. ALBACORE (Thunnus alalunga) Fam.: SCOMBRIDAE

Spanish: ALBACORA

French: GERMON

Italian: ALALUNGA

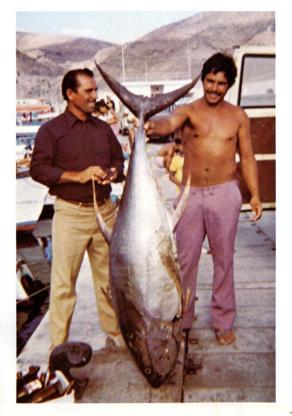
German: WEISER-THUN

Japanese: BIN-CHO-BIN-NAGA

> HABITAT: Deep-sea pelagic environments. They swim between – 1 and – 50 m depths. NOURISHMENT: Carnivore. Small gregarious fishes, macroplanctonic crustaceans and cephalopods. REPRODUCTION: May to June. Near the Canary Islands. FISHING: Sufface tackles. SIZE: Max. 110 cm. AOUARIUM: No.







32. BIG EYE TUNA (Thunnus obesus) Fam.: SCOMBRIDAE

Spanish: ATUN OJUDO (local name) or ATUN PATUDO

French: THON OBESE

Japonese: MEBACHI



HABITAT: Deep sea and warm water. Vastly distributed all over the Atlantic Ocean.

FISHING: Very frequent success if local «rabil» or «albacora» tackles are used. SIZE: Max. 1.90 m. Generally between 50 and 160 cm.

33. YELLOWFIN TUNA (Thunnus albacores) Fam.: SCOMBRIDAE



HABITAT: It abounds in tropical waters all over the Atlantic Ocean. Spiridle-like shape. Small head and little eves. Back and anal fins longer than in any other Thunnus species. First dorsal fin is lemo yellow coloured. Second dorsal fin and the anal one are yellow. Yellow pinnulae with black edges. FISHING: Long line, hoop and live bait. Very interesting sporting fishing in summer.

NOTE: very appreciated fish meat if canned or just fresh.

34. THONINE (Euthynnus aletteratus) Fam.: SCOMBRIDAE

Spanish: BACORETA French: THONINE

Italian: TONNETTO

German: FALSCHER BONITO



HABITAT: Coastal water with strong currents, next to islands and in deep levels. Migrator, NOURISHMENT Prelagic fishes and larvae. REVIDOU/IDN: Jaylo to August FRUIDDU/IDN: Jaylo to August SUZE: Up to 80 cm. act tackies. On the continental shelf. SUZE: Up to 80 cm. AQUARIUM: No.

35. BELTED BONITO (Sarda sarda Bloch)

Fam.: SCOMBRIDAE

Spanisch: BONITO

French: BONITE A DOS RAYE

Italian: PALAMITA

German: UNECHTER BONITE



HABITAT: Pelagic migrator. It forms banks on costal surfaces. NOURISHMENT: Small clupeids and other pelagic fishes. REPRODUCTION: Spring and summer. FISHING: Sator artificial live-baited fishing tackle. SIZE: Up to 80 cm. AGUARIUM: No.

36. LITTLE TUNNY (Euthynnus quadripunctatus) Fam.: THUNNIDAE

Spanish: BACORETA (local name) or BONITO DE ALTURA

French: THONINE

Italian: TONNETTO

German: FALSCHER BONITO

Portuguese: ALVACORA



HABITAT: Frequently in coastal waters with strong currents. Typical species of warm and tepid seas.

NOURISHMENT: Predator. Pelagic fishes. REPRODUCTION: July and August.

REPRODUCTION: July and August

FISHING: Surface tackles. Light equipments are the adequate ones. They serve as bait when large fishes are sought. They provoke very interesting fights. Little tunnies banks use to point at the existence of some bigger species around.

37. PLAIN BONITO (Auxis thozard) Fam.: SCOMBRIDAE

Spanish: MELVA

French: BISE

Italian: TAMBARELLO COMMUNE

German: MEERRABE



HABITAT: Pelagic migrator. NORISHMENT: Pelagic fishes. FISHING: Surface tackles. REPRODUCTION: June to September. SIZE: Up to 50 cm. AQUARIUM: No adaption is possible.



SWORDFISH

Swordfish is the only member of the XIPHIDAE family. Its scientific name is Xiphias Gladius L. It is an animal which is capable of realizing long-scale migrations and thus it is very spread all over world's seas and oceans, though they are mostly located in tepid waters.

In the Atlantic Ocean, it can be found in the German Ocean as well as about the 45 S latitude, and obviously anywhere in the Mediterranean Sea.

FISHING

Until 1968, swordfished had only been fished in southern latitudes in Spain. Later on, this fishing has been gaining much interest.

The ideal zone to practise such fishing extends from the continental shelf's edge (-150 to -200 m in depth) to under -200 m depths on the continental slope. Zones with smooth, perpendicular-to-the coast line slopes are the best ones since they intersect the migratory trajectories of the swordfish.

Optimal fishing happens at sunset by means of «scannings» on the selected zone at low speed and navigating perpendicular to the coast on a zigzag course.

The fact that the powerful swordfish tries to deepen when tried to be captured supplies this kind of fishing with lots of emotion. the tackle must be always ready to this fight, which is the most exciting part of sporting fishing, as said. The boat must be equiped with a sufficient amount of bait. It will be scattered all over the zone in several stages. The equipment must be adequate to perform deep-sea fishing.

38. SWORDFISH (Xiphias gladius L.) Fam.: XIPHIDAE

Spanish: PEZ ESPADA

French: ESPADON

Italian: PESCE ESPADA

German: SCHWERFISCH

Japonese: MEKAJIKI



HABITAT: Lonely pelagic migrator. On bottoms of a depth of -400 to -500 m, but restraining to a surface layer at -5 m. It descends to the bottom when it looks for fish banks. Water temperature between 17 and 20° C. NOURISHMENT: Very assorted. Related to its voracity. Cephalopods.

REPRODUCTION: June and July.

FISHING: Surface tackles.

SIZE: Max. length of 3.5 m and up to 300 kg in weight. AQUARIUM: No.

NOTE: Most successful fishing in autumn and winter.



39. MAMEATER (Carchavodon Carchavias) Fam.: 5

Fam.: SALACIAE

Spanisch: SARDA (local name) or JAQUETON

French: REQUIN

German: SCHILZANHAI

Japanese: TORA ZAME

Portuguese: TUBARAO



HABITAT: Lonely pelagic species. Deep-sea waters, sometimes next to the coast. Tropical and subtropical seas as well as very warm waters. NOURISHMENT: Very voracious. SIZE: Max. 10 m.

40. MACKEREL SHARK (Isurus oxyrinchus) Fam.: LAMNIDAE

Spanish: JANIQUIN (local name) or MARRAJO

French: OXYRHINE

Italian: MAKO

German: HERINGSHAI

Portuguese: ANEQUIM

Japanese: MAIRA



HABITAT: Lonely epipelagic spacies, Deep sea. NOURISHMENT: Carnivore, predator. It lives off clupeids and scombridae banks mainly. REPRODUCTION: Almost all year. FISHING: Spinning-tackle, surface tackles and deep long line. SIZE-Up to 4 m. 41. WHITE MARLIN (Tetrapterus Afbidus)

Fam.: ISTIOPHORIDAE

Tall. ISTICTIONIDAL

Spanish: MARLIN BLANCO (local name) or AGUJA BLANCA

French: MAKAIRE BLANC

Japanese: NISHIMA KAJIKI

> HABITAT: Migratory pelagic species. Wide spread. It inhabits deep waters and provoke exciting fights once hooked. Fishing a marlin is always regarded as a big event.

> NOURISHMENT: Fishes and cephalopods (squids), depending on the zone.

FISHING: Line and reel. SIZE: Max. of 2.50 m in length (including its face).

42. MEDITERRANEAN SPEARFISH (Tetrapterusbelone)



Italian: AGUGLIA IMPERIALE

> HABITAT: Migratory pelagic species. Very unusual. Only seen in the Balearic Sea, Adriatic Sea, Tyrrhenian Sea and Jonic Sea.

> NOURISHMENT: Carnivore, predator. Mainly clupeiform agujas and cephalopods.

FISHING: Pelagic tackles. SIZE: About 2 m at most (including its face). AQUARIUM: No.



HABITAT: Very spread all over the tropical seas. Very interesting species from the sporting point of view. Temperatures between 22 nad 24° C. FISHING: At surface with spinning-tackles. In Hierro it is captured with harpoon in summer.

SIZE: Blue-coloured and blanck-stripped. Ordinary weights of 30 to 40 kg. According to e. Henningway's opinion, it is the most delicious cooked sporting fish.

44. BLUE SHARK (Prionace glauca L.) Fam.: GALEIDAE

Spanish: QUELLA (local name) or TINTORERA

French: REQUIN BLEU

Italian: PESCE CANE

German: BLAUER HAI

Portuguese: GELHIA

Japanese: AOZAME



HABITAT: Cosmopolitan species of warm water. It abounds in the Canary Islands all year. NOURISHMENT: Pelagic fishes and cephalopods. FISHING: Surface tackles and deep long line. SIZE: Max. 3 m.

AQUARIUM: No.

NOTE: From the sporting point of view, a record-sized blue shark was captured by means of allowed, conventional procedures in the Canary Islands several years ago.

This challenge was achieved by John Nixon at the tackle, J. Holmes as pilot and owner of the yacht «XIPHIILAS» (it was the first fully-equiped boat that ever operated in our Archipelago) and C. Roncoruni, who is a representative of the International Game Fishing Association and very fond of this sport, of course.

Blue sharks are rather common here. A record capture is available to any fisher even though they are only equiped with some light tackle. Both preliminary operations before fishing and the selection of proper baits are activities that may supply such an excursion with great amusement.



45. OPAH. KING FISH

(Lampris regius or Lampris gutlatus)

Spanish: PEZ PRINCIPE or LUNA REAL

French: CRISOTOSE OPAH

German: GOTTESLACHE OPAH

Portuguese: PEIXE CRAVO

Japanese: MANDAI

> HABITAT: Tropical seas and warm waters. On – 50 to –400 m bottoms. It ascends to the surface by night sometimes. REPRODUCTION: Not much known about it. FISHING: Long line: It is an excellent dish. SIZE: Characteristically coloured: dark blue back with some silver stains and violet irrisons. Fins and jaws are rose or dark red.

46. BLEFISH (Pomatomus saltator L) Fam.: POMATOMIDAE

Spanish: CHOVA (local name) or ANJOVA

French: TASSERGAL

Italian: BALLERINO

Protuguese: CHOVA



HABITAT: Coastal pelagic species. To be found on banks at a depth between – 10 and – 200 m. NOURISHMENT: Very voracious predator. Sardines. REPRODUCTION: May. FISHING: Spruning-tackle and surface tackles with steel end track, since can divide up any kind of nylon with its teeth. SIZE: Up to 1 m.

47. BARRACUDA or SEA PYKE (Sphyraena Barracuda)



48. DOLPHIN-FISH (Coryphaena hippurus)

Spanish: DORADO or LAMPUGA



HABITAT: It inhabits all tropical seas. It abounds in the Canary Islands in summer.

NOURISHMENT: Flying fishes (they abound here, too).

FISHING: Spinning-tackle. Since it remains under floating objects, it bites the kook when the spinning-tackle is moved by. Spectacular fishing due to its marvelous colours (bluish green back, yellow fins and golden irisations). SIZE: Un to 1.80 m.

49. SEABARD FISH (Lepidopus caudatus Eof.) Fam.: GEMPYLIDAE

Spanish: PEZ SABLE



HABITAT: Depths of – 200 to – 300 m. It has no skin scales. Very long and narrow shaped Big-eyed. Very sharp teeth. NOURISHMENT: Very fast swimmer. Smaller fishes. FISHING: Fishing lines with aquids, jurels or mackerels as baits. SIZE: 1 to 2 m. 50. SNOEK (Nesiarcgus Nasutus. Johnson) Fam.: THYSITES

Spanish: PEZ CONEJO



HABITAT: Migrator. It abounds in the Canary domain in spring and winter. NOURISHMENT: Sardines, jurels and small Lampanyctii. It has powerful jaws and sharp, strong teeth. Bluish black coloured with silver irisations. FISHING: Sprining-tackle and line. At a depth of -50 to -100 m with sunlight, but deeper than that by night. At some 5 miles away from the coast. SIZE: It may reach 1 m, inlength.

51. OIL FISH (Lepidocybium Flavo-brunneum. Smith) Fam.: GEMPYLIDAE

Spanish: ESCOLAR DE GUINEA

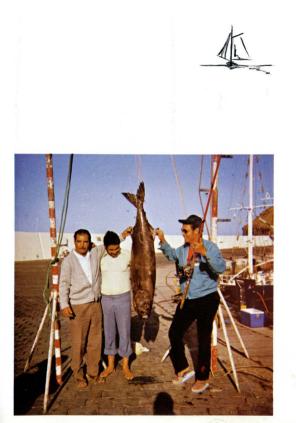


HABITAT: Deep waters. Preferably at -100 to- 200 m on the continental ledge. Strong canines in its jaws. Its meat and oil provoke purging effects if not adequately cooked.

NOURISHMENT: Smaller fishes.

FISHING: Very interesting fishing by night. Good fighter. Most successful search at -100 to- 200 m depths.

SIZE: Up to 1 m in length and 40 kg in weight.



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deep-sea sporting fishing oceanic pelagic species



This method consits of a superficial dragging of double hooks. They are furnished with some special decoys that hang from a line which is composed of three tracks made of different stuff and thickness. An appealing red or bluecoloured ribbon is attached to each hook, so they agitate when the boat moves on.

Live-bait fishing

Live-bait fishing should be performed with stopped boat and 2.5 to 5 m —in—length thick, resistent fishing rods. Hooks must be single ones and they should be baited with diverse live fishes, mainly anchovies, sardines, chicharros and so on (they have been kept in special tanks before that).

Tanks are very critical to the bait. A continuous, very active renewal of water must be done. All the same, such renewall should resemble the natural renewing process that takes place in the fish's original environment. An excessive difference in the temperature and salinity values to the primitive ones or a different oxygen concentration might lead them to death. A too high concentration of fishes in the tanks can be deadly too.

Pumps in charge of the water renewal serve as well to produce some streams of water around the boat that excite fishes and cover up fishers. Behind these streams, the fisher places himself with a long fishing rod and the corresponding live bait. When some tuna is tried to be fished, some previously tanked fishes are thrown to the sea so as to attact any eventual capture better than by means of baits only.

dangerous fishes in sporting fishing

There are a few poisonous species in our littoral that any sporting fisher must know, though eventual accidents caused by them rarely have mortal consequences.

Most important and well-know biointoxications are those provoked by some fishes organs like *fishbones, spikes, teeth*, etc. They may be able to inoculate its victims with poison through their injuries.

Fishes poisonous organs —and mainly fishbones— correspond to bony radii at the back and pectoral fins as well as some opercular fishbones.

Poisonous glands are allocated at the base of such bony configurations. Toxins are inoculated through longitudinal furrows that exist on such bones.

No doubt that poisonous fishes are comestible. There is no danger in eating them, since the poison is *thermolabile* that means that it disactivates due to the cooking warmth, and it is restrained to the related fishbones.

The only remaining danger that exists comes out when the fish is manipulated while being fished or selected or whenever there is some contact with it when it is still row.

We can summarize now the list of poisonous species as this:

Elasmobranguidae fishes

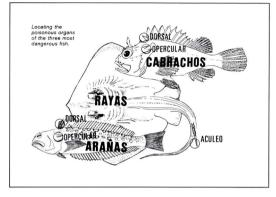
DASAYATIDAE

Their tail is the poisonous organ. There the so-called «aculeum» (a strong toothed fishbone) lodges a poisonous glandle that looks like a soft spoon. No doubt that the most dangerous species here is the *common stingray* (Dasyatis pastinaca). The main precaution to take into account is to cut off inmediately its whole tale.

Teleostean fishes

MURENIDAE

Teeth and therefore their bites are the dangers that this species supplies. The fact that they have great vitality even after having been fished must be taken into account so as to avoid unexpected disagreable surprises. Best precaution against *morays* (Muraena helena) is to make a longitudinal cut on their mouth so as to section their jaws muscles and disble them to bite anymore.



SCORPAENIDAE

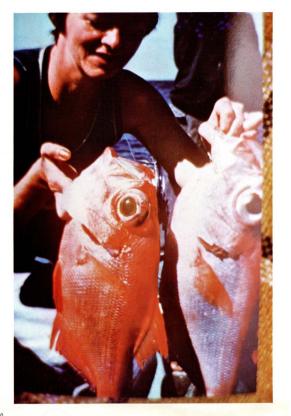
This genus has a variable amount of toxic fishbones: generally, its first twelve dorsal fin's radii, three fishbones on its anal fin and two other ones on its ventral fins. Sea scorpion and other species belong to this family, as said.

TRACHINIDAE

Opercular and first back fin's fishbones are the dangerous ones.

Sea spiders (Trachinus araneus) are no doubt the most toxic fishes that can be captured and manipulated in our seas.

The precautions to adopt are the same as mentioned before: cutting all dangerous fishbones and throwing them away as well as manipulating the fish with metal pincers.





sea-fishing itineraries in...



THE CANARY ISLANDS





SEA-FISHING ITINERARIES IN THE PROVINCE OF SANTA CRUZ DE TENERIFE

To all fishing enthusiasts going to the Canary Islands we especially recommend Santa Cruz de Tenerife; once there you can rent a vehicle and take the following itineraries.

1. FIRST ITINERARY

Leaving from Santa Cruz we'll visit Anaga Cape, some 20 km distant to the northeast; there we cast the line from land; the bait to use is the sea or earth worm, easy to get in the specialised shops; we can also use little mollusc taken out of its shell which we find on the shore in order to fish with a running lead cast.

Up to Illeste you can drive and then you take some fairly good roads to Roquete Promontory. Once there it really depends on the physical training of each fisherman in order to go on up to the capes of Antequera or Anaga, where he can find a wide fishing-ground with plenty of sheep's head which bite well at dusk. Big gilt-head and some conger can bite as well. To go back to Santa Cruz we can easily hire a ship in the small place San Andrés; we sail past the Organos Promontory, and if we want, we can go back to the northeast passing El Roquete and Anaga to Roque Bermeja, a small island lying at the extremity of Tenerife. Everywhere in this region we can use the fishingline for streaming, being nearly absolutely sure to get some bites; in autumn we might catch some bluefish, bonito and evens some big tunnyfish.



2. SECOND ITINERARY

Starting again from Santa Cruz on the already mentioned northeartern road we can go to Bailadero and from there on a tortuous road down to Taranana, from where fairly good roads lead to the sanctuary of Ntra. Sra. de Begoña near Almáciga with Baja Negra and Punta de Santiago —the two extremities of a wide and wonderful fishing—ground, where the fisherman can angle from the coast and where there are abundant species obtainable by the sportsman. Of course the possibilities are even better, if you fish from a ship, either with deep sea gear or with a fishing–line for streaming; we especially draw the enthousiasts' attention to the places in the northeast like Roque de Fuera and Roque de Tierra where tumy–fish often pass.

3. THIRD ITINERARY

We advise the fisherman who wants to catch big specimens that he should head for the south or southwest of the island. The new motor-way of the south takes you quickly to the port. Los Cristianos (90 km), where you can find several sport shops specialised in equipping the fisherman with everything he needs.

In order to profit from sport and landscape we advise you to go to the southern part of the island on the interior road through Bosque de la Esperanza and Valle de la Orotava up to the slopes of the Teide and Montaña Blanca; on account of its beauty it is advisable to climb up to the refuge Altavista at the foot of the Teide and to the lce Cave; if you want to go up to the Teide summit you'll take the cableway recently put into service.

From the National Parador of Cañadas at the foot of the Teide a winding road leads down to Aguilaflor and Granadilla and from there you reach Playa de las Americas and los Cristianos, both situated at the seaside and with magnificent hotels a good starting point for our fishing excursions.

4. FOURTH ITINERARY

From Los Cristianos the fisherman has countless possibilities (according to the season). In autumn, winter and spring it is advisable to make one of the expeditions to the southern point, where sharks can be caught with fresh meat and steel-tipped gear.

Travelling again by ship from Los Cristianos to San Sebastian de la Gomera sharks exceeding 200 kg can be found, practically half way in what is called the straits between the two islands; we bait the waters first and let us drift then.

Normally the inexperienced fisherman, rod in hand sitting on his «fishing chair» is told by experts the necessary details about how to proceed; as a general rule we must bear in mind that the line mustn't be loose so that the fish might not escape.

5. FIFTH ITINERARY

From Los Cristianos it is another day's journey on land or sea to the Teno Promontory in the southwest of the island. In this region we'll see the «Gigantes», the steepest cliff of the whole island with 300 or 400 meter high rocks; from the vessel near the cliffs we'll fish the delicious «palletes» which are fried and served with pototeos (wpaps arrugdss) — delightful and typical meal.

From Gigantes we can take our ship to Teno tip to fish there the barracuda, near the coast, at half-depth, between La Loja de Mero and La Gabiota Promontory, not far from the lighthouse, a dangerous zone, where we must sail carefully, on account of the countercurrents which might cause trouble to the improvident seafarer.

In this region we use deep sea gear and fresh meat, except in midsummer, when the fishing-line for streaming might be used for all kind of tunnyfish with ondulating spoon bait with one hook and artificial fish.

Many fairly good roads lead to the Teno Lighthouse, the general embarcation point used by the fisherman; on the way we come across villages surrounded by woods and mountains like Masca, Cañizal, Alto, El Palmar, Teno Alto; we embark in the lighthouse village Teno.

From Teno Cape we'll go back to the capital via Punta de Teno, Buenavista, Garrachico, Icod to sea there the millenary dragontree, unique of its kind in the world.

In Icod we can choose between two alternatives. We can take the high road through leafy pine forests all over the Orotava Valley or the low road along the coast to reach the cosmopolitan town Puerto de la Cruz.

6. SIXTH ITINERARY

Being in Tenerife (by ship, sailing from Alcalá de Guia de Isora or from Los Cristianos; or by air to land in San Sebastian de la Gomera) the fisherman should get to know the island Gomera, at whose shores the abundance of all the before mentioned fish species is remarkable.

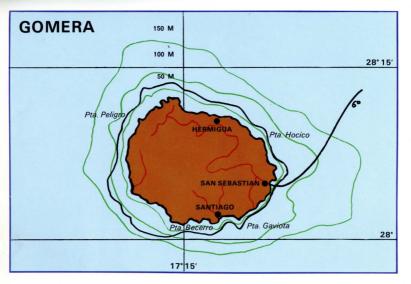
This proves the influx of fishermen from Tenerife on each Sunday, who literally invade the coast.

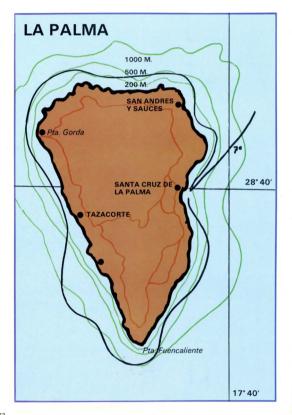
Maybe the southeastern tip of the island, just attainable by ship that has to be rent in the capital San Sebastian or some nearby village, is the most interesting region for the visiting fisherman: there are plenty of «hammer sharks» near the cliffs and other species which will make our fishing days unforgettable. The coastal waters all along La Gomera are aproximately 20 m deep, very favourable for underwater fishing.

7. SEVENTH ITINERARY

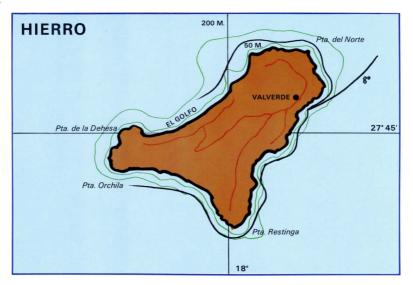
The province of Tenerife also offers good possibilities for amusement fishing around the Island de la Palma, where it is a tourist's must to see the Caldera de Taburiente (recently repopulated with Spanish ibex). Around this island in the most western part of the Canarian Archipelago there are the coldest waters and it is logically exposed to the countercurrents from the Atlantic and the African Continent, but inspite of that, and only, if we sail more days, we will find some tunnyfish over 300 kg, and esplecially bonito. When coming back to the Island de la Palma we must not omit to get some bottles of the picturesque «mojo canario», with one, two or three stars according to our preferences, hot or less savoury; it seems that this culinary addition is more properly and genuinely seasoned there than in any other place of the Archipelago.











8. EIGHTH ITINERARY

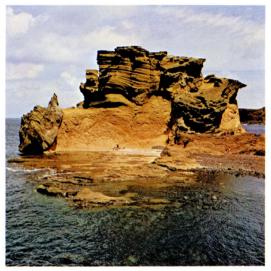
Perhaps the most important fishing expedition on the sea that can be made in the province of Tenerife is the trip —rapid if possible— up to the outskirts of the Island Hierro; it is also advisable to sail from the port Los Cristianos and while travelling to use the fishing-line for streaming on the surface with big spoon bait and strong lines 80×110.7100 at least).

The northern region of the Hierro Island and the one known as Restinga de Hierro is the aim of this expedition. If you sail at a speed of 4 to 6 knots across these waters with one fishing-line on the surface and another one at half depth (therefore with a lot of lead), you'll mostly have large bites of fantastic cathead, tunnyfish, bonito and even great bluefish. It is possible to take fresh provisions aboard in Valverde. Profitting from the day's run back to Tenerife you can again try the fishingline for streaming.

SEA-FISHING ITINERARIES IN THE PROVINCE OF LAS PALMAS DE GRAN CANARIA

1. FIRST ITINERARY

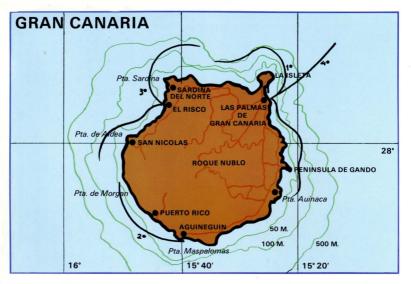
a) Once in Las Palmas de Gran Canaria, the capital of this province, connected to the peninsula by numerous flights and regular shipping lines, we'd suggest to the sportsman to spend the first days in the capital with its many hotels and the magnificent Puerto de la Luz, from where he can undertake several sporting expeditions at moderate prices, already commercialized and with



daily departures. It is quite compatible with the seatrips to rent a car in order to visit the surroundings of the capital without forgetting the famous Roque Nublo, in the centre of the island, a most original stone configuration of huge proportions.

If we want to accompany on their trips the professional fisherman who anchor in the Playa de las Canteras, we'll spend in their company pleasant and delightful days in the northwestern waters.

If the wind is unfavourable from west or northwest, it is convenient to choose one of the trips on the western coast, which seems to be more sheltered from bad winds. In any case, it is useful, to have light fishing lines for streaming (for small tunnyfish) and deep sea gear for fishing in deeper waters, with some meat. which is always provided by the proprietors of the vessels for hire.



b) From the coast of the canning-factory-zone in the western part of the capital it is possible to cast out the line or to fish with a buoy; you can get magnificent sheep's head, gilt head and at dusk many more species, baiting with common prawn or shrimp or dried tunnyfish.

You can spend pleasant days casting the rod on any pebble beach with strong waves.

2. SECOND ITINERARY

From Las Palmas we take the eastern road of the island which has been converted recently into a wonderful motor-way, and we get to Maspalomas with its modern hotels, from where we make the first great-see fishing excursion in Gran Canaria. Likewise, we suggest to go on from Maspalomas to Argueniguín, a fishing village, where it is quite easy to hire a vessel of different tonnage and draught at a moderate price. With the fishing-line for streaming to the Mogán promontory — a stormy and therefore by minor tunnyfish frequented region—we'l spend pleasant fishing days.

Between Argueniguín and Puerto de Mogán a well-equipped and complete sporting harbour has been installed recently (Puerto Rico), where we can easily find a vessel of greater tonnage, in order to make at rip out to sea towards the southeast, to catch the sword-fish and some big tunny-fish. In all these places, if we fish together with the professional seafarers, who have the wellfrequented spots at their finger-tips, we can catch great sheep's head, conger, bleak and even some big halibut and sea-bass.

3. THIRD ITINERARY

From Las Palmas we take the road to the northern and western coast to Guia, Galdar, Agaete and el Risco, just the right places to embark on a trip and to cast out the line from land at the same time.

Near Guia is Sardina del Norte; with its lighthouse it is the most northwestern tip of the island and a frequent meeting-point of many migratory pelagic species which are easy to catch from the coast or preferably from any small vessel hired in the mentioned place.

From the lighthouse towards the south the coast is specially rugged, offering numerous well-frequented hiding-places for fish; it is therefore ideal for underwater fishing and also for fishing with a floating buoy; we best enclose first the fishing ground.

From El Risco we take the road to San Nicolás and reach after 16 km a crossroad where we turn to the right and approach the coast and a promontory, which forms the occidental extremity of the island, and where you might obtain largest catches cast fishing line from land with heavy gear.

Our stay in Gran Canaria must not end without visiting the interior, the Firgas sources and the Snow-Well, which we reach on winding, but fairly good roads.







4. FOURTH ITINERARY

Of the islands of the Archipelago Fuerteventura is the driest and less fertile one. We reach its capital, Puerto del Rosario, by air or regular shipping lines.

The fisherman can cast his line right outside the capital, preferably at dusk or night, while remaining at the shore. If the would rather hire a vessel, which might be easily obtained, he mostly head towards the north, as the waters surrounding the northern tip of the island and the small island Lobos situated there have great abundance of fish, either migratory pelagic species (tunnyfish in general) or rock species which enter well into the deep sea gear. This place is also well suited for underwater fishing. We suggest that the fisherman stays in the village Corralejo (there are small inns and some hotels are being built). It is easy to get provisions there and the important fishing grounds can be quickly reached. It is about 40 km to the north of Puerto del Rosario.

You must not leave Fuerteventura without visiting the dunes and volcanoes in the desertlike region; frequent excursions are organised right from the capital itself.

5. FIFTH ITINERARY

Lanzarote

This island offers many possibilities to the fisherman, whether he angles or prefers underwater fishing.

We'd advise the underwater fisherman to go to the regions of Playa Blanca (in the southern bay) with the clearest water in the world, as the anchor of any vessel can be distinguished 40 m deep. We reach the beach per road (44 km from the capital Arrecife) and find there plenty of halibut, sheep's head, false codfish, jurel, etc. On the seabed are white rocks, in which countless lilac seaurchins hide, whose stings are very painful; any contact should therefore be avoided.

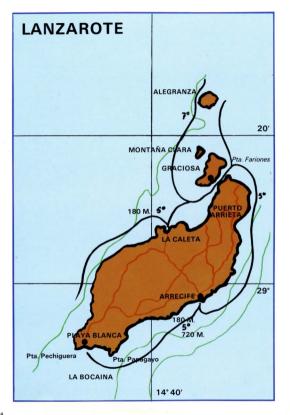
Lanzarote, too, offers plenty of possibilities in the north (in the village Caleta, 18 km from Arrecife) to the underwater fisherman with a similar fauna as the above described.

Finally towards the north in Orsola, 34 km from Arrecife, sailing to the east coast, we'll find easily attainable and rich grounds, too. Likewise, you can rent a vessel for underwater fishing from Puerto Arrieta (on the road from Arrecife to Orsola), sailing in this case to the north-north-east with similar fishing grounds.

6. SIXTH ITINERARY

The angler in Lanzarote must plan his undertakings from Arrecife to Puerto Arrieta.

The waters to the south-southwest of Arrecife, the nearest ones to the African Continent have plenty of great spotted dogfish and flying fish, which can be caught from the anchored vessel.

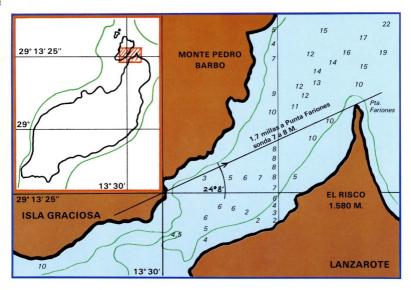


Days of rest from fishing should be dedicated to a visit of Jameos del Agua with its electrical installation and to the Cueva de los Verdes without forgetting the volcances enclosing unforgettable remembrances for the tourist.

7. SEVENTH ITINERARY

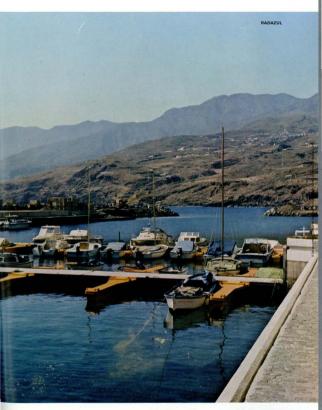
This may be the most important expedition from Lanzarote. We set out from the capital or from Puerto Arrieta and sail to the northern zone of the Canarian Archipelago past the islands Graciosa. Montaña Clara until we reach Alegranza island — a very adequate zone for underwater fishing, being on the passage of the migratory species.

All kind of tunnyfish form a magnificent attraction for the fisherman throwing his line, either on the surface or at a slower pace in the depth; likewise the ship might be stopped and deep sea gear be used for the many types of tunnyfish, which abound there.



		SCALE OF WINDS	
No. on the scale	Denomination	Observations on land	km/h.
0	CALM	Smoke rises vertically.	0-1
1	LIGHT WIND	Wind direction defined by that of the smoke, but not by the flags.	4-6
2	VERY LIGHT Gentle breeze	Wind noticed on face. Leaves on trees move and also flags.	7-12.5
3	LIGHT Gentle breeze	Leaves on trees move constantly and flags unfurl.	14-20
4	WINDY (Moderate)	Dust and papers in the air. Small branches on trees move.	21-29
5	STRONG BREEZE (rather strong)	Large branches on trees move. Ripples form in ponds.	30-38
6	STRONG BREEZE (strong)	Large branches on trees move. Wind whistles.	40-49
7	BRISK (very strong)	All trees moving. It becomes difficult to walk against the wind.	50-60
8	STRONG WIND	Branches break. Impossible to walk against the wind.	61-72
9	VERY STRONG WIND	Damage to projecting parts of buildings.	74-86
10	STORM	Uproots trees and damages buildings consi- derably.	90-100
11	HEAVY STORM	Destruction everywhere.	
12	HURRACANE	No experience.	over 120

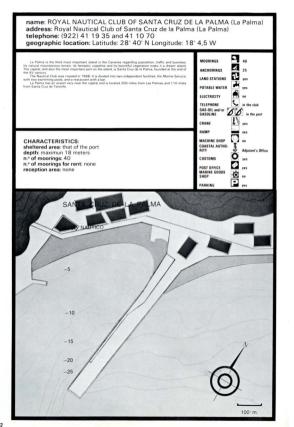
		SEA CONI	DITIONS
No.	Height of waves (meters)	Denomination	Description of surface of sea
0	0	CALM	Like glass.
1	under 0.3	SMOOTH	Ripples without crests.
2	0.3-1.0	RIPPLY	Small, short waves, but pronounced ones.
3	1.0-1.5	MODERATE	Larger waves, some whitecaps; short sounds heard.
4	1.5-2.5	HEAD-SEA	Many whitecaps and crests with white foam; pronounced waves; muffled murmur.
5	2.5-3.5	STRONG HEAD SEA	Waves break and the foam is carried in the direction of the wind; continual murmur.
6	3.5-6.0	ROUGH	Foam carried in dense veins in the direction of the wind; many breaking waves and muffled roar which is heard from far away.
7	6.0-12.0 ROUGH	VERY ROUGH	Whole surface of the sea white.
8 and 9	Correspond to M	MOUNTAINOUS and CO	NFUSED, respectively.



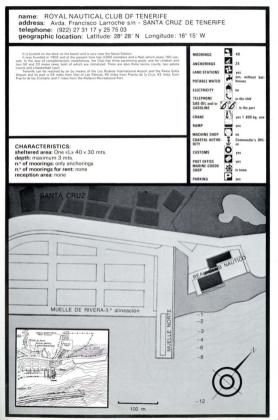


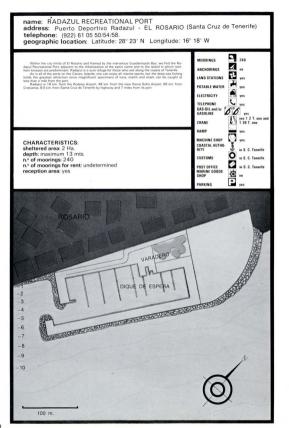
harbours and nautical clubs of the canary islands

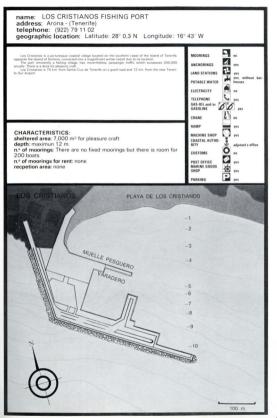
Charts and maps taken from the III NAUTICAL TOURISM GUIDE

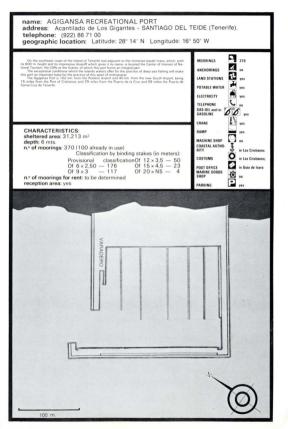


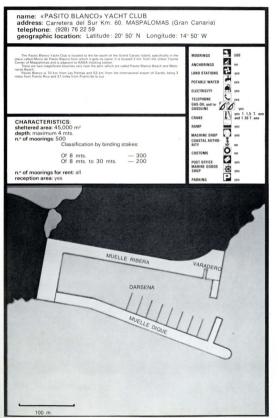
4 documento. Los autores. Distratización realizada por URP/GC. Biblioteca Uni versitori

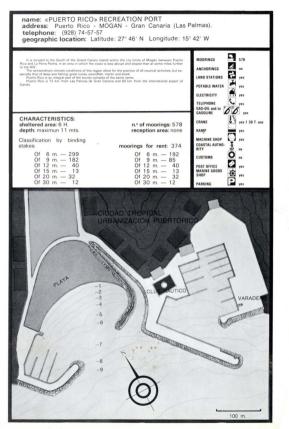


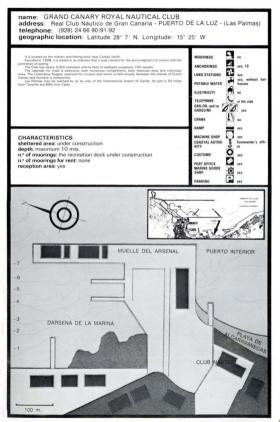


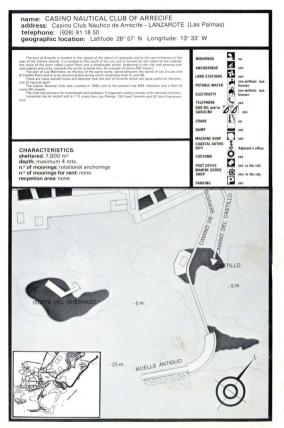












USEFUL ADDRESSES

Nautical Clubs

Gran Canaria:

CLUB NAUTICO JUVENIL ELCANO Doctor Denix, 5 LAS PALMAS	
UNION RISCO CLUB DE VELA LATINA Gacela, 6 Barrio de San Nicolás LAS PALMAS	
REAL CLUB NAUTICO DE GRAN CANARIA León y Castillo, 308 LAS PALMAS	Tel.: (928) 23 45 66
CLUB DE YATES PASITO BLANCO Carretera del Sur km 60 MASPALOMAS	Tel.: (928) 76 22 59
CLUB NAUTICO PUERTO RICO Urbanización Puerto Rico MOGAN - LAS PALMAS	Tel.: (928) 74 57 57
CLUB MOTONAUTICO LAS PALMAS Muelle Santa Catalina PUERTO DE LA LUZ - LAS PALMAS	Tel.: (928) 26 42 44 (928) 26 42 35
CLUB DE VELA LATINA Padre Cueto, 2, 3.º PUERTO DE LA LUZ - LAS PALMAS	Tel.: (928) 26 17 26
Tenerife	
REAL CLUB NAUTICO DE TENERIFE Avda. Francisco Larroche, s/n. SAN CRUZ DE TENERIFE	Tel.: (922) 27 31 17 (922) 25 75 03
CLUB NAUTICO DE TENERIFE Avda. Anaga, s/n. SANTA CRUZ DE TENERIFE	
La Gomera	
CLUB NAUTICO SAN SEBASTIAN DE LA GOMERA Calvo Sotelo, 7 SAN SEBASTIAN DE LA GOMERA	Tel.: (922) 31 93 40 34 95 29
Lanzarote	
CLUB NAUTICO DE ARRECIFE ARRECIFE	Tel.: (928) 81 50 54
CASINO CLUB NAUTICO Ruperto González Negrin, 1 Arrecife	
CANARIAS	Tel.: 81 18 50

La Palma REAL CLUB NAUTICO DE SANTA CRUZ DE LA PALMA SANTA CRUZ DE LA PALMA

Tel.: (922) 41 19 35

Sporting Federations

FEDERACION ESPAÑOLA DE ACTIVIDADES SUBACUATICAS (DIVING) Santaló, 15 - 3.º BARCELONA - 6 Tel · (93) 228 87 96 FEDERACION ESPAÑOLA DE ESOLU NALITICO (NALITICAL SKUNG) "Zona Residencial Barcelona 2» Roberto Bassas, 30 - 1.º - 1.º Tel (93) 330 89 03 BARCELONA - 14 (93) 330 99 57 FEDERACION ESPAÑOLA DE MOTONAUTICA (MOTORBOAT BACING) Avda América 33 - 4 º B Tel: (91) 415 93 27 MADRID - 2 (91) 415 93 26 FEDERACION ESPAÑOLA DE PESCA (FISHING) Tel: (91) 221 36 33 Navas de Tolosa 3 MADRID - 13 (91) 221 42 62 FEDERACION ESPAÑOLA DE PIRAGUISMO (CANOEING) Miguel Angel, 18 - 6.º Tel: (91) 410 38 15 MADRID - 10 (91) 410 40 48 FEDERACION ESPAÑOLA DE REMO (OAR SAILING) Núñez de Balboa, 16 - 1.º Tel: (91) 226 47 09 MADRID - 1 (91) 275 59 20 FEDERACION ESPAÑOLA DE SALVAMENTO Y SOCORRISMO (LIFE-SAV/ING) Eduardo Dato, 18 Tel: (91) 419 75 87 MADRID - 10 (91) 419 73 17 FEDERACION ESPAÑOLA DE VELA (SAIL) Juan Vigón, 23 MADRID - 3 Tel.: (91) 233 53 05

Navy Offices

LAS PALMAS

Isla de Gran Canaria

Las Palmas Comandancia de Marina Pedro del Castillo, 28

Isla de Lanzarote

Arrecife Ayudantía de Marina Vargas, 3 Tel.: (928) 26 46 51

Tel · (928) 81 10 85

Isla de Fuerteventura	
Puerto del Rosario Avudantía de Marina	
Juan Domínguez Peña, s/n.	Tel.: (928) 85 05 07
Arrecife	
Villacampa, 2 LANZAROTE	Tel.: (928) 81 11 36
Puerto del Rosario	
San Roque, s/n. FUERTEVENTURA	Tel.: (928) 85 00 53
TENERIFE	
Isla de Tenerife	
Santa Cruz de Tenerife Comandancia de Marina Rambla General Franco, s/n.	Tel.: (922) 27 21 00
Los Cristianos Ayudantía de Marina.	
Isla de La Palma	
Santa Cruz de La Palma Ayudantía de Marina	
Plazoleta del Muelle, 8	Tel.: (922) 42 11 85
Isla de La Gomera	
Ayudantía de Marina La Playa	Tel.: (922) 87 02 53
Isla de Hierro	
Valverde Ayudantía de Marina	Tel.: (922) 55 09 36

Tourist Information Centres

CANARIAS	
LAS PALMAS Casa del Turismo GRAN CANARIA	Tel.: (928) 26 22 23
SANTA CRUZ DE TENERIFE Palacio Insular TENERIFE	Tel.: (922) 24 22 27
ARRECIFE DE LANZAROTE Parque Municipal LAS PALMAS	Tel.: (928) 81 18 60

Customs

ISLAS CANARIAS	
Administración del Puerto Franco en:	Free port Authorities:
Santa Cruz de Tenerife José Antonio, 2	Tel.: (922) 29 15 86
Santa Cruz de La Palma En muelle	Tel.: (922) 31 13 73
San Sebastián de La Gomera R. Padrón, 17	Tel.: (922) 87 03 51
Las Palmas Explanada Torres Quevedo, s/n. GRAN CANARIA	Tel.: (928) 26 01 64
Arrecife Villacampa, 2 LANZAROTE	Tel.: (928) 81 11 36
Puerto del Rosario San Roque, s∕n. FUERTEVENTURA	Tel.: (928) 85 00 53

additional comments

TABLE OF RESCUE SIGNALS

To be used on the bridge.

Signals that will be used by the airplanes which carry out watch and rescue services to direct a boat towards an airplane, a boat or a person in danger.

Manoeuvers mada by an airplane in the order of their appearance



RESPONSES OF THE RESCUE STATIONS OR MARINE RESCUE UNITS TO THE SIGNALS FOR HELP ISSUED BY A BOAT OR A PERSON

	HAND SIGNALS	FLARES	OTHER SIGNALS	THEY MEAN
Day signals		Orange smoke flare.	Or a combination of light and sound signals (exploding light) consisting of three sim- ple signals which go off at aproximately one-minute in- tervals.	WE SEE YOU WE WILL HELP YOU AS SOON AS POSSIBLES.
Night signals		Rocket with white stars con- sisting of theree simple sig- nals which go off at intervals of aproximately one minute.		(Repetition of these signals means the same thing).

If necessary, the day signals can also be issued at night and the night signals during the day.

SIGNALS WHICH WILL BE USED REGARDING THE USE OF THE RESCUE DEVICES WHICH THEY HAVE AT THEIR BASE ON THE COAST.

	AT THEIR BASE ON THE COAST.				
Day signals	Vertical movement of a whi- te flag or of the arms.	or shooting of signal of green stars.		In general: AFFIRMATIVE. Specific: «We have picked up the line». «The end of the hand rope has been made fast».	
Night signals	VERTICAL movement of a light or white flare.	or shooting of signal of green stars.		«There is a man in the li raft of the transporter». «Put about».	
Day iignals	HORIZONTAL movement of a white flag or the arms ex- tended horizontally.	or shooting of a signal of red		Is general: NEGATIVE. Specific: «Unimoor: «Enrough, put about»	
Night signals	HORIZONTAL movement of	or shooting of a signal of red			

GASTRONOMY

Canary cuisine has a wide variety of fish dishes. They are generally served out with some popular «papas arrugás» (wrinkled potatoes) and a special sauce: «mojo picón».

Watercress stew and the popular «sancocho canario» (it is about salty fish and hot sauce) are the most traditional Canary dishes. Bananas and tomatoes, wich are top richnesses of the Archipielago, play an important role in the Canary gastronomy, too. The same happens to the «gofio», which is a sort of wheat, corn or barley flour that has been previously torrefacted. It accompanies certain dishes instead of bread.

Sweet blood sausages, «tirilajas», «bienmesabes», «frangollos», lustrated spoon cakes, meat cakes, teacle nougats and «gofio» are exquisite examples of the Canary pastrymaking.

«Quesadillas» are a very typical dish in Hierro just as the «raspaduras y marquesotes» in La Palma. Rum and honey rum must be underlined as originally Canary drinks.

Canary tobacco is an excellent complement to any Canary meal. Its world fame is due to the quality and large variety of products such as the typical cigars, which are being exported to very diverse countries.

COMMUNICATIONS

The Canary Archipielago is linked to Europe, Africa and America (and specially with Spain) by means of many sea and air lines.

Least distance to Africa is 115 km. Between the harbour of Cadiz and Gran Canaria or Tenerife there is a distance of 680 and 705 miles, respectively (it is equivalent to a two days run on boat). Direct flights from Madrid last less than two hours. Both in Las Palmas de Gran Canaria and Santa Cruz de Tenerife there is an international airport. Gomera, Fuerteventura, Lanzarote y La Palma dispose of airport, too.

Home communications in the Archipielago are satisfied by regular air and sea services.

TOURIST HOTELS

The Canary Islands have a very diversified hotel supply. Province of Las Palmas has 212 hotel establishments with 33542 beds. Province of Santa Cruz de Tenerife has 192 hotels and 31935 beds.

TYPICAL DISHES

BAKED FISH FILLETS

Ingredients: fish, milled bread, garlic, black milled pepper, butter or olive oil, lemon juice.

The fish is chopped into fillets. While some cloves of gariic are being smashed apart, a bit of salt and some parsley leaves must be added to them, and on top of that some black pepper, non-boiled melted butter and lemon juice will be poured on.

After a layer of fish has been extended on an oven tray (it should be previously greased with butter), a layer of the garlic stuff must be laid down on it. Then everything will be dusted with milled bread. This cicle must be repeated again and again until the fillets are all over. Then the tray is put into the oven. The juice that will be exuded should be poured on again. This dish will be served with «papas sancochadas» (a certain variety of cooked potatoes).

VINEGAR FISH

Ingredients: $3/4\ kg$ of fish, one big onion and another little one, four parsley leaves, two boiled eggs, one cup of olive oil, vinegar, two tomatoes, marjoram, salt.

The fish is cooked with the little onion, two parsley leaves and some salt. The big onion is chopped up into very small bits apart, just as the remaining parsley leaves, both eggs and both tomatoes. After that the fish is chopped as well and everything is dressed with vinegar, marjoram, olive oil and salt. It must be turned over several times. It will be served without being warmed. Optional warm «papas sancochadas» can be added to it.

SALTY FISH CAKE

Ingredients: 1/2 kg of fish, 1/2 kg of «fritura» (tomatoes, onions, parsley, pimiento and olive oil), two eggs, two spoonfuls of flour, 1/2 cup of milk.

The fish is put in to soak the previous day. Then it is cooked, crushed and added the previously filtered «fritura» up. Anything else is then mixed up and the whole stuff is put into some butter mould with milled bread. It must remain in the oven until it reaches such a point that when it is pricked with a needle, the needle keeps clean. It should be served moderately warm, with tomato sauce and «papas sancochadas».

FEAST DAYS

- February (1)
- 6.week before Palm Sunday
- March-April
- April 29
- · May.
- May 1. to 15.
- Corpus Christi.
- Corpus Octave.
- Next Sunday (1).
- June 21. to 28. (each 5 years).
- 1. July Sunday.
- July 14.
- July 16.
- July 25.
- July 25.
- August 5.
- August 25 (1).
- September 15 (1).
- September 7. to 15.
- September 11.
- Next Sunday after September 17.
- 2.October Saturday.

(1) Of tourist interest.

Winter feast days, Santa Cruz de Tenerife Puerto de la Cruz and Santa Cruz de la Palma Winter festivals, Opera, Las Palmas de Gran Canaria. Holv Week. Las Palmas de Gran Canaria, Santa Cruz de Tenerife and La Laguna. Celebration of the isle's incorporation to the Castilian Kingdom, Las Palmas de Gran Canaria Spring feast days, Santa Cruz de Tenerife. Celebration of the foundation of the city. Santa Cruz de Tenerife Las Palmas de Gran Canaria and La Laguna. La Orotava Tenerife St. Isidro's «romería» La Orotava Lustrum holidays in Ntra. Señora de las Nieves'honour, Santa Cruz de Palma. St. Benedict's feast day and romería. La Laguna Tenerife St. Buenaventura's feast day. Betancuria. Fuerteventura Popular holidays in Virgen del Carmen's honour Santa Cruz de Tenerife St. James'romerías, Gáldar and San Bartolomé Gran Canaria St. James'feast day. Celebration of the heroic defense of the city agains Admiral Nelson's attack. Santa Cruz de Tenerife. Virgen de las Nieves'feast day, Santa Cruz de la Palma. St. Ginés'feast day. Arrecife de Lanzarote. Typical Virgen del Pino's romería, Teror. Holy Christ on the Calvary typical holidays. La Laguna, Tenerife, Charco's feast day, Aldea de San Nicolás, Christ on the Calvary feast day. Icod de los Vinos, Tenerife. Nuestra Señora de la Luz's «romería» and maritime procession.



MINISTERIO DE TRANSPORTES, TURISMO Y COMUNICACIONES SECRETARIA DE ESTADO PARA EL TURISMO DIRECCION GENERAL DE EMPRESA Y ACTIVIDADES TURISTICAS

PRECIO 600 PTAS.