

*Contributions to the Flora of the Canary Islands  
(especially Tenerife)*

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Resumen

*Contribuciones al conocimiento de la flora de las Islas Canarias, especialmente de Tenerife:* Como adiciones florísticas se presenta *Amaranthus quitensis*, *Kochia scoparia*, *Anacyclus radiatus*, *Aster laevis* y *A. lanceolatus*, *Guizotia abyssinica*, *Helianthus annuus*, *Hypochoeris radicata*, *Ipomoea cairica*, *Euphorbia inaequilatera*, *Pennisetum purpureum*, *Setaria chevalieri*, *Oenothera suaveolens*, *Oxalis corymbosa* y *O. latifolia*, *Salpichroa organifolia*, *Solanum* cf. *bonariense* y *S. mauritianum*, y *Zostera marina*. Se mencionan, además, otros géneros (*Bidens*, *Leontodon*, *Tragopogon*, *Aristida*, *Chloris*, *Digitaria*, *Pennisetum*, *Polypogon*, *Sida*, *Aphanes* y *Bupleurum*), discutiendo su presencia y su valor taxonómico.

During the last 20 years several botanists from various countries have contributed largely to the flora of the Canary Islands thanks to the development of tourism which has made the Islands a popular and easily attainable destination for so many people. The following contributions to the Canarian flora are partly the result of 2 such visits by the author (Gran Canaria dec. 1964-jan. 1965, Tenerife oct. 1969), partly due to an examination of plant material from these islands collected by other botanists and of older material kept in the Herbarium, Bot. Museum, Copenhagen. I wish here to express my sincere thanks to the gentlemen: N. Kaae,

Skodsborg, S. Laegård, Aarhus and F. Mang, Hamburg, who all placed some of their material at my disposal for determination. Further Sr. G. Kunkel, Tafira Alta, Gran Canaria, has sent me some material for determination or verification, and the Botanical Museum, Oslo, has kindly sent me some plants of J. Lid's Canarian collections on loan.

Most of the plants treated in this paper are adventives or garden-escapes, established or not, a flora-group which to some extent has been neglected by the resident and visiting botanists. Of course the native plants and particularly the highly interesting endemic species among them have above all attracted the attention of the botanists. But in the future the adventitious flora will play an increasing role in the flora of the Canaries due to the advancing devastation and reduction of the original vegetation, a highly regrettable but apparently unavoidable fact.

#### A m a r a n t h a c e a e :

*Amaranthus gracilis* Desf. Tenerife: In arable field at San Miguel west of Granadilla, 1965, N. Kaae, at Las Galletas, 1967, N. Kaae, in dunes at El Médano and in Barranco de los Valos, 1968, F. Mang; further observed in several waste places in and around Puerto de la Cruz, 1969. Mentioned by Lems (1960) without precise statements from the various islands. Kunkel (1968) recorded the plant from Gran Canaria.

*Amaranthus graecizans* L. (*A. angustifolius* Lam.). Barranco de los Valos, Tenerife-South, 1968, F. Mang. Recorded from Gran Canaria by Kunkel (1968), and *A. silvestris* Desf. mentioned by Lems (1960) without any precise statements from the various islands may be the same plant.

*Amaranthus muricatus* (Moq.) Gillies. Common in waste places in Puerto de la Cruz and Santa Cruz, Tenerife, 1969; dunes at El Médano, Tenerife-South, 1968, F. Mang. Already recorded from Lanzarote, Fuerteventura and Gran Canaria (Kunkel 1967a, Lid 1968). A native of Argentina and Chile.

*Amaranthus quitensis* HBK. In arable field near the airport Los Rodeos, La Laguna, Tenerife, 1969 (well developed and in flower and fruit). New to the Canary Islands. A native of tropical and subtropical S. América.

#### Caryophyllaceae:

*Spergula rubra* (L.) Dietr. as given by Lid 1968 (by Lems 1960 as *Spergularia rubra* Presl) most likely has to be referred to the taxon *Spergularia bocconeii* (Scheele) Asch. & Graebn. (*S. atheniensis* [Heldr. & Sart.] Asch. & Schweinf.). It resembles much *S. rubra* but is separated by broadly triangular, dull (not silvery) stipules and smaller flowers (ca. 2-3 mm against 3-5 mm in *S. rubra*). It occurs in sw. Europe, N. Africa, the Near East, Madeira, while *S. rubra* is widespread in most of Europe, N. Africa, Asia and introduced elsewhere (N. América, Australia). One sheet with specimens from Arucas, Gran Canaria 1897, leg. O. Gelert (Herb. Copenh.) seen.

#### Chenopodiaceae:

*Chenopodium multifidum* L. Las Vegas (ca. 1300 m) east of Granadilla, Tenerife-South, 1968, F. Mang. Hitherto recorded only from Santa Cruz, Tenerife, and from one locality on Gran Canaria (Kunkel 1967). A perennial herb and a native of S. América, now a more or less cosmopolitan weed.

*Kochia scoparia* (L.) Schrad. Waste place in Punta Brava west of Puerto de la Cruz, Tenerife, 1969, N. Kaae. A variable, annual weed new to the Canary Islands, a native of Central Asia but introduced in many parts of the world. A sterile garden-form, f. *trichophila* (hort.) Sch. & Thell. is often cultivated in gardens.

#### Compositae:

*Anacyclus radiatus* Loisel. Waste place near the airport Los Rodeos, La Laguna, Tenerife, 1969. New to the Canary Islands. A common weed in the Mediterranean region.

*Aster. A. squamatus* (Spreng.) Hiern. recently introduced to the Canary Islands and mentioned by Kunkel (1967), Sunding (1968) and Lid (1968) is now very commonly distributed in the northern part of Tenerife, especially found

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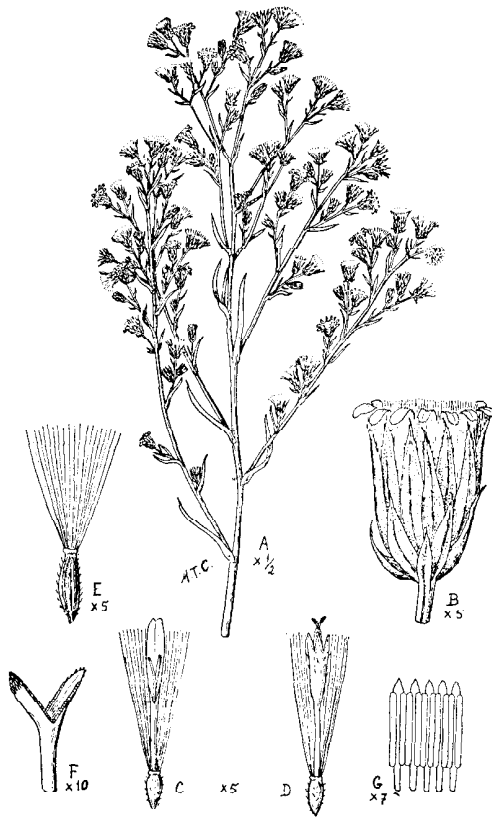


FIG. 19. — *Aster squamatus* (Spr.) Hieron.: A, parte superior de la planta; B, capítulo; C, flor marginal; D, flor del disco; E, aquenio; F, parte superior del estilo; G, anteras.

along the roads through towns and villages, in waste places and in damp, cultivated areas. Further 2 Aster-species occur as garden-escapes in Tenerife, both natives of N. America: *A. laevis* L. s. A. Gray, collected as a weed in the City-Park, Santa Cruz, 1969, and *A. lanceolatus* Willd. (*A. simplex* Willd.), collected on roadsides between La Guancha and Icod, 1969, N. Kaae.

*Bidens*. Besides the very commonly distributed *Bidens pilosa* L. (abundant at least in the five western islands) another *Bidens*-species, *B. angustifolia* Nutt. has been given for the Canary Islands (Gran Canaria, Tenerife, Palma, Hierro, Knoche 1923, Lindinger 1926, Lems 1960, Kunkel 1967). However this species, whose legitimate name is *B. micranthoides* Sherff and a native and endemic to the Hawaii Islands (Sherff 1937) is most unlikely to be found as an adventitious plant in the Canary Islands. On Tenerife in 1969 I could collect the species *B. aurea* (Ait.) Sherff (*Coreopsis* a. Ait.), a native of entral America. It was observed in a number of localities in the northern part of the island between La Laguna to the east and Buenavista to the west as a weed of arable fields and along roads. A first find (Tenerife) that I have been able to confirm from herbarium material is one from La Guancha, 1965, N. Kaae. Most likely all the previous finds of *B. micranthoides* (*B. angustifolia*) are referable to this species. There are no records of this species as an alien plant outside its native area, whereas *B. aurea* is a well known adventitious plant e.g. in France, Italy and Portugal.

*Galinsoga parviflora* Cav. Weed in a potato-field, Orotava, Tenerife, 1969. In the Canary Islands previously known only from Gomera (Lid 1968). This species was mentioned from Gran Canaria (Kunkel 1969) as *G. ciliata*.

*Guizotia abyssinica* (L.f.) Cass. Waste place at the harbour of Santa Cruz, and as a weed in flower-beds in the City-Park, Santa Cruz, Tenerife, 1969. New to the Canary Islands. A native of NE. Africa; in Europe introduced in several countries with birdseeds, also found as a casual on Madeira (Hansen 1968).

*Helianthus annuus* L. - Weed in a flowerbed, Puerto de la Cruz, 1969. Seems to be a weed new to the Canary Islands, but probably often found in cultivation.

*Hypochoeris radicata* L. Along the road between Orotava and Aguamansa, Tenerife, 1965, N. Kaae. Seems to be a weed new to the Canary Islands; a native of Europe but introduced in other parts of the world, e.g. known from Madeira and the Acores.

*Leontodon*. *L. hispidus* L. and *L. nudicaulis* (L.) Banks as given for the Canary Islands e.g. by Lid (1968) hardly represent 2 different species of this genus (already Pitard & Proust (1908) entertained that idea). Just as in Madeira (Hansen 1968) the Canarian *Leontodon*-material probably belongs to the taxon *L. saxatilis* Lamk. ssp. *rothii* (Ball) Maire (synonym: *Thrinchia hispida* Roth). *L. saxatilis* Lamk. ssp. *saxatilis* (synonyms: *Thrinchia hirta* Roth and *L. nudicaulis* [L.] Banks) is most likely not a member of the Canarian flora, nor is true *L. hispidus* L.

*Tagetes minuta* Ait.: Sta. Ursula east of Puerto de la Cruz, Tenerife, 1969. This weed from S. America seems to be new to Tenerife; in 1967 it was published by Kunkel as new to Gran Canaria and to the Canary Islands as a whole.

*Tragopogon*. In the Canarian floristic literature, e. g. Lems (1960), the following species of this genus are said to be represented in the flora: *T. hybridus* L. (*Geropogon glaber* L.), *T. porrifolius* L. and *T. villosus* L. These statement now need some corrections. The taxon *T. villosus* L. is a very dubious one and presumably can be ignored. The record of this doubtful species dates back to a single find by Knoche (1923), who published it as found in seashore vegetation at Agaete, Gran Canaria, in 1916. *T. porrifolius* L. has been recorded from Gran Canaria and Tenerife, but an examination of the following available material of so-called "*T. porrifolius*", all from Tenerife, has lead to the conclusion, that this species probably should be deleted from the Canarian flora and replaced by another species *T. sinuatus* Avé-Lall. (synonyms: *T. australis* Jord., *T. porrifolius* auct. non L.).

The finds are: Above La Orotava, ca. 1800 m, 1957, K. Larsen (Bot. Mus., Copenh.), between Orotava and Teide, ca. 1600 m, 1963, J. Lange (Bot. Mus., Copenh.), Teno Hills between Santiago and Masca, 1967, Kaac and in a banana-plantation in Orotava, ca. 500 m, 1968, F. Mang. *T. sinuatus* is a common plant in the Mediterranean region and often confused with true *T. porrifolius* L., whose legitimate name has to be changed into *T. eriospermus* Ten (cf. Greuter 1967). These two species can easily be separated by the shape of the beaked achenes: Spindleformed and gradually narrowed upwards into the long beak in "*T. porrifolius*" and almost cylindrical and passing into a beak of nearly the same shape in *T. sinuatus*.

*Xanthium spinosum* L. This cosmopolitan weed seems to spread rapidly on Tenerife. It has been published recently as new to the Canary Islands by Kunkel (1967) and Lid (1968) (a single find in Tenریفe [Granadilla] and several finds in Gran Canaria). In 1968 F. Mang, Hamburg, collected it in dunes at El Médano and in Barranco de los Valos, and in 1969 the author observed it on roadside near the Botanical Garden, Puerto de la Cruz and in a field near Adeje, all Tenerife.

#### C o n v o l v u l a c e a e :

*Ipomoea cairica* (L.) Sweet (*I. palmata* Forssk.). Observed as a weed of arable fields in a number of places on Tenerife-North, f. inst. covering a maize-field at Matanza east of Puerto de la Cruz, 1969. The origin of this plant is unknown; it is found as an ornamental plant in tropical and subtropical regions all over the world. As an adventive plant new to the Canary Islands.

#### C r u c i f e r a e :

*Matthiola livida* (Del.) DC. On a dry slope near Los Cristianos, Tenerife-South, probably as an adventitious plant, 18/3-1967, N.Kaae. A native of NW.Africa, on the Canary Is-

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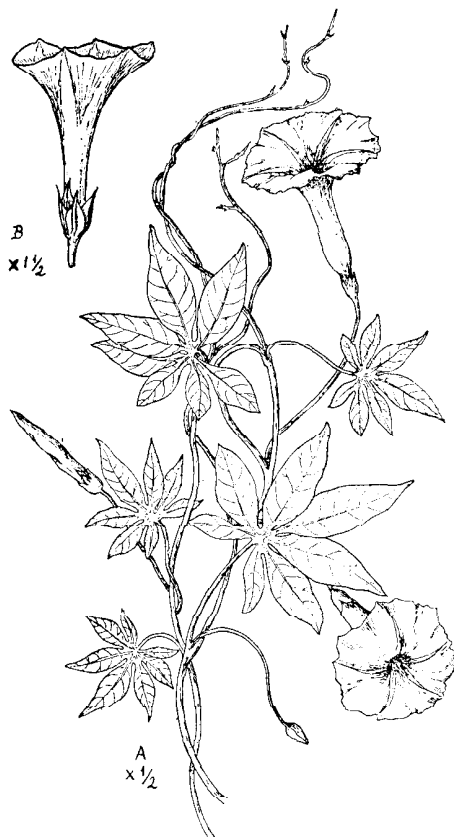


FIG. 30. — A, *Ipomoea cairica* (L.) Sweet: rama en flor. — B, *Ipomoea indicisa* (Vell.) Hallier: flor.

lands hitherto recorded only from Gran Canaria (Christ 1888), probably introduced.

#### Cyperaceae:

*Cyperus eragrostis* Lam. (*C. vegetus* Willd.). Roadside east of Icod de los Vinos, Tenerife, 1969. This plant has been



mentioned briefly by Lems (1960) from Tenerife, and further it is known from Gran Canaria (Kunkel no. 11460, specimen seen). It is a native of western N. America and S. America, naturalized in SW. Europe and known from Madeira and the Acores too.

#### Euphorbiaceae :

*Euphorbia inequilatera* Sond. Waste place at the harbour of Santa Cruz, Tenerife, 1969. A prostrate herb and a native of South Africa. New to the Canary Islands.

*Euphorbia paralias* L. Sandy field near the sea at El Médano, Tenerife-South, 1965, N.Kaae. New to Tenerife but earlier records exist from Gran Canaria and La Palma.

#### Geraniaceae :

*Geranium purpureum* Vill. Barranco del Infierno, Tenerife, 1969. As pointed out by Larsen (1960), this species has been mentioned from the Canary Islands already by Pitard & Proust (1908) (known from the 5 western islands) but often neglected in modern floristic literature and regarded conspecific with *G. robertianum* L. Larsen states it from Gran Canaria: San Bartholomé de Tirajana; further finds seen are: Barranco de Guinguada, Gran Canaria 1897, leg. O. Gelert, Ladera de Sta. Ursula, Tenerife 1957, leg. K. Larsen, both in the Herb. Copenh. True *G. robertianum* probably does not at all occur on the Canaries.

#### Gramineae :

*Aristida*. For many years the annual species *A. adscensionis* L. has been given as an introduced and established weed frequent in all 7 Canaries. As late as in 1967 Kunkel has published the closely related, perennial *A. coerulescens* Desf. from Gran Canaria as a plant new to the Islands. However this last mentioned species seems to be rather common at least on Gran Canaria and Tenerife; so 18 different collections from Gran Canaria and Tenerife seen by the author could be identified as *A. coerulescens*. *A. adscensionis*

has probably been widely misunderstood and seems to be a rare plant in the Canaries if found there at all.

*Botriochloa pertusa* (L.) A. Camus. This grass has been recorded from Gran Canaria by Lid (1968) as new to the Canaries. Lid also mentions a sheet kept in the Kew Herb. with this plant collected in Gran Canaria already in 1897 by O. Gelert (a Danish pharmacist and botanist): The same collection is represented by 2 sheets in the Copenhagen Herb.; Gelert called his plant *Andropogon ischaemum* — *Botriochloa* i., which species has been given from Gran Canaria and Tenerife by Lems (1960) based on Webb & Berth. (1836) and his own collections. Sometimes *B. pertusa* is recognized as belonging to *B. ischaemum* e.g. by Roberty (1960) as *Dichantium* or *Botriochloa ischaemum* var. *pertusum* (-a). Lid's plant (from Mt. San Gregorio, Gran Canaria) has been referred to var. *panormitana* (Parl.) Maire & Weill. (*B. panormitana* (Parl.) A. Camus (Pilger?), differing in having glabrous nodes, less pubescent leaves and more numerous racemes, and considered to be a plant endemic to Sicily. According to Celarier (1958) *B. pertusa* is a highly variable, apomictic species, a native of East Africa and Asia (from Arabia eastwards to SE.Asia [Bor 1960]), but recorded as an introduced plant in many other parts of the world, and so its occurrence in the Canary Islands, Sicily etc. may be explained in this way.

*Chloris*. As adventitious plants new to the Canary Islands Lid (1968) states finds of *Chloris gayana* Kth. and *C. polystachya* Sw., both collected in Barranco Martínez s.of Puerto de la Cruz, Tenerife. In 1969 I could collect *C. gayana* in the same place, and Sventenius (in litt. 1964) has stated it from some other localities on Tenerife (coastal zone: Realejos, San Juan de la Rambla and far west). This species is widespread as a weed in the tropics and subtropics of both hemispheres, e.g. known from Madeira and Porto Santo; further recorded as an alien in Atlantic Europe (Ooststroom & Reichgelt 1962). Lid's second species, *C. polystachya* Sw., seems to me a very mysterious one! No taxon "C. polysta-

chya Sw.” seems to exist in the literature, but there is a “*C. polystachya* Roxb.” = a nom. nud. for *C. roxburghiana* Schult. and a “*C. polystachya* Lag.” a nom. nud. for *C. inermis* Trin. or *Leptochloa virgata* (L.) BP. A taxon *C. polydactyla* Sw. exists, and a misprint may have taken place. However, by courtesy of the Bot. Museum, Oslo, I have had Lid’s plant on loan for examination, and it could be identified as *Chloris truncata* R. Br., a native of Australia and known as an adventitious plant in Europe and elsewhere (Ooststroom & Reichgelt l.c.). Another find of this plant from Tenerife exists: Las Cañadas, ca. 2200 m. leg. K. Larsen, det. A. Hansen (Herb. Bot. Mus., Copenh.). The plant has probably been brought to Las Cañadas from the lowlands by means of the busy traffic on the excellent highway through the Caldera. Another traffic-plant in this area is for example *Bromus tectorum* L., which now has become very commonly distributed along the same road.

*Digitaria*. In the Canarian floristic literature 2 species of this grass-genus are said to occur on Gran Canaria, Tenerife and Gomera, viz. *D. nodosa* Parl. and *D. sanguinalis* (L.) Scop. However all material of so-called “*D. sanguinalis*” seen by the author has to be referred to the closely related species *D. ciliaris* (Retz.) Koel. (*D. commutata* Schult., *D. adscendens* [HBK.] Henr.), differing from *D. sanguinalis* in absence of scabridities on the nerves of the lower lemma, in having usually glabrous leaves and more slender and longer spikes. True *D. sanguinalis* is possibly absent from the Islands, at least rare.

*Eremopogon foveolatus* (Del.) Stapf (*Andropogon* f.L.). Maspalomas, Gran Canaria, 1964, leg. the author. Seems to be a plant new to Gran Canaria, but earlier recorded from Tenerife, Gomera and Hierro (Lem 1960, Lid 1968).

*Lagurus ovatus* L. — Slope above Pino de Oro, Santa Cruz, Tenerife, 1962, N. Kaae. Seems to be new to Tenerife and a rare plant in the Islands as a whole, earlier recorded only from Gran Canaria, Gomera and Hierro.

*Paspalidium geminatum* (Forssk.) Stapf (*Panicum* g.

Forssk.). Collected at Guía, North Gran Canaria, 1964 by the author. Since Webb & Berthelot's days known as an introduced plant with a few finds on Gran Canaria under the name *Panicum paspaloides* Pers., a synonym. A grass of usually wet habitats and a native of tropical Africa and Asia, introduced elsewhere, e.g. in Central and South America.

*Pennisetum. P. purpureum* Schum. Roadside at Las Galletas and in a field-boundary at Vilaflor, Tenerife-South, 1968, S. Laegaard. A perennial grass and native of tropical Africa, often cultivated as a foddergrass under the name "Elephant-Grass". Known from Madeira under the same conditions (A. Hansen 1968).

*Pennisetum setaceum* (Forssk.) Chiov. (*P. asperifolium* [Desf.] Kth., *P. rueppelii* Steud.). In 1969 this conspicuous, perennial grass has been observed in several places, especially along the roads, in the northern part of Tenerife, e.g. at Santa Ursula east of Puerto de la Cruz. A native of North Africa and not at all new to the Canary Islands but misunderstood by some authors. This grass is hardly native to the Canaries but either introduced or an escape from cultivation as an ornamental plant. The first mention of it seems to be kept in "Index Seminum" from the Botanical Garden in Orotava 1963, in which seeds of so-called *P. rueppelii* Steud. from Barranco de Martínez, Tenerife, are offered for exchange; in "Index Seminum" for 1965 probably the same plant has been named *P. setaceum* (Forssk.) Chiov. (from Durazno), and in the "Index" for the years 1966 and 1967 probably again the same plant figures under the name *P. setaceum* (Forssk.) Chiov. ssp. *orientale* (L. Rich.) Maire (from La Rambla and Barranco de Martínez, both Tenerife). P. Sunding (1966) published a find of so-called "*P. elatum* Hochst. ex Steud." growing abundantly on roadsides between El Risco and Agaete, Gran Canaria (repeated by Lid 1968). According to Bor (1960, 1968) *P. elatum* Hochst. ex Steud. is a synonym of *P. divisum* (Forssk. ex Gmel.) Henr., a native of Southern Tunisia, Egypt, Sinai and SW. Asia. Sunding's specimens figured in his paper as fig. 1 has kindly been sent

me on loan from the Bot. Museum, Oslo, and without any doubt they are identical with *P. setaceum*. Thus the distributional gap between Tunisia and the Canary Islands for "*P. divisum* = *P. elatum*" has no longer any reality. In 1964 when I first saw this grass from the Canary Islands collected near Puerto de la Cruz, Tenerife (leg. J. Lange), I informed Dr. E. Sventenius, the Orotava Garden, about this possible new grass for the Canary Islands, and then he kindly told me, that since at least about 20 years it had been well known as a subsponaneous plant in the coast - zone along the north-side of Tenerife (Puerto de la Cruz, Realejos, San Juan de la Rambla and far west) and further that it was known from Gran Canaria too, e.g. at Agaete and in Barranco Goyedra, in some places moreover rather common.

*Pennisetum villosum* R. Br. In 1969 this perennial grass, a native of East Africa, was observed in a number of localities in the northern part of Tenerife, the habitats mostly being roadsides. It has been reported earlier from La Palma and Gran Canaria (Knoche 1923) but is not cited from Tenerife by Lems (1960). However Dr. E. Sventenius, the Orotava Garden, kindly has informed me that this plant has been known on Tenerife in at least 15-20 years, and in this period it has increased its area essentially. The inflorescences are used for ornamental purposes.

*Polypogon*. In the floristic literature the following taxa of this grass-genus have been enumerated as found in the Canary Islands: *P. x adscendens* Guss., *P. elongatus* HBK., *P. fugax* Nees ex Steud., *P. interruptus* HBK., *P. litoralis* Sm., *P. maritimus* Willd., *P. monspeliensis* (L.) Desf. and *P. semiverticillatus* (Forssk.) Hyl. After an examination of available material and consultation of the actual literature the following reduction of the number of species represented in the flora seems necessary and reasonable: *P. elongatus* HBK. and *P. interruptus* HBK., both natives of S. America are probably not found in the islands, as they seem to be rare aliens outside their native areas. *P. elongatus* has been given by Lems (1960) from Lanzarote, Fuerteventura and

Tenerife based upon statements by Webb & Berth. (1836) and Bolle.(1892) and from Gran Canaria and Gomera by Lid (1968), but this plant is most likely to be referred to *P. fugax* Nees ex Steud., described in 1854 and a species widespread in NE. Africa and through the whole of Asia as far as China. *P. fugax* is first mentioned as a Canarian plant by Lems (1960). The following material of this species has been available to me:

1) "E Canariis", Chr. Smith, 1815-16 (sub.nom.*P.lagascacae* R. & S. = *P. monspeliensis* × *Agrostis stolonifera*); thus found about 20 years before it was published by Webb & Berth. (1836). 2) Tenerife: In humidis, La Laguna, 15/7-1855, leg. de la Perraudière (sub.nom. *Santia elongata* Parl. and *P. elongata* HBK.); a very luxurious *P. fugax*. 3) Tenerife: Coast-rocks east of Puerto de la Cruz, 1957, K. Larsen (sub.nom.*P.litoralis* Sm.) 4) Tenerife: Las Cañadas, 1969, leg. the author. 13 sheets representing 27 different finds (sub nom. *P.elongatus* HBK.) from Gran Canaria, Tenerife and Gomera in the collections by J.Lid., Bot.Mus., Oslo, kindly sent me on loan, could be identified as *P.fugax*. *P. interruptus* has been given once from Tenerife by Lems (1960), but it has not been possible to verify this single record. This species is very much alike *P.fugax* ("P.elongatus"), and most likely a mistake has been made. "*P. litoralis* Sm." is the hybrid *P.monspeliensis* × *Agrostis stolonifera* or × *Agropogon litoralis* (Sm.) C.E. Hubb. (*P. lutosus* [Poir.] Hitchc.). It has been recorded from Tenerife by Bornmüller (1903), but as *A.stolonifera* hardly occurs in the Islands (when given a mistake for *P.semiverticillatus* exists), this hybrid can be left out of consideration as a Canarian plant.

Thus the following taxa of the genus *Polypogon* remain as members of the Canarian flora:

*P. fugax* Nees ex Steud. — L.F.C.T.G.

*P.maritimus* Willd. — C.

*P.monspeliensis* (L.) Desf. — C.T.G.P.

*P.semiverticillatus* (Forssk.) Hyl. — L.C.T.G.P.H.

*P.× adscendens* Guss. (*P.monspeliensis* x *semiverticilla-*

tus or x *Polypogonagrostis adscendens* [Guss.] Maire). — C (Kunkel 1967).

*Setaria chevalieri* Stapf. Found on roadsides in Santa Ursula east of Puerto de la Cruz, Tenerife, 1969, probably as a garden escape. An ornamental grass originating in South Africa; closely related to *S.palmifolia* (Koenig) Stapf, another ornamental species of this genus from India. New to the Canary Islands.

*Stenotaphrum secundatum* (Walt.) O.K. Naturalized on slopes at the coast, La Paz, east of Puerto de la Cruz, Tenerife, 1969. Has been recorded from Gran Canaria by Kunkel (1967) as an alien new to the Canary Islands. It is common in cultivation as a lawn-grass.

#### Hypericaceae:

*Hypericum joerstadii* Lid, described as a new species by Lid (1968), has been given only from the northeastern part of Tenerife (Taganana-tunnel), Afur, Pedro Alvarez and El Rosario s.of Esperanza). A find from the heights above El Palmar, Tenerife-NW, 1921, leg.F.Börgesen (as *H.glandulosum* Ait. var.) is in the Herb., Bot. Museum, Copenhagen.

#### Labiatae:

*Nepeta teydea* W. & B. Generally known as a plant from the *Spartocytisus*-association of the subalpine cinder fields in Las Cañadas, Tenerife. In 1969 it was observed in fissures in a road-wall at San Vicente w.of San Juan de la Rambla, in about 100 m.h.

#### Malvaceae:

*Sida*. Among the members of this genus recorded from the Canary Islands as introduced and well established weeds are *S.rhombifolia* L. (known from Gran Canaria, Tenerife, Gomera, La Palma) and *S.carpinifolia* L.f. However this last name in the Canaries seems to have been applied to at least 3 different taxa, viz. 1) *S.acuta* Burm.f. (*S.carpinifolia* L.f. p.p.), one sheet seen: "E. Canariis", leg. Chr. Smith 1815-

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FLORA DE LA PROVINCIA DE BUENOS AIRES , vol. 4, 1965. 211



FIG. 61. - *Malvastrum coromandelianum* (L.) Garcke: A, rama en flor; B, flor.  
C, androceo; D, gineceo; E, fruto; F, mericarpo; G, semilla.

16,2) *S.rhombifolia* L.f. (f. inst. Bourgeau, Pl. Canariensis no. 1236, Bufadero, Tenerife 1855, and 3) *Malvastrum coromandelianum* (L.) Garcke (seen from Arucas, Gran Canaria, leg. O. Gelert 1897 and from Guía, Gran Canaria, leg. the author



1964; further Lid (1968) has published 2 other finds from Gran Canaria and moreover has regarded the plant as new to the Islands). They are all weeds widespread in the tropics and subtropics all over the world.

#### Oenotheraceae:

*Oenothera suaveolens* Desf. Roadside between Orotava and Aguamansa, Tenerife, 1969. Biennial herb and a native of N.America, known as an alien in several countries in Europe. New to the Canary Islands.

#### Oxalidaceae:

*Oxalis*. 4 *Oxalis*-species hitherto are known as weeds in the Canary Islands, viz. *O. corniculata* L., *O. europaea* Jord. (*O. stricta* auct.), *O. pes-caprae* L. (*O. cernua* Thunb.) and *O. variabilis* Jacq. (*O. purpurea* L.) Further 2 species of this category have been collected recently in the Islands, viz *O. latifolia* Kth. (*O. intermedia* A. Rich.), known from Gran Canaria and Tenerife at least since 1964. Material from the following finds has been seen: Gran Canaria, Pagador 1964 and Maspalomas 1965, both leg. N. Kaae; Tenerife, potato-field at Icod de los Vinos, banana-plantation in Puerto de la Cruz and in Arenas near Puerto de la Cruz, in Taoro and in flowerbeds in the City-Park of Santa Cruz, all 1969, leg.N. Kaae and the author. A perennial herb and a native of the West Indies, Central and S. America, naturalized in the Mediterranean region, in SW.England, Madeira, the Acores, S. Africa and Ceylon (Young 1958). *O. corymbosa* DC. (*O. martiana* Zucc.), seen from the following finds in Tenerife: Banana-plantation in Punta Hidalgo, 1967 and at Las Arenas near Puerto de la Cruz, 1964, both leg. N. Kaae. A native of S. America and naturalized and a troublesome weed in many subtropical countries; also known from Madeira at the Acores.

#### Polygonaceae:

*Polygonum maritimum* L. Sandy field near the sea at

El Médano, Tenerife-South, 1965, N. Kaae. New to Tenerife but recorded earlier from Gran Canaria and La Palma.

#### R a n u n c u l a c e a e :

*Ranunculus trichophyllus* Chaix. In big masses in a water-canal in Barranco del Infierno, Tenerife, 1969. Previously only known from a few finds on Gran Canaria and Tenerife (Lems 1960).

#### R e s e d a c e a e :

*Oligomeris linifolia* (Vahl) Macbride (*Resedella subulata* (Del.) Webb). Punta Roja at El Médano, Tenerife-South, 1968, leg. F.Mang. Seems to be new to this island and probably native; earlier recorded from Fuerteventura, Lanzarote and Gran Canaria (Abdullah 1967).

#### R o s a c e a e :

*Aphanes*. *A. arvensis* L. generally has been recorded from five western Canary Islands (Pitard & Proust 1908, Lid 1968). However the presence of this species in the Canaries is rather unlikely, just as on Madeira (A. Hansen 1969), and already Rothmaler (1935) has stated that *A. arvensis* here is substituted by the species *A. microcarpa* (Boiss. & Reut.) Rothm. In the herb., Bot. Museum. Copenhagen, *A. microcarpa* is represented with a sample from La Cumbre, Gran Canaria, collected by O. Gelert in 1897, and all the material given by Lid (1968) as "*A. arvensis*" and sent me on loan from the Bot. Museum, Oslo, could clearly be identified with *A. microcarpa*.

#### S i m a r o u b a c e a e :

*Ailanthus altissima* (Mill.) Swingle (*A. glandulosa* Desf.). An ornamental tree from SE. Asia, run wild and established in several places round Puerto de la Cruz, Tenerife, 1969. Recorded from Gran Canaria by Kunkel (1967, 1969).

Solanaceae:

*Nicotiana paniculata* L. (*N. cerinthoides* Hornem.). An annual or short-lived perennial herb from Peru, S.America; in 1969 observed in several waste places in Puerto de la Cruz (east) and in San Vicente near San Juan de la Rambla, Tenerife. Since 1959 mentioned in "Index Seminum", pu-

From A.L.Cabrera:

FLORA DE LA PROVINCIA DE BUENOS AIRES, vol. 5, 1965. 221

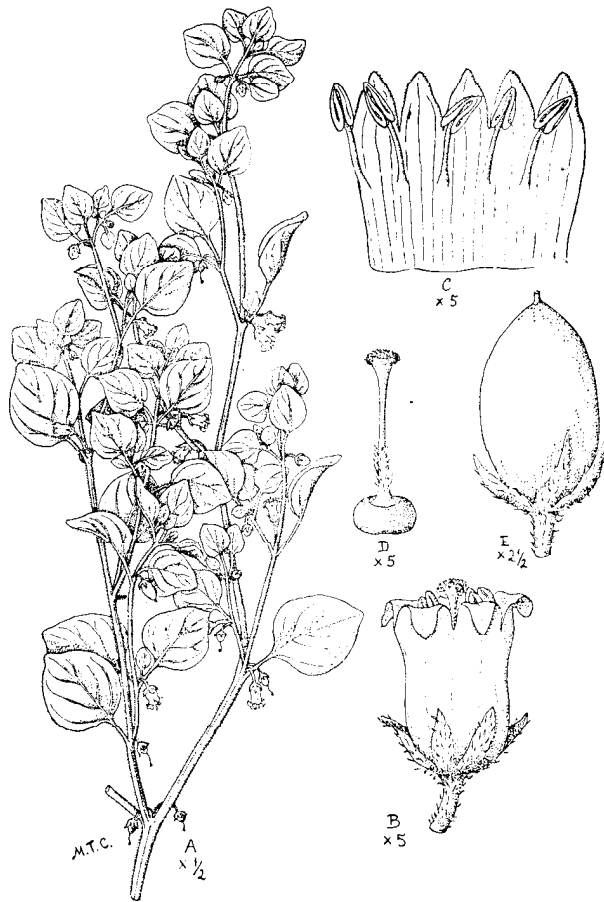


FIG. 75. — *Salpichroa origanifolia* (Lau.) Thellung: A, rama en flor; B, flor; C, corola desplegada; D, gineceo; E, fruto.

blished by the Orotava Botanical Garden, from the following localities: Puerto de la Cruz, Orotava, El Durazno, Güimar and Bco. de Martínez, Now it is a well established weed at least in Puerto de la Cruz and often grows together with *Nicotiana glauca*.

*Salpichroa organifolia* (Lam.) Thell. (*S. rhomboidea* [Hook.] Miers). Naturalized in a banana-plantation at Puerto de la Cruz, Tenerife, 1969. An ornamental plant originating in S. Brazil, Uruguay, N. and S. Argentina; naturalized in Europe in South France, Corse (Cugnac 1931) and Italy, known also from the Acores. New to the Canary Islands.

*Solanum cf. bonariense* L. Observed as a well established garden-escape along a road in Valle Guerra, Tenerife-NE., 1969. A native of South America (S. Brazil, Uruguay, NE. Argentina) and known as a subsponaneous plant also in South Europe and North Africa.

*Solanum mauritianum* Scop. (*S. auriculatum* Ait.). Subspontaneous in a barranco near Las Arenas, Tenerife, 1969, N. Kaae. A native of Central America, also known as a well established garden escape on Madeira and the Acores.—On the whole a number of perennial, woody *Solanum*-species are known as well established garden-escapes in the Canary Islands, such as *S. fastigiatum* Willd. (Index Sem. Orotava 1962), *S. giganteum* Jacq. (Index Sem. Orotava 1963, 1968), *S. jasminoides* Paxt. (Kunkel 1969), *S. marginatum* L. (Lid 1968, Kunkel 1969), *S. robustum* H. Wendl. (Index Sem. Orotava 1960).

#### U m b e l l i f e r a e :

*Apium leptophyllum* (Pers.) F. Müll. (*A. tenuifolium* [Moench] Tell.) recorded by Lid (1968 from La Palma and Tenerife as a weed new to the Canary Islands is commonly distributed in the northern part of Tenerife, particularly on roadsides and as a garden-weed, grows for example very abundantly in flowerbeds under the famous Dragon-Tree in Icod de los Vinos. Observed also on Tenerife-South: Banana-plantation at Los Cristianos 1967, N. Kaae.

*Bupleurum*. *B. aciphyllum* Webb & Berth. known from the 5 western Canaries, and *B. salicifolium* Lowe known from Madeira are generally accepted as one single species which then has to be called *B. salicifolium* Lowe (see Pitard & Proust 1908, Lems 1960, Lid 1968). After having compared some material collected in both Madeira (1968) and on Tenerife (1969) the two species seem to me quite distinct and can be separated morphologically as follows:

	Lower stem-leaves	Inflorescence	Stylopodium
<i>B. aciphyllum</i>	3-5 mm broad, with 5-6 distinct nerves and minutely crenulate margins	Composed of numerous umbels	Narrow, not broader than young mericarps
<i>B. salicifolium</i>	8-15 mm broad, with 7-9 distinct nerves and entire margins	Rather simple with few umbels	Dilated, broader than young mericarps (like a hat with its brim.)

It must be added that I have not been able to study *B. aciphyllum* var. *robusta* described by Burchard (1910) from Gomera. Its systematic position so far is uncertain, and *B. aciphyllum* may be a somewhat variable plant.

#### Zosteraceae:

*Zostera marina* L. The beach at El Médano, Tenerife-South, 1968, F. Mang. Seems to be a plant new to the waters of the Canary Islands, where this genus has been represented hitherto by the species *Z. nana* Roth only.

Some additions to the introduced flora in Las Cañadas, see Sventenius (1946): *Amaranthus hybridus* L. s.l. (Parador), *Chenopodium album* L. s.l. (Parador), *Chloris truncata* R. Br., *Lactuca serriola* L. (Parador), *Oryzopsis miliacea* (L.) Aschers. & Schweinf. (Los Azulejos), *Poa trivialis* L. (Los Azulejos), *Polypogon fugax* Nees ex Steud.

## Summary

The present paper states the following plants (adventitious or garden-escapes, naturalized or not) as new to the Canary Islands: *Amaranthus quitensis*, *Kochia scoparia*, *Anacyclus radiatus*, *Aster laevis* and *A. lanceolatus*, *Guizotia abyssinica*, *Helianthus annuus*, *Hypochoeris radicata*, *Ipomoea cairica*, *Euphorbia inaequilatera*, *Pennisetum purpureum*, *Setaria chevaleri*, *Oenothera suaveolens*, *Oxalis corymbosa* and *O. latifolia*, *Salpichroa organifolia*, *Solanum* cf. *bonariense* and *S. mauritanum*, and *Zostera marina*. An attempted revision of the Canarian members of the genera *Bidens*, *Leontodon*, *Tragopogon*, *Aristida*, *Chloris*, *Digitaria*, *Pennisetum*, *Polytigon*, *Sida*, *Aphanes* and *Bupleurum* has been made. A number of records of species mostly new to either Tenerife or Gran Canaria are also given.

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## RESEÑA

ALAN BLOOM: *Alpine Plants of Distinction.*  
Collingridge Books, The Hamlyn Publ. Group Ltd., London-New York-Sydney-Toronto, 134 págs., 32 fotogr.; Feltham 1968. - s 35/-

*Plantas Alpestres Sobresalientes:* El libro de la floricultura tratando especies oriundas de regiones elevadas. El autor: Un jardinero distinguido y de experiencia. O "un libro escrito por un entusiasta profesional para los entusiastas aficionados".

Traduciendo el título verbalmente, el lector llega a la conclusión de que el libro trata plantas alpinas diferentes. Lo hace, pero otra vez diferente. Porque "alpinos", en la lengua inglesa, se refiere especialmente a plantas que se cultivan en rocallas. Es decir entre rocas, imitando un paisaje alpestre en miniatura.

Nosotros, aficionados de plantas de zonas subtropicales, nosotros cultivamos entre rocas sólo especies cactáceas y otras suculentas; la jardinería, incluyendo sus términos técnicos, en los países templados, es diferente...

Como usar plantas alpestres (junto con listas de proposiciones) en nuestros jardines se explica en capítulos de menos importancia. La parte verdaderamente importante pero, que ocupa casi 90 páginas, se refiere a las especies mismas, en un glosario descriptivo en orden alfabético de géneros citados. Unos 129 géneros se menciona, con descripciones de las especies más importantes, y con recomendaciones para el cultivo de éstas. Páginas también útiles se reúne con el registro de los géneros y especies que contiene al mismo tiempo datos sobre el espacio de plantar y unos números clave de mérito de las especies, o sea "certificados sobresalientes", según el autor.

G. KUNKEL'