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CONTRIBUTIONS TO THE FLORA OF MADEIRA AND PORTO SANTO

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With 5 figures

Abstract: Besides new records of a number of rare or otherwise interesting plants of the Madeira Archipelago the following species — natives, aliens or garden-escapes — have been recorded as new to Madeira: *Iresine herbstii*, *Narcissus pseudonarcissus*, *Campanula lusitanica*, *Corrigiola litoralis*, *Vaccaria pyramidata*, *Cistus salvifolius*, *Tradescantia fluminensis*, *Anacyclus radiatus*, *Centaurea salmantica*, *Crepis capillaris*, *Emilia sagittata*, *Gnaphalium calviceps*, *Helichrysum petiolatum*, *Sonchus asper* ssp. *glaucescens*, *Sedum praealtum*, *Diplotaxis catholica*, *D. siifolia*, *Eruca sativa*, *Rhododendron ponticum*, *Phyllanthus tenellus*, *Fumaria sepium*, *Arundinaria japonica*, *Avena brevis*, *Bromus lanceolatus*, *Notodanthonia tenuior*, *Panicum capillare*, *Parapholis filiformis*, *Paspalum distichum*, *Phalaris arundinacea* var. *picta*, *Setaria viridis*, *Vulpia longiseta*, *Myriophyllum aquaticum*, *Juncus conglomeratus*, *Luzula multiflora* ssp. *multiflora*, *Lamium hybridum*, *Origanum micranthum*, *Lotus conimbricensis*, *Melilotus segetalis*, *Trifolium isthmocarpum*, *Orobanche crenata*, *Argemone mexicana*, and *Ailanthus altissima*. The following species of the same categories are new to Porto Santo: *Chenopodium vulvaria*, *Gaillardia pulchella*, *Bromus lanceolatus*, *Bromus rigidus*, *Dactylis smithii* ssp. *marina*, *Eragrostis barrelieri*, *Lolium parabolicae*, *Stenotaphrum secundatum*, and *Juncus hybridus*. Forty-two of the species cited above represent species new to the

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Madeira Archipelago as a whole. Further, some remarks on the nomenclature of various Madeiran species have been given, and a new name: *Vicia costae* A. Hansen has been proposed. A short note on R. Th. Lowe and his Madeira-Flora finishes the paper.

The present paper brings a number of floristic observations made in Madeira mainly in 1972 and 1973, together with the results of studies in some herbaria in Funchal, Madeira and Coimbra, Portugal. Thanks are due to Engenheiro Rui Vieira, late President of the Junta Geral and Director of the Botanical Garden, Funchal, for making a longer stay in Madeira in April-May 1973 possible and for working facilities in the Botanical Garden, and to Mr. G. E. Maul, of the Municipal Museum of Funchal, for working facilities in this Museum and for admittance to the herbarium and for valuable help in many respects. Thanks are due also to the gentlemen: V. Dalgaard, Copenhagen; K. W. Larsen, Lyngby, Copenhagen; G. Kjellson, Elsinore; Prof. Dr. F. Höpflinger, Graz, Austria; and Mrs. G. Martienssen, Hamburg, Germany; for handing over to me some material of Madeira plants for determination or verification.

Abbreviations used: Herb. BGF = *Herbarium of the Botanical Garden, Funchal.*

Herb. MMF = *Herbarium of the Museu Municipal, Funchal.*

AMARANTHACEAE

Iresine herbstii Hook.

In waste place near the Stadium, Funchal, 1973, flowering. A woody perennial and a native of Brazil, S. America, often cultivated in different colour-variants for ornament and sometimes escaping.

AMARYLLIDACEAE

Narcissus pseudonarcissus L.

Established in pastures and along roadsides at Santo da Serra, escaped from cultivation, 1973. Perennial, a native of W. and SW. Europe.

BORAGINACEAE

Myosotis arvensis (L.) Hill

Fajã da Nogueira Valley, near the new power-station, and as a weed in «Quinta do Palheiro», NE. of Funchal, 1972. A rare plant on Madeira.

CAMPANULACEAE

Campanula lusitanica «L.» (C. loeflingii Brot.)

Fajã da Nogueira Valley, on roadsides near the new power-station, 1972. New to Madeira. A surprising find of this annual plant only known from the Iberian Peninsula; it may represent a very recent introduction into Madeira, and probably may be connected with the building of the power-station.

CARYOPHYLLACEAE

Corrigiola litoralis L.

Quinta da Junta, Santo da Serra, 1957, leg. R. Vieira and R. Santos (Herb. BGF., referred to *Polygonum aviculare* L.), probably a recent introduction. Annual or perennial, distributed in SW. Europe northwards to S. England and to Denmark, further in N. and E. Africa and W. Asia. Found again by the author in April 1973 as a weed on cultivated ground in the same area; thus it seems to be naturalized.

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Silene ignobilis Lowe

This annual species described by Lowe in 1838, from corn-fields in Ponta de S. Lourenço, Madeira, and further observed by him in Porto Santo and supposed to be endemic to the Archipelago, most likely only represents the annual species *Silene behen* L., commonly distributed in the Central and eastern Mediterranean Region. This conclusion has been reached after having studied some material in the Herb. MMF., collected by the late J. G. da Costa at Lombas, Porto Santo, about 1940; cf. also Cosson (1868) and Menezes (1914). Since then the plant has not been observed again in the Archipelago, and the said finds most likely only represent incidental introductions.

***Spergularia salina* (L.) Griseb.**

Along the rivulet through Vila, Porto Santo, abundant 1973. New to this island. In 1971 it was published as new to Madeira too (Hansen 1971); most likely it has been for many years overlooked or confused with other *Spergularia*-species.

***Vaccaria pyramidata* Med.**

In waste land at the harbour of Funchal, 1973. Annual herb, a native of SE. Europe and the Near East, but now nearly a cosmopolitan weed spread in many parts of the world. New to Madeira.

CELASTRACEAE

***Maytenus dryandri* (Lowe) Loes. (Catha d. Lowe)**

Collected at the Fishing-harbour east of Club Caniço, 1971, by G. Martienssen, Hamburg. To-day a rare plant in Madeira (endemic), formerly more widespread.

CHENOPODIACEAE

***Chenopodium vulvaria* L.**

Vila, Porto Santo, a weed of flowerbeds in the nursery of the Forestry Department, 1973. New to the Archipelago. A native of the Mediterranean region and the Near East, but introduced and naturalized in many other areas.

CISTACEAE

***Cistus psilosepalus* Sweet (*C. hirsutus* Lam.)**

Further finds of this plant known to exist in Madeira since at least 1953 (Fernandes 1956) are: Arrebentão, 2.8.1962, Fajã da Urtiga, 16.2.1962, Jardim da Serra, Fonte de Pedra, 22.11.1963, and Porto Santo: Encosta norte do Pico do Castelo, 12.7.1958, all collected by R. Vieira and kept in the Herb. BGF. In 1972 it was observed on a roadslope between Poiso and Camacha, and in 1973 on the roadside between S. António and Eira do Serrado, NW. of Funchal. It is a question whether this plant is a native of Madeira or a rather recent introduction.

518 *Cistus salvifolius* L.

The 2 finds of supposed *C. psilosepalus* (Fanal 1933 and Ribeira da Janela 1934) made by the late J. G. da Costa, and both in the Herb. MMF., mentioned in an earlier paper by the present author (Hansen 1970), now turned out to be identical with *C. salvifolius*, thus also known from Madeira and new to the island. It has most likely been introduced accidentally, and perhaps has disappeared again. Widespread in the Mediterranean region.

COMMELINACEAE

Tradescantia fluminensis Vell. em. Brückn.

A garden-escape in Monte above Funchal, 1969, on roadside at a levada near Caniço, 1971, leg. G. Martiensen, on stonewall in Funchal, N. of the Botanical Garden, 1972, and in riverbed at S. Vicente, North coast, 1973; new to Madeira. Perennial originating in S. America (Brazil-Paraguay), naturalized in the Azores (Palhinha 1966) and in S. Europe, f. inst. on Corsica, the Balearic Islands and in Portugal (Pinto da Silva 1956).

COMPOSITAE

Ageratina adenophora (Spreng.) King & Robinson (*Eupatorium* a. Spreng.)

Another locality in Porto Santo for this plant was discovered in 1973: In a shady *Populus alba*-copse at Terra de Maia (near the church), NE. of Vila. Previously only known from a single locality on this rather dry island, with only a few suitable habitats for plants demanding humidity (Hansen 1970).

Ageratina riparia (Regel) King & Robinson (*Eupatorium* r. Regel)

A third locality in Madeira for this alien from Central America, recorded from the island since at least 1963, could be stated in 1972: Path in Ribeira N. of the Botanical Garden, Funchal. It may very well have a more extensive distribution in the Funchal-Monte-region than known at present. In 1973 it was further observed near Quinta da Junta, Santo da Serra, which locality thus represents its, up till now, easternmost locality in Madeira. In La Palma, Canary Islands, it is at present a very common plant, probably present in all the Barrancos of that island.

Anacyclus radiatus Lois.

In ruderal site at the harbour of Funchal, 1973, an alien new to Madeira. Annual and widespread in the Mediterranean region; also known from the Canary Islands (Tenerife, Hansen 1970 a).

Aster squamatus (Spreng.) Hier.

As one would expect this plant is spreading on Madeira. It was first observed in the village of Ponta do Sol on the South coast, W. of Funchal, in 1969 (Hansen 1970). In 1971 it was found in several places along the road running between Ponta do Sol and Tabua, and in 1973 it could be collected in a waste place at Praia Formosa, a few km. W. of Funchal. Most likely it will be able to conquer the whole of Madeira in the next few decennia!

Centaurea salmantica L. or **Mantisalca salmantica** (L.) Briq. & Cavill.

Gaula, eastern Madeira, 1963, leg. M. A. L. Sardinha (Fl. Lusit. Exsicc. No. 279, Herb. Coi.), probably an introduced plant. A biennial or perennial, and a native of Portugal and the West Mediterranean region; new to Madeira, apart from an old and isolated record from Selvagem Grande, Salvage Islands (Lowe 1869).

Chamaemelum mixtum (L.) All. (*Ormenis*. (L.) Dum.)

In ruderal site, Vila, Porto Santo, 1973, new to this island. In Madeira it has been known in a few localities since Lowe's days, originally introduced. Annual, widespread in the Mediterranean region.

Chrysanthemum leucanthemum L.

Along roadsides and in fields near Quinta da Junta, Santo da Serra, 1973; it seems to be the only region of Madeira where this plant — once introduced, first mentioned by Menezes (1914) — has been established.

Chrysanthemum pinnatifidum L. f.

Pico do Castelo, Porto Santo, 1973. None of the *Chrysanthemum*- or *Argyranthemum*-species endemic to the Madeira Archipelago seem hitherto to have been found in P. Santo, but this species could very well have been planted there together with all the other \pm foreign

plants that have been put on the peak in order to prevent further soil-erosion, a phenomenon that highly threatens the vegetation cover in many parts of P. Santo.

***Crepis capillaris* (L.) Wall.**

On roadside at the entrance of the Quinta da Junta, Santo da Serra, 1973, scarce. New to Madeira: Annual or biennial, widely distributed in SW. and Central Europe, introduced in many other parts of the world (N. and S. America, Australia, New Zealand), also known from the Azores and from the Canary Islands.

***Emilia sagittata* (Vahl) DC.** (*E. flammea* Cass., *E. sonchifolia* auct.)

Subspontaneous at Matur near Água de Pena, NE. of the Airport, 1973, leg. K. W. Larsen (Herb. C.), probably an escape from cultivation, new to Madeira. Annual, originating in S. and SE. Asia, but spread as a weed in the tropics and subtropics of the world (Garabedian 1924).

***Gaillardia pulchella* Foug.**

Porto Santo, escaped from cultivation at the new — yet at present not used — Tourist Hotel, on the south coast W. of Vila, 1973. Annual and a native of N. America; known as a casual in various European countries.

***Gnaphalium* cf. *calviceps* Fern.**

On parking-place at Terreiro da Luta above Monte, 1972. New to Madeira. Annual, originating in S. America (Brazil - C. Argentina), but first described as an alien from Virginia, USA., in 1935. To-day it is known as a well established alien in N. America and in New Zealand (Drury 1971). There are so far no records known from Europe. In 1972 I could also collect it on Terceira, Azores, new to this group of islands too (Hansen 1973).

***Helichrysum petiolatum* (L.) DC.**

Established garden-escape on roadside between Poiso and Camacha, 1972. New to Madeira. An unidentified sheet in the Herb. BGF., from Queimadas 1957, leg. R. Vieira & R. Santos, and studied by the author in 1973, turned out to be the same plant. A woody perennial

from S. Africa, in Europe known as a subsponaneous plant in Portugal (Pinto da Silva et al. 1956).

Lactuca serriola L.

The existence of this plant in Madeira has been much doubted as all earlier records seemed to refer to either *L. virosa* L. or to *L. patersonii* Menezes (in fact = *L. virosa* L.), (Hansen 1970, 1971). Yet in 1970, the plant was observed on roadsides and roadslopes at the Airport, obviously recently introduced (Hansen 1971), where — according to a sheet in the Herb. BGF. — it has been collected as early as July 1958, leg. R. Vieira (sub nom. *L. patersonii*).

Lactuca virosa L. (*L. patersonii* Menezes)

A further 2 finds of this rare plant in Madeira can be mentioned here, according to herbarium-material in Herb. BGF.: Ribeira das Cales, 2.8.1962, and Estrada Nacional of Curral das Freiras, 28.10.1963, both leg. R. Vieira.

Soliva stolonifera (Brot.) Loud. or *Gymnostyles nasturtiifolia* Juss.

On roadside at Madalena do Mar, south coast W. of Funchal, March 1973, leg. V. Dalgaard (Herb. C.). This tiny, prostrate annual, originating in S. America, has been given for Madeira by Lowe (1872) and Menezes (1914) as a very common weed growing in the streets of Funchal, but during the years 1967-1973 I have never succeeded in discovering it there, and most likely it is now extinct in Funchal, and at present must be considered a very rare plant in Madeira.

Sonchus asper (L.) Hill. ssp. *glaucescens* (Jord.) Ball (*S. glaucescens* Jord.)

On roadsides between Poiso and Camacha, 1972, a ssp. new to Madeira. Widespread in the Mediterranean region, also known from the Canary Islands.

CONVOLVULACEAE

Convolvulus massonii Dietr.

Fajã da Nogueira Valley, hanging down nearly perpendicular rocks; an endemic species which at present should be characterized as

very rare, thus Menezes (1914) only mentions a few localities. A shrubby or subshrubby, twining plant, by Sa'ad (1967) referred to the Canarian species *C. canariensis* L. as a variety, var. *massonii* (Dietr.) Sa'ad, only differing in being glabrous.

C. siculus L.

On a path between Ponta do Sol and Madalena do Mar, south coast W. of Funchal, 1973. Another rare *Convolvulus*-species mentioned already by Lowe (1872), annual or perennial, widespread in the Mediterranean region and Portugal.

C. tricolor L.

A few specimens in ruderal site at the harbour of Funchal, 1973, previously only mentioned from Madeira by Lowe (1872): «In vineyards and waste ground about Funchal, occasionally». Annual or perennial, mainly West-Mediterranean in its distribution.

CRASSULACEAE

Sedum praealtum A. DC. (*S. dendroideum* A. DC.)

Loreto E. of Calheta, Madeira. 1973, leg. V. Dalgaard, Herb. C., most likely a garden-escape. Ornamental, evergreen shrub and a native of Mexico, in Europe naturalized on coastal rocks in SE. France and NW. Italy.

S. sediforme (Jacq.) Pau (*S. altissimum* Poir.)

This perennial plant from the Mediterranean region was recorded as new to Madeira in 1969, collected in a locality situated near the tunnel on the road between Machico and Caniçal, eastern part of the island (Hansen 1970). A new find was made in 1973: Rocks near Matur SW. of Machico.

CRUCIFERAE

Coronopus squamatus (Forssk.) Aschers.

In rubbish tip near the tunnel on the road Machico-Caniçal, 1973. A rare plant in Madeira, previously only observed on streets and roads of Funchal and in the Machico-harbour.

Diplotaxis

Two species of this genus, *D. catholica* (L.) DC. and *D. siifolia* G. Kunze were collected in a waste place near the Stadium of Funchal, 1973, as new to Madeira. Both are annuals and natives of SW. Europe and NW. Africa. *D. siifolia* is sometimes considered a ssp. of *D. catholica*.

Draba muralis L.

Fajã da Nogueira Valley, near the new Power Station, 1972. A rare plant in Madeira and only observed in the highest parts of the island.

Eruca sativa Mill.

S. Lourenço Promontory, near the Forest Service-House, easternmost part of Madeira, 1973. Probably the first record of this plant from Madeira itself, while it has long been a well-known plant from Porto Santo, and is even common there.

Matthiola parviflora (Schousb.) R. Br.

On roadside at Ponta, SW. of Vila, Porto Santo, 1973. In the Archipelago only known from this island with a single record from Ponta da Malhada, E. of Vila, 1923 (da Costa 1946).

Sisymbrium orientale L.

In waste place at the harbour of Funchal, 1973. A rare plant in Madeira, mentioned for the first time by Menezes (1922), collected in 1915 and 1921. Annual, and widely distributed in the Mediterranean region, introduced elsewhere.

CYPERACEAE

Carex pilulifera L.

In 1970 I published this plant as new to Madeira (Achadas da Cruz, undoubtedly spontaneous, 1969), but according to a sheet in the Coimbra Herbarium, it has already been collected in Madeira in 1963: Funchal, leg. M. A. L. Sardinha, Fl. Lusit. Exsicc. No. 340 (Herb. Coi.).

Cyperus alternifolius L.

Further finds of this plant, published in 1971 as a new and well-established garden-escape on Madeira (Hansen 1971) are: Ponta da Cruz, SW. of Funchal, leg. R. Santos as early as 1957 (Herb. BGF.), and Ribeira de Machico, at the mouth in the town of Machico, 1972, leg. the author.

Cyperus brevifolius (Rottb.) Hassk. (Kyllinga b. Rottb.)

According to a sheet in Herb. BGF., the time for the first find of this plant in Madeira has to be moved back from 1968 (Hansen 1969) to 1963, then found at Caniçal by R. Vieira. A new station is: Matur near Água de Pena, January 1973, leg. K. W. Larsen (Herb. C.).

ERICACEAE

Rhododendron ponticum L.

Subspontaneous on roadslope near Paul da Serra, 1972. A native of the Iberian Peninsula, Asia Minor and the Near East. Another garden-escape of this genus in Madeira, *R. mucronatum* from Japan, was recently published (Hansen 1971).

EUPHORBIACEAE

Phyllanthus tenellus Roxb.

In 1967 a *Phyllanthus*-species was observed in waste places and as a garden-weed in Funchal. It was then identified as being *P. niruri* L. s. lat., a native of America, and published as new to Madeira (Hansen 1968). Since then it has become clear to me that it is a case of mistaken identity. The plant in question is in fact *P. tenellus* Roxb., another annual herb very much like *P. niruri* in habit but differing in having 5 free stamens in the male-flowers, while *P. niruri* only possesses 3 stamens. As the male-flowers are very small and inconspicuous in *P. tenellus*, the mistake made may be somewhat explicable! *P. tenellus* is native to the Mascarene Islands, but according to Webster (1957), it has been introduced into the southeastern United States, the West Indies, Brazil and doubtless other areas of the New World (in the West Indies at least known since 1839). It flowers throughout the year when conditions are favourable. It demands moist and shady places, and spreads very easily due to the rapidity of growth and reproductive maturation of the plant. According to Webster (l. c.), a seedling when

only a few cm. high is already producing explosively dehiscent capsules, and deciduous branchlets which have only 2 or 3 leaves unrolled will already have a completely developed fruit! *P. tenellus* has been observed in Funchal each year since 1967, and in 1973 it was further collected in S. Gonçalo, a few km. east of Funchal. According to a sheet in Herb. BGF., it is also known from Ribeira Brava, leg. R. Vieira & R. Santos (sub nom - *Hypericum humifusum*), collected already in 1957, thus being the first find in Madeira. Very recently this plant has also been proved to exist in the Azores (S. Miguel and Pico, Hansen 1973), and in the Canary Islands (Gran Canaria, Kunkel 1972).

FILICES

Adiantum raddianum C. Presl (*A. cuneatum* Langsd. & Fisch.)

This fern from Brazil, S. America, was given as an alien new to Madeira for the first time by Vasconcellos (1968), and Benl (1967) characterizes it as even more abundant than *A. capillus-veneris*! Two new localities are: Ribeiro Bonito, 1967, leg. G. Andrada (Herb. of the Forestry Department, Funchal), and a rock-wall near the old shipyard E. of Caniço, 1971, leg. G. Martienssen, Hamburg. It is probably very often confused with *A. capillus-veneris*. Also known from the Azores and the Canary Islands.

Doodia caudata R. Br.

In my floristic contributions (Hansen 1974), this fern was given as an alien new to Madeira, with supposed first record published in 1968. According to a sheet found in Herb. BGF., it has been collected in Madeira as early as 1962: Ribeiro Vasco Gil, prope fontem Vermelha dictum, leg. E. Sventenius.

9065 **Osmunda regalis** L.

A sheet with this plant in a collection of Madeira-ferns collected by Cossart in 1850, but unfortunately left without any statements of localities (in Herb. MMF.), may indicate that this fern did at one time exist in Madeira. There are no recent records. It is well-known from the Azores (all islands except Graciosa).

FUMARIACEAE

Fumaria sepium Boiss. & Reut.

A field-weed in the same area at Quinta da Junta, Santo da Serra, where *Corrigiola litoralis* was collected, 1973. New to Madeira, annual

distributed in Spain and Portugal, and most likely a recent introduction into Madeira.

GRAMINEAE

Agrostis pourretii Willd. (*A. pallida* DC., *A. salmantica* (Lag.) Kunth)

Recently published as an alien new to Madeira, found in Funchal in 1969 (Hansen 1970). 1972 it was observed in a new locality: Fajã da Nogueira Valley, on roadside near the Power Station.

Arundinaria japonica Sieb. & Zucc. (*Pseudosasa j.* (Sieb. & Zucc.) Makino)

Monte above Funchal, perfectly established on roadside, flowering in April 1973, det. C. E. Hubbard. A native of Japan, new to Madeira, and most likely an escape from cultivation. Cultivated in many temperate countries and sometimes established, f. inst. in the British Isles.

8428
Avena brevis Roth (*A. mandoniana* Coss. & Bal.)

This annual Oat has been widely misunderstood in Madeira, but at least 2 older collections do exist, viz.: S. Roque 1865, Mandon Pl. Maderenses 1865/66, No. 271 (kept in several herb.), and Santa near Porto do Moniz 1932, leg. da Costa (Herb. MMF.). It may be extinct now. Menezes (1894 and 1899) placed it under *A. strigosa* Schreb., the latter in that way being a doubtful plant for Madeira, most likely it has never occurred there.

Brachypodium phoenicoides (L.) R. & S.

Ribeira de João Gomes, Funchal, 1963, leg. M. A. L. Sardinha, Fl. Lusit. Exsicc. No. 307 (Herb. Coi.). A rare plant in Madeira, hitherto only recorded from Ribeiro Seco, Funchal (Menezes 1926).

Bromus lanceolatus Roth (*B. macrostachys* Desf.)

On roadside at the harbour of Funchal, 1972, and on rocks at Terra de Maria, NE. of Vila, Porto Santo, 1973. New to both islands. Annual grass, common in the Mediterranean region, and introduced in many other parts of the world; also known from the Canary Islands. The material from P. Santo belongs to var. *lanuginosus* (Poir.) Dinsm.

Bromus rigidus Roth (B. maximus Desf.)

In ruderal site at Vila, Poto Santo; new to this island, but for many years well-known from Madeira, where it is fairly common.

86^A **Dactylis.**

Parker (1972) has studied this grass-genus in Madeira. Besides the introduced *D. glomerata* L. ssp. *glomerata* (Madeira, P. Santo) *D. smithii* Link ssp. *hylodes* Parker (inland ssp.) and ssp. *marina* (Borrill) Parker (coastal ssp.) are present, according to Parker only found in Madeira in the Archipelago. But according to a sheet in Herb. MMF., ssp. *marina* has been found also in Porto Santo: Pico Branco 1940, leg. da Costa, an observation which I could confirm during a visit there in 1973 (observed on the eastern slope of the peak, near the sea). Menezes's mention of «*D. glomerata*» on Ilhéu Chão and Bugio, Desertas, most likely covers this ssp. too.

Eragrostis barrelieri Dav. (E. poaeoides auct. mad., non PB.)

Porto Santo, among paving stones in the streets of Vila, 1973; New to P. Santo, but since long a well-known plant in Madeira. Annual and a native of warm-temperate Europe and Asia, introduced elsewhere.

Eragrostis curvula (Schrad.) Nees

This alien from S. Africa has been known in Madeira since at least 1954 (Malato-Beliz 1958, Hansen 1970), from the region east of Funchal. Further findings indicating a continuous spreading are: Quinta do Palheiro, NE. of Funchal, as a garden-weed, 1972, and in 2 different localities (roadside and ruderal site) in Funchal, 1973.

87^B **Festuca ovina** L.

In 1906, Menezes published what he called *Festuca ovina* L. ssp. *duriuscula* Hack. as a plant new to Madeira, collected at Monte above Funchal by Moniz (before 1898, as this Madeiran botanist died the same year). In his Flora of Madeira (1914), Menezes mentioned the same plant under the name *F. ovina* L. ssp. *duriuscula* (L.) Hack. In Herb. MMF. 2 *Festuca*-sheets are kept bearing this name, one collected at Santa near Porto Moniz in June 1933, and another collected in Jardim do Seminário do Funchal 1938, both leg. da Costa, and both without any doubt representing introduced specimens. To-day, *F. ovina* var. or ssp. *duriuscula* or *F. duriuscula* is generally named *F. longifolia* Thuill.,

as the epithet «*duriuscula*» is a nom. dub., and, in my opinion, the above mentioned Madeiran material does not at all belong to this species. It is merely a *Festuca ovina* L. s. lat. which plant thus is known from at least 2 stations in Madeira, but has not been observed again recently, and therefore its occurrence on Madeira is best characterized as accidental.

Gaudinia fragilis (L.) PB.

On roadside in the Fajã da Nogueira Valley, near the new Power Station, 1972, at Matur near Santa Cruz, 1973, leg. K. W. Larsen (Herb. C.), and a garden weed in Ponta da Cruz W. of Funchal, 1973. These observations show how this grass is still expanding on Madeira since its first discovery in 1954, see Malato-Beliz (1958) and Hansen (1970, 1973).

Haynardia cylindrica (Willd.) Greuter (Monerma c. (Willd.)
Coss. & Dur.)

Waste place at the eastern end of the Airport, Santa Cruz, 1972. A rare annual in the Archipelago, known from a few stations in Madeira, Porto Santo and the Desertas. In 1973 it was observed in the island of Santa Maria, Azores, as a species new to this part of Macaronesia.

Helictotrichon sulcatum (J. Gay) Henr. or **Avenochloa sulcata** (J. Gay) Holub
(*Avena marginata* Lowe)

The existence of this stout, perennial grass in Madeira — only known from a few stations in the highest parts of the island, Pico Grande, Pico Ruivo, Balcões — seems to have been quite neglected or simply forgotten by the recent authors contributing to the taxonomy of this genus, f. inst. Potztal (1951), Holub (1958, 1962) and Gervais (1973). Its area covers SW. France, Spain, Portugal, Morocco and Madeira. It can be added here that Potztal (l. c.) has made a superfluous new combination: *Helictotrichon sulcatum* (J. Gay) Potztal against *H. sulcatum* (J. Gay) Henrard (Henrard 1940).

839 A **Holcus mollis** L.

According to a sheet in Herb. MMF. this grass was collected at Fonte da Hortela, Seixal, Madeira, in July 1928 by da Costa. Previously only known from a single finding in Porto Moniz, July 1921, leg. da

Costa, and published as a plant new to Madeira by Menezes (1922). The material from Fonte da Hortela represents a form with the nodes without hairs. *H. mollis* is perennial and widespread in Europe, introduced elsewhere.

***Lolium parabolicae* Sennen ex Sampaio**

In addition to my note on this grass (Hansen (1971) it can be said now that it also occurs on Porto Santo: In several stations in the dune-area (about 10 km. long), along the south coast between Vila and Ponta da Calheta, 1973. Besides Madeira (old collection from Funchal by Mandon in the sixties in the last century), and Porto Santo, its area comprises the Canary Islands (Fuerteventura, Hierro), the coast of Morocco, Spain and Portugal (locus typicus is Vila do Conde, about 30 km. N. of Porto, Portugal), and has recently been recorded from Brittany, France, as new to this country (Kerguelen 1972).

6900* ***Lolium lowei* Menezes = *L. canariense***

In a recent account on this grass (Hansen 1970), I have mentioned its occurrence in the northern Deserta, Ilhéu Chão, and the fact that it has been recorded also from Porto Santo (Pickering 1962). During my stay in Porto Santo in 1969, I did not succeed in seeing it because I was there at the wrong season, but in 1973 I had the chance of collecting this plant in 2 localities: Pico do Castelo and Rocha de Nossa Senhora, a few km. SE. of Pico do Castelo. Further, I have studied some material from P. Santo collected by da Costa in 1939 (Herb. MMF.): Pico da Juliana, Pico de Ana Ferreira, Pico Branco and Pico de Gandaia (in Herb. Coi. there also is a sheet with this plant from Pico de Gandaia, leg. M. A. L. Sardinha, 1963, Fl. Lusit. Exsicc. No. 376). Terrell (1968) mentions that he has studied some *atypical* specimens of «*Lolium canariense* Steud., a close relative and endemic to the Canary Islands, from Porto Santo (Pico de Juliana, Pico de Gandaia, the same sheets as mentioned above in Herb. MMF.). I feel quite sure now that this material, studied by Terrell, is in fact *Lolium lowei*, and in support of this I can state that my material from Pico do Castelo also represents somewhat atypical specimens of *L. lowei*, caused by the fact that they were growing in deep shade under planted *Pinus-trees*. Actually *L. lowei* is undoubtedly a plant of open, sunny habitats, as I have met it on Ilhéu Chão.

***Notodanthonia tenuior* (Steud.) S. T. Blake**

A weed on lawns under trees in a remote part of «Quinta do Palheiro», NE. of Funchal, 1972; new to Madeira. A remarkable find

of a perennial grass, originating in Australia and New Zealand (probably introduced here), and most likely introduced into Madeira with some plant-import from those regions. — The nomenclature of this grass is somewhat complicated. It was originally described as *Plinthanthesis tenuior* by Steudel (Syn. Pl. Glum. 1: 14, 1854); afterwards it was apparently quite neglected for many years, and consequently described again as a new species under the name of *Danthonia purpurascens* J. Vickery (1950, 1956). In 1963 Zotov created a new genus: *Notodanthonia* including among others *Danthonia purpurascens*, which then became *N. purpurascens* (J. Vickery) Zotov, and finally S. T. Blake in 1972 found that the type of *Plinthanthesis tenuior* Steud. was identical with a specimen of *Notodanthonia purpurascens*, hence the name *Notodanthonia tenuior* (Steud.) S. T. Blacke is valid. Two other Australian *Notodanthonia*-species (earlier *Danthonia*-species): *N. racemosa* (R. Br.) Zotov and *N. semiannularis* (Labill.) Zotov, are known as wool-aliens in Europe, f. inst. in Holland, Sweden, Switzerland, Germany and England (Ooststroom & Reichgelt 1960, Probst 1949).

819A *Oryza sativa* L.

According to a sheet in Herb. MMF. this plant has been collected in Madeira — as an escape from cultivation or introduced by chance — in 1928 (Seixal, leg. da Costa); refer to my note on specimens of this plant collected in Ribeira Brava in 1970 (Hansen 1971).

Panicum capillare L.

Curral das Freiras, 1963, leg. M. A. L. Sardinha, Fl. Lusit. Exsicc. No. 371 (Herb. Coi.). A weed new to Madeira, perennial, originating in N. America but now spread in many parts of the world.

Panicum maximum Jacq.

On roadside at Matur near Água de Pena, 1973, and in an open forest S. of Santo da Serra, 1974, leg. F. Höpflinger. This perennial grass from tropical Africa was, most likely, originally introduced into Madeira for forage, as is the case in many other parts of the world's tropics and subtropics, but has since then run wild in a number of places. First mentioned by Menezes (1906).

Parapholis filiformis (Roth) C. E. Hubb.

Slope on the small promontory Cais at Porto da Cruz, north coast of Madeira, 1972. New to Madeira, but recorded from Porto Santo

by Pickering (1962), collected there by da Costa once during the years 1938-41 (sub. nom. *Lepturus filiformis* (Roth) Trin.). Distributed all along the coast of the Mediterranean Sea as well as along the Atlantic coast of Portugal and Morocco.

Paspalum distichum L. (*P. vaginatum* Sw.)

Ribeira de Machico, in swamp at the town of Machico, 1972. New to Madeira. Perennial, distributed in the tropics and subtropics all over the world. Its close relative *P. paspaloides* (Michx.) Scribn. (*P. distichum* auct., non L.) has been known from the island for many years; they are very often confused, and their somewhat complicated nomenclature makes their separation even more difficult.

Phalaris arundinacea L. var. *picta* L. 825A

Santa near Porto do Moniz, Madeira, June 1932, leg. da Costa (Herb. MMF.), probably a garden-escape, as this variety with the leaf-blades striped green and cream is occasionally cultivated for ornament. *Phalaris arundinacea* L. is not known at all from the Macaronesian Islands.

Poa pratensis L. s. lat.

On roadslope near the tourist-hotels and appartements, Matur near Água de Pena, E. of Santa Cruz, 1972. A very rare plant in Madeira only mentioned by Menezes (1914) with Lowe as authority, but without any localities. At Matur most likely quite recently introduced.

876B **Setaria viridis** (L.) PB.

According to a sheet in Herb. MMF. this grass has once been collected in Madeira: Funchal, May 1936, leg. da Costa; it has never been observed again since 1936, and the find in question most likely only represents an isolated introduction.

Sporobolus indicus (L.) R. Br.

On roadside at Matur near Água de Pena, NE. of the Airport Santa Cruz, 1973. Hitherto only recorded from roadsides at this Airport (Hansen 1971), but apparently spreading further from this place.

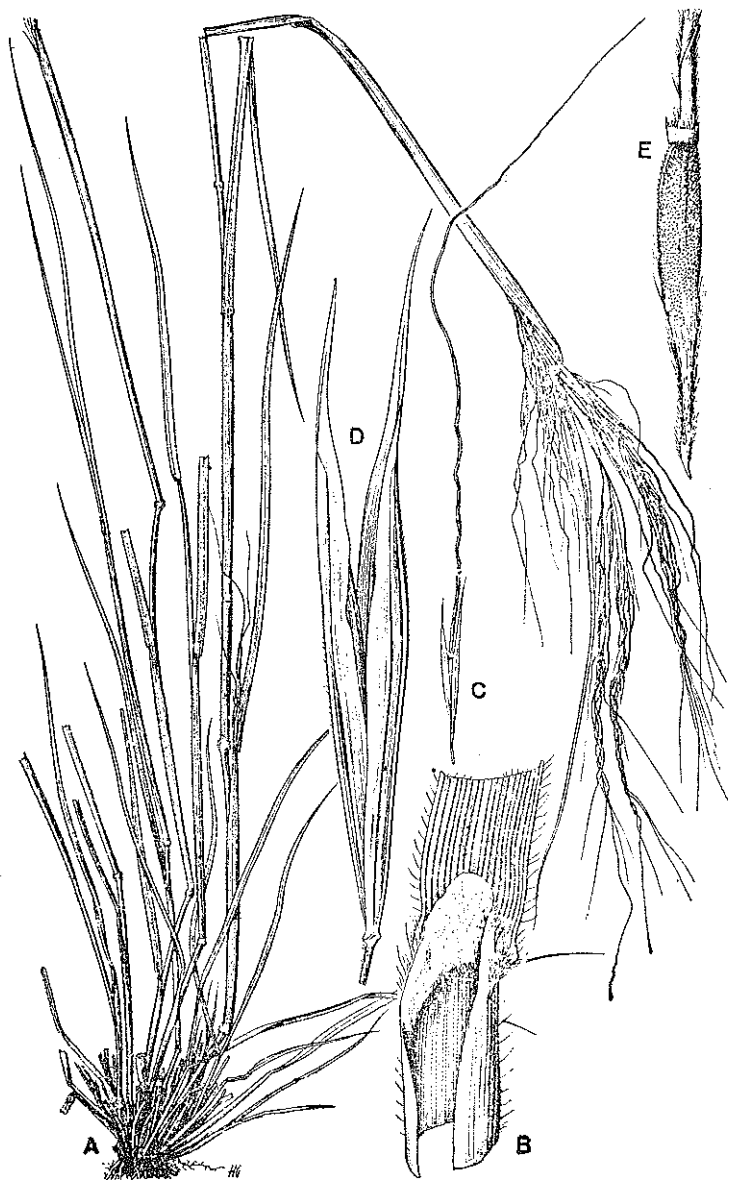


Fig. 1. — *Stipa neesiana* Trin. & Rupr. A: Plant, ca. $\times \frac{1}{2}$. B: Ligule, ca. $\times 5$.
 C: Spikelet, ca. $\times 1 \frac{1}{2}$. D: Glumes, ca. $\times 5$. E: Caryopsis, ca. $\times 5$. — After
 J. A. Caro: Las especies de *Stipa*. — Kurtziana 3, 1966.

Stenotaphrum secundatum (Walt.) Kuntze

Perfectly established along the rivulet through Vila, south coast of Porto Santo, 1973. New to this island, but for many years naturalized in Madeira, mentioned already by Menezes (1906).

2148 **Stipa neesiana** Trin. & Rupr.

Fig. 1.

A perennial grass recorded from Madeira for the first time by Grabham (1942), found in Funchal. According to a sheet kept in the Coimbra Herb., it seems to have been collected in Madeira already in 1893 by Menezes sub. nom. *S. setigera* Presl. His collection was made at the Funchal Hospício, and according to another sheet in Herb. MMF., the plant still existed at this place in 1938, leg. da Costa. In 1957 it was collected in the «Quinta do Palheiro», NE. of Funchal, by J. Malato-Beliz and R. Santos, (Herb. BGF.), and in this garden it still occurred as a weed in 1972, leg. the author. Two further recent findings are: Roadside near the Stadium in Funchal, 1972, and roadside in Rua de Menezes, Funchal, 1973, both leg. the author. Thus this South American grass now can be considered as a fully established weed in the Funchal-area.

Triplachne nitens (Guss.) Link

An unusual habitat for this plant was observed in Porto Santo in 1973: A scree high up the Pico Branco-Massive (at about 400 m.). Usually it is a plant of coastal sands and dunes, and a rare plant in the Archipelago, known only from the dune area along the south coast of P. Santo (Hansen 1970), and from the São Lourenço-Promontory, Madeira.

HALORAGACEAE

Myriophyllum aquaticum (Vell.) Verdc. (*M. brasiliense* Cambess.)

Fig. 2.

In moist ground at Santo da Serra, 1971, leg. G. Kjellson (Herb. C.). An interesting observation of an alien new to Madeira, probably introduced as an aquarium-plant. An aquatic or semiterrestrial herb, a native of S. America (E. Brazil, Uruguay, Argentina, Chile), often cultivated elsewhere in ponds or aquaria, and naturalized in Japan, Australia, New Zealand, in south-western and south-eastern North America,

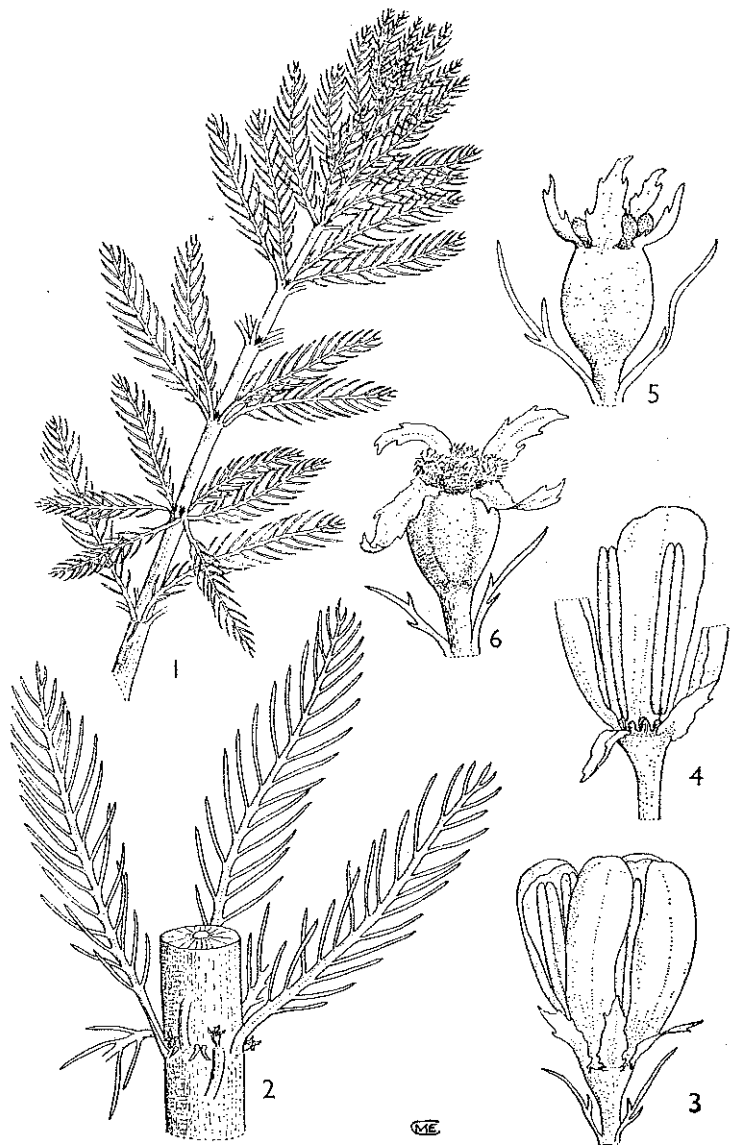


Fig. 2. — *Myriophyllum aquaticum* (Vellozo) Verdc. 1: Part of leafy stem with female flowers, ca. $\times 1$. 2: Detail of same, ca. $\times 2$. 3: Male flower, ca. $\times 12$. 4: Same with petal removed to show rudimentary styles, ca. $\times 12$. 5: Female flower, ca. $\times 24$. 6: Same at a later stage, ca. $\times 24$. — After R. Boutique & B. Verdcourt: Haloragaceae. Flora of Tropical East Africa 1973.

Malesia (W. Java), E. Africa, and in Europe (S. France). According to Meijden & Caspers (1971), all naturalized specimens are sterile or have only female flowers and do not produce fruits. This is also the case in Madeira. The plant is generally known under the name of *M. brasiliense* Cambess., but in 1973, Verdcourt made the new combination *M. aquaticum* (Vellozo) Verdcourt, based on *Elydria aquatica* Vellozo, Fl. Flumin. 57, 1825.

JUNCAEAE

Juncus conglomeratus L.

A sheet in the Coimbra Herb. designated Chão das Feiteiras, Madeira, leg. M. A. L. Sardinha, Fl. Lusit. Exsicc. No. 284, 1963, most likely represents this species that hitherto was unknown on Madeira.

Juncus foliosus Desf. and **J. hybridus** Brot.

Both species were published as new in Madeira, found in 1969 (Hansen 1973). New records of *J. foliosus* are: Terreiro da Luta above Monte, 1972, and Pico do Castelo, Porto Santo, 1973, thus new to P. Santo too. A new record of *J. hybridus* is: Matur, Madeira, 1973.

Luzula.

In 1973 it was shown that *Luzula congesta* (Thuill.) Lej. or *L. multiflora* (Retz.) Lej. ssp. *congesta* (Thuill.) Hyl. occurs in Madeira. Now also *L. multiflora* (Retz.) Lej. ssp. *multiflora* can be presented as belonging to the flora, most likely as a native plant, found in Monte above Funchal, along the levada from Queimadas, and in the Fajã da Nogueira Valley, all collected in 1973. Earlier, authors did not separate *L. campestris* and *L. multiflora* in Madeira.

LABIATAE

Lamium hybridum Vill.

On cultivated ground near the church in the village Santo da Serra, 1973. A weed new to Madeira, annual, and widespread in Europe, except for the South, and in NW. Africa. The genus *Lamium* is further represented in Madeira by 2 very rare species, viz. *L. amplexicaule* L. and *L. purpureum* L., annuals as well, and probably both originally introduced.

***Ocimum micranthum* Willd.**

On roadside in Funchal (northern outskirts), 1973. An alien new to Madeira, annual, and a native of America, where it is distributed from Florida through Central America to Brazil and Paraguay. The genus *Ocimum* has about 150 species, some of which are ornamentals or spice-plants, but this does not seem to be the case with *O. micranthum*.

LEGUMINOSAE

***Lathyrus aphaca* L.**

This very characteristic annual herb was briefly mentioned in a previous paper (Hansen 1973). Only a few finds are so far known from Madeira, but a further one can be added here: Pico dos Barcelos, NW. of Funchal, 1971, leg. G. Kjellson (Herb. C.).

***Lathyrus sphaericus* Retz.**

Matur, near Água de Pena, NE. of the Airport, 1973, leg. K. Larsen (Herb. C.), and in the Fajã da Nogueira Valley, 1973. Likewise a rare plant on Madeira, thus Lowe (1862) only knew it in 3 localities, but due to its grass-like appearance it may have been overlooked.

***Lotus conimbricensis* Brot.**

In waste ground at the harbour of Funchal, 1973. An alien new to Madeira, and probably a recent introduction from Portugal or the Mediterranean region, where this usually white-flowered annual is widespread.

***Lotus suaveolens* Pers. (*L. subbiflorus* auct., non Lag.,
L. hispidus auct.)**

Porto Santo: Pico do Castelo, a weed in the Forestry Garden on its northern slope, 1973. In the Archipelago previously only known from Madeira, where it is fairly common, and from Deserta Grande, Desertas.

***Medicago ciliaris* (L.) All. (*M. intertexta* (L.) Miller var. *c.* (L.) Heyn)**

Fig. 3.

In waste place at Praia Formosa, W. of Funchal, 1973. This very characteristic plant is very rare on Madeira, and only known from the



©K

Fig. 3. — *Medicago ciliaris* (L.) All. (slightly reduced). — After C. Heyn: The annual species of *Medicago*, 1963.

said area. It was most likely once introduced into Madeira, yet known since Lowe's days.

Melilotus alba Med.

Since the first record of this plant as a weed new to Madeira discovered in Funchal 1968 (Hansen 1968), another locality can now be given: Matur near Água de Pena, 1973, leg. K. W. Larsen (Herb. C.).

Melilotus elegans Salzm. in DC.

In ruderal site at Praia Formosa W. of Funchal. Known in this area as early as 1829 (Lowe 1862), and given the name *M. lippoldiana* Lowe, later on by Menezes (1914) changed into *M. elegans* Salzm. var. *lippoldiana* (Lowe) Mnzs. Yet, it is hardly deviating enough from *M. elegans* as to justify its rank as a variety. *M. elegans* is a native of the West-Mediterranean region, and most likely was once introduced into Madeira.

Melilotus segetalis (Brot.) Ser.

In waste place at the harbour of Funchal, and a garden-weed in Avenida do Infante, Funchal, both in 1973. An alien new to Madeira, annual from Portugal and the West-Mediterranean region.

Psoralea americana L.

A dying remnant of an old population of this plant in the Praia Formosa-area W. of Funchal, was mentioned by the author in 1973. Later, in the same year, another locality with several specimens was detected in the western outskirts of Funchal, about 2 km. from the first place mentioned. Thus this plant seems to have a fair chance of surviving in Madeira.

Teline paivae (Lowe) Gibbs & Dingwall (Genista p. Lowe, Cytisus p. (Lowe) Masf.)

On sea cliffs between Ribeira do Inferno and Ribeira do Seixal, north coast of Madeira, 1973, leg. V. Dalgaard (Herb. C.). A rare endemic only known from a few localities.

Trifolium bocconeii Savi

Fig. 4.

In waste place at the harbour of Funchal, 1973, most likely a recent introduction. A rare plant in Madeira, only found once before: Pico da Silva, NE. of Funchal, 1862 (Lowe 1868). Annual, widespread in the Mediterranean region and in SW. Europe north to the English Channel.

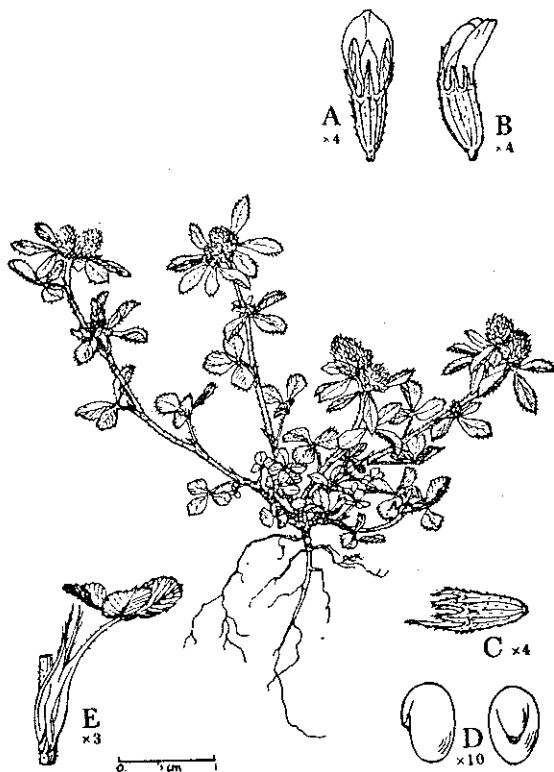


Fig. 4. — *Trifolium bocconeii* Savi. A-B: Flowers. C: Calyx. D: Seeds. E: Stipule. — After R. W. Butcher: A new British Flora I, 1961.

Trifolium isthmocarpum Brot.

In waste place at the harbour of Funchal, 1973. An alien new to Madeira, probably recently introduced from Portugal; a native of Portugal and the West-Mediterranean region, a casual elsewhere.

Trifolium resupinatum L.

In waste place at the harbour of Funchal, 1973 and in Ribeira do Pedregal, Porto Santo. A rare plant in the Madeira Archipelago, thus Lowe (1862) only gives 2 localities in Madeira and 2 in Porto Santo. A native of Asia, but long ago introduced into — and widespread — in the Mediterranean region, and in W. and C. Europe.

Trifolium subterraneum L.

In meadow above Caniço, 1971, leg. G. Martienssen, Hamburg. A rare plant in Madeira and Porto Santo, known since Lowe's days; a native of S. and W. Europe, north to England and SW. Ireland.

Vicia atlantica Costa

De acordo com o Press
- esta espécie é sinónimo
seguinte: *V. benghalensis*

This rare species endemic to the Madeira Archipelago, and only recorded from Porto Santo, was described by Costa in 1948. Costa only mentions 2 localities: Matas and Lombo do Meio, but in 1973 it was observed in abundance on the western slope of Pico do Castelo and on Pico Branco. It is undoubtedly a well-defined and separate species, related to *V. benghalensis*, but because of the existence of *Vicia atlantica* Pomel, *Nouv. Mat. Fl. Atl.*, p. 193, 1874, from NW. Africa (to-day often treated as a ssp. of *V. ochroleuca* Spreng., ssp. *atlantica* (Pomel) Maire), *V. atlantica* Costa is a preoccupied and therefore an invalid name. A new name is proposed here: *Vicia costae* A. Hansen, nom. nov. (*V. atlantica* Costa, *Lista Fitologica do Porto Santo, Bol. Mus Mun. Funchal III* (7): 64, 1948, non Pomel; type in Herb. MMF.).

229 **Vicia benghalensis L.** (*V. atropurpurea* Desf.)

Along the levada at Campanário W. of Funchal, 1973, leg. G. Maul (Herb. MMF.), and near Club Caniço. E. of Funchal, 1971, leg. G. Martienssen, Hamburg. A rare plant in Madeira and Porto Santo.

Vicia capreolata Lowe

Further localities in 1973 for this rare endemic species are: On steep rocks in ravine below Pico das Torres (between Pico do Arieiro and Pico Ruivo), and on cliffs along the road between Pico do Serrado and Curral das Freiras, both leg. V. Dalgaard (Herb. C.).

Vicia disperma DC.

Canical, S. Lourenço Promontory, and in Curral das Freiras, both 1973. Likewise a rare *Vicia*-species on Madeira, thus Lowe (1868) only mentions 2 localities.

Vicia lutea L.

New localities for this rare species on Madeira are: Funchal, in waste place at the harbour, Fajã d'Areia, E. of S. Vicente, on road-slope, and in a dry riverbed near Faial, north coast, all 1973. The material from Funchal belongs to ssp. *vestita* (Boiss.) Rouy from SW. Europe.

Vicia pubescens (DC.) Link

Fajã da Nogueira Valley, 1972, a new locality for an apparently rare plant — at least not much collected.

LILIACEAE

Allium neapolitanum Cyr.

A garden-weed in Camacha, 1973. A rare species published as an alien new to Madeira in 1968, collected in Funchal (Hansen 1968).

MALVACEAE

Modiola caroliniana (L.) D. Don

Fig. 5.

Abundant in ruderal site near the Stadium, Funchal, 1973. This prostrate, *Ranunculus*-like plant with very characteristic fruits, was found in Madeira already by Lowe, and thus has been able to keep itself there for more than a century; yet it has never been recorded outside Funchal and its nearest environs.

OROBANCHACEAE

Orobanche calendulae Pomel (*O. mauritanica* Beck)

In dunes at Ponta da Calheta, southwestern part of Porto Santo, and on Pico do Castelo in the same island (hosts unknown), both in

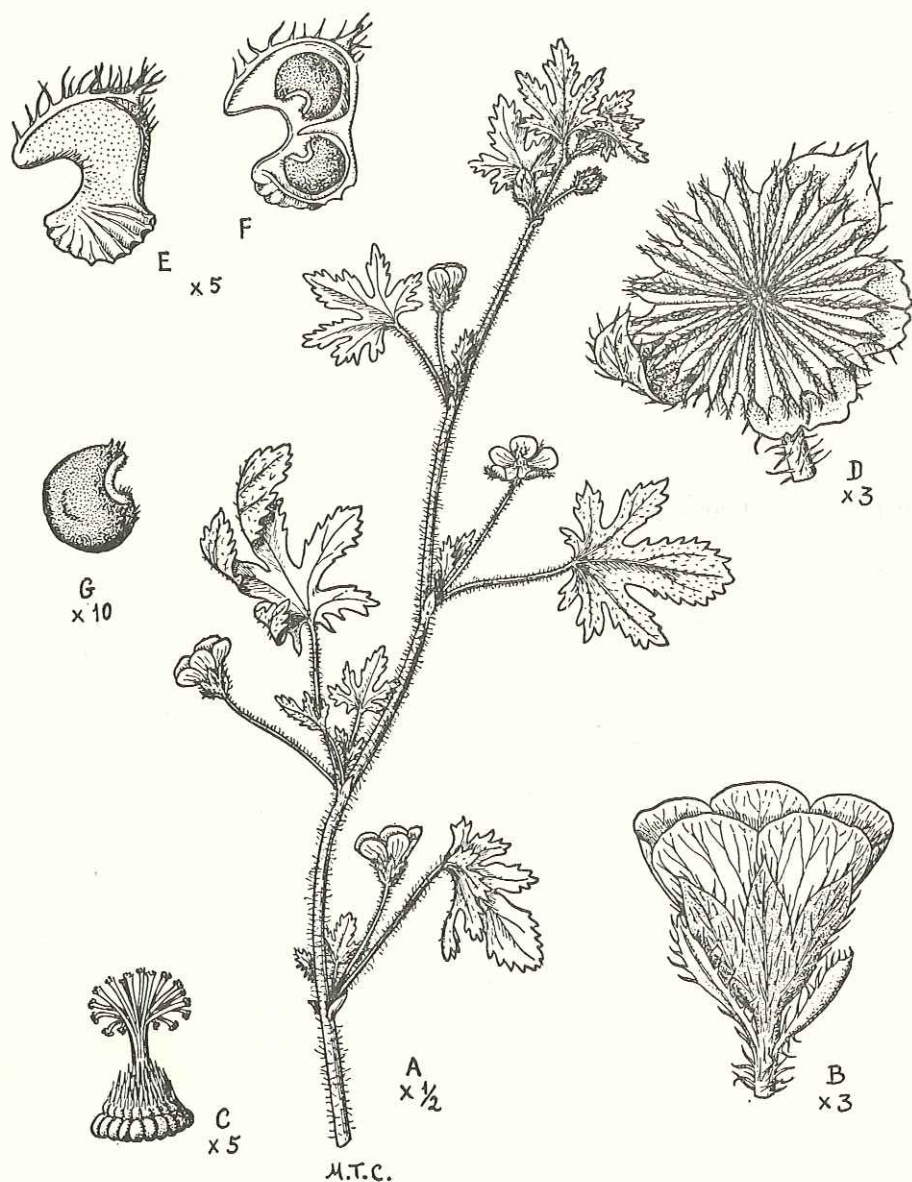


Fig. 5. — *Modiola caroliniana* (L.) G. Don. A: Flowering branch. B: Flower. C: Gynoecium. D: Fruit. E: Mericarp. F: Longitudinal section of mericarp. G: Seed. — After A. Cabrera: Flora da Provincia de Buenos Aires 4, 1965.

1973. In the Archipelago it is only known from P. Santo, first mentioned by Pickering (1962), without any particular localities, originally observed by da Costa, who lived in the island in the years 1938-41.

Orobanche crenata Forssk.

According to a sheet in the Herb. BGF., this parasite has once been found on Madeira: Quinta do Bom Sucesso, Funchal, 15.4.1957, leg. R. Santos (sub nom. *O. minor* Sm.). New to the island; also known from the Azores and widespread in the Mediterranean region.

ORCHIDACEAE

Dactylorhiza foliosa (Verm.) Soó

The nomenclature of this fine orchid endemic to Madeira is somewhat intricate. It was originally described by Lowe (1830), as *Orchis foliosa* based on a name by Solander, but apparently Lowe did not know about the existence of an earlier taxon *Orchis foliosa* O. Swartz (1800), a species from the Cape Province, S. Africa, and quite a different plant. Against the rules, *O. foliosa* was used for more than a century, and it was not until 1948 that Summerhayes drew attention to the invalid *Orchis foliosa* Solander ex Lowe, and hence created a new name: *Orchis maderensis* Summerhayes, a valid name if this plant is still kept as an *Orchis*-species. But in 1947, Vermeulen transferred the *Orchis*-subgenus *Dactylorchis* into a separate genus *Dactylorchis*, and *Orchis foliosa* then received the name *Dactylorchis foliosa* Vermeulen (actually this author wrongly writes *D. foliosa* (Soland.) Verm.). Later *Dactylorchis* had to be superseded by *Dactylorhiza* Neck. ex Nevski, and consequently our species is at present named *Dactylorhiza foliosa* (Verm.) Soó (Soó 1962). In fact, Soó made this new combination in a paper issued in 1960 (Soó 1960), but his new combinations herein were not validly published; and therefore in a paper 2 years later (Soó 1962) the mistakes were rectified.

PAPAVERACEAE

Argemone mexicana L.

In ruderal site at the harbour of Funchal, and at Praia Formosa, W. of Funchal, both in April 1973; new to Madeira. Annual from N. America, but now widespread and nearly a cosmopolitan species in the warmer parts of the world; also in the Canary Islands (Gran Canaria,

Tenerife, La Palma). The Madeiran material belongs to var. *ochroleuca* (Sw.) Lindl., with whitish-yellow flowers.

PLANTAGINACEAE

Plantago myosuroides Lamk.

A few years ago this *Plantago*-species was published as an alien new to Madeira (Hansen 1970), found at the harbour of Funchal in 1969, but only a few specimens were then seen. In 1973, it was observed again in Funchal, this time in hundreds of specimens growing among pavement in the street called Rua do Lombo da Boa Vista (eastern part of the town), a quiet street without much traffic and hence rather «green», and the plants were growing on both sides of the street in nearly its whole length. It is an annual, and a very characteristic species not easily confused with any Madeiran or European *Plantago*-species. A native of S. Brazil and Argentina, and most likely now a well-established plant in Madeira.

POTAMOGETONACEAE

Potamogeton oblongus Viv. (*P. polygonifolius* auct.)

Abundant in a pond or water-tank in «Quinta do Palheiro», NE. of Funchal, 1972, hardly cultivated. A very rare plant on Madeira, only known from brooklets, puddles and levadas at Santana and Santo António da Serra (Menezes 1914) and not seen there recently.

RESEDACEAE

Reseda media Lag.

This annual or biennial from SW. Europe was recorded for the first time in Madeira in «Logares ervosos do Santo António da Serra» 1925, leg. Costa, and published by Menezes (1927). In 1972 it was observed in a ditch on the western border of Santo da Serra, and in 1973, on a roadslope near the Junta Geral Garden in the same village, and also on a roadslope near the parking place at the centre of Monte above Funchal. Once introduced it seems now to have become a well-established plant on Madeira. Also introduced into the Azores (Faial, S. Miguel, Terceira).

RUBIACEAE

Galium murale (L.) All.

In waste place at Praia Formosa, W. of Funchal, 1973. New to Madeira itself, but since Lowe's days known as a rare plant on Porto Santo and the Southern Deserta (Bugio), but most likely overlooked.

SCROPHULARIACEAE

572 **Scrophularia auriculata** L. (*S. aquatica* auct., non L.)

Scrophularia racemosa
In my «Check-list» (1969) this plant was given, with doubt, for Madeira, but since then 2 recent finds have become available, viz. «On wet rocks and in a brooklet between Santana and S. Jorge», 22.6.1971, leg. C. Simon (Herb. MMF.), and «Ribeira de S. Jorge» (evt. same locality), Jan. 1971, leg. V. Dalgaard (Herb. C.). *Scrophularia racemosa* Lowe described in 1830 from Madeira is probably identical with *S. auriculata* L., and thus not representing a species endemic to Madeira as Lowe imagined, but incidentally, the Scrophularias of Madeira are still a very problematic genus awaiting a thorough and modern taxonomic treatment. — *S. auriculata* is a perennial with West-European-Mediterranean distribution; also on the Azores.

553

Verbascum sinuatum L.

According to a sheet in Herb. MMF. there is a rather recent find of this rare plant hitherto known from a few localities in Madeira (Menezes 1914), viz. ruderal site at the corner of Caminho Velho da Ajuda and Rua do Dr. Pita, 18.8.1965, leg. G. Maul.

Veronica.

New localities in 1973 for 2 rare species of this genus are: *V. agrestis* L., a garden-weed in Funchal (2 localities); *V. hederifolia* L., abundant in cornfields near the village of Curral das Freiras.

SIMAROUBACEAE

Ailanthus altissima (Mill.) Swingle (*A. glandulosa* Desf.)

Collected in Ribeira Grande at S. Jorge, Madeira, 1963, by R. Santos, according to a sheet in Herb. BGF. A tree or shrub from China,

extensively naturalized in C., S. and W. Europe, in Madeira «Sometimes seen in gardens» (Grabham 1934).

UMBELLIFERAE

Bupleurum salicifolium R. Brown ex Buch

Rare endemic, hitherto only known from Madeira, but according to a sheet in Herb. BGF. it also occurs on Porto Santo: Pico Branco, 17.9.1960, leg. R. Vieira. As author of this species Solander is usually mentioned in Lowe, Trans. Cambr. Phil. Soc. 6: 21, 1838, but in fact its first publication is due to R. Brown ex Buch, Phys. Besch. Canarischen Inseln, p. 195, 1825. Its description: «*Frutescens, fol. lanceolatis, acuminatis, involucris lanceolatis, ramis laevissimus*» was taken by Brown from Solander's manuscript, but it was Brown who published it (Britten 1904).

URTICACEAE

Parietaria debilis Forst. f.

A rare annual, found on shady rocks and stonewalls in Madeira and Porto Santo. New records are: Between Seixal and Porto Moniz, north coast, 1969, S. Lourenço Promontory near Caniçal, 1972 and São Vicente, north coast, 1973, all leg. the author; Ilhéu Chão, Desertas, 1970, leg. Hecker, new to the Desertas.

TO THE MEMORY OF R. TH. LOWE

In this year (1974), a century has passed since the death of the famous expert on the Madeira flora, the English chaplain *Richard Thomas Lowe*. The exact date of this death is not known, as the ship, which was to bring him to Madeira for an additional and supposedly last visit to Madeira (he was then 72 years old), disappeared in the Bay of Biscay without leaving any traces (51 persons perished). It is known that the ship, a steam-ship named «Liberia», left the port of Liverpool, England, on April 11th., and the catastrophe most likely occurred 1 or 2 days later.

Lowe's famous work on the flora of Madeira: «A Manuel Flora of Madeira and the Adjacent Islands of Porto Santo and the Desertas», vol. I and II, part 1, is generally cited as having been published in 1868, but in fact its printing ran over 15 years (1857-1872), and it is possible

to give the exact years for the publishing of the single parts, 6 in all; they are as follows:

Vol. I, part 1, p. I-XII, 1-106, 1857

— — 2, p. 107-262, 1862

— — 3, p. 263-378, 1864

— — 4, p. 379-522, 1868

— — 5, p. 523-582 + Addenda et Corrigenda, Index, p.583-618, 1868

Vol. II, part 1, p. 1-113, 1872.

Unfortunately the flora was never completed, and the following 24 plant-families of the *Dicotyledones* were never published:

Plumbaginaceae	Phytolaccaceae
Boraginaceae	Polygonaceae
Scrophulariaceae	Aristolochiaceae
Orobanchaceae	Lauraceae
Myoporaceae	Thymelaeaceae
Globulariaceae	Euphorbiaceae
Verbenaceae	Urticaceae
Labiatae	Plantanaceae
Plantaginaceae	Juglandaceae
Nyctaginaceae	Myricaceae
Amaranthaceae	Cupuliferae
Chenopodiaceae	Salicaceae

together with all families of the *Monocotyledones*, *Gymnospermae* and *Pteridophyta*.

However, it is said that the part lacking of Lowe's flora-manuscript, which was known to exist but supposed to have been lost in the shipwreck, was discovered a few years ago in an English university library, and measures have been taken in order to get it printed and published, if possible. All botanists working with the flora of Madeira would welcome it very much! But in any case, the existing part of the flora is a remarkable and minutely painstaking account of the vegetation of the Madeira Archipelago, and is still immensely useful. It is now a very rare book and hardly obtainable. It ought to be reprinted as is done with so many other old and rare botanical books!

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