

New Bryophyte Records from Gran Canaria

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In the following will be given a short survey of some of the most interesting finds of bryophytes made during one month field work in Gran Canaria in the spring 1967. Four species are reported for the first time from the island, viz *Ditrichum subulatum*, *Didymodon trifarius*, *Gyroweisia reflexa*, and *Schistidium pulvinatum*. The survey is a supplement to Sunding (1967), and further localities for the more common species are not supplied. For a more thorough review of the bryophyte flora of Gran Canaria, see Störmer (1959), Sunding (1966, and 1967), where also reviews of previous works on the bryophytes of Gran Canaria and the Canary Islands in general are given.

In the present enumeration of species the following abbreviations are used: G.C. Gran Canaria; Bco. Barranco; c. fr. fertile, cum fructibus; and m. metres above sea level.

I wish to thank First Curator Per Störmer for his determination of *Didymodon trifarius*.

FISSIDENTACEAE

1. *Fissidens viridulus* (Sw.) Wahlenb.
syn. *F. impar* Mitt.
El Espigón above Tenteniguada, 1300 m. - On moist *Adiantum capillus-veneris* rocks.
Rare in G.C. First reported from the island by Bryhn (1908). A few other scattered localities from the northern part of the island are mentioned in Störmer (1959) and Sunding (1967).

DICRANACEAE

2. *Ditrichum subulatum* Hamp.
Bco. de Cuba (near Magullo), 430 m. - On the soil in a shady *Prunus amygdalus* plantation with a rather nitrophilous weedy herb vegetation.
New to G.C. Earlier known from Tenerife (Bryhn 1908, Winter 1914) and Palma (Störmer 1959).

ENCALYPTACEAE

3. *Encalypta vulgaris* Hedw.
Caldera de los Marteles, 1500 m (c. fr.), and Bco. de Guayadeque, just South of Caldera de los Marteles, 1420 m. (c. fr.). - On moss covered rocks, with the *Aeonium caespitosum* - *Greenovia aurea* community typical of high altitudes.
Rare in the Canary Islands, from G. C. only reported by Armitage (1926) and Sunding (1967). For discussion of distribution and ecology of the species in the archipelago, see Sunding (i. c.)

POTTIACEAE

4. *Tortula canescens* Mont.
Ridge between Tenoya and Lomo de los Gatos, western slope, 210 m (c. fr.). - In arid *Euphorbia balsamifera* vegetation.
Rare in G. C., earlier reported from the island by Bryhn (1908) and Sunding (1966 and 1967).
5. *Tortula inermis* (Brid.) Mont.
Above Las Lagunetas, 1320 m (c. fr.)
1 km. South of Timagán, 1350 m.
South of Cruz de Tejada, near the road to Pozo de las Nieves, 1520 m.
In the two first mentioned localities *T. inermis* was growing on *Aeonium caespitosum* - *Greenovia aurea* - rocks, in the third locality it was found on the soil in *Adenocarpus foliolosus*-*Cytisus proliferus* - vegetation.

In the Canary Islands only known from G. C. where it has been found twice (Schiffner 1902, Geheeb & Herzog 1910, and Störmer 1959), both in high altitudes as are the three above mentioned localities.

6. *Tortula ruralis* (Hedw.) Crome.
Montaña de Constantino, western slope, 1590 m. - *Aeonium caespitosum* - *Greenovia aurea* community.
In the Canary Islands only known from Tenerife and from G. C. where it was reported for the first time in Sunding (1967).
7. *Crossidium squamigerum* (Viv.) Jur.
syn. *Tortula membranifolia* Hook.
Bco. de Tejeda, below La Culata, 1.020 m (c. fr.) - *Aeonium caespitosum* - *Greenovia aurea* community.
Earlier reported from G. C. by Bryhn (1908), Armitage (1926), and Störmer (1959), seems to be rare in G.C. and in the Canary Islands in general.
8. *Barbula rigidula* (Hedw.) Mild.
East of Montaña de Viso, 880 m. - On soil in a dense *Cistus monspeliensis* - *Euphorbia regis-jubae* vegetation.
Rare in G.C., earlier reported from the island in Bryhn (1908) and Sunding (1966).
9. *Didymodon trifarius* (Hedw.) Rochl.
syn. *Barbula trifaria* (Hedw.) Mitt.
Det. Per Störmer.
Bco. la Lajilla, East of Casa Blanca in Tasartico, 400 m. (c. fr.).
New to G.C. Rare in the Canary Islands, earlier reported from a few localities in Tenerife (Winter 1914), Palma and Gomera (Störmer 1959).
10. *Gyroweisia reflexa* (Brid.) Schimp.
Bco. del Castillo. (Bco. de los Cernualos), South of Valsequillo, 530 m. - On a moist *Adiantum capillus-veneris* rock.
New to G.C. Only once earlier reported from the Ca-

nary Islands, by Störmer (1959) from Gomera. Its ecology in Gomera seems to be similar to that in the locality in Bco. del Castillo, as Störmer mentions *Eucladium verticillatum*, a species characteristic of *Adiantum* rocks, among its accompanying species.

GRIMMIACEAE

11. *Schistidium pulvinatum* (Hedw.) Brid.
Montaña de Constantino, southwestern slope, 1580 m. (c. fr.).—On dry, sun-exposed *Aeonium caespitosum* - *Greenovia aurea* - rocks.
New to G.C. Rare in the Canary Islands, earlier only reported twice from Tenerife (Dixon 1911, Störmer 1959).

BARTRAMIACEAE

12. *Philonotis rigida* Brid.
Bco. de Cuba (near Magullo), 410 m. - Dripping wet *Adiantum capillus-veneris* rocks, associated with *Eucladium verticillatum* and *Rhynchostegiella curviseta*. Only one earlier report from G.C., from Bco. Propios de Moya, in Störmer (1959).

ORTHOTRICHACEAE

13. *Orthotrichum affine* Schrad. ex Brid.
Cruz de Tejada, 1.490 m. (c. fr.).—Epiphytic, on *Adenocarpus foliolosus* stems and branches.
Rare in G. C., the first report from the island was that given in Sunding (1967).
14. *Orthotrichum rupestre* Schleich. ex Schwaegr.
Montaña de Constantino, southern slope, 1580 m. (c. fr.). - On South exposed, sunny rocks.
Rare in G.C., always in high altitudes, see Sunding (1967).

LEUCODONTACEAE

15. *Leucodon canariensis* (Brid.) Schwaegr.
South of Cruz de Tejeda, near the road to Pozo de las Nieves, 1.530 m. - On rocks, in *Aeonium caespitosum* - *Greenovia aurea* community.
L. canariensis was reported for the first time from the island in Sunding (1967), also known from Tenerife, Hierro and Gomera.
16. *Antitrichia californica* Sull.
Montaña de Constantino, southwestern slope, 1580 m, and western slope, 1590 m. - In dense mats on rocks, mainly in the *Aeonium caespitosum* - *Greenovia aurea* community.
This phytogeographically very interesting species was reported for the first time from the Canary Islands by Störmer (1960), from two localities at high altitudes on Montaña de Constantino in G.C. Later one additional find has been made in Caldera de Tirajana by the author (Sunding 1967). *A. californica* seems to be rather common over great parts of the sunny side of Montaña de Constantino, in the border zone where the fog from the North side of the islands dissolves, partly being the dominant moss species on *Aeonium caespitosum* - *Greenovia aurea* rocks.

RESUMEN

Briófitas Nuevas para la Flora de Gran Canaria

Se cita 16 especies de musgos, poco conocidas anteriormente de esta isla y colectadas durante la primavera de 1967 por el autor. De las especies citadas, las siguientes especies son nuevas para la flora de Gran Canaria:

Ditrichium subulatum Hamp.
Didymodon trifarius (Hedw.) Rochl.
Gyroweisia reflexa (Brid.) Schimp. y
Schistidium pulvinatum (Hedw.) Brid.

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F.—K. HARTMANN y G. JAHN: *Waldgesellschaften des mitteleuropäischen Gebirgsraumes nördlich der Alpen.*—Vol. I de "Oekologie der Wälder und Landschaften" (edit. por Prof. F.—K. Hartmann). Editorial Gustav Fischer Verlag, Stuttgart 1967. 636 pág., con 2 mapas climatográficos y 50 tablas plegables en dos partes (caseta), 17,5 x 25 cm; DM 148. Precio de suscripción: DM 128.—

Formaciones de bosques de las regiones centro-europeas al Norte de los Alpes: Una obra monumental, para la que hay que felicitar tanto a los autores y sus colaboradores como a la casa editorial que la ha publicado. No es un libro de texto, de fácil aprovechamiento; esta obra es más que una sociología regional: es el primer volumen de una ecología de bosques y paisajes.

Se trata de un estudio fito-sociológico y minucioso de los bosques de paisajes montañosos del Centro de Europa, de los Alpes hacia el Norte. La primera parte (636 páginas) contiene los análisis sociológicos de la vegetación de los bosques, de muchas asociaciones florísticas y de paisajes regionalmente distribuidas, resumidas en descripciones, listas y tablas. Se analizan los suelos y subsuelos, también químicamente, y se consideran las influencias climáticas sobre la vegetación de cada localidad. Solamente las referencias (literatura) ocupan 39 páginas. Finaliza el primer volumen con un registro de 24 páginas.

Pero el primer volumen es una simple introducción, explicación y suplemento a las 50 tablas plegadas de la segunda parte, que contienen los croquis originales de innumerables localidades. Cada una de las tablas presenta un estudio entre sí, separando las subasociaciones particulares. Se investiga cada una de éstas desde el estrato arbóreo hasta las plantas inferiores, como los musgos y líquenes. Dos mapas climáticos (temperatura media) de toda la región estudiada da idea de la ecología de los paisajes.—No es solamente una gran obra y de mucho esfuerzo, es una sin-ecología ejemplar, y por eso indispensable para los fitólogos, forestales y geógrafos.

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