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A new species of *Limoniastrum* (Plumbaginaceae) from Yemen and Somalia

J. Edmondson*

Abstract

Limoniastrum rechingeri J.R.EDMONDSON (Plumbaginaceae) is described from Yemen and Somalia. Its relationships with *L. migiurtinum* (CHOIV.) MAIRE (Somalia) and *L. weygandiorum* MAIRE & WILCZEK (Morocco), and the chorology of all three species, are discussed.

Key Words: Flora of Yemen and Somalia; Plumbaginaceae, *Limoniastrum*, *L. rechingeri* sp.n., *L. migiurtinum*, *L. weygandiorum*; chorology.

Zusammenfassung

Limoniastrum rechingeri J.R.EDMONDSON (Plumbaginaceae) wird aus dem Yemen und aus Somalia beschrieben. Die verwandtschaftlichen Beziehungen zu *L. migiurtinum* (CHOIV.) MAIRE (Somalia) und *L. weygandiorum* MAIRE & WILCZEK (Marokko) sowie die Verbreitung dieser drei Arten werden diskutiert.

Introduction

In the course of preparing an account of the *Plumbaginaceae* of the Arabian peninsula for a forthcoming volume of Flora of Arabia, my attention was drawn by Tony Miller (Royal Botanic Garden, Edinburgh) to an undetermined gathering by K.M. Guichard at BM which had been provisionally filed as "*Bubania* sp. nov." by Miss Dorothy Hillcoat.

The specimen was sent to me on loan, along with a letter from Dr Rudolpho Pichi-Sermolli of Firenze addressed to Miss Hillcoat, in which the specimen was contrasted with the type of *Bubania migiurtina* CHIOV. from Somalia which Dr Pichi-Sermolli had examined at FI. CHIOVENDA's binomial provides the basionym of the currently accepted name for the species.

After examining Guichard's specimen, and following the receipt on loan of further Somali material of *Limoniastrum* from K, I reached a similar conclusion to Dr Pichi-Sermolli, namely that this is a distinctive new species. The specific epithet commemorates Professor Karl-Heinz Rechinger, whose monumental work on the Flora of Iran, Afghanistan and adjacent highlands has been an inspiration to all those who have studied the plants of south-west Asia.

* Dr. John Edmondson, Department of Botany, National Museums & Galleries on Merseyside, Liverpool Museum, William Brown Street, Liverpool L3 8EN, Great Britain.

Limoniastrum rechingeri J.R.EDMONDSON, sp.n.

Description and geographical distribution

Ex aliis speciebus generis *Limoniastri* inflorescentia latiore, ramis longis erecto-patentibus, bracteis spinosis, spinis usque ad 7 mm longis, squarrosis vel basin recurvatis, hirtis; corolla 11 - 12 mm longa angustiore infundibuliformi differt.

Suffrutex elatus, usque ad 60 cm altus, foliis omnino basalibus. Foliorum laminae coriaceae, calce dense incrustatae, anguste ellipticae, (3.5 -) 7 - 10 x (2 -) 3.6 - 4 cm, apice rotundatae vel breviter mucronatae, in petiolum basi vaginantum attenuatae; petioli (2.5 -) 3.5 - 4 cm longi. Caulis erectus, parte inferiore aphyllus, inferne squamis paucis semiamplexicaulibus cuspidatis obsitus, superne ramosus, ramis ad 12 cm longis, erecto-patentibus. Spiculae plerumque biflorae; bracteae coriaceae, superiorae lineares, margine non scariosae, utrinque spinosae, spinis inferne forte glanduloso- et eglanduloso-hirtae. Calyx 12 - 13 mm longus, tubo tenui, limbo profunde diviso, 5-dentatus, dentibus linearibus, 3.5 mm longis, suberectis. Corolla alba, vix ex fauce calycis exserta, 14 mm longa, anguste infundibuliformis; tubus c. 6 mm longus, limbus 8 mm longus, margine breviter lobato. Stamina inclusa; filamenta ad medium corollae adnata, partes liberae usque ad 0.5 mm longa; antherae 1.9 - 2.0 mm longae. Ovarium oblongum; styli ad medium usque connati, glabri; stigmata filiformia. Floret menses Jul. - Oct.

Type: Republic of Yemen, Hadhramaut region, Ghail, E. of Mukalla, 30. IX. 1949, 'up to 2 ft', K.M. Guichard no. KG/HAD/308 [holotype BM].

Other collections: Republic of Yemen, Hadramaut: Buschsteppe bei Rêdet esch Schedjer westlich Schuhêr, auf Schotter (Kalk) des Küstentieflandes, 19. Mai 1939, H. v. Wissmann n. 3064 [BM] (specimen with incompletely developed young inflorescence and the remains of the previous year's inflorescence in an accompanying packet).

Republic of Somalia: N. Somalia, site A/27, 10° 37' N, 48° 11' E, alt. 1300 m. Gypsaceous limestone, rather broken country, 7. 7. 1981, J.B. Gillett & R.M. Watson no. 23.792 [K]. - Bender Beila, wide tug 1 km from high tide line, sand & rocks along tug, c. 10 m a.s.l., 23. 10. 1983, J. Aronson, M.A. Ikar, S. Linington, R.J. Wedderburn, G.E. Wickens no. 46 [K].

Relationships and chorology

The species most closely resembles *Limoniastrum migiurtinum* (CHIOV.) MAIRE, with which it shares the feature of squarrose-recurved spines which so conspicuously clothe the inner bracts. *L. migiurtinum* differs in having smaller bracts with shorter, more slender spines which are glabrous (densely patent-hairy in *L. rechingeri*). *L. rechingeri* also resembles *L. weygandiorum* MAIRE & WILCZEK, which differs from both the aforementioned species in its much smaller stature (10 - 15 cm) and in having sinuate-margined basal leaves.

There is an inconsistency between the original description of the hair covering of the bracts of *L. migiurtinum* (CHIOVENDA 1929, p. 213) and the description of the type specimen in Dr Pichi-Sermolli's letter to Miss Dorothy Hillcoat dated 1 March 1954 which states: "*Bubania* [= *Limoniastrum*] *migiurtina* has bracts smaller and provided with shorter (1/3) and slenderer spines, the surface of the bracts as well as the spines are glabrous. The scale at the bottom of the bracts is glabrous and with edge clearly scariose.

The sheath of the leave [sic] is larger and more apart from the stem. The blade is covered with smaller, slenderer and more discrete scale-like hairs".

CHIOVENDA's description states:"Bracteae unica florem arctissime involvens crasse et rigidissime coriacea 8 - 10 mm longa, corpus cylindraceum 5.4 mm diam. crassum formans, dorso echinis conico-subulatis patentim arcuatis acutissimis simplicibus 2 - 3 mm longis tecta, bractea et echini dense breviterque pubescentes et sparse albo-lepidoti".

Allowing for some accescence of the spine after flowering, it is possible that the difference in size might have been accounted for by a greater maturity in some specimens, yet it is hard to understand how two botanists could have made such different observations of the indumentum on the same material. I have however examined another specimen of *Limoniastrum migiurtinum* which short, glabrous spines from the following locality in Somalia:

Nugaal Region, 3 km N. of Bedey, E. of Eil, limestone cliffs and slopes facing the sea, amongst fallen boulders, shrub 1 m high, flowers white, 4. 10. 1985, [J.] Lavranos & [S.?] Carter 23506 [MO, K].

Except for the calyx indumentum, this material corresponds to CHIOVENDA's original description and is therefore accepted as representative of *Limoniastrum migiurtinum.*

The new species is apparently confined to southern Yemen and northern Somalia, and is currently known only from the type gathering and three other collections. The disjunction between the new Afro-Arabian species and its counterpart which is confined to Somalia can perhaps be explained by the gradual separation of the Arabian peninsula and the Horn of Africa as a result of the opening up of the rift along the long axis of the Red Sea, and the subsequent isolation of two components of a former polymorphic population.

Limoniastrum weygandiorum occurs only in a small area close to the border between Morocco sensu stricto and the former territory of Spanish Sahara, in the Atlantic Saharan region (La 'Youne province) between the mouths of the Aoreora and Draa rivers (OZENDA 1977). The species is locally common on rocky reg inland from the coast of Tarfaya province near the inlet known as Khniffis lagoon (EDMONDSON et al. 1988).The occurrence of a close relative of the Somali and Arabian species in Morocco is difficult to explain, and may reflect a more ancient pattern of distribution of the ancestors of the group along the southern coast of the Tethys in Tertiary times.

Examples of other genera with similar disjunct distributions include *Ceratonia* (Fabaceae) whose newly discovered species *C. oreothauma* HILLCOAT, LEWIS & VERDCOURT occurs in Oman and Somalia and is related to the widespread Mediterranean tree *C. siliqua* L.; *Cupressus dupreziana* A.CAMUS (Cupressaceae) from Tassili, in Central Sahara, which has affinities with the widespread tree *C. sempervirens* L.; *Globularia* (Globulariaceae), where *Globularia arabica* JAUB. & SPACH from Egypt (including Sinai) and western Arabia is related to the circum-Mediterranean species *G. alypum* L.; *Lupinus princei* HARMS (Fabaceae) from Somalia, a member of the rough-seeded group of *Lupinus* whose members are centred in north-west Africa; and *Punica* (Punicaceae or Lythraceae), whose *P. protopunica* BALF.f. is endemic to Socotra and is related to the widespread and often cultivated species *P. granatum* L.

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References

CHIOVENDA, E. 1929: Flora Somalia, vol. 1. – Rome: Sindicato italiano arti grafiche (for the Ministero dell Colonie).

EDMONDSON, J., GUNN, A., BURT, A.J., PARKER, D.M. 1988: Checklist of flora of the Khniffis-Tarfaya region (Morocco). – In: DAKKI, M., LIGNY, W. DE (eds), The Khniffis Lagoon and its surrounding environment (Province of La 'Youne, Morocco). – Trav. Inst. Sci., Rabat, mém. hors série: 41 - 45.

OZENDA, P. 1978: Flore du Sahara, 2nd ed. – Paris: C.N.R.S.