

STUDIES IN THE THEACEAE, XXVI
THE GENUS *VISNEA* *

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THE GENUS *Visnea* was first described by Linnaeus f. (Suppl. Pl. 36. 1781), and on a later page (251) of the same publication the author recorded the species *V. mocanera*. The specific name refers to the *mocan* of the Guanches, or ancient inhabitants of the Canary Islands, who made from the plant a kind of syrup which was much used with their daily food and in medicines. It is thought that *V. mocanera* is the plant referred to as "mocan." A second generic name, *Mocanera*, was introduced by Jussieu (1789), who actually recognized the existence of the previously described *Visnea*. However, no serious question of nomenclature ever evolved, since *Mocanera* became only a little-used synonym and never challenged the priority of *Visnea*. To this day no other species has been added to the genus.

Originally the species was described from the Canary Islands, and it has been recorded from most of the group, quite extensively from Gran Canary, Teneriffe, Gomera, Palma, and Ferro. It was at first thought that the Canary Islands encompassed the complete range of the species. However, Johnson (Hooker's Jour. Bot. 9: 161. 1857) reported the species as growing in the northwestern portion of the islands of Madeira between the Ribeira da Janella and the Ribeiro do Inferno. From the works of other authors one may assume that this small area originally mentioned in Johnson's work shows the distribution of the species on Madeira.

It appears that the species is usually found growing in rather wild and inaccessible places. On Madeira its habit is that of a shrub, while in the Canary Islands it more often attains the stature of a small tree.

There seem to have been considerable question and also several suggestions regarding the correct position and relationships of the genus. Endlicher (Gen. Pl. 1018. 1840) first placed it in the Theaceae, but later in the second supplement of the same publication (Suppl. 2, 81. 1842) considered it as belonging to the Ebenaceae. Johnson (1857) suggested a relationship with the genus *Clethra* and suggested *Visnea* as "another link of connection between Ericaceae and Vacciniaceae." However, by 1885 Johnson appears to have changed his opinion, since he treated the genus in his Handbook of Madeira under the Theaceae.

In 1859, two years after Johnson's original article appeared, Schacht (Denkschr. Bot. Ges. Regensburg 4: 47-60, t. 1, 2. 1859), from material sent by Johnson, offered a detailed discussion on the status of *Visnea*.

* This genus was studied originally with the oriental genus *Anneslea*, and a publication comprising the two genera was planned. However, as the study progressed, it was decided to treat the two separately.

This last work was undoubtedly based to a considerable extent on the previous work of Johnson. No definite conclusions were offered. It is interesting to note that in the plates, which are very well done as a whole, the anthers are depicted with almost pore-like openings rather than longitudinal slits.

Toward the end of the nineteenth century botanists in general accepted *Visnea* as belonging to the Theaceae. Szyszylowicz (1895) and Melchior (1925), in their respective treatments of the family in *Die Natürliche Pflanzenfamilien*, both placed *Visnea*, without reservation, in the Theaceae. They placed it in the tribe Ternstroemieae along with *Adinandra*, *Ternstroemia*, and *Eurya*.

Most botanists, it seems, have interpreted the ovary as inferior or half-inferior. This interpretation stems from the fact that the persistent calyx-lobes are joined at the base, and in the development of the fruit this fused basal portion of the calyx is adnate to the side of the fruit. This appears very much like an inferior ovary, except that the fruit, when dissected longitudinally, shows a clean demarkation from the calyx-lobes in the line and character of the pericarp, which is distinct and not fused with the calyx.

In the flower, the ovary appears to be placed on the torus formed with the base of the connate calyx-lobes, but retains its individual identity. Some authors have described the ovary as projecting "lightly" into the torus. I could detect no projection into the torus from the dissections I made and studied. It does appear, however, that in the development of the fruit and the persistent calyx, the base of the fruit does project somewhat into the torus, but, as I mentioned above, retains its individuality.

Visnea Linnaeus f., Suppl. Pl. 36. 1781. — Endlicher, Gen. Pl. 1018. 1840; Suppl. 2, 81. 1842. — Webb & Berthelot, Hist. Nat. Iles Canar. 3 (2): 144. 1842. — Choisy in Mém. Soc. Phys. Hist. Nat. Genève 14: 130 (Mém. Ternstr. 42). 1855. — Johnson in Hookers Jour. Bot. 9: 161. 1857. — Schacht in Denkschr. Bot. Ges. Regensburg 4: 47–60, t. 1, 2. 1859. — Bentham & Hooker, Gen. Pl. 1: 182. 1862. — Baillon, Hist. Pl. 4: 257. 1873. — Szyszylowicz in Nat. Pflanzenfam. III. 6: 190. 1895. — Hubbard in Bailey, Stand. Cyclop. Hort. 6: 3480. 1917. — Engler in Veg. Erde [Pflanzenwelt Afr. 3 (2)] 9: 494. 1921. — Melchior in Nat. Pflanzenfam. ed. 2, 21: 145. 1925. — Lemée, Dict. Pl. Phan. 6: 877. 1935.

Mocanera Jussieu, Gen. Pl. 318. 1789. — Lamarck, Encycl. 4: 208. 1797. — Jussieu in Dict. Sci. Nat. 31: 504. 1824. — Non *Mocanera* Blanco, Fl. Filip. 446–451, 858. 1837.

Flowers axillary, hermaphroditic. Bracteoles 2. Sepals 5, imbricate, connate at the base forming a shallow tube adnate to the base of the ovary. Petals 5, imbricate, connate at the base. Stamens 12 [–21], adhering to the base of the corolla; filaments free; anthers basifixed, erect. Ovary 3-celled, lightly immersed in the torus; ovules few in each cell, pendant

from the apex; styles 3, distinct, persistent. Fruit baccate, indehiscent, projecting into the torus, nearly enclosed and adjoined near the base by the persistent calyx, *appearing* subinferior. Seeds small, pyriform, 3-angled, the embryo curved, cylindrical, the albumen pulpy.

Evergreen trees with small flowers.

TYPE SPECIES: *Visnea mocanera* Linn. f.

DISTRIBUTION: Canary Islands and Madeira.

Visnea mocanera Linnaeus f., Suppl. Pl. 251. 1781. — Willdenow, Sp. Pl. 2: 926. 1800. — Bory de St.-Vincent, Essai Iles Fortunées 327, t. 7. 1804. — Colla, Hort. Repul. 146, t. 32. 1824. — Sprengel, Syst. Veg. 2: 465. 1825. — Hooker, Icon. Pl. 3: t. 253. 1840. — Walpers, Repert. Bot. Syst. 1: 368. 1842. — Webb & Berthelot, Hist. Nat. Iles Canar. 3 (2): 145, t. 69 B. 1842-44. — Choisy in Mém. Soc. Phys. Hist. Nat. Genève 14: 130 (Mém. Ternstr. 42). 1855. — Walpers, Ann. Bot. Syst. 7: 360. 1868. — Johnson, Handb. Madeira 220. 1885. — Nicholson, Illustr. Dict. Gard. 4: 185, f. 200, 1886. — Szyszyłowicz in Nat. Pflanzenfam. III. 6: 190. 1895. — Thonner, Blütenfl. Afr. t. 99. 1908; Fl. Pl. Afr. t. 98. 1913. — Pitard & Proust, Fl. Iles Canar. 134. 1908. — Menezes, Fl. Arch. Madeira 30. 1914. — Hubbard in Bailey, Stand. Cyclop. Hort. 6: 3480. 1917. — Knoche, Vagandi Mos (Die Kanarische Ins.) 220, t. 17. 1923. — Melchior in Nat. Pflanzenfam. ed. 2, 21: 145. 1925. — Lindiger, Beitr. Kennt. Veg. Fl. Kanar. Ins. 278. 1926.

Mocanera canariensis Heynhold, Nom. Bot. Hort. 1: 884. 1840, *nom. nud.* — Jaume St.-Hilaire, Expos. Fam. Nat. 2: 371. 1805. — Jussieu in Dict. Sci. Nat. 31: 505. 1824.

Small tree or shrub. Branches brown or grayish brown, terete, glabrous, lenticellate, the young branchlets brown, angled, pubescent when very young. Leaves coriaceous, subelliptic-obovate, 4-7 cm. long, 2-2.5 cm. wide, glabrous (except when very young), acute at the apex, cuneate at the base, the margin subrevolute, serrulate along the upper half, a gland (quickly caducous) to each serration, the veins obscure on both surfaces, occasionally visible below, the midrib 2-3 (-4) mm. long. Flowers axillary, solitary or in twos, occasionally in fascicles of three; pedicel terete, 7-8 mm. long, lightly pubescent at anthesis (lens); bracteoles 2, ovate or long-deltoid, unequal, 1.25-1.5 mm. long, one bracteole immediately below the calyx, the other disposed along the pedicel away from the calyx, rarely opposite; calyx-lobes 5, imbricate, coriaceous, persistent, unequal, glabrous (lightly pubescent at anthesis), 3-5 mm. long, 2.5-2.75 mm. wide, joined at the base for 1.5-2 mm. forming a torus; corolla-lobes 5, imbricate, obtuse, membranaceous, 5-6.5 mm. long, 3.5-4 mm. wide, joined at the very base; stamens ca. 13 [-21], ca. 4 mm. long, unequal, the filament ca. 3 mm. long, free, lightly adnate to the base of the corolla, the anthers long-ovate ca. 1 mm. long, projected into an apicule; ovary subglobose to conical, lightly imbedded in the torus, ca. 1.5 mm. diameter,

sulcate and glabrous near the base, densely pubescent above, 3-celled, the ovules few, the styles 3, filiform, persistent, ca. 3 mm. long, free nearly to the base, pubescent, the stigmas punctiform. Fruit baccate, indehiscent, conical, crowned by the persistent styles, during development projecting more deeply into the torus, the cells often indistinguishable, appearing one-celled, crowded with pulp, 1-4-seeded, others abortive. [Seeds 3-angled pyriform, acute, the testa glutinous-granulate].

CANARY ISLANDS: TENERIFFE: above Taganana, in forest, alt. 900 m., *A. Engler s.n.* (AA). — "Cruz de Taganana, Cumbre, in rupibus," alt. 900 m., *J. Bornmüller* 927 (AA), June 14, 1900. — Guinar, river ravine, alt. 700-800 m., *O. Burchard* 62 (AA), Feb. 1904. — Guinar, river ravine, alt. 500 m., *J. Bornmüller* 2588 (AA), Sept. 6, 1901. — In woods, *C. Bolle s.n.* (G), in 1851. PALMA: near Breña Baja, Montagneta, alt. 500 m., *J. Bornmüller* 2586 (AA), May 10, 1901. FERRO: El Golfo, Vueltas above the church, *R. T. Lowe H* 178 (G), Feb. 18, 1858. — Risco de Jinama, alt. 500-600 m., *J. Bornmüller* 2589 (AA), May 17, 1901.

MADEIRA: Ribeiro do Inferno, *W. Barbey* 908 (G), Dec. 16, 1858.

CULTIVATED: T e n e r i f f e : Oratava, in garden, *J. Bornmüller* 925 (AA), July 1900. — F r a n c e : Antibes (Alpes-Maritimes), Villa Thuret (AA), Mar. 12 & Apr. 10, 1889.

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