

A taxonomic revision of *Maurocena* (Celastraceae), a Western Cape monotypic endemic

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ABSTRACT

A taxonomic account is given of the monotypic genus *Maurocena* Mill. *Maurocena frangula* Mill. has a restricted range and is endemic to the Cape Peninsula and the West Coast National Park, Western Cape. *Maurocena frangularia* (L.) Mill., the species name and author citation widely used in the past, is incorrect. It is characterized by, among others, pendulous ovules and gynodioecy, rare states in the Celastraceae. *Maurocena* is apparently most closely related to the southern African genus *Lauridia* Eckl. & Zeyh.

INTRODUCTION

The genus *Maurocena* is fairly similar in many anatomical and morphological features to *Lauridia* Eckl. & Zeyh. (Archer & Van Wyk 1997). However, the pendulous ovules in *Maurocena* set it apart from the other genera in the southern African Cassinoideae, which have erect ovules (Archer & Van Wyk 1996). The occurrence of pendulous ovules is relatively rare in the Celastraceae. Perhaps the genus is, on account of its ovule orientation, more closely related to the tropical American *Tetrasiphon* Urb. and *Gyminda* Sarg. (Loesener 1942; Brizicky 1964) than to the remaining southern African genera.

Maurocena frangula was evidently not uncommon in cultivation in Europe in the 18th century, in view of the abundance of illustrations of the species. It was first introduced in 1690 to the Royal Botanic Gardens in London (Aiton 1811). In the pre-Linnaean period the species was described and illustrated by Plukenet (1691), Petiver (1702), Boerhaave (1710) and Dillenius (1732). The genus and phrase name of Dillenius (1732), *Maurocena frangula sempervirens, folio rigido subrotundo* was taken up by Linnaeus (1737, 1743). However, in 1753 Linnaeus reduced *Maurocena* to synonymy under *Cassine* L. The name *Maurocena* was subsequently validly published when the genus was reinstated by Miller (1754), in an attempt to rectify what he thought was an error on Linnaeus's part. The epithet *frangula* was provided later (Miller 1768), being taken up from the phrase name. Willdenow (1798) first introduced the incorrect form of the epithet, *frangularia*, which is today in general use in herbaria and in most recent literature. The author citation in general use for the taxon, i.e. (L.) Mill. (Arnold & De Wet 1993), is also incorrect.

***Maurocena* Mill.**, The gardener's dictionary [abridg. edn 4, 1754]: 859, facs. edn, Cramer (1969); Adans.: 303 (1763), as *Maurocena*; Sond.: 465 (1860); Kuntze: 147 & 149 (1891) p.p., excl. subg. *Triceros* Kuntze; Thonner: 331 (1915); Davison: 343 (1927); Loes.: 179 (1942); R.A.Dyer: 335 (1975). Type: *M. frangula* Mill.

***Maurocena* Mill. subg. *Eumaurocena* Kuntze:** 149 (1891).

Small evergreen, gynodioecious shrub to spreading tree up to 8 m high, unarmed, glabrous, without elastic threads in leaves and bark; bark greyish with layers of powdery yellow pigment in exposed rhytidome, exfoliating in thin scales, surface cracked in grid-like pattern. *Branchlets* terete or slightly flattened, greyish brown to brown. *Leaves* opposite; lamina widely elliptic to circular, dark green above, grey-green below, (25–)35–60 (–85) × (20–)30–55(–65) mm, base rounded to cuneate, apex rounded to retuse, margin entire, revolute, coriaceous and rigid; venation slightly raised above and more prominent below, reticulation inconspicuous, brochidodromous, midrib and petiole very conspicuous below owing to whitish green colour contrasting with grey-green of rest of lamina in dried leaves; petiole 2–3 mm long; stipules minute, ± 1 mm long, ± triangular, brownish black, marcescent. *Inflorescences* sessile, ± irregularly dichasial, axillary towards apices of branchlets, 4–10-flowered; bracts minute. *Flowers* often unisexual with staminodes (female), or bisexual, pentamerous, ± 2 mm diam.; pedicels 2–4 mm long. *Sepals* rudimentary, ± 0.3 mm long. *Petals* white, ovate, 1.3 × 1.0 mm, sessile, apex rounded, margin ± deflexed. *Stamens* ± erect; inserted below margin of disc; filaments of perfect flowers 3–4 mm long, well exerted above flowers; filaments of female flowers rudimentary (staminodes); anthers of perfect flowers 0.8 mm long, basifixed, introrse, dehiscing by longitudinal slits. *Disc* fleshy, entire, undulate. *Ovary* ± 1/3 immersed in and adnate to disc, 2(3)-locular with 2 pendulous collateral ovules per locule, ovules epitropous, dorsal; styles ± 0.25 mm long; stigma in female flowers often conspicuously 2-lobed, papillate, stigma inconspicuous in perfect flowers. *Fruit* baccate, pale red, spheroid, 7–10 mm diam., mesocarp fleshy. *Seed* 1 or 2 per locule (up to 5 per fruit recorded), brown, ± spheroid, post-chalazal vascular bundles not observed, fleshy endosperm present; embryo erect, with cotyledons fleshy, widely elliptic, base unequal (Figure 1).

***Maurocena frangula* Mill.**, The gardener's dictionary edn 8.: no page number (1768); Willd.: 1493 (1798), in syn. as *frangularia*; Pers.: 327 (1805); Marloth: 153 (1925); Davison: 343 (1927); Loes.: 179

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FIGURE 1.—*Maurocenia frangula*. A, branch with female flowers, $\times 0.7$; B, female flower, $\times 7$; C, branch with perfect flowers, $\times 0.7$; D, perfect flower, $\times 7$. Drawn from Marloth 5978 (PRE) by Anne Stadler.

(1942); Adamson: 567 (1950); Levyns: 190 (1966); Von Breitenbach: 640 (1965); Palmer & Pitman: 1324 (1973); Coates Palgrave: 515 (1977); Bond & Goldblatt: 224 (1984). Type: Dillenius, Hortus Eltham. t. 146, f. 147 (1732), lecto., here designated.

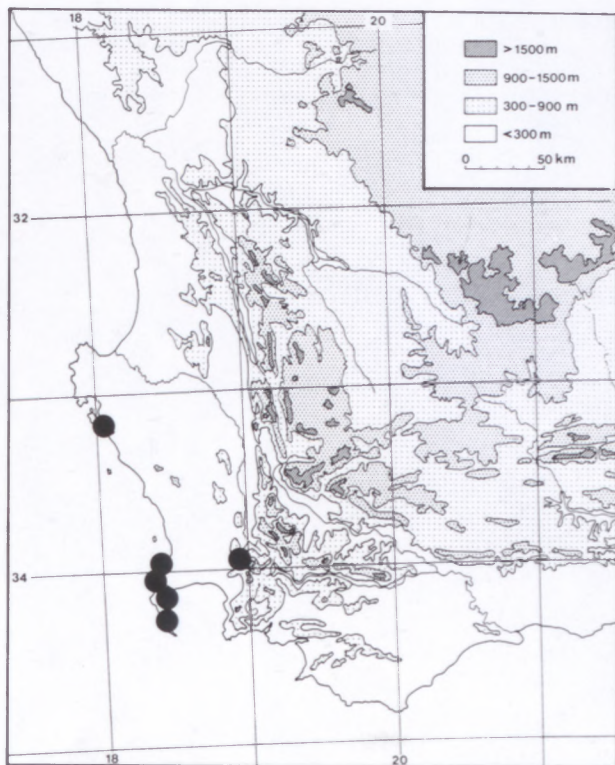
Cassine maurocena L.: 269 (1753); 385 (1762); Willd.: 1493 (1798); Thunb.: 52 (1794); Thunb.: 225 (1818); Thunb.: 268 (1823); W.T.Aiton: 170 (1811); Roem. & Schult.: 466 (1819); Spreng.: 939 (1824); Eckl. & Zeyh.: 128 (1834/5); Hook.: t. 552 (1843); Sond.: 465 (1860); Hook.f.: 363 (1862); Szyszyl.: 33 (1888).

Icones: Pluk.: t. 158, f. 2 (1691); Petiver: t. 57, f. 4 (1702); Boerh.: 244 (1727); Dill.: t. 146, f. 147 (1732); Hook.: t. 552 (1843); Marloth: t. 51 (1925); Davison: t. 19 (1927); Von Breitenbach: 641 (1965).

Maurocenia is a monotypic genus of mountain kloofs and coastal bush on rocky sea shores in the Cape Peninsula and near Stellenbosch (Figure 2). *M. frangula*

is a gynodioecious shrub or tree, frequently encountered along the footpaths in the kloofs of Table Mountain. The wood is hard and has a fine grain, and has formerly been used in the manufacturing of musical instruments (Pappe 1854). Vernacular names are 'Hottentot's cherry' and 'Hottentot'skersie', referring to the fruit which is edible and was eaten by Khoikhoen (Hottentot). The genus name commemorates the Italian horticulturist, F. Mauroceni.

Although the species is described here as gynodioecious, it may well be dioecious. Further study is required to confirm the functional sexuality of the flowers. The long slender stamens would suggest an adaptation to wind pollination which is supported by the almost complete absence of sepals and deflexed petals. However, Marloth (1925) described the flowers as sweetly scented, visited by flies and bees.

FIGURE 2.—Known distribution of *Maurocena frangula*.

Specimens examined

WESTERN CAPE.—3318 (Cape Town): West Coast National Park, Postberg Peninsula, (–AA), *Van Wyk BSA 142* (PRU); 'Montis tabularis' [Table Mountain], (–CD), *Marloth 97* (PRE); Camps Bay, (–CD), *Marloth 5978* (PRE), *Maude s.n.* (BM), *Prior PRE-47256* (PRE, Z); Table Mountain, Grotto Ravine, (–CD), *Marloth 12044* (PRE); Stellenbosch, ridge behind Swartboskloof, adjoining Haelkop, (–DD), *Taylor 7301* (PRE). 3418 (Simonstown): Muizenberg, near False Bay, (–AB), *MacOwan 580* (BM, BOL, PRE, Z); slopes above Bakoven Bay, (–AB), *Marais 601* (BOL, PRE); Blackburn Kloof near Hout Bay, (–AB), *Marais 606* (PRE); Jagersfontein, (–AB), *Pole Evans 4349* (PRE); Hout Bay, (–AB), *Rehmann 1609* (Z), *Smuts 1154* (PRE); Boyes Drive, opp. St James, between Muizenberg and Kalkbaai, (–AB), *Stauffer & Esterhuysen 5123* (PRE, Z); boulder near summit of Steenberg, (–AB), *Taylor 3296* (PRE); Cape of Good Hope Nature Reserve, Booiseskerm, (–AB), *Taylor 10531* (C, PRE); Cape Peninsula, West Coast opposite Antipolis shipwreck, (–AB), *Van Jaarsveld 3154* (PRE); Chapman's Peak, (–AB), *Van Jaarsveld 3171b* (PRE); Hout Bay, (–AB), *Wolley Dod 1045* (BM); Simonstown, Smitswinkelbaai, (–AD), *Schlechter 700* (Z); eastern side of Hangklip Peak, facing Blesberg, (–BD), *Rourke 1855* (NBG, PRE).

Species excluded or insufficiently known

- M. americana* Mill. (1768)
M. arguta (Lindl.) Kuntze: 149 (1891) = *Turpinia* sp.
 (Staphyleaceae)
M. cerasus Mill. (1768)
M. cochinchinensis (Lour.) Kuntze: 150 (1891) = *Turpinia* sp.
M. heterophylla (Ruiz & Pav.) Kuntze: 150 (1891) = *Turpinia* sp.
M. insignis (Kuntze) Kuntze: 149 (1891) = *Turpinia* sp.
M. occidentalis (Sw.) Kuntze: 150 (1891) = *Turpinia* sp.
M. phylliraea Mill. (1768)
M. pinnata (Schiede ex Schltdl.) Kuntze: 150 (1891) = *Turpinia* sp.
M. pomifera (Roxb.) Kuntze: 147 & 149 (1891) = *Turpinia* sp.

- M. schinziana* Loes.: 194 (1894) = *Cassine parvifolia* Sond.
M. simplicifolia (Gardner & Champ.) Kuntze: 149 (1891) = *Turpinia* sp.
M. sphaerocarpa (Hassk.) Kuntze: 147 & 150 (1891) = *Turpinia* sp.
M. zollingeri Kuntze: 147 (1891) = *Turpinia* sp.

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