

CELASTRACEAE

A NEW SPECIES OF *GYMNOSPORIA* FROM SOUTH AFRICA AND SWAZILAND

Gymnosporia hemipterocarpa Jordaan, sp. nov., *G. buxifoliae* (L.) Szyszyl. affinis, sed ramis primo rubro-purpureis; foliis caeruleo-griseis; capsulis sub-porcatis, laevigatis, flavis differt.

TYPE.—South Africa, KwaZulu-Natal, 2830 (Dun-dee): Weenen District, Farm Mkholombe, 5 km E of Weenen, (–CC), 6 April 1987, *Jordaan 1155* (PRE, holo.; NH, iso.).

Maytenus cymosus forma *DE2507* sensu Edwards: 269 (1967) quoad specimens *Edwards 2507, 2784, 2810*.

Shrub up to 2 m high, rarely a small tree up to 4 m high, spinescent, glabrous. *Branches* terete, reddish brown when young, becoming grey with age. *Brachyblasts* short. *Thorns* robust, terete, up to 70 mm long, rarely floriferous. *Stipules* subulate, ± 1 mm long, margin fimbriate. *Leaves* fasciculate or alternate towards tips of branchlets, subcoriaceous, greyish green when fresh, greyish when dry; lamina ovate, obovate to oblanceolate, $15\text{--}40 \times 10\text{--}20$ mm, apex

acute to rounded, base cuneate, margin with incisions in distal half, venation not obvious below except for raised midrib in dry specimens; petiole ± 0.5 mm long. *Inflorescence* a dense dichasium, slightly shorter than or as long as leaves; peduncle 6–12 mm long, reddish purple; pedicels 1–2 mm long. *Flowers* unisexual, pentamerous, white or cream-coloured, 15–19 per cyme, sweetly scented. *Sepals* triangular, ± 0.8 mm long, margin lacinate. *Petals* oblong, 1–2 mm long, margin uneven. *Disc* ± 1.5 mm wide, 5-lobed. *Male flowers*: stamens slightly shorter than petals; filaments ± 1 mm long; pistillode short; style unbranched. *Female flowers*: staminodes shorter than stamens in male flowers; ovary 3-locular, half-ridged; style very short; stigma 3-branched, spreading. *Capsules* subglobose, 4–5 mm diam., 3-valved, each valve with outer surface ridged towards distal end, smooth, coriaceous, yellow to dark red to purplish. *Seeds* reddish brown, shiny; aril thin, yellow, partially covering the seed. Figures 6, 7.

Diagnostic characters and affinities: *Gymnosporia hemipterocarpa* is easily recognized by its leaves which

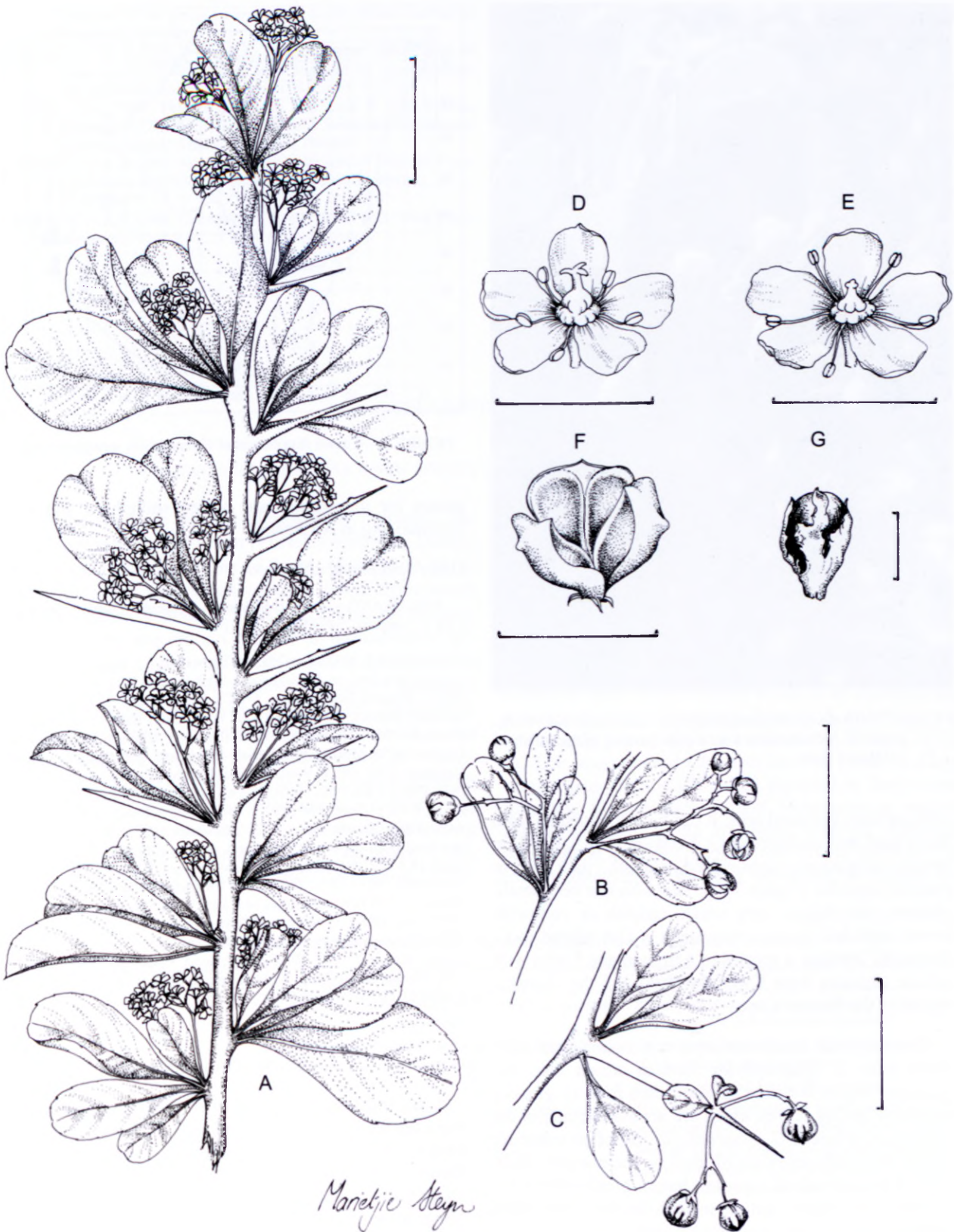


FIGURE 6.—*Gymnosporia hemipterocarpa*. A, flowering branch; B, C, fruiting branches; D, female flower; E, male flower; F, capsule, note wing-like ridges on upper half of valves; G, seed with aril. A, D, Edwards 2909 (PRE); B, F, G, Edwards 3299 (PRE); C, Edwards 2507 (NU); E, Compton 2640 (PRE). Scale bars: A, B, C, 20 mm; D, E, 4 mm; F, 5 mm; G, 2 mm. Artist: Marietjie Steyn.

are coriaceous and greyish green, giving the plant a greyish appearance. Furthermore, the inflorescences have dark reddish purple axes which contrast with the rest of the plant, and the capsules are small, dark red to purplish and half-ridged. It is related to species in what was previously referred to as the *Maytenus heterophylla*

complex (Robson 1965, 1966, 1994). Subsequently the complex has been resolved into several species, all now placed in the genus *Gymnosporia* (Wight & Arn.) Hook.f. (Jordaan 1995; Jordaan & Van Wyk 1999). The new species belongs to *Gymnosporia* section *Buxifoliae* Jordaan (Jordaan & Van Wyk 2006) by having seeds



FIGURE 7.—*Gymnosporia hemipterocarpa*. Leaves and fruit. Photograph: G. Nichols, taken from a plant growing in the Hluhluwe – iMfolozi Park.

with partially enclosed arils. It can be distinguished from the related and widespread *G. buxifolia* (L.) Szyszyl. in having subglobose, semi-ridged, smooth, dark red or purplish capsules (Figure 7). *G. buxifolia* has very small, globose, non-ridged, very rough, reddish or yellowish brown capsules. *G. hemipterocarpa* is also related to *G. devenishii* Jordaan, a species of Afromontane Forest with sulcate capsules from KwaZulu-Natal and the Transkei region of the Eastern Cape.

Gymnosporia hemipterocarpa can easily be confused with *G. glaucophylla* Jordaan which also has glaucous leaves. It can be distinguished from *G. glaucophylla* by having leaves which are always toothed in the distal part, whereas *G. glaucophylla* has often subentire leaves with only remnants of teeth on the margins. Both species have 3-valved capsules, but *G. glaucophylla* has smooth, subglobose, entire, reddish brown, non-ridged fruits.

Distribution and habitat: reported from the hot, arid, Mooi, Thukela, Mfolozi and Pongola River Valleys in KwaZulu-Natal and also from Swaziland (Figure 8). Plants grow on rocky hillsides in dense Valley Thicket (Lubke 1998: 16) in the Savanna Biome at altitudes of 0–600 m.

Etymology: the epithet is a compound of the Greek words, *hemipteron*, half-winged, and *carpos*, fruit, alluding to the half-winged pericarp of the capsule. Proposed

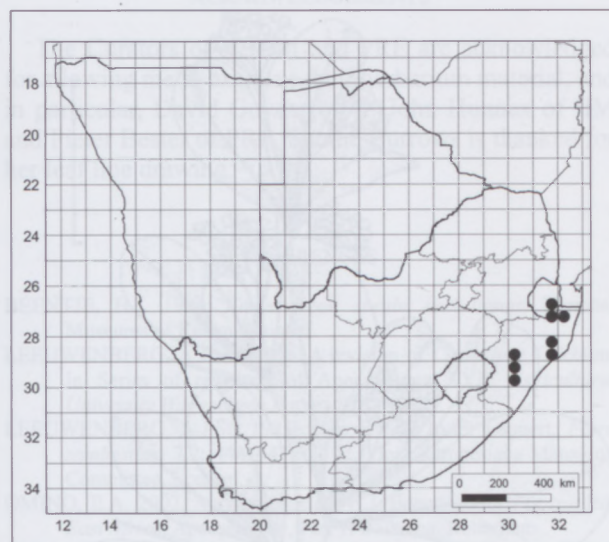


FIGURE 8.—Known distribution of *Gymnosporia hemipterocarpa*.

names for the species are: valley spikethorn and *val-leipendorring* in Afrikaans.

Other specimens examined

SWAZILAND.—2631 (Mbabane): Hlatikulu District, Sitobela, (–DC), Compton 26404 (NBG, PRE).

KWAZULU-NATAL.—2731 (Louwsburg): Ngotshe District, 6 miles [9.6 km] on Kosi-Pongola Weir road, (–BC), Edwards 3198 (PRE); Pongola Bosveldplaas, (–BC), Nel 41 (NH). 2732 (Ubombo): Ubombo District, 6 miles [9.6 km] W of Jozini Dam Village, (–AC), Edwards 2909 (NU, PRE). 2830 (Dundee): Thukela Ferry, (–CB), Galpin 14798 (PRE); Piet Retief Monument, Entonyaneni, (–CB), Gerstner 3580 (NH); Weenen Veld Reserve, (–CC), Acocks 10146 (NH, PRE); 1 km from Mudén, (–CC), Archer 350 (PRU); Blauwkrans River, (–CC), Pentz 214 (PRE); Umhlumbe Mountains, (–CC), West 1460 (PRE); Mudén Valley, (–CD), Edwards 2507 (NU, PRE); 4 miles [6.4 km] from Mudén to Greytown, (–CD), Edwards 2759 (PRE); 3 miles [4.8 km] from Mudén in Mooi River Valley, (–CD), Edwards 2784 (NU, PRE). 2831 (Nkandla): Umfolozi Game Reserve, (–BD), Edwards 3299 (PRE); 3 miles [4.8 km] W of Masimba, (–BD), Moll 5258 (NH, PRE); Umhlutazi Valley, (–DC), Lawn 567, 1470 (NH). 2930 (Pietermaritzburg): Umvoti District, Upper Huis River Valley, (–AB), Edwards 2810 (PRE); Richmond Road near Thornville, (–CB), Thompson 10 (NU). Without precise locality: bushveld of Black Umfolozi, Gerstner 3199 (NH).

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