

FABACEAE

ACACIA ORMOCARPOIDES (MIMOSOIDEAE), A NEW SPECIES FROM SEKHUKHUNELAND, SOUTH AFRICA

INTRODUCTION

Botanically poorly explored areas of South Africa continue to yield unexpected new plant discoveries and records (Hurter & E. van Wyk 2001; Hurter & A.E. van

Wyk 2004a, b; Hurter 2003). During the course of taxonomic work on the genus *Acacia* in southern Africa and field work aimed at investigating biogeographical patterns in the group, several potentially new species of *Acacia* have been collected for the first time, one of which is

described in the present paper. The new species is a yellow-flowered member of subgenus *Acacia* section *Acacia* subsection *Uniseriae* (Vassal 1974; Guinet & Vassal 1978; Chappill & Maslin 1995; Timberlake *et al.* 1999). Subgenus *Acacia* has recently been shown to be monophyletic within the traditional broad generic concept of *Acacia*, the latter which is now known to be polyphyletic (Pedley 1986; Clark *et al.* 2000; Miller & Bayer 2000, 2003; Luckow *et al.* 2003).

***Acacia ormocarpoides* P.J.H.Hurter, sp. nov.**, statim ab omnibus speciebus aliis flavifloris capitatis *Acaciae*, foliolis secundariis minutis glabris solum e rhachillis duobus sulcatis farinaceis constantibus, involuclis perfoliatis, bracteolis carinatis et lobis corollae brevibus ligulatis non supra calycem in tubo connatis, distinguitur. Habet capitulas valde minores (5–8 mm diametro) quam *A. tenuispina* in pedunculis glabris non glandularibus 9–16 mm longis, et legumina tenuis glabra sine glandulis sessilibus pustularibus.

TYPE.—Limpopo, 2429 (Nylstroom): Zwemkloof 283-KT, 909 m, (–DB), 28 November 2002, P.J.H. Hurter 1983 (PRE, holo.; NBG, PRU, iso.).

Small tree up to 3.5 m tall, trunk slender. *Branches* fastigiate, ascending, striate, blackish brown; new growth conspicuously striate, ferruginous. *Stipules* in pairs, spinescent, 10–30 mm long, white, glabrous, attenuate, pungent, antrorse, basally thickened. *Bark* coarsely flaking or splitting to reveal a reddish brown inner layer on young shoots. *Leaves* dull green, glabrous, bipinnately compound, pulvinus green at maturity; petiole sulcate, 0.2–10.0 mm long; leaves on juvenile growth (secondary leaves) with large, raised, brown, crateriform, petiolar nectary gland, absent in leaves on mature growth (primary leaves); rachis up to 12 mm long, sulcate, terminating in a short, rigid, persistent, deflexed hook or claw, at least one nectary gland at junction of distal pinna pair; rachillae 1 pair on primary leaves, 2 or 3 pairs on secondary leaves, distichous, 6–20 mm long, sulcate, filled with a farinaceous substance, dotted with small, sunken, glandular structures between each leaflet pair, terminating in a short, rigid, persistent, deflexed hook or claw; leaflets distichous, 5–9 pairs per rachillae, oblong to obovate-oblong, 2.5–5.0 × 1.3–3.0 mm, entire, eglandular, apex mucronulate, terminal pairs largest, asymmetrical, base oblique, conspicuous on abaxial surface only. *Inflorescences* capitate, globose, bright yellow, 5–8 mm diam., borne on new growth, fascicled on axillary peduncles; peduncle 9–16 mm long, with scattered, small yellow glands; involucler perfoliate, 0.5–2.0 mm long, 4–7 mm up the peduncle, dotted with small, whitish yellow glands, androgenous florets always present between bracts. *Flowers* bright yellow, dichlamydeous. *Bracteole* clavate, carinate, sparsely glandular, apices with sparse, villose hairs. *Calyx* campanulate, pentamerous, glabrous, 1.2–2.1 mm long, ascending, apices weakly villose, clasping corolla. *Corolla* campanulate, pentamerous, membranaceous; lobes ± united, free above calyx, ligulate, 1.5–2.6 mm, ascending, edges and apex slightly papillate. *Stamens* numerous; filaments 6.0–7.5 mm long. *Ovary* slightly stipitate, ventricose, septate, 0.8–1.2 mm long, surface with a few pustulate waxy globules; style 2–4 mm long. *Pods* dehiscent, fal-

cate, complanate, valves venous, 50–130 × 6–9 mm, 5–10-seeded, sparsely covered with a few non-pustulate glands, edges not constricted between seeds at maturity. *Seeds* ellipsoid, 6–9 × 4–6 mm, areole elliptic, 4–6 × 2–4 mm. Figure 8.

Diagnostic features and affinities: *Acacia ormocarpoides* can be distinguished from all other African yellow-flowered capitate acacias by the combination of its diminutive, glabrous, secondary leaflets consisting of only two sulcate, farinaceous rachillae, perfoliate involucler, carinate bracteoles and the short ligulate corolla lobes which are not united above the calyx to form a tube. In the field it is possible to confuse it with the sympatric *A. tenuispina* I. Verd. and to a lesser extent, with *A. exuvialis* I. Verd., both members of the group of *Acacia* subg. *Acacia* with glandular, glutinous pods (Ross 1971, 1979). Although the pods of *A. ormocarpoides* are sparsely dotted with non-pustulate glands, it is not a member of the glandular podded group.

Acacia tenuispina has much larger capitula (10–20 mm in diameter) on densely glandular peduncles 8–30 mm long, florets in which the corolla lobes are fused above the calyx to form a tube and glutinous pods with abundant sessile pustular glands, the latter often dark-coloured (Ross 1975, 1979). In contrast, *A. ormocarpoides* has much smaller capitula (5–8 mm in diameter) on glabrous, eglandular peduncles 9–16 mm long, campanulate florets in which the corolla lobes are not fused above the calyx to form a tube and slender glabrous pods without sessile pustular glands. Further differences in habitat preference were noted in the field: *A. ormocarpoides* only grows in sandy or loamy soils between norite boulders, whereas *A. tenuispina* is exclusively found on flats of deep, black, clay soils commonly known as cotton soils.

Acacia exuvialis is easily distinguished from *A. ormocarpoides* by its papery, peeling bark, sticky and glandular new growth, sticky and glandular upper peduncle (portion between the involucler and capitulum), an involucler that is situated just below the capitulum, smaller sticky and glandular pods and infundibuliform florets.

Distribution: at present *A. ormocarpoides* is only known from a few farms on the Leolo Mountains in the upper catchment of the Motse River in Sekhukhuneland, Limpopo, South Africa (Figure 9). Biogeographically this locality falls within the Sekhukhuneland Centre, a region rich in endemic plants (Van Wyk & Smith 2001). The recently described *A. robbertsei* P.P.Swartz (Coates Palgrave 2002) and *A. sekhukhuniensis* P.J.H.Hurter (Hurter & Van Wyk 2004b), as well as several other undescribed species of *Acacia* (unpublished data) are known to be endemic to this local centre of plant endemism. In view of its restricted geographical distribution, the threat of extreme overgrazing and extensive mining activities, *A. ormocarpoides* should be considered Endangered (World Conservation Union (IUCN) 2001).

Etymology: the specific epithet refers to the close resemblance this *Acacia* shows in habit and vegetative features with members of the genus *Ormocarpum* (Fabaceae: Faboideae), and for which plant it was at first mistaken in the field.

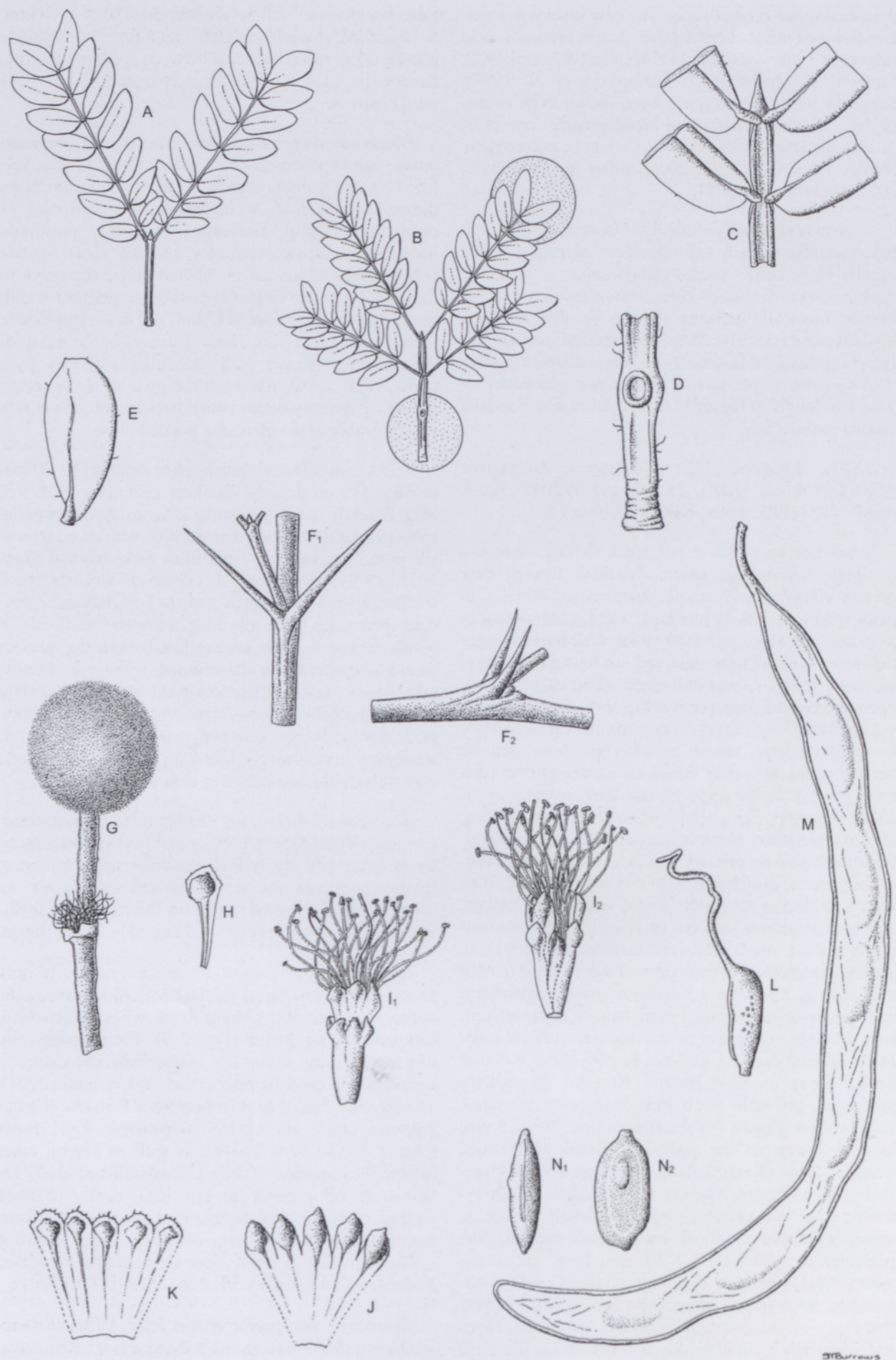


FIGURE 8.—*Acacia ormocarpoides* P.J.H.Hurter. A, primary leaf, $\times 1.8$; B, secondary leaf, $\times 1.8$; C, rachilla, $\times 9$; D, petiole, $\times 9$; E, leaflet, $\times 2.7$; F₁, F₂, stipules, $\times 1.8$; G, inflorescence, $\times 1.8$; H, bracteole, $\times 9$; I₁, I₂, floret, $\times 9$; J, calyx, $\times 9$; K, corolla, $\times 9$; L, gynoecium, $\times 18$; M, pod, $\times 1.8$; N₁, N₂, seed, $\times 1.8$. Artist: Sandie Burrows.

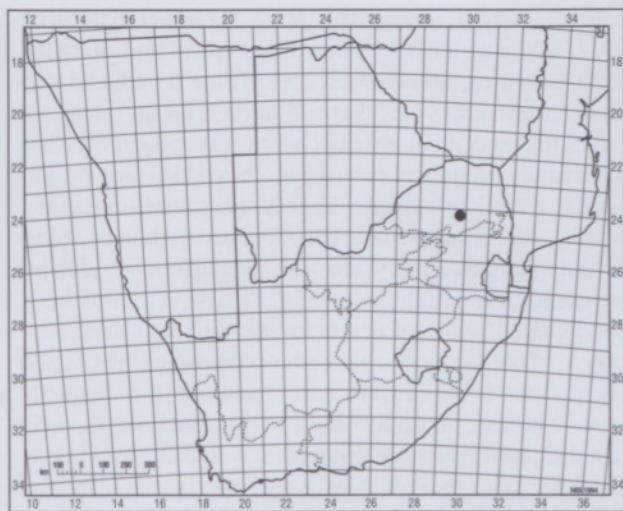


FIGURE 9.—Known distribution of *A. ormocarpoides*.

Other specimens examined

LIMPOPO.—2429 (Nylstroom): Zwemkloof 283-KT, 909 m, (–DB), 04-03-2004, T. Mukoma & P.J.H. Hurter 70 (PRE, PRU); Thornhill 544KS, Sekwati, 985 m, (–DB), 04-03-2004, T. Mukoma & P.J.H. Hurter 71, 72 (PRE).

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