

MIMOSACEAE

A NEW SPECIES OF *ACACIA* FROM NORTHERN MOZAMBIQUE

INTRODUCTION

In the course of researching a publication on the woody flora of Mozambique, a distinctive undescribed species of *Acacia* was collected south of the coastal town of Pemba in the Cabo Delgado Province of northeastern Mozambique. When first seen, the trees were deciduous and the large broad, blackish stipular spines stood out strikingly, rendering them unmistakable. Although clearly related to *Acacia amythetophylla* Steud. ex A.Rich. (Hunde 1979; Ross 1979; Timberlake *et al.* 1999), it was realised that the combination of morphological and ecological differences justify describing this taxon as a new species, *Acacia latispina*.

Acacia latispina J.E.Burrows & S.M.Burrows, sp. nov., *A. amythetophyllae* similis sed cortice pallida sublaeve, spinis magnis conspicuis stipularibus usque ad 45 mm latis 50 mm longisque, pinnulis oblongo-falcatis superficie inferiore glandulis complanatis perparvulis dense obsita, differt.

TYPE.—Mozambique, Cabo Delgado Province, 14.8 km from the main Pemba-Metoro road, on road to Mecufi, 13°11'13"S, 40°33'10"E, 23 December 2006, J.E. Burrows & S.M. Burrows 9764 (PRE, holo.; BNRH, K, LMA, iso.).

Deciduous tree up to 7 m tall. *Bark* smoothish, pale, beige-brown, flaking; branchlets glabrous, pale grey-beige, lenticellate, splitting longitudinally; new growth branchlets red-brown, smooth, glabrous. *Stipules* paired, spines up to 50 × 45 × ± 2 mm, unmistakably large and flattened, roughly triangular in outline, the flared basicopic lobe margins folded over in larger stipules,

spines held at ± 90° to stem. *Leaves* bipinnate, glabrous throughout, but lower surface of pinnules densely set with minute, pale, flattened glands, ± 0.04 mm diam., resulting in lower surface appearing paler than upper; petiole 18–24 mm long, faintly 4-ribbed, pulvinus with crateriform ellipsoid nectariferous gland ± 4 mm long, and a pair of peg-like linear-clavate (stipitate) glands ± 2 mm long on adaxial pair of petiolar wings ± 10 mm up from petiole base; rachis 65–135 mm long, somewhat dorsiventrally flattened, 4-angled, each angle very narrowly winged, with a circular gland ± 2 mm diam. between terminal pair of pinnae; pinnae in 9–12 pairs (3–6 in juvenile leaves), rachillae 28–54 mm long, faintly winged; leaflets in (10–)14–16(–20) pairs per pinna, oblong-falcate, 6–10 × 2–4 mm, apex acute, base asymmetrically truncate. *Inflorescences* capitate, globose, bright yellow, 9–12 mm diam., borne in axillary fascicles of 3–5 per fascicle, among new leaves or on pseudopaniculate leafless terminal shoots; peduncle 22–28 mm long, involucler below middle, mainly at 35–45 % of the peduncle length, glabrous. *Flowers* pentamerous, yellow; bracteoles 1 mm long, broadly clavate, margins lacerate. *Calyx* cupuliform, ± 1 × 0.8 mm, shallowly toothed with broadly acute teeth, margins with a few minute hairs. *Corolla* cylindrical, 2–3 mm long, glabrous, lobes narrowly acute, ± 0.8 mm long, margins entire to pustulate. *Pods* flat, thin, somewhat raised over seeds, 130–170 × 18–21 mm, dark grey when dry, margins ± straight, slightly thickened, venation reticulate, raised when dry. *Seeds* 8–12 per pod, oblong-elliptic, compressed, ± 6 × 5 × 2 mm, dull mid-brown, areole pale, horseshoe-shaped, 4 × 2.7 mm. Figures 3, 4.

TABLE 1.—Differences between *Acacia latispina* and *A. amythetophylla*

Character	<i>A. latispina</i>	<i>A. amythetophylla</i>
Bark	smoothish, pale, beige-brown, flaking	rough dark grey to blackish, fissured longitudinally (Drummond 1981; Timberlake <i>et al.</i> 1999)
Stipules	unmistakably large and flattened, roughly triangular in outline and up to 50 × 45 mm	short, straight and dark, although sometimes 8–16 mm, neither conspicuous nor numerous (Coe & Beentjie 1991 [as <i>A. macrothyrsa</i>]; Timberlake <i>et al.</i> 1999; Coates Palgrave 2002)
Petiole	4-angled, faintly 4-ribbed	sulcate
Petiolar glands	2 peg-like, linear-clavate glands 2 mm long on adaxial petiole wings	peg-like petiolar glands absent
No. of pinnae	3–12	7–35
Pinnule shape	oblong-falcate	narrowly oblong to linear-oblong
Pinnule undersurface	densely set with minute pale flattened glands	eglandular
Habitat	coastal woodland, within sight of sea	plateau (often miombo) woodland, mainly between 500 and 1 500 m (1 200–1 800 in East Africa); never coastal

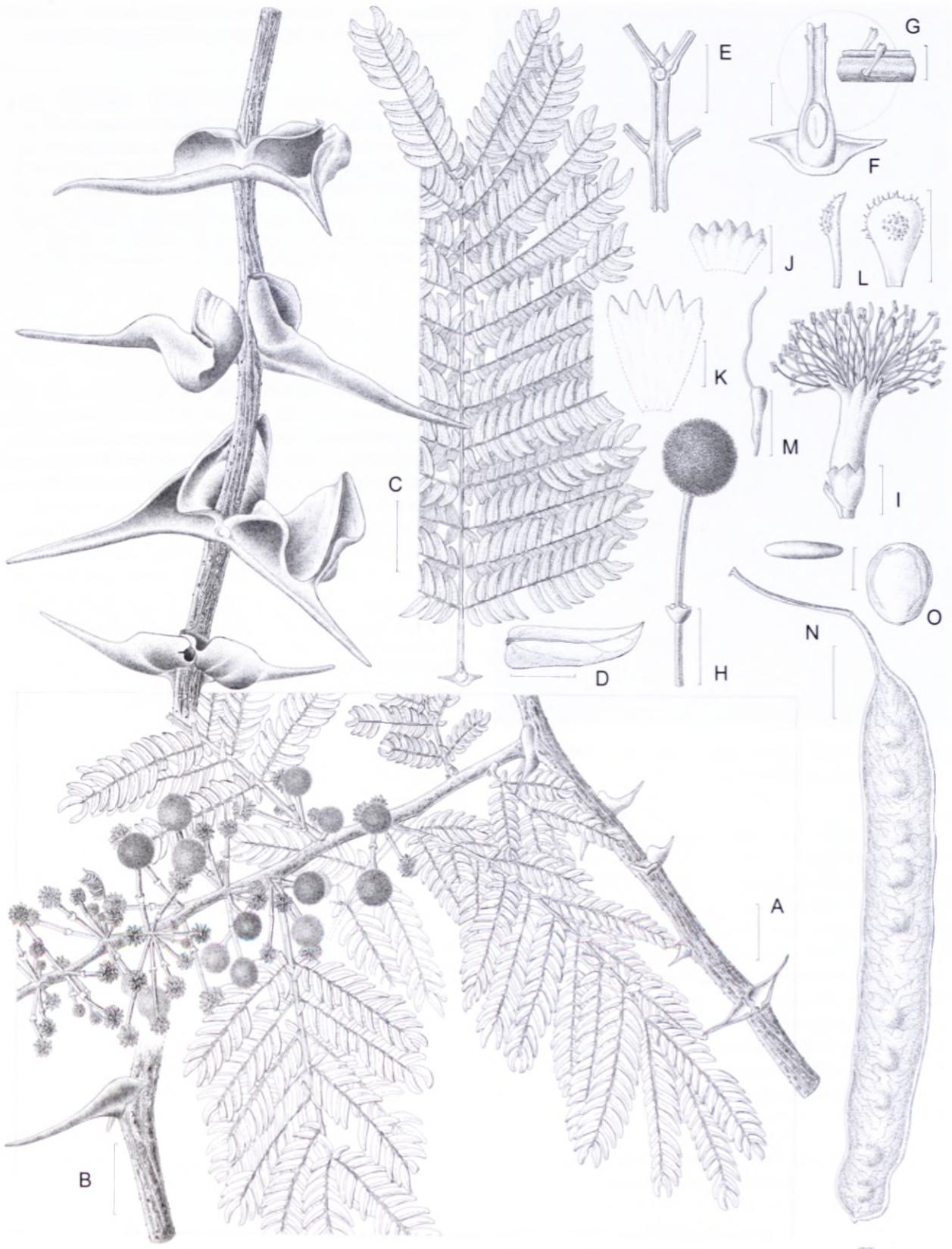


FIGURE 3.—*Acacia latispina*, A–O, J.E. Burrows & S.M. Burrows 9764. A, flowering branchlet; B, branchlet with stipules; C, leaf; D, pinnule; E, rachilla; F, petiole; G, clavate petiolar glands; H, inflorescence; I, floret; J, calyx; K, corolla; L, bracteoles; M, gynoecium; N, pod; O, seeds. Scale bars: A–C, N, 20 mm; D, O, 4.5 mm; E, 7 mm; F, 4 mm; G, 2 mm; H, 10 mm; I–L, 1 mm; M, 1.5 mm. Artist: Sandra Burrows.

Diagnostic features and affinities: *Acacia latispina* is most closely allied to *A. amythephylla* Steud. ex A.Rich. but is unmistakably distinct from that species by virtue of its prominently large, winged stipules. The coastal habitat of *A. latispina* is also quite different to that of *A. amyth-*

ethophylla, the latter being almost invariably a species of plateau and escarpment woodland, largely associated with the miombo genera of *Brachystegia* and *Julbernardia* (Caesalpinaceae). A more detailed tabulated comparison of the two taxa is given in Table 1.



FIGURE 4.—*Acacia latispina*, habit at type locality, October 2005. Photographer: John Burrows.

Further afield, it is noted that *Acacia latispina* bears some resemblance to the Mexican species *A. cochliacantha* Humb. & Bonpl. ex Willd. The latter taxon has flattened spines which become spoon-shaped with age, reaching 60 mm long and 40 mm wide (Siegler & Ebinger 1988; www.worldwidewattle.com). It is interesting to note this example of convergent evolution whereby this feature of 'spoon-shaped' spines has developed independently in two taxonomically unrelated species, on two different continents, although the spines of *A. latispina* are generally thinner and more convoluted than those of the New World *A. cochliacantha*.

Distribution and habitat: known only from the type locality (Figure 5), despite fairly extensive exploration of the surrounding Pemba District. *Acacia latispina* grows in an open coastal woodland/scrub mosaic on sandy, pebbly soils on the first levee behind the coastal dunes, at an altitude of about 20 m. This new taxon adds yet another endemic species to the flora of the coastal belt of northeastern Mozambique, a region that is increasingly becoming recognized as a region of botanical diversity and endemism (Lock 2006; Burrows 2009).

Conservation status: because the species is currently known only from the type locality, where $\pm 1\ 000$ plants are estimated to occur within an area of 25 km², and because the area between Pemba and Mecufi is under

pressure from continued rural development, we recommend an IUCN RDL status of Endangered (B2a,c) (IUCN 2001).

Note: this species is deliberately described here under the genus *Acacia*, in the full knowledge that there remain contentious issues surrounding the circumscription of the genus *Acacia sensu lato*. Until such time as the legality of the proposed generic name changes is settled, and the name *Acacia* is universally accepted as not being applicable to African members of the group, we prefer to retain the generic name *Acacia* for the African species.

ACKNOWLEDGEMENTS

We gratefully acknowledge Dr Hugh Glen for the Latin diagnosis, and the Instituto de Investigaç o Agr ria de Moçambique (IIAM) for permission to collect plants in Mozambique. The anonymous referee who pointed out the similarity of this species to the Mexican *Acacia cochliacantha* is sincerely thanked.

REFERENCES

- BURROWS, J.E. in press. A new species of *Tarenna* (Rubiaceae) and a new species of *Pavetta* (Rubiaceae) from northern Mozambique. *Kew Bulletin*.
- COATES PALGRAVE, M. 2002. *Keith Coates Palgrave Trees of southern Africa*, edn 3. Struik, Cape Town.
- COE, M. & BEENTJE, H. 1991. *A field guide to the acacias of Kenya*. Oxford University Press, Oxford.

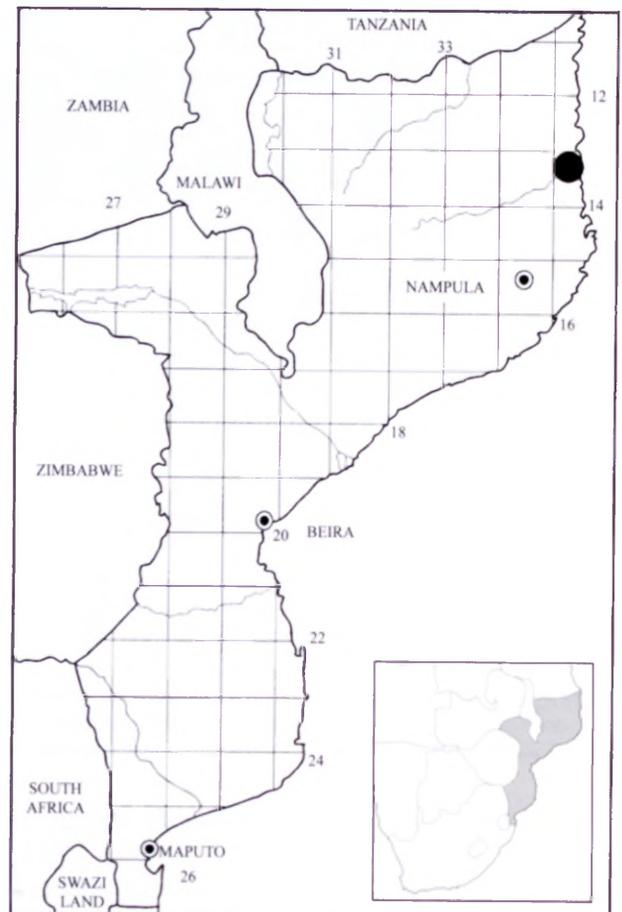


FIGURE 5.—Known distribution of *Acacia latispina*.

- DRUMMOND, R.B. 1981. *Common trees of the central watershed woodlands of Zimbabwe*. Department of Natural Resources, Causeway, Harare.
- HUNDE, A. 1979. *Acacia amythethophylla*, the correct name of a widespread African tree. *Botaniska Notiser* 132: 393–395.
- IUCN. 2001. *IUCN Red List Categories and Criteria: Version 3.1*. IUCN Species Survival Commission. IUCN, Gland, Switzerland and Cambridge, UK.
- LOCK, J.M. 2006. A new species of *Scorodophloeus* (Leguminosae: Caesalpinioideae: Detarieae) from Mozambique. *Kew Bulletin* 61: 257–259.
- ROSS, J.H. 1979. A conspectus of the African *Acacia* species. *Memoirs of the Botanical Survey of South Africa* No. 44. Botanical Research Institute, Pretoria.

- SIEGLER, D.S. & EBINGER, J.E. 1988. *Acacia macrantha*, *A. pennatula*, and *A. cochliacantha* (Fabaceae: Mimosoideae) species complexes in Mexico. *Systematic Botany* 13: 7–15.
- TIMBERLAKE, J., FAGG, C. & BARNES, R. 1999. *Field guide to the acacias of Zimbabwe*. CBC Publishing, Harare.
website: [www.worldwidewattle.com/image gallery](http://www.worldwidewattle.com/image_gallery)—accessed 14 June 2009.

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