

NOTES ON AUSTRALIAN TAXA OF *ACACIA* No. 6

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ABSTRACT

Tindale, Mary D. (National Herbarium of New South Wales, Royal Botanic Gardens, Sydney, N.S.W., Australia 2000) 1980. Notes on Australian Taxa of *Acacia* No. 6: *Telopea* 1 (6): 429-449. Pl. XVIII-XXV.—Six new species of *Acacia* (Family Mimosaceae) from Eastern Australia are described, viz. *Acacia constablei* Tindale, *A. costiniana* Tindale, *A. covenyi* Tindale, *A. floydii* Tindale, *A. georgensis* Tindale and *A. kydreensis* Tindale. A note on *A. lucasii* W. F. Blakely is provided.

INTRODUCTION

Six new species of *Acacia* are described so that they may appear prior to the forthcoming census of the Gymnosperms and Angiosperms of New South Wales. The new taxa are classified according to the recent scheme of Pedley (1978), all being members of subgenus *Heterophyllum* Vassal. Reference is also made to their position in the classifications by Bentham (1864) and Maiden and Betche (1916), as they have been widely used.

The flavonoid pattern of the heartwood is cited, where it is known.

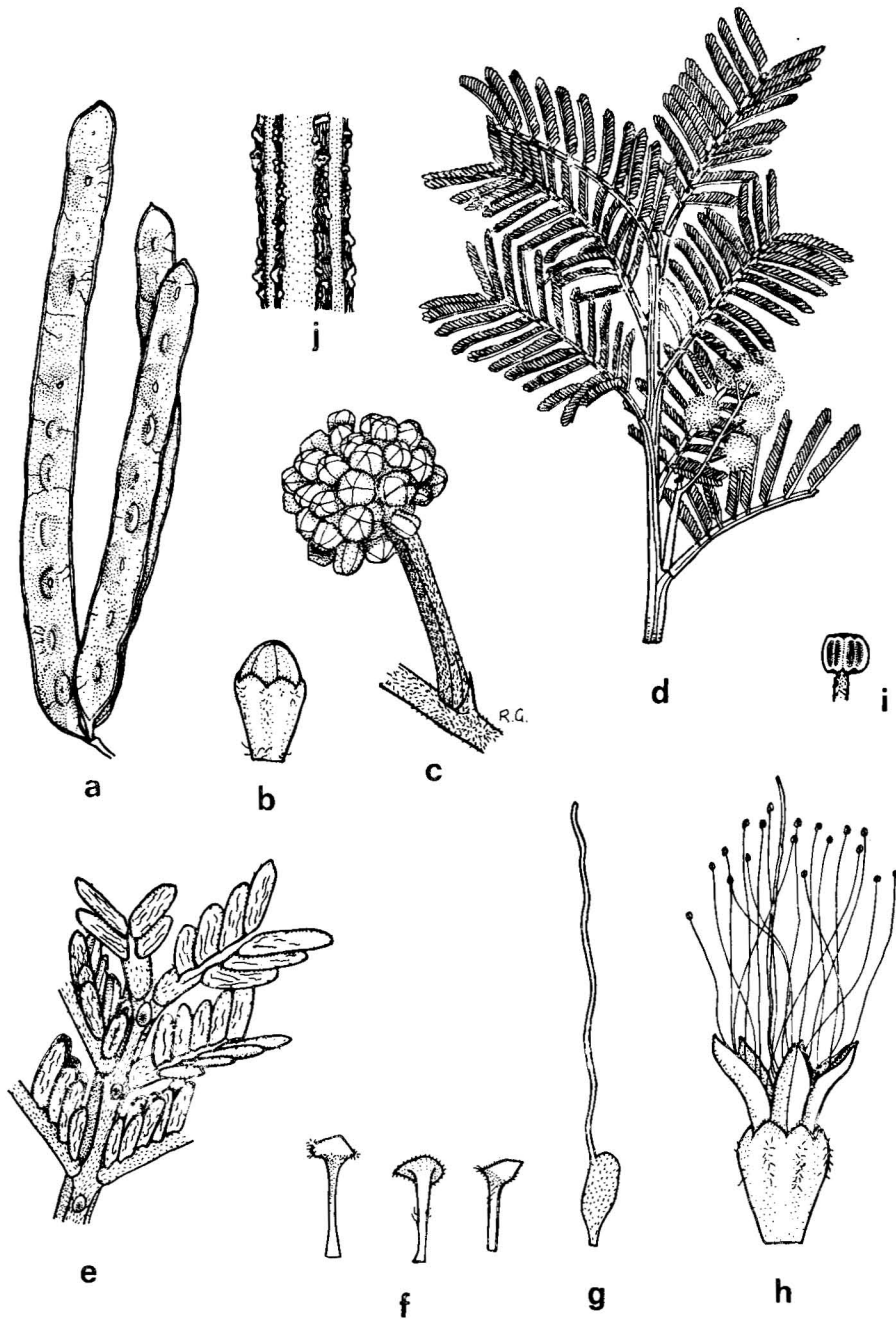
SECT. BOTRYCEPHALAE (Benth.) Taub.

Acacia constablei Tindale, sp. nov.

Acacia mearnsii De Wild. arcte affinis sed differt; caulibus gracilibus, ramulorum cristis scabridiusculis, pinnarum paribus paucioribus id est paribus 5-11 (vice 9-20), pinnulis magis carnosius magis numerosis id est paribus 13-28 (vice 16-70), leguminibus junioribus magis tomentosus et lateribus leguminum maturorum fere rectis.

Allied to *Acacia mearnsii* De Wild. but differing in its slender stems, the knobly ridges of the branchlets, the fewer pairs of pinnae i.e. 5-11 (instead of 9-20) pairs, the more fleshy and more numerous pinnules, i.e. 13-28 (instead of 16-70) pairs, the more tomentose young legumes and almost straight-sided, mature legumes. Plate XVIII.

HOLOTYPE: NEW SOUTH WALES: **South Coast**: the rhyolite hill, SE. of Narrabarba [c. W. of Disaster Bay], straggly shrubs 4-6 ft [1.2-1.8 m] high, flowers pale yellow and very sparse, pods young, light grey in colour, very plentiful, whipstick habit of growth, bark smooth and light grey, plentiful on exposed, knife-edge hill top, some plants growing in sheltered areas, up to 10-12 ft [3-3.6 m] high with thicker stems, appears to be confined to this area, associates:—*Dendrobium speciosum*, *Pyrrosia*, *Veronica* sp., alt. 200 ft [c. 60 m], *E. F. Constable* 4325, 14.viii.1963 (NSW 64644, wood voucher for phytochemical survey), with flowers, young fruit and old dehisced fruit. ISOTYPES: AD, BRI, CANB, K, L, MEL, PERTH, US.



Acacia constablei Tindale

a. Legume, $\times \frac{2}{3}$. b. flower bud, $\times 10$. c. young capitulum, $\times 6$. d. branchlet with pinnae and mature capitula, $\times \frac{2}{3}$. e. rhachis and pinnae, $\times 4$. f. bracteoles, $\times 13\frac{1}{2}$. g. pistil, $\times 13\frac{1}{2}$. h. flower, $13\frac{1}{2}$. i. anther, $\times 40$. j. branchlet, $\times 4\frac{2}{3}$. Vouchers: a. (Constable 5444). b-i. (Constable NSW 53868). j. (Constable NSW 30546).

Erect or straggling, whipstick-like shrubs usually 1.3–2.6 m high but up to 5 m in sheltered situations; bark smooth and light grey (often mottled). *Branchlets* dark brown, with knobby ridges c. 0.5 mm high, minutely puberulous with grey hairs especially towards the apices. *Young tips* densely clothed with sulphur yellow or dark golden-orange, tomentose hairs. *Leaves*: petiole 0.5–1.2 cm long, somewhat flattened in the vertical plane, ridged, with a grey-puberulous, elevated gland at the base of the lowest pair of pinnae; rhachis 2–6.5 cm long, grey-puberulous, bearing an orbicular, elevated, puberulous gland (with a fawn, slit-like orifice) at the base of each pair of pinnae, interjugary glands rare, mostly with one present between the uppermost 2 pairs of pinnae; rhachis terminating in a seta which is broad, hard, brown, recurved, 0.5–0.6 mm long and usually with an orbicular gland at the apex. *Pinnae* 5–11 pairs, 1–2 cm long, 0.3–0.4 cm broad. *Pinnules* 13–28 pairs, fleshy, coriaceous, dark green, closely spaced and overlapping, concave on drying, 1–2.5 mm long, 0.5–0.6 mm broad, the apices broadly rounded, the surfaces and margins subglabrous or minutely puberulous with white hairs, bearing an apical tuft of white hairs. *Inflorescences* pale yellow, globular, the capitula 4.5–6.5 mm in diam., each composed of 30–32 flowers, borne in axillary racemes or terminal panicles, the peduncles densely puberulous with appressed, short grey or sometimes yellow hairs, 2.0–2.5 mm long and c. 0.5 mm broad. *Bracts* at the base of each peduncle, deltoid, dark brown, clothed on the margins and surface with yellow and white hairs. *Bracteoles* 0.6–0.8 mm long, dark red-brown, with a narrow to broad, ciliolate petiole; the lamina peltate, ciliolate with a fringe of white hairs. *Calyx* red-brown (when dried), obconical, c. 0.8 mm long, c. $\frac{1}{2}$ the length of the corolla, dissected to c. $\frac{1}{5}$ of its length into 5 obtuse or acute lobes ciliolate with white or yellow hairs, the tube glabrous or with a few hairs along the ribs. *Corolla* light brown or red-brown (when dried), c. 1.4–1.5 mm long, dissected to $\frac{1}{2}$ its length into 5 glabrous petals, the margins and apices granulate. *Filaments of the stamens* numerous, 1.8–2.0 mm long. *Anthers* bilocular. *Ovary* subsessile, 0.5–0.6 mm long, dark brown, glabrous or with a few, crisped, white hairs. *Style* fawn, glabrous, laterally attached, 1.5–2.0 mm long, the stigma slightly expanded. *Legumes* stipitate, coriaceous, black, non-glaucous, straight or almost so, 5–7 cm long, 7–9 mm broad, puberulous with short, appressed, grey hairs; young fruit densely tomentose with cream-coloured hairs. *Seeds* (immature) 4–8, longitudinal in each legume.

DISTRIBUTION: NEW SOUTH WALES: **South Coast:** near Narrabarba, Nadgee State Forest, where it forms almost impenetrable whipstick-like scrubs on rocky, knife-edge ridges of Devonian rhyolite and granite.

FLOWERING PERIOD: June to August.

FRUITING PERIOD: November.

SPECIMENS EXAMINED: NEW SOUTH WALES: **South Coast:** rhyolite hill, c. 3 miles [c. 4.8 km] SE. of Narrabarba, very straggly shrubs from 4–8 ft [1.2–2.4 m] high, few in sheltered positions up to 15 ft. [4.5 m], whipstick habit, trunks 1–4 inches [c. 2.5–10 cm] in circumference, longest seen was 8 inches [c. 20 cm] in circumference, bark smooth and mottled grey, confined to a very exposed and rocky area and ceases to grow once the rhyolite cuts out, associates: *Melaleuca armillaris*, *Kunzea ambigua*, *Casuarina littoralis*, etc., *E. F. Constable 5444*, 2.1964 (A, AD, BRI, CANB, NSW, PERTH, UC, Z), fruiting; a rhyolite ridge, c. 3 miles [c. 4.8 km] S. of Narrabarba, 2 000 ft [c. 600 m] alt., spreading shrub 10–12 ft [c. 3–3.6 m] high, bark smooth and light grey, occasional at this point, sheltered area of ridge, *E. F. Constable NSW 53869*, 6.1960 (NSW), flowering; Narrabarba Hill, 15 miles [24.2 km] N. of Victorian border, *E. F. Constable NSW 30546*, 10.1954 (CBG, K, MEL, NSW, US); a rhyolite ridge, c. 3 miles [c. 4.8 km] S. of Narrabarba, small shrub 4–7 ft [1.2–2.1 m] high, flowers yellow, whipstick growth, bark smooth and greyish, frequent, rocky knife-edge ridge, very exposed area, rhyolite, 2 100 ft [c. 700 m] alt., *E. F. Constable NSW 53868*, 6.1960 (A, AD, B, BM, CBG, L, MEL, NE, NSW, P, US); 751870 E, 587200 N, Nadgee State Forest, shrubs 1–2 m high, with grey to dark grey mottled with lichen, on poor skeletal soil, on high exposed rocky hilltop, 210 m alt., pale yellow flowers, principal associate species: *Melaleuca armillaris*, *Kunzea ambigua* and *Zieria cytisoides*, *L. A. Newman NSW 108561*, 6.1979 (NSW).

I am indebted to Mr Ernest F. Constable, former Botanical Collector at the Royal Botanic Gardens and National Herbarium of New South Wales, Sydney, for drawing my attention to this species, providing the original field notes and making collections of it over a period of several years. This taxon is named in his honour.

A. constablei would be placed in the *Botrycephalae* according to the classifications of Bentham (1864), Maiden and Betche (1916) and Pedley (1978).

The habit of *A. constablei* is whipstick-like with slender stems but Mr L. Newman, who, at my request in June 1979, examined shrubs of this species at the rhyolite and granite hill on which this wattle was collected by Mr E. F. Constable in 1960 and 1963, was unable to find any lignotubers. Since that time the ageing shrubs had grown very little and few young plants were observed. According to Mr Newman this species occurs both on rhyolite and granite.

A. constablei is closely allied to *A. mearnsii* De Wild., which is important in the tanning bark industry. The latter species is an erect spreading tree usually 4–15 m high, when young with delicately drooping branches. *A. mearnsii* has pale yellow or cream-coloured flowers on the trees between October and early December but mainly in November, although there are two records from Victorian localities for April. *A. constablei* flowers from June to August. In *A. mearnsii* the branchlets are not knobbly but smooth and densely clothed with minute, velvety, grey or (on young branchlets) yellow hairs.

A. constablei is also allied to *A. nanodealbata* J. H. Willis, from which it varies in the whipstick-like habit, knobbly ridges on the branchlets, more fleshy pinnules, more tomentose black legumes and less pouch-like glands on the rhachises as well as the presence of occasional interjugary glands.

The flavonoid pattern of the heartwood in *A. constablei* is mollisacacidin, as is very common in the *Botrycephalae* (see Tindale & Roux (1969).

SECT. PHYLLODINEAE DC.

Acacia covenyi Tindale, sp. nov.

Acaciae barringtonensi Tindale affinis a qua differt: ramulis glabris, phyllodiis 1.5–6.5 cm longis glabris, inflorescentiis phyllodia aequantibus vel quam phyllodia majoribus, floribus in capitulo paucioribus (5–8), pedunculis inflorescentiarum glabris glaucis, ovariis glabris 0.7–0.9 mm longis, leguminibus submoniliformibus glabris. Ab *Acacia prominente* A. Cunn. ex G. Don phyllodiis confertissimis, ramulis arcte angulosis et glande cujusque phyllodii exiguo non protrudente statim diagnoscenda.

Allied to *Acacia barringtonensis* Tindale from which it differs: the branchlets glabrous, the phyllodes 1.5–6.5 cm long and glabrous, the inflorescences equal to or longer than the phyllodes, the fewer flowers in a head (5–8), the peduncles of the inflorescences glabrous and glaucous, the ovaries glabrous and 0.7–0.9 mm long, the legumes submoniliform and glabrous. Immediately to be distinguished from *Acacia prominens* A. Cunn. ex G. Don by the very crowded phyllodes, by the prominently angular branchlets and by the insignificant, non-protruding gland of each phyllode. Plate XIX.

HOLOTYPE: NEW SOUTH WALES: Con Creek, Bendethera, c. 20 miles [32 km] W. of Moruya [c. 35° 56' S, 149° 43' E], alt. 360 m, trees 6–7.5 m high, foliage very glaucous, smooth greyish bark, confined to creek bank and ending at this point about 1 mile [1.6 km] from caves, *E. F. Constable* 6877, 10.v.1966 (NSW), with flower buds and old dehisced fruit. ISOTYPES: CANB, K, US.