

Acacia courtii, a new species from eastern New South Wales (*Acacia* sect. *Juliflorae*: Fabaceae)

Mary D. Tindale and Clare Herscovitch

Abstract

Tindale, Mary D. and Herscovitch, Clare (Royal Botanic Gardens, Sydney, N.S.W. 2000) 1990. *Acacia courtii*, a new species from eastern New South Wales (*Acacia* sect. *Juliflorae*: Fabaceae). *Telopea* 4(1): 115–119. A new species of *Acacia* with a restricted distribution on the North Coast of New South Wales is described, namely *A. courtii* (sect. *Juliflorae*). A map is provided showing its known distribution. This species is illustrated and its affinities discussed. A key is provided to this species and its ally *Acacia orites* Pedley.

Introduction

A new species of *Acacia* is described, prior to the forthcoming volume 2 of the Flora of New South Wales.

Taxonomy

The terminology of shapes in the specific description is that defined by Lee (1948: 144).

***Acacia courtii* Tind. et Herscovitch, sp. nov.**

Acacia oritidi Pedley affinis, a qua differt calycibus 0.5–0.8 mm longis, corollis 1.8–2.3 mm longis, leguminibus crassis lignosisque, seminibus majoribus, 5.6–7.7 mm longis (arillo non incluso), 2.3–3.0 mm latis, nervis minoribus phyllodiorum dense anastomosantibus.

HOLOTYPE: NEW SOUTH WALES: On roadside, Captain Cook Bicentenary Rd., North Brother Mtn., 27 km SW of Port Macquarie, in dry sclerophyll forest, rocky soil, altitude 40 m, small tree 7 m tall; fruit dark grey; associated with *Eucalyptus acmenoides*, *E. propinqua*, *E. intermedia*. 'Leaves' with red margins, somewhat glaucous and of weeping habit, K.J. Phillis, for A.G. Floyd 1157, 16.xi.1978 (NSW). Isotypi: BRI, CANB, K, Coffs Harbour (N.S.W.) Forestry Herbarium.

Tall shrub or weeping tree 7–20 m high; *trunk* d.b.h. to 50 cm; *foliage* pendulous, often tinged pink to purplish red in rapidly growing tips; *bark* smooth and grey, later black and furrowed. *Branchlets* slender, flexible, angled, becoming terete, pale tawny or pale green, glabrous, often slightly to moderately glaucous, bark sometimes slightly flaky in patches, becoming mottled then dark maroon-brown, often with fawn-brown lenticels. *Phyllodes* borne singly, green, dull, flattened, linear, (5–)11–18 cm long, 4.5–8.5(–12) mm wide, $l/b = (10\text{--})16\text{--}26\text{(–}33)$, widest at or near the middle, subcoriaceous, glabrous, tapered gradually towards apex and base; *nerves* prominent and pale with one main central nerve and on either side 1–3 longitudinal nerves which are slightly more or no more prominent than the longitudinal anastomosing minor nerves, the l/b of the areoles >10 ; *margins* red (when fresh), yellowish brown or light purplish brown (when dried); apical mucro attenuated, slightly oblique or hooked, to 1.2 mm long, bearing a minute orbicular gland; *basal gland* of *phyllode* solitary, adaxial, 0.5–0.7 mm

long, (0.1–)0.5–3.9 mm above the pulvinus, orbicular to \pm oblong, the rim orange or yellow-tawny, glabrous, distinctly raised above the margin or \pm sunken; *pulvinus* light tawny to reddish brown, glabrous, often glaucous in the furrows, 1.0–4.0 mm long, 1.0–3.0 mm wide. *Stipules* caducous, inconspicuous, c. 0.4 mm long, c. 0.3 mm wide at the base, deltate, orange-brown, scurfy. *Inflorescence* pale yellow, spicate, single or paired in the phyllode axils (rarely non-axillary), 3.0–6.5 cm long after anthesis, c. 5 mm wide; *flowers* 55–78, compactly arranged in bud, reduced to 25–44 flowers and becoming distant as the rhachis elongates, the flowers in clusters of 3 or 4 along the rhachis; *rhachis* and *peduncle* slender, tawny, glabrous, often slightly glaucous, longitudinally wrinkled when dried, probably terete when fresh, c. 0.6 mm diam.; *peduncle* 3–5 mm long; *bracts* apparently 2 per inflorescence, imbricate, papery, brown or brownish orange, narrow deltate with incurled margins, fimbriate but otherwise glabrous, 1.0–2.4 mm long; *bracteoles* (0.65–)0.7(–0.85) mm long, peltate or scutelliform, the claw (0.25–)0.4–0.5 mm long, comparatively wide, the margins densely fimbriate; lamina flat or angled inwards, 0.4–0.6 mm long, \pm broad-ovate, membranous, the surface with spreading white hairs or more usually glabrous, the margin fimbriate with hyaline hairs c. 0.1 mm long. *Flowers* 4-merous, rounded in bud. *Calyx* pale, membranous, 0.5–0.8 mm long, 1.2–1.5 mm wide, dissected for $\frac{1}{6}$ – $\frac{1}{3}$ of its length into blunt, broadly deltate, glabrous lobes, often slightly keeled, the sinuses broadly obtuse, the margin fringed with minute white hairs, the tube covered with spreading white hairs 0.1–0.2 mm long. *Corolla* pale yellow to almost white, delicate, glabrous, 3–3.5 times the length of the calyx, 1.8–2.3 mm long, dissected for $\frac{1}{2}$ – $\frac{3}{5}$ of its length; *petals* elliptical, relatively broad, $l/b = 2$, mostly the margins slightly incurved towards the papillose apex. *Stamens* 3.0–4.8 mm long. *Ovary* sessile, ellipsoid or \pm oblong, c. 0.8 mm long, c. 0.4 mm diam., pale yellowish orange, densely villous with white tapering hairs 0.25–0.3 mm long; *style* 3.0–3.3(–4.2) mm long. *Legumes* straight or falcate, linear, contracted slightly between the seeds, woody, thick, longitudinally wrinkled when dried, probably terete when fresh, (7.5–)12.5–18.0 cm long, (3.0–)3.5–4.0 mm wide, light brown to brown, glabrous, occasionally slightly glaucous; *margins* pale, shortly tapered to an acute apex and to the base; *stalk* c. 5 mm long, sparsely clothed with white, appressed hairs c. 0.2 mm long. *Seeds* (6–)8–11 per legume, elongated, ellipsoid and often laterally compressed, longitudinally placed in the legume, glossy, brown, with a lighter brown peripheral ridge, 5.6–7.7 mm long, 2.3–3.0 mm wide, 2.3–2.6 mm thick; *pleurogram* a thin dark line, narrowly U-shaped, open towards the hilum; *areole* elongated, 4.8–6.3 mm long, 1.3–1.6 mm wide; *funicle* golden orange when dried, filiform, lightly folded 4–8 times over the acentral basal aril. *Flowering*: November–January. *Fruiting*: November, legume probably taking about a year to mature (Figure 1).

DISTRIBUTION: NEW SOUTH WALES: Mid-north Coast: only known from North Brother Mtn, Camden Haven State Forest, and Middle Brother Mtn, Middle Brother State Forest (Figure 2).

HABITAT: Mostly occurring on dry, rocky, north-west- to west-facing mountain slopes in shallow soils, on microgranite, in mixed dry sclerophyll forest (White Mahogany and Grey Gum), at altitudes of 40–300 m.

SPECIMENS EXAMINED: NEW SOUTH WALES: North Coast: Laurieton, Captain Cook Bicentenary Rd., near Camden Haven State Forest, 31°38' S, 152°46' E, K.J. Phillis NSW 221504, 26.i.1981 (NSW); Compartment 138, Middle Brother State Forest, 31°41' S, 152°42' E, wood voucher for phytochemical survey, K.J. Phillis NSW 145771, 25.i.1981 (AD, B, BM, CANB, CBG, K, L, MEL, MO, NSW, NE, PERTH, TL, UC, US); Devils Hole, Middle Brother Mountain, A.G. Floyd 913, 27.iv.1978 (NSW).

The specific epithet honours Mr Arthur B. Court who retired in January 1989 as

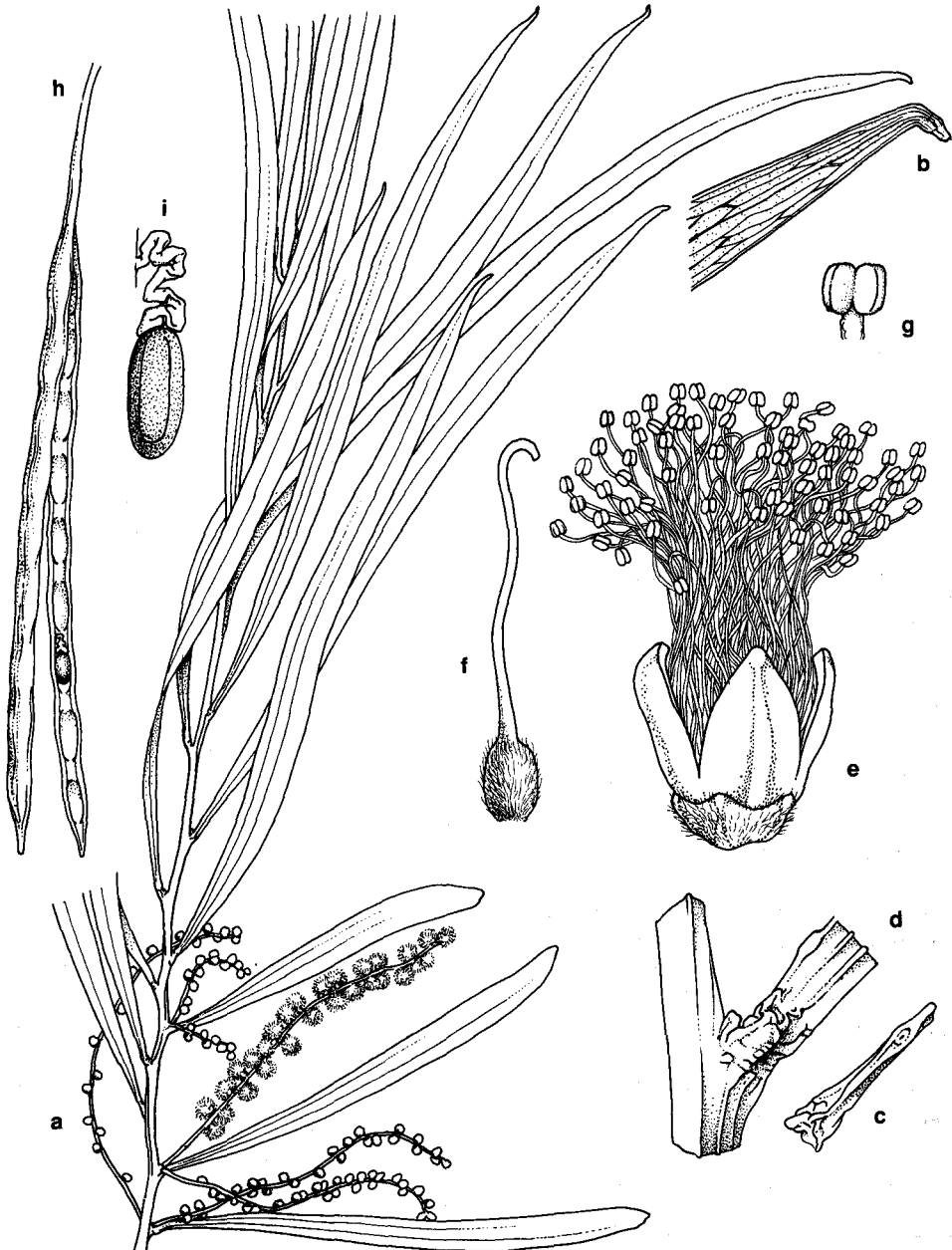


Figure 1. *Acacia courtii*. a. habit, with phyllodes and spicate inflorescences ($\times \frac{2}{3}$). b. apex of phyllode ($\times 4\frac{2}{3}$). c. pulvinus, side view ($\times 4\frac{2}{3}$). d. base of phyllode, with pulvinus and gland ($\times 4\frac{2}{3}$). e. flower ($\times 13\frac{1}{3}$). f. gynoeceium ($\times 13\frac{1}{3}$). g. anther ($\times 33\frac{1}{3}$). h. legume ($\times \frac{2}{3}$). i. seed ($\times 2\frac{1}{3}$). Vouchers: a-d, h-i, K.J. Phillis NSW 145771; e-g, K.J. Phillis (AGF 1157). Del. R.A. Roden.

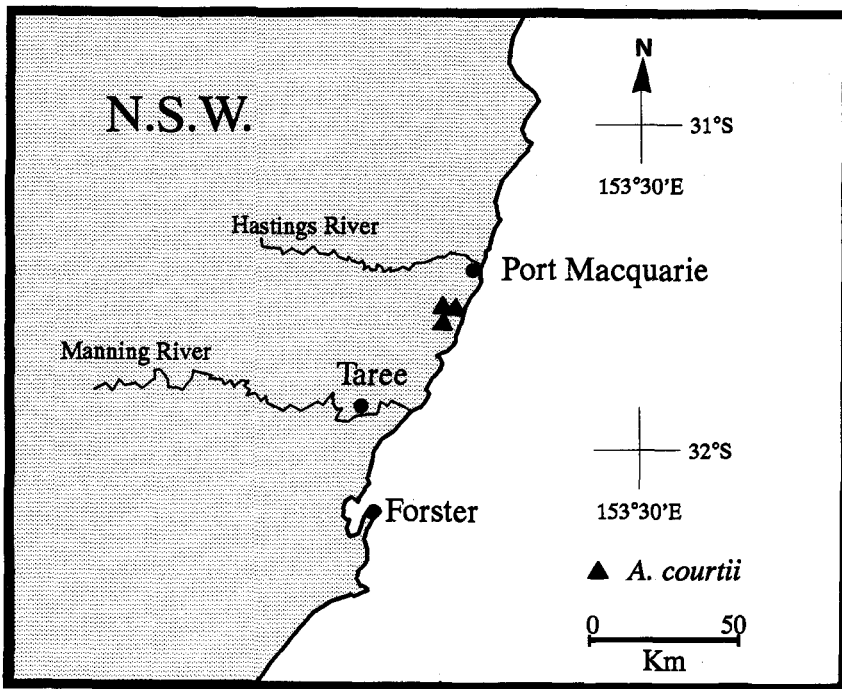


Figure 2. Distribution of *A. courtii*.

Assistant Director, Australian National Botanic Gardens, Canberra, A.C.T. He is revising the group of Australian *Acacia* species to which *A. courtii* belongs.

A. courtii is closely allied to *A. orites* Pedley (1964: 32–33, 1978: 167), both of which belong to sect. *Juliflorae* subseries *Tetramerae*. Most species of the latter subseries occur in eastern Australia. The flowers of the *Tetramerae* are 4-merous and the legumes (with one exception) elongated, narrow and ± constricted between the seeds. *A. courtii* has a very restricted distribution on Middle Brother and North Brother Mountains on the mid-North Coast of New South Wales, whereas *A. orites* is confined to the edge of rainforests and in wet sclerophyll forests with high rainfall at 600–900 m altitude on the Mount Warning shield volcano in far north-eastern New South Wales and south-eastern Queensland.

We would recommend a Conservation Code of 2V (vulnerable) according to the criteria used by Briggs and Leigh (1988).

Key to *A. courtii* and *A. orites*

- 1 Phyllodes with densely anastomosing nerves. Legumes thick, woody, 7.5–18.0 cm long. Seeds (not including the aril) 5.6–7.7 mm long, 2.3–3.0 mm wide. Calyces 0.5–0.8 mm long. Corollas 1.8–2.3 mm long. Flowering November-January ***A. courtii***
- 1* Phyllodes with sparsely anastomosing nerves. Legumes thinly coriaceous, 6.5–11.0 cm long. Seeds (not including the aril) 2.5–4.0 mm long, 1.7–2.0 mm wide. Calyces c. 0.5 mm long. Corollas 1.5–2.0 mm long. Flowering August-October ***A. orites***

Acknowledgements

We acknowledge a grant from the Australian Biological Resources Study to Mary Tindale in 1983–1984, when Clare Herscovitch provided research assistance in this *Acacia* project. During a grant from ABRS in 1989 Miss S. Armitage prepared Figure 2 and undertook the word-processing of this manuscript. In 1990 Mr P. Kodela prepared the final word-processing of this paper during a grant from the Royal Botanic Gardens Research Fund.

Our thanks are due to Dr R.W. Johnson, Director, Queensland Herbarium, for the loan of specimens of *A. orites*, as well as to Mr A.G. Floyd and Dr K.J. Phillis who drew our attention to *A. courtii*. Messrs. A.B. Court and A.G. Floyd also provided helpful suggestions regarding our manuscript.

Grateful acknowledgement is made to Dr L.A.S. Johnson for providing funds, when he was Director, Royal Botanic Gardens Sydney, for the plate of *A. courtii* drawn by Mr R.A. Roden. We also wish to thank Dr Johnson for checking the Latin diagnosis prepared by Mary Tindale.

References

- Briggs, J.D. & Leigh, J.H. (1988) Rare or Threatened Australian Plants. *Special Publication Australian National Parks and Wildlife Service* 14.
- Lee, A.T. (1948) The genus *Swainsona*. *Contr. New South Wales Natl. Herb.* 1: 131–271.
- Pedley, L. (1964) Notes on *Acacia*, chiefly from Queensland II. *Proc. Roy. Soc. Queensland* 75: 29–35.
- Pedley, L. (1978) A revision of *Acacia* Mill. in Queensland. *Austrobaileya* 1: 75–234.

Manuscript received 28 November 1989

Manuscript accepted 1 May 1990