

ACACIA ACRIONASTES (LEGUMINOSAE: MIMOSOIDEAE), A NEW SPECIES FROM SOUTH-EASTERN QUEENSLAND

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Summary

Acacia acrionastes is described as new. It has close affinities with *A. floydii* and *A. betchei*. It is restricted to mountain peaks in south-eastern Queensland. *A. floydii* does not occur in Queensland.

Acacia acrionastes Pedley, **sp. nov.** affinis *A. floydii* Tindale et *A. betchei* Maiden & Blakely ab illa phyllodiis plerumque aliquantum latioribus, glande foliari e basi phyllodii longius disposita, calyce apice pubescente, floribus in capitulo pluribus (12–16), petalis longioribus, seminibus brevioribus, areola inaperta; a hac phyllodiis plerumque longioribus glande non in medio disposita, lobis calycis non tandem separatis, legumine latiore, seminibus brevioribus latioribusque differt. **Typus:** Queensland. MORETON DISTRICT: Mt Maroon, lower slopes, 28°13'S, 152°44'E, February 1986, *R. Cummings* 5230 (holo: BRI).

A spindly tree to 8 m, vegetative parts glabrous; branchlets terete, sometimes slightly glaucous. Phyllodes linear, (6–)9–12.5(–17) cm long, 2–3(–4) mm wide, (25–)30–60 times as long as wide, tapering gradually from the middle to a point, rather thick in texture, without obvious secondary venation, wrinkled when dry; pulvinus c. 1 mm long; gland prominent, varying widely in position, commonly 10–25 mm from base of phyllode (1/5–1/9 of phyllode length from base). Heads of 12–16 flowers in axillary racemes, the axis c. 4.5 cm long, branches 10–15, each c. 5 mm long, all parts glabrous. Flowers pale; calyx turbinate, \pm truncate, c. 0.7 mm long, pubescent in a narrow fringe at the top; corolla 1.5 mm long, the lobes free to about the middle; stamens c. 3 mm long; ovary glabrous, the style oblique, 3.5 mm long. Pod with up to 9 seeds, up to 10 cm long, 8–10 mm wide, raised slightly over the seeds and the margins sometimes a little indented between them; seeds arranged longitudinally, 4.5–5 mm long, 3 mm wide, pleurogram prominent, the areole large, open, funicle thickened into a clavate aril. **Fig. 1.**

Other specimens (all BRI): Queensland. MORETON DISTRICT: Mt Edwards, Jun 1938, *Smith* [AQ166903]; Mt French, 10 km SW of Boonah, alt. 300 m, Sep 1986, *Bird & King* [AQ406719]; ditto, Nov 1986, *Bird* [AQ431622]; Mt Maroon, on rocks near summit, Jan 1962, *Everist* 7032; Mt Ernest, Jan 1953, *Tyack Bake* [AQ166900]; Mt Lindesay, alt 1200 m, Oct 1932, *Stewart* [AQ166899].

Distribution and habitat: This species occurs on shallow rocky soils derived from rhyolite or basalt and among rocks on mountain peaks, up to 1200 m alt., in the south-eastern part of Queensland. These peaks have an unusual flora with several endemic species, for example *Pultenaea whiteana* S.T. Blake, *Comesperma breviflorum* Pedley and *Acacia saxicola* Pedley. The other species of the complex have restricted geographic ranges near the Queensland–New South Wales border, all on granite. *A. betchei* and *A. adunca* occur in the elevated country around Stanthorpe extending south to the northern part of the New England Tableland. *A. floydii* is found in somewhat wetter situations to the east of Tenterfield.

Phenology: This species flowers in July and August and fruits about November.

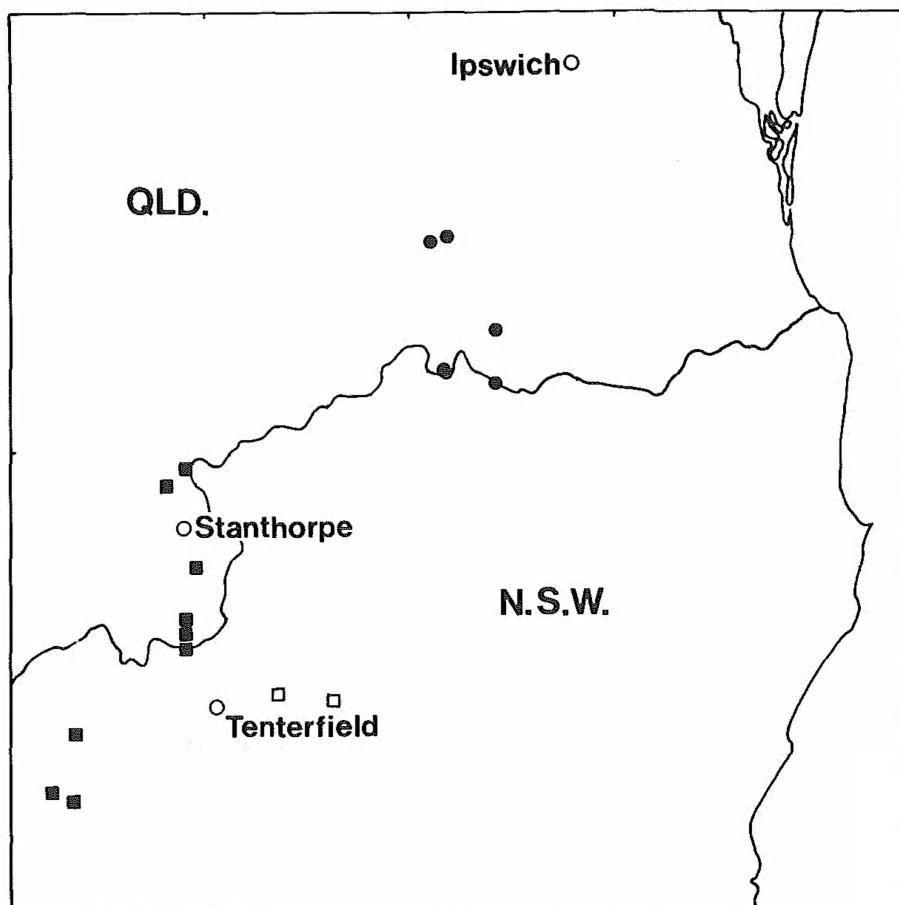
Etymology: Greek *akris*, -os, hilltop, peak, and *nastes*, an occupant; a reference to the habitat of the species. It should be treated as a noun functioning as an adjective (see Stearn, 1973, p. 98).

Notes: The affinities of *A. acrionastes* are with *A. betchei* and *A. floydii*. It differs from *A. betchei* in having usually longer phyllodes with the gland below the middle, calyx not splitting into spathulate lobes and wider pods with shorter, wider seeds. From *A. floydii* it differs in having usually longer phyllodes with the gland further from the base, calyx pubescent at the top, heads with more flowers, longer petals and shorter seeds with closed areoles. The 'mountain plants' referred to under *A. adunca* Cunn. ex G. Don in Pedley (1980, p. 286) are *A. acrionastes* and the specimen, *White* 7843, cited there is

also *A. acrionastes*. The phyllodes of *A. adunca* are usually narrower and uncinata, and the flowers are a deeper yellow. The four species may be distinguished as follows:

1. Phyllodes uncinata, 1.5–2.5 mm wide, 40–70 times as long as wide, gland not overly prominent ***A. adunca***
 Phyllodes 1–4 mm wide, 22–65 times as long as wide, not uncinata, or if slightly so then gland prominent, exserted 2
2. Gland prominent, exserted, 3–15 mm from base of phyllode; heads of 8–12 flowers ***A. floydii***
 Gland not exserted or, if so, small, occasionally absent; heads of 12 or more flowers 3
3. Gland small and exserted, at about the middle of the phyllode, or absent; heads of 16–25 flowers, rarely 12; calyx at length splitting into spatulate lobes; pods 5–7 mm wide ***A. betchei***
 Gland not exserted, 10–25 mm from base of phyllode (c. 1/5–1/9 its length); heads of usually 12–16 flowers; calyx not splitting into free lobes; pods 8–10 mm wide ***A. acrionastes***

A. floydii was wrongly included in the checklist of Queensland species of *Racosperma* (Pedley 1987). The record was based on specimens of *A. acrionastes*. The rationale for referring *A. acrionastes* to *Acacia* rather than to *Racosperma* is given elsewhere (Pedley 1990).



Map 1. Distribution of *Acacia acrionastes* (●), *A. betchei* (■) and *A. floydii* (□).

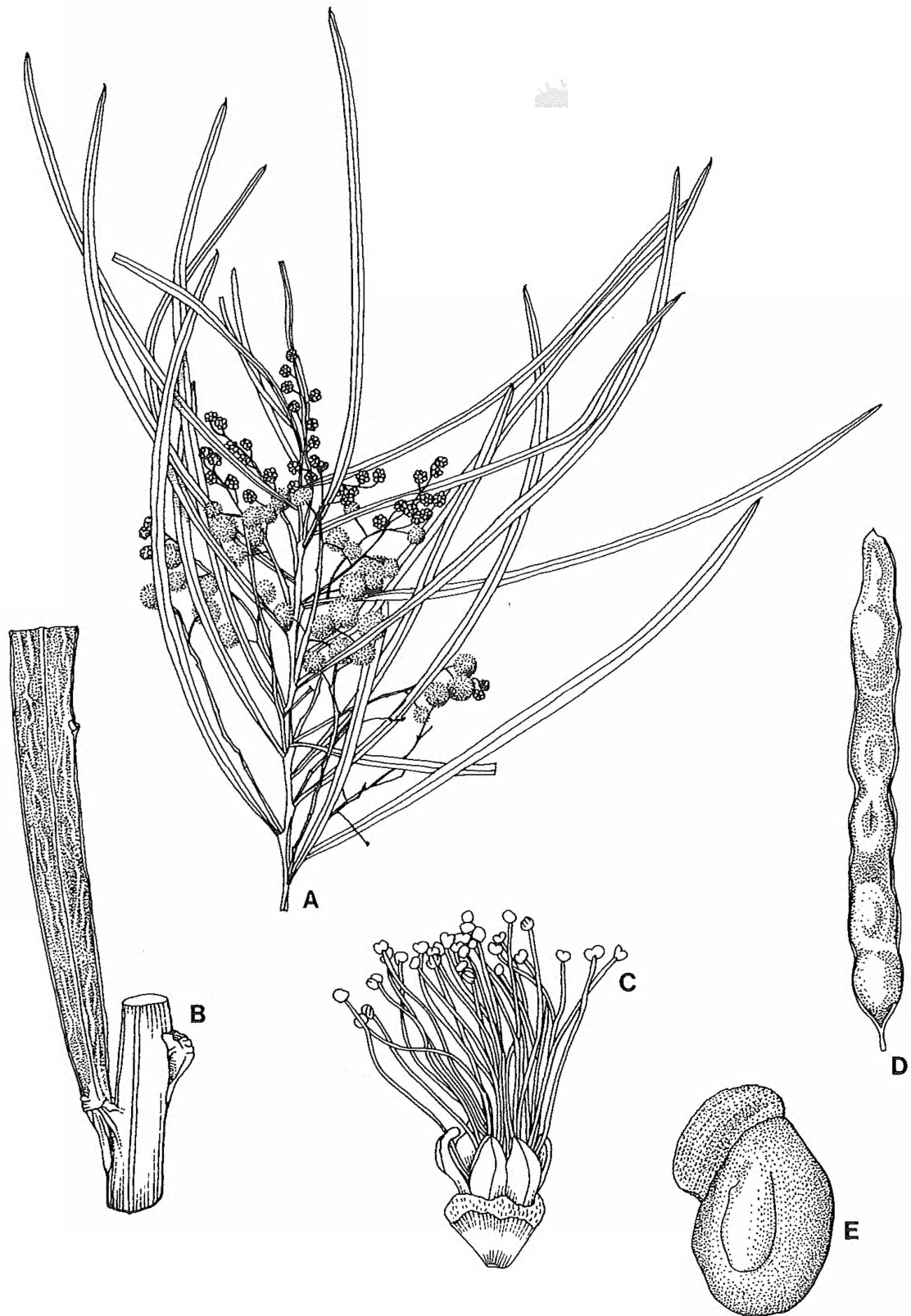


Fig. 1. *Acacia acrionastes*: A. twig $\times 0.75$. B. base of phyllode showing position of gland $\times 4.5$. C. flower $\times 12$. D. pod $\times 0.75$. E. seed $\times 6$. A-C. Cummines 5230: D.E. Bird fAO4316221.

Acknowledgements

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