

Two new species of *Acacia* from Western Australia

By Mary D. Tindale* and B. R. Maslin†

Abstract

Two new species of *Acacia* endemic to Western Australia are described: *A. citrinoviridis* sp. nov. and *A. subtessarogona* sp. nov. Both belong to Bentham's series Juliflorae.

Introduction

Due to the pending publication of a further section on the phytochemistry of Australian *Acacia* species by Prof. D. G. Roux and Dr. Tindale, it is necessary to provide names for these two new Western Australian taxa.

Specimens cited in the text are located at the Western Australian Herbarium (PERTH) unless otherwise indicated.

Acacia citrinoviridis Tindale et Maslin sp. nov. (Figures 1, 3C and D, 4).

Acaciae acuminatae Benth. affinis, a qua differt ramulis manifeste porcatis, marginibus phyllodiorum nonciliatis, phyllodiis minus striatis, sed costa prominenti et venis 2 minus prominentibus axi parallelis, floribus 5-meris, leguminibus strictis vel raro parum inter semina constrictis, multo latioribus (0.7–1.5 cm latis), marginibus prominentioribus (1.2–1.5 mm latis) et praesertim juventute pilis lucentibus citrino-viridibus dense vestitis.

Allied to *Acacia acuminata* Benth. from which it differs in the prominently ridged branchlets, the margins of the phyllodes non-ciliate, the phyllodes less striate but with a prominent midrib and 2 less prominent veins parallel to the axis, the flowers 5-merous, the legumes straight or rarely slightly constricted between the seeds, much broader (0.7–1.5 cm broad), the margins more prominent (1.2–1.5 mm broad) and especially in the young condition densely clothed with glistening, citron-green hairs.

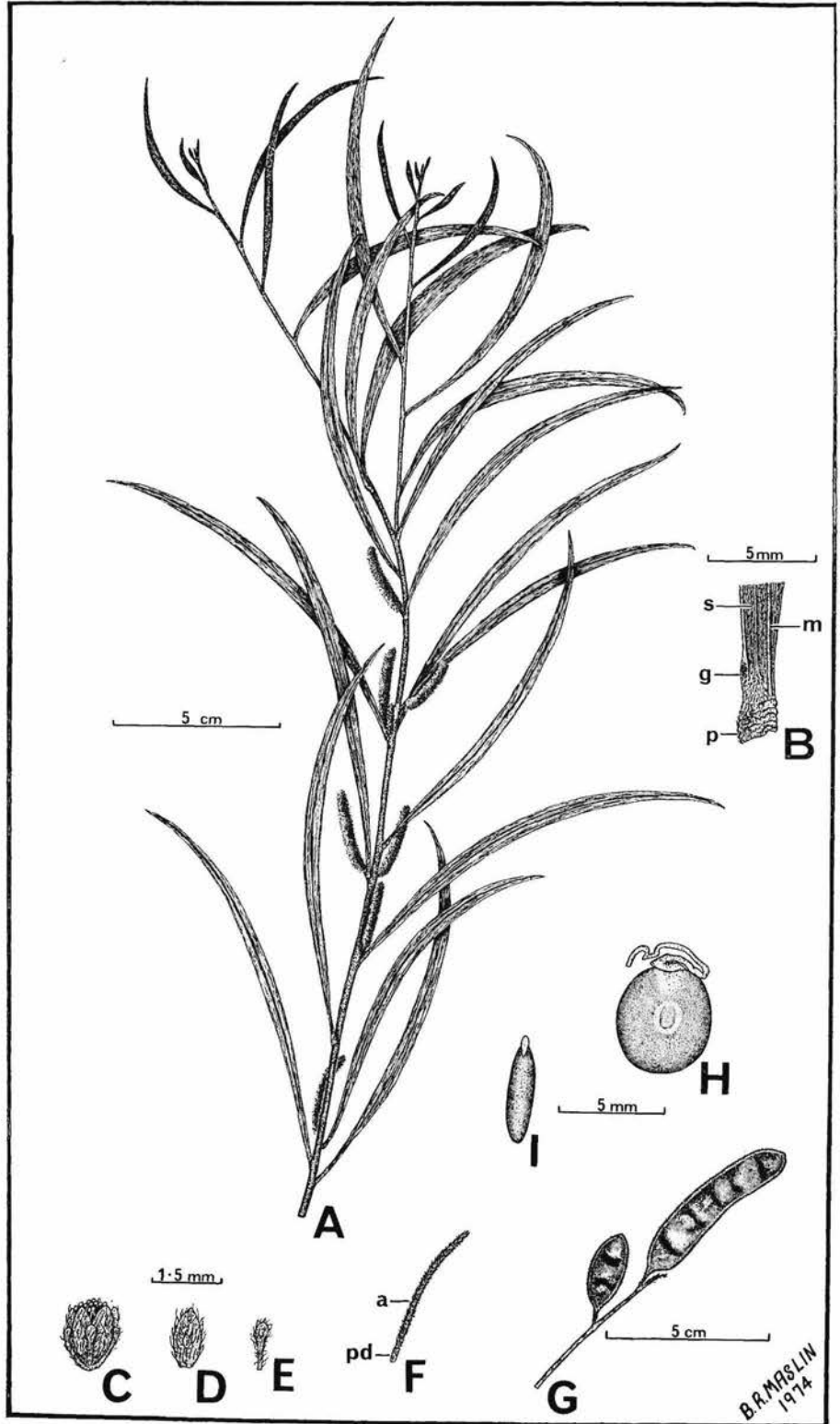
Type: Fortescue River crossing, E. of Millstream homestead, 11 June 1972, B. R. Maslin 2735 (holo: PERTH; iso: CANB, K, L, MEL, NSW, NY, PERTH).

Tree to 7–8 m high; *young plants* forming dense bushes often with somewhat drooping branches; *bark* grey, fissured on trunk and main branches; *branchlets* red-brown, glossy, with prominent, fawn, longitudinal ribs, clothed between them with fugacious, short, grey, appressed hairs; *young shoots* very densely clothed with iridescent citron-green hairs. *Mature phyllodes* very narrowly elliptical, 8–12 cm long, 0.5–1.2 cm broad, falcate, silvery greyish green, densely clothed with antrorsely appressed, short hairs, often slightly twisted at the base; *midrib* fairly prominent, with 2 less prominent veins parallel to the costa as well as numerous, parallel minor veins, all arising from the base of the phyllode; *margins* non-ciliate; *apiculum* curved, obtuse, hard, thickened and sometimes knob-like; *pulvinus* 4–6 mm long, transversely rugose, clothed with short, appressed, grey hairs. *Gland* small, round or oblong, situated on the upper margin of the phyllode 1–1.5 mm above the pulvinus or rarely halfway between the apiculum and the pulvinus. *Flower-heads* spicate, 1–2 in the axils of the phyllodes, 1.3–3.2 cm long; *axis* with a dense yellow tomentum; *peduncles* 2–4.5 mm long, densely clothed with tomentose, yellowish green hairs. *Flowers* 5-merous; *calyx* c. 0.9 mm long, divided almost to the base

Figure 1. *Acacia citrinoviridis*. A—Upper portion of branch. B—Phyllode base showing obscure gland (g), pulvinus (p), midrib (m), and fine secondary veins (s). C—Flower. D—Petal. E—Sepal. F—Flowering spike (flowers removed) showing minute peduncle (pd) and densely (golden) hairy axis (a). G—Legumes. H—Seed (side view). I—Seed (end view). A, C–F from B. R. Maslin 2764A; B and G from *A. Robinson* s.n.; H and I from G. & E. Scott s.n.

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into club-shaped, villous sepals; *corolla* divided to almost half its length into densely villous petals which are c. 1.2 mm long and c. 0.5 mm broad at the base; *stamens* 1.5–2 mm long; *ovary* brown, c. 0.8 mm long, c. 0.4 mm broad, clothed with villous yellow hairs; *style* yellow, c. 1 mm long. *Legumes* 3.5–8 cm long, 0.7–1.5 cm broad, straight or very rarely slightly constricted between the seeds, hard and brittle, light brown or yellowish, rugose, densely clothed especially in the young condition with fugacious, glistening, slightly matted, citron-green hairs; *margins* prominent, 1.2–1.5 mm broad. *Seeds* 3–8, black or dark brown, almost globose, compressed, c. 5 mm diam.; *pleurogram* central, continuous; *areole* oval, cream-coloured to dark green, c. 1 mm long; *funicle* filiform, cream-coloured with 2 folds, very slightly dilated into an aril.

Distribution and habitat: (Figure 4) North-west Western Australia: extending from the vicinity of Shark Bay north-east to the Fortescue River. This species occurs as far west as Nanutarra (between Roebourne and Carnarvon), while a line from Marble Bar to Wiluna represents the approximate eastern limit of its known distribution. Although *A. citrinoviridis* is normally found along creeks and rivers with sandy rocky beds, it also grows in stony soil away from the water-courses.

WESTERN AUSTRALIA: Millstream, M. I. H. Brooker 2071; Weeli Walli Creek, Wittenoom area, J. V. Blockley 203; Nanutarra Bridge, Ashburton River, B. Maloney NSW 107190 (K, NSW), wood voucher for phytochemical survey; Nanutarra Bridge, Ashburton River crossing, North West Coastal Highway, B. R. Maslin 2764A (AD, BRI, NSW, PERTH, US); Between Mundiwindi and Roy Hill, J. S. Beard 4600; Kookhabinna Gorge, A. Robinson s.n., Sept. 1959; Pingandic Station, Ashburton district, G. & E. Scott s.n., 1971; Tom Price, F. Lullfitz NSW 104414 (K, NSW); Mt. Augustus Station, J. S. Beard 6089 (NSW, PERTH); Peak Hill road, G. E. Brockway 10; Glenburgh Station, 150 mi | 240 km | E. of Carnarvon, J. S. Beard 4354.

Flowering and fruiting period: According to Mr. G. Scott (pers. comm.) this species only flowers in a good season following summer or winter rains. Flowering material examined by the authors ranged from late April to June and fruiting specimens from late April to September.

This species superficially resembles *Acacia acuminata* Benth. which is commonly known as "Jam", hence the name "River Jam" for *A. citrinoviridis*. Both taxa are members of the Juliflorae-Falcatae (Benthams, 1864). *Acacia citrinoviridis* is known as the "Milhan" tree in the Ashburton district but "Wantan" in the Murchison-Gascoyne region. The aborigines coarsely grind the dry seeds of this wattle and eat them uncooked (Scott, 1972).

The specific epithet refers to the citron-green hairs occurring on the young shoots and legumes of this wattle.

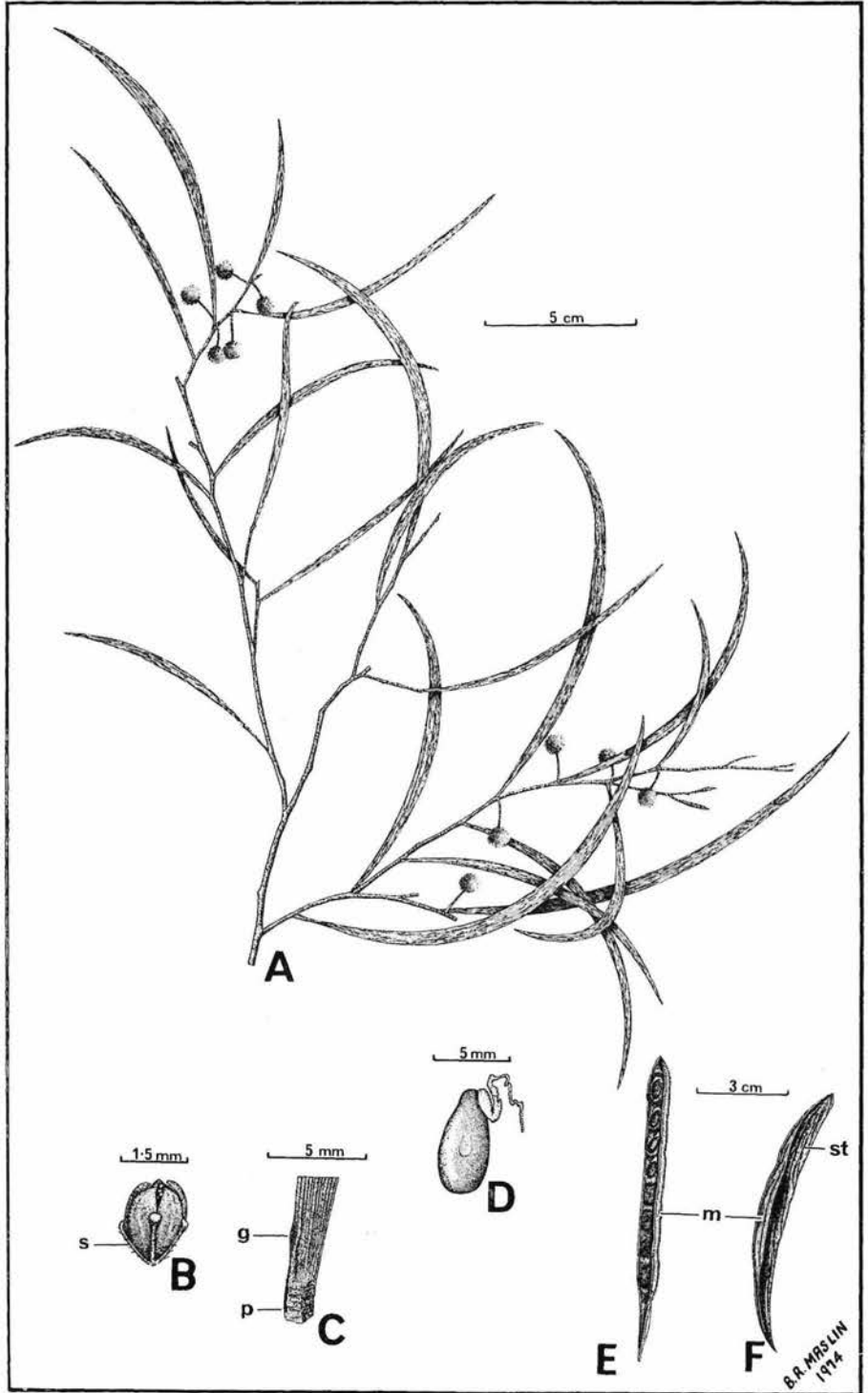
***Acacia subtessarogona* Tindale et Maslin sp. nov.** (Figures 2, 3A and B, 4).

Acaciae brachystachyae F. Muell. affinis, a qua differt phyllodiis latioribus (4–9 mm latis), inflorescentiis junioribus subsessilibus e phyllodiorum axillis 1–5 ortis, leguminibus plerumque longioribus (6–12 cm longis) plus minusve tetragonis lignosioribus, leguminum paginis laterali-bus sulcatis.

Allied to *Acacia brachystachya* F. Muell. from which it differs in the broader phyllodes (4–9 mm broad), the young inflorescences subsessile and 1–5 borne in the axils of the phyllodes, the legumes longer (6–12 cm long), more or less tetragonous, more woody, the lateral sides of the legumes sulcate.

Type: 10 miles [16 km] SW of Winning Pool, Western Australia, 10 Oct. 1941, C. A. Gardner 6224 (holo: PERTH; iso: CANB, K).

Figure 2. *Acacia subtessarogona*. A—Upper portion of branch. B—Flower bud showing linear-spathulate sepals (s). C—Phyllode base showing pulvinus (p) and obscure gland (g). D—Seed. E—Legume valve (with few seeds—remainder dehisced) showing broad margin (m). F—Legume showing broad margin (m) and surface striations (st). A and F from C. A. Gardner 6041; B, C and E from C. A. Gardner 6224 (the type); D from B. R. Maslin 2768.



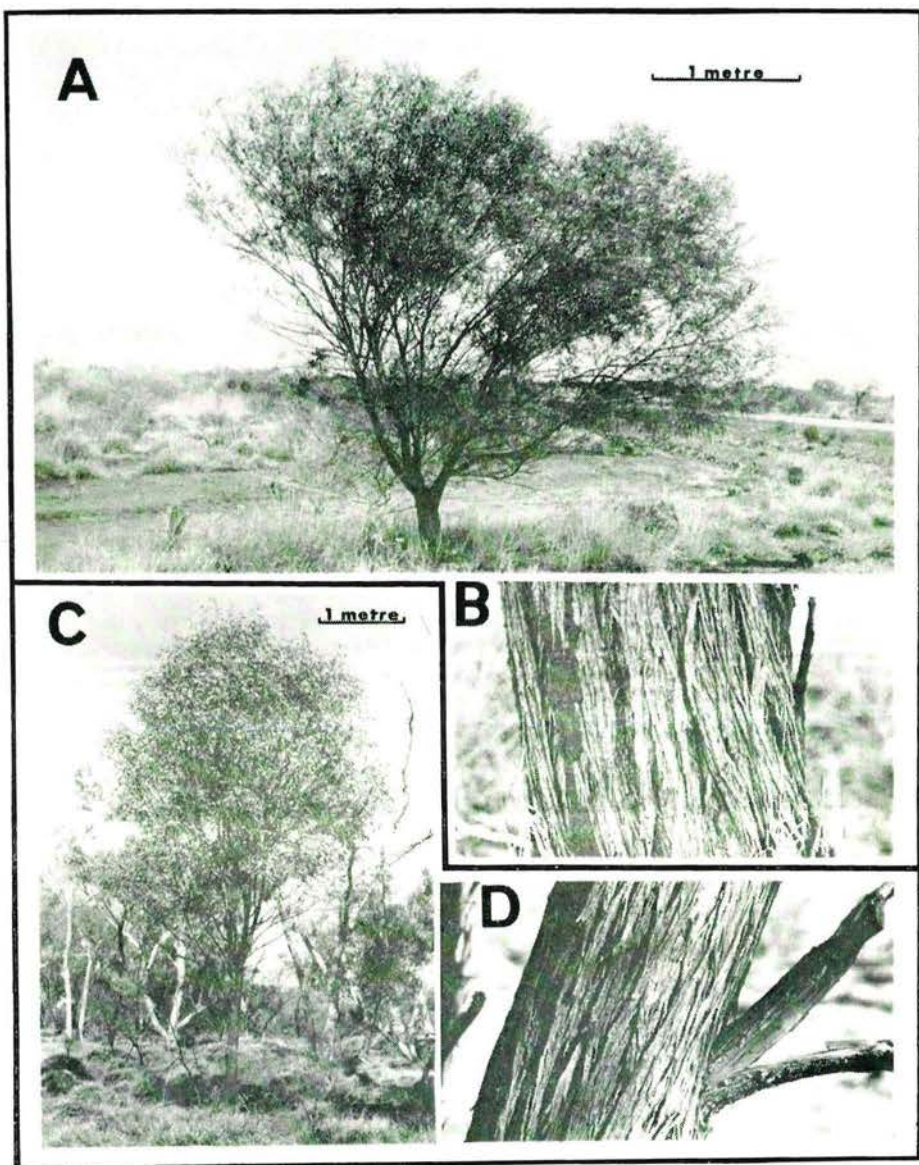


Figure 3. *Acacia subtessarogona* (A—habit, B—bark); *A. citrinoviridis* (C—habit, D—bark). A and B from *B. R. Maslin* 2768; C and D from *B. R. Maslin* 2735 (the type).

Small tree or tall spreading shrub usually 5–8 m high; bark grey, fissured near the base of the main trunk, smooth on the branches; young branchlets with light brown ridges, the surface between them dark red-brown, clothed mainly on this surface with very short, grey, appressed hairs. Phyllodes very narrowly elliptical, 7–13 cm long, 4–9 mm broad, falcate, pale green, coriaceous, clothed with short, appressed, silvery hairs mainly between the veins; midrib often not readily distinguished from the numerous parallel minor veins, all arising from the base of the phyllode; apiculum hard, rounded, often knob-like; pulvinus 2–3 mm long, transversely rugose, clothed with very short, grey, appressed hairs. Gland small, oval, situated on the upper margin of the

phyllode 1.5–5 mm above the pulvinus. *Young flower-heads* subsessile, 1–5 clustered in the axils of the phyllodes. *Flower-heads* shortly spicate to globose, 6–12 mm long, 4–8 mm broad; *peduncles* comparatively elongated in mature flower-heads, 4.5–8 mm long, clothed with short, closely appressed, grey hairs. *Bracts* at the base of peduncles very broadly ovate, brown, ciliate. *Bracteoles* with fimbriate claws; *laminae* peltate and fimbriate. *Flowers* 5-merous; *calyx* c. 1 mm long, divided to the base into very narrow, club-shaped sepals clothed with pale yellow hairs; *corolla* divided one third to one half of its length into glabrous petals which are c. 2 mm long and c. 0.8 mm broad, petals swollen at their apices which bear a tuft of papillae, the margins granulose and the median stripe inconspicuous; *stamens* c. 2.3 mm long; *ovary* subsessile, brown, c. 0.7 mm long; *stigma* slightly expanded. *Legumes* 6–12 cm long, subtetragonous, with the upper and lower surfaces sulcate and 2–3 mm broad, grey, hoary, ornamented with light brown, longitudinal veins with some reticulations. *Seeds* up to 8 and longitudinal in each legume, obloid-compressed, 5–6.5 mm long, 3–3.5 mm broad, dark brown; *pleurogram* small, central, light brown, horseshoe-shaped; *areole* dark brown, 0.3–0.6 mm long; *funicle* fawn, convoluted, filiform, expanded into an aril on top of the seed.

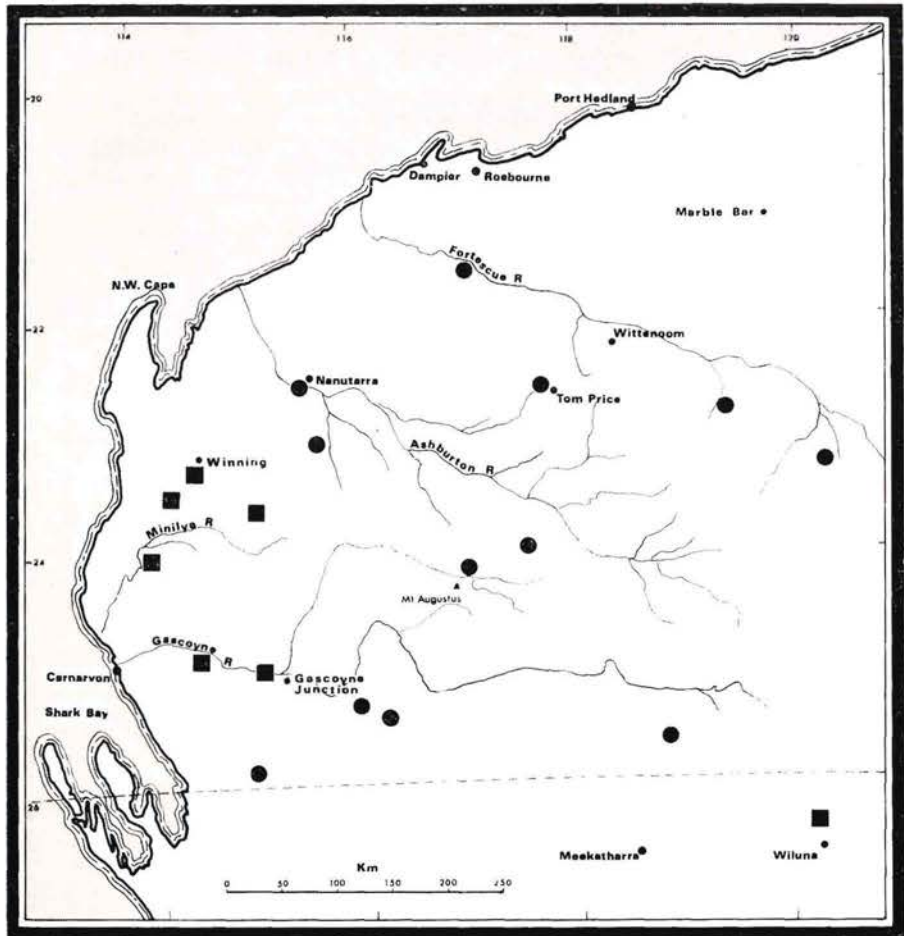


Figure 4. Distribution of *A. citrinoviridis* (●) and *A. subtessarogona* (■).

Distribution and habitat: (Figure 4) North-west Western Australia: most collections of this species have been made from between Winning Station (210 km north-east of Carnarvon) and Gascoyne Junction (160 km east of Carnarvon); there is also one record of this plant from the Wiluna district which is about 400 km south-east of the main area of distribution. This species commonly grows on red loamy soil in low-lying areas often in association with *A. sclerosperma* F. Muell. and *A. tetragonophylla* F. Muell. It has also been collected from higher rocky ground in association with *A. ancistrocarpa* Maiden and Blakely.

WESTERN AUSTRALIA: Wogoola Station, Ashburton River, *C. A. Gardner* 3188; Winning Pool Station, 53 km S of Barradale on North West Coastal Highway, *B. R. Maslin* 2768 (BRI, NSW, NY, PERTH); 75 Mile Post N of Carnarvon, *J. S. Beard* 3492; Wiluna area, *J. Morrissey* 62; Gascoyne River, 80 miles [129 km] E of Carnarvon, *C. A. Gardner* 6041.

Flowering and fruiting period: Flowers from July to September; mature legumes present from September to December.

As outlined earlier in this paper on p. 88, *A. subtessarogona* is closely allied to *A. brachystachya* Benth. The latter species together with *A. cibaria* F. Muell., *A. linophylla* W. V. Fitzg. and *A. ramulosa* W. V. Fitzg. form an interrelated taxonomic complex which has a very wide range in Australia. *Acacia subtessarogona* is most readily distinguished from the above four taxa by the subtetragonous, almost "squashed" character of its mature legumes.

The specific epithet refers to the subtetragonous fruit in this wattle.

Acknowledgments

We wish to express our appreciation to Mr. H. K. Airy Shaw for checking the Latin diagnoses, as well as to Mr. G. Scott for very helpful field observations about *A. citrinoviridis*.

References

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SCOTT, MARJORIE P. (1972). Some Aboriginal food plants of the Ashburton district, Western Australia. *W.A. Nat.* 12 (4):94-96.