

A NEW SPECIES OF *ACROTRICHE* R. Br. (EPACRIDACEAE) FROM SOUTH-EASTERN AUSTRALIA.

by

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ABSTRACT

Jobson, P. C. and Whiffin, T. A new species of *Acrotriche* R. Br. (Epacridaceae) from South-Eastern Australia. *Muelleria* 7(2): 295-299 (1990).—A new species of *Acrotriche*, *A. leucocarpa* P. Jobson & T. Whiffin from the Southern Tablelands of New South Wales and East Gippsland, is described and discussed.

INTRODUCTION

Acrotriche R. Br., a member of the Epacridaceae, may be distinguished from the closely related genera *Monotoca* R. Br. and *Leucopogon* R. Br. by the presence of hair tufts near the apex of the corolla lobes. The generic name comes from the Greek 'akron' and 'thrix' meaning hairs on the apex.

The genus occurs in the Australian States but not in the Northern Territory. The highest diversity occurs in South Australia. Plants are found chiefly in open heathlands and forested habitats along the ranges and coast, usually on low nutrient soils.

Paterson (1960, 1961, 1962) revised the genus using both morphological and anatomical techniques. At the time she recognised twelve species; subsequently, Jackes and Powell (1980) described a new species and transferred a species from *Monotoca* to *Acrotriche* making the current total fourteen.

Populational studies conducted on *A. aggregata* R. Br. and *A. divaricata* R. Br. indicated the presence of an undescribed taxon from southern New South Wales and East Gippsland. Herbarium specimens from CBG, MEL and NSW were examined, as well as field collected material from a total of 16 populations were studied for leaf morphology, leaf flavonoids and leaf wax alkanes (Jobson, 1988). Paterson (1960) mentioned the presence of a white-leaved form from southern New South Wales and placed it with *A. divaricata*.

TAXONOMY

Acrotriche leucocarpa P. Jobson *et* T. Whiffin *sp. nov.*

Frutex ramosissimus hemisphaericus. *Folia* lanceolata, 8-11 mm longa, 3-4 mm lata, laminis planis, apicibus mucronatis; pagina inferior laminae in aspectu alba, cum papillis minimis tecta. *Flora* viridia, sepala apicibus roseis. *Fructus* margaritaceo-alba, translucens.

TYPUS: New South Wales, Southern Tablelands, Junction of 'Minuma Range' and 'Badja' Tracks, below Big Badja Hill, c. 40 km N of Numeralla. 35° 59'S; 149° 34'E, 31 May 1988, P.C. Jobson 342 (HOLOTYPE: MEL 156200; ISOTYPI: LTB, NSW, MEL 156199).

A low erect, much branched *shrub*, 0.5-1 m high, young branches hirsute. *Leaves* lanceolate, spreading, flat, 8-11 mm long, 3-4 mm wide, apex with a pungent point, margins entire; upper surface glabrous, lower surface covered in microscopic papillae giving it a milky-white appearance. *Flowers* wholly green or tips of corolla lobes with reddish tinge, 3-5 in short axillary spikes or clusters, on first year wood. *Bracteoles* keel-shaped, 0.5 mm long. *Sepals* glabrous, broadly ovate, obtuse, 1.25

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mm long, 0.75 mm wide, frequently tipped red. *Corolla* tube 1.5–2 mm long, lobes 1 mm long, spreading, tuft of hairs at the neck of the corolla tube arising from the epidermal cells. *Anthers* orange, oblong, 0.5 mm long. *Ovary* with alternating vertical red and green bands, globular, glabrous, 4–5 celled, 1 mm diameter, 1 mm long. *Nectary* scarcely lobed, 0.5 mm high; style conical, 0.5 mm long; stigma more or less flat. *Mature* fruit pearly-white, translucent, 5 mm diameter. (Fig. 1)

KEY TO RELATED TAXA

- | | |
|--------------------------------------------------|----------------------|
| 1. Abaxial leaf surface green | <i>A. divaricata</i> |
| 1. Abaxial leaf surface white | 2 |
| 2. Mature fruit red, leaves 10–19 mm long | <i>A. aggregata</i> |
| 2. Mature fruit white, leaves 8–11 mm long | <i>A. leucocarpa</i> |

SELECTED SPECIMENS EXAMINED (Total 22):

New South Wales—Southern Tablelands: Spur on the E face of Wog Wog Mountain, 37° 05'45"S, 149° 26'20"E, c. 800 m, 25.ix.1984, *D. E. Albrecht 1063* (MEL); On the SE side of a prominent bluff, 2.4 km N of Wadbilliga trig, Wadbilliga National Park, 36° 19'S, 149° 36'E, 1200 m, 27.iii.1985, *J. D. Briggs & P. H. Weston 1820* (CANB, NSW); Kanangra Walls, 35 km SW of Katoomba, 0.8 km NE of Kittani Top, 13.v.1978, *M. D. Crisp 4011* (CBG); Upper Cotter River near Gallipoli Flat, Namadgi National Park, 35° 35'30"S, 148° 49'E, 1010 m, 5.xi.1987, *P. Gilmour 6250* (CBG); type locality, 31.v.1988, *P. C. Jobson 339* (LTB, NSW); *ibidem*, *P. C. Jobson 340, 341, 343* (LTB, NSW, MEL); Canberra, -ix.1928, *H. B. Williamson s.n.* (MEL 645107); Tinberry Mountains (c. 55 km SSE of Canberra, E of Michelago, south declivities of S Tinberry Peak at c. 4200 ft, 22.iv.1978, *J. H. Willis s.n.* (MEL 1513677).

Victoria—East Gippsland: Wulgulmerang Road at crossing on Boundary Creek, c. 100 m NE of bridge, 37° 07'S, 148° 14'E, 800 m, 10.ix.1985, *D. E. Albrecht 2421* (MEL); Rocky outcrop on west side of Mt Coopracambra summit, 37° 16'S, 149° 17'E, *D. E. Albrecht 3673* (CBG, HO, MEL, NSW); Nunning Plateau, Reedy River chasm area, 4.ii.1973, *A. C. Beaglehole 41372* (MEL); Little River Falls, 16.i.1948, *N. A. Wakefield 2288* (MEL); Mt Elizabeth c. 16 miles NNE of Buchan, 16.ix.1968 *J. H. Willis s.n.* (MEL).

ETYMOLOGY:

The specific epithet of this taxon alludes to the white drupe which is characteristic of this species.

HABITAT:

Acrotriche leucocarpa is found in open eucalypt woodlands where it is a common understorey shrub. It favours high altitudes of between approximately 900 m and 1300 m. The species tend to grow on red sandy clay over a sandstone bedrock.

DISTRIBUTION (Fig. 2):

The species is found from the Kanangra Walls area south, along the main range of the Great Dividing Range to East Gippsland, near Mt Elizabeth. North of the Tinderry Ranges populations of this species become disjunct. There is also an isolated occurrence at the headwaters of the Cotter River. Although its conservation status is not fully known, it does not appear to be endangered.

DISCUSSION:

In general appearance, *A. leucocarpa* closely resembles *A. divaricata* to the extent that Burbridge & Gray (1970) and Willis (1973) placed it under *A. divaricata*. The chief similarity is in the leaf morphology but *A. leucocarpa* differs in its shorter leaf length although its width is often broader (Paterson 1960, Jobson 1988). Both *A. leucocarpa* and *A. aggregata* are white on the undersurface of their leaves due to microscopic papillae and they both have similar leaf anatomies. *Acrotriche aggregata*, however, has a larger leaf size than *A. leucocarpa*. In addition, there are differences between *A. leucocarpa* and both *A. divaricata* and *A. aggregata* in leaf flavonoids and leaf wax alkanes (Jobson 1988). *Acrotriche leucocarpa* can also be distinguished on fruit colour; both *A. divaricata* and *A. aggregata* have red drupes, whereas *A. leucocarpa* has a white drupe.

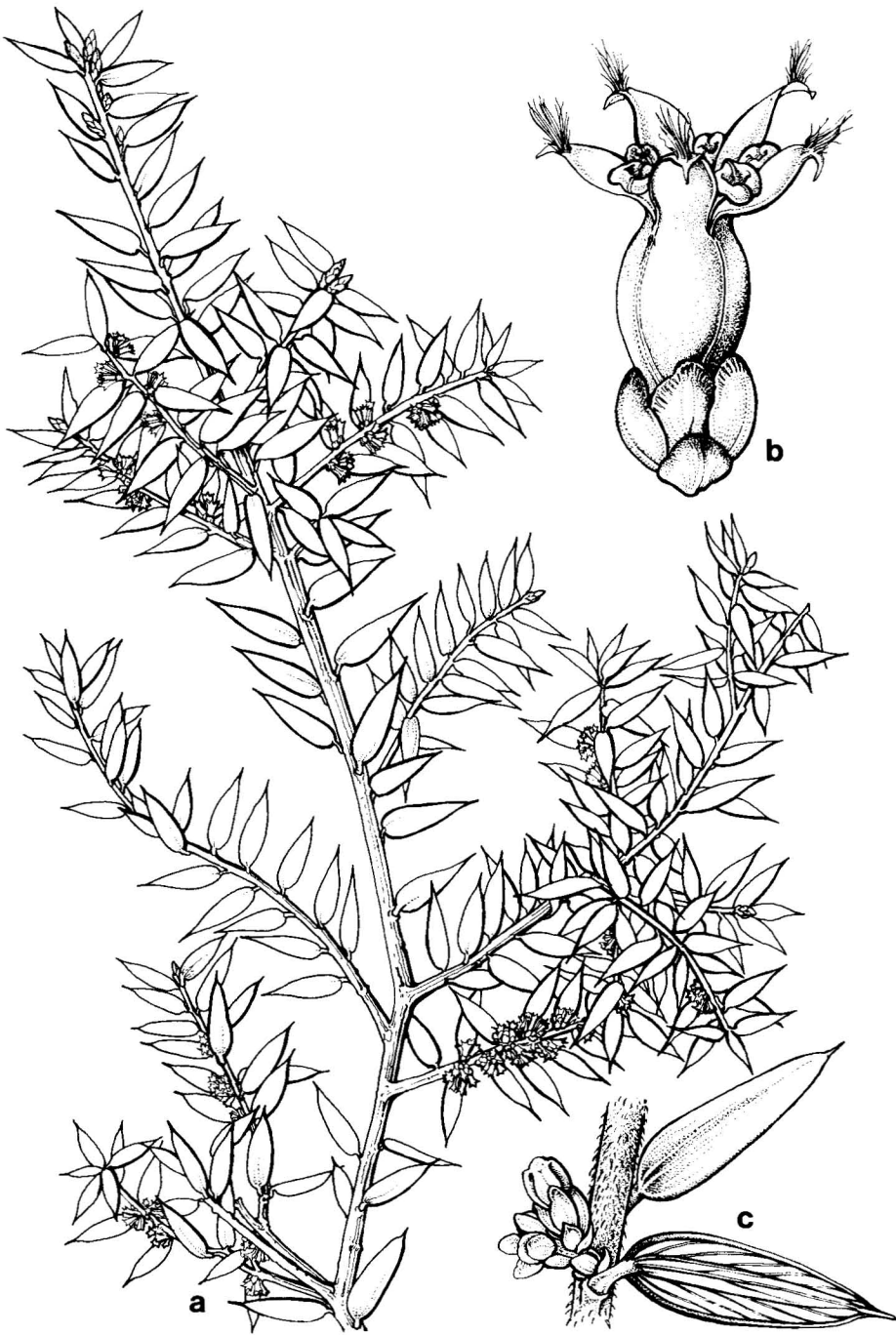


Fig. 1. *Acrotriche leucocarpa*. a—Flowering branch, $\times 1$. b—Flower, $\times 20$. c—Leaf and young buds, $\times 4$.
All drawn from type collection.

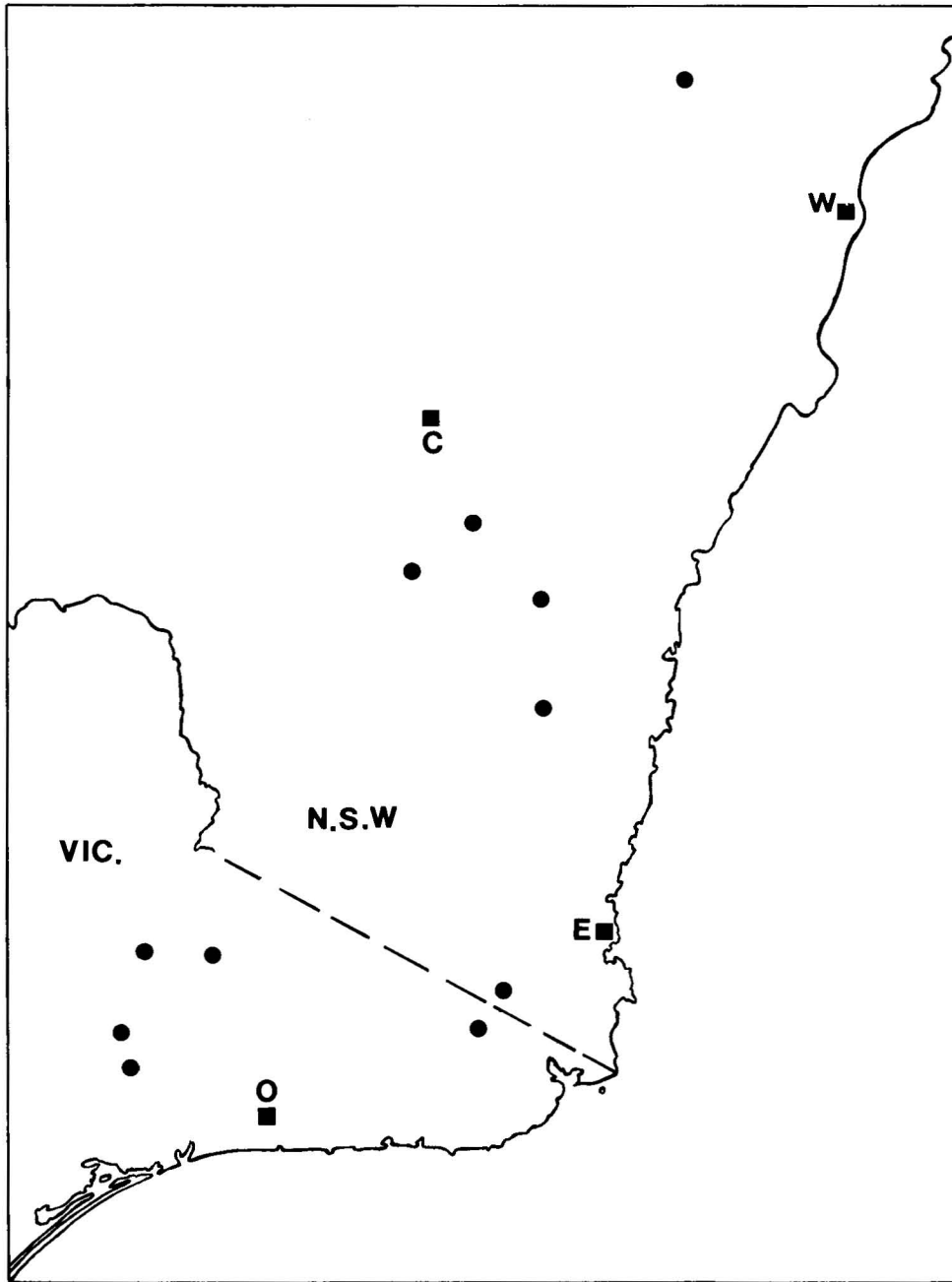


Fig. 2. Distribution of *Acrotriche leucocarpa*. W = Wollongong, C = Canberra, E = Eden, O = Orbost.

The distributions of three species are relatively discreet. *Acrotliche aggregata* has the widest distribution. It extends from northern Queensland (Paluma Range) along the Great Dividing Range to the Blue Mountains in central New South Wales. *Acrotliche divaricata* has a much smaller range and extends from Newcastle through the Blue Mountains to just south of Campbelltown. *Acrotliche leucocarpa*, as stated above, is chiefly a southern New South Wales and Victorian species.

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