

Two new species of *Actinotus* (Apiaceae) from Western Australia

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Abstract

G.J. Keighery. Two new species of *Actinotus* (Apiaceae) from Western Australia. *Nuytsia* 13 (1): 23-27 (1999). Two new perennial species of *Actinotus* (Apiaceae) are described and illustrated. One is confined to the higher rainfall areas of south Western Australia between Margaret River and Walpole. The other is only known from a few populations in the Whicher Range south-east of Busselton.

Introduction

The genus *Actinotus* (Apiaceae) in Western Australia consists of four (one undescribed) species of post-fire annual herbs, which are widespread in the Mediterranean and semi-arid areas of southern Western Australia, and a group of six (three undescribed) perennial taxa confined to the higher rainfall area, largely between Perth and Albany. This paper describes two of the new perennial species, both restricted to the forested areas of Western Australia.

Taxonomy

Actinotus laxus G. J. Keighery, *sp. nov.*

Differt ab *A. omnifertilis* rhizoma elongatum expansum, caulis florifer tenuissimus laxus ad 40 cm altum et umbellae parvae.

Typus: Recreation Reserve, intersection of Scott Rd and Govenor Broome Rd, Western Australia, 29 December 1990, G.J. Keighery 12210 (*holo*: PERTH 01994212; *iso*: CANB, K, MEL).

Slender *sub-shrub* from a spreading rhizomatous woody rootstock to over 30 cm diameter; erect flowering branches annually renewed, to 40 cm tall. *Stems* very slender, lax, pubescent when young becoming glabrous with age. *Leaves* alternate, pubescent when young, petiole 2-3 mm long; lamina trilobed (rarely with 5 lobes), 8-16 mm long, discolorous, green on upper surface, grey-green underneath. *Inflorescence* subtended by a linear leaf-like bract, peduncle 18-35 mm long, with

(6)8–12 flowers (up to 5 male, the remainder bisexual), glabrous. *Bracts* 8–10, linear, usually sparsely hairy, c. 2 mm long, green with a red point. *Pedicels* c. 0.5 mm long. *Flowers* white, c. 2 mm long. *Petals* entire, white, c. 1 mm long, the end inflexed, midrib prominent. *Stamens* c. 3 mm long, each with a pinkish anther c. 1 mm long. *Fruit* sparsely hairy, c. 3 mm long. (Figure 1)

Other specimens examined. WESTERN AUSTRALIA: Pingerup Rd, 29 km E of Mt Chudalup, 15 Dec. 1994, A.R. Annels & R.W. Hearn 5200 (PERTH); 34°07'S, 115°18' E, 16 Nov. 1992, A.R. Annels 2982 (PERTH); Weld River Swamp, 16 km S of Shannon Mill, Dec. 1957, D. Churchill s.n. (PERTH); South Northcliffe Track to Gardner River, 19 Mar. 1961, A.S. George 2337 (PERTH); Northcliffe Forest Park, 28 Dec. 1990, L. Graham 600 (PERTH); Bow River, 3 Dec. 1913, S.W. Jackson s.n. (NSW, CANB); Walpole, 25 Jan. 1947, Mrs M. Johnson (PERTH); Yelverton State Forest, 19 Jan. 1990, G.J. Keighery 12210 (PERTH), Big Brook, Pemberton, Western Australia, Jan. 1922, M. Koch 2613 (NSW, MEL); Broke Inlet, 27 Jan. 1990, G. Wardell-Johnson 1061 (PERTH); Walpole–Nornalup National Park, 27 Jan. 1993, J.R. Wheeler 3799 (PERTH); Scott River Rd, E. Wittwer 550 (CANB).

Distribution. In discrete populations between Augusta and Walpole with an outlier in Yelverton Forest, north-east of Margaret River.

Habitat. Occurs in fresh, usually permanent swamps under dense cover of *Homalospermum firmum* and *Agonis linearifolia*, or *Reedia spathacea* or rarely seepages with *Juncus kraussii* rushes. Often associated with the other endemics of this habitat, *Cephalotus follicularis*, *Cosmelia rubra*, *Reedia spathacea* and *Homalospermum firmum*.

Flowering period. Usually flowers in summer (December to March). Flowering is not enhanced by fire.

Conservation status. Represented in several conservation reserves and State forest blocks. Restricted in range but not considered to be at risk.

Etymology. Named after the slender lax flowering branches.

Affinities. Related to *Actinotus omnifertilis* (F. Muell.) Benth., which is a short-lived post-fire perennial herb that lacks the extensive rhizome of this new species. *Actinotus laxus* is readily distinguished from all other members of the genus by its long slender lax flowering branches, which are supported by the surrounding vegetation, and its very small inflorescences. Flowering in *Actinotus laxus* does not appear to be enhanced by fire as it is in *A. omnifertilis*.

Actinotus whicheranus G.J. Keighery *sp. nov.*

Frutex e basi lignosa ramosae caulis florifer ad singulus 40 cm. altum erectus. Folia alterna, puberula, discoloria, divisa. Inflorescentia 15–35 mm. lata. Flores albi.

Typus: Sabina Rd, Whicher Range, south of Busselton, Western Australia, 19 December 1991, G.J. Keighery 12394 (*holo:* PERTH 03415384; *iso:* MEL, CANB, SYD).

Erect slender *sub-shrub* from a short woody above ground stem; erect flowering branches to 40 cm tall. *Stems* slender, pubescent when young, becoming glabrous with age. *Leaves* alternate, pubescent when young, petiole 25–55 mm long; lamina with three to four primary lobes and with secondary lobes,

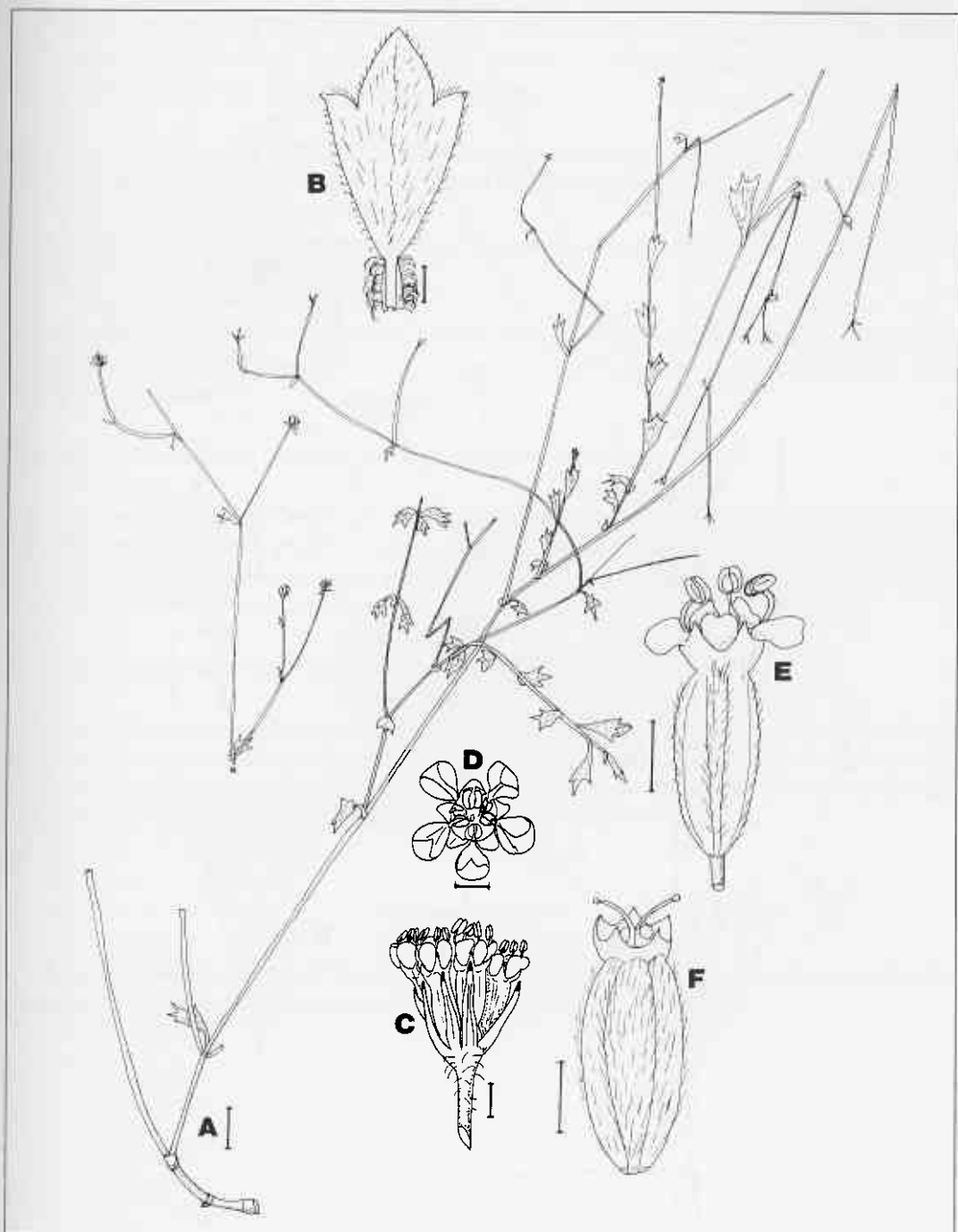


Figure 1. *Actinotus laxus*. A - flowering branch, scale bar = 1 cm, B - leaf, C - inflorescence, D - flower, top view, E - flower, side view, F - fruit. Scale bar for B-F = 1 mm. Drawn from G.J. Keighery 12210.

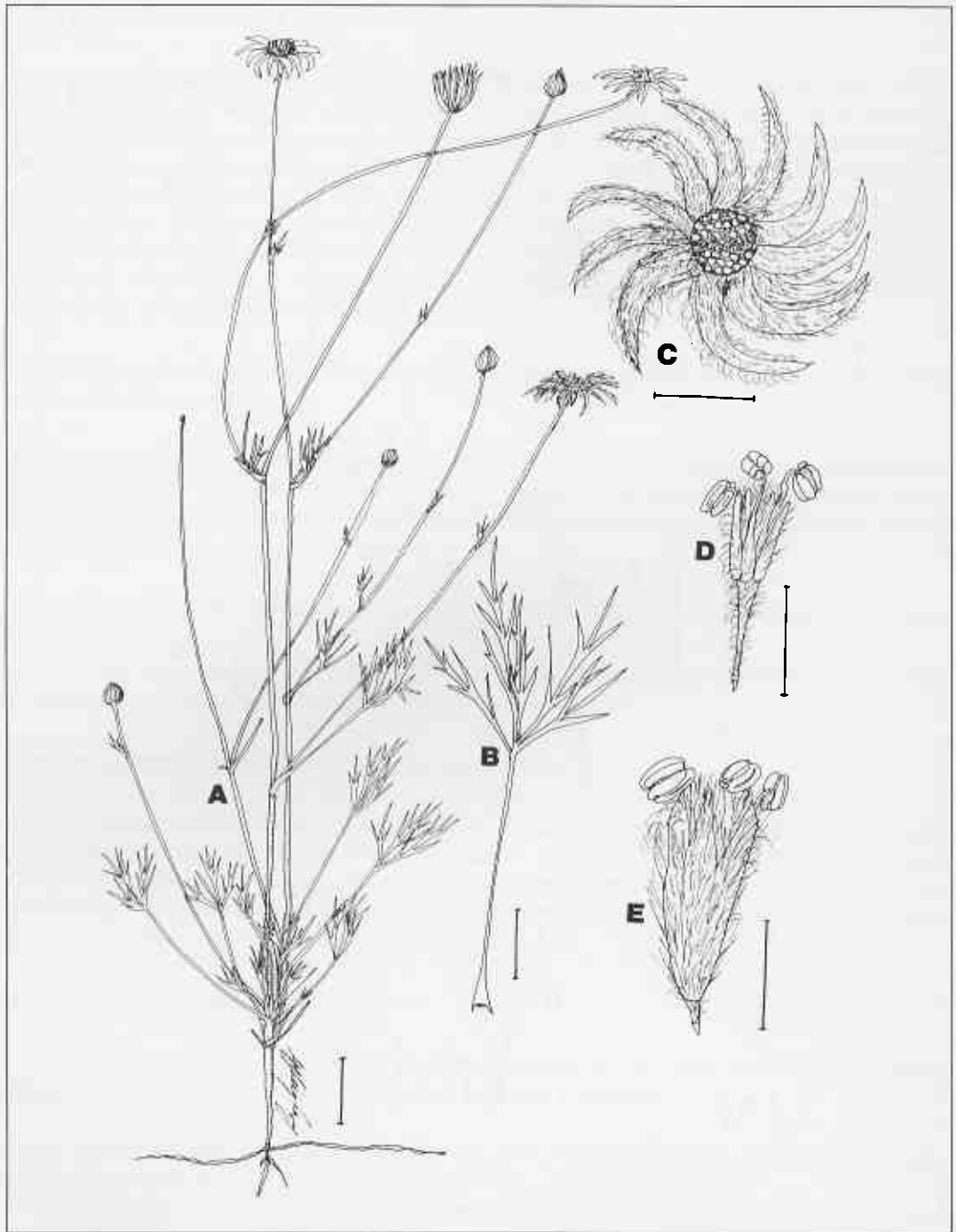


Figure 2. *Actinotus wicheranus*. A - whole plant, scale bar = 1 cm, B - leaf, C - inflorescence, D - male flower, E - bisexual flower. Scale bar for B-E = 1 mm. Drawn from G.J. Keighery 12394.

20–25 mm long, usually discoloured, green on upper surface, grey-green underneath. *Inflorescence* 15–35 mm diameter, subtended by a linear leaf-like bract 3–6 mm long, peduncle 5–8 cm long, with numerous flowers (up to 30% male, the remainder bisexual), glabrous. *Bracts* linear, hirsute, 4–8 mm long, usually sparsely hairy. *Pedicels* c. 0.5 mm long. *Flowers* white, c. 2 mm long. *Petals* entire, white, c. 1 mm long, the end inflexed, midrib prominent. *Stamens* c. 3 mm long, each with a pinkish anther c. 1 mm long. *Fruit* hairy, c. 3 mm long. (Figure 2)

Other specimens examined. WESTERN AUSTRALIA: Sabina Rd, 7 Jan. 1997, D. Bright & A. Annels SC135.7 (PERTH); E of Vasse Highway on Sabina Rd, 1 Feb. 1996, G. Keighery 14358 (PERTH).

Distribution. Confined to a narrow band along the western margin of the Blackwood Plateau and adjacent Whicher Range Escarpment.

Habitat. Occurs in white sand pockets over laterite, under *Banksia attenuata* woodland or *Beaufortia squarrosa* tall shrubland. The species may survive mild winter fires but is killed by summer fires, regenerating from seed.

Flowering period. Usually flowers in summer (December to March).

Conservation status. CALM Conservation Codes for Western Australian Flora: Priority Two. Confined to the Whicher Range, south-east of Busselton. Highly restricted but locally common. The declaration of the proposed Whicher Range Nature Reserve will encompass most populations. Populations east of the Vasse Highway are in State forest.

Etymology. Named after the Whicher Range to which the species is confined.

Affinities. Not closely related to any other species of *Actinotus* in Western Australia. The habit of being a tufted sub-shrub with an erect short woody stem and small inflorescences on long erect flowering stems is superficially similar to *A. minor* (Sm.) DC. from New South Wales and perhaps more distantly to the large-flowered *A. helianthi* Labill. from Queensland and New South Wales.

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