TWO NEW SPECIES OF OLEARIA Moench (COMPOSITAE: ASTEREAE) FROM CENTRAL AUSTRALIA

by

D. A. Cooke*

ABSTRACT

Cooke, D. A. New species of Olearia Moench (Compositae: Astereae) from central Australia. Muelleria 6(3):181-184 (1986). — Two new species of Olearia, O. macdonnellensis and O. tridens, are described and discussed; both are currently known from the Macdonnell Ranges of the Northern Territory.

TAXONOMY

Olearia macdonnellensis D. A. Cooke, sp. nov.

Frutex viscidus aromaticus ad 1.2 m altus., Caulis erectus lignosus divaricate ramificans; ramuli subteretes striati brunneto initio vernicosi puberulenti pilis glandulosis ad 0.15 mm longis. Folia coriacea viridia concolora vernicosa ut videtur glabra, pilis glandulosis ad 0.12 mm longis in strato vernicosum inclusis; laminae oblongae lato-obovatae obtusae 1.2-2.5 cm longae 6-14 mm latae, plerumque 4-10-crenatae rario serratae vel repandae, venatione camptodromata craspedodromata distincta, in petiolis 2-6 mm longis sensim transientes. Capitula 2-5 in corymbos terminales. Pedunculi 2-8 cm longi, subtenti. Involucrum cyathiforme 6-9 mm longum viride vel purpurascens, extrinsecus glandulosum vernicosum; bracteae c. 3-seriatae inaequales, extimae lanceolate herbaceae, interiores anguste linearo-ellipticae herbaceae marginibus scariso-hyalinis, apicibus acutis integris vel eroso-ciliatis. Receptaculum subconvexum c. 1.5 mm diametro nudum. Flosculi radii 8-14 manifeste uniseriati foemini, ligulis 8-15 mm longis albis; flosculi disci numerosiores bisexuales 5-meri, corollis 6-8 mm longis luteis. Antherae c. 2.8 mm longae cum apicibus lanceolatis c. 0.6 mm longis. Achene teretum 2.5-3 mm longum c. 0.5 mm latum sericeo-villosum. Pappus uniseriatus 7-8 mm longus, setis 40-55.

Type Collection:
1 km W. of Ellery Creek Big Hole, N.T., 23°47'S, 133°03'E, 17.vii.1983, P. K. Latz 9639. (Holotype: NT 73777. Isotype: AD. Also, according to NT label data, DNA, MEL, PERTH).

*State Herbarium, Botanic Gardens, North Terrace, Adelaide, South Australia, Australia 5000.
Fig. 1. Olearia macdonnellensis. a — leaves.  
b — glandular hairs. From the type collection.

Also Examined:
Northern Territory — Ellery Creek Waterhole, 6.viii.1961, G. Chippendale s.n. (NT 8298; AD 96445098; also MEL 674095 n.v. and, according to NT label data, BRI, CANB, DNA, SYDN [? = NSW], PERTH); Serpentine Gorge, 1.ix.1978, A. C. Kalotas s.n. (NT 57615).

Distribution and Habitat:
Recorded from the Serpentine and Ellery Gorges in the central Macdonnell Ranges west of Alice Springs, and possibly more widely distributed in this area. All collections are from the bases of steep rocky slopes which provide a sheltered microclimate. Flowering is recorded in August and early September.

Discussion:
Olearia macdonnellensis is related to O. calcarea F. Muell. ex Benth. and O. muelleri (Sonder) Benth. but readily distinguished by the pedunculate capitula forming corymbs and by the larger leaves with more distinct venation and petioles. The two latter species are widespread on calcareous loams and sandy soils in the semi-arid winter rainfall zone of southern Australia with a few records from the Great Victoria and Gibson deserts. The restricted habitat of O. macdonnellensis is apparently isolated from this distribution by the mountain ranges of central Australia.

The microscopic glandular hairs were observed on leaves from which the varnish had been dissolved by immersion in absolute alcohol for a few minutes. They occur sparsely scattered on both surfaces of the lamina, and more densely near the margins and midvein. Similar hairs, more or less imbedded in varnish, were observed on the leaves and branchlets of O. calcarea and O. muelleri.

Olearia tridens D. A. Cooke, sp. nov.

Frutex nanus virgatus 25-35 cm altus. Caules erecti lignosi repetite ramificantes; ramuli subteretes costulis ab foliis decurrentibus virides. Indumentum ramulorum foliorumque initio minute araneosum pilis laxis crispatis ad 0.4 mm longis, postea scaberulum papillis conicis ad 0.06 mm altis. Folia anguste cuneata vel spathulata 5-18 mm longa, ad apices in dentibus tribus aequalibus acutis mucronulatis subrecurvatis 1-3 mm longis symmetrice divisa, rarioris asymmetrica dentibus 1-2 adjectis brevioribus, rigide coriacea marginibus incurvis in sicco. Capitula terminalia solitaria. Pedunculi 1-4 cm longi, squamis 1-4 angusto-lanceolatis 1-3 mm longis instructi, microscopice araneosi, in ramulis foliosis sensim transientes. Involucrum cyathiforme 5-6 mm longum viride vel purpurascens, extrinsecus microscopice glandulosum, bracteae c. 4-seriatae inaequales, herbaceae marginibus angustis hyalinis, extimae lanceolatae 1.5-2.5 mm longae, interiores anguste elliptico-lanceolatae apicibus acutis vel acuminati cliiolatis. Receptaculum convexum c. 1.5 mm diametro nudum. Flosculi radii 30-40 conferti ut videtur bisieriati, foemini, ligulis 5-8 mm longis coequales; flosculi disci bisexuales 5-meri, corollis c. 3.5 mm longis lutesc. Antherae c. 1.9 mm longae cum apicibus lanceolatis sterilibus c. 0.4 mm longis. Achene teretum c. 1.5 mm longum c. 0.3 mm latum pubescens. Pappus uniseriatus c. 3 mm longus, setis 25-40.
Dwarf virgate shrub 25-35 cm high. Stems erect, woody, repeatedly branched; branchlets subterete with ridges decurrent from the leaf bases, green. Indumentum of the branchlets and leaves at first minutely arachnose with lax crisped hairs to 0.4 mm long, later scabridulous with conical papillae to 0.06 mm high. Leaves narrowly cuneate to spatulate, 5-18 mm long, symmetrically divided at the apex into 3 equal acute mucronulate slightly recurved teeth 1-3 mm long, more rarely asymmetrical with 1-2 additional shorter teeth, rigidly coriaceous with margins incurved in dried material. Capitula terminal, solitary. Peduncles 1-4 cm long, microscopically arachnose, with 1-4 narrow-lanceolate scales 1-3 mm long, passing gradually into the leafy branchlets. Involucre cyathiform, 3-6 mm long, green or purplish, microscopically glandular on the outside; bracts c. 4-seriate, unequal, herbaceous with narrow hyaline margins, the outermost lanceolate, 1.5-2.5 mm long, the inner ones narrowly elliptic-lanceolate with acute to acuminate ciliolate apices. Receptacle convex, c. 1.5 mm diam., naked. Ray florets 30-40, crowded and appearing biseriate, female, with pale blue ligules 5-8 mm long; disc florets fewer, bisexual, 5-merous; corollas c. 3.5 mm long, yellow. Anthers c. 1.9 mm long, including the sterile lanceolate apices c. 0.4 mm long. Achenes terete, c. 1.5 mm long, c. 0.3 mm wide, pubescent. Pappus uniseriate, c. 3 mm long, consisting of 25-40 bristles. (Fig. 2).

Type Collection:
4 km W. of Trephina Gorge, N.T., 23°32'S, 134°22'E, 17.vii.1983, P. K. Latz 9589. (Holotype: NT 73590. Isotype: AD 98421171. Also, according to NT label data, DNA, PERTH).

Also Examined:
Northern Territory — Amphitheatre, Palm Valley, 24.ix.1972, G. Griffin 6 (NT 43482); Palm Valley, 20.vii. 1972, P. K. Latz 2659 (NT 36698); AD 97244206); Reedy Creek, George Gill’s Range, 1894, R. Tate s.n. (AD 9583012).

Distribution and Habitat:
The species has a wide but possibly discontinuous distribution in the Macdonnell Ranges. It occurs on steep rocky slopes and cliffs in skeletal soils. Flowering is recorded in July.

Discussion:
Olearia tridens is related to O. stuartii (F. Muell.) F. Muell. ex Benth. and may be confused with depauperate specimens of this generally larger shrub. It is recognizable by the characteristic leaf shape and the indumentum which contrasts with the pubescence of mixed persistent glandular and non-glandular hairs in O. stuartii.

The specific epithet is from the Latin tridens, a trident, referring to the shape of the leaves.
ACKNOWLEDGEMENT

I would like to thank the Officer in Charge of the Herbarium of the Northern Territory for the loan of specimens.

Manuscript received 13 August 1985.