

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 spatulata 5-18 mm longa, ad apices in dentibus tribus aequalibus acutis mucronulatis subrecurvatis 1-3 mm longis symmetrice divisa, rariore 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, microscopicè araneosi, in ramulis foliosis sensim transientes. *Involucrum* cyathi-forme 3-6 mm longum viride vel purpurascens, extrinsecus microscopicè glandulosum, bractee c. 4-seriatae inaequales, herbaceae marginibus angustis hyalinis, extimae lanceolatae 1.5-2.5 mm longae, interiores anguste elliptico-lanceolatae apicibus acutis vel acuminatis ciliolatis. *Receptaculum* convexum c. 1.5 mm diametro nudum. *Flosculi* radii 30-40 conferti ut videtur biseriati, foemini, ligulis 5-8 mm longis coeruleis; flosculi disci pauciores bisexuales 5-meri, corollis c. 3.5 mm longis luteis. *Antherae* c. 1.9 mm longae cum apicibus lanceolatis sterilibus c. 0.4 mm longis. *Achenium* teretum c. 1.5 mm longum c. 0.3 mm latum pubescens. *Pappus* uniseriatus c. 3 mm longus, setis 25-40.

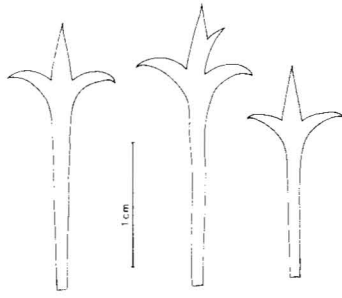


Fig. 2. *Olearia tridens*, leaves. From the type collection.

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. *Achene* 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 Trepkina 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 95838012).

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.