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Olearia adpressa (Asteraceae: Astereae), a new, geographically restricted species from shale breakaways in the Mid West of Western Australia

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SHORT COMMUNICATION

Olearia Moench is a large genus of perennial, woody daisies with more than 130 species in Australia and almost 50 in Western Australia (Western Australian Herbarium 1998–; Council of Heads of Australasian Herbaria 2011). Most Western Australian taxa have relatively wide distributions encompassing more than one bioregion (Department of the Environment 2013), with a number occurring across southern Australia. One exception is *O. newbeyi* Lander, which has only been recorded from one location in the Mallee bioregion (Western Australian Herbarium 1998–; Lander 2008). The distinctive new species described below is similarly only known from a single site and is likely to be a rare, short-range endemic given the restricted occurrence of its habitat.

Olearia adpressa Hislop, *sp. nov.*

Type: south-east of Port Gregory, Western Australia [precise locality withheld for conservation reasons], 25 July 2008, *M. Hislop* 3784 (*holo*: PERTH 08074542; *iso*: CANB, MEL).

Olearia sp. Gregory (M. Hislop 3784), Western Australian Herbarium, in *FloraBase*, https://florabase.dpaw.wa.gov.au/ [accessed 16 July 2018].

Spreading *shrubs*, *c.* 60 cm high and 60 cm wide. *Stems* with a sparse indumentum of short, stiff, patent hairs, to *c.* 0.05 mm long, overtopped on the youngest growth by an irregular, early-glabrescent (except beneath the appressed leaves where the hairs are retained at maturity) layer of white, tangled hairs. *Leaves* sessile, antrorse-appressed; lamina thick, somewhat compressed laterally, narrowly ovate to oblong (in dorsal view), 2.0–3.5 mm long, 0.7–1.2 mm wide, 0.9–1.3 mm deep, apex obtuse; adaxial surface not visible *in situ*, concave, with tangled white hairs towards the base and apex, ± glabrous in between; abaxial surface shiny, smooth or sparsely and minutely tuberculate, with a single deep, ± closed groove, usually appearing glabrous, but with a dense indumentum of tangled, white hairs over sessile glands within the grooves. *Capitula* 12–14 mm diam., terminal, solitary, ± sessile to shortly pedunculate, peduncles to *c.* 5 mm long, with a few leaf-like bracts and an indumentum of white, tangled hairs. *Involucre* ± obconic, 5–6 mm long; involucral bracts 4- or 5-seriate, the abaxial surfaces of the outer and intermediate bracts dark green towards the apex and in a medial band (the innermost often with a medial band only), the remainder of the surface pale yellow-green with an

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indumentum of white tangled hairs and sessile glands distally, becoming glabrous below, the margins hyaline (except in the outermost); outermost bracts narrowly ovate to narrowly elliptic, 1.0–2.2 mm long, 0.5–0.6 mm wide; innermost bracts narrowly elliptic, 4.3–5.1 mm long, 0.8–1.0 mm wide. *Receptacle* ± flat or slightly convex, 1.4–2.0 mm diam. *Ray florets* 6–9, uniseriate, female; corolla tube 2.4–2.7 mm long, glabrous; ligule pink, fading to white, 5.4–6.5 mm long, 1.5–1.6 mm wide; stylar arms narrowly ligulate, 0.6–0.8 mm long. *Disc florets* 9–13, bisexual; corolla tube 3.3–3.8 mm long, pink distally, glabrous; corolla lobes 0.8–1.0 mm long, narrow-triangular, glabrous or with very few hairs towards the apex; anthers 1.2–1.4 mm long, sterile appendages 0.5–0.6 mm long; stylar arms narrowly ligulate, 0.5–0.7 mm long. *Cypsela* at least 1.8 mm long and 0.4 mm wide (only immature cypselas seen), with an indumentum of white, steeply antrorse or antrorse-appressed duplex hairs over sparse sessile glands; carpopodium conspicuous, oblique. *Pappus* uniseriate or partially 2-seriate, with 30–38 barbellate bristles, a little shorter than, to *c.* the same length as, the disc florets. (Figure 1)

Diagnostic characters. Readily distinguished from all other Western Australian species of *Olearia* by its distinctive leaves, which are antrorse-appressed, short (to 3.5 mm long), with a deep, narrow, abaxial groove, and with a dense indumentum of tangled, white hairs over sessile glands within the grooves.

Distribution and habitat. Currently only known from a shale breakaway near Gregory in the Geraldton Sandplains bioregion. At this site it grows in a rocky, clay-loam soil in heathland dominated by *Melaleuca concreta* and *M. marginata*.

Phenology. The single collection of this species was made in July, at which time it was more or less in full flower.

Etymology. From the Latin *adpressus* (appressed, lying flat against), a reference to the leaves which are pressed forward against the stem.

Vernacular name. Northampton Daisy Bush.

Conservation status. Listed by Smith and Jones (2018) as Priority One under Conservation Codes for Western Australian flora, under the name *O.* sp. Gregory (M. Hislop 3784). *Olearia adpressa* is currently only known from one scattered population around a shale breakaway in the Mid West of Western Australia. These breakaways are a distinctive geographical feature of restricted occurrence between Gregory and Northampton and are not currently represented in the conservation estate. *Olearia adpressa* is one of three recently discovered species that are likely to be endemic to this landform, the others being *Ozothamnus vespertinus* R.W.Davis, Wege & Schmidt-Leb. (Schmidt-Lebuhn *et al.* 2018) and a new species of *Styphelia* that is expected to be formally described in the next two or three years. Given that the floristics of this landform are so poorly known, future survey may bring other local endemics to light.

Affinities. The closer affinities of the new species appear to lie with members of *O.* sect. *Eriotriche* Benth., which are all characterised by the presence of woolly hairs on the abaxial leaf surface and singly-arranged (non-clustered) leaves. The short-leaved Western Australian members of this section, such as *O. brachyphylla* (Sond.) N.A.Wakef., *O. exiguifolia* (F.Muell.) Benth. and *O. minor* (Benth.) Lander, are all easily distinguished from *O. appressa* by their leaves, which are spreading (rather than appressed against the stem), with a clearly visible adaxial surface (*cf.* adaxial surface obscured), and lack deep, narrow grooves on their abaxial surface. While *O. lanuginosa* (J.H.Willis) N.A.Wakef.

Figure 1. *Olearia adpressa.* Scan of flowering branchlet from *M. Hislop* 3784 showing the distinctly non-clustered, antrorse-appressed leaves. Scale bar = 1 cm.

also has short, appressed leaves, and may therefore bear some superficial resemblance, the clustered arrangement of the leaves in that species is a clear point of difference.

The short, antrorse-appressed leaves with deep, narrow grooves on the abaxial surface make *O. appressa* a very distinctive species that is unlikely to be confused with any others.

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