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Conserving the nature of WA

***Goodenia pedicellata* (Goodeniaceae), a new species from the Pilbara bioregion of Western Australia**

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Abstract

Sage, L.W. and Dixon, K.W. *Goodenia pedicellata* (Goodeniaceae), a new species from the Pilbara bioregion of Western Australia. *Nuytsia* 15(3): 513–516 (2005). A new species of conservation priority, *Goodenia pedicellata*, is described, illustrated, mapped and compared with *G. cusackiana* (F. Muell.) Carolin. Surveys are needed to accurately determine the rarity of the species in the wild, currently known only from the holotype location.

Introduction

Goodenia pedicellata is a distinctive new species from the Pilbara bioregion of Western Australia. A perennial plant of unknown fire response, the species is found on rocky clayey soils, favouring exposed sites on the crest of small hills. The species is easily distinguished by its long, retained, ebracteolate pedicels and dense cottony hairs. The silver foliage in a compact rosette-like arrangement of leaves and slender stemmed flowering habit would make the species highly desirable for amenity horticulture.

The discovery of this species brings the number of known *Goodenia* species for the Pilbara bioregion to 28 and 128 for Western Australia.

New species description

Goodenia pedicellata L.W. Sage & K.W. Dixon, *sp. nov.*

Goodeniae cusackianae (F. Muell.) Carolin affinis sed corolla extra pilis strigosis, pagina seminum aculeata et lobis corollae alis ad c. 2 mm latis differt.

Typus: Oakover River tributary on hillside in rocky clayey soils [precise locality withheld for conservation purposes], Western Australia, 20 June 2002, *K.W. Dixon* 999 (*holo*: PERTH 06962467; *iso*: CANB).

Perennial herb to 25 cm tall, single stemmed with dense cottony and strigose hairs. *Leaves* in a rosette-like arrangement or cauline but concentrated at distal end, narrowly obovate to narrowly obtrullate, to 50 mm long (including petiole) and 15 mm wide, petiolate, with dense cottony hairs; rapidly narrowing basally; apex acute, \pm apiculate; old leaf bases often retained. *Inflorescence* compact, raceme-like; pedicels to c. 15 cm long, retained, articulate immediately below ovary, strigose and cottony hairy; bracts leaf-like; bracteoles absent. *Sepals* lanceolate, 3.5 mm long, \pm equal, apex acute, adnate for c. $\frac{1}{4}$ of length, with cottony and strigose hairs. *Corolla* yellow with some purple lines, to c. 16 mm long, auriculate; tube c. 1 mm long; pouch \pm as long as ovary; stiff, simple, appressed, strigose hairs outside with two tufts of stiff, simple downward pointing hairs inside near the top of the throat, simple erect hairs on the outside auricle margin. *Abaxial corolla lobes* c. 5 x 2 mm, fused for c. 4.5 mm beyond junction with adaxial lobes, apex acute and partially distinct from wings; wings to c. 2 mm wide, rounded. *Adaxial corolla lobes* c. 8 x 1.5 mm; auricle c. 1.5 x 2.5 mm; wings to c. 2 mm wide opposite auricle and c. 0.5 mm wide above auricle, rounded, terminating 0.5 mm below apex of the corolla lobe above the auricle. *Stamen* filaments linear, c. 3 mm long; anthers \pm elliptic, c. 2 mm long, mucronulate. *Ovary* c. 4 mm long with strigose and cottony hairs, tapering basally; septum \pm as long as locule and cottony hairy over entire surface; ovules c. 40 (c. 20 in each locule), scattered over the surface of septum. *Style* c. 3.5 mm long, mostly glabrous; indusium \pm depressed obovate or almost square in outline, brown, mouth gaping, scattered simple hairs above and below, conspicuous white bristles on upper and lower lips, 0.2 mm long, \pm equal in length. *Fruit* (mostly immature seen) \pm elliptic, c. 6 mm long. *Seeds* flat, c. 1.5 x 1.0 mm, aculeate, brown; wing c. 0.2 mm wide. (Figure 1)

Other specimens examined. WESTERN AUSTRALIA: Oakover River tributary [precise locality withheld], 20 June 2002, P. Nikulinsky s.n. (PERTH).

Distribution. Currently known only from the type location. This locality is found in the Pilbara Interim Biogeographic Region of the Eremaean Botanical Province (Thackway & Cresswell 1995; Western Australian Herbarium 1998 onwards). (Figure 2)

Habitat. Open, exposed sites with scattered, sparse shrubs on rocky slopes and crests of low hills.

Phenology. Collected flowering in late June.

Conservation status. Conservation Codes for Western Australian Flora: Priority One. The species is currently known from one population on vacant land. Urgent survey effort is required to determine the true extent of the species. Cattle disturbance is a potential threat and the fire response needs to be examined to determine an appropriate fire management regime.

Etymology. The specific epithet refers to the distinctive long and persistent pedicels.

Notes. *Goodenia pedicellata* is placed within *Goodenia* subgenus *Goodenia* section *Goodenia* subsection *Ebracteolatae* on the basis of the yellow corolla and the absence of bracteoles and enations.

Appearing to have no known close relatives the species is superficially similar to *G. cusackiana*. It can be distinguished from this species by much longer pedicels, more than twice as many ovules and seeds that are aculeate rather than colliculate.

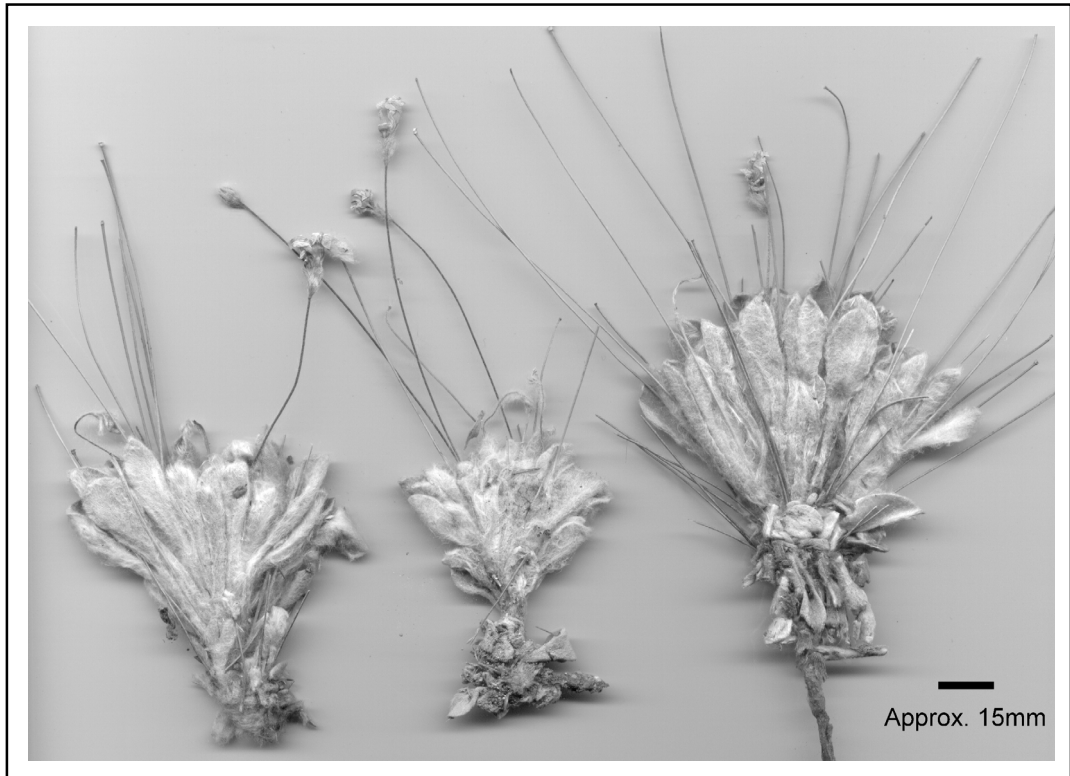


Figure 1. *Goodenia pedicellata* – photograph of detail from holotype collection (K.W. Dixon 999).

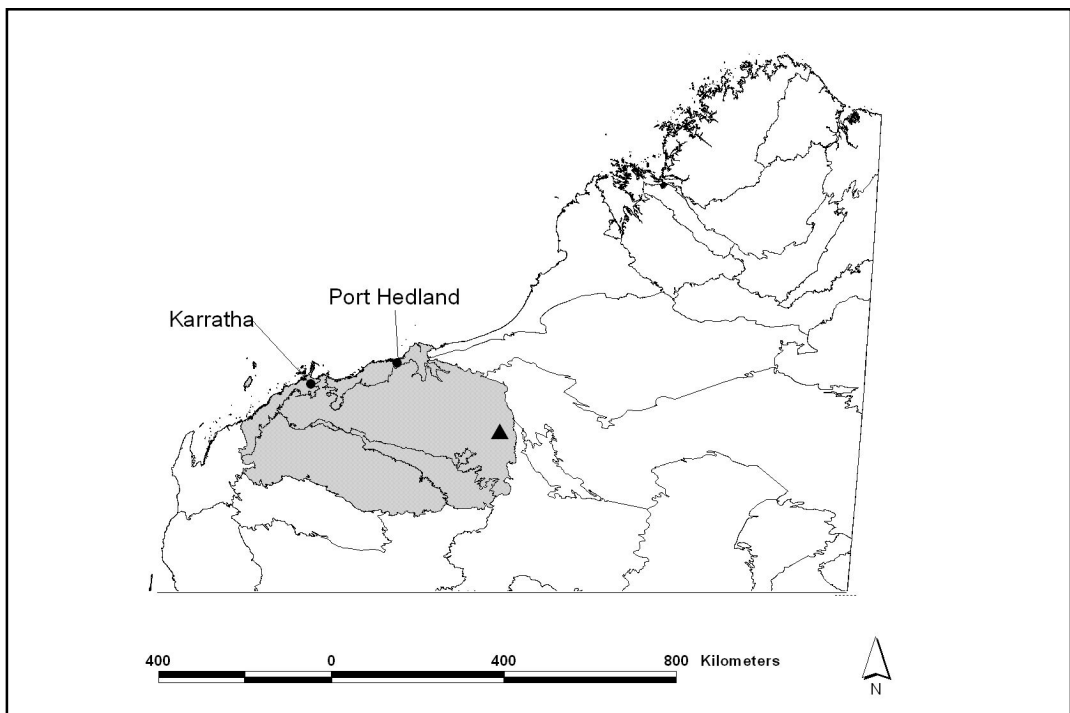


Figure 2. Distribution map for *Goodenia pedicellata* (▲), showing bioregion boundaries (Pilbara bioregion shaded grey).

Amendments to the Flora of Australia Key

The *Goodenia* key in the “Flora of Australia” (Carolin 1992: 149–166), particularly couplet 11 and 12 in Group 8 (p. 164), should be altered as follows:

11: Plant not stoloniferous

12a: Ovary tapering at base

12b: Leaves glabrous or with ± appressed hairs;

south eastern Australia **117. *Goodenia elongata***

12b: Leaves with dense cottony and strigose hairs;

north western Australia ***Goodenia pedicellata***

12a: Ovary rounded at base

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