

A NEW SPECIES OF GREVILLEA
(PROTEACEAE: GREVILLEOIDEAE)
FROM SOUTH-WEST WESTERN AUSTRALIA

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ABSTRACT

Grevillea marriottii P.M. Olde. A new species of *Grevillea* from south-west Western Australia is described and illustrated, with notes on distribution and habitat.

INTRODUCTION

This species was first collected in May 1987 by Neil Marriott in the vicinity of Mt. Holland, W.A. It was not at first recognised as a *Grevillea*, being at the time of collection without flowers and fruit. Cutting material was sent to W.R. Elliot, nurseryman of Melbourne for propagation, which eventually flowered in cultivation in August 1988. Only then was the true identity of the material realised. The type specimen was collected on a second trip in October 1988 by N. Marriott and P.M. Olde. Terminology and presentation closely follows that used by D.J. McGillivray in his revision of *Grevillea* (in press).

TAXONOMY

Grevillea marriottii P. Olde, sp. nov.

G. lissopleurae McGillivray affinis, sed indumento ramulorum et foliorum aperte villosa, foliis maturis latioribus et scabris, plerumque ad apicem aut bifidis aut trifidis aut tripartitis, ovario villosa, fructibus in capitulis fasciculatis et in stipitibus valde incurvatis portatis differt.

Typus: c. 2 km south of Mt. Holland, Western Australia, 119° 44' E, 32° 12' S on the eastern side of the Mt. Holland-Hatter Hill Road, beside a mining transect. Uncommon. 50-80 plants were found on a rise in yellow sand with laterite outcropping, in association with *Melaleuca scabra*, *Adenanthos* spp., *Dryandra cirsiifolia*, *Grevillea apiculoba* scattered in mallee Eucalypt woodland. 4 October 1988. P.M. Olde et N. Marriott. (fls, fruit). Holotypus: NSW 222167.

The specific epithet is named for Neil Marriott (1951-), nurseryman, Deep Lead, western Victoria, on whose small property most Australian species of *Grevillea* are cultivated and whose life-long interest in the genus *Grevillea* led to his discovery of the species.

An open, multi-stemmed and lignotuberous shrub 0.8-1.2 m high, 0.5-1 m wide; much-branched, and dense when young, becoming open and spindly with age. Branchlets angular and ridged, occasionally rounded, tomentose to villous, or loosely so, the hairs two-armed, white, relatively long (1-1.5 mm), soon falling but persisting in the leaf axils. Leaves sessile, dull green, ascending to spreading, simple and linear or obovoid, very often apically bifid, trifid or tripartite; apex of leaves or lobes obtuse-mucronate or occasionally acute and pungent; leaf base truncate to subamplexicaul. Mature leaves (0.5-) 1-5.3 cm long, 1.5-3.5 mm wide, sometimes slightly downcurved; upper surface markedly scabrous, glabrous or sprinkled with erect, white two-armed hairs, only the midvein visible as an impressed groove; margin smoothly revolute, sometimes obscuring the undersurface except for the midvein; lower surface villous or loosely so, often obscured, midvein prominent; texture coriaceous. Juvenile leaves 0.8-3 cm long, 2.5-



CL. Payne

Grevillea Marriottii Habit x 1.15, fruit x 2 flower x 10 mature leaf x 2 juvenile leaf x 1 nectary x 50.

12 mm wide, white villous or loosely so, sometimes with mixed reddish and ferruginous hairs, oblong to obovate, usually broader than adult leaves with flat or shortly recurved margins and conspicuous lateral venation mainly on the undersurface; texture chartaceous. *Inflorescence* \pm 1.5 cm long, 1 cm wide, erect, terminal, simple, subsessile or very shortly pedunculate, obovoid to dome-shaped, dense, often subtended by one or two axillary florescent branchlets; peduncles 1-3 mm long, villous; floral rachis 3-5 mm long, densely villous, wider than the peduncle; bracts 1-1.5 mm long, 0.4-1 mm wide, conspicuous and spreading in bud, ovate with acute apex, densely villous outside, with mixed white and ferruginous hairs, glabrous at the base inside, densely villous above, some bracts persistent after anthesis; pedicels 3-4 mm long, appressed-villous, hairs fawnish and white. *Torus* 0.7-0.8 mm across (dorsal to ventral), oblique at 30-40° to line of stipe. *Nectary* prominent, oblong with lipped apex (apparent on dried specimens), erect and appressed to the stipe, 0.5 mm high, extending 0.4 mm above the toral rim, 0.1 mm thick at the level of the rim. *Perianth* \pm 3 mm long, 0.7 mm wide, white, oblong, undilated at the base, often persistent to fruiting, appressed-villous outside, glabrous inside in the basal 1.5-2 mm, papillose in the upper half almost to the limb; dorsal tepals 6.5 mm long, 0.5 mm wide; limb revolute, ovoid, apiculate to subpyramidal. *Pistil* 10.5-11.7 mm long; stipe 1.5-2.2 mm long, broader than the style, densely villous on the dorsal side, glabrous on the ventral side; ovary 0.6-0.9 mm long, obliquely ovoid, densely white villous; ovules 2; style white, villous at the base with ascending hairs for up to 2 mm from the ovary, otherwise strongly but minutely papillose (or bearing short, erect, inconspicuous papilloid hairs) to within 2 mm of the apex, strongly curved especially in the upper 3 mm, dilating suddenly at the flanged style-end; pollen-presenter oblique at c. 45°, 0.8-1.00 mm long, 0.7-0.8 mm wide, c. 0.2 mm high, \pm square, broadly convex with prominent, central stigma. *Fruits* 10-14 mm long, 4-5 mm wide, often clustered in heads, oblique on strongly incurved stipes, oblong to oblong-ellipsoidal, slightly dorsally concave in side view with a prominent apical attenuation; before dehiscence, faintly ribbed, surface pubescent with mixed two-armed and glandular hairs; after dehiscence, conspicuously 3-ribbed, the surface glabrous, rugose, cracking with age, the follicle halves remaining joined but becoming \pm flat in side-view with upturned apex and base; style fragile; pericarp \pm 0.8 mm thick with membranaceous inner surface; *Seeds* not seen.

Flower colour:

Pedicels: pinkish-brown.

Perianth: before anthesis, tepals green becoming cream to white; limb grey-green becoming white; after anthesis, tepals turning rapidly fawn with pinkish tinges to black. Perianth hairs white, a few on limb with reddish cell contents.

Stipe and ovary: light green beneath white indumentum.

Nectary: white.

Style: greenish white ageing cream to white, then black.

Style-end: cream to white, some flushed pink.

Pollen-presenter: cream to white.

Fruit: green with attached style red at the base when young, becoming black.

VARIATION: A stable and uniform species. Juvenile plants have broader, thinner leaves with conspicuous lateral venation.

Identifying features:

1. Leaves 1.5-3.5 mm wide, conspicuously granulose, EITHER simple and entire, OR, more often apically bifid, trifid or tripartite.
2. Ovary densely white villous with spreading hairs.
3. Fruits often clustered in heads when young, borne on markedly incurved stipes; after dehiscence, becoming flat in side view, the surface conspicuously 3-ribbed.

Affinities: *G. lissopleura* has similar flowers and occurs in the same area. It can be distinguished by its leaves which are narrower (1-1.2 mm wide), always simple and linear, with the upper surface smooth and longitudinally ribbed, its ovary bearing appressed hairs, its fruits borne erect on the stipes.

Distribution: Western Australia, where confined to the area near Mt. Holland, south of Southern Cross. Plants were seen both north and south of Mt. Holland over a distance of c. 20 km by road.

Climate: Hot, dry summers; mild to cool winters. Average annual rainfall 250-280 mm.

Conservation status: Suggested 2R (terminology as per Briggs & Leigh). Initial searches indicate that *G. marriottii* may be confined to the Mt. Holland area, although most investigations were undertaken close to the road or along mining transects. However, more searches are needed. The status of the land on which the species is found is uncertain but mining surveys are currently (October 1988) being undertaken.

Habitat: It occurs in yellow or white sand over laterite on rises or on the tops of lateritic cappings in association with *Grevillea apiculoba* and sometimes *Grevillea pilosa* subsp. *dissecta*.

Flowering period: (?August)-October.

Ecology: The species appears to be restricted to rises either in yellow or white sand underlain by laterite or on the ridges growing in pure laterite. While exploring another mining transect c. 1 km further south, young plants were found regenerating around the edge of a gravel pit in pure laterite. A small seedling was collected here and pressed. Most flowering was finished but appeared to have been dense and considerable quantities of seed were being set. The younger plants were much bushier and lusher than those collected at the type locality, where their spindly condition reflected both their age and much harsher, drier times. In the population from which the Type specimen was collected, young growth was observed to be arising from near the base of some plants. However, an examination of these plants for lignotuberosity was overlooked and needs to be confirmed by further field work.

Propagating material was sent from both populations to Peter Abell, Royal Botanic Gardens, Sydney and to W.R. Elliot, nurseryman, Melbourne. Peter Abell successfully grafted the species onto *G. robusta* and the taxonomic description of developing bracts is based on observations of these plants in June 1989. Cuttings were also struck by W.R. Elliot.

No insects or birds were seen attending the few inflorescences present at the time of collection. However, a relatively sizeable drop of nectar was observed in mature flowers.

Specimens seen: 2 km S. of Mt. Holland, W.A. P.M. Olde and N. Marriott, 4.x.1988 HOLOTYPE 222167 NSW. ISOTYPE PERTH.

3 km S. of Mt. Holland, W.A. around gravel pit in pure laterite. P.M. Olde and N. Marriott, 4.x.1988. NSW 222281. Several non-holotype duplicates of adult plants from this locality KWPA, MEL, CBG, CANB..

3 km S. of Mt. Holland, W.A. P.M. Olde and N. Marriott, 4.x.1988. Juvenile plant growing in gravel pit in pure laterite. NSW 222282.

Two living plants grafted from scion material collected at the same site as the holotype were also examined. These potted plants flowered in August/September 1989 at the Royal Botanic Gardens, Sydney.

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A NEW SPECIES OF ACACIA FROM WESTERN AUSTRALIA

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INTRODUCTION

Acacia declinata has been in cultivation for at least seven years in the garden of the Western Australian Herbarium, as well as at least two other locations in the State, without a name; now it will be offered to the public by one or more nurserymen and a name is needed in order to make it known to the market. It appears to do well in full sun and partial shade, making a very prickly, dense ground cover more resistant to treading upon than even *Hemiandra pungens*!

TAXONOMY

Acacia declinata Cowan & Maslin, sp. nov. (Fig. 1).

Typus: Amelup, Borden Road, Western Australia, 28 Sept. 1972, A.M. Ashby 4603 (holo: PERTH; iso: CANB, K, NY, PERTH).

Frutex dense intricate multiramosus prostratus 25-40 cm altus, ad c. 2 m diametro, ramulis teretibus, puberulis, pilis demum + declinatis. Phyllodia subteretia, compressa in sicco, supradato-pungentia, mucrone brunneo, pulvino nullo vel ad 0.3 mm longo, 7-22 mm longa, 0.8-1.2 mm lata, patentia sed denum plerumque declinata, recta ad leviter recurvata, glabra, medio-viridia, nervis 8, nervo adaxiali incompleto, glande plerumque nulla, interdum praesenti, ovali ad circulari, 1-3 mm supra basem phyllodii. Pedunculi 4-8.5 mm longi, graciles, glabri ad parce puberuli, bracteis basalibus oblongo-ovatis, cucullatis, acutis, 1-1.5 mm longis, puberulis. Capitula globularia, vivide lutea, circa 6 mm (2.5-3.5 mm in sicco) diametro, 9-20-floribus, bracteolis linearibus ad lineari-spathulatis, ciliolatis. Flores pentameri, sepalis



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