

***Hibbertia hooglandii* (Dilleniaceae), a new species from the Kimberley Region, Western Australia**

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Abstract

Wheeler, J.R. *Hibbertia hooglandii* (Dilleniaceae), a new species from the the Kimberley Region, Western Australia. Nuytsia 7(1): 69-73 (1989). A new species, *Hibbertia hooglandii* J.R. Wheeler, is described and illustrated. This species is endemic to the Kimberley Region. Its closest relative appears to be *H. muelleri* Benth. The tentative placement of the new species in *H.* section *Hemistemma* (Thouars) Benth. is discussed.

Introduction

This paper describes a new species, *Hibbertia hooglandii*, to provide a name for use in the forthcoming "Flora of the Kimberley Region". This species, endemic to the Northern Botanical Region as defined by J.S. Beard (1980), was first collected in 1976.

Description

***Hibbertia hooglandii* J.R. Wheeler, sp. nov. (Figure 1)**

Fruticulus caulibus rufis glabrescentibus. Folia subsessilia lineares supra glabra, margine revoluta. Flores solitarii axillares pedunculati. Bractea linearis vel subulata. Sepala elliptica extra pilis implicatis crispatis obtectis. Staminodia omnia extra stamina in uno latere floris posita. Stamina in seriebus duobus vel tribus omnia in uno latere floris posita. Carpella 2, dense villosa; ovula in quoque carpello 2.

Typus: Mitchell Plateau, N of camp, Western Australia, 27 Feb. 1979, J.S. Beard 8467 (holo: PERTH; iso: CANB).

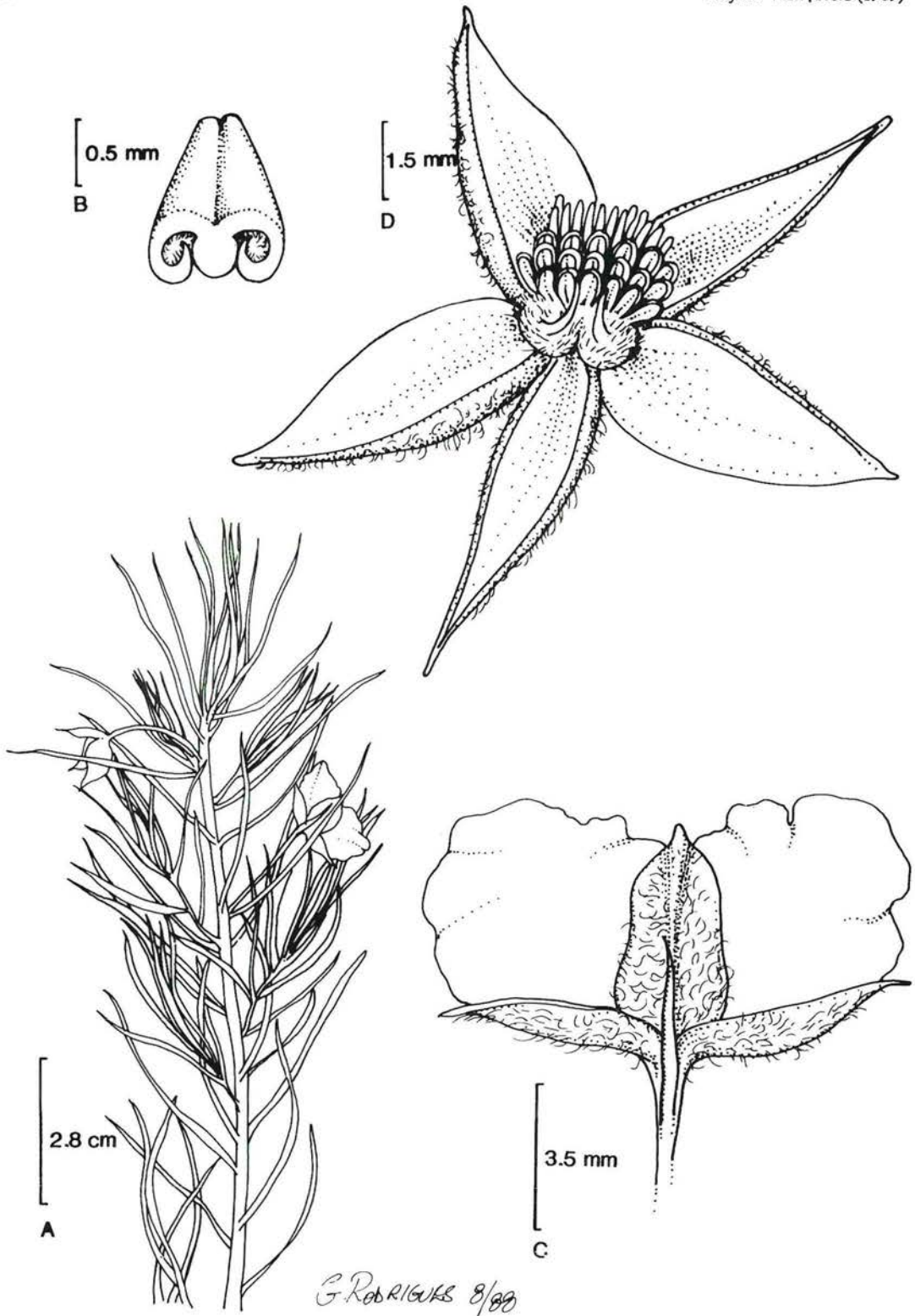


Figure 1. *Hibbertia hooglandii*. A - Flowering branch. B - Part of leaf to show revolute margins. C - Flower showing bract, sepals and petals. D - Flower with petals fallen showing staminodes, stamens and carpels. Drawn from K.F. Kenneally 7048 (PERTH).

Small *shrub*, erect or spreading, to 0.4 m high, often multistemmed. *Stems* reddish brown, glabrescent, somewhat angular at least when young. Young shoots with a few simple, curly, tangled hairs. *Leaves* scattered sometimes a few of them clustered together, subsessile with a few hairs in the axil, linear, 13-55 x 0.3-0.5 mm, apparently terete with revolute margins, acute to mucronulate; upper surface glabrous and grooved longitudinally down the centre; lower surface apparently glabrous, but with minute curly hairs hidden by the margin which is revolute to the prominent and glabrous midrib. *Flowers* solitary, axillary. *Peduncle* (6)15-35 mm long, slender, glabrous. *Bract* beneath the flower linear to subulate, 2.5-7 mm long, glabrous or with curly, tangled hairs, acute. *Sepals* elliptic, midrib thickened, outer surface with curly, tangled hairs which are usually white but also occasionally ferruginous, inner surface glabrous, apex acute to mucronulate; outer 2 sepals 5-8 x 2-3 mm, sometimes to 3.5 mm wide in fruit, narrower than the inner sepals; inner sepals 5.5-8 x 2.5-4 mm, sometimes to 5.5 mm wide in fruit, margin thinner and often glabrous or almost so. *Petals* golden yellow, obovate and obcordate, 5.5-11 x 5-10 mm. *Staminodes* 6-13, all on one side of the flower in a row outside the stamens, linear, 1.5-3 mm long, not differentiated into filament and anther. *Stamens* 17-25, all on one side of the flower in 2 or 3 rows inside the staminodes, free except at the very base; filament (0.5)1-1.5 mm long; anther narrowly oblong, 2-2.3 mm long, dehiscent by longitudinal slits, obtuse. *Carpels* 2, globular, c. 1 mm across, densely villous with white, curly hairs; ovules 2 per carpel; style more or less erect, c. 2.5 mm long, glabrous. Fruiting carpels globular to obovoid, 5-6.5 x 4.5-5 mm, with white, curly, tangled hairs, often only one carpel maturing. *Seeds* light brown, more or less globular, c. 5 x 4-5 mm, the lower two thirds covered by a waxy aril, often only one seed developing.

Specimens examined. WESTERN AUSTRALIA: King Edward River, Mitchell Plateau road, 14° 55' S, 126° 13' E, A.C. Beaglehole 51927 (PERTH); McDonald Creek, 31 km NE Mitchell River turnoff on Gibb River-Kalumburu Mission road, 14° 47' S, 126° 30' E, A.C. Beaglehole 52188 (PERTH); King Edward River, c. 50 km NE 'Mitchell River' Homestead, 15° 08' S, 126° 11' E, A.C. Beaglehole 58931 & E.G. Erroy 2631 (PERTH); Mitchell Plateau, N of mining camp, 14° 49' S, 125° 50' E, A.C. Beaglehole 59059 & E.G. Erroy 2759 (PERTH); Mitchell Plateau, 15 km W of airstrip on Mitchell Falls road, 14° 48' S, 125° 45' E, T.P. Farrell 954 (PERTH); Pim Hill, 17 km NNW of Kalumburu Mission, Napier Broome Bay, 14° 11' S, 126° 32' E, S.J. Forbes 2185S (PERTH); Mitchell Plateau, 50 km ESE of mining camp on road to Theda, 14° 54' S, 126° 11' E, P.A. Fryxell & L.A. Craven 4059 (CANB); Mitchell Plateau, 14° 50' S, 125° 50' E, R.J. Hnatiuk MP47 (PERTH); Mitchell Plateau, 14° 50' S, 125° 50' E, K.F. Kenneally 4942 (PERTH); Mitchell Plateau, Amax Basecamp, 14° 49' S, 125° 51' E, K.F. Kenneally 6807 (PERTH); Mitchell Plateau, track to Surveyors Falls, 14° 41' S, 125° 43' E, K.F. Kenneally 7048 (PERTH); Mitchell Plateau, 1 km NW of mining campsite, 14° 49' S, 125° 50' E, K.F. Kenneally 7723 (PERTH); King Edward River, 0.7 km SSW of ford crossing on old 'Mitchell River' Station road, 15° 07' S, 126° 07' E, B.L. Koch 597 (PERTH).

Distribution. Endemic to the Kimberley Region. Recorded from between Mitchell Plateau and the Gibb River - Kalumburu road, also a sterile collection from Pim Hill, 17 km NNW of Kalumburu (Figure 2).

Habitat. Occurs in palm-eucalypt woodland or *Eucalyptus miniata*-*Eucalyptus tetradonta* woodland, mainly on lateritic soil but also recorded on clay over basalt or on sandstone.

Flowering and fruiting period. Flowers and fruits recorded for October, January, February, May and June.

Affinities. The closest relative of *Hibbertia hooglandii* appears to be *H. muelleri* Benth., in *H.* section *Hemistemma* (Thouars) Benth. The latter species appears to be restricted to the Daly River area of Northern Territory and differs from *H. hooglandii* principally in the inflorescence. The flowers of *H. hooglandii* are always solitary and pedunculate, whereas in *H. muelleri* they are always arranged in pedunculate, one-sided, several-flowered spikes. *H. muelleri* has a denser

indumentum than *H. hooglandii* and has an ovate rather than linear to subulate bract below each flower.

Discussion. The species in *Hibbertia* section *Hemistemma* characteristically have sessile flowers arranged in a one-sided, several-flowered, pedunculate spike, broad bracts, an indumentum of simple hairs, numerous stamens and staminodes both of which occur on one side of the flower with the staminodes outside the stamens, two densely hairy carpels each with 2-4 ovules.

Hibbertia section *Hemistemma*, as recognised by Bentham (1863) and Gilg & Werdermann (1925), also includes the south-western species *H. verrucosa* (Turcz.) Benth. The latter species I believe to be misplaced in *H.* section *Hemistemma*. Not only does it have one-flowered peduncles and stellate hairs, but the staminodes, although outside the stamens, also extend each side of the stamens. If *H. verrucosa* is removed from this section then the remaining species form a more cohesive group, all tropical in distribution.

Hibbertia hooglandii exhibits stamens, staminodes and indumentum characteristic of *H.* section *Hemistemma* but lacks the typical several-flowered spikes with sessile flowers subtended by broad bracts. Instead it has solitary, pedunculate flowers, each subtended by a narrow bract. Despite this anomaly, *H. hooglandii* would seem best placed in *H.* section *Hemistemma*, pending a reassessment of sectional boundaries within the genus.

Etymology. This species is named after Dr R.D. Hoogland, in recognition of his contribution to the taxonomy of the genus *Hibbertia*.

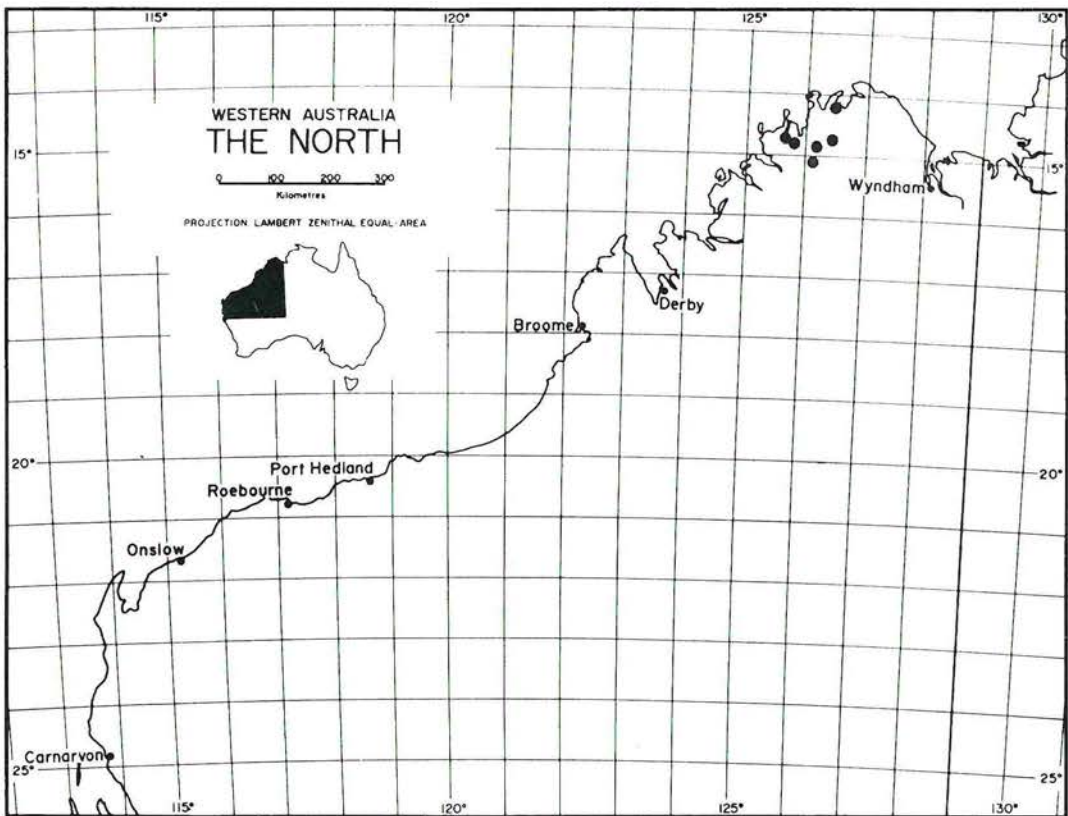


Figure 2. Distribution of *Hibbertia hooglandii*.

Acknowledgements

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