

## A new species of *Pilostyles* (Rafflesiaceae) from Western Australia

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### Abstract

Dell, B. A new species of *Pilostyles* (Rafflesiaceae) from Western Australia. Nuytsia 4(3): 293-294 (1983). A new species of *Pilostyles*, *P. collina* Dell, is described from Western Australia. Its distribution and resemblance to *P. hamiltonii* C. A. Gardner is discussed.

### *Pilostyles collina* Dell, sp. nov.

*Alabastra* 1.5-2 mm diam. *Flores* aurantiaci et rosei. *Bracteae* 12-15, triseriatae, rufo-aurantiacae, apice ipso brunneolo-aurantiacae, externae suborbiculares vel ovatae, 1.5-2 mm longae et 1.2-1.5 mm latae, internae oblongae vel ovatae, 1-1.5 mm longae et 0.8-1 mm latae. *Segmenta perianthii* 4-5, pallide rosea, oblonga vel angusta obovata, basi abrupte attenuata, 1.2-1.5 mm longa et 0.8 mm lata, apicibus brunneolo-aurantiacis, truncatis vel praemorsis. *Baccae* 2-3 mm diam., polyspermae.

*Typus*: Middle slope Peak Charles, 32°53'S, 121°10'E, Western Australia. "Endophyte with small pink and orange flowers on *Oxylobium* sp. Host 1-2 m tall in thickets on granite". 10 January 1982, B. Dell 8216 (holo: PERTH; iso: CANB, K, G, MO, PERTH).

*Vegetative plant* entirely embedded in stems of host plant. *Flower buds* 1.5-2 mm diam., globose, solitary, unisexual, fleshy, exerted from bark of host plant. *Bracts* 12-15, reddish-orange, triseriate, imbricate, concave, base broad and fleshy, gradually thinning towards apex, irregularly erosulate along the margin; apex brownish-orange, obtuse; *bracts of outer whorl*, suborbicular to ovate, 1.5-2 mm long, 1.2-1.5 mm wide; *bracts of inner whorls* oblong to ovate, 1-1.5 mm long, 0.8-1 mm wide. *Perianth segments* 4-5, pale pink, free, distinct or imbricate, soft and fleshy, shortly attenuate at base, oblong to narrow obovate, 1.2-1.5 mm long, 0.8 mm wide; apex brownish-orange, truncate or praemorse. *Disc* epigynous, pink, fleshy when young. *Column* in male flowers pink, cylindrical,  $\pm$  perianth length, apex with a thickened margin and one or two sulci in a shallow depression; *anthers* biseriate, numerous, contiguous under the margin, unilocular. *Column* in female flowers very short, expanded at apex bearing ring-shaped *stigma* on its margin; *ovary* lemon-yellow, globose, half inferior, unilocular; *ovules* numerous on parietal placentae. *Fruit* globose, a many seeded berry, 2-3 mm diam.

*Selected specimens*. WESTERN AUSTRALIA: Foot of Bluff Knoll (34° 22'S, 118° 15'E), K. F. Kenneally 6529 (PERTH); Peak Eleanora, 10 Jan. 1980, J. S. Pate (PERTH).

*Distribution.* Western Australia: Known only from Peak Charles and Peak Eleanora (Fitzgerald Peaks), nearby Dog Rock (Pate, pers. comm.) and Bluff Knoll (Stirling Range).

*Host.* Parasitic on *Oxylobium linearifolium* (G. Don) Domin (Peak Charles); *O. atropurpureum* Turcz. and *Gastrolobium velutinum* Lindl. (Bluff Knoll).

*Flowering period.* January-March.

*Pilostyles collina* may be readily distinguished from the closely related *P. hamiltonii* by three features. Firstly, the open flowers of *P. hamiltonii* are reddish-purple whereas the open flowers of *P. collina* are a blend of orange and pink. Unlike *P. hamiltonii*, the bracts and perianth segments of *P. collina* have prominent brownish-orange tips. Secondly, the bracts of *P. collina* occur in three whorls and number from 12-15. *Pilostyles hamiltonii* bracts are biseriate and number from 8-12. Thirdly, the open flowers of *P. collina* (1.5-2 mm diam.) are smaller than *P. hamiltonii* (2-3 mm diam.). In addition the two species parasitize different hosts. *Pilostyles collina* has been recorded on *Oxylobium* and *Gastrolobium* whereas *P. hamiltonii* is endophytic in *Daviesia* and *Jacksonia* (Dell 1981). The two species are allopatric with *P. hamiltonii* having the largest geographical range occurring in both the jarrah and wandoo forests (Dunsborough to Kalamunda) and coastal sandplain (Moore River to Eneabba).

On the three host species examined unisexual male and female *P. collina* flowers emerged at random from within the same host stem.

#### Reference

- Dell, B. (1981). Notes on the biology of *Pilostyles* (Rafflesiaceae) in Western Australia. W. Austral. Herb. Res. Notes No. 5: 71-79.