A new species of *Pimelea* (Thymelaeaceae) from south-western Australia

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Abstract

Rye, B.L. A new species of *Pimelea* (Thymelaeaceae) from south-western Australia. Nuytsia 7(1): 59-62 (1989). The new species *Pimelea pelinos* is named, described and illustrated. It is known only from a cluster of salt lakes near Scaddan in the south-west of Western Australia. A few printing errors that occurred in an earlier paper on the Thymelaeaceae are noted.

Introduction

A recent revision of the Thymelaeaceae of Western Australia (Rye 1988) describes 45 species of *Pimelea* occurring in the state. Another *Pimelea* species has now been discovered near Scaddan in south-western Australia. The first known collection of the species was made from a male plant in 1984 and came to my attention when the revision paper was in press. More complete material, collected in 1988, has made it possible to describe both male and female flowers of the species although the fruits are still unknown. As well as providing a description and name for the species, this paper amends the key to Western Australian *Pimelea* species of Rye (1988, 143) so as to accommodate the new species.

Pimelea pelinos Rye, sp. nov. (Figure 1)

Frutex dioecius. Caules foliaque glabra. Flores extus pubescentes. Floris tubus internus glaber. Sepala interna pubescentia. Antherae sessiles.

Typus: East of Scaddan, Western Australia, 10 June 1988, *A.J.G. Wilson* 114 (holo: PERTH; iso: CANB, K, MEL). The type collection is from an individual female plant.

Dioecious shrub. Stems and leaves glabrous. Flowers hairy outside. Floral tube glabrous inside. Sepals hairy inside. Anthers sessile.

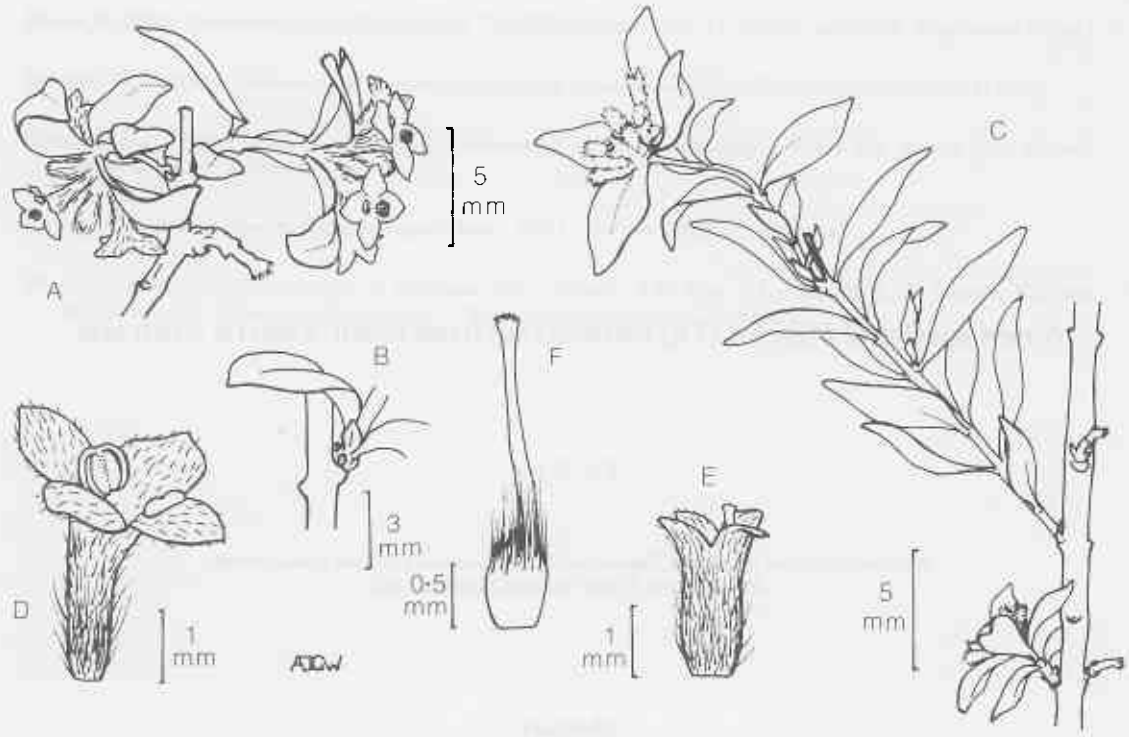

Figure 1. *Pimelea pelinos*. A - Male flowering branch. B - Base of flowering branchlet. C - Female flowering branch. D - Male flower. E - Female flower. F - Ovary and style. Drawn from *A.J.G. Wilson* 112 (A, B, D), 113 (E, F) and 114 (C).

Shrub, 0.3-0.6 m high, single-stemmed at ground level, erect or straggling above, dioecious. *Stems* glabrous, yellowish or red-tinged at first, becoming dark grey-brown then medium to dark grey further from apex. *Leaves* opposite, antrorse to patent, glabrous; petiole 0.2-0.5 mm long; blade concolorous, green, narrowly obovate or rarely obovate, 2.5-11.5 x 0.8-2.5 mm, acute. *Flowering branchlets* axillary, 0.7-9 mm long not including flowers, with minute sessile reddish bracts at base; peduncle 0.5-3.5 mm long, sometimes hairy. *Involucral bracts* 2 or 4, sessile, leaf-like in colour and texture, ovate to obovate or rarely narrowly so, 3.3-6 x 1.7-3 mm, obtuse, glabrous or inner pair of bracts with hairs along middle of adaxial surface. Inflorescence terminal, compact, 5-21-flowered. *Pedicels* c. 0.5 mm long, densely hairy; hairs antrorse, up to 0.7 mm long. *Flowers* cream, densely hairy outside, the hairs antrorse; tube glabrous inside. *Male flowers*: tube 2-3.2 mm long, 0.4-0.6 mm diameter at middle, expanded to 0.7-1 mm at summit, with hairs 0.5-0.7 mm long towards base and smaller hairs 0.3-0.4 mm long above; sepals ovate, 1-1.5 mm long, hairy inside, the hairs on both surfaces similar to those on distal part of floral tube; stamens virtually sessile, the filament c. 0.05 mm long, the anther 0.5-0.7 x 0.4-0.6 mm, the slits semi-lateral after dehiscence; pistillode 0.2-0.3 mm long. *Female flowers:* tube c. 1.5 x 1 mm, scarcely continued above ovary-portion, c. 0.8 mm diameter at summit, uniformly hairy, the hairs up to 0.8 mm long; sepals ovate, c. 0.8 mm long, hairy inside in distal half, the hairs of both surfaces up to 0.4 mm long; staminodes c. 0.3 mm long; ovary c. 1 mm long, with an apical tuft of hairs up to 0.7 mm long; stigma somewhat brush-like. *Fruit* not seen.

Other specimens examined. WESTERN AUSTRALIA: E of Scaddan, *P. van der Moezel* 367 (PERTH); E of Scaddan, *A.J.G. Wilson* 112, 113 (PERTH).

Distribution. (Figure 2.) Known only from the vicinity of the type location east of Scaddan.

Habitat. Occurs around salt lakes. Together with a variety of other shrub species, *Pimelea pelinos* grows in clay or somewhat sandy clay on the higher ground slightly above the area occupied by samphires.

Flowering period. June-July.

Derivation of name. From the Greek word *pelinos* meaning 'of clay or mud', referring to the habitat of the species.

Affinities. Pimelea pelinos belongs to *Pimelea* sect. *Pimelea* but does not appear to have any very close relatives. It can be confused with *P. microcephala* R. Br. but differs in having flower clusters on short modified branchlets, in being hairy on the adaxial surface of the sepals and in its subsessile anthers.

Conservation status. There appears to be a large number of plants of *Pimelea pelinos* in its only known area of occurrence, which extends for at least two kilometers along a series of salt lakes. A.J.G. Wilson (pers. comm.) observed about 100 plants during a quick survey of five lakes in the vicinity. She also examined many more lakes extending north of this area to near Salmon Gums, as well as a few lakes to the east. Most of these lakes had a gypsum rather than clay substrate and none had populations of *P. pelinos*. A detailed survey of the lakes at Scaddan and other areas nearby is needed to assess the conservation status of this species more exactly but it does appear to be geographically restricted. It is not known from any conservation reserves.

Notes. Although the head-like flower clusters sometimes appear almost sessile at first glance, they are on well defined branchlets, which are modified by the presence of minute sessile bracts at the base. The branchlets have one to several pairs of leaves below the involucral bracts of the flower clusters.

The stigma was slightly exserted from the throat of the female flowers examined, but most flowers were still in bud and those measured had only just opened. In older flowers the style may become more prominently exserted.

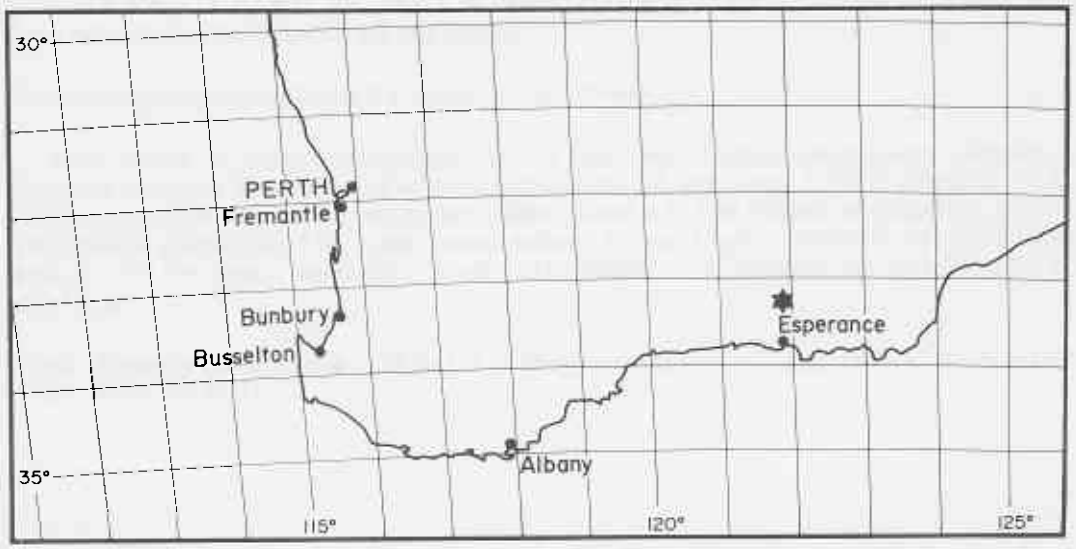

Figure 2. Distribution of *Pimelea pelinos* (●).

Dioecious species of *Pimelea* usually appear to have about equal numbers of male and female plants. However, A.J.G. Wilson (pers. comm.) estimated that there were about ten times as many male as female plants in the populations of *P. pelinos*.

Amendment to *Pimelea* Key

The fourth couplet of the key given in Rye (1988: 143) needs to be renumbered as the fifth and the new fourth couplet given below inserted before it. All subsequent couplets should be renumbered to become one number greater than they are at present.

4. Sepals hairy inside. Anthers subsessile ..... *P. pelinos*

4. Sepals glabrous inside. Anthers with a filament 0.4-1.4 mm long.

Errata to Thymelaeaceae Revision

Two of the figures given in Rye (1980), numbered 31 and 32, were printed at only half the magnification of all other figures in the paper; consequently the magnifications given in the captions are double the actual size for these figures.

In the key to sections of *Pimelea* on page 143, greater than and less than symbols were omitted in the fourth couplet. The couplet should read as follows.

4. Floral tube prominently constricted at cirumscission point, glabrous inside. Sepals narrowly ovate to elliptic. Stamens > 12 mm long ..... 5. *Macrostegia*

4. Floral tube not prominently constricted or, if so, then hairy inside above circumscission point. Sepals narrowly ovate to elliptic. Stamens < 10 mm long.

Acknowledgements

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References

Rye, B.L. (1988). A revision of Western Australian Thymelaeaceae. Nuytsia 6: 129-278.