Pimelea lyallii

BIOSTATUS
Native – Endemic taxon

CURRENT CONSERVATION STATUS
2023 | At Risk – Declining | Qualifiers: Sp, CD, DPS, DPT, RR
Jump to previous conservation statuses

CATEGORY
Vascular

STRUCTURAL CLASS
Trees & Shrubs - Dicotyledons

SIMPLIFIED DESCRIPTION
Low growing shrub with flexible twigs bearing crowded pairs of pointed leaves that are densely hairy underneath inhabiting dunes in southern New Zealand. Twigs usually buried in sand. Leaves 5–7 mm long by 2–3 mm wide. Flowers hairy, white, in clusters at tip of twigs. Fruit white.

FLOWER COLOURS
White

DETAILED DESCRIPTION
A small to medium-sized shrub. **Stems** prostrate, flexible, up to 600 mm long, sometimes producing adventitious roots if buried by sand. **Young branches** ascendant and moderately to densely clad in long, white (sometimes yellowish) hairs; internode length 2.5–8.0 mm; older stems sparsely hairy to glabrous, brown. **Node buttresses** short, lunate (0.3–0.5 mm), smooth, brown, hairless, or with sparse, short hair, masked by internode hair on young stems, not prominent on leafless stems. **Leaves** usually distant, sometimes closely spaced and imbricate, ascendant, then patent or deflexed, persistent, on short (0.5 mm), often red petioles; lamina pale green, glabrous above, moderately densely to densely covered in white to yellowish hair below (also along margins and at tip); 5–7 × 2–3 mm wide, elliptic to slightly ovate, flat to slightly concave above, midvein obscure below; acute, base cuneate. **Stomata** on both leaf surfaces. **Inflorescences** terminal on branchlets, loose, 3–4-flowered, sometimes clustered in groups of 2 or more; receptacles flat to convex, very hairy. **Involucral bracts** 4, up to 9 × 3 mm, sometimes with a few hairs on the upperside near the base, densely hairy below and on margins and tips. **Plants** gynodioecious. **Flowers** white, on short pedicels (0.5 mm); tube and calyx lobes very hairy outside; inside hairless; female tube 3.5 mm long, ovary portion 3 mm, calyx lobes 1.2 × 0.9 mm; hermaphrodite tube 5 mm long, ovary portion 2 mm, calyx lobes 2.0 × 1.6 mm. **Anther filaments** inserted at mouth of tube; anther yellow. **Ovary** very hairy at summit. **Fruits** ovoid, fleshy, 5.0 × 3.8 mm, white, opaque. The tube breaks off, irregularly, near the base as the fruits ripen. **Seeds** pyriform, with thin crest, 2.5 × 1.8 mm. Description based on Burrows (2009).

Fortrose Spit, Southland (leaf details). Photographer: Jesse Bythell, Licence: CC BY-NC.

Pimelea lyallii. Photographer: John Barkla, Licence: CC BY.

SIMILAR TAXA
Pimelea lyallii is easily recognised within its natural habitat because it is the only species found within active to semi-stable dune fields. *P. lyallii* could only be confused with plants currently attributed to *P. prostrata*. From this it is perhaps best distinguished by its longer leaves and flower perianths. Herbarium material is less easily resolved, particularly when it is sterile.

DISTRIBUTION
Endemic. Confined to the Foveaux Strait and Stewart Island/Rakiura coastline.

HABITAT
Coastal in sand dunes and their associated swales.

THREATS
Widespread along the south Otago, Foveaux Strait and Stewart Island/Rakiura coastlines but its range is contracting in the northern part due to dune consolidation, coastal development and the spread of weeds.

GENUS
Pimelea

FAMILY
Thymelaeaceae

AUTHORITY
Pimelea lyallii Hook.f.

SYNONYMS
None

TAXONOMIC NOTES
New Zealand *Pimelea* Sol. ex Gaertn. urgently require a full taxonomic revision using modern techniques.

ENDEMIC TAXON
Yes

ENDEMIC GENUS
No

ENDEMIC FAMILY
No

FLOWERING
October–April

FRUITING
November–April

PROPAGATION TECHNIQUE
Easy from semi-hardwood cuttings but difficult to maintain in cultivation.

WETLAND PLANT INDICATOR STATUS RATING
FACU: Facultative Upland
Occasionally is a hydrophyte but usually occurs in uplands (non-wetlands).

CULTIVATION
Occasionally available from some specialist native plant nurseries.

ETYMOLOGY
pimelea: from Greek pimelē, meaning “lard” or “soft fat,” presumably referring to the oily seeds or fleshy cotyledons.
lyallii: Named after David Lyall (1817-1895), 19th century Scottish naturalist and surgeon with the Royal Navy, who explored Antarctica, New Zealand, the Arctic and North America and was a lifelong friend of Sir Joseph Hooker.

NVS CODE
PIMLYA

PREVIOUS CONSERVATION STATUSES

2017 | At Risk – Declining | Qualifiers: CD, DP, RR, Sp
2012 | At Risk – Naturally Uncommon | Qualifiers: RR, Sp
2009 | At Risk – Naturally Uncommon
2004 | Gradual Decline
Jump to current conservation status

REGIONAL CONSERVATION STATUSES

Otago: 2025 | Regionally Threatened – Regionally Critical | Qualifiers: CI, DPT, PF, RF, RR Help
The regional threat classification system leverages off the national assessments in the NZTCS, providing information relevant for the regional context. Otago conservation status information is sourced from the "Conservation Status of Indigenous Vascular Plants in Otago, 2025" Jarvie S et al. (2025) report.

REFERENCES AND FURTHER READING

Burrows CJ. 2009. Genus *Pimelea* (Thymelaeaceae) in New Zealand 3. The taxonomic treatment of six endemic hairy-leaved species. *New Zealand Journal of Botany 47(3)*: 325–354. https://doi.org/10.1080/00288250909509813.

ATTRIBUTION

Description based on Burrows (2008).

MORE INFORMATION

https://www.nzpcn.org.nz/flora/species/pimelea-lyallii/

PDF DATE

25 May 2026