

Leptospermum repo

COMMON NAME

Waikato peat bog mānuka

FAMILY

Myrtaceae

AUTHORITY

Leptospermum repo de Lange et L.M.H.Schmid

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

Yes

STRUCTURAL CLASS

Trees & Shrubs - Dicotyledons

CURRENT CONSERVATION STATUS

2017 | Threatened – Nationally Critical | Qualifiers: DP, De

DISTRIBUTION

Endemic. New Zealand. North Island, greater Waikato lowlands, Coromandel Peninsula and Bay of Plenty (historically Northland and Taranaki).

HABITAT

Restiad bog and associated wetlands

DETAILED DESCRIPTION

Shrub to small tree (1)–3–(6)m tall, sometimes much reduced in extreme acid wetlands, then attaining heights of 100 mm or less. **Trunk** usually unbranched at base, up to 0.1 m d.b.h, usually devoid of branches in lower $\frac{1}{3}$ to $\frac{1}{2}$. **Bark** firmly attached, fibrous, often deeply fissured. **Branches** usually 3 or more, and openly branching with semi-erect to widely spreading branches, young stems copiously covered in (0.12–0.24)–0.48–(0.80) mm long, white, straight to slightly flexuous, sericeous, antrorse-appressed hairs, becoming glabrescent with age. **Vegetative buds** 3–8, mostly shedding soon after vegetative growth commences, rarely with a few persistent, (0.4)–0.6–0.8–(1.0) × (0.3)–0.5–0.7–(0.9) mm, amber to red-brown, scarious, oblong to ovoid, inner surface smooth, glossy, outer with frayed, lacerate margins or entire, basal portion densely invested in white antrorse-appressed to suberect sericeous hairs up to 0.01 mm long. **Leaves** pleasantly spicy-scented when crushed, divergent to spreading, (5.0)–8.0–11.0–(15.0) × (0.3)–0.5–0.8–(2.0) mm, glossy yellow-green, green to dark green; lamina linear, linear-lanceolate, narrowly lanceolate, occasionally filiform, flat to weakly concave, acute, minutely cuspidate, bases narrowly cuneate, margins minutely denticulate; surfaces sericeous hairy near base and along midrib, and proximal $\frac{1}{3}$ of leaf margin, glabrescent with hairs ± persisting on basal portion of leaf and; oil glands numerous, more evident when dry. **Perules** 4–6, shedding at bud burst, (0.4)–0.6–0.8–(1.0) × (0.4)–0.6–0.8–(0.9) mm, glabrous, hyaline, amber to pale red-brown, scarious, orbicular, margins usually entire, sometimes frayed inner surface smooth, glossy. **Inflorescence** monadic on short axillary brachyblasts, or, on occasion on long, 200 mm long or more, terminal shoots. **Prophylls** caducous, 2, 0.1–0.2 mm long, oblong, midrib scarcely developed, yellow-



Flowers, Kneebone Road, Te Mimiha Peat Bog, Hamilton Basin, Waikato. Photographer: Peter J. de Lange, Date taken: 12/12/2020, Licence: CC BY.



Flowering branches, Kneebone Road, Te Mimiha Peat Bog, Hamilton Basin, Waikato. Photographer: Peter J. de Lange, Date taken: 12/12/2020, Licence: CC BY.

green, green to red-green when fresh, tan when dry, abaxial surface densely invested in white sericeous hairs. **Pedicels** sessile, or 0.1 mm long at anthesis, elongating to 2.4 mm after anthesis, terete, sparsely invested with antrorse-appressed, sericeous white hairs. **Flower buds** clavate, tholiform with calyx lobes not meeting. Fresh flowers when fully expanded 10–11–(15) mm in diameter. **Hypanthium** (2.8)–3.0–(4.0) × (1.6)–2.2–(4.0) mm, green or honey-brown, obconic, obconic-funnelform; terminating in a slightly thicker rim bearing five calyx lobes; surface smooth (wrinkling in dry specimens) finely glandular punctate, glabrous. Calyx lobes 5, spreading, 2.4–2.6 × 2.4–2.6 mm, caducous, broadly deltoid with rounded apices, usually glabrous except for margins which may be sparsely ciliate, oil glands colourless. Receptacle dark red at anthesis. **Petals** 5, spreading, 4–5 × 2–3 mm, white, orbicular, apex obtuse to rotund, margins finely crimped, oil glands not evident. **Stamens** 15–36, in 1–2 weakly defined whorls adnate to receptacular rim, filaments white. Antipetalous stamens 3(+2), antisepalous 4–6. Outermost antipetalous stamens erect or weakly incurved, on filaments 1.20–1.68 mm long, occasional inner whorl of 2 stamens present, these erect or incurved, 0.9–1.2 mm long, positioned at base of the outermost antipetalous pair. Antisepalous stamens about half length of antipetalous, on filaments 0.6–0.84 mm long, incurved, erect or in mixtures of both. Anthers dorsifixed 0.36 × 0.12 mm, ovoid, latrorse. Pollen white to cream. Anther connective gland 0.24 mm long, amber, narrowly obovoid. **Ovary** 5-locular, each loculus with c. 80 ovules, set in 8 rows on each placental lobe. Style (0.96)–1.9–2.0 mm long at anthesis, elongating to 3 mm after anthesis, green (very rarely pink—one population); stigma 0.70–0.78 mm in diameter at anthesis, expanding to 0.9 mm following anthesis, flat, green, sometimes flushing pink at anthesis, finely papillate rugulose. **Fruits** persistent, woody, (5)–8–(9) × (5)–6 mm, pale brown-grey to grey, hemispherical / globose (sometimes broadly obconic), centre often with persistent style remnant, valves 5, exerted as a dome, indented at centre, ± symmetrical with base. Valves opening on dead branches or following fire. **Seeds** 2.3–2.4–(2.6) × 0.24–0.24 mm, linear-cuneiform, curved, flexuous to sigmoid, laterally compressed or terete, 2–4-angled, apex truncate or acute, testa dull or glossy, orange-brown, glabrous, longitudinally striate.

MANAAKI WHENUA ONLINE INTERACTIVE KEY

[Key to the Myrtaceae of New Zealand](#)

SIMILAR TAXA

From *Leptospermum scoparium* s.s., *L. repo* differs ecologically by its restriction to peat bog habitats, and morphologically by its gracile growth habit; longer, finer, linear, linear-lanceolate leaves, and larger flowers which have white petals, usually white stamen filaments and usually green style and stigma. *Leptospermum scoparium* s.s. has smaller flowers, which may have pink-tinged petals, usually pink-tinged or pink stamen filaments, and pink-tinged, pink or carmine coloured style and stigma; the leaves of *L. scoparium* s.s. are broadly ovate, oval to orbicular and sharply acuminate. *Leptospermum repo* is allied to three other northern New Zealand *Leptospermum*, only one of which is formally recognised, *L. scoparium* var. *incanum*. From that variety *L. repo* is by its much narrower, linear, linear-lanceolate leaves, that are only sparsely hairy – broadly lanceolate, and densely covered in hairs when young, and notably by its smaller, white rather than larger, usually pink tinged, pink or even red flowers (for other differences see de Lange & Schmid 2021).

FLOWERING

October–January

FLOWER COLOURS

White

FRUITING

Fruits are found throughout the year.

PROPAGATION TECHNIQUE

Easily grown from fresh seed. *Leptospermum repo* is an attractive species on account of its gracile growth habit, fine, linear, linear-lanceolate leaves, and floriferous habit.

THREATS

Leptospermum repo has been eliminated from all but c. 10% of its former wetland habit (it now seems to be extinct in Northland and Taranaki). Decline is still ongoing in some of the peat bogs in which remnant populations persist as a result of farming, roading and on going. The species remains common in the larger, intact peat bogs (e.g., Whangamarino, Kopouatai). One serious threat to the species is myrtle rust diseases caused by the naturalised *Austropuccinia psidii*. Although this rust has yet to be observed on *Leptospermum repo* it is believed only to be a matter of time before it does attack this species. For this reason, *L. repo*, as *Leptospermum* aff. *scoparium* (c) (AK 191319; “Waikato peat bog”) was listed by de Lange et al. (2018) as “Threatened / Nationally Critical” qualified “DP [Data Poor]”, “De [Designated]”. In their paper, de Lange & Schmid (2021) saw no reason to change that status, though *L. repo* should also be qualified “Rel [Relict]” considering its historic loss.

ETYMOLOGY

leptospermum: Slender seed

repo: The epithet “repo” is taken from Te Reo Māori (Māori Language) for “swamp”; it refers to the wetland habitat in which *Leptospermum repo* grows

ATTRIBUTION

Fact sheet prepared for NZPCN by P.J. de Lange 30 August 2021. Description from de Lange & Schmid (2021).

REFERENCES AND FURTHER READING

de Lange PJ, Schmid LMH. 2021. *Leptospermum repo* (Myrtaceae), a new species from northern Aotearoa / New Zealand peat bog habitats, segregated from *Leptospermum scoparium* s.l. *Ukrainian Botanical Journal* 78(4): 247–265. <https://doi.org/10.15407/ukrbotj78.04.247>

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NZPCN FACT SHEET CITATION

Please cite as: de Lange, P.J. (Year at time of access): *Leptospermum repo* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network. <https://www.nzpcn.org.nz/flora/species/leptospermum-repo/> (Date website was queried)

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/leptospermum-repo/>