

Kunzea linearis

COMMON NAME

rawiri mānuka, kānuka

SYNONYMS

Leptospermum ericoides var. *lineare* Kirk, *Leptospermum lineatum* Cockayne; *Kunzea ericoides* var. *linearis* (Kirk) W.Harris

FAMILY

Myrtaceae

AUTHORITY

Kunzea linearis (Kirk) de Lange et Toelken

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

Yes

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Trees & Shrubs - Dicotyledons

CHROMOSOME NUMBER

2n = 22

CURRENT CONSERVATION STATUS

2017 | Threatened – Nationally Vulnerable | Qualifiers: DP

PREVIOUS CONSERVATION STATUSES

2012 | At Risk – Declining

2009 | At Risk – Declining

2004 | Serious Decline

BRIEF DESCRIPTION

Small tree with flaky bark bearing masses of small very narrow erect leaves and clusters of small white flowers. Leaves long and narrow, to 12mm long, soft to grasp. Flowers 4.5–12 mm wide, with a red shiny centre. Fruit a small dry capsule.

DISTRIBUTION

Endemic. New Zealand: North Island (Te Pahi to northern Waikato with a disjunct outlier in north-eastern Wairarapa (see de Lange 2014)).

HABITAT

Coastal shrublands and cliff faces, usually on sand, sand podzols, and/or sandy peats. Rarely on podzolised clays or sandstone bluffs. Occasionally found inland.



Kunzea ericoides var. *linearis* bark.
Photographer: Peter J. de Lange, Licence: CC BY-NC.

DETAILED DESCRIPTION

Erect shrubs or small trees up to 12 m. Trunk 1–(4), mostly erect, 0.10–0.60 m d.b.h. **Bark** dark brown to brown, ± elongate, coarsely tessellated usually firmly attached, though peeling inwards leaving centrally attached lunate flakes. **Branches** numerous; ascending to upright, plumose; branchlets plumose, slender; branchlets sericeous, indumentum copious, hairs antrorse-appressed, weakly flexuose, up to 0.68 mm long. **Leaves** sessile, hairy, rarely glabrous, densely crowded along branchlets toward apices; lamina 9.3–19.5 × 0.3–1.2 mm, initially silvery-grey (due to dense hair covering), maturing dark green to glaucous green above (as hairs are shed); linear, apex sharply acute, cuspidate, base attenuate; lamina margins copiously covered in silvery-grey hairs, these forming a thick band and fusing with the abaxial midrib hairs just short of lamina apex, and along decurrent leaf bases.

Inflorescence spiciform 3–12-flowered botrya 20–80 mm long or an elongated, spiciform, 10–40-flowered botryum up to 180 mm long. Flowers of smaller botrya crowded, those of elongated botrya regularly spaced up to 20 mm apart; terminal portion of both short and elongated spiciform botrya inflorescence types often bearing undeveloped flowers and active vegetative growth. Inflorescence axis densely invested in antrorse-appressed, weakly flexuose, silky hairs. **Pherophylls**, leaf-like, 1–2 per flower, hairy (rarely glabrous); lamina 6.0–12.8 × 0.9–2.2 mm, dark silvery-green, silvery-grey or glaucous (depending on extent of hair covering), linear to linear-falcate; apex acute, base attenuate; lamina margin densely covered by antrorse-appressed, sericeous hairs, rarely glabrous. **Pedicels** sessile to subsessile, up to 1.2 mm long, copiously invested with silky, antrorse-appressed, weakly flexuose hairs. Flower buds ovoid, double conic to pyriform, apex sharply erect; calyx lobes pinched at base inwards, touching prior to bud burst. **Flowers** 1.9–5.7 mm diam. **Hypanthium** 2.0–4.0 × 2.5–4.1 mm, copiously covered in silvery-white to silvery-grey hairs or glabrous; barrel-shaped, cupular or narrowly campanulate, rim bearing 5 persistent sharply erect calyx lobes; hypanthium usually completely covered in a dense covering of long, silky, antrorse-appressed silvery hairs. **Calyx lobes** 5, erect, 1.0–1.6 × 0.2–0.6 mm, narrowly deltoid to deltoid with acute tips, red-green, densely covered in long, silky, silvery, antrorse-appressed, hairs or glabrous. **Receptacle** green or pink at anthesis, usually darkening to crimson after fertilisation. **Petals** 5–6, 0.9–2.0 × 0.7–1.9 mm, cream, pale pink or cream basally flushed pink, narrowly ovate to suborbicular, suberect, apex rounded, margins ± finely and irregularly crumpled, oil glands colourless. **Stamens** 32–46–(60) in 1–2 weakly defined whorls, arising from receptacular rim, filaments cream. **Anthers** dorsifixed, 0.04–0.06 × 0.02–0.04 mm, testiculate, latrorse. **Pollen** white. **Anther connective gland** prominent, pale pink or golden-yellow when fresh, drying yellow to pale orange, spheroidal, finely to coarsely papillate. **Ovary** 3–5 locular, each with 18–30 ovules in two rows on each placental lobe. **Style** 0.8–2.0 mm long, cream or pale pink; stigma narrowly capitate, as wide as, or slightly wider than style, ± flat, greenish-white or pink, flushing red after anthesis, surface finely granular-papillate. **Fruits** 1.6–2.9 × 2.3–4.1 mm, initially silvery-white or silvery-grey due to dense hair covering, maturing grey-brown to grey-black, barrel-shaped to narrowly obconic, rarely campanulate to cupular, calyx valves prominently erect. **Seeds** 0.50–1.10 × 0.48–0.70 mm, obovoid, oblong, oblong-ellipsoid, or cylindrical; testa semi-glossy, orange-brown to dark brown, surface coarsely reticulate.

MANAAKI WHENUA ONLINE INTERACTIVE KEY

Key to the Myrtaceae of New Zealand

SIMILAR TAXA

Morphologically most similar to *K. ericoides*. Both species have similar linear-lanceolate leaves but *K. ericoides* has glabrescent branchlets, corymbiform racemes, and smaller flowers with fewer stamens. *Kunzea linearis* is distinguished from all other NZ members of the *K. ericoides* complex by having linear almost filiform leaves, spicate racemes, narrowly lanceolate-acute, long persistent erecto-patent sepals, erecto-patent petals, and brown bark which peels into small, tessellated, semi-lunate flakes.

FLOWERING

October–February

FLOWER COLOURS

White

FRUITING

December–June

PROPAGATION TECHNIQUE

Easily grown from fresh seed. Can be grown with great difficulty from semi-hardwood cuttings.

THREATS

Primarily threatened through loss of habitat. The preferred coastal habitat of *K. linearis* is actively threatened by coastal resort development, and farming throughout its range. Also plants are cut for firewood. Very few populations occur on protected land. Hybridism with other *Kunzea* spp. is a major problem in urban settings such as Auckland.

ETYMOLOGY

kunzea: Named after Gustav Kunze (4 October 1793, Leipzig -30 April 1851), 19th century German botanist from Leipzig who was a German professor of zoology, an entomologist with an interest mainly in ferns and orchids

linearis: Linear (leaves)

ATTRIBUTION

Fact Sheet prepared for NZPCN by P.J. de Lange 1 September 2014. Description modified from de Lange (2014).

REFERENCES AND FURTHER READING

de Lange PJ. 2014. A revision of the New Zealand *Kunzea ericoides* (Myrtaceae) complex. *Phytokeys* 40: 185 p.
<https://doi.org/10.3897/phytokeys.40.7973>.

NZPCN FACT SHEET CITATION

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MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/kunzea-linearis/>