

Kunzea sinclairii

COMMON NAME

Great Barrier Island kānuka

SYNONYMS

Leptospermum sinclairii Kirk; *Leptospermum ericoides* var. *pubescens* Kirk

FAMILY

Myrtaceae

AUTHORITY

Kunzea sinclairii (Kirk) W.Harris

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 Critical | Qualifiers: DP, IE, RR

PREVIOUS CONSERVATION STATUSES

2012 | At Risk – Naturally Uncommon | Qualifiers: IE, RR

2009 | At Risk – Naturally Uncommon | Qualifiers: IE

2004 | Range Restricted

BRIEF DESCRIPTION

Sprawling silvery-grey shrub (rarely a small tree) naturally confined to Great Barrier Island (Aotea Island). Branches trailing, covered in masses of broad silvery grey, hairy leaves and clusters of white flowers with red centres. Leaves silvery grey, broad, 5.6–20.6 × 2.0–4.5 mm, softly hairy. Flowers produced in dense corymbiform racemes, 5.7–10.2 mm diameter. Fruit a dry, greyish, hairy capsule 2.2–3.6 × 2.7–3.9 mm.

DISTRIBUTION

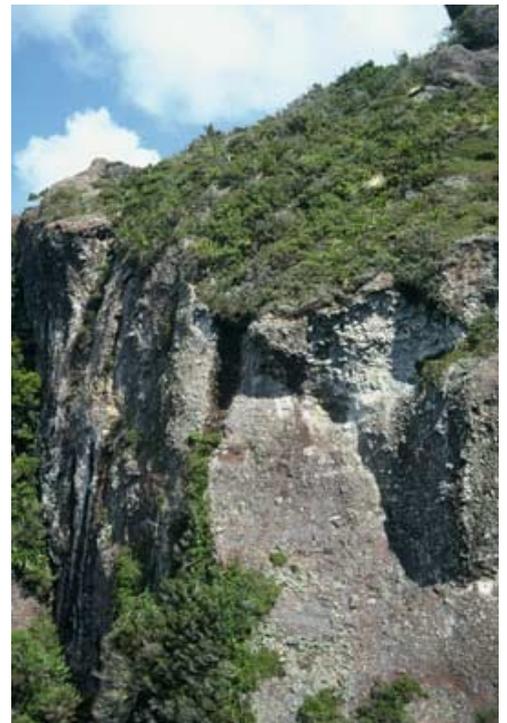
Endemic. New Zealand: Great Barrier Island (Aotea Island), where it is known only from the central portion of the island (de Lange & Norton 2004).

HABITAT

Rhyolite endemic, largely confined to exposed outcrops of this rock on the central portion of the island but also extending down gorges and in open clay pans and low windswept scrub in places formerly forested (see de Lange & Norton 2004).



Mt Young, Great Barrier Island. Photographer: Gillian M. Crowcroft, Licence: All rights reserved.



Windy Canyon, Great Barrier Island, October. Photographer: Gillian M. Crowcroft, Licence: All rights reserved.

DETAILED DESCRIPTION

Mostly decumbent, trailing, silvery grey to grey, shrubs up to 3 × 1 m, very rarely forming trees up to 6 m tall; irrespective of stature, branches widely spreading and densely leafy, sometimes rooting on contact with soil or rock. **Trunk** 1–4, 0.05–0.16 m d.b.h. **Bark** dark brown to grey-brown, coarsely stringy to tessellated and distinctly corky-coriaceous, usually firmly attached, if detaching, then usually doing so along transverse cracks. **Branches** numerous, prostrate and widely spreading, new growth subscaudent (in tree forms this habit is retained resulting in arching, pendulous branches); branchlets numerous, widely spreading to subscaudent, often coarsely interwoven, leaves usually densely crowded along stems; branchlets sericeous, indumentum copious, silky, hairs antrorse-appressed, weakly flexuose up to 0.06 mm long. **Leaves** heterophyllous, mostly sessile, sometimes shortly petiolate (up to 1.6 mm long). Seedling and juvenile leaves dark green to glaucous, glabrous up to 25.0 × 3.5 mm, oblanceolate to lanceolate, apex acute, base attenuate. Mature leaf lamina 5.6–20.6 × 2.0–4.5 mm, initially silvery-white (due to dense hair covering), maturing silvery-grey to reddish grey (as some hairs are shed); lamina broadly lanceolate, elliptic to obovate, rarely oblong-obovate, apex sharply acute, often cuspidate, base attenuate; hairs of midribs and margins converging at leaf apex. **Inflorescence** a compact, corymbiform 4–20-flowered botryum 7.0–20.0 mm long; on occasion inflorescences may form elongated botrya on late season vegetative growth. Inflorescence axis densely invested with antrorse-appressed, weakly flexuose, silky hairs. **Pherophylls** deciduous, rarely present at flowering; foliose pherophylls 1.0–1.2 × 0.2–0.4 mm, oblong to oblong-lanceolate, very rarely broadly spathulate, cuspidate, copiously invested in sericeous, antrorse-appressed hairs; squamiform pherophylls 0.3–1.0 × 0.4–0.8 mm, broadly to narrowly ovate or lanceolate, apex acute, subacute to obtuse, margins finely ciliate. **Pedicels** 2.8–7.3 mm long, invested with silky, antrorse-appressed, weakly flexuose, hairs becoming glabrate. **Flower buds** 2.3–4.9 × 2.1–4.2 mm, ovoid to pyriform, apex flat to weakly domed prior to bud burst with calyx lobes held flat across surface, rarely meeting. **Flowers** 5.7–10.2 mm diameter. **Hypanthium** 1.9–3.6 × 2.1–4.2 mm, silvery-white to silvery grey or reddish-grey due to copious covering of hairs; narrowly obconic to obconic or cupular, surface covered in long, silky, antrorse-appressed silvery hairs. **Calyx lobes** 5, erect to suberect, or spreading, 1.1–1.6 × 0.9–1.8 mm, broadly obtuse, red-green to pale green with a white or pink membranous margin; lobe margins finely ciliate. **Receptacle** greenish pink or pink at anthesis, darkening to crimson after fertilisation. **Petals** 5–6, 2.0–3.6 × 2.1–3.3 mm, white, very rarely basally flushed pink, broadly ovate, suborbicular to orbicular, rarely ± cuneate-truncate, apex rounded, margins ± finely and irregularly crumpled or frayed, oil glands not evident in fresh or dried material. **Stamens** 18–46 in 1–2 weakly defined whorls, filaments white. **Anthers** dorsifixed, 0.06–0.1 × 0.06–0.09 mm, broadly ellipsoid to scutiform, latrorse. **Pollen** white. Anther connective gland pale pink when fresh, drying pale orange, spheroidal, coarsely papillate. **Ovary** 3–5 locular, each with 18–34 ovules in two rows on each placental lobe. **Style** 1.8–3.0 mm long at anthesis, white basally flushed pink or pale pink; stigma narrowly capitate, as wide as or scarcely wider than style, ± flat, greenish-pink or pink, flushing red after anthesis, surface finely granular-papillate. **Fruits** 2.2–3.6 × 2.7–3.9 mm, graphite grey, maturing to charcoal fading to greyish-white; narrowly obconic to obconic, rarely cupular, copiously covered in short, silky, antrorse-appressed hairs. **Seeds** 0.52–1.09 × 0.38–0.72 mm, obovoid, oblong, or oblong-ellipsoid;

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

Readily distinguished from the other members of the *Kunzea ericoides* complex by its generally decumbent growth form, and by the rather broad leaves which are densely covered in silky, silvery grey hairs (see de Lange 2014).

FLOWERING

September–January

FLOWER COLOURS

White

FRUITING

February–July

LIFE CYCLE

Seeds are dispersed by wind and possibly water (Thorsen et al., 2009).

PROPAGATION TECHNIQUE

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

THREATS

Common within open rhyolite rock habitat (90.5 ha (0.3 %) of the island (de Lange & Norton (2004)). As a consequence of past kauri logging, and associated burning, this species has extended its range to include open clay pans, windswept ridges tops, kauri log scoured gorges and other temporarily open sites. In these areas the species is declining through natural regeneration, and in many of these sites it is out-numbered by the hybrid *K. robusta* × *Kunzea sinclairii*. This hybrid though common does not pose a risk; ecological and genetic studies suggest hybrids are declining in abundance as a consequence of natural succession to taller forest (de Lange & Norton 2004).

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

sinclairii: After Sinclair (c. 1796–1861). Colonial Secretary and naturalist.

WHERE TO BUY

Occasionally sold in garden centres.

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>.

de Lange PJ, Norton DA. 2004. The ecology and conservation of *Kunzea sinclairii* (Myrtaceae), a naturally rare plant of rhyolitic rock outcrops. *Biological Conservation* 117(1): 49–59. [https://doi.org/10.1016/S0006-3207\(03\)00262-3](https://doi.org/10.1016/S0006-3207(03)00262-3).

de Lange PJ, Rolfe JR, Barkla JW, Courtney SP, Champion PD, Perrie LR, Beadel SM, Ford KA, Breitwieser I, Schönberger I, Hindmarsh-Walls R, Heenan PB, Ladley K. 2018. Conservation status of New Zealand indigenous vascular plants, 2017. *New Zealand Threat Classification Series* 22. Department of Conservation, Wellington, NZ. 82 p. <https://www.doc.govt.nz/globalassets/documents/science-and-technical/nztcs22entire.pdf>.

Thorsen MJ, Dickinson KJM, Seddon PJ. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285–309. <https://doi.org/10.1016/j.ppees.2009.06.001>.

NZPCN FACT SHEET CITATION

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MORE INFORMATION

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