

# 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

2018 | Threatened – Nationally Critical

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

## HABITAT

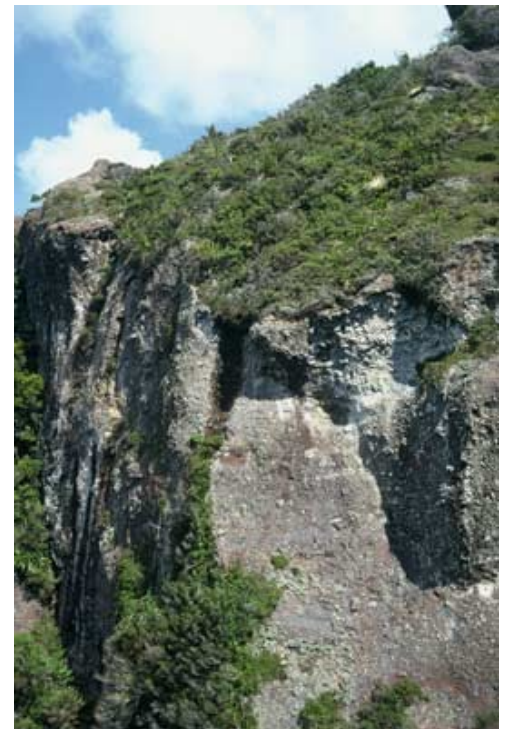
Rhyolite endemic, largely confined to exposed outcrops of this rock on the central portion of the island but also extending down gorges and in open clay pans and low windswept scrub in places formerly forested (see de Lange & Norton 2004).

## FEATURES

Mostly decumbent, trailing, silvery grey to grey, shrubs up to 3 × 1 m,



Mt Young, Great Barrier Island. Photographer: G.M. Crowcroft



Windy Canyon, Great Barrier Island, October. Photographer: Gillian Crowcroft

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 spatulate, 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.

## 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 to January

## FLOWER COLOURS

White

## FRUITING

February to 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 hybrids *K. robusta* × *Kunzea sinclairii*. This hybrids 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, P.J.; Norton, D.A. 2004: The ecology and conservation of *Kunzea sinclairii* (Myrtaceae), a naturally rare plant of rhyolitic rock outcrops. *Biological Conservation* 117: 49–59.

<http://www.sciencedirect.com/science/journal/00063207/117/1>

de Lange, P.J. 2014: A revision of the New Zealand *Kunzea ericoides* (Myrtaceae) complex. *Phytokeys* 40: 185p doi: 10.3897/phytokeys.40.7973.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285–309

## NZPCN FACT SHEET CITATION

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

## MORE INFORMATION

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