Kunzea salterae

COMMON NAMES
Moutohora kānuka

BIOSTATUS
Native – Endemic taxon

CURRENT CONSERVATION STATUS
2023 | At Risk – Naturally Uncommon | Qualifiers: DPR, RR
Jump to previous conservation statuses

CATEGORY
Vascular

STRUCTURAL CLASS
Trees & Shrubs - Dicotyledons

SIMPLIFIED DESCRIPTION
Decumbent shrubs, upright shrubs or small much-branched widely spreading trees endemic to Moutohora (Whale Island). Branches slender often pendulous. Branchlets numerous, slender, often pendulous, young stems copiously covered in short erect hairs. Leaves numerous, up to 18 × 2.0 mm needle-like. Flowers white, up to 12 mm diameter, borne in dense ‘corymbiform’ clusters. Fruit a small dry capsule 2.0–2.7 × 2.0–4.0 mm.

FLOWER COLOURS
Red/Pink, White

Moutohora, Bay of Plenty (from a specimen collected by Paul Cashmore). Photographer: Jeremy R. Rolfe, Date taken: 13/02/2018, Licence: CC BY.

DETAILED DESCRIPTION

Shrubs to small trees 0.1–10 × 2–6 m with broad, spreading, somewhat pendulous crowns, or completely decumbent and sprawling. **Trunk** up to 0.3 m d.b.h., widely spreading to suberect, flexuose. **Bark** initially firm, sinuous-fluted, elongate, cracking transversely with apices gradually detaching as small lunate flakes. **Branches** suberect to widely spreading, ascending or pendulous, branchlets slender; sericeous, indumentum copious rarely glabrate to glabrous, sericeous; initial hairs on emergent growth, straight, antrorse-appressed to 0.55 mm, deciduous; otherwise divergent persistent 0.04–0.1 mm, apices ± curled, often admixed antrorse-appressed, straight to somewhat sinuous hairs up to 0.28 mm. **Leaves** ± spreading to patent; lamina 4–18 × 0.6–2.0 mm, bright green, yellow-green, bronze-green to dark green; linear-lanceolate to narrowly oblanceolate, apex acute to subacute, cuspidate, rarely obtuse to rounded; base attenuate; lamina margin sparsely to densely, sericeous, hairs antrorse-appressed, to 0.5 mm, in 1–2 irregular rows just failing short of leaf apex. **Inflorescence** a 2–8-flowered corymbiform botryum to 45 mm long. **Pherophylls** deciduous squamiform, rarely foliose, 0.6–1.8 mm long; squamiform pherophylls brown or amber, broadly deltoid to oblong-ovate, glabrous except for finely ciliate margin and apex; foliose pherophylls bright green, linear, margins and apex finely ciliate. **Pedicels** 1.1–3.0 mm long, invested in divergent to subantrorse sericeous hairs. **Flower buds** pyriform to clavate, apex domed with calyx valves not or scarcely meeting. **Fresh flowers** 9–12 mm diam. **Hypanthium** 2.1–3.8 × 1.8–3.2 mm, reddish-brown; narrowly obconic to funnelform terminating in a slightly thicker rim bearing five persistent calyx lobes; surface smooth, sparsely hairy to glabrate; hairs subantrorse to antrorse, flexuose. **Calyx lobes** 5, upright 0.6–0.9 × 1.1–1.3 mm, persistent, broadly to narrowly triangular, glabrate except for ciliate apex. **Receptacle** dark red at anthesis. **Petals** 5, spreading, 1.4–1.6 × 1.4–1.6 mm, white, rarely basally flushed pink, orbicular to suborbicular, apex obtuse to rotund, margins finely crimped, oil glands colourless or rose-pink, scarcely evident when fresh. **Stamens** 28–38 in 1–2 weakly defined whorls, filaments white rarely tinged rose-pink toward base. **Anthers** dorsifixed, 0.11–0.16 × 0.10–0.14 mm, scutiform to ovoid, latrorse. **Pollen** white. **Anther connective gland** prominent, pale orange to pink when fresh, drying orange-brown, spheroidal, finely papillate, somewhat farinose. **Ovary** 3–4 locular, each locule with 8–10 ovules in two rows on each placental lobe. **Style** 2.1–3.2 mm long at anthesis, white basally flushed with pink; stigma capitate, up to 1× style diameter, flat, abruptly broadened, pale cream, finely papillate rugulose. **Fruits** 2.0–2.7 × 2.0–4.0 mm, light brown to grey, cupular to suburceolate. **Seeds** 0.80–1.00 × 0.45–0.48 mm, narrowly oblong, oblong, oblong-obovate to falcate-oblong or elliptic, testa semi-glossy, orange-brown; surface coarsely reticulate, central portion of cells furnished with short, tubular-spiny, protuberances.

SIMILAR TAXA

From *Kunzea tenuicaulis*, *K. salterae* is distinguished by its allopatric distribution; longer (up to 18 mm), linear-lanceolate rather than oblanceolate to obovate leaves; glabrate, narrowly obconic to funnelform hypanthium; by its flat, narrowly capitate rather than slightly domed centrally depressed stigma; and by the non-testiculate, deeply furrowed thecae. *K. salterae* is distinguished from *K. linearis* by the possession of shorter glabrate leaves and short and divergent rather than long, silky and antrorse branchlet hairs. Further, the inflorescences of *K. salterae* are corymbiform rather than spiciform, and the individual flowers are distinctly pedicellate, never sessile to subsessile. Further differences are given in de Lange (2014).

DISTRIBUTION
Endemic. New Zealand: Moutohora (Whale) Island.

HABITAT
A local endemic that is widespread in dune and geothermal fields shrubland and regenerating forest of Moutohora (Whale Island).

THREATS
When myrtle rust (*Austropuccinia psidii*) was detected in New Zealand (May 2017) the conservation status was upgraded as a precautionary measure from 'At Risk – Naturally Uncommon' to 'Threatened – Nationally Vulnerable' because, on best advice, it was believed that no indigenous Myrtaceae had resistance to the myrtle rust disease (de Lange et al. 2018). Currently there have been no reports of infected wild trees of *Kunzea* but inoculation trials of the New Zealand species has demonstrated they are susceptible, and further that over time, infected specimens will die. Only time will tell if wild populations of *Kunzea* will be threatened by this rust fungus.
Myrtle Rust (*Austropuccinia psidii*) is an invasive fungus which threatens native myrtle specie. Learn more myrtlerust.org.nz

GENUS
Kunzea

FAMILY
Myrtaceae

AUTHORITY
Kunzea salterae de Lange

SYNONYMS
None - first described in 2014

TAXONOMIC NOTES
Kunzea salterae has many features suggestive of a hybrid origin between *K. linearis* and *K. tenuicaulis* (de Lange 2014)—yet these species do not have naturally overlapping distributions. This is an aspect that would be worth further research.

ENDEMIC TAXON
Yes

ENDEMIC GENUS
No

ENDEMIC FAMILY
No

FLOWERING
August–April

FRUITING
August–September

PROPAGATION TECHNIQUE
Unknown—probably easily grown from fresh seed. This species is very uncommon in cultivation and its exact needs and preferences are as yet unknown.

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
salterae: The epithet 'salterae' refers to Dr Josh Salter (1946–) of Auckland, New Zealand. Dr Salter is a botanical illustrator and conifer embryologist.

MANAAKI WHENUA ONLINE INTERACTIVE KEY
Key to the Myrtaceae of New Zealand

NVS CODE
KUNSAL

CHROMOSOME NUMBER
2n = 22

PREVIOUS CONSERVATION STATUSES
2017 | Threatened – Nationally Vulnerable | Qualifiers: DP, RR
2013 | At Risk – Naturally Uncommon
Jump to current conservation status

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, 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.

ATTRIBUTION
Fact Sheet prepared for NZPCN by P.J. de Lange 25 August 2014. Description modified from de Lange (2014).

NZPCN FACT SHEET CITATION
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MORE INFORMATION
https://www.nzpcn.org.nz/flora/species/kunzea-salterae/

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