Trithuria inconspicua

SYNONYMS
Hydatella inconspicua (Cheeseman) Cheeseman, Trithuria inconspicua Cheeseman subsp. inconspicua

FAMILY
Hydatellaceae

AUTHORITY
Trithuria inconspicua Cheeseman

FLORA CATEGORY
Vascular – Native

ENDEMIC TAXON
Yes

ENDEMIC GENUS
No

ENDEMIC FAMILY
No

STRUCTURAL CLASS
Herbs - Dicotyledons other than Composites

CHROMOSOME NUMBER
2n = c.24

CURRENT CONSERVATION STATUS
2017 | Threatened – Nationally Critical | Qualifiers: RR

PREVIOUS CONSERVATION STATUSES
2012 | Threatened – Nationally Endangered | Qualifiers: EF, PD, RR
2009 | Threatened – Nationally Vulnerable | Qualifiers: RR
2004 | Serious Decline

BRIEF DESCRIPTION
Diminutive, tufted, aquatic herb 15–55 mm tall producing numerous unsheathed fine hair like leaves arranged in fans. Inflorescences inconspicuous, borne on stalks 20–40 mm long. Flowers much reduced, male, flower or bisexual. Male flowers with obvious red stamens. Female flowers much reduced reddish.

DISTRIBUTION
Endemic. New Zealand: North Island (Northland, where it is known from western dune lakes from near Awanui to the Pouto Peninsula).

Kai Iwi Lakes. Photographer: Jeremy R. Rolfe, Date taken: 24/10/2009, Licence: CC BY.

Typical view, partially obscured by sediment and algal floc. Kai Iwi Lakes. Photographer: Jeremy R. Rolfe, Date taken: 24/10/2009, Licence: CC BY.

HABITAT
An aquatic of shallow to medium depth (5–7 m) freshwater lakes (exact depth range dependant on water quality and light levels), preferring reasonably stable substrates but has been found growing in fine sand, gravel and organic muds. Apparently intolerant of surrounding taller vegetation. Mature plants are often partially buried in sediment so that only their upper most leaf tips are exposed.

WETLAND PLANT INDICATOR STATUS RATING
OBL: Obligate Wetland
Almost always is a hydrophyte, rarely in uplands (non-wetlands).

DETAILED DESCRIPTION

Aquatic perennial herb, tufted 15–55 mm high, from a shortly branching erect rhizome, trichomes present; copious adventitious roots. Apomictic or sexual. Plants in populations often female only, or plants co-sexual with unisexual or bisexual reproductive units. **Leaf-bases** weakly dilated (not sheathing), hyaline, toothed auricles present or absent. **Leaves** spreading, glabrous, 15–55 × 0.25–0.4 mm; lamina linear-filiform, adaxially faintly compressed below, terete above, apex rounded with a hydathode. **Reproductive units** 1–4 per tuft, (3.5)–4–5–(7) mm long, on glabrous terete scapes 20–40 × 0.3–0.4 mm; involucral bracts 2–4–(7), male reproductive unit bracts 3.5–5.0 mm long, ovate to narrow-ovate, stamens (1)–3–8; anthers 0.8–1.4 mm long, bright red, filaments 1–5 mm long; bisexual reproductive unit bracts 4–5 mm long; stamens 1–5; carpels 2–10; female reproductive unit bracts 2.5–5.0 mm long. **Carpels** 8–24, reddish, with 5–13 stigmatic hairs of unequal length, 0.3–1.0 mm long, red becoming hyaline. **Fruits** 0.4–0.56 × 0.2–0.4 mm, ellipsoid to ovoid, deciduous from persistent stalks, pericarp thin and membraneous, smooth, indehiscent. **Seed** faintly reticulate, yellowish-brown to reddish-brown with a darker apical cap (formed by an operculum).

SIMILAR TAXA

Trithuria inconspicua is most likely to be confused with some of the spike rushes (*Eleocharis* spp.) and species of *Centrolepis*. From these *Trithuria* differs by its submerged flowering habit, with the male and female flowers usually separate; by the male flowers which have much longer filaments and 2-celled anthers; and by the female flowers which have septate styles that are septate. Vegetative material of *Trithuria* differs from *Centrolepis* in that the leaves are not sheathed. *Trithuria* could be confused with sterile plants of *Eleocharis pusilla*, however, *E. pusilla* has uniformly bright green leaves arising from a creeping rhizome. *Trithuria brevistyla* differs from *T. inconspicua* by the possession of shortened stigmatic hairs that form a knobbly capitate head; by the void to globose (rather than ellipsoid to ovoid), and by the scapes which do not elongate at maturity.

FLOWERING

October–December

FLOWER COLOURS

Red/Pink, Yellow

FRUITING

December–February

PROPAGATION TECHNIQUE

Difficult. Should not be removed from the wild.

THREATS

Seriously threatened in Northland due to the recent spread of the introduced bladderwort *Utricularia gibba*, and also by the continuing spread of oxygen weeds into these important lakes. Indeed, as of 2004, it has been confirmed as extinct in two more Far North dune lakes.

ETYMOLOGY

inconspicua: Inconspicous

ATTRIBUTION

Fact Sheet by P.J. de Lange (6 January 2004). Fact sheet updated by P.J. de Lange (4 February 2019). Description based on Smissen et al. (2019).

REFERENCES AND FURTHER READING

Smissen RD, Ford KA, Champion PD, Heenan PB. 2019. Genetic variation in *Trithuria inconspicua* and *T. filamentosa* (Hydatellaceae): a new subspecies and a hypothesis of apomixis arising within a predominantly selfing lineage. *Australian Systematic Botany 32(1)*: 1–11. https://doi.org/10.1071/SB18013.

NZPCN FACT SHEET CITATION

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MORE INFORMATION

https://www.nzpcn.org.nz/flora/species/trithuria-inconspicua/