

Nitella masonae

COMMON NAME

stonewort

SYNONYMS

Nitella hookeri var. *masonae*

FAMILY

Characeae

AUTHORITY

Nitella masonae (R.D.Wood) M.T.Casanova

FLORA CATEGORY

Non-vascular – Native

BRIEF DESCRIPTION

Small branched submerged plant with easily punctured stems and branches. Distinctive forked branches.

DISTRIBUTION

Endemic. New Zealand: North, South Island.

HABITAT

Usually recorded from deep, clear-water glacial lakes, at high elevation.

DETAILED DESCRIPTION

Aquatic, submerged, macro-algae. Usually a small plant to 0.3 m. Obvious branchlets arise in whorls from central stems, which are anchored in the sediment by colourless rhizoids. Stem and branchlets are composed of strings of single cells that are easily punctured. Sterile branches are variable, simple to forked within a whorl, but usually have at least one obvious fork where the length beyond the fork similar to the length below. Usually three cells comprise the branchlet beyond the last fork. Plant is monoecious, with antheridia and oogonia on the same plant, usually located together on contracted branchlets in an elongated fruiting head and without mucus present on these spicate fruiting heads.

SIMILAR TAXA

In sterile material forked branchlets are occasional, where the length to the fork and beyond the fork are similar. This distinguishes the species from *Nitella tricellularis* and *N. claytonii*, which have absent or inconspicuous forking in sterile branches. Most sterile branchlets are obviously forked in *N. hookeri*.

FRUITING

Oospores are laterally compressed, longer than 450 µm and have prominent spiral ridges, with a smooth to papillate to reticulate membrane surface.

PROPAGATION TECHNIQUE

Fragments or oospores.

REFERENCES AND FURTHER READING

Broady, P.A.; Flint, E.A.; Nelson, W.A.; Cassie Cooper, V.; de Winton, M.D.; Novis P.M. Chapter 23 Twenty –Three :Phyla Chlorophyta and Charophyta (Green Algae). In: New Zealand Inventory of Biodiversity (Volume 3), Gordon, D.P. (Ed), Canterbury University Press, 616pp.

Casanova, M.T.; de Winton, M.D.; Karol, K.G.; Clayton J.S. (2007). *Nitella hookeri* A. Braun (Characeae, Charophyceae) in New Zealand and Australia: implications for endemism, speciation and biogeography. *Charophytes* (1): 2-18

de Winton, M.D.; Dugdale, A.M.; Clayton, J.S. (2007). An identification key for oospores of the extant charophytes of New Zealand. *New Zealand Journal of Botany*:463-476

Wood RD, Mason R 1977. Characeae of New Zealand. *New Zealand Journal of Botany* 15: 87-180.

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/nitella-masonae/>

