

Nitella tricellularis

COMMON NAME

stonewort

SYNONYMS

Nitella hookeri var. *tricellularis*

FAMILY

Characeae

AUTHORITY

Nitella tricellularis (Nordst.) Nordst.

FLORA CATEGORY

Non-vascular – Native

BRIEF DESCRIPTION

Small branched submerged plant with easily punctured stems and branches. Do not appear to be forked.

DISTRIBUTION

Endemic. New Zealand: South and Chatham Islands.

HABITAT

Usually recorded from deep, clear-water glacial lakes, at high elevation, but also recorded from a coastal waterbody on the Chatham Islands.

DETAILED DESCRIPTION

Aquatic, submerged, macro-algae. Plant appears to have simple sterile branchlets, without forks, but on closer inspection, can be seen to have tiny forks at the end in many cases. Branchlets arise in whorls from central stems, which are anchored in the sediment by colourless rhizoids. Stem and branchlets are comprised of strings of single cells that are easily punctured. Plant is monoecious, with antheridia and oogonia on the same plant, usually located together on branchlets in a small rounded fruiting head and without mucus present on these fertile heads.

SIMILAR TAXA

Distinguished from *Nitella claytonii* in that sterile branches are longer and obvious, with tiny forked ends, compared to reduced branchlets and almost complete absence of forking in *N. claytonii*. *N. masonae* has at least some obvious branchlet forks, where the length beyond the fork is similar to below.

FRUITING

Oospores are laterally compressed, longer than 400 µm and have prominent spiral ridges with a smooth to punctate, or rough membrane surface.

PROPAGATION TECHNIQUE

Fragments or oospores.

REFERENCES AND FURTHER READING

Broadly, 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-tricellularis/>

