Lagarosiphon major

COMMON NAME
Lagarosiphon

FAMILY
Hydrocharitaceae

AUTHORITY
Lagarosiphon major (Ridley) Moss ex Wager

FLORA CATEGORY
Vascular – Exotic

STRUCTURAL CLASS
Herbs - Monocots

NVS CODE
LAGMAJ

CONSERVATION STATUS
Not applicable

BRIEF DESCRIPTION
Submerged perennial bottom rooted oxygenweed. It is characterised by strongly recurved leaves along the stem that are arranged spirally and closely-packed, even more so towards the shoot apex. Leaves are dark green and up to 16 mm long and 2mm wide and gradually tapering to an acute tip. The stems are long, slender, brittle and much branched. The flowers are minute, only 0.25 mm in diameter on fine filamentous stems up to 6 cm long found in the upper leaf bases.

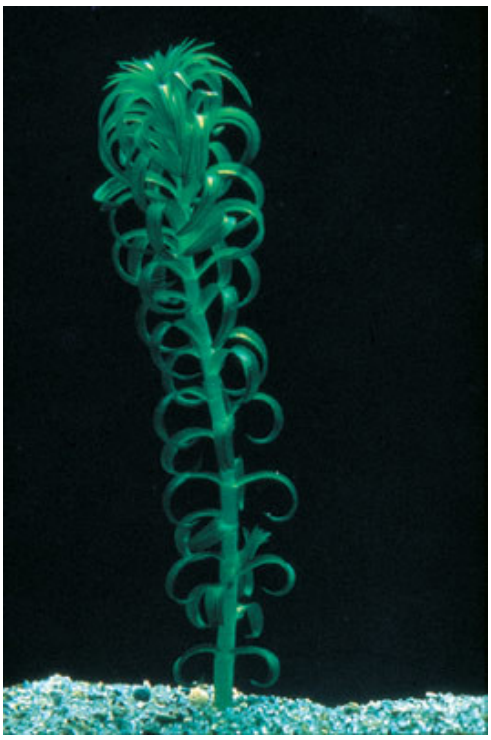
DISTRIBUTION
Widely naturalised in North Island and lowland northern and eastern South island, rare in Westland and upland South Island.

HABITAT
Moderately fast flowing to still water bodies. Waters of low fertility, clear streams and lakes.

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

DETAILED DESCRIPTION
Vigorous submerged bottom rooting aquatic perennial reaching depths of 6.5m. Stems slender, brittle and much branched. Leaves are dark green, alternate and crowded and overlapping toward the apex of the stem. They are also stiff and curved downwards, are gradually tapered towards the tip, usually 6 to 20 mm long, and have minute marginal serrations. Flowers are tiny 0.25 mm in diameter and up to 6 mm long, pinkish and occur threadlike from the axils of upper leaves. Only female plants have been collected in New Zealand.

SIMILAR TAXA
Canadian pondweed (Elodea canadensis) and egeria (Egeria densa). Both of these species have leaves arranged in whorls on the stem, whereas lagarosiphon has leaves arranged alternately in a spiral pattern and leaves are downward curving.



Lagarosiphon major. Photographer: Auckland Regional Council, Licence: Public domain.

Close up of Lagarosiphon major. Photographer: John Smith-Dodsworth, Licence: CC BY-NC.

FLOWERING
January-March

FLOWER COLOURS
Red/Pink

FRUITING
No seed production known in NZ

LIFE CYCLE
Perennial. New plants develop from stem fragments which can produce adventitious roots. There is no seed production in New Zealand, with only female plants of this species being present here.
Stem fragments are easily dispersed within catchments by water flow. New catchments are colonised by contaminated boats and trailers (occasionally motor cooling water), eel nets, diggers, people liberating fish, and emptying aquaria. Birds are unlikely to be a factor.

YEAR NATURALISED
1950

ORIGIN
Africa.

REASON FOR INTRODUCTION
Ornamental pond plant

CONTROL TECHNIQUES
Plants can be physically removed from the lake or waterway using SCUBA or snorkel divers for small scale infestations, or using mechanical diggers. But the appropriateness of these methods is site specific, and the potential for contamination of other sites by mechanical equipment is a signficant concern. There are a number of manipulations to the habitat that in theory can control lagarosiphon (e.g., shading, bottom lining, water drawdown) but there are significant limits to their practical application, rendering them site (or waterbody) specific. The only chemical products registered for aquatic use in New Zealand that are efficacious on lagarosiphon are diquat and endothall. Diquat is a relatively fast acting contact herbicide, which interrupts the electron transport system in plant photosynthesis and causes the destruction of cell membranes and desiccation. At present the introduced grass carp (Ctenopharyngodon idella) are the only biocontrol agent available to manage lagarosiphon.

TOLERANCES
Physical damage and grazing results in resprouting from branches and fragments.

ETYMOLOGY
major: Greater

NATIONAL PEST PLANT ACCORD SPECIES
This plant is listed in the 2020 National Pest Plant Accord. The National Pest Plant Accord (NPPA) is an agreement to prevent the sale and/or distribution of specified pest plants where either formal or casual horticultural trade is the most significant way of spreading the plant in New Zealand. For up to date information and an electronic copy of the 2020 Pest Plant Accord manual (including plant information and images) visit the MPI website.

ATTRIBUTION
Factsheet prepared by Paul Champion and Deborah Hofstra (NIWA).

REFERENCES AND FURTHER READING

Champion et al (2012). Freshwater Pests of New Zealand. NIWA publication. http://www.niwa.co.nz/freshwater-and-estuaries/management-tools/identification-guides-and-fact-sheets/freshwater-pest-species.

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Sculthorpe C D (1967). The biology of aquatic vascular plants. Edward Arnold Publishing, 610pp.

MORE INFORMATION

https://www.nzpcn.org.nz/flora/species/lagarosiphon-major/