

Egeria densa

COMMON NAME

Egeria

FAMILY

Hydrocharitaceae

AUTHORITY

Egeria densa Planchon

FLORA CATEGORY

Vascular – Exotic

STRUCTURAL CLASS

Herbs - Monocots

NVS CODE

EGEDEN

CONSERVATION STATUS

Not applicable

BRIEF DESCRIPTION

Submerged, bottom-rooted perennial plant in the oxygenweed group. It is a large leafy plant, the leaves being 10 to 30 mm long and 2 to 5 mm wide with minutely serrated margins, which occur in whorls of four to five. Egeria produces flowers (male only), which are conspicuous during the summer months floating on the water surface. Flowers are to 20 mm across, with 3 white petals.

DISTRIBUTION

Widely naturalised in North Island and Marlborough, few sites elsewhere in South Island.

HABITAT

Submerged in moderate flowing to still water bodies, usually in moderately to highly enriched water bodies. Prefers sandy or silty sediments.

WETLAND PLANT INDICATOR STATUS RATING

OBL: Obligate Wetland

Almost always is a hydrophyte, rarely in uplands (non-wetlands).

DETAILED DESCRIPTION

Submerged, bottom-rooting perennial, growing to 5 m. Stems slender, brittle, much-branched, buoyant, 3 mm diam. Leaves in whorls of 4-6 (occ 3 near base), linear, 15-30 x 4 mm, dark green. Flowers on surface, 3 petaled, 20 mm diam, white with 9 yellow stamens, Nov-Jan. Only male plants found in NZ, no seed set.

SIMILAR TAXA

Canadian pondweed (*Elodea canadensis*) and lagarosiphon (*Lagarosiphon major*). Egeria can be differentiated from the others by its larger size and conspicuous white flowers. Canadian pondweed almost always has leaves arranged in whorls of three. Lagarosiphon has leaves that curl downwards and are not arranged in whorls.

FLOWERING

Spring/summer. When the plants flowers can reach the surface of the water.

FLOWER COLOURS

White, Yellow



Egeria densa. Photographer: Auckland Regional Council, Licence: Public domain.



a picture of Egeria densa. Photographer: John Smith-Dodsworth, Licence: CC BY-NC.

FRUITING

Only male plants in NZ.

LIFE CYCLE

Egeria propagates from stem fragments containing lateral buds that give rise to new plants. Egeria does not produce seed in New Zealand, with only male flowering plants being present.

YEAR NATURALISED

1946

ORIGIN

South America, naturalised throughout tropical and temperate areas of world.

REASON FOR INTRODUCTION

Ornamental aquarium 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. Although the potential for contamination of other sites by mechanical equipment is a significant concern. There are a number of manipulations to the habitat that in theory can control egeria (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 product registered for aquatic use in New Zealand that is efficacious on egeria is diquat. 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 egeria. Grass carp have been successfully used for the eradication of egeria from Parkinson's Lake.

TOLERANCES

The plant is slightly tolerant to shade and frost, intolerant to drought and highly tolerant to poor drainage. Physical damage and grazing will result in regrowth from buried stem apices and fragments.

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>.

Johnson PN, Brooke PA (1989). Wetland plants in New Zealand. DSIR Field Guide, DSIR Publishing, Wellington. 319pp.

Coffey BT, Clayton JS (1988). New Zealand water plants: a guide to plants found in New Zealand freshwaters. Ruakura Agricultural Centre. 65pp.

Popay et al (2010). An illustrated guide to common weeds of New Zealand, third edition. NZ Plant Protection Society Inc, 416pp.

Kasselmann C (2003). Aquarium plants. Krieger Publishing company, Florida, 518pp.; WSDE (2001). An aquatic plant identification manual for Washington's freshwater plants. Washington State Department of Ecology, 195pp.

Aston, H (1977). Aquatic plants of Australia. Melbourne University Press, 367PP.

Hofstra D, P Champion, (2006). Management options assessment for *Egeria densa*. NIWA client Report HAM2006-160.

Hofstra D, P Champion, (2006). Organism Consequence Assessment *Egeria densa*. NIWA Client Report: HAM2006-058g.

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/egeria-densa/>