

Salvinia molesta

COMMON NAME

water fern

FAMILY

Salviniaceae

AUTHORITY

Salvinia molesta D.S.Mitch.

FLORA CATEGORY

Vascular – Exotic

STRUCTURAL CLASS

Ferns

CONSERVATION STATUS

Not applicable

BRIEF DESCRIPTION

Free floating fern with tightly overlapping hairy leaves, that forms dense growths on still and slow flowing waters.

DISTRIBUTION

Introduced and Naturalised. New Zealand: North Island (ponds and lakes from Northland to Waikato, subject to a national eradication programme since 1983, first record from Western Springs, Auckland in 1963). A widespread species which has become a serious weed in tropical regions.

HABITAT

Still and slow flowing water bodies in warm areas. Prefers warm growing conditions and is susceptible to frost damage in a severe winter.

WETLAND PLANT INDICATOR STATUS RATING

OBL: Obligate Wetland

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

DETAILED DESCRIPTION

Free-floating fern. **Stem** horizontal with paired aerial (above the water) leaves. **Adult leaves** brownish-green elliptic to broadly elliptic up to 2.5 × 2 cm, folded, whereas young leaves are flat. **Aerial leaves** have hairs shaped like miniature egg-beaters. **Lower submerged leaves** look more like roots and can be up to 30 cm long. **Sporocarps** in long, straight chains, hairy c. 1 mm diameter produced under water.

SIMILAR TAXA

The juvenile form resembles *Azolla* spp, but it is very distinctive when mature.

LIFE CYCLE

Perennial. Spreads rapidly by fragmentation and producing plantlets from the old end of the horizontal axis, and can grow from a single node; the death and decay of the older connecting part of the plant can lead to the separation of the viable younger branches. The plant is apparently a sterile hybrid. Fragments spread by water movement, deliberate release (with fish from aquaria).

YEAR NATURALISED

1964

ORIGIN

South America, southeastern Brazil, and northern Argentina.

REASON FOR INTRODUCTION

Ornamental aquarium plant



Salvinia molesta. Photographer: John Smith-Dodsworth, Licence: CC BY-NC.



Gold Coast, Australia. Photographer: Colin C. Ogle, Date taken: 01/08/2011, Licence: CC BY-NC.

CONTROL TECHNIQUES

Notify Ministry for Primary Industries if found.

TOLERANCES

Leaves are frost sensitive but can survive over winter in warmer parts. Generally requires high light and high temperature. Tolerates any quality of water, nutrient increases growth rate.

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 P. et al. 2020. Freshwater Invasive Species of New Zealand 2020. NIWA publication.
<https://docs.niwa.co.nz/library/public/FreInSpec.pdf>.

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/salvinia-molesta/>