

*Sagittaria platyphylla* [简体中文](#) [正體中文](#)

**System:** Terrestrial

| Kingdom | Phylum        | Class      | Order       | Family       |
|---------|---------------|------------|-------------|--------------|
| Plantae | Magnoliophyta | Liliopsida | Alismatales | Alismataceae |

**Common name** sagittaria (English), elliptic-leaved arrowhead (English)

**Synonym** *Sagittaria graminea* , var. *platyphylla* Engelm  
*Sagittaria mohrii* , J.G. Sm.

**Similar species** *Alisma* spp., *Sagittaria graminea*

**Summary** *Sagittaria platyphylla* is a rhizomatic aquatic plant which can thrive in many aquatic habitats. It forms extensive infestations in shallow waterways, where it can seriously restrict water flow, increase sedimentation and aggravate flooding. Infestations of *Sagittaria platyphylla* can also displace native plants in wetland areas.



[view this species on IUCN Red List](#)

## Species Description

*Sagittaria platyphylla* is an rhizomatous aquatic plant that can reach heights up to 150cm (EFloras.org, UNDATED). The Auckland Regional Council (2002) reports that, "\i>S. platyphylla has fleshy rhizomes that are usually submerged below the water surface, while leaves are held above the surface by rigid stems. There are two kinds of leaves: emergent leaves that are linear to ovate, tapering abruptly to a point with stems that are triangular in cross-section and winged towards the base; and submerged leaves that are strap-shaped. The white or sometimes pink flowers are found in clusters of three-flowered whorls at the end of the flower stem.\" EFloras.org (UNDATED) reports that, \"The Inflorescences are racemes of 3-9 whorls. Flowers can be 1.8cm in diameter and the sepals can be spreading to recurved. Fruiting heads are 0.7-1.2cm in diameter\".

## Uses

Parsons and Cuthbertson (1992) state that *S. platyphylla* has been cultivated as an ornamental and this has aided spread.

## Habitat Description

The Auckland Regional Council (2002) reports that, "\i>S. platyphylla grows in static or slow-moving fresh water such as drains, streams and pond margins, up to a depth of 45cm.\" FNZAS (UNDATED) classifies *S. platyphylla* as a swamp plant. \"In Australia, *S. platyphylla* has become increasingly more common in irrigation supply channels, drains, shallow creeks and wetlands\" (Parsons and Cuthbertson, 1992).

## Reproduction

The Auckland Regional Council (2002) states that, "\i>S. platyphylla spreads locally by its creeping root system, and to other areas *via* seed carried in water, by machinery, wildlife and humans. New infestations can also form *via* rhizome fragments transported by ditch cleaning machinery and spoil.\" Parsons and Cuthbertson (1992) state that *S. platyphylla* can spread from seed, and displaced rhizomes and tubers. Entire plants can break free and float to new locations.

## General Impacts

The Wellington Department of Conservation (2002) states that, \"*S. platyphylla* forms extensive infestations in shallow waterways, where it can seriously restrict water flow, increase sedimentation, and aggravate flooding. Infestations of this plant can also displace native plants in wetland areas.\"

## Management Info

Physical: The Auckland Regional Council (2002) reports that, \"Small infestations can be cleared by hand or machinery but all the roots, rhizomes and tubers must be removed and plant material disposed of carefully.\"

## Pathway

Parsons and Cuthbertson (1992) state that *S. platyphylla* has been cultivated as an ornamental and this has aided spread.

**Principal source:** [Auckland Regional Council, 2002](#). Auckland Regional Pest Management Strategy: 2002-2007.

**Compiler:** National Biological Information Infrastructure (NBII) & IUCN/SSC Invasive Species Specialist Group (ISSG) with support from the Terrestrial and Freshwater Biodiversity Information System (TFBIS) Programme ([Copyright statement](#))

**Review:** Dr. Surrey Jacobs Principal Research Scientist Royal Botanic Gardens Sydney NSW, Australia

**Pubblcation date:** 2006-11-29

## ALIEN RANGE

[5] AUSTRALIA  
[3] NEW ZEALAND

[1] GEORGIA

## BIBLIOGRAPHY

18 references found for *Sagittaria platyphylla*

### Managment information

[Champion, P. Clayton, J. and Rowe, D. 2002. Alien Invaders Lake Managers Handbook. Ministry for the Environment.](#)

**Summary:** Available from: <http://www.mfe.govt.nz/publications/water/lm-alien-invaders-jun02.pdf> [Accessed 3 February 2005]

[Champion, P.D.; Clayton, J.S. 2000. Border control for potential aquatic weeds. Stage 1. Weed risk model. Science for Conservation 141.](#)

**Summary:** This report is the first stage in a three-stage development of a Border Control Programme for aquatic plants that have the potential to become ecological weeds in New Zealand.

Available from: <http://www.doc.govt.nz/upload/documents/science-and-technical/sfc141.pdf> [Accessed 13 June 2007]

[Champion, P.D.; Clayton, J.S. 2001. Border control for potential aquatic weeds. Stage 2. Weed risk assessment. Science for Conservation 185. 30 p.](#)

**Summary:** This report is the second stage in the development of a Border Control Programme for aquatic plants that have the potential to become ecological weeds in New Zealand. Importers and traders in aquatic plants were surveyed to identify the plant species known or likely to be present in New Zealand. The Aquatic Plant Weed Risk Assessment Model was used to help assess the level of risk posed by these species. The report presents evidence of the various entry pathways and considers the impact that new invasive aquatic weed species may have on vulnerable native aquatic species and communities.

Available from: <http://www.doc.govt.nz/upload/documents/science-and-technical/SFC185.pdf> [Accessed 13 June 2007]

[Gardner, 1998. Sagittaria platyphylla - Elliptic-Leaved Arrowhead. Ohio Department of Natural Resources.](#)

**Summary:** Available from: <http://www.dnr.state.oh.us/dnap/Abstracts/S/sagiplat.htm> [Accessed 9 March 2005]

[National Pest Plant Accord, 2001. Biosecurity New Zealand.](#)

**Summary:** The National Pest Plant Accord is a cooperative agreement between regional councils and government departments with biosecurity responsibilities. Under the accord, regional councils will undertake surveillance to prevent the commercial sale and/or distribution of an agreed list of pest plants.

Available from: <http://www.biosecurity.govt.nz/pests-diseases/plants/accord.htm> [Accessed 11 August 2005]

[Parsons, W., and E. Cuthbertson, 1992. Sagittaria - Sagittaria platyphylla. Noxious Weeds of Australia.](#)

**Summary:** Available from: <http://www.weeds.org.au/cgi-bin/weedident.cgi?tpl=plant.tpl&state=&s=&ibra=all&card=W13> [Accessed 9 March 2005]

[Royal New Zealand Institute of Horticulture \(RNZIH\), 2005. Sagittaria Sagittaria platyphylla](#)

**Summary:** Available from: [http://www.rnzih.org.nz/pages/nppa\\_077.pdf](http://www.rnzih.org.nz/pages/nppa_077.pdf) [Accessed 1 October 2005]

Wellington Department of Conservation, 2002. Have you seen these aquatic plants? *Sagittaria platyphylla*. Department of Conservation, P. O. Box 5086, Wellington.

## General information

Battle, J. M., and T. B. Mihuc, 2000. Decomposition dynamics of aquatic macrophytes in the lower Atchafalaya, a large floodplain river. *Hydrobiologia*. 2000; 418(1-3): 123-136.

FloraBase, 2004. *Sagittaria platyphylla* (Engelm.) J.G.Sm. The Western Australia Flora.

[Floras.org, Undated. \*Sagittaria platyphylla\*. Flora of North America.](#)

**Summary:** Available from: [http://www.efloras.org/florataxon.aspx?flora\\_id=1&taxon\\_id=222000354](http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=222000354) [Accessed 9 March 2005]

[FNZAS \(Federation of New Zealand Aquarium Societies\), Undated \*Sagittaria platyphylla\*.](#)

**Summary:** Available from: [http://www.fnzas.org.nz/320.0.html?&user\\_plants=124&cHash=808072f587](http://www.fnzas.org.nz/320.0.html?&user_plants=124&cHash=808072f587) [Accessed 9 March 2005]

Freshwater Biodata Information System New Zealand (FBIS), 2005

**Summary:** The Freshwater Biodata Information System (FBIS) contains fish, algae, aquatic plant and invertebrate data and metadata gathered from New Zealand's freshwater streams, rivers and lakes. FBIS provides different ways to search for biodata: choose a predefined search from a list of common searches; use the map view to draw a box on a map and search for biodata; or create your own search for maximum search flexibility. FBIS is offered as a nationally available resource for the New Zealand public, institutions and companies who need access to a well-maintained long-term data repository.

Available from: <https://secure.niwa.co.nz/fbis/validate.do?search=common> [Accessed 5 August 2005]

[Global Biodiversity Information Facility \(GBIF\), 2010. Species: \*Sagittaria platyphylla\*](#)

**Summary:** Available from: <http://www.gbif.net/species/13751047/> [Accessed 15 June 2010]

[ITIS \(Integrated Taxonomic Information System\). 2005. Online Database \*Sagittaria platyphylla\*](#)

**Summary:** An online database that provides taxonomic information, common names, synonyms and geographical jurisdiction of a species. In addition links are provided to retrieve biological records and collection information from the Global Biodiversity Information Facility (GBIF) Data Portal and bioscience articles from BioOne journals. Available from:

[http://www.itis.gov/servlet/SingleRpt/SingleRpt?search\\_topic=TSN&search\\_value=38927](http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=38927) [Accessed December 31 2004]

Sage, L. W., S. G. Lloyd, and J. P. Pigott, 2000. *Sagittaria platyphylla* (Alismataceae), a new aquatic weed threat in Western Australia. *Nuytsia*. 2000; 13 (2): 403-405.

[USDA-GRIN \(Germplasm Resources Information Network\), 2005. \*Sagittaria platyphylla\*. National Genetic Resources Program \[Online Database\] National Germplasm Resources Laboratory, Beltsville, Maryland.](#)

**Summary:** Available from: [http://www.ars-grin.gov/cgi-bin/npgs/html/tax\\_search.pl?Sagittaria+platyphylla](http://www.ars-grin.gov/cgi-bin/npgs/html/tax_search.pl?Sagittaria+platyphylla) [Accessed 9 March 2005]

[USDA-NRCS \(Natural Resource Conservation Service\), 2005. \*Sagittaria platyphylla\*. The PLANTS Database Version 3.5 \[Online Database\] National Plant Data Center, Baton Rouge, LA.](#)

**Summary:** Available from:

<http://plants.usda.gov/java/nameSearch?keywordquery=Sagittaria+platyphylla&mode=sciname&submit.x=7&submit.y=7> [Accessed 9 March 2006]