# GLOBAL INVASIVE SPECIES DATABASE

FULL ACCOUNT FOR: ***Sagittaria sagittifolia***

***Sagittaria sagittifolia*** 简体中文 正體中文

**System:** Terrestrial

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

**Common name** suokiu (English), shui p'Ing (English), chieh ku (English), giant arrowhead (English), pijlkruid (English), pai ti li (English), chien tao ts'ao (English), flecha de agua (Spanish), t'zu ku (English), sagit&#65533;ria (Portuguese), espadana (Portuguese), wapatoo (English), Pfeilkraut (German), fl&#65533;che d'eau (French), yen wei ts'ao (English), old world arrowhead (English), saeta de agua (Spanish), arrowhead (English), Hawaii arrowhead (English)

**Synonym** ,ittaria japonica (Hort.)
*Sagittaria sagittifolia* , var. *edulis* Siebold ex Miq.
*Sagittaria sagittifolia* , var. *leucopetala* Miq.
*Sagittaria sinensis* , Sims
*Sagittaria trifolia* , L.
*Sagittaria trifolia* , var. *edulis* (Siebold ex Miq.)
*Sagittaria trifolia* , var. *sinensis* (Sims) Makino

**Similar species**

**Summary** Sagittaria sagittifolia is a very hardy aquatic plant that has become a general nuisance in the crops' irrigation systems, drains and waterways around the globe.

view this species on IUCN Red List

**Species Description**
*Sagittaria sagittifolia* is a herbaceous aquatic perennial that reaches sizes of 1m by 0.5m . It is a hardy species that is not frost tender. The leaves are borne on triangular stalks that vary in length with the depth of the water in which the plant is growing. They do not lie on the water but stand boldly above it. They are large and arrow-shaped and very glossy. The early, submerged leaves are ribbon like. The flower-stem rises directly from the root and bears several rings of buds and blossoms, three in each ring or whorl, and each flower composed of three outer sepals and three large, pure white petals, with a purple blotch at their base. The upper flowers are stamen bearing; the lower ones generally contain the seed vessels only. *S. sagittifolia*'s tubers are walnut sized and grow just below the mud surface, produced on creeping runners (Grieve, 2005; National Plant Pest Accord, 2001; and Plants for a Future, 2000).

**Lifecycle Stages**
North American region: *S. sagittifolia* flowers in mid-summer, and the seeds ripen through the fall. The flowers are monoecious (individual flowers are either male or female, but both sexes can be found on the same plant) and are pollinated by insects (Plants for a Future, 2000).

**Uses**
Plants for a Future (2000) offers a variety of uses both edible and medicinal for *S. sagittifolia* . The leaves and roots of *S. sagittifolia* are edible. The root can be cooked and is apparently excellent when roasted and likened to potatoes. The tubers are starchy with a distinct flavour, but should not be eaten raw. The leaves and young stems can also be cooked but are apparently somewhat acrid. The plant also has medicinal properties as an antiscorbutic; diuretic, and galactofuge but may induce premature birth. The authors post a disclaimer for all edible and medical knowledge: \"We are not experts on the medicinal uses of plants and much of the information has been taken from other sources. You should talk to someone who knows what they are on about before using any of these plants. Plants For A Future can not take any responsibility for any adverse effects from the use of plants\" (Plants for a Future, 2000).

**Habitat Description**
*Sagittaria sagittifolia* can inhabit ponds, canals and slow flowing water on muddy sub-strata in water up to 45cm deep, in acid or calcareous conditions (Plants for a Future, 2000). Scher (UNDATED) adds that *S. sagittifolia* can be found in Sub-arctic to tropical environments, in quiet, shallow, standing waters, including swamps, reservoirs, rice paddies, river banks, bays.

**Reproduction**
Reproduction is by achenes and vegetatively by whole, immature plants and underground tubers. Seeds float easily and can be carried long distances (Scher, UNDATED).

**General Impacts**
The Nature Conservancy (2005) explains that *S. sagittifolia* is a general nuisance in the crops' irrigation systems, drains and waterways of more than 50 countries. This invasive potential stems from its remarkable ability to adapt, both in form and physiology to a variety of habitats.

**Principal source:** Plants for a Future, 2000. *Sagittaria sagittifolia*

**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


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**ALIEN RANGE**

**[1]** ARGENTINA
**[1]** CUBA
**[5]** NEW ZEALAND
**[1]** AUSTRALIA
**[1]** MEXICO
**[2]** UNITED STATES

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**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]
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.
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**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=38931 [Accessed 11 August 2005]
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