Limnophila sessiliflora 简体中文 正體中文

System: Terrestrial

Kingdom	Phylum	Class	Order	Family
Plantae	Magnoliophyta	Magnoliopsida	Scrophulariales	Scrophulariaceae

Common name Asian marshweed (English), ambulia (English), limnophila (English), shi long wei (Chinese)

Synonym *Hottonia sessiliflora* , (Vahl)
Terebinthina sessiliflora , (Vahl) Kuntze

Similar species *Cabomba caroliniana*

Summary Limnophila sessiliflora is an aquatic perennial herb that can exist in a variety of aquatic habitats. It is fast growing and exhibits re-growth from fragments. Limnophila sessiliflora is also able to shade out and out compete other submersed species. 2-4,D reportedly kills this species.

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Species Description
L. sessiliflora is described as an aquatic, or nearly aquatic, perennial herb with two kinds of whorled leaves. The submerged stems are smooth and have leaves to 30mm long, which are repeatedly dissected. Emergent stems,on the other hand are covered with flat shiny hairs and have leaves up to 3cm long with toothed margins. The emergent stems are usually 2-15cm above the surface of the water. The flowers are stalkless and borne in the leaf axis. The lower portion (sepals) have five, green, hairy lobes, each 4-5mm long. The upper portion is purple and composed of five fused petals forming a tube with two lips. The lips have distinct purple lines on the undersides. The fruit is a capsule containing up to 150 seeds (Hall and Vandiver, 2003).
In the course of studying *Limnophila* of Taiwan, Yang and Yen (1997) describe *L. sessiliflora*. Descriptions and line drawings are provided.

Notes
Hall and Vandiver (2003) state that, \"*L. sessiliflora* is derived from a Latin word which means pond-loving and refers to its aquatic existence. Sessiliflora, also Latin, means sessile-flowered and refers to this plant's stalkless flowers.\" The authors also report that, \"A toxin present in the stem tissue may prevent herbivorous fish from eating the plant.\"

Lifecycle Stages
Hall and Vandiver (2003) state that, \"In late fall *L. sessiliflora* mats break loose from the hydrosoil. Since the fruit is mature in the late fall the floating mats spread the seeds as they move.\"

Habitat Description
L. sessiliflora will grow in a variety of aquatic habitats and can withstand a minimum temperature of 15°C, with an optimum temperature between 20-26°C (IFAS, 2001).

Reproduction
Hall and Vandiver (2003) state that, \"*L. sessiliflora* reproduces by fragmentation of the stem or by seeds.\"

Nutrition
Hall and Vandiver (2003) state that, \"*L. sessiliflora* is found in or near organically stained, acidic or clear, slightly alkaline water. It also tolerates low temperatures.\" IFAS (2003) state that, \"The best light intensity for growth is around 215 micro-einsteins/metre squared/hour. It is an efficient photosynthesizer and has low light compensation point for long periods of photosynthesis, making it a competitive plant because it can start growing in low light before other plants do.\" The authors go on to state that *L. sessiliflora*'s minimum temperature tolerance is 15°C, and its maximum tolerance is 28°C. The optimum temperature for *L. sessiliflora* is 20-26°C.

General Impacts
IFAS (2001) reports that, \"*L. sessiliflora* is fast-growing and able to regrow from fragments. It is also able to shade out, and thus, out-compete totally submersed species. This species also clogs irrigation and flood-control canals, and pumping and power stations. *L. sessiliflora* is a major weed problem in paddy rice fields of India, China, Japan and the Philippines.\" The authors also state that, \"*L. sessiliflora* is an efficient photosynthesizer and has a low light compensation point for long periods of photosynthesis, making it a competitive plant because it can start growing in low light before other plants do.\"

Management Info
Mechanical: IFAS (2001) reports that, \"The action of mechanical harvesters and chopping machines serves to help spread *L. sessiliflora*, which re-grows from leaf fragments.
Chemical: IFAS (2001) reports that, \"Registered aquatic herbicides provide very limited control of this species; however, high levels of 2-4,D reportedly kills this plant.\" Wang *et al*. (2000) report that, \"Daily spraying for 8 days with 1000 ppm paraquat gave excellent control of *L. sessiliflora*.\" In Japan, Wang *et al*. (2000) state that, \"Sulfonylurea (SU) herbicides, known for their high herbicidal activity and low mammalian toxicity, were used since 1988 to control *L. sessiliflora* and other broadleaf weeds on rice fields at Sennan Village, Akita Prefecture, Japan. Since 1996, control of *L. sessiliflora* with the SU herbicides was no longer satisfactory. Two greenhouse studies at Tohoku National Agricultural Experiment Station and one experiment in the rice fields at Sennan Village were conducted in 1997 to confirm *L. sessiliflora* resistance to SU herbicides and to compare herbicide treatments for control of SU-resistant *L. sessiliflora*.\" The study conducted in Wang *et al*. (2000) hope to identify if *L. sessiliflora* was resistant to other herbicides that use different modes of action from SU's. The authors state that, \"In particular, amide or phenoxy herbicides were effective control measures.\"

Principal source: *Limnophila sessiliflora (Vahl) Blume* (IFAS, 2001)
Limnophila, Limnophila sessiliflora (Vahl) (Hall and Vandiver, 2003)

Compiler: National Biological Information Infrastructure (NBII) & IUCN/SSC Invasive Species Specialist Group (ISSG)

Review: Expert review underway

Pubblication date: 2006-08-25

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ITIS (Integrated Taxonomic Information System), 2005. Online Database *Limnophila sessiliflora*
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.cbif.gc.ca/pls/itisca/taxastep?king=every&p_action=containing&taxa=Limnophila+sessiliflora&p_format=&p_ifx=plglt&p_lang= [Accessed March 2005]
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