

Southeastern Aquatic Plants Identification, Control, and Establishment

Arrowhead | Sagittaria spp.



All arrowhead species have showy, vibrant flowers with three petals.



Delta arrowhead, Sagittaria platyphylla.



There are at least seven species of *Sagittaria* in Mississippi. Most species of this attractive plant resemble the common garden species taro, elephant ears, and caladiums in shape. However, shape is variable among species.

The leaves can be found both above and below the water surface, and they can grow high above the water on long stalks. **They are shaped like a spade, deeply notched like an arrowhead, or lance shaped.**

Flowers are produced during the summer and are usually white with three petals. Pink flowers can occur but are less common.

Giant arrowhead, *Sagittaria montevidensis*, is non-native and invasive and can be identified by the brownish-purple spot at the base of each flower petal. Although uncommon in recreational ponds, this species should be eliminated upon first detection. Other Mississippi species are native and rarely become a problem in ponds.

Management Value

Giant arrowhead, *Sagittaria montevidensis*, is **non-native** and invasive, and should be eradicated upon first detection.

Other Mississippi species of this plant are native and important for wildlife. The tubers are eaten by people, muskrats, and waterfowl. In fact, one common name for *Sagittaria* is duck potato. Arrowhead tubers are considered an important part of the Native American diet—the Cree tribe called them *wapato*. Some raw tubers are edible but become less bitter when cooked. The seeds also provide food for different wildlife species.

It is important to note that another native species, *Peltandra virginica*, which is very similar in appearance to some species of *Sagittaria*, can be poisonous if not prepared properly before eating.

Stand of broadleaf arrowhead, Sagittaria latifolia.

Arrowhead | Sagittaria spp.

Arrowhead are a species that can be introduced around shorelines to improve aesthetics and provide habitats for wildlife and fish. They spread relatively slowly, allowing for both mechanical and herbicidal control when necessary.

Recommended Controls

Option 1: Glyphosate (5.4-pound formulation). For each gallon, mix 3.8 ounces glyphosate, 1.3 ounces surfactant, and water. Spray to wet all exposed plants. Do not exceed annual herbicide rate limits as stated on the product label.

Option 2: Imazamox (1.0-pound formulation). For each gallon, mix 1.2 ounces imazamox, 1.3 ounces surfactant, and water. Spray to wet all exposed plants. Do not exceed annual herbicide rate limits as stated on the product label.

Option 3: 2,4-D (3.8-pound formulation). For each gallon, mix 5.1 ounces 2,4-D, 1.3 ounces surfactant, and water. Spray to wet all exposed plants. Do not exceed annual herbicide rate limits as stated on the product label.

For some arrowhead species, multiple applications may be necessary to achieve eradication.

The best approach to control this species is to treat ponds with herbicides when the water temperature is at least 60°F and the plants are actively growing. For options 2 and 3, it would be best to treat one-third of the pond at a time, with a week or more separating applications.

After the entire pond has been treated, a repeat application for the entire pond may be necessary to eliminate remaining plants.

Southeastern Aquatic Plants | Identification, Control, and Establishment

Read and follow all chemical label instructions, especially the section on the use of personal protection equipment.

The information given here is for educational purposes only. References to commercial products, trade names, or suppliers are made with the understanding that no endorsement is implied and that no discrimination against other products or suppliers is intended.

Publication 3735-17 (POD-11-22)

By **Wes Neal**, PhD, Extension/Research Professor, Wildlife, Fisheries, and Aquaculture; **Dennis Riecke**, Fisheries Coordinator, Mississippi Department of Wildlife, Fisheries, and Parks; and **Gray Turnage**, PhD, Assistant Research/Extension Professor, GeoSystems Research Institute.

Copyright 2022 by Mississippi State University. All rights reserved. This publication may be copied and distributed without alteration for nonprofit educational purposes provided that credit is given to the Mississippi State University Extension Service.

Produced by Agricultural Communications.

Mississippi State University is an equal opportunity institution. Discrimination in university employment, programs, or activities based on race, color, ethnicity, sex, pregnancy, religion, national origin, disability, age, sexual orientation, gender identity, genetic information, status as a U.S. veteran, or any other status protected by applicable law is prohibited.

Extension Service of Mississippi State University, cooperating with U.S. Department of Agriculture. Published in furtherance of Acts of Congress, May 8 and June 30, 1914. STEVE MARTIN, Interim Director