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Arrowhead, Duck Potato Sagittaria latifolia Willd.

Gene Silberhorn
Virginia Institute of Marine Science

Technical Report

Wetland Flora

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Arrowhead
Duck Potato

***Sagittaria latifolia* Willd.**

Growth Habit and Diagnostic Characteristics

Sagittaria latifolia is frequently found in tidal freshwater marshes and swamps, particularly in the intertidal zone. It is often associated with arrow arum *(Peltandra virginica)*, pickerelweed *(Pontederia cordata)* and to a lesser extent, bultonge *(Sagitteria falcata)*, but it is seldom as abundant as arrow arum and pickerelweed. Arrowhead is a fleshy emergent, growing from 45 to 90 cm (1.5 to 3.0 ft) high. A variable species, the leaf blades range from broad (as illustrated) to very slender and strap-like. Blades usually have the characteristic arrowhead shape, whether broad (up to 35 cm) or narrow (8 cm or less). The leaf petiole and flower stalk (scape) come up from rhizomes beneath the substrate. The scape usually occurs associated with leaf clusters, but is independent of them. Rhizomes also produce underground tubers that are produced at the ends of rhizomes, hence the common name duck potato. The tubers are a prime waterfowl food. They are also quite good for human consumption; however, they are difficult to find in the mud and are seldom larger than a golf ball.

The flowers are showy white with bright yellow centers (stamens or pistils) with the male or staminate flowers near the terminus of the scape. The reproductive structure of this plant is very similar to bultongue *(S. falcata)*, however, bultongue has lance-shaped leaves without the downward trending lobes. Both species produce dry fruits called achenes that are sometimes eaten by waterfowl. Unlike arrowhead, bultongue does not produce tubers.

A similar plant, arrow arum *(Peltandra virginica)*, has a triangular-shaped leaf that may be confused with this species, however, *Peltandra* does not have white flowers and the leaf veination is different. Arrow arum has three major veins, whereas arrowhead has narrower veins that parallel the general shape of the blade.

Density and Production

Annual production for S. latifolia ranges from 200 to over 1000 grams of dry weight per meter^2 (1-4 tons/acre). There is no information in the literature regarding stem count or density.

Distribution

Arrowhead is widely distributed in wetland areas throughout the eastern two thirds of the United States.

Habitat

S. latifolia usually grows in the soft, muddy sediments of the intertidal zone of freshwater marshes and swamps. Arrowhead is often associated with arrow arum and pickerelweed *(Pontederia cordata)*, although it does not appear as abundant as the other two species. A related species, bultongue *(S. falcata)*, can also be found in the same habitat. Arrowhead also grows in non-tidal wetlands.

Ecological Values/Benefits

In addition to the waterfowl food value of this species (tubers), the entire ecosystem is considered a primary spawning and nursery area for anadromous fishes. Holistically, organic matter produced by vascular plants, phytoplankton, and benthic algae in these systems serves as an energy source for a large array of organisms, a number of which are commercially important.

Hydrophytic Factor/Federal Delineation

According to the *Federal Manual for Identifying and Delineating Jurisdictional Wetlands* and the *National List of Plant Species that Occur in Wetlands: Virginia* (1988), *Sagittaria latifolia* is classified as an **obligate wetland plant (OBL)**. OBLs are plants that almost always occur in wetlands (>99% probability).

Sagittaria latifolia Willd.

Wetlands Program
School of Marine Science
Virginia Institute of Marine Science
College of William and Mary
Gloucester Point, Virginia 23062
Dr. Carl Hershner, Program Director

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