

# Technical Report



## Wetland Flora

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# Bultongue Coastal Arrowhead

*Sagittaria falcata* Pursh

### Growth Habitat and Diagnostic Characteristics

Bultongue, *Sagittaria falcata*, a fleshy-leaved wetland plant, is closely related to arrowhead (*Sagittaria latifolia*) (Wetland Flora 91-1/March 1991). Like arrowhead, bultongue has showy flowers with white, parchment-like petals (3) with a bright yellow center. The central part of the flower is composed of stamens and pistils. Male flowers dominate the upper part of the flower stalk (scape) and female flowers the lower. Blooms usually occur in clusters of three at a node, however, occasionally only two develop. The scape comes up directly from an underground rhizome and is usually independent of the leaves. Unlike arrowhead, bultongue's leaves are lanced-shaped and not the typical arrowhead-shape, although the scapes are very similar. The two species often grow in the same habitat (shallow water). The scape is often taller (1.5 to 4.0 feet) than the leaves (1.0 to 3.0 feet). Although both species produce flat, dry seeds called achenes which are eaten by waterfowl, bultongue does not produce underground tubers. Arrowhead, however, does produce tubers which are eaten by waterfowl and muskrats.

### Density and Production

Annual production of *S. falcata* is seldom reported in the literature because it is rarely a dominant plant in wetlands. However, its estimated annual production ranges from 200 to over 1000 grams of dry weight per meter<sup>2</sup> or approximately 1 to 4 tons per acre.

### Distribution

Bultongue is a southern, mainly coastal plant ranging from Delaware to Florida, west to Texas and Mexico and south to the West Indies and northern South America.

### Habitat

*S. falcata* is more likely to be found in tidal freshwater marshes in the Mid-Atlantic region than any other wetland type. Bultongue is only occasionally found in nontidal wetlands. Its preferred habitat appears to be in the intertidal zone (between mean sea level and mean high water) in tidal rivers and minor tributaries where salinity does not occur over 0.5 ppt for extended periods of time. *S. falcata* is often associated with arrow arum (*Peltandra virginica*) (Wetland Flora 90-6/November 1990), pickerelweed (*Pontederia cordata*) (Wetland Flora 91-5/May 1991) and arrowhead. Arrow arum and pickerelweed are usually more abundant in this habitat than either of the two sagittarias. Arrow arum and pickerelweed are also more tolerant to saltwater intrusion during periods of drought in tidal wetlands.

### Ecological Values/Benefits

Specifically, the main wildlife value of this plant is the dry, flat seeds which are eaten by waterfowl and the cover that a dense stand affords wildlife in general. All the broad-leaved plants (arrow arum, pickerelweed, arrowhead and bultongue) occurring in the intertidal zone decompose rapidly at the end of the growing season.

Holistically, organic matter (detritus) 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. The entire ecosystem of tidal wetlands is a primary spawning and nursery area for anadromous fishes.

### Hydrophytic Factor/Wetland Indicator Status

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

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