

Technical Report



Wetland Flora

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Gene Silberhorn

Pickerelweed Tuckahoe

Pontederia cordata L.

Growth Habit and Diagnostic Characteristics

Pickerelweed is a striking, fleshy perennial appearing in tidal freshwater, riverine wetlands in the intertidal zone, between mean sea level and mean high water. At peak season, the plant's two prominent features are its rich green, heart-shaped (cordate) leaves and attractive spike of violet-blue flowers. The leaves, 20 to 40 cm long (8 to 10 in) and 10 to 20 cm wide (4 to 8 in), have an array of delicate veins that parallel one another and the characteristic shape of the leaf. Although the dense foliage and height (60 to 120 cm - 2 to 4 ft) are prominent habit features, the spike of blue flowers (May to September) may be its most aesthetic asset. A marsh dominated by this plant will have a definite blue hue during the blooming season because of the multitude of flowering spikes. Subtending the flower spike is a leaf-like bract, very similar to the vegetative leaves. *Pontederia* often grows in association with arrow arum (*Peltandra virginica*). Although both species are somewhat similar, they can be easily differentiated. Pickerelweed has heartshaped leaves and blue flowers and arrow arum has an enclosed (spathe) spike (spadix) and triangular shaped leaves with three prominent veins.

Density and Production

Production estimates of *Pontederia* are often combined with *Peltandra* in the scientific literature largely because both species usually occur as the arrow arum/pickerelweed community in the intertidal zone. In the Mid-Atlantic region, peak standing crop estimates for this community range from 450 to over 1200 g (dry wt)/m², averaging over 660 or up to 5 tons per acre per year. These figures are comparable to the very productive saltmarsh cordgrass (*Spartina alterniflora*). Stem density is not well documented, but estimated to be from 10 to 20 per m². Fleshy aquatic plants, such as *Pontederia*, rapidly decompose at the end of the growing season. The familiar vegetated shores are mainly bare mud by October.

Distribution

Pickerelweed ranges throughout the eastern North America from Canada to South Carolina and Texas. In nontidal areas, *Pontederia* often occupies the shoreline of lakes and ponds.

Habitat

In the coastal plain riverine wetlands of our area, *Pontederia* commonly grows in soft, muddy sediments between mean sea level and mean high water (intertidal zone). It often functions as a pioneer species in this habitat, invading mud flats in advance of its usual companion counterpart, *Peltandra virginica*. Pickerelweed is seldom found in marshes where salinities average above 0.7 ppt. Arrow head (*Sagittaria latifolia*), bultongue (*Sagittaria falcata*), giant bulrush (*Scirpus validus*) and wild rice (*Zizania aquatica*) are frequent or occasional associate species.

Ecological Values/Benefits

Oligohaline and freshwater tidal riverine wetlands of the Chesapeake Bay watershed are important spawning and nursery areas for anadromous fishes, such as herring and shad. The reddish, bladder-like seeds of pickerelweed have limited value as waterfowl food.

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), *Pontederia cordata* is classified as an **obligate wetland plant (OBL)**. OBLs are plants that almost always occur in wetlands (>99% probability).

Pontederia cordata L.



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