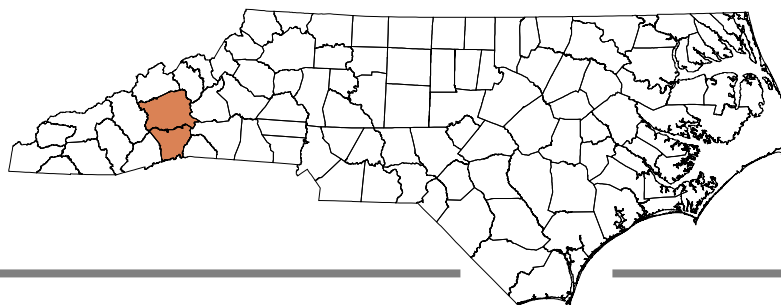


Bunched arrowhead

Sagittaria fasciculata

(Clustered arrowhead, duck potato)

Endangered (July 25, 1979)



Description: Bunched arrowhead is a small emergent aquatic perennial 6-13 inches (36-40 cm) tall. Leaves are up to 12 inches (30 cm) long and taper downward into a long stalk, which attaches to the base of the plant. Long, parallel veins run almost the entire length of the leaf. Flowers grow in whorls of 2-3 at intervals on a long stalk. Each flower grows upward on its own stem from the main stalk, and has three petals and three sepals. The petals are white, 0.2-0.7 inch (6-18 mm) long. Seeds have broad wings and a wrinkled surface. Small, flat, linear leaves (phyllodia) can be seen under the water after emersed leaves die off.

Life History: Flowers from May to June and fruits from June to August. Bunched arrowhead is monoecious; upper flowers of the flowering stem are male and lower flowers are female. The stems of the lowest whorl of flowers ascend in fruit. The fruiting head is 0.2-0.6 inch (5-15 mm) broad, and is made up of numerous small, dry, single-seeded fruits. Each fruit is 0.10-0.14 inch (2.5-3.5 mm) long.

Habitat: Rooted in shallow water of bogs and wooded swamps with a slight but steady flow of cool, clean water. Often found in soils that are characteristically sandy loam covered with 10-24 inches (25-60 cm) of muck, sand, and silt. Plants will grow in full sun or partial shade beneath red maple, black gum, and alder at the base of steep slopes, but larger, more vigorous plants grow in shady areas.

Distribution: In North Carolina, endemic to limited areas of Henderson County

in the southern mountains and into the upper piedmont of South Carolina. Also found historically in Buncombe County but not in the last 20 years.

Threats: Habitat degradation by drainage and clearing of land for development, highway, railway and powerline rights-of-way maintenance, water withdrawal and encroachment of woody plants.

Management Recommendations: Identification of new populations and maintenance and protection of existing habitat. Research to learn more about the autecology, cultivation, and propagation techniques for restoration, including hydrology of extirpated populations. Some reintroduction efforts have been tried but their success is not yet known.

Sources: Hardin 1977, Murdock pers. com., Radford et al. 1964, USFWS 1992a.

