

Halbred-Leaved Tearthumb Hastate-Leaved Tearthumb

Polygonum arifolium L.

Growth Habit and Diagnostic Characteristics

P. arifolium is a slender stemmed annual that is erect when young, but becomes vinelike and intertwines with marsh vegetation as it matures. Tearthumb forms dense, matted thickets at peak growing season that are difficult to walk through. The hastate or heartshaped leaves are borne alternately on angled stems. The stems have usually four longitudinal ridges, giving a square appearance in cross section. Downward trending barbs are found on stem ridges (as illustrated) and on leaf petioles. Smaller barbs are also located on the main vein of the leaf blade and on the blade margin. The blades are also pubescent (velvety) on both sides. The stem is surrounded by a membraneous sheath or collar known as an ocrea. The ocrea is a common characteristic of the buckwheat family (Polygonaceae), to which this plant belongs.

The terminus of the stem bears several pink to white flowers. The showy part of the bloom is made up of sepals (calyx). Petals are not present. The fruit is small (4mm or 3/8 in.), lens-shaped, glossy black or dark brown and is a favored waterfowl food.

A similar species, sagittate-leaved tearthumb (*Polygonum sagittatum*), also has barbs and twines and grows in a similar habitat. *P. sagittatum*, however, has narrower leaf blades, with the lower lobes extending down instead of to the side and nearly on the same plain as the blade margin.

Both species form tangled mats with other vegetation and frequently appear together in the same location.

Density and Production

Standing crop and stem density values for *P. arifolium* are difficult to assess because the plant infrequently grows in pure stands and is seldom reported in the scientific literature. Stem densities appear to range

from 1 to 4 stems/m², and above-ground biomass ranges from 0.01 to 1 ton of dry weight per annum.

Apparently the tangled growth habit of the plant belies the actual standing crop and stem density values, which are rather low compared to other marsh species.

Distribution

Polygonum arifolium ranges from the Canadian Maritime Provinces, west to Minnesota, south to Missouri and east to Georgia.

Habitat

Tearthumb is commonly found in tidal freshwater marshes in the mid-Atlantic states, but frequently occurs in nontidal wetlands as well. The plant appears to prefer open wetlands such as marshes, wet meadows, ditches, pond margins and along the borders of swamps. It is often found in flooded conditions. *P. arifolium* is often associated with other wetland plants such as smartweeds (*Polygonum punctatum*, *P. hydro-piperoides*, and *P. setaceum*), swamp dock (*Rumex verticillatus*), rice cut-grass (*Leersia orysooides*), swamp milkweed (*Asclepias incarnata*) and others.

Ecological Values/Benefits

Tearthumb thickets provide dense cover for small animals and nesting birds. The fruit of smartweeds and tearthumbs is excellent waterfowl food.

Hydrophytic Factor/Wetland Indicator Status

According to the *National List of Plant Species that Occur in Wetlands: Virginia (1988)*, *Polygonum arifolium* is classified as an **obligate wetland plant (OBL)**. OBL plants almost always occur in wetlands (99%) under natural conditions.

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