

# Horned Pondweed *Zannichellia palustris*

Native to Chesapeake Bay

**Family** - Zannichelliaceae

**Distribution** - *Zannichellia palustris* or horned pondweed is found in every state in the continental United States, as well as in Europe and South America. Horned pondweed is widely distributed in Chesapeake Bay, growing in fresh to moderately brackish waters, in muddy and sandy sediments. Horned pondweed generally grows in shallow water but may grow to depths of 5 m (16.4 ft).

**Recognition** - Long, linear, thread-like leaves are mostly opposite or arranged in whorls on slender branching stems. Leaf tips gradually taper to a point, and a thin sheath or stipule covers the basal parts of leaves. Horned pondweed has tendril-like roots and slender rhizomes. The seeds of horned pondweed readily distinguish this species and occur in groups of 2 to 4, are horned shaped and form in the leaf axils.

**Ecological Significance** - Horned pondweed is an annual plant and is one of the first SAV to appear in the early spring. By June as water temperatures warm, the plants release their seeds and die back. Two growth forms of horned pondweed are found in the bay, one upright and the other creeping, the latter of which is found in areas of higher wave energy.

**Similar Species** - Sago pondweed (*Stuckenia pectinata*) and widgeon grass (*Ruppia maritima*) are similar in appearance to horned pondweed. Sago pondweed, however, has leaves in bushy clusters, and widgeon grass has alternate leaves, whereas horned pondweed has opposite or whorled leaves. The species are easily distinguished when they are in seed. Widgeon grass has single seed pods that form at the base of fan-shaped clusters of short flowering stalks. Sago pondweed seeds are in terminal clusters. Horned pondweed has distinctively (horned) shaped seeds that occur in the leaf axils in groups of 2 to 4.



**Reproduction** - Two growth forms of horned pondweed occur in Chesapeake Bay: 1) an upright form with free-floating branches, and 2) a prostrate or creeping growth form with stem node roots that anchor the plant in areas with high wave energy (also common form in winter). Horned pondweed is usually the first SAV to appear in spring, and seed formation occurs in early to late spring. Reproduction is mostly by seed formation; the seeds are horn-like, slightly curved fruits that occur in groups of 2 to 4. Decline usually begins in June or early July, and produces floating mats of decaying plants. Thereafter, a second growth cycle can occur in fall, and it can grow over the winter in some areas. Horned pondweed seeds generally germinate in the same year as seeds are set.