WATER-MILFOILS
Myriophyllum species

NATIVE TO MAINE

Maine is home to six native water-milfoil species. Five of these are leafy milfoils, bearing some resemblance to one or more of the invasive milfoils. The sixth native species, dwarf water-milfoil (Myriophyllum tenellum), is a diminutive bottom dweller. Lacking true leaves, and not bearing any resemblance to the invasive milfoils, M. tenellum is not featured in this field guide. Specific information for each of the other five native milfoils is presented on the following pages:

- Alternate-flowered water-milfoil (Myriophyllum alterniflorum)
- Farwell's water-milfoil (Myriophyllum farwellii)
- Low water-milfoil (Myriophyllum humile)
- Northern water-milfoil (Myriophyllum sibiricum)
- Whorled water-milfoil (Myriophyllum verticillatum)

In addition to the species-specific information for each of the five native species, please see the chart comparing key diagnostic features of the five natives and the three invasive water-milfoils on pages 86 and 87.

**NOTE:** All leafy milfoils display a wide range of vegetative variability. Any milfoil found in Maine waters should be considered suspicious until a positive identification has been confirmed by someone with the appropriate expertise.

**Habitat:** All of Maine’s native water-milfoils are found in the submersed and emergent plant communities. They are best adapted to the quiet waters of lakes and streams.
Description: All five leafy native milfoils have long branching stems emerging from sprawling roots. All have finely-divided leaves arranged in a radiating pattern around the stem. The submersed leaves of all five species are feather-divided. Beyond these common features, Maine’s native milfoils could be sorted into two distinct groups:

**Group 1 ~ Milfoils with Two Distinct Leaf Types and Emergent Flowers; Submersed Leaves are Consistently Whorled.**

In the first group are the milfoils that have two distinct leaf types: submersed leaves, and emergent leaves. The emergent leaves, called bracts, are directly associated with the flowers. These milfoils produce flowers and fruits above or at the water’s surface on emergent spikes, and the submersed leaves are consistently arranged in whorls. There are three native milfoils in this group: alternate-flowered water-milfoil (*M. alterniflorum*), northern water-milfoil (*M. sibericum*), and whorled water-milfoil (*M. verticillatum*). NOTE: All three invasive milfoils prohibited in Maine also fit into this general category.

**Group 2 ~ Milfoils with One Leaf Type Only and Submersed Flowers; Submersed Leaves Not Consistently Whorled.**

The second group consists of the milfoils that have one leaf type only (submersed leaves). The plants in this group produce flowers and fruits below the surface of the water in the axils of the submersed leaves. The leaf arrangement of the milfoils in this group is less uniform, sometimes whorled, sometimes not; overall more of a scattered radiating pattern. There are two milfoils in this group: Farwell’s water-milfoil (*M. farwellii*), and low water milfoil (*M. humile*) NOTE: None of the three invasive milfoils prohibited in Maine fits into this category. If you find a milfoil with several clearly identifiable flowers or fruits located in the leaf axils of the submersed leaves, all three invasive milfoils may be ruled out.

![Low water-milfoil (*Myriophyllum humile*) has submersed flowers and is a Group 2 milfoil (*M. humile* is the more reddish plant of the two species seen growing here; the other is large purple bladderwort)](image)

Excerpt from Maine Field Guide to Invasive Aquatic Plants © 2008 Maine Volunteer Lake Monitoring Program
**US Range:** All five milfoils are native to Maine, New England and to other parts of the United States.

**Annual Cycle:** All native milfoil species are perennials that propagate from stem fragments, spreading roots and (to a lesser degree) seeds. Flowers, followed by fruits, develop by mid-summer. Three species flower above the water surface on emergent spikes, and two species produce flowers below the water surface in the leaf axils of the submersed stems (see Group descriptions on page 79). With the exception of low water-milfoil, all may produce winter buds toward the end of the growing season. The buds drop to the sediments as the plants decay. In certain conditions, some species may overwinter intact, but die-back to the rootstalks is common. New shoots emerge in the spring from overwintering rootstalks and winter buds. Certain milfoil species are able to hybridize with other, closely related milfoil species.

**Value in the Aquatic Community:** The fine leaves and bushy form of water-milfoils provide good cover and trap detritus and other food particles, providing favorable habitat for invertebrates and fish. Both foliage and fruits may be grazed by waterfowl.

**Look Alikes:** All five native milfoils may be confused with other plants that have finely divided leaves including bladderworts, fanwort, hornwort species, mermaid weed, water crowfoot species, water marigold, and other members of the water-milfoil genus.

Information specific to the five individual species follows.