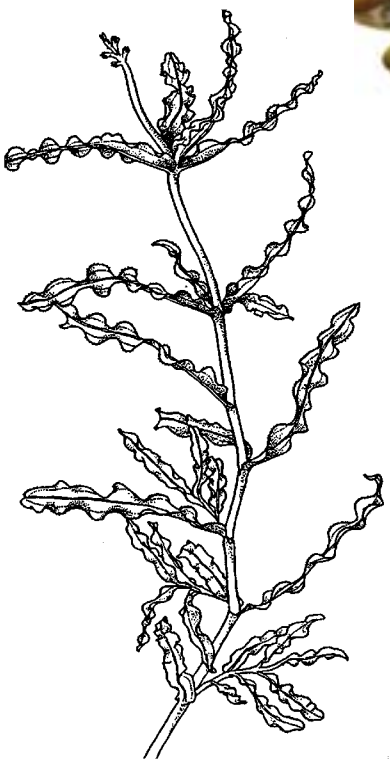
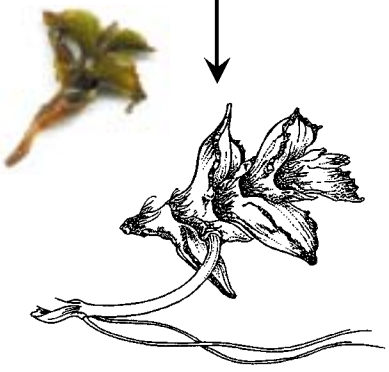
Curly Leaf Pondweed

Potamogeton crispus

Illustrative view of Curly Leaf Pondweed
Note: Wavy leaves resemble lasagna noodles



Winter buds ("turions") resemble small brown pine cones
Actual size 4-5 cm



Curly Leaf Pondweed
Single Leaf

2x

Note: Margins of leaf are serrated (finely-toothed)

CURLY-LEAF PONDWEED
Potamogeton crispus L.

Curly-leaf pondweed is a non-native aquatic plant that can tolerate low temperature waters like those in its native region of northern Europe and Asia. It has proven to be a strong competitor with native species in Wisconsin lakes and streams, particularly in the spring and early summer when it gets a head start on the local competition. The first confirmed specimen of curly-leaf pondweed in the United States was collected in Delaware in the mid-1800's. By the turn of the century, it had spread along the East Coast from Virginia to Canada, and by the 1930's it was established in the Midwest. Currently, curly-leaf pondweed is found throughout the lower 48 states.

Description: This submersed aquatic plant has spaghetti-like stems that often reach the lake surface by mid-June. The oblong leaves attach directly to the stem in an alternate pattern. Leaf margins are wavy (resembling lasagna noodles) and finely toothed creating an overall leaf-texture that is "crispy." In spring, curly-leaf produces flower spikes that stick up above the water surface. The small flowers are arranged in a dense terminal spike on a curved 1-2 inch (25-50 mm) stalk. By June, nutlets (achenes) are mature on the stalks and may drop to the sediment. These seeds play a relatively small role in reproduction compared to their vegetative winter buds, or turions. Turions look like small brown pinecones and are produced in great numbers by mid-summer on shortened branchlets along the stem. Studies of curly-leaf beds in lakes have shown as many as 1600 turions in a one square yard (.8 m) plot. The germination rate for these turions is high, ranging from 60% to 80%.

Habitat: Curly-leaf is considered a deep-water plant. However, in a lake where it is dominant, a bed of curly-leaf may start in 1-2 feet (30-60 cm) of water and extend out to depths of 10-12 feet (3-4 m) or more. This plant has a competitive advantage over many native species because it can tolerate low light conditions, both in the summer during algal blooms and during winter under ice and snow cover. It has been found growing beneath 20 inches (50 cm) of ice and a heavy blanket of snow. The cool water adaptations of curly-leaf set it apart from other Wisconsin aquatic plants. It is actively growing under the ice while most plants are dormant, but dies back in mid-July when other aquatic plants are just reaching their peak growth for the year. In lakes where curly-leaf is dominant, the summer die-off causes increased nutrient levels that can lead to habitat disturbance and degraded water quality (algal blooms).

Management and Control: Curly-leaf pondweed provides food for ducks and valuable winter and spring habitat for fish and invertebrates. These values are overshadowed when curly-leaf dominates a plant population because summer die-off leaves little habitat for the rest of the season and causes increased nutrient levels leading to algal blooms. Selective control of curly-leaf stands and protection or restoration of native species can lead to a balanced plant population. Protecting water quality will also help keep curly-leaf in check because it has a competitive advantage over native plants when water clarity is reduced.

Information adapted from the following source:
Borman, S. Curlyleaf Pondweed. Lake Tides 20(1). pp 5-6.