

## CURLY-LEAF PONDWEED (*Potamogeton crispus*)



### Native range:

Eurasia, Africa, and Australia

### Characteristics: (U.S. Army Corps)

Curly-leaf pondweed grows in lakes, reservoirs, ponds, rivers, streams, and springs. It can grow in clear to turbid and polluted waters and in alkaline or brackish waters (Stuckey 1979). Curly-leaf pondweed is a perennial and has elongate, slender rhizomes that are buff or reddish. The stems of curly pondweed are flattened. Leaves are entirely submersed, sessile, oblong to broadly linear, 3 to 8 cm long and 5 to 12 mm wide. The leaf tip is usually rounded and sometimes minutely cuspidate. The leaf margins are finely toothed, undulate and crisped. Stipules are translucent and soon disintegrating.



Bur-like turions, up to about 5 cm long, often form during the spring and late summer months and consist of three to seven small, thickened leaves that project from the stem at a slight upward angle. Flowers are borne on a short spike that extends above the surface of the water. The fruits

**Life cycle: (U. S. Army Corps of Engineers):**

Curly-leaf pondweed produces seed, but the importance of seed in the spread and maintenance of populations is unknown (Stuckey 1979) and is assumed to be less important than turions (Sastroutomo 1981). In most portions of its range, Curly-leaf pondweed typically reaches peak biomass in the late spring or early summer months, forms turions, then declines and "survives" the warmer months in a dormant state (i.e., as a turion) (Cypert 1967, Stuckey 1979, Sastroutomo 1981, Tobiessen and Snow 1984, Nichols and Shaw 1986). As water temperatures cool during the late summer or fall months, the turions germinate; grow through the winter months with the plants reaching peak biomass in the spring before most other submersed macrophytes begin their growth cycle. Once established, the plants re-grow and form colonies from rhizomes.

(Matt Rehwald, WDNR Bureau of Watershed Management): CLP begins to grow from the turions in midsummer (in colder water it begins growing in early fall). At this time, there will be a turion attached to the new growth. The late season and early spring leaves will more closely resemble ribbon leaf pondweed (*P. epihydrus*) than the normal summer CLP leaves. In the fall and early spring, you should look for 1) turions, 2) the serrated leaf margins, and 3) a darker center leaf midrib area. In the summer, look for plants that have a wavy appearance (look like miniature lasagna noodles). This wavy appearance gives you a "crispy" looking leaf. The leaf edges will be serrated. Leaves are often a light green color.

**Control methods:**

While eradication is difficult, control of CLP is generally easier than other exotic plants such as Eurasian water-milfoil. Timing of control whether by manual, mechanical or chemical methods is critical. The objective must be to prevent the release and spread of turions which occurs approximately mid-summer just before the plants die back. Persistence is also important as previously released turions can lay dormant for several years before germinating. First year control methods can produce good results, but failure to follow up and repeat control measures for three to five years can have less than optimal results. All mechanical and chemical control measures require permitting by the WDNR and development of an aquatic plant management plan.

**Methods of early detection:**

Watch for early spring plant growth. Near to surface growth and even surface matting will be detectable well in advance of native aquatic plant growth. Monitoring shorelines for washed up plant fragments resulting from boat traffic can provide evidence of colonies not yet visible from the water surface. Rake drags in suspect areas of water depths less than 15 feet can be very effective as this plant is tough and remains intact on rake heads.