

Eurasian Watermilfoil (*Myriophyllum spicatum*)

General Description

Eurasian watermilfoil (EWM) is an invasive aquatic plant that can literally “take over” in any mesotrophic (moderate nutrient level) to moderately eutrophic (higher nutrient level) aquatic environment (Madsen, J.D., 1998). It is an aggressive competitor and can form dense canopies of vegetation that shade out slower growing native aquatic plants and hinder boat navigation. Given optimum conditions, this plant species can grow up to two inches per day. Once infested with EWM, an aquatic ecosystem is at risk of several negative impacts, and the local community is in for numerous challenges. Great care and forethought must be taken in managing this plant effectively.

Lifecycle & Mechanism of Spread

EWM is particularly adept at reproducing and spreading rapidly. This species has four methods by which it can reproduce: by seed, fragmentation, stem runners, and rhizomes. A mature flowering plant will produce seed, but “although viable seeds are formed, they are not generally significant in the spread of the plant” (Madsen and Boylen, 1989). The primary mode of reproduction is via fragmentation. A whole new EWM colony may begin as a result of a two-inch fragment settling on the lake bottom and taking root. A third reproductive strategy is through stem runners. Simply put, the plant will “seek” additional nutrients by growing along the bottom of the lake until a fertile area has been found in which to root and grow. The fourth mechanism of reproduction is by underground rhizomes. Root runners (rhizomes) will fan out below ground in order to start new plants in more nutrient rich areas.

EWM spreads from one water body to another through fragmentation. Boaters carry fragments of EWM with them on boats, motors, or trailers. Upon launching into a new water body, the fragments float off, settle on the lake bottom, and a new colony begins. A pioneer colony can easily spread further within a given lake by boat props breaking plants apart, or by a process called auto fragmentation. Near the end of each growing season, to further ensure reproductive success, the EWM plant will automatically break into fragments, enabling further spread of the species.

Potential Impacts to Ecosystem

While EWM interferes with recreational boating or swimming activities within a water body, the negative impacts to the ecosystem can be devastating. EWM is an opportunistic species, with survival strategies that are difficult to manage. First, it gets ahead of other plants by growing tall before other species even begin to emerge in spring. By the time native plants begin to grow, EWM has taken up the majority of the surrounding nutrients and has begun to shade out native plant competitors. Native vegetation loses the competition to EWM because of low nutrient availability and low light levels needed for photosynthesis. The amount of plant biomass that is produced by EWM colonies is immense, and this, in turn, can begin a whole series of negative environmental impacts. From nutrient releases and severe algae blooms to dissolved oxygen depletion and ill affects to wildlife and the fishery, this invader is simply bad news.

EWM can genetically cross with northern watermilfoil species, and hybrid plants result (Moody and Les, 2002). The only manner by which a hybrid plant can be identified is through genetic lab analysis. Consult a professional if you have trouble identifying a plant specimen.

Identification Tips

Although Eurasian watermilfoil looks very similar to native milfoils (especially northern watermilfoil), there are some characteristic traits typical of the invasive plant. Leaves of EWM come off the stem in whorls of four, and each leaflet typically has 12 to 21 pairs of “needle-like” leaflets. The numerous leaflets make EWM appear feathery. Often, EWM is limp and collapses upon the stem when removed from the water. Native milfoil may look and feel stiffer upon removal from the water.

