

Beneficial Aquatic Plants

Aquatic plants serve an important purpose in an aquatic environment. They play a key component in maintaining and enhancing the ecological balance in ponds, lakes, wetlands, rivers, and streams. Beneficial aquatic plants have many values including filtering nutrients and toxic chemicals, stabilizing shorelines and providing important fish and wildlife habitat. Wisconsin Lake & Pond Resource sells and installs a number of aquatic plant species.

Provided is a list of beneficial aquatic plants offered or commonly observed. Ecological values and a description are included for a majority of the plant species.

Emergent Plants (Plants that tend to grow near-shore with their leaves out of the water.)



Common Arrowhead (*Sagittaria latifolia*) also known as duck potato is a perennial herb that is a very common shoreline plant. As its name implies, leaves are shaped like an arrowhead. The leaves vary greatly in size and shape. Common arrowhead produces small white flowers made up of three rounded petals. Ecologically, duck potato is considered one of the highest valued aquatic plants for wildlife. The high-energy tubers and seeds are relished by a variety of wildlife, including several species of waterfowl. Arrowhead stands provide rearing habitat for fish and help aid in shoreline stabilization.



Blue Flag Water Iris (*Iris versicolor*) are ornamental perennials that grow along shorelines. The sword-like leaves arise in late March to early April and grow 1-2 feet tall. Blue flag iris offers showy violet flowers that bloom during May to July. Yellow iris produces showy yellow flowers that bloom in July. Water iris is supported by a robust root network that provides excellent shoreline stabilization. Iris also offers important shoreline habitat for an array of wildlife.



Softstem Bulrush (*Schoenoplectus tabernaemontani*), **Hardstem Bulrush** (*Schoenoplectus acutus*), and **Three-square Bulrush** (*Schoenoplectus pungens*), are common perennial pond and lake colonizers that can grow in water up to 5 feet. Softstem and hardstem bulrush support long cylindrical leaves that grow 3-8 feet high. Three-square has triangular leaves that grow 2-5 feet. Bulrushes provide important spawning, nursery, and foraging habitat for fish and waterfowl. Bulrush species are also very effective at taking up nutrients and stabilizing shorelines.



Pickerel Plant (*Pontederia cordata*) is an ornamental perennial that can grow in water up to 3 feet deep. Pickerel plant is made up of glossy, heart shaped leaves and a showy violet blue flower spike. The colorful flower stalk serves as a nectar source and home for many beneficial insects. Pickerel plant also offers exceptional habitat for both adult and juvenile fish. The robust leaves and rhizomes play a key role in shoreline stabilization and help buffer wave action.



White Water Lily (*Nymphaea odorata*) emerges from a buried rhizome. Durable round stalks grow up from the rhizome. This perennial herb supports large round leaves (4-10 inches) wide that float at the water's surface. By mid-summer showy white flowers float at the water's surface. Lilies serve as important fish cover, especially for largemouth bass. White water lily seeds, rhizomes, flowers, and leaves are consumed by many wildlife species. White water lilies also prevent shoreline erosion by slowing wave action.



Water Arum (*Calla palustris*) is an ornamental perennial that supports heart shaped leaves that grow to 1 foot high. A showy white floral leaf surrounds a unique golden spadix. Water arum is a popular pond plant that usually prefers to grow in water less than 1 foot deep. Ecologically, arum provides habitat for fish and aquatic invertebrates. Berries of water arum are consumed by a variety of wildlife.



Water Plantain (*Alisma subcordatum*) is a common shoreline colonizer that grows well on exposed mud flats in water less than 1 foot deep. Water plantain is a perennial herb that supports broad, flat leaves that grow 1-2 feet high. Tiny white flowers are spread out on a highly branched flower stalk. Like arrowhead, water plantain has many ecological values. The sturdy flower stalk offers a popular perch for songbirds and insects. A variety of waterfowl consume both tubers and nutlets. Water plantain also provides juvenile fish rearing habitat and shoreline buffering.



Sweet Flag (*Acorus calamus*) is a perennial herb that resembles cattails at first glance. Unlike cattails though, sweet flag does not grow to nuisance levels. The tall sword-like leaves produce an appealing spicy fragrance. A cigar looking spadix (seed-head) is a unique characteristic of sweet flag. This aquatic plant will grow in water up to 3 feet deep. Ecologically, sweet flag provides spawning habitat for fish and serves as an important stabilizer against erosion.



Common Bur-reed (*Sparganium eurycarpum*) is a perennial herb that tends to grow in shallow waters. This emergent has sword-like leaves that resemble a compressed triangle in cross section and grow 2-4 feet. Bur-reed produces a large seed crop that is consumed by a variety of waterfowl. Like bulrush, bur-reed provides excellent habitat for nesting birds and important habitat for fish. Common bur-reed also anchors bottom sediment and offers nutrient filtering capabilities.



Soft Rush (*Juncus effusus*) is an early growing perennial that establishes along shorelines in shallow water less than 1 foot deep. Each plant supports dense clusters of smooth cylindrical stems. The leafless stems grow 1-3 feet. Soft rush is a popular pond plant because it is short enough to fish over and helps prevent the encroachment of cattails. Anchored by an impressive root network, soft rush offers excellent shoreline stabilization. Soft rush also provides cover and seeds for a variety of birds.



Cardinal Flower (*Lobelia cardinalis*) is a 1-6 ft. perennial that has showy, red flowers in 8 in., terminal spikes. Each flower has three spreading lower petals and two upper petals, all united into a tube at the base. Erect leafy stems, often in clusters, with racemes of flowers resembling flaming red spires. The lower portion of the erect stem is lined with lance-shaped leaves. Although relatively common, overpicking this handsome wildflower has resulted in its scarcity in some areas. Since most insects find it difficult to navigate the long tubular flowers, Cardinal Flower depends on hummingbirds, which feed on the nectar, for pollination.



Great Blue Lobelia (*Lobelia siphilitica*) is a showy perennial that is usually unbranched but may exhibit some branching. The erect, 2-3 ft., stems produce lavender-blue, tubular flowers crowded together on the upper stem. Showy, bright blue flowers are in the axils of leafy bracts and form an elongated cluster on a leafy stem. Each flower is split into two lips – the upper lip has two segments and the lower lip has three. This blue counterpart of the Cardinal Flower (*Lobelia cardinalis*) is a most desirable plant for woodland gardens especially since it blooms bright blue in late summer.



Floating Leaved Pondweed or Common Pondweed (*Potamogeton natans*) is a perennial aquatic species native to quiet or slow-flowing freshwater habitats. It produces both floating and submersed leaves on the same plant. The floating leaves are ovate to oblong-ovate and almost always cordate at the base. They are dark green, leathery, opaque, with translucent longitudinal veins. They are 5 to 10 cm long, pointed at the tips, and rounded at the base.

Submersed Plants (Plants that tend to grow with their leaves under water.)



Sago Pondweed (*Stuckenia pectinata*) is a perennial herb that emerges from a slender rhizome that contains many starchy tubers. Leaves are sharp, thin, and resemble a pine needle. Reddish nutlets (seeds) that resemble beads on a string rise to the water surface in mid-summer. Sago pondweed produces a large crop of seeds and tubers that are valued by waterfowl. Juvenile fish and invertebrates utilize sago pondweed for cover.



Water Celery (*Vallisneria spiralis*) also known as eel-grass has long ribbon-like leaves that emerge in clusters. Leaves have a prominent central stripe and leaf tips tend to float gracefully at the water's surface. In the fall, a vegetative portion of the rhizome will break free and float to other locations. Water Celery is considered one of the best all natural waterfowl foods. The entire plant is relished by waterfowl, especially canvasbacks. Eel-grass beds serve as an important food source for sea ducks, marsh birds, and shore birds. Fish utilize water celery for cover.



Muskgrass (*Chara spp.*) is a complex algae that resembles a higher plant. It's identified by its pungent, odor and whorls of toothed branched leaves. Ecologically, muskgrass provides shelter for juvenile fish and is associated with black crappie spawning sites. Waterfowl love to feast on *Chara* when the plant bears its seed-like oogonia. Muskgrass serves an important role in stabilizing bottom sediment, tying up nutrients in the water column, and aiding with water clarity.



American/Canadian Waterweed or Pondweed (*Elodea canadensis*) is an important part of lake ecosystems. It provides good habitat for many aquatic invertebrates and cover for young fish and amphibians. Plant lives entirely underwater with the exception of small white flowers which bloom at the surface and are attached to the plant by delicate stalks. It produces winter buds which overwinter on the lake bottom. In the fall leafy stalks will detach from the parent plant, float away, root, and start new plants.



Common Bladderwort (*Utricularia vulgaris*) is a perennial herb that floats freely in water or grow as water plants, lying on mud with the water only reaching up to their inflorescence. None of the bladderwort plants have a real root, and they are not usually anchored in the ground. In the absence of a rootstock the job of feeding the plant falls on the leaves. Most bladderworts widen their diet by trapping small insects in its leaf lobes, which have evolved into bladders.



Coontail (*Ceratophyllum demersum*) is a perennial, submerged aquatic, that can be a desirable aquatic plant. However, thick growths around shore can be problematic. Lacking true roots, it commonly floats near the surface later in summer. Stiff leaves are whorled around a hollow stem in groups of five to twelve. Coontail can be differentiated from milfoils by forked, not feathery leaves. Leaf spacing is highly variable, but the ends are often bushy, like a raccoon's tail. Coontail supports many species of waterfowl, fish, and insects as both a food source and type of habitat.



Common Naiad (*Najas flexilis*) and **Southern Naiad** (*Najas guadalupensis*) are annual, submerged aquatics with leaves in pseudo-whorls or oppositely positioned pairs. The ribbonlike leaves are submersed with variable spacing between nodes. The edges may or may not appear spiny and the leaf tips taper to a fine point. Each year naiads desposit seeds in which they grow from every season. Naiads are very beneficial, but can form bushy masses by mid-summer.



Northern or Common Milfoil (*Myriophyllum sibiricum*) is a perennial, submersed aquatic that resembles closely to the invasive and exotic species Eurasian water milfoil. The stems have a few branches that are light colored. Northern milfoil produces a red, 4-parted flower that is held above the water with whorled petals. The leaves are whorled, short-stalked, and divided into pairs of 5-12 thread-like leaflets. Whereas Eurasian water milfoil produces pairs of 14-20 pairs.



White Water Crowfoot/Buttercup (*Ranunculus aquatilis*) or **Yellow Water Crowfoot/Buttercup** (*Ranunculus flabellaris*) are aquatic plants, growing in mats on the surface of water. They have branching thread-like leaves under water and thread-like (white water buttercup) or kidney shaped (yellow water buttercup) floater leaves. In fast flowing water the floaters may not be grown. The flowers are white or yellow petaled with yellow centers and are held a centimeter or two above the water. The floater leaves are used as props for the flowers and are grown at the same time.