



# Beneficial

# Native Aquatic Plants of Texas

Texas Aquatic Plant Management Society  
201 East Jones, Lewisville, TX 75057

Native Aquatic plants are a beneficial component of reservoir and stream ecosystems. They provide structure and improve habitat for fish and other organisms, increase water quality and clarity, stabilize sediments and protect shorelines from erosion. Some of the common native aquatic plants in Texas are shown below.



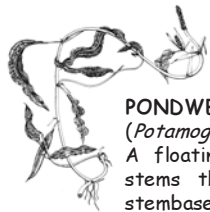
**SOUTHERN NAIAD**  
(*Najas guadalupensis* (Sprengel) Magnus)  
A submersed annual aquatic plant, southern naiad is a slender, narrow-leaved plant. Tolerant of many kinds of aquatic systems, southern naiad generally grows in shallow littoral zones. Leaves are opposite and thin, generally less than an inch in length, growing on long slender stems. The flowers are small, yet produce many viable seeds.



**MUSKGRASS**  
(*Chara Linnaeus*)  
A macroalgae, muskgrass is considered a pioneer species, forming extensive underwater mats similar to vascular plants. The grey-green stems provide habitat in ponds and lakes and have a distinctive odor, hence the common name. The stiff, thin leaves are whorled around a long, slender stem, staying low in the water column. Reproduction occurs through the orange oogonia which are barely visible on the upper leaves.



**TAPEGRASS, WILD CELERY**  
(*Vallisneria americana* Michaux)  
This submersed aquatic plant is found in rivers, streams, lakes and ponds. Ribbon-like basal leaves can grow to several feet long from a single rosette. Dioecious staminate flowers are found at the rosette while the pistillate flowers grow to the surface on spiral stalks where pollination occurs. After pollination, the fruit ripens and produces abundant viable seeds.



**PONDWEED**  
(*Potamogeton sp.* Poirret.)  
A floating-leaved perennial with stems that elongate from the stembase, producing floating and submersed leaves. Submersed leaves are alternate, broad-leaved but tapering, while the floating leaves are shiny, dark green, and oblong. Fruiting spikes are produced singularly in the axils.



(Stutzenbaker)

**WATER STARGRASS**  
(*Heteranthera dubia* (Jacq.) Small)  
A submersed annual, water stargrass can grow efficiently in a variety of habitats, water depths and sediment types. Overwintering by rhizome provides an important food item for waterfowl and habitat for fisheries. A slender, multi-branched stem grows from the buried rhizome. Alternate leaves and a rounded stem can help distinguish from flat-stem pondweed. Distinctive yellow, star-shaped flowers provides basis for its common name.



**COONTAIL**  
(*Ceratophyllum demersum* L.)  
This annual submersed aquatic plant is common to quiet streams, ponds, lakes and reservoirs. Generally rootless, mats of coontail can be found free floating. The leaves are in whorls of 5-12, branched, up to 3/4 inch long and can be abrasive to the touch. The entangled stems can reach several feet in length.



**AMERICAN LOTUS**  
(*Nelumbo lutea* (Willd.) Pers)  
A perennial aquatic plant, American lotus grows from rhizomes and seeds. Lotus leaves are large, circular, peltate, either floating or emergent. The flowers are extremely large, showy, yellow in color and fragrant. Seeds produced are viable and valuable as waterfowl food. Generally found in slow to nonmoving waters.



**ARROWHEAD** (*Sagittaria* spp.)  
Perennial, generally emergent plants growing from a rhizome with large leaves. Leaf shape can vary from blade to the broad lancet form. Some underwater rosettes of leaves can be produced. White prominent flowers are produced in whorls of three and can be produced throughout the growing season. Arrowheads generate underground corms or tubers which are highly desirable by waterfowl.



**PICKERELWEED**  
(*Pontederia cordata* L.)  
An emergent, perennial shoreline plant with heart to lanceolate shaped leaves and erect, showy purple flowers from a single rosette. Pickerelweed grows from rhizomes as well as seeds. Prefers shallow and slow or nonmoving waters.



**WHITE WATER LILY**  
(*Nymphaea odorata* Aiton)  
These perennial aquatic plants produce large leaves and flowers from rhizomes. Leaves of white water lily are circular and v-notched. Leaves are floating and generally reddish on the underside. The flowers are showy white, fragrant and in high demand by the aquatic nursery industry. These aquatic plants are generally found in slow or nonmoving shallow waters.



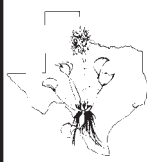
**SPATTERDOCK**  
(*Nuphar luteum* (Small) E.O. Beal)  
A perennial, emergent aquatic plant which produces large heart-shaped leaves. The flowers are small and yellow, partially opened, producing a viable seed. Spatterdock can be found in slow to non-moving water, up to 5 feet in depth.



**BULRUSH** (*Scirpus validus* Vahl.)  
One of the most valuable food sources for waterfowl and mammals. A shoreline plant that grows in clusters, up to several feet in height. Rounded, spongy stems taper at the top with a tuft of dangling flowers on spikelets which produces numerous viable small seeds. Provides excellent shoreline stabilization and spreads by underground rhizomes.

Aquatic plant illustrations provided by the Information Office of the University of Florida, IFAS, Center for Aquatic Plants (Gainesville)

For more information call Texas Aquatic Plant Management Society representatives at 972-436-2215



# Harmful

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# Non-native Aquatic Weeds in Texas

Aquatic weeds that have been introduced from other parts of the world into Texas waters can create serious environmental, economic, and public health problems. Because of their growth habits and their lack of natural controls, they often create extensive mats of vegetation which block light and gas exchange, degrade aquatic habitat, crowd out native plant populations, and impede human uses.

## HYDRILLA- Southeast Asia (*Hydrilla verticillata* (L.f.) Royle)



This submersed perennial aquatic plant was introduced into the United States in the 1960's and has since spread to 13 states, including Texas. Hydrilla is characterized by oblong whorled leaves (5) with serrated edges at each node. Long stems branch as the plant elongates rapidly to the surface, forming a dense canopy. Due to these growth strategies, hydrilla can shade out desirable native vegetation, impede navigation, affect water quality and habitat. In addition, hydrilla can reproduce sexually (seed) and asexually with tubers, turions, stolons and fragments.

## WATERHYACINTH - South America (*Eichhornia crassipes* (Martius) Solms-Laub.)



This floating plant has been called "the world's worst weed", introduced into water gardens because of beautiful purple flowers. Waterhyacinth produces long free-floating dark roots which uptake all required nutrients and release hydrogen ions, acidifying surrounding waters. Numerous broad inflated leaves extend from the stalk, ranging in height from a few inches to several feet. Although waterhyacinth can produce many viable seeds, the main reproductive method is by daughter plants. These interconnected parent to daughter plants form the dense floating mat which can reduce dissolved oxygen levels and effectively block waterways.

## EURASIAN WATERMILFOIL - Europe/Asia (*Myriophyllum spicatum* L.)



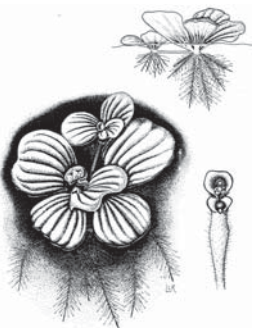
This submersed perennial aquatic plant can be found in 45 states. Stems are long and flexible, generally red when actively growing, with whorled leaves (4) around each node. The leaves are can be more concentrated closer to the surface, with 14+ leaflets per leaf, appearing featherlike. The slender flowering stem has the staminate upper and pistillate positioned lower, producing many viable seeds per plant. Can reproduce asexually by stolons and fragmentation, especially autofragmentation. Through formation of a dense canopy, Eurasian watermilfoil can shade out native vegetation, impede navigation, affect water quality and habitat.

## GIANT SALVINIA- South America (*Salvinia molesta*)



This free-floating aquatic fern is larger than the common salvinia, with oblong floating leaves  $\frac{1}{2}$  to  $1\frac{1}{2}$  inch in length. Leaves frequently fold and compress into chains, with white bristles found on the leaf surface. Underwater stalks contain attached spore cases. Giant salvinia forms dense mats, spreading rapidly by buds. These floating mats reduce oxygen exchange and can negatively effect water quality and habitat.

## WATERLETTUCE - South America (*Pistia stratiotes* L.)



A free-floating perennial plant forms a rosette of grey-green leaves about 4 to 8 inches long with long roots extended into the surrounding waters. Intolerant of cold temperatures, waterlettuce is limited to the more sub-tropical regions in Texas. Reproduction is generally asexually through production of daughter plants, forming large dense mats of free-floating plants. These mats can affect habitat and transportation.

## ALLIGATORWEED-South America (*Alternanthera philoxeroides* (Martius) Grisebach)



Aggressive, mat-forming perennial, emergent shoreline plant found in habitats ranging from dry to wetland, lake shore and riverine. Spread can occur from seed or plant fragments. Leaves are opposite, generally lanceolate and about 4 inches long. Small, white flowers are produced on short spikelets, flowering throughout the growing season. Dense mat growth can impede navigation and displace native vegetation.

It is illegal to import, sell, purchase, transport, propagate, possess, or release into public waters any of these harmful exotic aquatic plants.  
(Texas Parks and Wildlife Dept.)

Please check boat trailers and props when leaving a lake. Don't transport harmful aquatic plants!