Illegal Aquatic Plants of South Carolina

Aquatic Nuisance Species Program

South Carolina Department of Natural Resources

Illegal Aquatic Plants of South Carolina

Non-native plants are responsible for most aquatic weed problems in South Carolina. The lack of natural controls allows these plant species to thrive and develop large dense populations that impair the health and use of our public waterways. Aquatic weeds, such as hydrilla and water hyacinth, obstruct navigable waterways, restrict water flow, clog water intakes, degrade water quality, provide breeding habitat for mosquitoes and other pests, interfere with recreation, displace native plant species, and may upset the balance of desirable fish populations. Since 1981, over $18 million has been spent trying to control nuisance aquatic plant populations in public waters, with most of the funding used to control non-native species.

Preventing the occurrence and spread of aquatic weed infestations in public waters can save millions of public and private dollars each year in avoided water impacts and control costs. Because prevention is so important, South Carolina, like several states, has adopted laws which prohibit the importation and distribution of specific exotic aquatic plant species known to cause problems.

The South Carolina Noxious Weed Act provides the South Carolina Department of Agriculture with far reaching powers to "seize, quarantine, treat, destroy, apply other remedial measures, to export, return to shipping point, or otherwise dispose of in such a manner as (it) deems appropriate, any noxious weed." To further deter persons from spreading nuisance aquatic seeds the law includes fines not exceeding $500 and/or imprisonment not exceeding one year.

The South Carolina Department of Natural Resources and the Aquatic Plant Management Council are working with Clemson University's Department of Plant Industry and the Department of Agriculture to improve the implementation of these laws as they relate to nuisance aquatic plants. Educating the public and the plant nursery industry about the law and the potential problems associated with certain aquatic plants is an important component of the prevention effort.

The purpose of this booklet is to help owners and operators of plant nurseries and aquarium shops, as well as, the general public to easily identify illegal aquatic plant species, thereby reducing the risk of their importation and distribution in South Carolina.

Noxious Weed List for South Carolina

Alligatorweed	*Alternanthera philoxeroides*
Brazilian elodea	*Egeria densa*
Common reed	*Phragmites australis*
Eurasian watermilfoil	*Myriophyllum spicatum*
Giant salvinia	*Salvinia molesta, S. biloba S. herzogii, S. auriculata*
Hydrilla*	*Hydrilla verticillata*
Purple Loosestrife	*Lythrum salicaria*
Slender naiad	*Najas minor*
Water chestnut	*Trapa natans*
Water hyacinth	*Eichhornia crassipes*
Water Lettuce	*Pistia stratiotes*
Water primrose	*Ludwigia hexapetala*
African oxygen weed*	*Lagarosiphon major*
Ambulia*	*Limnophila sessiliflora*
Arrowhead*	*Sagittaria sagittifolia*
Arrow-leaved monochoria*	*Monochoria hastata*
Duck lettuce*	*Ottelia alismoides*
Exotic bur reed*	*Sparganium erectum*
Mediterranean clone of caulerpa*	*Caulerpa taxifolia*
Melaleuca*	*Melaleuca quinquenervia*
Miramar weed*	*Hygrophila polysperma*
Pickerel weed*	*Monochoria vaginalis*
Mosquito fern*	*Azolla pinnata*
Rooted water hyacinth*	*Eichhornia azurea*
Water spinach*	*Ipomoea aquatica*
Wetland nightshade*	*Solanum tampicense*

* also on Federal Noxious Weed List

Alligatorweed
(*Alternanthera philoxeroides*)

Alligatorweed is an aggressive emergent perennial from South America. Stems reach a length of 3 feet or more. Leaves are opposite, entire, and up to 4 inches long. It is distinguished by its small, white, clover-like flowers. Alligatorweed spreads rapidly by fragmentation.

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Brazilian Elodea
(*Egeria densa*)

Egeria is a branched submersed perennial from South America. Leaves occur in whorls of 3-6 around a long stem and are up to 1 inch long and 1/5 inch wide with finely toothed margins. Flowers are about 1/2 inch in diameter, white, and 3 petaled. Similar in appearance to hydrilla but is usually distinguished by its smooth texture and larger leaves and flowers. It is sometimes sold as "Anacharis."

Common Reed
(*Phragmites australis*)

Phragmites is a perennial grass that reaches 10 feet in height. Leaves are two-ranked, flat, long-attenuate up to 1 1/2 feet long and 1/2 inch wide, blue-green in color with rough margins. The leafy stem is topped by a 1 foot long silvery brown silky panicle of flowers. Common reed reproduces and spreads readily by rhizomes.

Eurasian Watermilfoil
(*Myriophyllum spicatum*)

This introduced species is a submersed perennial with distinct feathery leaves arranged in whorls of 4 around a long slender stem. Leaves are up to 1 inch long and usually dark green but often with a reddish tint. The flowering stem is very slender and up to 6 inches long with whorls of inconspicuous flowers. Eurasian watermilfoil reproduces by fragmentation.

Giant Salvinia
(*Salvinia molesta*)

Giant salvinia is a small, free floating, introduced aquatic fern. It usually appears as branched stems with floating leaves in whorls of 3. Floating leaves are light to medium green, suborbicular, and 1/2 to 1 inch long and wide. The upper surface is covered with dense, stiff white hairs with distinct "egg beater" shaped tips.

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Hydrilla
(*Hydrilla verticillata*)

Hydrilla is an introduced submersed perennial. Leaves are up to 2/3 inch long with sharply toothed margins and occur in whorls of 3-8 around a long thin stem. Sharp teeth located on the lower midrib of the leaves gives the plant a rough feel. Hydrilla exhibits multiple branching at a single node. Translucent white flowers are less than 1/4 inch in diameter. It is sometimes sold as "Anacharis."

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Purple Loosestrife
(*Lythrum salicaria*)

Purple loosestrife is an emergent perennial originally from Europe that grows to 6 feet with multiple woody stalks. Leaves are typically opposite, lance-shaped, and 3 to 4 inches long. It is distinguished by its long dense spike of bright pink/purple flowers at the top of the stems. Each plant can produce millions of seeds annually.

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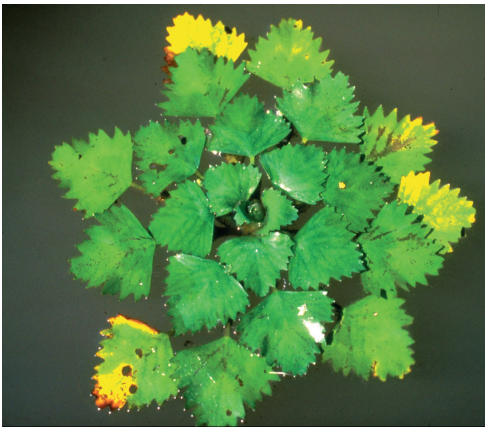
Slender Naiad
(*Najas minor*)

Slender naiad is a submersed annual from Europe that grows to 4 feet in length. Leaves are opposite, very narrow with 7-15 marginal teeth and up to 1 1/2 inches long. The abundant stiff recurved leaves near the end of the branches give the plant a bushy appearance. Inconspicuous flowers and fruit are located in the leaf axils.



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Water Chestnut
(*Trapa natans*)

Water chestnut is an emersed or floating plant. The lower leaves are submersed, sessile, alternate, and cleft. The upper floating leaves are diamond shaped with distinct teeth along the leaf margins. The flower of water chestnut has 4 white petals with 4 green sepals. The fruit is a nut enclosed in a thorny calyx with 4 sharp spines.

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Water Hyacinth
(*Eichhornia crassipes*)

This free-floating plant from Brazil reaches up to 3 feet in height. Leaves are thick, leathery, and elliptic to ovate in shape and emerge from the plant base. The leaf stem is inflated and spongy to provide floatation. The flowering spike contains 5-20 very showy light purple flowers with a yellow spot. Roots are dark, fibrous, and feathery in appearance. This is a very popular water garden plant.

Water Lettuce
(*Pistia stratiotes*)

Water lettuce is a free-floating, stoloniferous perennial from the tropical/subtropical regions of the world. Leaves are formed in rosettes, are densely pubescent, grayish to light green in color and up to 6 inches long. Leaf shape is ovate to obovate with a truncate apex. It reproduces vegetatively by forming new plants on stolons.

Water Primrose
(*Ludwigia hexapetala*)

Water primrose is an emergent perennial that grows to 3 feet tall but stems may be many feet long when floating on the water. Leaves are alternate and variable in shape from suborbicular in early growth stages to lanceolate in the mature stage. Flowers are bright yellow and about 1 inch in diameter with 5-6 sepals.

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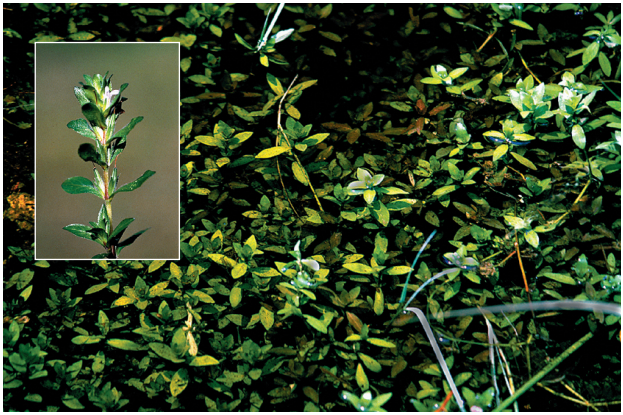
Limnophila
(*Limnophila sessiliflora*)

Limnophila is a perennial from Southeast Asia. Most of the plant is submersed, but a few inches of the stem and leaves can be emergent. Submersed leaves are up to 1 inch long, feathery, and in whorls about the stem, while emersed leaves are generally lance-shaped with irregular margins. Stems are up to 12 feet long. Single blue to lavender flowers occassionally occur on the emersed portion of the stem.



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Hygrophila
(*Hygrophila polysperma*)

Hygrophila is a prolific exotic originally from the East Indies. It is mostly submersed, but a small portion of the plant may extend above the water surface. Leaves are opposite, elliptic to oblong, entire, and 1 1/2 inch long and 1/2 inch wide. Stems are square and grow up to 6 feet. Flowers are white to bluish-white and located in the axils of upper leaves.

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