

Water Gardens and Weeds



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The popularity of water gardening has increased exponentially in North Carolina and throughout the country during the past few years. Water garden equipment and plant sales have nearly doubled annually over the past five years, and industry projections suggest that this rate will continue for another five years. Most of the aquatic and wetland plants sold by the industry never become problems. However, a few have proven to be highly invasive and have caused significant environmental problems, obstructing waterways, restricting water flow, degrading water quality, and interfering with fishing and recreation. Preventing the introduction and spread of noxious aquatic weeds can save millions of dollars of public and private money annually which result from economic losses and the cost of control activities. Invasive species included in this publication are not native to the United States and entered as contaminants among other plants or as intentional introductions. Federal and NC Noxious Aquatic Weeds are regulated under a combination of Federal and State Laws. [The NC Aquatic Weed Control Act of 1991](#) specifically empowers the North Carolina Department of Agriculture and Consumer Services with the authority to regulate the "importation, sale, use, culture, collection, transportation, and distribution" of noxious aquatic weeds.



Salvinia molesta
Giant Salvinia, Water Velvet,
Koi Kandy, Karibaweed
(Federal Noxious Weed)



Giant salvinia is a small, free floating, aquatic fern introduced from South America. It usually appears as branched stems with floating leaves attached in pairs. Floating leaves are light to medium green, often with brownish edges in mature plants and 1/2 to 1 inch long and wide, with a distinctive fold in the center. The upper surface is covered with dense, stiff hairs with distinct [egg beater](#) shaped tips. This plant has 3 growth stages. The immature plant closely resembles *Salvinia minima*, but the leaf hairs do not have the "egg beater" appearance. Reproduction is by fragmentation.



Hydrilla verticillata

Hydrilla, Florida Elodea

(Federal Noxious Weed)

This underwater aquatic plant is wide-spread worldwide and is probably native to Africa or Asia. Hydrilla is characterized by leaves in whorls of (usually) 3 to 6, which are strap shaped, 5/8 inches long, have saw-like serrations on the margins, and sometimes have spines or bumps on the underside of the midvein. Tiny white flowers are abundant during the growing season, but are rarely seen. Hydrilla reproduces by stem fragmentation and by forming [tubers](#) beneath the hydrosol and [turions](#) at the leaf axils. The plant closely resembles another invasive exotic, Brazilian Elodea, and two native species of American Elodea.



Ludwigia hexapetala

(=*L. uruguayensis*)

Creeping Waterprimrose

(North Carolina Noxious Weed)

Creeping waterprimrose is a perennial native to Central or South America that grows to 3 feet tall. Stems may be much longer when floating on the water, forming large free-floating mats. It may grow terrestrially and form a woody reddish-brown stem. Leaves are alternate and vary in shape from rounded in [early growth](#) to pointed in the mature stage. Stems are often covered with hairs. [Flowers are bright yellow](#), 1 inch in diameter with 5 - 6 petals. Waterprimrose reproduces by fragmentation and seed.



Lythrum salicaria

Purple Loosestrife

(North Carolina Noxious Weed)

Purple loosestrife, a beautiful but aggressive invader, arrived in eastern North America in the early 1800's. It is a very hardy perennial which can rapidly degrade wetlands. Purple loosestrife grows to 6 feet with multiple woody stalks. [Leaves](#) are typically opposite, lance-shaped, and are 3 to 4 inches long. It is distinguished by its long dense spike of [bright pink/purple flowers](#) at the top of each stalk. Each plant can produce millions of seeds annually. Seeds can remain dormant for several years.



Myriophyllum aquaticum

Parrotfeather

(Not currently regulated in NC)

Parrotfeather is a perennial, native to South America. It has become naturalized across many areas of the United States. It is usually found rooted in shallow areas up to 3 feet in depth. **Underwater stems often appear red or orange. Above water stems and leaves are gray-green in color.** Leaves are found in whorls of 3 to 6 and are [feathery](#) in appearance. Parrotfeather often forms large mats on the surface of the water in lakes, ponds, and streams. Reproduction is by fragmentation.



Eichhornia crassipes

Water Hyacinth

(Not currently regulated in NC)

Water hyacinth is a free-floating plant from Brazil and reaches up to [3 feet in height](#). The leaves originate from a central crown and have **inflated spongy stems**, with **thick waxy leaves**. Flower spikes contain 5 to 20 [light purple flowers each with a yellow spot](#). Dark feathery roots hang beneath the plants. Reproduction is by seeds and budding (producing new plants on short runners). When introduced to the "wild" it may cause serious problems in our state. Water hyacinth has been called the "worlds worst aquatic weed".

The purpose of this brochure is to help regulatory agencies, aquatic plant nurseries, ornamental plant dealers, water garden enthusiasts, and the general public to identify some of the invasive aquatic and wetland plants that have been found commonly in water gardens. If you find or suspect that you have found one of the listed illegal plants, contact --

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