

# Giant Salvinia



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## A New Aquatic Menace in Alabama

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Alabama is blessed with abundant aquatic resources that provide fishing, boating and other outdoors recreational opportunities. Aquatic plants — plants that grow in or closely associated with the water — are an important part of these resources. These plants provide habitat for insects, fish and other organisms that inhabit our waterways. However, some aquatic plant species living in our waterways are not native to Alabama or even to North America and may interfere with human use of water resources and impact both native plants and animals. These are referred to as noxious exotic aquatic plants.

### Notable Exotics

Notable noxious exotic aquatic plants found in Alabama that often interfere with our water uses include hydrilla, *Hydrilla verticillata*; Eurasian watermilfoil, *Myriophyllum spicatum*; and water hyacinths, *Eichhornia crassipes*. Hydrilla and Eurasian watermilfoil are submersed plants that have been present in our waterways since the late 1970s. These two plants have had a significant impact on the Mobile Delta in South Alabama and the reservoirs of the Tennessee Valley. Millions of dollars have been spent over the years attempting to control these plants or to minimize their adverse impacts on public and private waters.

Water hyacinths are floating plants that have been present in Alabama waters since the late 19th century. Large floating mats of hyacinths impact the Mobile Delta and reservoirs of the Alabama and Tombigbee Rivers. These large mats can block off access to entire coves, shade out desirable native plants, and generally cause headaches for people who enjoy the water. Fortunately, water hyacinths cannot tolerate freezing temperatures; so their abundance is greatly reduced during the winter months.

### A New Menace

Now another exotic plant threatens our waterways: the floating aquatic fern commonly known as giant salvinia, *Salvinia molesta*. This floating fern, a native of southeastern Brazil, is spreading rapidly and already inhabits waterways in 22 countries in tropical and temperate areas around the world. In 1999 giant salvinia was discovered in two ponds within the city limits of Auburn that drain into the Tallapoosa River watershed. Word of giant salvinia spread rapidly, and the Auburn discoveries were quickly followed by the detection of giant salvinia in two ponds on the Chattahoochee watershed in Russell County near Seale. Since that time, giant salvinia has been found in an additional pond in Lee County, just north of Auburn, and also in a private pond in Montgomery County. Our state is not alone. Many other states are also reporting giant salvinia, including Florida, Georgia, Mississippi, North Carolina, Louisiana, Texas, California, and Arizona.

Giant salvinia has the ability to tolerate cold temperatures, survive extended periods without sunlight, remain viable without water for up to a year, and has the potential for rapid reproduction and growth. Given these factors, the growth potential of giant salvinia is explosive. A single plant has the ability to colonize 40 acres of water in a growing season. Under ideal environmental conditions, the plant population may double in one week.

What are ideal conditions for giant salvinia? It grows best in waters with high nutrient levels, especially nitrogen; water pH levels below 7.5; warm water temperatures; and a long growing season. These conditions are found throughout the state of Alabama making most waters in our state highly susceptible to colonization by this exotic plant.

The aggressive nature of the plant results in the formation of large, dense

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mats that cover the water and then form layers up to three feet thick on the water's surface. These mats impede both recreational and commercial boater access and cause problems with flood control measures, irrigation, and hydroelectric uses.

Giant salvinia infestations can reduce both plant and animal species diversity, degrade water quality, and can cause a complete collapse of a fishery by blocking the sunlight necessary for the food web; hence the nickname, "devil weed."

Once giant salvinia becomes established in a water body, it is very difficult to





control. Giant salvinia's tremendous growth potential and tolerance of most environmental factors that reduce plant communities, such as freezing temperatures or darkness, allow the plant to remain abundant or re-establish a community from the survival of even a single plant.

How did giant salvinia get to Alabama? Water garden enthusiasts have long been suspected as a source for exotic plant infestations. Even though giant salvinia is listed on the Federal Noxious Weed List and interstate transportation is prohibited, plants were found at nurseries in Alabama and other states. The Alabama Department of Agriculture and Industries confiscated giant salvinia at several retail nurseries during a recent survey. Unfortunately, with the boom in water gardening, the potential for continued introduction of giant salvinia and many other different exotic plants is extremely high.



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### More Information

Information concerning the history of giant salvinia infestations in the United States may be found at a special web page maintained by the United States Geological

Survey. Identification characteristics and biology of this plant may also be found at this web site. The address for this site is [http://salvinia.er.usgs.gov/html/news\\_and\\_notes.html](http://salvinia.er.usgs.gov/html/news_and_notes.html).

The Alabama Division of Wildlife and Freshwater Fisheries is working in partnership with both Alabama Power Company and the U.S. Corps of Engineers Mobile District. We are trying to keep this plant from becoming established in the public waters of our state by providing technical guidance to private pond owners in the use of both herbicide treatments and grass carp to remove salvinia from the ponds where it is now found. We are also conducting plant surveys to determine if giant salvinia or any other noxious exotic plant is present anywhere else in our state.

The public can help by contacting the Alabama Division of Wildlife and Freshwater Fisheries if giant salvinia is suspected in any small impoundment or public waters of Alabama.

✉ Fisheries Section  
Division of Wildlife &  
Freshwater Fisheries  
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🌐 [www.dcnr.state.al.us/agfd](http://www.dcnr.state.al.us/agfd)



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## Alabama Aquatic Menaces

The following is a list of all nonindigenous aquatic plants that are prohibited from being introduced or placed or caused to be introduced or placed into public waters of the state. This list may be changed to reflect any new plants that may cause concern.

<b>Common Name</b>	<b>Scientific Name</b>
African elodea . . . . .	<i>Lagarosiphon spp.</i>
Alligator weed . . . . .	<i>Alternanthera philoxeroides</i>
Brazilian elodea . . . . .	<i>Egeria densa</i>
Curlyleaf pondweed . . . . .	<i>Potamogeton crispus</i>
Eurasian watermilfoil . . . . .	<i>Myriophyllum spicatum</i>
Floating waterhyacinths . . . . .	<i>Eichhornia crassipes</i>
Giant salvinia . . . . .	<i>Salvinia molesta</i>
Hydrilla . . . . .	<i>Hydrilla verticillata</i>
Hygrophila . . . . .	<i>Hygrophila polysperma</i>
Limnophila . . . . .	<i>Limnophila sessiliflora</i>
Parrot-feather . . . . .	<i>Myriophyllum aquaticum</i>
Purple loosestrife . . . . .	<i>Lythrum salicaria</i>
Rooted waterhyacinth . . . . .	<i>Eichhornia azurea</i>
Spineyleaf naiad . . . . .	<i>Najas minor</i>
Water-aloë . . . . .	<i>Stratiotes aloides</i>
Water-lettuce . . . . .	<i>Pistia stratiotes</i>
Water chestnut . . . . .	<i>Trapa natans</i>
Water spinach . . . . .	<i>Ipomea aquatica</i>