

**TEXAS PARKS AND WILDLIFE  
PRESS RELEASE**

Howard Elder  
Aquatic Habitat Biologist  
April 11, 2005

**Vegetation Problem in Toledo Bend  
Reaches Critical Mass**

In 1998, an exotic floating aquatic fern called giant salvinia was found in Toledo Bend Reservoir. Relatively small and non-threatening, few would consider it a potential ecological disaster waiting to happen. State and Federal officials however, were well aware of the potential danger the seemingly harmless plant represented.



Once established, giant salvinia forms dense mats that eliminate all other aquatic vegetation in the area, eliminating even phytoplankton and zooplankton which are vital to healthy fish populations.

Texas Parks & Wildlife Department, US Fish and Wildlife, and Louisiana Department of Wildlife and Fisheries launched an aggressive campaign in an effort to educate controlling authorities and the general public of the threat giant salvinia posed to their resource.

Aggressive herbicide applications by Texas and Louisiana held small



infestations in check for many years.

An extended drawdown in 2001 dramatically reduced giant salvinia populations on Toledo Bend. A gradual but steady increase of the invasive fern followed in spite of annual herbicide treatments by Texas and Louisiana. Annual fall drops in water level helped isolate giant salvinia infestations to the backs of creeks and drainages, holding their expansion to a minimum.

High water levels on Toledo Bend throughout 2004 allowed small populations of giant salvinia to grow unchecked and expand to new areas. Surveys on the Texas portion of the reservoir in 2004 indicated giant salvinia had increased from 150 acres to over 3,000 acres. Flushed from its refuge in the backs of numerous bayous by heavy rains, large mats of giant salvinia were pushed south into the main portion of the reservoir, many as far south as the dam itself. In many areas, heavy wave action left large amounts of giant salvinia stranded on the bank.

The end result after several cold fronts and accompanying winds was an effective seeding of the reservoir with small viable colonies of giant salvinia. Spring surveys now estimate over 3500 acres of giant salvinia spread throughout the reservoir. These seedling colonies represent the most severe ecological threat to Toledo Bend and neighboring reservoirs like Sam Rayburn since the discovery of giant

salvinia in 1998. Common salvinia, a close cousin to giant salvinia, is already present on Sam Rayburn Reservoir but has not caused any problems.

State officials and the Sabine River Authority are working to develop a viable plan to combat giant salvinia in 2005 and beyond. Using an integrated pest management approach, control efforts utilize a variety of techniques to affect control.

Signs have been placed at all major boat ramps on Toledo Bend to inform the public of the dangers of giant salvinia and requesting boaters clean their boats and trailers of all aquatic vegetation to prevent overland transport. An annual fall drawdown, part of the normal operating plan for the reservoir, will significantly reduce expansion of giant salvinia in shallow backwater areas. Herbicide applications will continue but be limited to boat ramps and areas of high concentrations due to the lack of resources and manpower. Large-scale releases of a weevil as a bio-control agent for giant salvinia, first conducted in 2004, are planned through 2006.

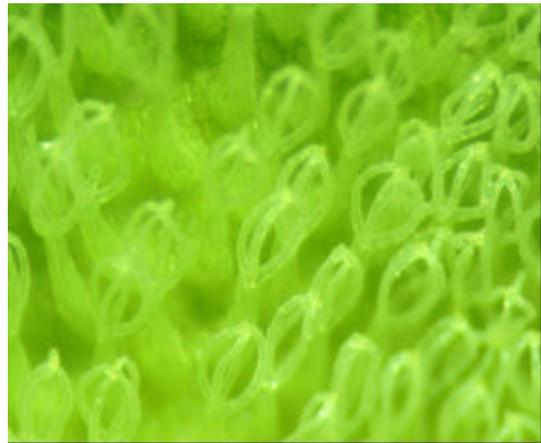
Concerned anglers and other resource users can help by inspecting and cleaning their boats, trailers, jet-ski intakes, and other equipment of all aquatic vegetation before leaving an infected area. Anglers fishing Sam Rayburn should be aware of any suspicious floating aquatic vegetation, particularly around boat ramps and the backs of nearby creeks. Most new infestations of invasive species occur at or near boat ramps.

Giant salvinia typically has oblong floating leaves from ½ to 1 ½ inches long. Leaves have a velvety surface and are usually a shade of green. Younger plants have smaller leaves that lie flat on the water's surface. In more

mature plants the leaves are much larger, folded, and compressed into upright chains.



When viewed with a magnifying glass, the tips of leaf hairs on giant salvinia resemble an eggbeater. In contrast, leaf hairs of common salvinia are forked and do not form the identifying “cage-like” structure.



**Possession or transport of giant salvinia is prohibited by State and Federal law. Any suspicious plants found should be left in place and their exact location documented. Any possible sightings of giant salvinia on Sam Rayburn should be reported to TPWD immediately.**

Contact:

Howard Elder

Texas Parks & Wildlife Department  
Aquatic Habitat Biologist  
409-384-9965  
[howard.elder@tpwd.state.tx.us](mailto:howard.elder@tpwd.state.tx.us)

or

Todd Driscoll  
Texas Parks & Wildlife Department  
Fisheries Biologist District 3-D  
409-384-9572  
[todd.driscoll@tpwd.state.tx.us](mailto:todd.driscoll@tpwd.state.tx.us)