# Midsouth Aquatic Plant Management Society
# *Newsletter*

**Volume 32 Number 1** **January 2014**



## Message from the President

Dear Fellow MSAPMS Members,

First of all I want to wish everyone a very Happy New Year! The new year here in Mississippi and many other southern states have been unusually cold! We have many places with record breaking lows courtesy of the "Polar Vortex" that hit here a few weeks ago. For an area that is not used to this bitter cold, it will be interesting to see what effect it may have on the aquatic plant growth in our area. I guess only time will tell!

This year our 33rd Annual Meeting will be held in conjunction with the 54th Annual Meeting of the Aquatic Plant Management Society (APMS) in Savannah, Georgia, July 13-16, 2014. I encourage everyone to participate in this combined APMS/MSAPMS meeting. This meeting will provide an excellent environment for the exchange of information and knowledge on aquatic plant management with representatives from Federal and state agencies, universities, private industry, and the public. As host chapter, the MSAPMS is providing assistance with the technical program. As a member of the APMS Meeting Planning Committee, I can guarantee that everyone will have a great time in Savannah!

As President of the MSAPMS, I would like to encourage all of you to get involved in the organization. We need your input not only from the field but also from industry and government entities on issues that affect your everyday business. The Board can help pass along information and express concerns that affect you. The Board of Directors will be having our Mid-Winter Board Meeting on March 12, 2014.

If anyone has any topic they would like for the Board to discuss, please don't hesitate to e-mail me at Sherry.L.Whitaker@usace.army.mil.

I look forward to seeing all of you in Savannah!

*Sherry Whitaker*

Sherry Whitaker
President – MSAPMS

## 2013 Louisiana Department of Wildlife and Fisheries Aquatic Plant Control Efforts

Alex Perret

The Louisiana Department of Wildlife and Fisheries (LDWF) Aquatic Plant Control Program strives to provide the public with safe and usable fishing and boating access. Left unchecked, invasive plants have the potential to completely inundate the state's abundant freshwater lakes, making them inaccessible and threatening the natural habitat of our valuable aquatic resources. Multiple approaches are necessary to combat nuisance aquatic vegetation in affected waters to restore and improve the aquatic habitat and the natural balance of plants and fish.

In 2013, herbicides were applied to 99,316 acres of nuisance aquatic vegetation to provide boating and fishing access in lakes and water bodies throughout the state. The majority of these efforts included control of 50,208 acres of water hyacinth, 33,061 acres of giant salvinia, 4,579 acres of alligator weed, and 3,403 acres of common salvinia. In addition, approximately 372,000 adult giant salvinia weevils and 72,000 adult common salvinia weevils were stocked into water bodies throughout Louisiana.

In recent years, aquatic plant control biologists have shifted efforts towards identifying and utilizing all effective plant control methods available. Integrated pest management (IPM) involves combining the effects of chemical, mechanical, and biological control methods to manage nuisance species more effectively and efficiently. The long-term benefits and cost efficiency provided by the IPM strategy allows LDWF to effectively manage the aquatic vegetation infestations throughout Louisiana's public water bodies.

Lake Bistineau is an example of a water body on which IPM has been implemented. Giant salvinia was first discovered in Lake Bistineau in 2006. Since that time, the 17,000 acre impoundment has been infested with several thousand acres of the plant each summer. In 2009, giant salvinia infestations covered an astounding 8,500 acres of the lake. Successive cold winters and a flood event helped to reduce the plant coverage dramatically, but it soon rebounded. Since 2011, LDWF has utilized herbicide applications, floating boom, giant salvinia weevils, and drawdowns in an effort to control the infestation on Lake Bistineau. In 2013, 7,389 acres of giant salvinia were treated on Lake Bistineau by LDWF spray crews and private airboat contractors. Approximately 149,900 adult weevils were stocked on the lake during 2013. The giant salvinia weevils were raised in a greenhouse and transplanted in the early spring to allow establishment and provide control throughout the growing season. Drawdowns were initiated when giant salvinia coverage exceeded 1,500 acres. During these drawdowns, water levels were fluctuated when possible to strand the maximum amount of plant material. Although a significant amount of plant material remains in the heavily timbered northern part of the lake, these combined efforts have successfully controlled infestations in the southern part of the lake and thus provided recreational opportunities that had been impeded in past years.

In addition to Lake Bistineau, IPM is being used on many water bodies in Louisiana to control several different invasive plant species. Aquatic vegetation management plans are available for most water bodies throughout the state. These documents are used as a guide for IPM and as a source of recommendations and information to provide to lake authorities and the public. In 2013, the Aquatic Plant Control Program completed 80 Vegetation Management Plans for Louisiana public water bodies.

**MSAPMS Board of Directors will hold their next board meeting at Alabama Power on March 12, 2014.**

## Invasive Aquatic Plant Surveys in Montana

Gray Turnage and John D. Madsen

Aquatic invasive plants are becoming more and more problematic in the Western U.S. each year. The Montana Department of Natural Resources (MTDNR) in particular is trying to combat the spread and establishment of these plants in MT waters. Plants of particular interest are Eurasian watermilfoil (*Myriophyllum spicatum*), curlyleaf pondweed (*Potamogeton crispus*), and flowering rush (*Butomus umbellatus*). These plants, when found, disrupt the native ecology of a system and make it easier for other non-native species to establish. In addition, they cause problems for outdoor enthusiasts by forming large mats or beds that interfere with recreational activities.

**Photo 1. Small flowering rush bed in Montana.**

These plants are primarily spread by boaters when moving from infested to non-infested water bodies. These plants are primarily found in the western portion of the state which is also where most of Montana's population is located. This makes it more likely that boaters will pick up an invasive species and move it to a pristine water body. Since 2009, we have worked with the Montana Department of Natural Resources Conservation (DNRC) to document the presence of these species in Montana waters. Additionally, we have assisted the DNRC in implementing management protocols that reduce the spread of these plants within and between Montana water bodies. To date we have surveyed over 2100 reservoir points and over 150 km of Montana's rivers to assist DNRC in the management of these invasive species.

**Photo 2. Gray working in Montana.**


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**POSITION VACANCY ANNOUNCEMENT**
**Assistant/Associate Professor**
**(Entomology, Ecology and Management of Invasive Species)**

**ACADEMIC RANK:** Assistant/Associate Professor, 12 month, tenure track appointment with research (75%), and teaching (25%).

**WORK LOCATION:** Louisiana State University Agricultural Center, Department of Entomology, Baton Rouge, Louisiana.

**POSITION DESCRIPTION:** Invasive species of insects, other invertebrates, and plants have a tremendous impact on the economy of Louisiana due to the state's subtropical climate and proximity to major ports. The Department of Entomology seeks a scientist to conduct research on the biology and management of invasive species in Louisiana. The successful candidate will establish a research program to improve our understanding of invasive species biology and control and their interactions within ecosystems, and a field-oriented applied research program focusing on management strategies. Applicants with a wide range of areas of expertise will be considered, but a strong background in biological control of insects and plants is preferred. Examples of invasive species that are currently priority concerns in Louisiana include lepidopteran borers in graminaceous crops (e.g., Mexican rice borer), kudzu bug, red-banded stink bug, tawny crazy ant, non-native scolytines, spotted winged drosophila, Bermuda grass stem borer, giant salvinia, and other invasive weeds. The successful candidate must be team-oriented and willing to collaborate with departmental faculty who possess expertise in the areas of insect systematics, urban entomology, medical/veterinary entomology, population genetics, integrated pest management, and plant-insect interactions. Participation in regional initiatives and success in obtaining extramural funding will be necessary. Graduate student training as a member of the Graduate Faculty of Louisiana State University is required. The incumbent will be responsible for contributing to the teaching program of the department; including teaching the biological control course and a second course in his/her area of specialty.

**QUALIFICATION REQUIREMENTS:** The successful candidate must hold a Ph.D. degree in Entomology or related discipline at the time of employment. They must possess the ability to develop an extramurally funded research program to conduct basic and applied research focusing on a broad range of invasive species problems. Outstanding oral and written communication skills are essential.

**SALARY AND BENEFITS:** Salary will be commensurate with qualifications and experience. The LSU AgCenter has an attractive benefits package with a wide variety of benefit options. Benefits offered include retirement, multiple medical insurance options, supplemental insurances (dental, life, long-term disability, accident, vision, long-term care, etc.), Tax Saver Flexible Benefits Plan (saves tax dollars on some child care and medical expenses), university holidays (14 per year, typically includes a week off at Christmas), generous annual (vacation) and sick leave benefits, Employee Assistance Program, and possible educational leave and tuition exemption for coursework at campuses of the LSU System. Specific benefits depend on job category, percent effort and length of employment.

**DATE AVAILABLE:** September 8, 2014 or as mutually agreed upon.

**APPLICATION DEADLINE:** March 31, 2014 or until a suitable candidate is identified.

**APPLICATION PROCEDURE:** Must apply online at https://lsusystemcareers.lsu.edu/ by attaching the following: 1) a curriculum vita; 2) copies of all undergraduate and graduate transcripts (official transcripts will be required prior to employment); 3) list of publications and up to five selected reprints (as PDFs); 4) three letters of recommendation; 5) and a letter of application describing abilities, professional interests, and career goals. In lieu of attaching the letters online, they may be sent directly to contact listed below. (Paper, faxed or e-mailed application materials will not be accepted.) For more information contact:

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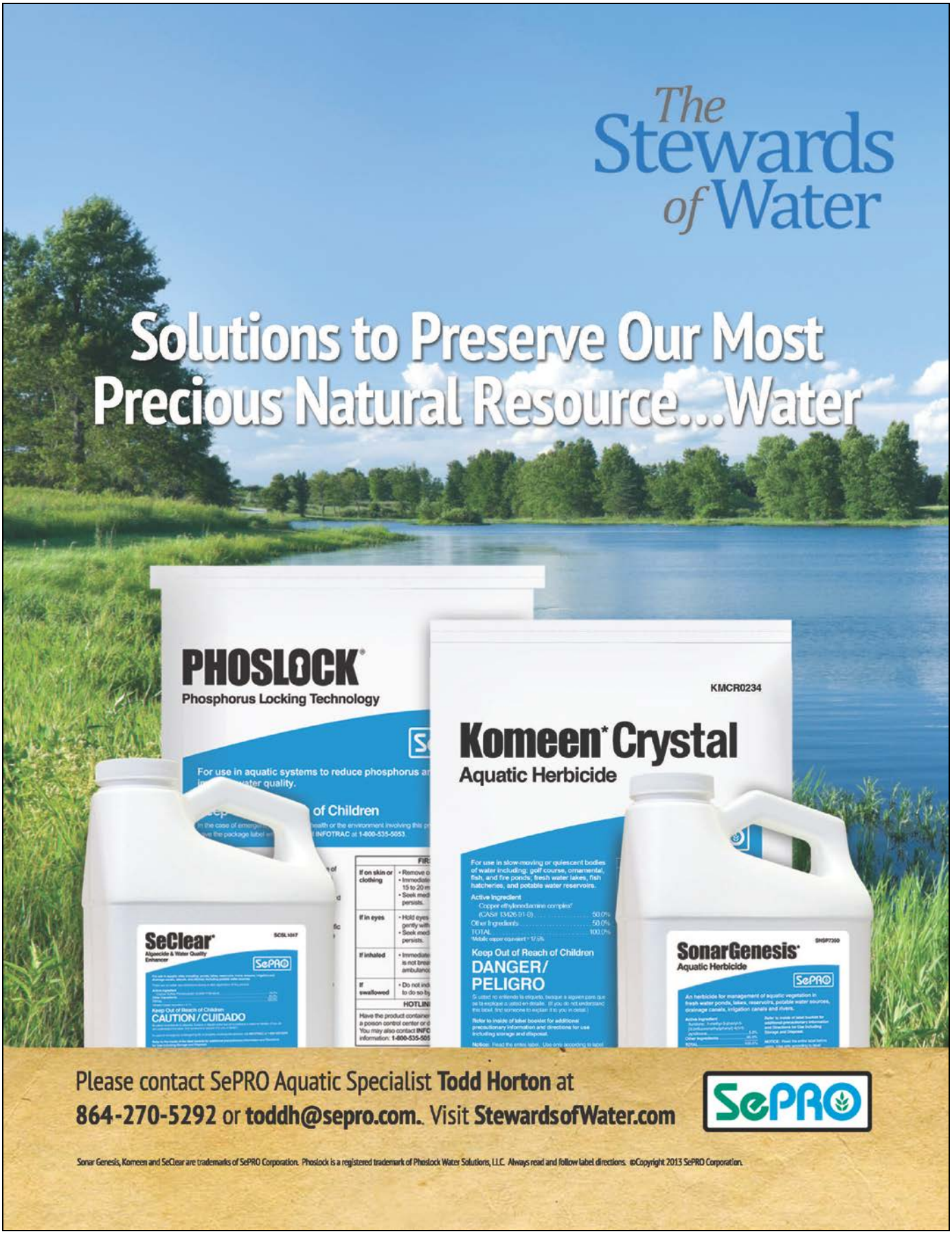
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## Research Finally Brings Relief to Detroit Lakes, MN

John D. Madsen

Flowering rush (*Butomus umbellatus*) is a relatively unknown invasive plant to most of the continental US, but it has been a thorn in the flesh of lake users in Detroit Lakes, Minnesota for more than four decades. As flowering rush continued to expand in the multiple basins of the Detroit Lakes chain, the Pelican River Watershed District pursued many management options. Herbicides, mechanical harvesting, hand-pulling were all attempted, with little success.

**Photo 1. MSU Graduate Student Brad Sartain samples flowering rush on Detroit Lakes, July 2012.**

Mississippi State University's Geosystems Research Institute became involved with a team of investigators that included Concordia College (Moorhead, MN), and the US Army Engineer Research and Development Center (USAERDC) in 2010, in collaboration with the Pelican River Watershed District and Minnesota Department of Natural Resources. GRI and Concordia College initiated a research project on the phenology, ecology, and management of flowering rush, to better understand this invasive plant and start working on appropriate management techniques. The USAERDC also participated in small-scale herbicide trials and with dye dissipation studies on the lake. These research projects found that most herbicides applied to water to control submersed flowering rush would not stay around long enough in the windy Detroit Lakes to be effective, which resulted in a focus on operational-scale treatments with diquat in 2012.

**Photo 2. Nathan Olson, Minnesota Department of Natural Resources Aquatic Invasive Species Specialist, gets his hands dirty (and wet) sampling flowering rush with MSU.**

In 2012, the operational-scale treatments on flowering rush were not only a huge success in reducing the nuisance growth that had plagued lake users, but also had two other desirable effects. The treatments significantly reduced the density of rhizome buds, the main method of flowering rush overwintering and spread, and there was less damage to native plant species than expected. One other effect – a large group of bulldog fans in northwestern Minnesota.

Pelican River Watershed District is planning more flowering rush control treatments for 2014.

# Thank you to Our Sustaining Members for Supporting the MidSouth Aquatic Plant Management Society

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**AquaMaster Fountains & Aerators**
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**Airmax Ecosystems**

## Calendar of Events

**Weed Science Society of America Annual Meeting**
February 3-6, 2014
Vancouver, British Columbia, Canada
www.wssa.net

**Midwest Aquatic Plant Management Society Meeting**
Mar 2-5, 2014
Lombard, IL
www.mapms.org

**Western Aquatic Plant Management Society Meeting**
Mar 31 – Apr 2, 2014
Reno, NV
www.wapms.org

**Aquatic Weed Short Course**
May 5-8, 2014
Coral Springs, FL

**Joint Aquatic Sciences**
May 18-23
Portland, OR

**Aquatic Plant Management Society Meeting**
Jul 13-16
Savannah, GA
www.apms.org

**May newsletter deadline, April 15, 2014. Send information to ryan.wersal@lonza.com.**