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MIDSOUTH AQUATIC PLANT MANAGEMENT SOCIETY
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Midsouth Aquatic Plant Management Society Newsletter

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Letter from the President

Happy Fall Y'all! Football has returned to us and with it cooler temperatures. This signals an approaching end to another growing season and a moment for all of us to take a step back and a deep breath on a job well done. I am hopeful that this newsletter finds you and yours happy and healthy.

The 42nd Annual Meeting was held in LaGrange, GA, and if you have never visited I certainly encourage you to do so, it is the quintessential southern town. I would like to thank the Board of Directors for their help and support in making the 42nd Annual Meeting such a success with special thanks to Carl Della Torre and Dr. Gray Turnage for their help in planning this meeting. I would also like to thank all of our members, sponsors, vendors, and speakers for their contributions. Without your support our MSAPMS annual meeting would not be possible.

As we embark on another year of promoting sustainable aquatic plant management in the MidSouth, I want to take a moment to emphasize our primary objective: to be the definitive voice for aquatic plant management in our region. Together, we possess a wealth of experience and expertise that can truly make a difference, and it is imperative that our collective thoughts and insights are heard within our communities and beyond.

Our dedicated Board is committed to serving this society with integrity and passion, and we are eager to amplify the concerns and ideas of our members. The strength of our society hinges on the active participation and service of all of you. Your voices matter, and we want to ensure that they resonate throughout our networks and in crucial conversations regarding aquatic plant management.

If you have time to spare and a passion for making a difference, I encourage you to reach out to any member of our Board to explore how you can volunteer your services and expertise. Working together, we can elevate the awareness and understanding of aquatic plant management issues that affect our ecosystems.

Let us continue to strengthen our society through collaboration and commitment. Your involvement will not only enhance the MSAPMS collective, but will enrich your personal experience with MSAPMS.

Our next annual meeting will be held at the Tennessee Aquarium, made possible through a very generous donation from the Tennessee Valley Authority, in Chattanooga, Tennessee, October 28-31, 2024. This is certain to be an extraordinary meeting, so make plans to attend!

Looking forward to seeing you all,
Daniel C. Hill

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Board of Directors Update

Your current MSAPMS BOD is:

President
Daniel Hill
Louisiana Wildlife & Fisheries

President Elect
Gray Turnage
Mississippi State University

Past President
Carl Della Torre
Orion IVM

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TVA

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Board of Directors Slate

Your 2024 MSAPMS BOD slate is:

We will be voting on this at the upcoming meeting in October

President Elect
Stephen Turner

Director
Tim McLean

Director
Wykle Green

A CASE OF UNINTENDED CONSEQUENCES

Last fall at the annual MidSouth Aquatic Plant Management Society meeting a panel fielded questions and discussed issues affecting aquatic managers including the use of fish toxicants such as rotenone and potential alternative products. Since then, AERF has received numerous calls and emails seeking clarification and additional information. I spoke with both attendees and panelists and, like the children's game of "telephone," the more the message was repeated the less clear the message became and the more I became convinced that it might be a good thing to provide information to a wider audience than just my callers. AERF has done some research and checked with EPA contacts and hopefully what we have learned will be helpful to resolve any misunderstandings.

The Environmental Protection Agency administers the federal statute regulating pesticides – the Federal Insecticide, Fungicide and Rodenticide Act, as amended (FIFRA). All pesticides distributed or sold in the United States must be registered by EPA based on scientific data showing that they will not cause unreasonable risks to human health or to the environment when used as directed on product labeling. EPA reviews each registered pesticide every 15 years once it has undergone a registration review. Through the registration review program, the Agency verifies that all registered pesticides continue to meet the registration standard as the ability to assess and reduce risk evolves and as policies and practices change. Rotenone has been the subject of review for years and during that process risks associated with its use have been identified and label changes have voluntarily been made by manufacturers.

More recently, on December 15, 2021, the EPA issued the *Rotenone Interim Registration Decision* which was amended on March 7, 2022. Without going into a lot of detail, some of the label changes mandated included:

- The restricted use statement was expanded to mandate the use by only Certified Applicators or persons under their direct supervision and the Certified Applicator must be on site during applications;
- The PPE statement was strengthened, and the glove and respirator sections were updated;
- Application restrictions were added to the Spray Drift Management section;
- The applicator is reminded that he is responsible for conforming his actions to the pesticide label and then is advised that the Standard Operating Procedure Manual of the American Fisheries Society is consider by the EPA to be part of the rotenone label;

- Drinking water protection language was added;
- Recreational use prohibitions were added;
- Use in estuarine or marine waters were prohibited; and
- The placarding of application sites was mandated with very specific requirements.

An earlier EPA analysis dated December 8, 2020 concluded that the proposed mitigation measures “could lead to increased costs to applicators from switching to alternative methods of fish control or a need for increased personnel” and “the proliferation of invasive fish species in freshwater habitats across the country.” Notwithstanding the warning, the decision was implemented as described above and fisheries managers are now dealing with the substantial consequences.

There are at least ten active EPA registrations listing rotenone as an active ingredient, but liquid formulations are not readily available these days for some reason and there are limited amounts of others. What is going on?

In 2014 Central Life Sciences acquired Prentiss, LLC who owned the EPA registrations for rotenone liquid and powder, and they also produced the liquid in their own manufacturing facility. That facility was not part of the acquisition so Central Life Sciences had to locate a contract packaging company to produce it which was HPI products in Missouri who had three locations. Unrelated to the pesticide production arrangement between Central Life Sciences and HPI, since 2007 HPI had been dealing with the EPA on some issues under the Resource Conservation and Recovery Act (RCRA), which is a federal law that regulates the disposal of hazardous and solid waste. The RCRA case remained unresolved until 2022 when a federal judge ordered HPI Products to stop operations for failure to comply with previous efforts to resolve longstanding violations of state and federal environmental laws. In 2023, EPA’s RCRA program referred the HPI sites to EPA’s Superfund Emergency Response and Removal program to assess and dispose of wastes improperly stored at the site.

Even if the shutdown of HPI because of environmental violations was justified (as it appears), Central Life Sciences was left high and dry trying to find someone else to package their Prenfish liquid rotenone. After two years they finally found a new company who would do the packaging. Even so, getting the production of rotenone going is not an automatic thing. EPA requirements are pretty stringent before approving a new packaging company including the

analysis of test batches to assure chemical integrity and conformance with the Confidential Statement of Formula. The entire process takes time. At this moment, the best estimate is that Central Life Sciences will have their rotenone products available sometime in August 2025. Central Garden and Pet is the parent company of Central Life Sciences, and they are the only remaining EPA registrant of rotenone products in the US.

That's the abbreviated story of how we got to this moment with rotenone. The short supply of preferred products and the increased burdens of the directions for use of rotenone are driving applicators to seek alternatives. The lack of true alternatives was mentioned in many of the documents leading up to the EPA interim decision, but no one really could have predicted all that has occurred to create these circumstances. Knowing the reason for a problem doesn't create a solution. So, what is an applicator to do?

AERF heard of sodium or calcium hypochlorite being recommended, so we checked with EPA and were told:

> "I looked at [our database], consulted some labels, and checked in with the [Product Manager] for both sodium and calcium hypochlorite and the only fish toxicant use that seems to be registered for those chemicals would be for control of scavengers in fish hatchery ponds. If the use you've heard about is outside of a fish hatchery, then that would be an illegal use."

The calcium hypochlorite product, EPA Reg. No. 1258-1237, is labeled primarily for pools and spas, water treatment facilities and for sanitizing non-food surfaces. There is a section for:

> "FISH PONDS - Remove fish from containerized ponds prior to treatment. Thoroughly mix 30 oz. of this product to 10,000 gallons of water to obtain 10 ppm available chlorine. Add more product to the water if the available chlorine level is below 1 ppm after 5 minutes. Return fish to pond after the available chlorine level reaches zero.
>
> and
>
> "CONTROL OF SCAVENGERS IN FISH HATCHERY PONDS - Prepare a solution containing 200 ppm of available chlorine by mixing 1.5 oz. of product with 20 gallons of water. Pour into drained pond potholes. Repeat if necessary. Do not put desirable fish back into refilled ponds until chlorine residual has dropped to 0 ppm, as determined by a test kit."

The sodium hypochlorite product (EPA Reg. No. 74208-20001) is much the same. Its intended uses are virtually identical to the label above:

> "FISH PONDS - Remove fish from ponds prior to treatment. Thoroughly mix 103 oz. of this product to 10,000 gallons of water to obtain 10 ppm available chlorine. Add more product to the water if the available chlorine level is below 1 ppm after 5 minutes. Return fish to pond after the available chlorine level reaches zero.
>
> and
>
> "CONTROL OF SCAVENGERS IN FISH HATCHERY PONDS - Prepare a solution containing 200 ppm of available chlorine by mixing 2 oz. of product with 10 gallons of water. Pour into drained pond potholes. Repeat if necessary. Do not put desirable fish back into refilled ponds until chlorine residual has dropped to 0 ppm, as determined by a test kit."

Clearly these products cannot be used legally as fish toxicants or piscicides outside the very specific uses described above.

AERF found publications with up to 40 different compounds listed as "fish toxicants." As near as we can tell, these documents and recommendations all were published prior to the passage of the 1972 FIFRA that, for the first time, made it illegal to use any pesticide in a manner inconsistent with its labeling. We all know by now that the EPA registered label takes precedence over any recommendation except for the limited exceptions listed under FIFRA Section 2(ee) and 24(c) Special Local Need labels. Recommendations that contradict the EPA registered labels are themselves illegal these days.

This inevitably leads us to "What if I use something that isn't a pesticide, like something to adjust the water quality?" In general, products are considered to be pesticides if they are **intended** for preventing, destroying, repelling, or mitigating any pest. The key word is "**intent**". If someone intends to use a product for pesticide purposes, such as killing or repelling fish, then that product is a pesticide under the law. EPA has addressed circumstances like this before and published FIFRA Compliance Policy No. 3.5 which states, in part:

> The Agency considers any application of an unregistered pesticide for other than personal use to be distribution or sale of an unregistered pesticide, a violation under Section 12(a)(1)(A) of FIFRA. This includes applying an unregistered pesticide to another person's property

> for other than monetary consideration. Furthermore, a person applying an unregistered pesticide for hire, only to provide a service of controlling pests without delivering any unapplied pesticide to any person so served, would be considered a distributor and is therefore subject to the higher penalties set forth in section 14(a)(1) and 14(b)(1) of FIFRA.

The consequences of the EPA action, while not exactly intended, were predicted and determined to be better than leaving the labeling of rotenone alone. While the dilemma faced by Central Life Sciences most certainly exacerbates the situation, absent the discovery of a viable alternate chemical there really isn't any leeway left at all. Find an EPA registered fish toxicant or piscicide and use it according to labeled directions. If you can't find liquid rotenone, and you want the job, you'll have to use a different formulation. When supplies of current alternative products are gone, then we will really have a problem. Hopefully, the new producer will be online by then.

It doesn't look like EPA will suddenly realize the horrible inconvenience it has created for fisheries managers and reverse its risk mitigation decisions. Nor is the EPA likely to speed up its approval process for the new production facility. Your only option is to use what products are legally available while supporting the research to find and register an efficacious and economically viable alternative.

Carlton R. Layne
Executive Director
Aquatic Ecosystem Restoration Foundation.

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New Awards

The MSAPMS BOD is pleased to announce the creation of two new awards. Recipients will be announced at the upcoming meeting.

Dr. David H. Webb Lifetime Achievement Award

The Lifetime Achievement Award, henceforth known as the “Dr. David H. Webb Lifetime Achievement Award” is presented to an individual whose career has been dedicated to the management and conservation of aquatic resources with an emphasis on the management of aquatic plants and/or algae. The award is a special recognition of those who have made significant contributions to the science, aquatic resources, and/or the industry of aquatic plant management.

Furthermore, this award is presented to those who like Dr. David Webb, seek to provide knowledge and motivation to the next generation of professionals in the aquatic plant management field. Dr. Webb was an inspiration to many in the field and one who throughout his career supported, promoted and advanced the Society. Thus, this recognition is for those who embody what it means to be a mentor and advocate for aquatic plant science and management.

New Awards

Young Professional Award

The Young Professional Award recognizes an individual that has exhibited a consistent drive to advance the status and goals of MSAPMS by consistently utilizing science driven solutions in the field of aquatic plant management.

Bryan Goldsby Retiring

Hard to believe we are at that point and age. Bryan and I have done this together for a long time……even back when we were teenagers and younger. #airboatsforlife Enjoy some time down Bubba!! You are still the best airboat driver I have ever seen. Conrgrats on building a great career, business, and legacy. Our industry is much better because of all you have done! Love ya!!

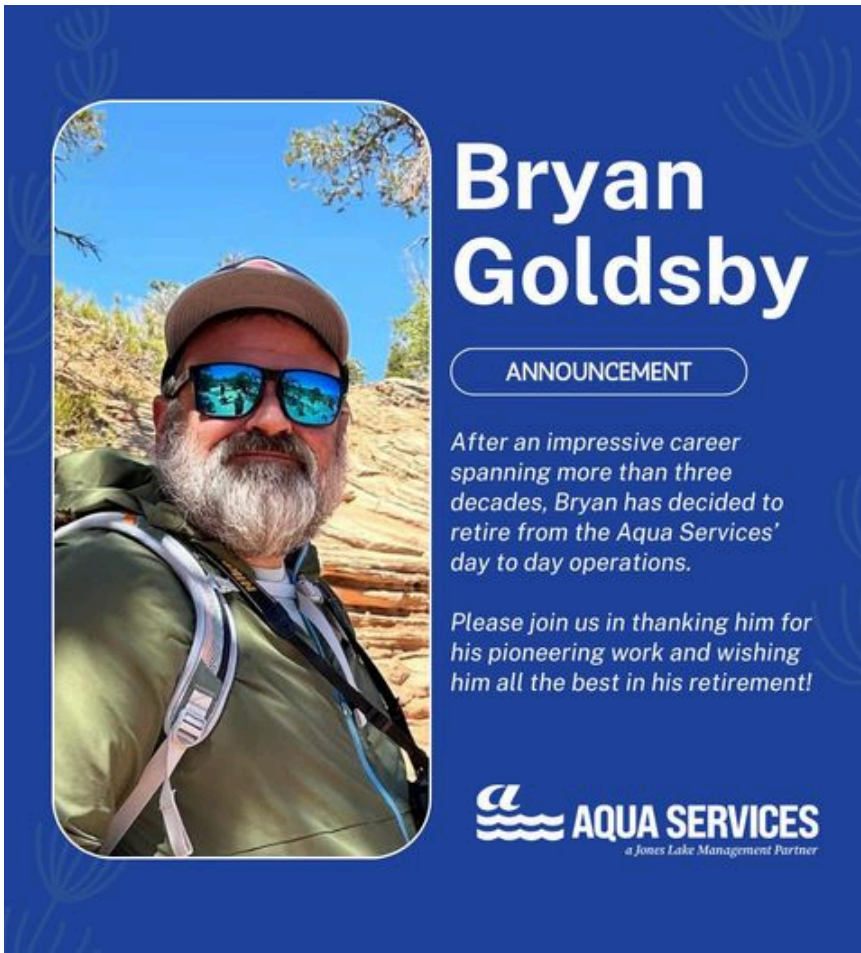
After much thought and consideration, Bryan Goldsby has decided to take a step back and retire from the Aqua Services' day-to-day operations. Aqua Services was founded in 1982 by Bryan's father, Terry Goldsby. The bulk of their initial work started with aquatic vegetation control on Lake Guntersville. Over the years, Aqua Services grew to become the premier provider of fisheries management and large-scale aquatic plant management in the southeastern United States. None of this would have been possible without Bryan and the countless hours he spent in the field and his work with a wide variety of clients ranging from private individuals to government entities and nuclear power plants.

Not only was Bryan integral in the growth and success of Aqua Services, he has also been influential in the growth of our industry as a whole. His work with entities like the Tennessee Valley Authority (TVA) and Georgia Power have helped set new industry standards. Bryan has also held board positions with several professional industry societies including a term as the board president of the Midsouth Aquatic Plant Management Society.

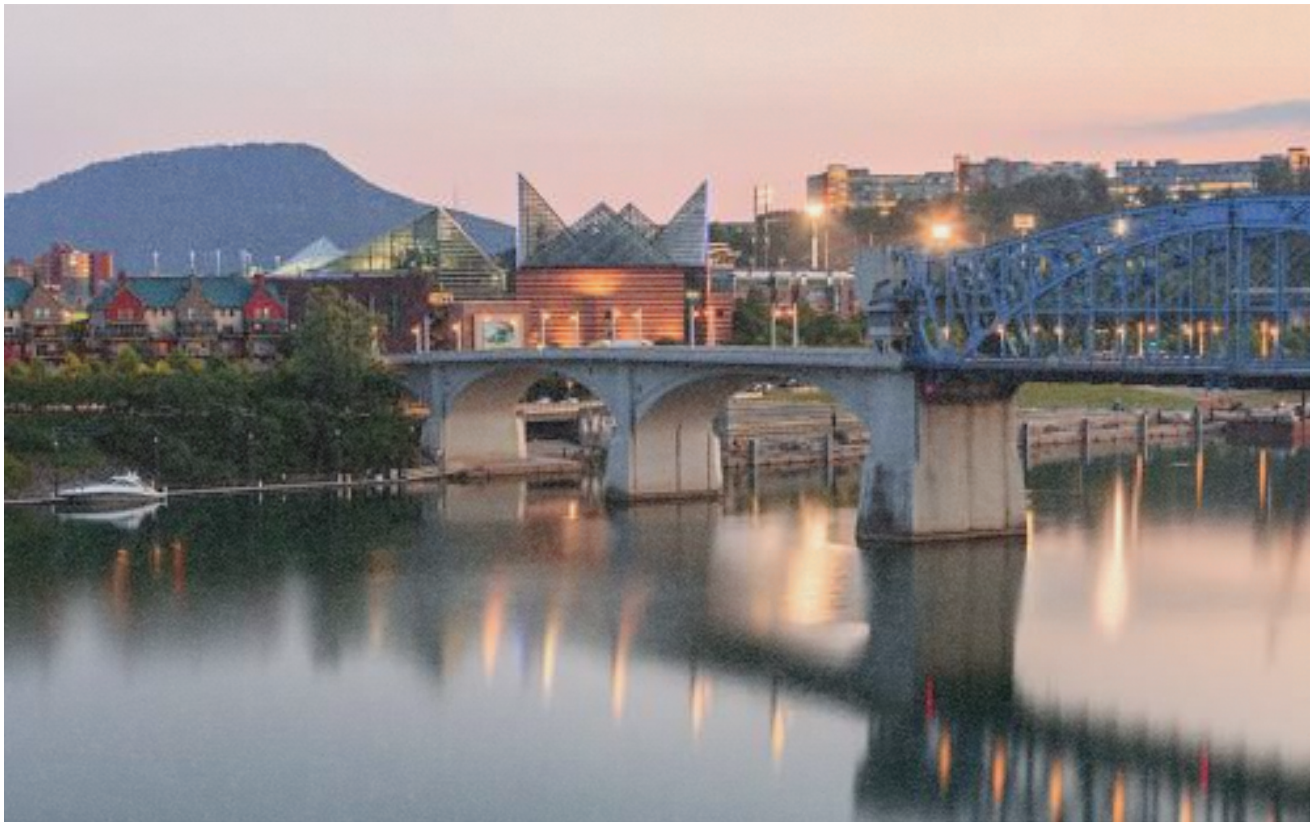
The work Bryan and his team have done, and the methods of treatment they developed, have continuously propelled the entire industry forward for the last 30 years. Thanks to his guidance and mentorship, Bryan leaves behind a team of knowledgeable and competent biologists ready to continue in his footsteps.

Please join us in congratulating him on a long, successful career and wishing him all the best in his retirement.

By Troy Goldsby



43rd Annual Mid-South Aquatic Plant Management Conference



Tennessee Aquarium

1 Broad St.

Chattanooga, TN 37402

October 29-31, 2024

Early registration ends Sept. 28

To register for the conference and reserve hotel rooms visit our website

https://www.msapms.org/

Student Spotlight

Maxwell Gebhart

Mississippi State University

Vallisneria L. is an important genus of submersed monocots throughout the world as many taxa serve an important role in the respective systems they occupy. However, this genus has been subject to numerous issues involving its evolutionary history and phylogenetics which has led to an unfortunately large gap in our current knowledge. Not only are there knowledge gaps but several species and hybrids have become invasive not only in the U.S. but internationally. This research aims to characterize several important facets of Vallisneria that are currently native and invasive within the U.S. Firstly, the phenology of five Vallisneria taxa will be studied in a mesocosm setting to determine a seasonal timeline and resource allocation pattern to understand when important life processes occur. Despite the large amount of research on V. americana, as one of the native Vallisneria taxa, there is little information on the seasonal life cycle for this species. The phenology will also aim to describe the morphology of these taxa to determine distinguishing characteristics that can be used for in situ identification and in herbaria spaces as well. Due to the invasive nature of V. × pseudorosulata and V. spiralis, management must be developed to curb further invasions and get populations under control. An initial screening of numerous herbicides, a concentration exposure time study, and field validation will aim to create baseline management information. Finally, there is large amounts of anecdotal evidence to suggest V. × pseudorosulata is outcompeting other invasive species such as Hydrilla verticilata L. and natives. The final aspect of this research will aim to study competition between V. × pseudorosulata and several target species to determine the validity of anecdotal evidence and provide information for management priorities. This is primary research on many of these aspects for Vallisneria and aim to address many of the knowledge gaps that are incredibly important to characterize.

Hometown: I grew up in Wesley Chapel, Florida but my family is originally from Columbus, OH.

Hobbies: I enjoy playing numerous videogames such as Final Fantasy and Baldur's Gate, I read as often as I can, and I crochet avidly in my spare time.

Career goals: I aim to work either as part of a natural resource agency or within a university.
Favorite food: I'm partial to Mexican street tacos usually al pastor style chicken.

Thank you to our sponsors!