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Hydrilla Management in the Upper Ocklawaha River Basin

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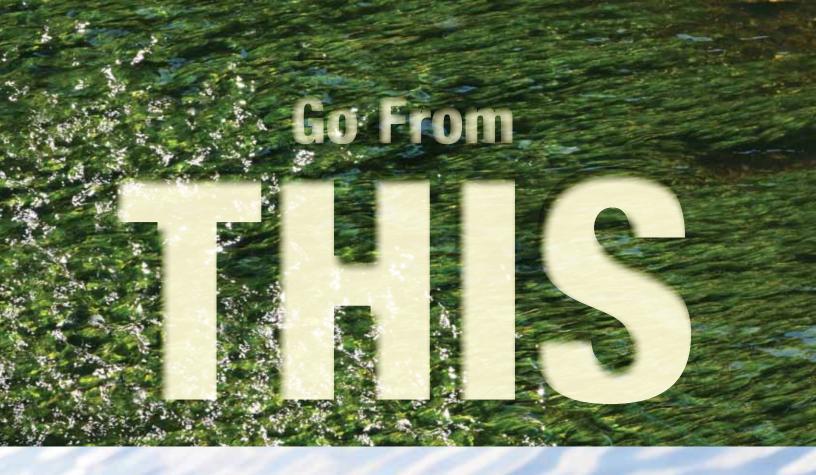
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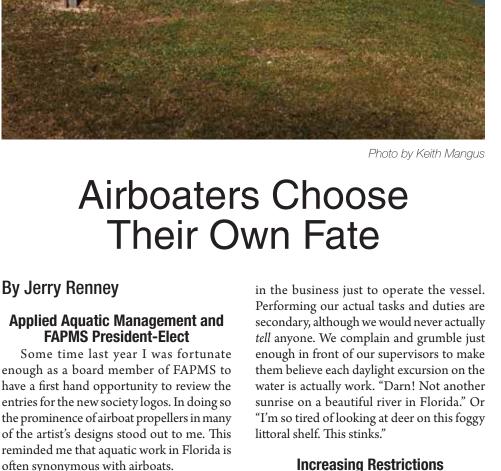
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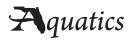
Sometimes it seems as if many of us are

often synonymous with airboats.

**By Jerry Renney** 

This is a delicate subject and I broach it





tentatively. I have made the statement that the Aquatics industry is somewhat tied to airboats, and therefore, to the airboat industry. Well, the airboat industry could use some help. Currently the state of Florida has approximately thirty airboat restrictive laws or ordinances. These range from area specific closures, to curfews, to outright bans on the vessels. You have probably read about these actions in recent years since the number has been steadily growing as the state becomes more populated and airboat-noise complaints become more common. Airboat enthusiasts and manufacturers have rallied to stop the demise of recreational airboating by policing their own, providing public outreach programs, and ultimately supporting legal battles for the airboat industry.

Fortunately for our industry, most of the airboat restrictions have exemptions for aquatic weed control operations. For example, in Polk County, airboats are not allowed to launch from the public ramps at Lake Rosalie or Lake Pierce. However, due to the vegetation management requirements for these water bodies, airboats are often the best tools; and plant managers of these systems remain exempt from the county ordinance. So why do I bring this issue to the attention of the aquatics industry if we are exempt and it is seemingly of no concern to us? There are two reasons: one explains why we should be concerned and the other is an example of what we can do to help.

#### Why Be Concerned?

The airboat industry is basically a small family of builders, fabricators and businessmen. Regardless of who you use for your airboat service it is likely they know everyone else in the business on a first name basis. They do the work because they love it, and their success relies primarily upon recreational airboat users purchasing their products. Commercial or government rigs are often extras in their annual sales. If these businesses fail, where do aquatic applicators go for their airboats? It may be true that if there is a market there will always be a supply, but at what cost? Will these manufacturers remain solvent and their equipment affordable without the recreational market?

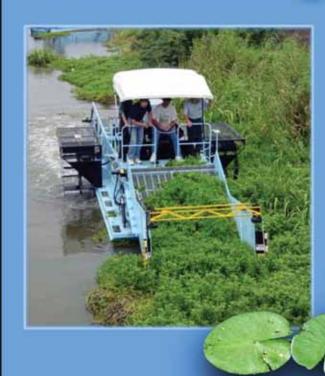
#### **Consideration Helps**

Airboating closures mentioned above were a result of rude or obnoxious behavior at the affected boat ramps in close proximity to residential homes. So here is the sticky part: many of us power load our boats as we have always done because it is the easiest way or because we were taught this way. I have even read some government airboat operation instructional manuals that specify power loading. It is a *benefit* that we are exempted from airboat restrictions, but as one of your colleagues I would hesitantly remind you that nothing can exempt us from rude behavior. I think most boat trailers come with winches and they should work, so we may have to use them occasionally. In addition, we should always be mindful of our airboat operation in the presence of the public, not just at boat ramps.

I hope this does not sound too preachy and instead only reminds each of us to consider our actions not solely as applicators but as airboat operators. I also hope I have successfully shown the relationship between the two industries. Whether we see it or not, the public just sees one thing... an airboater. Let's try to do our part to better their opinion.

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# Surveillance-Based Hydrilla Management in the Upper Ocklawaha River Basin, Florida

By Kelly Crew<sup>1</sup>, W. Godwin<sup>2</sup>, E. Cotsenmoyer<sup>3</sup>, M. Coveney<sup>2</sup>, E. Lowe<sup>2</sup>, J. Stenberg<sup>2</sup>, R. Conrow<sup>2</sup>, and J. Peterson<sup>2</sup>

#### Introduction

Reducing the spread of hydrilla (Hydrilla *verticillata*) in the Upper Ocklawaha River Basin (UORB) in central Florida is integral to achieving restoration goals for lakes in the basin, which form the primary headwaters for the Ocklawaha River (Figure 1). UORB lakes are high priority water bodies under the St. Johns River Water Management District's (SJRWMD) Surface Water Improvement and Management (SWIM) program. The SJRWMD and partners have made substantial investments in watershed restoration at Lakes Apopka and Griffin since the early 1990s, and water quality is improving (Coveney et al. 2005, Godwin et al. 2010). In anticipation of increased water clarity from these efforts, SJRWMD joined Lake County Mosquito and Aquatic Plant Management (LCMAPM) and the Florida Department of Environmental Protection (FDEP) in a surveillance-based, early detection/rapid response management program for hydrilla in the UORB.

The goal of surveillance-based management is to treat hydrilla early and often, thus avoiding expensive large-scale herbicide applications. FDEP adopted this approach for hydrilla from the United States Army Corps of Engineers (USACE) program for nuisance water hyacinth (Eichhornia crassipes; Schardt 1994; Miller et al. 2000). Joyce (1985) found that maintaining water hyacinth at the lowest feasible levels reduced herbicide use, sediment accretion, and the formation of anoxic conditions caused by shading and plant decomposition. A later study found that controlling hydrilla before it formed a canopy significantly reduced the amount of organic sediment produced, as well as the number and total weight of its reproductive tubers (Joyce et al. 1992).

Although arguments have been made for allowing hydrilla coverage to expand for

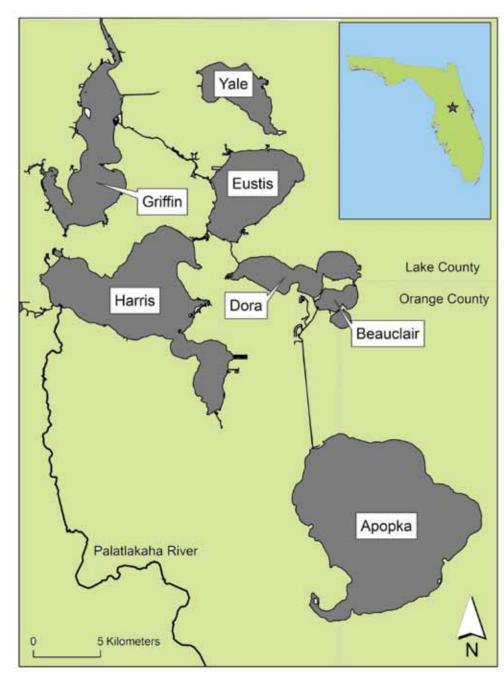


Figure 1. Upper Ocklawaha River Basin lakes

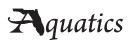


 Table 1. Morphometric characteristics of UORB lakes\*, mean Secchi depths and total area treated between 2000 and 2008. Stage is the water elevation (NGVD 1929) at which volume was calculated.

Lake	Stage (m)	Volume (ha-m)	Surface Area (ha)	Mean Depth (m)	Secchi (m)	Area of Treated Hydrilla (ha)
Apopka	20.2	19,900	12,465	1.6	0.31	156.5
Beauclair	19.2	900	439	2.1	0.33	6.2
Dora	19.2	5,322	1,774	3.0	0.33	1.1
Eustis	19.2	10,861	3,139	3.5	0.59	137.4
Griffin	18.1	9,144	3,810	2.4	0.44	243
Harris	19.3	27,681	7,563	3.7	0.61	133.8
Yale	18.0	6,069	1,627	3.7	0.74	3.4

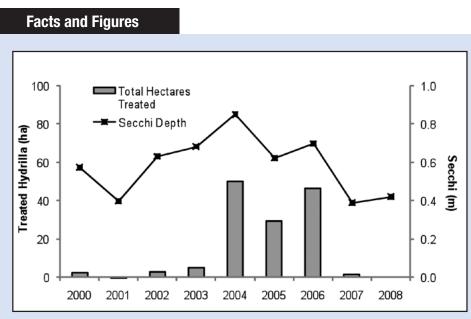
\*Lake Apopka morphometry from Hoge et al. (2003); other lakes from Fulton et al. (2004)

fisheries development (Murphy et al. 2006), managing its rapid growth at high coverages could be difficult and expensive (Miller et al. 2000, Coveney et al. 2006). Because UORB lakes are generally shallow (Table 1) and eutrophic, they provide an ideal habitat for the spread of hydrilla. Within two years, hydrilla expanded from 1% to 73% coverage in Lake Yale (Hestand et al. 1994). Using a surveillance-based maintenance control program in the UORB offered the best management strategy for minimizing water quality problems, impacts to native vegetation and overall costs.

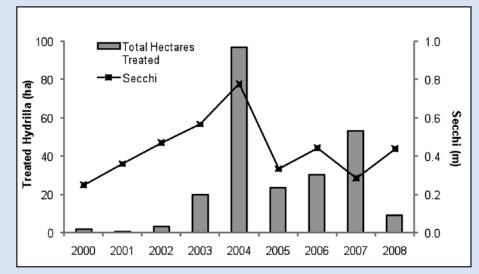
Surveillance-based management was first implemented in the UORB (excluding Lake Apopka) by LCMAPM and FDEP in 1990. SJRWMD extended the program to Lake Apopka in 1995 and intensified hydrilla surveillance in the Harris Chain of Lakes in 2002. We describe here the methods and results of this hydrilla management program in the UORB since 2000. Further details about surveillance-based management can be found in Crew et al. (2010).

#### Surveillance and Treatment Methodology

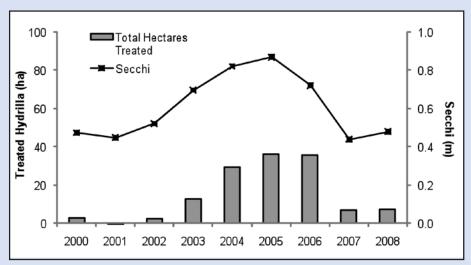
SJRWMD, LCMAPM and a contractor performed visual inspections weekly to monthly by circling the lake perimeter in a boat to locate new patches of hydrilla. A sonar unit on an airboat also was used to detect deeper growing hydrilla in Lake Apopka, but successful detection with sonar usually depended on the absence of other submersed plants, water levels greater than 0.9 m, and partially consolidated bottom sediments. Hydrilla also was identified during submerged aquatic vegetation (SAV) surveys, quarterly aerial surveys,

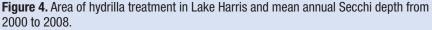


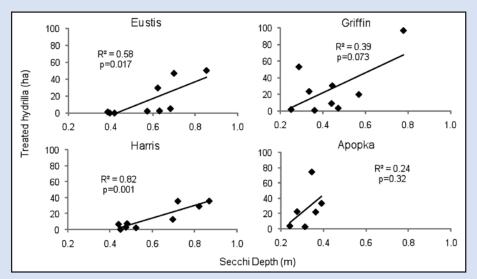




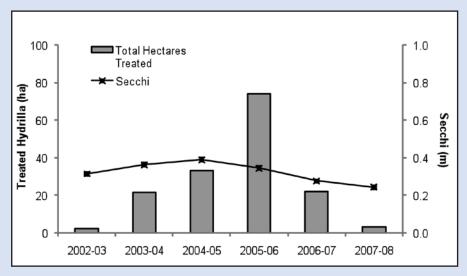
**Figure 3.** Area of hydrilla treatment in Lake Griffin and mean annual Secchi depth from 2000 to 2008.







**Figure 5**. Annual area of treated hydrilla vs. mean annual Secchi depth during 2000-2008 in Lakes Eustis, Griffin, Harris and Apopka. Data for Lake Apopka are tabulated by fiscal year (October-September).



**Figure 6.** Area of hydrilla treatment in Lake Apopka and mean annual Secchi depth. Treated area and Secchi depth are tabulated by fiscal year (October-September).

or other routine lake work. When hydrilla was identified, its location and extent were recorded and a contact herbicide was applied soon after, usually within a two-week period. Endothall-based herbicides typically were used, and these were applied at the recommended label rates.

The Florida Fish and Wildlife Conservation Commission (FWC) currently funds hydrilla management in the UORB (formerly FDEP's responsibility). The FWC also performs annual surveillance on UORB lakes for native and exotic aquatic plants. Coverages for exotic plants are determined yearly, while coverages of native aquatic plants are determined approximately every five years. Lakes are surveyed more frequently if expansion of exotic plants is a concern.

#### **Management History**

Lakes Eustis, Griffin, and Harris

During the 1980s, Lakes Harris and Griffin had more than 70% surface coverage of hydrilla. Whole-lake fluridone treatments were conducted by aircraft in 1987 at a cost of over \$1.7 million (Cotsenmoyer, unpublished data, 2007). Minimal or no hydrilla was observed in Lakes Eustis, Griffin, and Harris during the 1990s. Hydrilla spread rapidly, however, after a significant drought during 2000 to 2002 (Figures 2-4). Water levels decreased by up to one meter in some lakes, increasing bottom illuminance and enabling hydrilla to expand rapidly. When water levels rose in 2002, hydrilla grew faster than competing native species, increasing its coverage.

Water levels stabilized in late 2002, but water clarity, as measured by Secchi disc, increased, enabling hydrilla to spread further. Between 2002 and 2004, the total annual area of hydrilla treatment in Lakes Eustis, Griffin, and Harris increased from 7 to 177 ha (Figures 2-4).

Substantial decreases in water clarity were observed in Lakes Eustis and Griffin after hurricanes Charley, Frances, and Jeanne crossed central Florida in the fall of 2004. Parts of the UORB received over 50 cm of rain in August and September and experienced winds over 100 km h<sup>-1</sup>. Hydrilla coverage in Lakes Eustis and Griffin subsequently decreased in 2005 (Figures 2-3).

Between 2006 and 2007, the area of treated hydrilla decreased 81% in Lake Harris and 97% in Lake Eustis, but increased 75% in Lake Griffin. Most new patches in Lake Griffin were located in canals on the northwest shore of the lake, which were dredged in

Fiscal Year	Hectares Treated	Man Hours	Endothall (kg)
2002-03	2.3	104	129
2003-04	21.6	366	801
2004-05	33.0	587	1307
2005-06	74.1	422	3343
2006-07	22.2	499	903
2007-08	3.3	207	108
Yearly Average	26.0	364	1098

**Table 2.** Hydrilla treated in Lake Apopka by fiscal year 2002-03 to 2007-08 (fiscal year is October-September). Man-hours reflect the time spent searching for hydrilla, as well as treatment time.

2007. Hydrilla that was present in the canals likely was fragmented by dredging activities, thus multiplying the number of plant propagules available for establishment in the lake. A cleared substrate also might have enabled the spread of hydrilla in the canals.

The total cumulative area of treated hydrilla between 2000 and 2008 in the UORB was 682 ha (Table 1). Relative to each lake's surface area, hydrilla never exceeded 2.2% coverage. Herbicide applications were performed throughout the year on each lake, but the largest areas were usually treated between March and October. A significant  $(p \le 0.10)$  positive relationship was observed between the area of treated hydrilla and Secchi transparency for Lakes Eustis (r<sup>2</sup>=0.58, p=0.017), Harris (r<sup>2</sup>=0.82, p=0.001), and Griffin (r<sup>2</sup>=0.39, p=0.073) (Figure 5). These relationships suggest that hydrilla control in UORB lakes may require more resources as lake restoration improves water clarity.

During the period of surveillance-based management of hydrilla on Lake Griffin, the percentage of native species making up SAV patches has increased. In 2003, hydrilla accounted for approximately 50% of the SAV patches observed in surveys. In 2009, native eelgrass (*Vallisneria americana*) and Illinois pondweed (*Potamogeton illinoensis*) accounted for 82% and 16% of the SAV patches, respectively. This shift in species assemblage indicates that hydrilla has been controlled without harming native plant populations.

#### Lake Apopka

Hydrilla coverage was minimal in Lake Apopka prior to 2001. Surveillance was suspended between 2001 and 2002 because most of the areas that normally had SAV were dry and colonized with terrestrial plants. **Table 3.** Estimated annual costs of whole-lake treatments and average annual costs of surveillance management on Lakes Apopka, Harris, Griffin and Eustis (2002-2008). Surveillance management costs include both surveillance and treatment. Lake Apopka costs were tabulated by fiscal year.

Lake	Estimated Annual Cost for Whole-Lake Treatment <sup>*</sup> (\$)	Average Annual Cost of Surveillance Management (2002-2008)			
Apopka	333,300	46,200			
Harris	500,000	243,700			
Griffin	166,700	107,900			
Eustis	190,000	146,000			
Total	1,190,000	543,800			
*Cost estimates based on Hoyer et al. (2005) and Coveney et al. (2006)					

The majority of treatment occurred during September 2005 through October 2006 (Figure 6, Table 2). Water clarity declined in 2006, likely due to decreased lake volume and greater internal nutrient cycling at the onset of another drought. Since 2000, SJRWMD has treated approximately 157 ha of hydrilla in Lake Apopka with liquid and granular endothall.

At its highest coverage, hydrilla in Lake Apopka occupied approximately 0.6% of the lake's surface area. Unlike Lakes Eustis and Harris, Secchi depth in Lake Apopka was not significantly ( $r^2$ =0.24, p=0.32) related to the area of treated hydrilla (Figure 5). During the period of treatment, increases in native SAV were observed in Lake Apopka. Eelgrass increased in coverage from 11,200 m<sup>2</sup> in 1998 to 55,200 m<sup>2</sup> in 2007.

#### **Treatment Costs**

Surveillance-based management costs are largely associated with the labor and

herbicides required for frequent monitoring and treatments. For a financial comparison of management methods on these lakes, we estimated the cost of whole-lake treatments using 10 ppb fluridone. It was assumed that, with improving water quality trends, hydrilla typically would require whole-lake treatments every three years; thus the estimated cost for one whole-lake treatment was divided by three to obtain an annual cost (Table 3).

The average annual cost of surveillancebased management on Lakes Apopka, Harris, Griffin and Eustis, combined, from 2002 to 2008 was \$543,800 compared to an estimated annual cost of \$1,190,000 for whole-lake treatments (Table 3). On Lake Apopka, one whole-lake treatment every three years would have an annualized cost of approximately \$333,300 (Coveney et al. 2006). The average annual cost for surveillance-based management on Lake Apopka between 2002 and 2008 was \$46,200. These estimated costs for whole-lake treatments are probably low because treatments might be needed more frequently than every three years or might require a substantially higher fluridone concentration to overcome resistance. Whole-lake treatments on Lake Istokpoga were conducted every other year, but were increased to every year because of the quick recovery by fluridone resistant hydrilla (Hoyer et al. 2005).

#### Summary

Surveillance-based management has effectively controlled hydrilla in UORB lakes. Between 2000 (fiscal year 2002-03 for Lake Apopka) and 2008, annual hydrilla coverage did not exceed 2.2% of surface area in any UORB lake with surveillance-based management. The cost of surveillance-based management was approximately one-half the predicted annualized cost of whole-lake treatments. Because the treated area and Secchi depth were positively correlated, invasive plant management staff can anticipate performing hydrilla surveillance and treatment more frequently when water clarity increases. A surveillance-based maintenance control program in UORB lakes offered the best management strategy for minimizing water quality problems, impacts to native vegetation and overall costs.

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- <sup>1</sup>BCI Engineers and Scientists, Inc. 4049 Reid Street, Palatka, FL 32177, kcrew@sjrwmd.com (386) 312-2318
- <sup>2</sup> St. Johns River Water Management District, 4049 Reid Street, Palatka, FL 32177
- <sup>3</sup>Lake County Mosquito and Aquatic Plant Management, Tavares, FL 32778

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### In Memory of Andy L. Price November 16, 1930 – May 18, 2010

It is with much sadness that we say good-bye to Andy Price. Andy passed away doing the work he loved on May 18, 2010. After delivering two airboats with spray rigs in South Florida for his company, Vegetation Management Consultants, he died suddenly of heart failure. Andy grew up in South Carolina, and graduated from Clemson University with a Bachelor of Science degree in Natural Science.

Aquatics

His work history in aquatic plant management includes:

- 10 years with Pennwalt Corporation
- 20 years with Asgrow Florida and Terra
- 10 years with Orange County
- 5 years as owner and President of Vegetation Management Consultants.

Andy was a charter member of FAPMS, and very dedicated to the profession of aquatic plant management. He was very outspoken, and always willing to help. He served FAPMS in many capacities including:

- 1977 to 1980 as FAPMS BBQ cook when we grilled our own chicken for the banquet portion of the program. He was a "darn good chef."
- Board of Directors 1982-1983
- Chair of Local Arrangements Committee – 1984
- Chair of By-Laws Committee 1990
- Program moderator and projector operator many times before the advent of computers
- Recipient of Best Applicator Paper Award and Presidential Award in 1999.

At the 2006 FAPMS Annual Meeting Andy was awarded Honorary Lifetime Membership for "providing extraordinary support and assistance toward accomplishing the goals and objectives of the society." He will truly be missed.









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### Water Hyacinth Bio-Control Released St. Johns River, Florida

Photos by Jasmine Chopra.

South American planthopper, Megamelus scutellaris

#### **By Barry Vorse**

Jacksonville District U.S. Army Corps of Engineers

**PALATKA, Fla**. – A tiny insect about the size of a flea may be one of the keys to suppressing an invasive aquatic plant that has often choked Florida's navigable waters over the past 100 years.

Officials from the Florida Fish and Wildlife Conservation Commission (FWC), the St. Johns River Water Management District, the U.S. Department of Agriculture (USDA) and the U. S. Army Corps of Engineers gathered May 18 at the Edgefield Recreation Site just north of this Florida town to release *Megamelus scutellaris*, a South American planthopper, onto the invasive plant, water hyacinth (*Eichhornia crassipes*).

#### **Plant-Specific Insect**

Perhaps best described as a miniature grasshopper the size of a flea, the insect has been studied by the USDA for the past five years. It eats only the water hyacinth, meaning it is "plant specific," which is a federal requirement of any insect imported to the U.S. to control invasive plants.

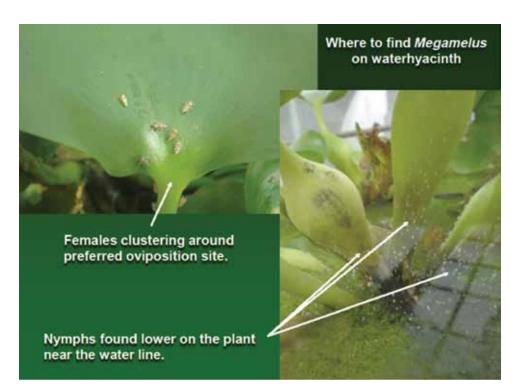
"Where we held the ceremony is no more than five miles away from where the first water hyacinth was introduced by farmers in the early 1800s," said Jacksonville District Deputy Commander Lt. Col. Nathaniel Rainey. "This effort was most certainly a collaborative effort by the four agencies involved. We all have mandates to control aquatic plants and have been deeply involved for many years." Rainey noted that after the release of water hyacinth into the wild, Congress enacted the Rivers and Harbors Appropriation Act of 1899. The act addressed a number of navigation issues and authorized the Corps to control the water hyacinth and other aquatic plants in navigable channels.

#### **Hyacinth Research Expertise**

"From that beginning, the Jacksonville District has gone on to become a center of expertise for the control of this type of vegetation," he said. "And we have been treating it ever since. You may recall how the St. Johns looked in the sixties and seventies when it was sometimes rare to see open water on the river in downtown Jacksonville. Over the years we have gotten better at how we approached this problem."

"This is an important day in our work," said Dr. Phil Tipping, a top research entomologist with the U.S. Department of Agricultural Research Service in Fort Lauderdale, who brought thousands of the insects to the event. "I hope we can all convene here in four years to see how successful this effort has been. That's when we'll really know."

Tipping planned to spread thousands more *Megamelus* in the days after the event



### Editor's Note

As the new editor for Aquatics Magazine, I would like to take a moment to thank Jeff Holland for his dedication and hard work for the past 6 years as editor. Jeff handed over the "torch" to myself and Karen Brown, Associate Editor, at the annual FAPMS meeting back in October. I hope that Karen and I can continue to deliver the types of articles that are cutting edge and informative, but also entertaining. If you have any articles or other information you would like to submit, please send me an email at Tina.Bond@rrsi.com. I'll be happy to help. Remember, this is your magazine and with your contributions and assistance, we can continue to keep you up to date on the latest aquatic plant management techniques, industry news and provide the best magazine for the aquatics industry.

Thank you - Tina Bond

in a water storage area near farm fields around the Putnam/St. Johns County line. Thousands more of the insects will probably be released within the coming weeks.

"I am so glad to see young people in attendance," Tipping said, referring to about 30 Interlachen High School students. "We are doing this so they, the future generations, can enjoy areas such as the Edgefield site."

#### **FWC Financed**

The release at the site was primarily financed by the FWC, which provided more than \$300,000 for the project. Don Schmitz, a research program manager in the FWC's Invasive Plant Management Section, praised Tipping.

"Phil and his people really made this happen," Schmitz said. "They put extra effort into completing all of the research needed before introducing a bio-control into an ecosystem in record time."

Special attendees on hand for the event were Mary E. Murphy and Lynn A. Hoffman, who donated the property for the Edgefield Recreation Site to the state of Florida in 2001.

"We are so happy to see things like today's ceremony happen on the property," said Ms. Murphy. "We donated the property, which had been in my family since 1860, so that wonderful things like this could be done for the environment. And it was so good to see the teenagers out here learning about nature."



Damage caused by the South American planthopper on water hyacinth.



Lt. Col. Nathaniel Rainey and a student from Interlachen High School release South American planthoppers into the river.



#### Great quotes from years ago:

From *Aquatic Vegetation Problems in the Northwest Region* by Jerry Krummrich (Annual Report, Florida Game and Freshwater Fish Commission, 1975):

"By July the bladderwort occupied waters 0-8 feet over 50% of the lake's surface, including virtually all the littoral zone, thus causing botanists to marvel and fishermen to swear."

From A Comparison of Various Methods for the Control of Florida Elodea in Orange County, Florida by R.H. Guppy (Hyacinth Control Journal Vol. 6 1967):

"A small sickle bar type mower was attached to the bow of a "john" boat for cutting. A rake was used to remove the vegetation. A 3-acre area was cleaned. We did not have to wait long for evaluation of the method; it was like shaving for the first time – the whiskers really grew. So we discarded mowing."

### **Aquatic Pest Control**

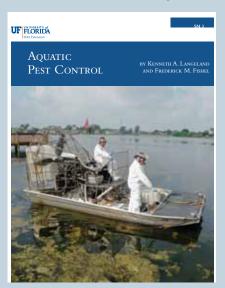
by Kenneth A. Langeland and Frederick M. Fishel

**Newly revised and expanded edition** – **SM3.** This is the exam preparation and general reference manual for commercial or public applicators seeking certification and licensure to apply pesticides for aquatic plant control in Florida. The book includes information on the history of aquatic plant management in Florida; rules and regulations

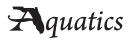
of aquatic plant management; herbicide technology; adjuvants in aquatic plant management; equipment selection and methods of application; non-herbicide control methods; environmental and public health considerations and aquatic plant identification. 116 pp.

Price: \$15.00

The manual is available from the UF/IFAS Extension Bookstore by calling 800-226-1764, e-mail pub@ifas.ufl.edu, or online at <u>http://ifasbooks.</u> <u>ifas.ufl.edu/</u>









FAPMS Scholarship Foundation



FAPMS past presidents and members of the FAPMS Scholarship Foundation. Top row, I-r: Vicky Pontius, Mike Bodle, Mike Hulon, PJ Myers, Keshav Setaram, Joe Joyce, Steve Weinsier, Brian Nelson, Jeff Schardt, Dan Thayer, Jim Brewer. Bottom row, I-r: Don Doggett, Mike Netherland, Eddie Knight, Bill Haller, Dave Tarver, Bill Moore, Francois Laroche.

The **FAPMS Scholarship Foundation** was established by the Board of Directors of the Society and is administered by the Board of Directors of the FAPMS Scholarship and Research Foundation, Inc. Since 1986 – 25 years – the foundation has provided over \$25,000 in scholarships.

#### Dear All,

For the Foundation's Silver Anniversary, fundraising reached a new high. Receipts from the Duck Race, Silent Auction, the sale of raffle tickets at the 2010 annual meeting, and the annual membership contribution totaled just over \$10,000. The delegates and sponsors for the 2010 annual meeting were very generous with their support and it is greatly appreciated. These dollars will be converted to scholarships to assist our membership. The current officers of the Foundation, besides myself, are: Keshav Setaram, Vice-President; Joe Joyce, Sec./ Treas.; P.J. Myers, Mike Netherland, and Steve Weinsier, Directors at Large.

The Foundation members, who include all Past-Presidents of FAPMS, were wellrepresented at the 2010 Annual Meeting as nineteen were present to help celebrate our twenty-fifth year.

Donald W. Doggett President

### 2010 FAPMS Meeting Highlights

Applicator of the Year



James Godfrey, SJRWMD – 2010 Applicator of the Year

The Applicator of the Year Award was designed to provide a means to recognize outstanding achievements and to enhance professionalism in aquatic plant management activities in Florida. James Godfrey of the SJRWMD was selected as Applicator of the Year at the FAPMS 2010 Training Conference from among several other nominees, all of whom shared active FAPMS membership and several years of experience in aquatic plant management. Some of the criteria suggested for nomination are weed control experience, weed identification, good public relations skills, work consistency and ingenuity. James fulfilled these criteria and, in addition, is cross-trained in wild land firefighting and Hazmat courses. He has readily volunteered to assist researchers with Experimental Use Permit (EUP) herbicide research trials. He also takes time to educate the public when asked to explain management goals at field sites. Congratulations, James!

#### **Applicator Team of the Year**

Congratulations to the Polk County Invasive Plant Management Team: Jason Woodard, Bryan Finder, Keith Smith, Lee Singleton, Craig Johnson, Donny Mills, and Phillip Stephens.

To learn more about these awards or to nominate an individual or a team for the 2011 Award, go to <u>www.fapms.org</u> and click on Conference – Manager of the Year.

#### **Presidential Awards**

The President's Award was presented to Jeff Holland "In recognition of several years of leadership as Editor of *Aquatics* Magazine for the Florida Aquatic Plant Management Society." Thank you, Jeff! – and – to Theresia Cluts "In recognition of years of support graciously provided to the Florida Aquatic Plant Management Society." Theresia is very helpful and always smiling at the registration table.





Where else but at FAPMS do you win a muzzle loader, a shotgun, or gift cards for rubber duck races? Winners from left to right: Tim Harris, John Farrell, Ernie Watson, and Steve Weinsier.



Outgoing directors (left to right): Dan Bergeson, Jerry Renney (President Elect), Stephanie McCarty, and Mike Bodle



Incoming president Dr. Vernon Vandiver presents a plaque to outgoing president Mike Bodle.

#### CALL FOR PAPERS FAPMS 2011 MEETING St. Augustine, Florida

The 35th annual FAPMS Training Conference will be held at the World Golf Village in St. Augustine, FL from Monday, October 10<sup>th</sup> through Thursday, October 13<sup>th</sup>, 2011. Presentations will begin on Tuesday October 11<sup>th</sup>. The Society is seeking presentations on topics including herbicide application and mechanical techniques (aquatic and right-of-way), tank mixtures, biological control, innovative control methods, revegetation projects, new weed introductions and research projects.

**Applicators/Field Personnel:** FAPMS was formed for the applicator and the annual training conference is a chance to share what you have learned with other members. You don't need to be a professional speaker to present a paper! All applicators/field personnel who present a paper will receive a plaque from the Society. Field applicators presenting the top three papers receive a plaque and a cash award. First place will receive \$300, second place will receive \$200, and third place will receive \$100.

**NOTE: Deadline for submission is July 31<sup>st</sup>, 2011.** Go to www.fapms.org and click on Conference – Call for Papers to submit your idea for a presentation.

For questions, contact Mike Hulon: texasaquaticmh@aol.com



Applicator paper presenters (I to r): Dave Midgette, Aquatic Vegetation Control Inc., 3<sup>rd</sup> Place; James Schultz, Lake Worth Drainage District, 1<sup>st</sup> Place; Brian Machiela, Aquatic Vegetation Control, Inc.; Steve Weinsier accepting for Spencer Winepol, 2<sup>nd</sup> Place, Allstate Resource Management.

#### To Every Presenter at the 2010 FAPMS Annual Meeting in Daytona,

On behalf of the entire membership of the FAPMS Society we would like to say "Thank You" for the great job you did at last year's meeting. The FAPMS annual meeting could not take place without your support and we truly enjoyed each presentation. All knowledge gained at the meeting allows us to improve our work in the aquatics field and use that knowledge on a daily basis. We hope to see you again at the October 2011 meeting in St. Augustine.

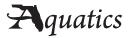
- The FAPMS Society

#### Paul C. Myers Applicator Dependent Scholarship

The Florida Aquatic Plant Management Society Scholarship and Research Foundation, Inc. is pleased to announce the availability of the *Paul C. Myers Applicator Dependent Scholarship*, providing up to \$1,500 to deserving dependents of FAPMS members. Award of the scholarship is based on the following:

- The applicant's parent or guardian having been a FAPMS member in good standing for at least three consecutive years.
- Financial need: determined based on need and the expected family contribution amount indicated on the processing results of a Student Aid Report (OMB No. 1845-0008). This report is available by completing a Free Application for Federal Student Aid (FAFSA) federal form (https://fafsa.ed.gov).
- The applicant being a high school senior entering college in the next academic year, attending junior college, or being a college undergraduate.
- An evaluation of the quality of the application and the required essay by the Scholarship Selection Committee composed of three FAPMS members and four FAPMS Scholarship and Research Foundation members.
- Submission of a completed application by June 1, 2011.

For more information or application forms, please contact Don Doggett at 239-694-2174, Doggett@LCHCD.org, or visit the Society's website at www.fapms. org and click on Scholarship.



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May 17-20, 2011 Florida Exotic Pest Plant Council Sheraton North Hotel Maitland, FL, <u>www.fleppc.org</u>

June 13-16, 2011 Florida Lake Management Society 22nd Annual Conference Discovering the St. Johns River: A River of Lakes St. Johns County Convention Center St. Augustine, Florida, http://flms.net/

#### July 24-27, 2011

Aquatic Plant Management Society 51<sup>st</sup> Annual Meeting Hyatt Regency Baltimore on the Inner Harbor, Baltimore, Maryland www.apms.org

August 17-19, 2011 South Carolina Aquatic Plant Management Society Clyde V. Madren Conference Center Clemson University Clemson, South Carolina www.scapms.org

#### Oct 10-13, 2011

Florida Aquatic Plant Management Society

35<sup>th</sup> Annual Training Conference World Golf Village, St. Augustine, FL <u>www.fapms.org</u>

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