



# AQUATIC PLANT NEWS

A newsletter of The Aquatic Plant Management Society, Inc. No. 64 June 2000  
Mike Stewart, Editor, CEEP.D-ES-P, 3909 Halls Ferry Road, Vicksburg, MS 39180-6199

## Program Highlights APMS 40<sup>th</sup> Annual Meeting & International Conference San Diego, California

by  
Jim Schmidt  
2000 APMS Program Chair/President-Elect

The 40<sup>th</sup> Annual Meeting of the Aquatic Plant Management Society is shaping up to be an exciting and informative event that shouldn't be missed by anyone in the industry. Recognizing that invasive aquatic plants are a problem of global magnitude, your Board and the Program Committee has brought together experts from throughout the world to convene in San Diego, CA, July 16 - 20, 2000 to present their views and experiences. The conference has also attracted a record number of students, ten, who will be competing in the Annual Student Paper Contest. In addition, over 25 poster presentations will be displayed on a wide variety of aquatic plant topics. Not be overlooked, we expect a good turnout of vendor exhibitors, a number of whom have already generously committed sponsorship monies towards several of this year's meeting events.

We're expecting a large turn-out for the conference, so if you're still waiting on making reservations at the Handlery Hotel and Resort, don't procrastinate too long. Arrive Saturday, take advantage of saving on airfares, and spend it on some of the many sights and recreational activities in and around the San Diego area. Join us Sunday evening for a casual, poolside gathering at the President's Reception to  
(Continued on Page 2 - 2000 Meeting Plans)



*Jim Schmidt and the APMS Local Arrangements Committee have arranged for an exceptional meeting; with informative presentations by colleagues from around the globe, as well as loads of activities to enjoy. See you in San Diego.*

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**Hope to See YOU in San Diego for Our 40<sup>th</sup> Annual Meeting !!!!!**

mingle with both old and new colleagues. The weather is guaranteed to cooperate.

Monday morning's Plenary Session addresses a number of key issues and opportunities facing us today at the Federal, state and local levels. President Decell has promised to provide an informative and inspirational address with a vision towards the future of the APMS. We hope to hear from invited speaker, Congressman Ron Packard, who has been quite involved in invasive plant initiatives at the Federal level. Get an update on the AERF to find out the positive impacts from government and industry working together. The Regional Chapter reports always provide excellent insights into what's happening in different parts of the country and even the Nile Basin. Additional papers on aquatic plant management experiences and educational sources round out the morning before the Annual Business Meeting.

The Ad Hoc International Program Committee searched the globe to come up with a Monday afternoon session full of papers varied by both topic and location. We start off with a Keynote address from Wim van Vierssen, a world renowned limnologist from the Netherlands. Our afternoon tour takes us to Scotland, Egypt, Brazil, Australia, New Zealand, Africa, Ireland and Puerto Rico. Everything from eating Alligator Weed to dealing with plants in the Australian impoundments to be used for the 2000 Summer Olympics is on the afternoon "menu". We also have the honor and pleasure to have two students from Glasgow presenting as part of the Student Paper Contest. Don't miss the tour, and expand your aquatic plant management horizons worldwide.

Tuesday offers variety. The morning opens with an array of presentations on Aquatic Plant Ecology and Physiology. The Session is best characterized as an "evolution" of talks ranging from discussion of biochemical processes at the cellular level on up to aquatic plant interactions with fish and waterfowl. After a morning break, it's back to business in a "Case Studies" session. Find out what has been done or is being done on specific plant species or at specific locations throughout the country. Return from lunch for the Chemical Control Session. Hear the latest research and operational updates on formulations, combination products and techniques being used from U.S. Army Engineers scientists, aquatic product manufacturers and university research personnel. Take a break and return for a varied discussion on "Biological, Mechanical and Environmental Control" experiences, research and techniques. Topics range from a series of papers on *Hydrellia pakistanae* to grass carp and mechanical shredding.

The Tuesday evening Banquet, a dinner cruise on San Diego Bay aboard the Spirit of San Diego will provide a real treat after two days of intense papers. The event will feature a live band, Mumbo Gumbo, for you added evening entertainment. As a change of pace, we will not conduct our usual Awards and Installation of New Officers at the Banquet. Instead, this has been deferred to a Wednesday Luncheon.

We were pleasantly surprised to receive an outpouring of varied papers on Eurasian Water Milfoil (EWM), enough, in fact, to dedicate the Wednesday morning session to this plant of notoriety. While a number of papers on the Milfoil Weevil had been requested and received, the subject matter on EWM ranges into studies on fungal pathogens and exudates; interrelationships with macroinvertebrates and largemouth bass; and control and prevention with public education programs, quarantines, and chemical methods. There's an early (11:30) break for an extended Luncheon and Awards Presentations next door in the Presidio Room, as mentioned above. Join us as we present the Student Paper Awards and install our new officers.

Our final, Wednesday afternoon Session on GIS/GPS promises to be interesting and interactive. After a few (indoor) papers on how this technology can and is being used in aquatic plant management, meeting attendees will reconvene poolside for demonstrations and hands-on experience with the latest equipment.

There will something for everyone to learn and take back with them from the 2000 APMS Conference. We hope to see many old and new faces in San Diego.

## Additional Meeting Info

### Handlery Hotel and Resort

- Call 619-298-0511 for last-minute changes to your lodging reservations.

**Tours & Site-seeing:** The following information is a summary of tour info members should have previously received by separate mailing.

**Field Trip #1.** July 20<sup>th</sup>, Model Wetland/ Marsh Project tour. Thursday afternoon, 1:00 to 3:00 pm. Deadline for sign-up is noon, Monday, July 17<sup>th</sup>, although limited to first 45. No fee for delegates or guests. "Friendship Marsh" is a model Marsh Restoration Project. Dr. Sharook Madon with the Pacific Estuarine Research Laboratory will provide an introduction and tour of the USA side of this unique project that straddles the US/Mexican border.

**Field Trip #2.** July 20<sup>th</sup>, 2-Hour tour of Wild Animal Park and full-all-day admission. Thursday, 9:00 am to 3:00 pm. \$29.65 each. Deadline for sign-up is noon, Monday, July 17<sup>th</sup>, although limited to first 36. Busses included in fee. Discuss transportation arrangements at sign-up.

**Field Trip #3.** Post-meeting Tour of Aquatic and Riparian Invasive Plants and Management Projects in California. 5-days and 4-nights. Total cost = \$800; \$200 deposit due by June 20<sup>th</sup>. \$600 balance by noon, Monday, July 17<sup>th</sup>. Includes all lodging, meals, transportation, and a group photograph. Departs July 21<sup>st</sup> (Friday) at 7:00 am and returns to Handlery on July 25<sup>th</sup>.

## Events/ Sponsorships for APMS Meeting

**"APMS- SePro Sea Cruise"** on San Diego Bay. The Aquatic Plant Management Society and SePro Corporation are jointly sponsoring a special four-hour dinner dance-concert cruise Tuesday evening, July 18<sup>th</sup>. APMS delegates will leave dockside in San Diego at 6:30 PM aboard the "Spirit of San Diego" for beautiful views of the bay, a spectacular sunset and night skyline. We'll be greeted as we board with champagne and entertained by Mumbo Gumbo, a great dance band with musical roots in zydeco, reggae, rock and R&B- a truly eclectic and original sound! Dinner is buffet-style with a California flare. Don't miss this!!

**"APMS Awards Luncheon"**. On Wednesday, July 19, Student Paper winners will be announced at luncheon sponsored by **Zeneca Corporation**. Other APMS awards will be announced, winners of the Silent Auction and the new APMS Officers will be introduced.

**"International Delegate and Student Luncheon"**. On Monday, July 17<sup>th</sup>, **Applied Biochemists** will sponsor a get-acquainted luncheon for all student presenters, their advisors to meet with presenters from outside the US. This will provide a great opportunity for students to meet visiting scientists from several countries.

**"Local Chapters Breakfast"**. On Tuesday morning, July 18<sup>th</sup>, **Elf Atochem** is sponsoring the traditional get-together for APMS Local Chapters.

## VISIT THE APMS WEB SITE

[www.apms.org](http://www.apms.org)

## FOR ADDITIONAL MEETING INFO

# SEE YOU in SAN DIEGO!!!!!!!!!!!!!!!!!!!!!!



## Proceedings Articles for the APMS Annual Meeting

Since this year's annual meeting is an International Meeting, the Journal of Aquatic Plant Management will be publishing the proceedings of the annual meeting as the January 2001 issue. Submission of proceedings articles is strictly optional, but strongly encouraged, for presenters of both platform talks and poster presentations. To ensure quick turnaround of the articles, it is imperative that authors bring their manuscripts with them for submission at the meeting. Page charges for this special issue have been waived, but charges for reprints will be assessed if reprints are requested. Late manuscripts cannot be accepted. Format for manuscript submission is provided on the APMS webpage at <http://www.apms.org>. If you have any questions concerning manuscript guidelines, acceptance, timelines, or other concerns, contact the editor at 601-634-4631 or [madsenj@wes.army.mil](mailto:madsenj@wes.army.mil).

### \*\*\*\*\* NOTICE \*\*\*\*\*

Effective August 1, 2000 the new address for the Editor of the Journal of Aquatic Plant Management will be:

Dr. John D. Madsen  
Biological Sciences Department  
S-242 Trifton Science Center  
Minnesota State University  
Mankato, MN 56001  
(Departmental Office):  
Phone: 507-389-2786 Fax: 507-389-2788

## Biographical

### Vice-President: Richard M. Hinterman

Mr. Hinterman has been actively involved in aquatic plant management since 1976. He founded a company that has become one of the largest application/distributor businesses in the country. Mr. Hinterman was a founder of the Midwest Aquatic Plant Management Society (MAPMS). He has served as President and Director of MAPMS, as well as serving on many committees. Having been a long-time member, he has served as Director of APMS and currently serves as Chair of the Finance Committee. He has been a strong force in the development of the Society's Scholastic Endowment Fund. Mr. Hinterman was a founder of the Aquatic Ecosystem Restoration Foundation (AERF) and is the current AERF Treasurer. He serves on various committees of several state agencies, including Michigan Department of Natural Resources, Michigan Department of Environmental Quality, and Michigan Department of Agriculture.

### Treasurer: Don Doggett

Mr. Don Doggett has been active in the field of aquatic plant management and a member of APMS for twenty-one years. Mr. Doggett has served on several committees and chaired the Site Selection Committee for four years. Mr. Doggett is the current APMS Treasurer, having been first elected in 1997. He has been involved with the Florida APMS for more than twenty years and served as President in 1996. Don is currently employed as Superintendent of Lee County Hyacinth Control District, Fort Myers, Florida.

### Editor: John D. Madsen

Dr. John D. Madsen, a research biologist in the Environmental Laboratory, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi, is the Team Leader for the Aquatic Plant Ecology Team. He conducts research on the ecology, management, and restoration of aquatic plants across the United States. Dr. Madsen has a Bachelor of Science degree from Wheaton College, and Master of Science and Doctor of Philosophy degrees in Botany from the University of Wisconsin-Madison. Dr. Madsen has been the Editor of the Journal of Aquatic Plant Management since 1997. Before that, he was Associate Editor of the Journal of Aquatic Plant Management (1996-1997), Chair of the Student Affairs Committee (1996-1997), judge for the student paper contest, and member of the Finance Committee. He was also on the Board of Directors for the Texas Aquatic Plant Management Society (1993-1994), and served as Chair of the Scholarship and Awards Committee of Texas-APMS (1993-1996). He has been a member of APMS since 1988.

### Director: Joe Bondra

Mr. Joe Bondra has been active in the aquatic plant management since 1989. First employed as a Sales Representative with Cygnet Enterprises, Inc. in 1990, he was promoted to General Manager in 1991. He is presently General Manager of Cygnet's operations nationally, with operations in Michigan, North Carolina, and Pennsylvania. Mr. Bondra was elected President of the Midwest Aquatic Plant Management Society (MAPMS) in 1997 and presently serves as Past President, Chair of Exhibit, Publicity, and Scholarship Committees for MAPMS. He is also a committee member for the Local Arrangements, Auditing, Bylaws, and Membership Committees. Mr. Bondra has attended the previous two annual Responsible Industry for a Sound Environment (RISE) Conferences, as the MAPMS Representative, with plans to become active in RISE's Communication Committee. Mr. Bondra has been Chair of the Exhibit Committee for APMS since 1997.

### Director: Jeffrey D. Schardt

Mr. Jeffrey Schardt is employed as Environmental Administrator by the Florida Department of Environmental Protection, Bureau of Invasive Plant Management. He received a Bachelor of Science Degree in Biology from Penn State University in 1976. Mr. Schardt has twenty-three years experience with aquatic plant management. He developed a stocking rate model for grass carp, developed Florida's aquatic plant permitting, inventory, and monitoring programs, and is involved in acquiring Florida's annual \$25 million aquatic plant control funding. Mr. Schardt is the current President of the Florida APMS, a Board member of National Bass / Grass Alliance, and the BASS / APMS liaison.

## APMS Board of Directors, 1999-2000

<u>Officer</u>	<u>Telephone</u>	<u>Email</u>
President Lewis Decell	601-638-7150	jldcom@aol.com
Imm. Past President David Spencer	530-752-1096	dfspencer@ucdavis.edu
President Elect Jim Schmidt	800-558-5106	jimschmidt@appliedbiochemists.com
Vice President David Tarver	904-668-2352	davidptarver@worldnet.att.net
Treasurer Donald Doggett	941-694-2174	dogget@mail.dms.state.fl.us
Editor John Madsen	601-634-4631	madsenj@wes.army.mil
Secretary Mike Stewart	601-634-2606	stewart@wes.army.mil

### Directors

Bill Haller	352-392-9615	wth@gnv.ifas.ufl.edu
Scott Jorgensen	517-351-8113	ATI@aol.com
Eric Barkermeier	919-603-0131	aquan@gloryroad.net
Tom McNabb	925-370-9175	tmnabb@aquatics.com
Bob Gunkel	601-634-3722	gunkelr@wes.army.mil
Michael Smart	972-436-2215	msmart@gte.net

## Strategic Planning Committee Questionnaire

In 1999, President Lewis Decell formed an APMS, Inc. Ad Hoc Committee for Strategic Planning. The goals of this committee are to ensure that the APMS, Inc. is correctly positioned for the future, and to recommend changes, if any, that need to be implemented. This effort will take at least 1-2 years to complete. Several basic elements of our organization, its operation, and mission/purposes must be evaluated. One very important aspect of this inward evaluation is to obtain information about our members, and their opinions and views.

A questionnaire has been developed and will be included in the registration package at the 40<sup>th</sup> Annual Meeting. Each member present is asked to take the time to fill out the questionnaire and return it to the registration desk prior to leaving the meeting, or give it to an Officer or Board Member. The information we need is very important relative to decisions that the Board of Directors will have to make.

The APMS, Inc. has been successful, by any standards. However, we have operated in essentially the same manner for over 20 years. Our operational procedures may or may not be the most effective to sustain us in the future. We are conducting an historical analysis of our operations, including our annual meetings.

Provide your influence by giving the questionnaire serious consideration. If you don't return it before you leave the meeting, please mail it to:

Lewis Decell  
P O Box 820438  
Vicksburg, MS 39182-0438

We will mail copies to members who were unable to attend the 40<sup>th</sup> meeting, and will provide feedback to the membership through our web page and newsletters.

## 1999 - 2000 Sustaining Members

Applied Aquatic Management, Inc.  
Eagle Lake, Florida

Applied Biochemists, Inc.  
Milwaukee, Wisconsin

Aquarius Systems  
North Prairie, Wisconsin

Aquatic Control, Inc.  
Seymour, Indiana

Aquatic Management Services, Inc.  
Novi, Michigan

Aquatics Unlimited  
Martinez, California

Brewer International  
Vero Beach, Florida

Cheltec, Inc.  
Sarasota, Florida

Cygnat Enterprises, Inc.  
Flint, Michigan

Dow Agrosciences  
Indianapolis, Indiana

Elf Atochem  
Exton, Pennsylvania

Griffin Corporation  
Valdosta, Georgia

Monsanto Agricultural Company  
St. Louis, Missouri

Nufarm Americas, Inc.  
St. Joseph, Missouri

Professional Lake Management  
Alto, Michigan

Resource Management, Inc.  
Tumwater, Washington

SePRO Corporation  
Carmel, Indiana

Terra  
Ft. Myers, Florida

Texas Aquatic Harvesting, Inc.  
Lake Wales, Florida

UAP/UHS  
Tampa, Florida

Zeneca Professional Products  
Wilmington, Delaware

## APMS 2000 PROGRAM DRAFT AGENDA

### SATURDAY JULY 15, 2000

1:00 pm - 5:00 pm APMS Strategic Planning Ad Hoc Committee Meeting

TBA

### SUNDAY JULY 16, 2000

8:30 am - 3:00 pm APMS Board of Directors Meeting  
 9:00 am - 6:00 pm Exhibit Set-up  
 9:00 am - 6:00 pm Poster Set-up  
 12:00 noon - 6:00 pm Registration  
 12:00 noon - 6:00 pm Presenter's Slide Reviewing  
 7:00 pm - 9:00 pm President's Reception - All Delegates Invited

Executive Room  
 Garden Room  
 Terrace Room  
 Foyer  
 California Room  
 Poolside

### MONDAY JULY 17, 2000

8:00 am - 5:00 pm Registration  
 8:00 am - 5:00 pm Exhibits  
 8:00 am - 5:00 pm Posters  
 8:00 am - 5:00 pm Presenters' Slide Viewing  
 8:30 am - 1:00 pm Spouses' Tour of San Diego Historic Sites, Pt. Loma Lighthouse & Luncheon - Sponsored by Elf Atochem  
 12:00 noon - 1:00 pm International Guests & Student Presenters & Advisors Luncheon Sponsored by - Applied Biochemists  
 12:00 noon - 1:00 pm AERF Board Meeting - Members & Invited Guests  
 5:30 pm - 7:30 pm AERF Focus Group - Members & Invited Guests

Foyer  
 Garden Room  
 Terrace Room  
 California Room

Hotel Lobby

Tower Room  
 Executive Room  
 Tower Room

### Session I Presiding

**PLENARY**  
 Lewis Decell - President APMS

Crystal Room

8:00 am

Call to Order

8:05 AM

Opening Announcements:  
 Jim Schmidt, Program Chair/President-Elect APMS, Inc.  
 Lars Anderson, APMS Local Arrangements Chair

8:10 AM

Presidential Address  
 Lewis Decell, President, APMS, Inc.

8:50 AM

APMS Regional Chapter Reports - Florida - Midwest -  
 Mid-south - Nile Basin - Northeast/South Carolina - Texas -  
 Western  
 Selected Chapter Officer or Delegate

9:30 AM

Federal Funding for Management of Invasive Aquatic Species  
 Rep. Ron Packard (R-CA) - Invited

9:50 AM

The Aquatic Ecosystem Restoration Foundation: A Unique  
 Approach to Applied Research.  
 Michael D. Moore, Executive Director, AERF, Lansing, MI.

10:05 AM

BREAK / REFRESHMENTS

Garden Room

10:20 AM

Old-World Climbing Fern - Floating Islands are not Safe  
 Randall K. Stocker, Director, Univ. of FL/IFAS Center for  
 Aquatic and Invasive Plants, Gainesville, FL

Crystal Room

10:35 AM

APIRS-Current Status and Potential New Directions  
 Karen Brown, Univ. of FL Center for Aquatic & Invasive  
 Plants, Gainesville, FL

10:50 AM

Overview of the CALFED Program with an Invasive Species  
 Perspective  
 Bellory Fong, Environmental Program Manager, CALFED,  
 Sacramento, CA

11:05 AM

Aquatic Plant Management at the City of Orlando: Its Past,  
 Present and Future  
 John A. Evertsen, City of Orlando Dept. of Streets &  
 Drainage, Orlando, FL

11:20 AM

ANNUAL APMS BUSINESS MEETING  
 President Lewis Decell Presiding

12:00 Noon

LUNCH

12:00 Noon - 1:00 PM

International Guests & Student Presenters/Advisors' Luncheon  
 Sponsored by - Applied Biochemists

Tower Room

12:00 Noon - 1:00 PM

Aquatic Ecosystem Restoration Foundation (AERF) Board  
 of Directors Meeting & Luncheon

Executive Room

## SESSION II

Moderator

## INTERNATIONAL

Dr. Lars Anderson

Crystal Room

1:00 PM

**Keynote: The Age of Water Scarcity: In Search of a New Paradigm in Aquatic Weed Control**  
**Wim Van Wieringen, I H E Delft**

1:30 PM

**Invasive Elodea Problems Impacting *Najas flexilis*: a Rare Native Macrophyte in Scottish Lochs (Student Paper)**  
**Ruth Wingfield & K. J. Murphy, University of Glasgow, Glasgow, Scotland.**

1:45 PM

**Trait Variation in Lotic Macrophyte Populations from Scotland and Egypt in Relation to Water and Sediment Physio-Chemistry**  
**Magdi M. Ali & K. J. Murphy University of Glasgow, Glasgow, Scotland.**

2:00 PM

**Plant-Groundwater Interactions in Freshwater Wetlands: A Functional Monitoring Approach (Student Paper)**  
**Michael P. Kennedy, K. J. Murphy, & D. J. Gilvear, University of Glasgow, Glasgow, Scotland.**

2:15 PM

**Functional Variation in Eichornia Species in Brazilian Floodplain Waterbodies**  
**Kevin J. Murphy, S. M. Thomaz & I. M. Bari, University of Glasgow, Glasgow, Scotland.**

2:30 PM

**Studies for Aquatic Plant Management in Hydro Electrical Lakes in Brazil**  
**Daniel A. S. Marcondes, Andre L. Mustafa & Robson H. Tanaka, Directorate of Environment, CESP, Dagoberto Martins, Edivaldo D. Velini & Robinson A. Pitelli, Sao Paulo State University, SP, Brazil.**

2:45 PM

**Aquatic Plant Survey in Hydro Electrical Lakes in Brazil**  
**Robson H. Tanaka, Directorate of Environment, CESP, Dagoberto Martins, Luciana R. Cardoso & Robinson A. Pitelli, Sao Paulo State University, SP, Brazil.**

3:00 PM

BREAK / REFRESHMENTS

Garden Room

3:15 PM

**Macrophyte Population Changes in Santana Reservoir, Rio de Janeiro, Brazil, Five Years of History**  
**R. A. Pitelli, G. F. Nachigal, A. M. Pereira, R. Bosan, & E. Vieira, FCAV/UNESP, Sao Paulo, Brazil State University, R. A. Bichara & L. A. B. Grande, LIGHT, Usina de Fontes, RJ, Brazil**

3:30 PM

**Managing Excessive Aquatic Plant Growth in a Lake Down-Under, Build It and They Shall Proliferate**  
**Danny Roberts, Geoff Sainty, Sharon Cummins & Geoff Hunter, Sainty and Associates, NSW Australia & Lars Anderson, USDA, UC-Davis, Davis, CA**

Crystal Room

3:45 PM

**Managing Stormwater Runoff with an Off-line Wetland Treatment System**  
**Geoff Sainty, Sainty and Associates, PTY Ltd, Geoff Hunter, Hunter Environmental Services, Jerome Alchin & David Bluett, Business Land Group, & David Hunt, David Hunt & Associates, Pty Ltd, NSW Australia**

4:00 PM

**Alligator Weed: Tasty Vegetable in Australian Backyards**  
**Lalith Gunasakera & Julio Bonilla, Cooperative Research Centre for Weed Management Systems, Agriculture Victoria, Dept. of Natural Resources & Environment**

4:15 PM

**Evaluation of New Herbicides for the Control of Submerged Weeds in New Zealand**  
**Deborah Hofstra & J. S. Clayton, National Institute of Water and Atmospheric Research, Hamilton, New Zealand & K. D. Getsinger, U. S. Army Engineer Research & Development Center, Vicksburg, MS**

4:30 PM

**Lake Victoria Regional Water Hyacinth Management Program**  
**Thomas J. McNabb, Clean Lakes, Inc., Martinez, CA, Thomas G. Moorhouse, Clean Lakes, Inc., Kampala, Uganda & Dick Nyeko, Ministry of Agriculture, Entebbe, Uganda**

4:45 PM

**The Management of Giant Hogweed (*Heracleum mantegazzianum*) in an Irish River Catchment**  
**Joe Caffrey, Central Fisheries Board, Dublin, Ireland**

5:00 PM

**Introduction and Release of the Alligator Flea Beetle, *Agasicles hygrophila* in Puerto Rico**  
**Edwin Abreu & Nelson Semidey, Crop Protection Dept., University of Puerto Rico, & Lourdes Bernier, Dept. of Natural Resources & Environment, Puerto Rico.**

5:15 PM

ANNOUNCEMENTS &amp; ADJOURN

5:30 pm - 7:30 pm

AERF Focus Group - AERF Members &amp; Invited Guests

Tower Room

TUESDAY, JULY 18, 2000

6:30 AM - 8:00 AM

APMS Regional Chapters' Presidents' Breakfast-Sponsored  
by Zaneca Professional Products

Executive Room

8:00 am - 5:00 pm

Registration

Foyer

8:00 am - 5:00 pm

Exhibits

Garden Room

8:00 am - 5:00 pm

Posters

Terrace Room

8:00 am - 5:00 pm

Presenters' Slide Viewing

California Room

5:30 pm - 10:00 pm

Annual APMS Banquet - Cruise, Dinner & Entertainment

Co-Sponsored by - SePro Corp. & APMS

Spirit of San Diego

# SESSION III

## Aquatic Plant Ecology & Physiology

Crystal Room

Moderator

Dr. Dean Martin

8:00 AM

Isolation and Characterization of Bioactive Compounds from *Typha domingensis*

Dean F. Martin & Maria T. Gallardo-Williams, University of South

FL, Tampa, FL, & Cherie L. Geiger, University of Central FL, Orlando, FL

8:15 AM

Removal of Aqueous Selenium by Four Aquatic Plants (Student Paper)

Kathleen M. Carvalho & Dean F. Martin, University of South FL, Tampa, FL

8:30 AM

Effect of Water Depth on Torpedograss Establishment

Dian Smith & Michael Smart, U.S. Army Engineer Research and Development Center, LAERF,

Lewisville, TX & Chuck Hanlon, SFWMD, West Palm Beach, FL

8:45 AM

Traits of Four Submersed Aquatic Macrophyte Species: Effects on Resources, Environmental

Conditions and Resilience after Clipping and Drought Disturbances. (Student Paper)

Katharina Engelhardt & John A. Kadlec, Utah State University, Logan, UT

9:00 AM

Simulation of Potential Persistence of Sago Pondweed and American Wildcelery in Peoria Lake,

Illinois, Using Recent and Historical Data on Light Availability and Suspended Sediments. (WU 33128)

Eily P.H. Best & William Boyd, U.S. Army Engineer Research & Development Center, Vicksburg,

MS, & William F. James, U.S. Army Engineer Research & Development Center, Spring Valley, WI

9:15 AM

Economic Value of Aquatic Vegetation to Fisheries (WU 33307)

James P. Kirk & Jim E. Henderson, U.S. Army Engineer

Research and Development Center, Vicksburg, MS

9:30 AM

Effects of Hypoxia on Fish Distribution in Vegetated Habitats. (U 32944)

K. Jack Killgore & Jan Jeffrey Hoover, U.S. Army Engineer

Research and Development Center, Vicksburg, MS

9:45 AM

Selection and Use of Aquatic Vegetation by Migratory Waterfowl in North Central Texas

(Student Paper)

Joetta K. Smith, Robert D. Doyle & Ken L. Dickson, University of

North Texas, Denton, TX & Gary O. Dick, LAERF, Lewisville, TX

10:00 AM

BREAK / REFRESHMENTS

Garden Room

# SESSION IV

## Case Studies & Experiences

Crystal Room

Moderator

Dr. Allison Fox

10:15 AM

The Resilience of Rhizomes: A Case-study of Pickerelweed

Allison Fox, University of FLIFAS, Gainesville, FL

10:30 AM

Predicting the Sprouting of Hydrilla Turions and Tubers in Clear Lake, California

David Spencer & Gregory Ksander, USDA-ARS Exotic & Invasive Weed Research Unit,

UC Davis, CA

10:45 AM

Nonchemical Alternatives for Weed Control in Oregon Irrigation Canals

Mark Sytsma, Portland State University, Portland, OR & Michael Parker,

Southern Oregon University, Ashland, OR

11:00 AM

Operational Biological Control at the Aquatic Plant Control

Operations Support Center (APCOSC) in the Jacksonville District

Charles Ashton, U.S. Army Corps of Engineers, Jacksonville, FL

11:15 AM

Triploid Grass Carp - A Review of the Imperial Irrigation District's Biological Program

Lupe Castro, Imperial Irrigation District, Imperial Valley, CA

11:30 AM

Biology and Control of *Limnophila*

W. T. Haller, University of Florida, Center for Aquatic & Invasive Plants, Gainesville, FL

11:45 AM

*Salvinia molesta* in Alabama - The First Year Story

Joe Zolczynski, Alabama Div. Of Wildlife and Freshwater Fisheries, Spanish Fort, AL

12:00 Noon

LUNCH (On You Own)



<b>Session V</b> Moderator	<b>Chemical Control</b> <b>Dr. Kurt Getsinger</b>	Crystal Room
1:00 PM	Small-scale Herbicide Evaluations Against Giant Salvinia (WU 32437) Linda S. Nelson & Kurt D. Getsinger, U.S. Army Engineer Research & Development Center, Vicksburg, MS & John G. Skogerboe, LAERF, Lewisville, TX	
1:15 PM	Aquatic Vegetation Control in Irrigation Conveyance Systems and Treatment Results on <i>Salvinia molesta</i> with Cleangate Aquatic Herbicide Paul Westcott, Applied Biochemists, Phoenix, AZ	
1:30 PM	Effects of Water and Copper Complexes in Combination with REWARD Herbicide Steven J. Kammerer, Zeneca Professional Products, St. Augustine, FL	
1:45 PM	Field Demonstrations of Aquathol K Combined with Reward, Cutrine-Plus and Hydrothol 191 for Improved Control of Hydrilla. (WU 33304) John G. Skogerboe, U.S. Army Engineer Research and Development Center, Vicksburg, MS, and Toni G. Pennington, Aquatic Ecosystem Restoration Foundation, Flint, MI	
2:00 PM	Evaluations of Aquathol K Combined with Reward, Cutrine-Plus and Hydrothol 191 for Improved Control of Hydrilla. (WU 33304) Toni G. Pennington, Aquatic Ecosystem Restoration Foundation, Flint, MI, and John G. Skogerboe, U.S. Army Engineer Research & Development Center, Vicksburg, MS	
2:15 PM	Estimating Exchange Flows and Herbicide Transport in a Shallow Lake (Student Paper) Svenn O. Palmarsson, S. Geoffrey Schladow & Lars W. J. Anderson, UC Davis, Davis, CA	
2:30 PM	Fall Application of Sonar for Control of <i>Egeria densa</i> in a Seasonally-filled Lake in Northern CA Lars W. J. Anderson & Chris Pirogko, USDA-ARS Exotic and Invasive Weed Research, UC Davis, CA & Tyler Koshnick, SePRO Corporation, Carmel, IN	
2:45 PM	Differential Response of Hydrilla to Fluridone Michael D. Netherland, SePro Corp., Carmel, IN, William T. Haller, University of Florida, Center for Aquatic & Invasive Plants, Gainesville, FL, Carole A. Lembi, Purdue University, West Lafayette, IN, & Kurt D. Getsinger, U.S. Army Engineer Research & Development Center, Vicksburg, MS.	
3:00 PM	BREAK / REFRESHMENTS	Garden Room
<b>Session VI</b> Moderator	<b>Biological, Mechanical &amp; Environmental Control</b> <b>Dr. John D. Madsen</b>	Crystal Room
3:15 PM	Restoration of a Shallow Lake Through Drawdown. John D. Madsen, R. Michael Stewart & John W. Barko, U.S. Army Engineer Research and Development Center, Vicksburg, MS & Daniel R. Helsel, Wisconsin Dept. of Natural Resources, Milwaukee, WI	
3:30 PM	Potential Control of <i>Hydrilla verticillata</i> by Use of a Classical Biocontrol Agent in Combination with a Competitive Native Plant Species (WU 33117) Michael J. Grodowitz & R. Michael Smart, U.S. Army Engineer Research & Development Center, Vicksburg, MS & Robert Doyle, University of North Texas, Denton, TX	
3:45 PM	Nutritional Status of <i>Hydrilla verticillata</i> Grown Under Various Environmental Conditions and its Effect on <i>Hydrellia pakistanae</i> . (WU 33305 & 33208) Jan E. Freedman, Michael J. Grodowitz & Dwilette G. McFarland, U.S. Army Engineer Research & Development Center, Vicksburg, MS.	
4:00 PM	Impact of Parasites and Predators on <i>Hydrellia pakistanae</i> , a Biological Control Agent of <i>Hydrilla verticillata</i> . (WU 33028) (Student Paper) Christi Snell & Jennifer Booker, University of North Texas, Denton, TX, and Michael J. Grodowitz & Alfred F. Cofrancesco, U.S. Army Engineer Research & Development Center, Vicksburg, MS	
4:15 PM	Possible Impact of <i>Hydrellia pakistanae</i> on Lake Seminole Hydrilla. (WU 33028) Al Cofrancesco, Michael J. Grodowitz, R. Michael Stewart & John D. Madsen, U.S. Army Engineer Research and Development Center, Vicksburg, MS, Don Morgan, U.S. Army Engineer District - Mobile, Lake Seminole Field Office, Chattahoochee, FL, & Ed Snoddy, formerly Tennessee Valley Authority, Muscle Shoals, AL	
4:30 PM	Population Management of Triploid Grass Carp. (WU 33200) James P. Kirk, U.S. Army Engineer Research and Development Center, Vicksburg, MS	
4:45 PM	Macrophyte Management via Mechanical Shredding: Effects on Water Quality in Lake Champlain (Vermont-New York) William F. James and Harry L. Eakin, U.S. Army Engineer Research & Development Center, Spring Valley, WI, & John W. Barko, U.S. Army Engineer Research & Development Center, Vicksburg, MS	
5:00 PM	ADJOURN	
5:30 PM - 10:00 PM	APMS Annual Banquet - Dinner Cruise & Entertainment Co-Sponsored by - SePro Corp. & APMS	Spirit of San Diego Meet Hotel Lobby

Wednesday July 18, 2000

8:00 am - 5:00 pm  
8:00 am - 5:00 pm  
8:00 am - 5:00 pm  
11:30 am - 1:15 pm

Exhibits  
Posters  
Presenters' Slide Viewing  
APMS AWARDS / OFFICER INSTALLATION LUNCHEON  
Sponsored by Zeneca Professional Products

Garden Room  
Terrace Room  
California Room  
Presidio Room  
Crystal Room

**SESSION VII**  
Moderator

**Eurasian Watermilfoil Biology & Control**  
Holly Crosson

- 8:00 AM Commercial Use of the Milfoil Weevil as a Biological Control for Eurasian Watermilfoil  
**Martin A. Hilovsky** & Christina Brandt, EnviroScience, Inc., Stow, OH, Sallie Sheldo, Middlebury College, Middlebury, VT
- 8:15 AM Overwinter Habitat and the Relationship to In-Lake Densities of the Milfoil Weevil, *Euhrychiopsis lecontei*: A Eurasian Watermilfoil Biological Control Agent.  
**Raymond M Newman** David W. Ragsdale, Alyson Milles & Cary Oren, University of Minnesota, St. Paul, MN.
- 8:30 AM Indigenous Populations of *Euhrychiopsis*, *Acanthina* and *Cricotopus* with Implications for the Biological Control of Eurasian Watermilfoil.  
**Robert L. Johnson**, Cornell University, Ithaca, NY
- 8:45 AM The Search for Exudates from Eurasian Water Milfoil and Hydrilla (Student Paper)  
**Lee Ann Glomski**, Carol A. Lembi, Karl V. Wood, Ralph L. Nicholson & Phillip Wharton, Purdue University, West Lafayette, IN
- 9:00 AM Selected Fungal Associates of *Myriophyllum spicatum* L.: Pathogens or Endophytes? (WU 33306)  
**Judy F. Shearer**, U.S. Army Engineer Research and Development Center, Vicksburg, MS.
- 9:15 AM Epiphytic Macroinvertebrate Abundance Along a Gradient of Eurasian Water Milfoil Cover. (Student Paper)  
**Kendra S. Cheruvellil**, P. A. Soranno & M. J. Sanborn, Michigan State Univ., East Lansing, MI, J. D. Madsen, U. S. Army Engineers Research and Development Center, Vicksburg, MS
- 9:30 AM The Indirect Effects of Eurasian Watermilfoil and Its Management on Largemouth Bass Recruitment. (Student Paper)  
**Rahman D. Valley** & Mary T. Bremigan, Michigan State University, East Lansing, MI
- 9:45 AM BREAK / REFRESHMENTS
- 10:00 AM Washington's Aquatic Plant Quarantine - Preventing the Introduction of the next Eurasian Water Milfoil.  
**Kathy Hamel** & Jennifer Parsons, Washington Dept. of Ecology, Olympia, WA.
- 10:15 AM Eurasian Watermilfoil Control and Exotic Species Prevention in Seattle's Lake Youngs Reservoir.  
**Rob Zisette**, Herrera Environmental Consultants, Seattle, WA.
- 10:30 AM Evaluation of Sonar versus Egena and Eurasian Water Milfoil in a Flowing Environment.  
**Michael D. Notherland** & Steve D. Cockreham, SePro Corp., Carmel, IN, John G. Skogerboe, U. S. Army Engineer Research and Development Center, LAERF, Lewisville, TX.
- 10:45 AM Low Dose Applications of Triclopyr for the Selective Control of Eurasian Watermilfoil. (WU 32841)  
**Angela G. Poovey**, ASCI Corp., U.S. Army Engineer Research and Development Center, Vicksburg, MS, John G. Skogerboe, U. S. Army Engineer, LAERF, Lewisville, TX, Kurt D. Geisinger, John D. Madsen & R. Michael Stewart, U. S. Army Engineer Research and Development Center, Vicksburg, MS, and Tyler Koshnick & Alicia Staddon, SePro Corp., Carmel, IN.
- 11:00 AM Responses of Eurasian watermilfoil (*Myriophyllum spicatum*) to three endosulfate products (*Aquathol K*, *Hydrothol 191*, *Super K*)  
**Lars W. J. Anderson** & Chris Piroosko, USDA-ARS Exotic and Invasive Weed Research, UC Davis, CA
- 11:30 AM APMS AWARDS / OFFICER INSTALLATION LUNCHEON  
Sponsored by Zeneca Professional Products

Garden Room  
Crystal Room  
Presidio Room

<b>Session VIII</b>	<b>GIS/GPS Use in Aquatic Plant Management</b> <b>Terry McNabb</b>	<b>Crystal Room</b>
1:15 PM	Sampling Techniques for Quantifying Submersed Aquatic Plants in L-Anse Creuse Bay, Lake St. Clair. (WU 33127) R. Michael Stewart, John D. Madsen & Bruce M. Sabol, U.S. Army Engineer Research and Development Center, Vicksburg, MS.	
1:30 PM	Remote Sensing and Bathymetric Mapping Techniques to Support Large-Scale Sonar Applications Doug Henderson & Terry McNabb, ReMetrix, LLC., Carmel, IN.	
1:45 PM	What's Out There for GPS Data Collection? Patrick Akers, California Dept. of Agriculture.	
2:00 PM	Demonstration of GPS Data Collection: Techniques and Issues (based on Trimble GeoExplorer GPS units). GPS Workshop Patrick Akers, California Dept. of Agriculture.	Pocahontas
4:00 PM	ADJOURN 2000 ANNUAL MEETING	
4:00 PM - 6:00 PM	Corps APCRP Review	Executive Room
<b>Thursday July 20, 2000</b>		
8:00 AM - 11:00 AM	APMS Board of Directors	Executive Room
9:00 AM - 3:00 PM	San Diego Zoo Animal Park: Behind the Scenes Tour (36 max.) (Optional Pay as you go - Sign-up at Registration Desk by Noon on Monday July 17th)	Hotel Lobby
1:00 PM - 3:00 PM	Model Wetlands Marsh Project Tour - NO CHARGE (Sign-up at Registration Desk by noon 7/17 limited to the first 45 people)	Hotel Lobby

**Alternate Submitted Papers**

Evaluation of Sonar for Selective Eurasian Watermilfoil Control:  
Within the Treatment Season at One Year Posttreatment  
Tyler J. Koschnick, SePro Corp., Carmel, IN, John D. Madsen,  
U. S. Army Engineers Research and Development Center,  
Vicksburg, MS, Chella Owens, U. S. Army Engineers LAERF,  
Lewisville, TX.

**Posters**  
**Terrace Room**

*Sagittaria graminea*: Emerging Aquatic Weed in Victoria, Australia. Lalith Gunasekera & Kevin Krake, Cooperative Research Centre for Weed Management Systems, Agriculture, Victoria, Dept. of Natural Resources & Environment, Tatura, Australia.

Identification of Male and Female Plants of *Egeria* sp. in Jupia Reservoir, Brazil. Daniel A. S. Marcondes, Andre L. Mustafa, Rene A. F. Belmont, Robson H. Tanaka, & Carlos J. Rodrigues, Directorate of Environment, CESP - Companhia Energetica de São Paulo, SP, Brazil

Concepts for Modeling Competition Between Submersed Macrophyte Species (WU 33308). Elly P. H. Best, U. S. Army Engineer Research & Development Center, Vicksburg, MS.

Impacts of Herbicide Use on Threatened and Endangered Plant Species (WU 33199). Linda S. Nelson and Kurt Getsinger, U. S. Army Engineer Research and Development Center, Vicksburg, MS.

Impact of Different Populations of *Euhrychiopsis lecontei* on Eurasian Watermilfoil. Alfred F. Cofrancesco, Dwilette G. McFarland and John D. Madsen, U. S. Army Engineer Research and Development Center, Vicksburg, MS.

Methods to Determine Dispersal Mechanisms for Hydrilla and Eurasian Watermilfoil (WU 33186). Chetta S. Owens, Asci Corp., U. S. Army Engineer Research and Development Center, LAERF, Lewisville, TX and John D. Madsen, U. S. Army Engineer Research & Development Center, Vicksburg, MS.

Ecological Attributes of Exotic and Native Plant Communities (WU 33186). R. Michael Smart, U. S. Army Engineer Research and Development Center, LAERF, Lewisville, TX, Gary O. Dick and David R. Honnell, Institute of Applied Science, University of North Texas, Denton, TX.

Sediment Resuspension Dynamics in Canopy- and Meadow-forming Submersed Macrophyte Communities (WU 33128). William F. James, U. S. Army Engineer Research and Development Center, LAERF, Lewisville, TX and John W. Barko, U. S. Army Engineer Research and Development Center, Vicksburg, MS.

Measurement Systems for Rapid Detection and Characterization of Aquatic Plants (WU 33118). Bruce M. Sabol, U. S. Army Engineer Research and Development Center, Vicksburg, MS.

Establishment of Native Aquatic Plants: An Overview (WU 33084). R. Michael Smart, U. S. Army Engineer Research and Development Center, LAERF, Lewisville, TX. and Gary O. Dick, Institute of Applied Science, University of North Texas, Denton, TX.

Integrated Endothall-Fungal Pathogen Treatment on Four Submersed Plants (WU 32953). Linda S. Nelson and Judy Shearer, U. S. Army Engineer Research and Development Center, Vicksburg, MS.

Status of Introduced *Hydrillia* spp. At Alabama, Georgia, and Texas Sites as of November, 1999 (WU 33028). Michael J. Grodowitz, Jan E. Freedman, Harvey L. Jones and Alfred A. Cofrancesco, U. S. Army Engineer Research and Development Center, Vicksburg, MS.

Mass Rearing *Hydrillia pakistanae*, *Deonier* and *Hydrillia balciunasi* Bock, Biological Control Agents of *Hydrilla verticillata* (L.F.) Royle (WU 33028). Jan E. Freedman and Michael J. Grodowitz, U. S. Army Engineer Research and Development Center, Vicksburg, MS.

Surveys of *Eichornia crassipes* and *Hydrilla verticillata* and Associated Insect Biological Control Agents on the Lowe Rio grande (WU 33028). Michael J. Grodowitz, Jan E. Freedman and Harvey L. Jones, U. S. Army Engineer Research and Development Center, Vicksburg, MS, Lavon Jeffers, Dyntel Corporation, U. S. Army Engineer Research and Development Center, Vicksburg, MS, Carlos F. Lopez, U. S. Bureau of Reclamation, Oklahoma-Texas Area Office, Austin, TX and Fred Nibling, U. S. Bureau of Reclamation, Technical Service Center, Research and Investigations, Denver, CO.

Preliminary Studies on Propagule Survival in Water Chestnut Treated with the Penny Shredder System (WU 33029). Dwilette G. McFarland and R. Michael Stewart, U. S. Army Engineer Research and Development Center, Vicksburg, MS.

Development of an Endemic Fungal Pathogen for Biological Control of Hydrilla (WU 32863). Judy F. Shearer, U. S. Army Engineer Research and Development Center, Vicksburg, MS.

Comparison of Areal Production Rates of Two Mechanical Systems for Control of Water Chestnut in Lake Champlain. R. Michael Stewart and John Madsen, U. S. Army Engineer Research and Development Center, Vicksburg, MS and David R. Honnell, Institute of Applied Science, University of North Texas, Denton, TX.



Concepts of Modeling Between Submersed Macrophyte Species (WU 33308). Elly P. H. Best, U. S. Army Engineer Research and Development Center, Vicksburg, MS.

Changes in Levels of Soluble Sugars During Sprouting of Vegetative Propagules of Hydrilla and Pondweeds. D. F. Spencer and G. G. Ksander, USDA-ARS Exotic and Invasive Weed Research Unit, UC-Davis, CA and F. J. Ryan, USDA-ARS Horticultural Crops Research Laboratory, Fresno, CA.

The Use of Stream Delta Surveillance as a Mechanism for Early Detection and Control of Eurasian Watermilfoil. Lawrence W. Eichler, Eric A. Howe and Charles W. Bouten, Darrin Fresh Water Institute, Troy, NY.

Preventing the Purple Plague from Taking over California's Waterways. Carri Benefield, Integrated Pest Control Branch, California Dept. of Food and Agriculture, Sacramento, CA.

Oregon and Chilean Populations of *Egeria densa* are Genetically Similar. M. Carol Carter and Mark D. Sytsma Dept. of Environmental Biology, Portland State University, Portland, OR.

Assessing Potential for Spread and Impacts of Eurasian Watermilfoil (*Myriophyllum spicatum*) in Lake Tahoe Using *in situ* Transplants and Bioassays. Katey Walter and Charles Goldman, USD Environmental Studies and Policy-Tahoe Research Group and Lars Anderson, USDA-ARS Exotic and Invasive Weed Research, UC-Davis, Davis CA

# THE AQUATIC PLANT MANAGEMENT SOCIETY, INC

The Aquatic Plant Management Society, Inc. is an international organization of scientists, educators, students, commercial pesticide applicators, administrators, and concerned individuals interested in the management and study of aquatic plants. The membership reflects a diversity of federal, state, and local agencies; universities and colleges around the world; corporations; and small businesses.

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