



AQUATIC PLANT NEWS

A newsletter of the Aquatic Plant Management Society, Inc./ No. 28, June 1988

Twenty-Eighth Annual Meeting of The Aquatic Plant Management Society, Inc. July 10-13, 1988 Fairmont Hotel, New Orleans, Louisiana, U.S.A.

A total of 63 presentations, 10 of which are student papers, will make the 28th annual meeting of the Aquatic Plant Management Society at the Fairmont Hotel in New Orleans July 10-13th, 1988, one of the fullest programs ever. Concurrent sessions, both Tuesday morning and Tuesday afternoon, July 12th, will be necessary.

The Monday morning session will begin with reports from state and regional APMS chapters. These short reports will be followed by Dick Comes' presidential address, and our annual business meeting. Then Ron Raschke, president of the North American Lake Management Society (NALMS), will give a keynote address.

The remainder of the time on Monday will be devoted to a symposium entitled "The Aquatic Ecosystem: Ecology and Management". Wayne Poppe, TVA, Chattanooga, and a former director and president for NALMS will begin the symposium with a presentation on the topic

"Lake/Reservoir Ecology". His presentation will be followed by presentations from representatives for the Bureau of Reclamation (James LaBounty, Denver), Corps of Engineers (Lynn Lamar, Washington), and TVA (Herbert Jones, Knoxville). These three agencies have the responsibility for managing most of the large public reservoirs in the United States. Dan Burden, Baton Rouge, will discuss his experiences with the management of urban lakes. Denny Bokemeier of Davis, Illinois, will discuss his experiences with the management of a private lake development. Then we'll have two presentations about lake and reservoir management in Europe and Egypt. Professor C.D.K. Cook, University of Zurich, will discuss lake management in Switzerland. Kevin Murphy, University of Glasgow, will relate his knowledge about lake/reservoir management in Europe and Egypt. These presentations will be followed by a panel discussion with each of the speakers serving on the



panel — as well as Vic Bartnik from Vancouver, British Columbia. John Barko, Waterways Experiment Station, will moderate this symposium.

Most of the contributed papers, including the student contest papers, will be presented in concurrent sessions on Tuesday morning. Leon Bates, TVA, will moderate Section A which contains the "applied research" oriented reports. Dave Sutton, University of Florida, Fort Lauderdale, will moderate Section B which contains those presentations which are more "basic research" type reports.

See page 7

FAIS DO-DO — Cajun Style

A special style activity has been planned for Tuesday evening. We will be treated to a Cajun Fais Do-Do at the old New Orleans Ice House.



Originally constructed in 1870, this building was renovated for the 1984 World's Fair.

Fais Do-Do means "make sleep" and is what big Cajuns told their baby Cajuns before the parents attended these rollicking events. Whirling couples two-stepping, a night-long feast of traditional fare, and plenty of bourbon and beer long ago became the hallmarks of the Fais Do-Do.

Chartered motor coaches will transport our group to the Ice House convention where a Cajun fiddling band and dancers will set the tune of our own Fais Do-Do. The menu will include cajun fare such as boiled crawfish, oysters, red beans with rice

and sausage, chicken & sausage jambalaya, crawfish etoufee and pecan pie. A cash bar will be provided for drinks other than beer, wine and soft drinks.

After the Fais Do-Do, guests may return to the hotel by the chartered coaches or they may choose to make the short stroll to the French Quarter where they can continue their New Orleans night-life site seeing and revelry. A special price has been given for children, so parents don't tell your children to "fais do-do" — bring them to the event! The evening will be relaxed and informal, so dress accordingly. Don Lee, Local Arrangements Chairman.

Proposed Changes to By-laws

Ammendment to By-laws

At the instruction of the Board of Directors, the By-laws Committee recommends that the By-laws be amended to read as follows:

ARTICLE XI

Section B. Annual dues shall be as follows: Active member, \$35.00; Student members, \$5.00; Sustaining members, \$200.00; Honorary members, none.

The purpose of this change is to set the dues for active members at \$35.00 instead of \$25.00. Dues for other

membership categories remain unchanged. This change was recommended by the Board of Directors at the New Orleans meeting in January 1988.

Ammendment to By-laws

At the instruction of the Board of Directors, the By-laws Committee recommends that the By-laws be amended to read as follows:

ARTICLE XV

1. He or she must have contributed significantly to the field of aquatic vegetation management during his or her career (the in-

dividual should be retired from his or her primary career and no longer employed in the field of aquatic vegetation management, except that part time work as a consultant shall be permissible).

The purpose of this change is to prevent people who have retired from their primary careers from being excluded for consideration as honorary members, solely because they may act as consultants on a part time basis. This change was recommended by the Board of Directors at the New Orleans meeting in January 1988.

Michigan Well Study Results In!!!

David Regalbuto and Fred Payne of Midwest Water Resource, Inc. have submitted the final draft of a report on an aquatic herbicide-groundwater study to the Michigan Aquatic Managers Association (MAMA). The study was designed to test the likelihood that 2,4-D or endothall would move from a lake into a connected aquifer. The impetus for this study was derived from a concern for the use of aquatic herbicides in the vicinity of shallow, domestic, near-shore wells.

The study site was selected to exaggerate the circumstances that would contribute to the potential migration of the herbicides into a domestic water well situated very near the lake shore. A pumping well was placed in sandy soil only fifteen feet from the shore of a Clare Co., Michigan private pond. A sampling well was placed between the pumping

well and the lake shore. Water was continuously removed from the pumping well to insure that lake water would move by the sampling well. In two separate experiments, granular 2,4-D (Aquakleen) or granular endothall (Hydrothol 191) was applied to the whole lake at a rate of 3 mg l⁻¹ and 6 mg l⁻¹ in the vicinity of the test wells. Lake water and sampling well water samples revealed only trace quantities of 2,4-D in the sampling well 28 DAT and a trace of endothall in the lake water sample 1 DAT. At no time did 2,4-D or endothall concentrations exceed detection limits of 0.1 mg l⁻¹ and 0.05 mg l⁻¹, respectively. The report concludes:

1. It is possible to induce the transport of 2,4-D, but not endothall, in very low concentrations, from surface water into an unconfined aquifer.

2. With all other conditions being equal, endothall is mobilized to lake water in less time after application than is 2,4-D.
3. Given initial concentrations of less than 100 parts per billion, degradation by chemical and microbial means, retardation due to absorption and dilution by hydrodynamic dispersion, it is unlikely that 2,4-D could be detected more than a few feet from a surface water source, following a conventional application."

(From: Regalbuto and Payne, 1988, A Field Test for Mobility of 2,4-D and Endothall from Surface to Groundwater) G. Douglas Pullman, Cygnus Enterprises, Inc., reprinted from Northern Lakes Manager, Winter 1988.

SCAPMS Celebrates Ten Years

The South Carolina Aquatic Plant Management Society will hold its Tenth Annual Meeting on August 18 and 19, 1988. The meeting will be held in Moncks Corner, S.C. at Santee Cooper's Somerset Point Facility. As has been the case in past years, the Board of Directors is planning an excellent slate of speakers from throughout the southeast to discuss their experiences in the field of aquatic plant management. The Program Committee is currently accepting requests for presentations at the Annual Meeting. Papers covering all aspects of aquatic plant biology, use, and control will be considered. A student paper contest, with a \$100.00 cash prize for first place, will be held if a minimum of three student papers are presented. As was the case in 1987, abstracts will be required this year. We will be publishing a proceedings of the meeting which will include abstracts of

all papers presented. Abstracts and titles should be submitted by July 1, 1988.

In addition, in order to celebrate the Society's Tenth Anniversary, the Board of Directors is planning a number of special events for August 17, the day prior to the meeting. Tentative plans call for both a golf and fishing tournament, the proceeds from which will go toward building the Scholarship Fund. In order to assist in confirming these plans, interested parties are requested to confirm their participation by August 1.

All abstracts and requests for further information should be sent to Mr. Tim Drake, Palmetto Aquatic Plant Management, Inc., P.O. Box 4212, Spartanburg, SC 29305.

Mark these dates on your calendar and plan on helping the Society celebrate this important milestone.

MEETINGS

June 20-23, 1988 - Florida Aquatic Weed Short Course. TREEO Center, Gainesville, FL.

July 10-13, 1988 - Aquatic Plant Management Society, 28th Annual Meeting. Fairmont Hotel, New Orleans, LA.

August 17-19, 1988 - South Carolina Aquatic Plant Management Society, 10th Annual Meeting. Somerset Point, Moncks Corner, SC.

October 14-16, 1988 - MidSouth Aquatic Plant Management Society, 6th Annual Meeting. Holiday Inn, Decatur, AL.

October 25-27, 1988 - Florida Aquatic Plant Management Society, 12th Annual Meeting. Holiday Inn Surfside, Daytona Beach, FL.

November 15-19, 1988 - North American Lake Management Society Eighth International Symposium. Clarion Hotel, St. Louis, MO.

GARLON 3A: New Developments and Uses for Aquatic and Terrestrial Weeds in Florida

GARLON® herbicides are currently used in industrial, non-crop, and forestry applications in the U.S. and in many countries throughout the world. GARLON herbicides were registered for use in the U.S. as GARLON 3A® in 1979 and as GARLON 4® in 1980. The Active ingredient in GARLON herbicides is triclopyr. GARLON 3A is a liquid amine formulated as a 3.0 pound a.e. per gallon concentrate. GARLON 4 is also a liquid but is an ester formulated as a 4.0 pound a.e. per gallon concentrate. GARLON herbicides may be applied as foliar, cut surface, injection, and basal bark treatments. Triclopyr is primarily active on broadleaf weeds, vines and brush and shows very little activity on grasses or sedges. Because of this activity it is particularly useful in situations where management objectives are to maintain a grass or sedge cover but reduce or eliminate brush and broadleaf weed species.

GARLON herbicides are very active over a broad range of woody plant species, including maples, sassafras, persimmon, elm, blackberry, locust, gums, sumac, oaks, and many waxy leafed species found in Florida. Studies conducted by the Auburn Herbicide Research Coop. in 1984 indicated excellent control of gallberry, vaccinium, magnolia, sweetbay, water oak, and tupelo. Other field trials have shown excellent control of Brazilian pepper with both foliar sprays and basal bark applications. Good control of wax myrtle, and other

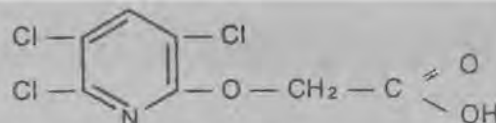
waxy-leaved species has also been observed.

GARLON 3A is most efficacious in foliar applications when applied in relatively high volumes of water with ground spray equipment. A 1 to 2% solution of GARLON 3A (plus ¼ to ½% agricultural surfactant) in 100 gallons of water applied as a drenching spray has been shown to be very effective.

Triclopyr is very short lived in the environment, with a half life as little as 2-4 hours in the presence of sunlight. It has very low animal and mammalian toxicity. Permanent tolerances of 0.01 ppm in milk, 0.05 ppm in meat, and 500 ppm in forage have been established by the EPA. Temporary tolerances (estab. 1986) of 0.20 ppm in fish, 0.20 ppm in shellfish, and 0.50 ppm in potable water have also been established. GARLON 3A herbicide is low in mammalian toxicity and practically non-toxic to fish.

Because of the wide spectrum of activity demonstrated by GARLON herbicides and low toxicity of GARLON 3A to fish and aquatic organisms, the potential for use in aquatic plant management is excellent.

In 1986, The Dow Chemical Company received permission from the EPA to evaluate GARLON 3A in aquatic environments. The permission was in the form of a Federal EUP and GARLON 3A Supplemental Label. The current EUP will expire in 1988 but renewal has been requested through



1990. Federal registration and labeling for aquatic uses of GARLON 3A is expected in 1991.

Testing to-date has included two large water dissipation studies; one in Lake Seminole, Georgia and another in Banks Lake, Washington. Results have indicated no detectable residues of triclopyr or its metabolites in water and sediment taken 42 days after treatment. Lab analysis of residues in crustaceans, mollusks, zooplankton, plants, and aquatic weeds will be completed this summer. Efficacy data from the Lake Seminole test indicated complete control of Eurasian Watermilfoil. Unfortunately the Hydrilla plant population was released by the GARLON treatments. However this does suggest the potential for selectivity with GARLON treatments. In addition to the two large lake tests, moving water dissipation studies were installed at 6 locations in the U.S. in 1987. Results from these studies are being analyzed.

Field trials in Florida are underway to evaluate GARLON 3A efficacy on aquatic plants and exotic plants growing in aquatic environments. Two trials will evaluate efficacy on water hyacinth and frog's-bit. Smaller trials are planned to evaluate effectiveness on Hygrophila, melaleuca, and water pennywort. Screening trials on spatterdock, bullrush, fanwort, primrose (Ludwigia), alligator weed, and water lettuce are also planned.

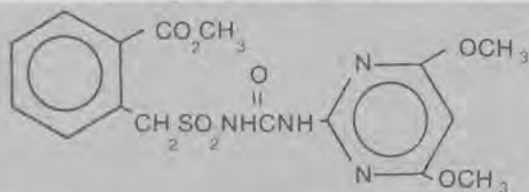
*Trademark of The Dow Chemical Co. W.N. Kline, Dow Chemical, U.S.A.

Bensulfuron

Mariner® is a new aquatic herbicide being developed by E.I. Du Pont de Nemours & Company. The active ingredient in Mariner®, bensulfuron methyl, is a member of the sulfonylurea class of chemistry. Sulfonylureas are highly active at very low use rates and exhibit extremely low mammalian toxicity.

Bensulfuron methyl was originally developed for use as a rice herbicide and is currently registered and sold in many rice growing countries around the world. Registration for use on rice in the United States is expected this year.

Since bensulfuron methyl is highly active on a wide variety of broadleaf and sedge weeds prevalent in rice fields, Dr. Lars Anderson of the USDA Aquatic Weed Laboratory, Davis, California began examining the potential of the compound for utility as an aquatic herbicide in 1985. Laboratory and field data indicated that



Mariner® was highly active on several important aquatic weeds including hydrilla, pondweeds and Eurasian watermilfoil. Application to dewatered irrigation canals provided 3 to 4 months of residual control.

Based on these data, Du Pont has submitted a petition to EPA for a small EUP program this year. This will allow more expansive testing to establish the efficacy of the product across a range of practical use situations. The U.S. Army Corps of Engineers (Dr. Howard Westerdahl), the Center for Aquatic Plants, University of Florida (Dr. Ken Langeland) and the USDA Aquatic Weed Control Laboratory (Dr. Lars Anderson) have agreed to participate in the proposed EUP program. Du Pont expects to

have approval for the EUP by the end of September.

In addition to the EUP program, both Dr. Anderson and Dr. Langeland are conducting additional exploratory and fundamental research with Mariner®. These studies are intended to more precisely define application timing, residual activity, weed spectrum and use rates.

Mariner® appears to be best suited for use as a pre-emergence or early post-emergence herbicide in controlling submersed aquatic weeds. It is anticipated that the product could be used in irrigation canals (de-watered), lakes, ponds, reservoirs and other bodies of water. Since relatively small amounts of Mariner® are required to provide weed control (100 parts per billion or less) and the compound exhibits low toxicity to aquatic organisms, Mariner® shows promise as a new tool for aquatic vegetation management.

R.C. Ackerson, E.I. Du Pont de Nemours & Co. (Inc.)

July 10-13, 1988

TWENTY-EIGHTH THE AQUATIC PLANT MA

SUNDAY, JULY 10, 1988

Before Noon
12:00 Noon
1:00pm
3:00-6:00pm
6:30-7:30pm

Committee Meetings??
Board Luncheon
Board of Directors Meeting
Registration
President's Reception

MONDAY, JULY 11, 1988

8:00am-5:00pm
Registration

9:00am-5:00pm
Exhibits on Display

SESSION I
8:30am-4:45pm

8:30am
8:30am
8:35am
8:40am

Presiding: Richard D. Comes, President
Call to Order
Invocation: G. Douglas Pullman
Announcements: Richard Couch, Program Chairman
APMS CHAPTER REPORTS
Florida APMS: Eddie Knight, President
South Carolina APMS: Tim Drake, President
Midsouth APMS: Leon Bates, President
Midwest APMS: Richard Hinterman, President
Western APMS: Fred Nibling, Immediate Past President
Canada: Scott Painter, Coordinator
Presidential Address: Richard D. Comes
Annual Business Meeting
Presiding: Richard Comes, President
COFFEE BREAK
Keynote Address: Ron Raschke, President
North American Lake Mgt. Soc.

**THE AQUATIC ECOSYSTEM:
ECOLOGICAL AND MANAGEMENT**

Presiding: John Barko
Waterways Experiment Station; Vicksburg, MS
"Lake/Reservoir Ecology"
Wayne Poppe, TVA, Chattanooga, Tenn.
ADJOURN FOR LUNCH

LAKE/RESERVOIR MANAGEMENT

1:20pm
1:40pm
2:00pm
2:20pm
2:40pm
3:00pm
3:20pm
3:40pm
4:00pm
4:45pm

US Army Corps of Engineers: Lynn Lamar; Washington, D.C.
U.S. Bureau of Reclamation: Jim LaBounty; Denver, Colorado
Tennessee Valley Authority: Herbert Jones; Knoxville, Tenn.
Urban Lakes: Dan Burden; Baton Rouge, LA
A Private Lake: Dennis Bokemeier; Davis, IL
COFFEE BREAK
Europe/Egypt: Kevin Murphy; Univ. of Glasgow
Switzerland: Chris Cook; Univ. of Zurich
DISCUSSION PANEL = Session 1 Speakers PLUS Victor Bartnik; Vancouver, B.C.
ADJOURN

TUESDAY, JULY 12, 1988

Local Chapter President's Breakfast
6:45am-8:15am
Sponsor: Chevron Chemical Company

Registration
8:00am-5:00pm

Exhibits on Display
8:30am-5:00pm

Session II

Invited* & Contributed Papers
Section A

Chairperson & Moderator: Leon Bates
TVA; Muscle Shoals, AL

8:15am
8:30am
8:45am

Management of Lakes for Wild Rice Production in Canada: P.F. Lee; Dept. of Biology; Lakehead University; Thunder Bay, Ontario, Canada P7B 5E1
Variation in Production Characteristics among Ontario Wild Rice Populations: Implications for Lake Management and Plant Breeding: Rebecca L. Counts* & Peter F. Lee; Dept. of Biology; Lakehead University; Thunder Bay, Ontario, Canada P7B 5E1
Cultivation and Scarification in the Management of Lake-grown Wild Rice (*Zizania aquatica* L.): T.J. Keenan* & P.F. Lee; Dept. of Biology; Lakehead University; Thunder Bay, Ontario, Canada P7B 5E1

9:00am

Factors Influencing Glyphosate Efficacy in Torpedograss (*Panicum repens* L.) under Field Conditions: T.R. Willard*, W.T. Haller, K. Langeland, D.G. Shilling, & D. Thayer; Dept. of Agronomy; Univ. of Florida; Gainesville, FL 32611
STUDENT CONTEST PAPER!

9:15am

Validation of the Model "INSECT" under Southeastern Texas Conditions: Michael Jay Grodowitz; CEWES-ER-A; P.O. Box 631; Vicksburg, MS 39180

9:30am

Impact of the Endangered Species Act on Pesticide Usage: Donald Schultz; FWE/EC; 75 Spring Street, SW; Atlanta, GA 30303

9:45am

Effects of Solricin 135 on Water Quality, Phytoplankton, and Off-Flavor in Channel Catfish Ponds: J.H. Scott*, D.R. Bayne, & C.E. Boyd; Dept. of Fisheries & Allied Aquaculture; Auburn Univ.; Auburn, AL 36849
STUDENT CONTEST PAPER!

10:00am

COFFEE BREAK

10:15am

Recent Studies of the Buoyant Potential of Benthic Barriers: G. Douglas Pullman; Cygnet Enterprises, Inc.; P.O. Box 248; Linden, MI 48451

10:30am

Comparison of Three Methods for the Non-Destructive Estimation of Biomass in Three Aquatic Weeds: Robert T. Pine*, Lars W. Anderson, & Silas O. Hung; USDA/ARS/WR; Botany & Animal Science Departments; Univ. of California; Davis, CA 95616

10:45am

Are Present Chemical Control Methodologies Compatible with Existing Biocontrol Agents of Waterhyacinths? D.C. Pellessier; CEWES-ER-A; P.O. Box 631; Vicksburg, MS 39180-0631
STUDENT CONTEST PAPER!

11:00am

The Potential for Contamination of Shallow Near-Shore Aquifers by Aquatic Herbicides: G. Douglas Pullman; Cygnet Enterprises, Inc.; Linden, MI 48451; and David P. Regalbuto; Midwest Water Resources, Inc.; 320 W. Santee; Charlotte, MI 48813

11:15am

Impact of Diquat on Non-Target Crop, Wetland, and Aquatic Plants: William T. Haller*, Donn Shilling, Tommy R. Willard, & A. Fox; Center for Aquatic Plants; Univ. of Florida; Gainesville, FL 32606

11:30am

Fluridone and NMF Residue in Two Sonar Treated Ponds: F.B. LaRoche, K.A. Langeland, & S. West; Center for Aquatic Plants; University of Florida; Gainesville, FL 32606

11:45am

ADJOURN FOR LUNCH

SESSION II

Invited* & Contributed Papers
Section B

Chairperson & Moderator: David Sutton
University of Florida; Fort Lauderdale, FL

8:15am

Growth Characteristics and Carbohydrates in Waterhyacinth: Kien Luu; Waterways Experiment Station; Vicksburg, MS 39180

8:30am

Effect of N, P, or K in the Culture Medium on the Biomass and the Nutrient Uptake and Storage by *Eichhornia crassipes*: K.R. Reddy & M. Agami*; Soil Science Dept.; University of Florida; Gainesville, FL 32611

8:45am

Do You Know Your *Lyngbya*? Notes on the Distribution and Taxonomy of a Mat-forming Macrocyanophyte: Barbara Speziale & Lawrence Dyck; Dept. of Biological Sciences; Clemson University; Clemson, SC 29634

9:00am

Management of *Lyngbya* Infestations: Can Diquat be Delivered to Benthic Mats? Lawrence Dyck & Barbara Speziale; Dept. of Biological Sciences; Clemson University; Clemson, SC 29634

9:15am

Effect of Fluorescein Family Dyes on the Growth of the Filamentous Alga *Lyngbya majescula*: Kevin B. Johnson* & Dean Martin; Dept. of Chemistry; Univ. of South Florida; Tampa, FL 33620
STUDENT CONTEST PAPER!

9:30am

Photophysiological Responses of Bloom Forming Algae to Changes in Light Intensity: *Lyngbya* as a Model: Glenn Turner* & Lawrence Dyck; Dept. of Biological Sciences; Clemson University; Clemson, SC 29634-1903
STUDENT CONTEST PAPER

9:45am

COFFEE BREAK

10:00am

Plant Growth Regulators as Aquatic Plant Management Tools: Michael Netherland* & Carole Lembi; Dept. of Botany & Plant Pathology; Purdue University; West Lafayette, IN 47907
STUDENT CONTEST PAPER!

10:15am

Use of a Fluorescent Dye to Predict Herbicide Dilution in Flowing Water: A. Fox* & W.T. Haller; Center for Aquatic Plants; Univ. of Florida; Gainesville, FL 32606; and K.D. Getsinger; Waterways Experiment Station; Vicksburg, MS 39180

ANNUAL MEETING OF MANAGEMENT SOCIETY, INC.

Fairmont Hotel
New Orleans, Louisiana

- 10:30am **Photolysis of Fluridone in Aqueous Solution**-Mark Mossler*, D.G. Shilling, & W.T. Haller; University of Florida; Gainesville, FL 32611 STUDENT CONTEST PAPER
- 10:45am **2,4-D Concentration and Exposure Time Relationships for the Control of Eurasian Watermilfoil**-W. Reed Green; Waterways Experiment Station; P.O. Box 631; Vicksburg, MS 39180
- 11:00am **Characterization of Allelochemicals in American Eelgrass (*Vallisneria spiralis*)**-Tai-Sheng Cheng* & Donald N. Riemer; Dept. of Soils & Crops; Cook College/Rutgers University; New Brunswick, NJ 08903 STUDENT CONTEST PAPER
- 11:15am **Glyphosate Efficacy in Torpedograss (*Panicum repens* L.) as Influenced by the Interaction of Carrier pH and Calcium Content**-D.G. Shilling*, W.T. Haller, T.R. Willard, & M.A. Mossler; Dept. of Agronomy; University of Florida; Gainesville, FL 32611
- 11:30am **Predicting Effective Diquat Concentrations for the Control of Hydrilla**-Martine C. Duff* & John H. Rodgers, Jr; North Texas State Univ., P.O. Box 13078; Denton, TX 76203 STUDENT CONTEST PAPER!
- 11:45am **ADJOURN FOR LUNCH**



SESSION III

Invited* & Contributed Papers
Section A

WEED AND WATER RESOURCE MANAGEMENT UNDER OPERATIONAL CONDITIONS

Chairperson & Moderator: Bill Zattau
Operations Support Center; Jacksonville District; COE
Jacksonville, Florida

- 1:15pm **Aquatic Plant Management from a Large Program Perspective***-Michael Dupes; US Army Corps of Engineers; Jacksonville District; Jacksonville, FL 32232
- 1:30pm **Aquatic Plant Management Operations from a Small Program Perspective***-Joe Zolczynski; Alabama Department of Conservation & Natural Resources; P.O. Box 245; Spanish Fort, AL 36527
- 1:45pm **An Update on the Corps' Aquatic Plant Control in Florida***-Edward Knight; Natural Resources Project Office; P.O. Box 1317; Palatka, FL 32078
- 2:00pm **The South Carolina Aquatic Plant Management Program***-Steven de Kozlowski; South Carolina Water Resources Commission; 1201 Main Street, Suite 1100; Columbia, SC 29201
- 2:15pm **Large-scale Sonar Application at Lake Seminole, Florida***-Joe Knight; Lake Seminole Resource Management Office; Chattahoochee, FL 32324
- 2:30pm **Mechanical Harvesting for Nutrient Removal**-C.E. Mericas*, P.T. Gremillion, & E. Terczak; International Science & Technology; 11260 Roger Bacon Drive, Suite 201; Reston, VA 22090
- 2:45pm **COFFEE BREAK**
- 3:00pm **New Tools for Mechanical Aquatic Plant Management***-Terence M. McNabb; Aquatic Unlimited, Inc.; Kent, WA
- 3:15pm **New Biocontrol Agents for Submersed Aquatic Plants**-Alfred Cofrancesco, Jr. & Edwin Theriot; CEWES-ER-A; P.O. Box 631; Vicksburg, MS 39180
- 3:30pm **Grass Carp in Western Irrigation Systems: Questions on Management and Sterility***-Randall Stocker; Imperial Irrigation District; Imperial, CA 92251
- 3:45pm **An Evaluation of the "AMUR" Grass Carp Stocking Rate Model**-John Cassini & David Maloney; Lee County Hyacinth Control District; P.O. Box 06005; Fort Myers, FL 33906
- 4:00pm **Environmental Impacts of Fluridone Application in Lake Okeechobee, Florida**-K.A. Langeland & D.D. Thayer; Univ. of Florida; 7922 NW 71st Street; Gainesville, FL 32606
- 4:15pm **Lake Okeechobee: A Lesson in Maintenance Control**-Joseph Joyce & Kenneth Langeland; Center for Aquatic Plants; 7922 NW 71st Street; Gainesville, FL 32606
- 4:30pm **The EPA Implementation of the Endangered Species Act under FIFRA***-Larry W. Turner; EPA; Washington, D.C.
- 4:45pm **ADJOURN**

SESSION III

Invited* & Contributed Papers
Section B

HYDRILLA

Presiding: Lars Anderson

USDA/ARS; University of California; Davis, CA

- 1:15pm **Natural History and Impacts of Hydrilla verticillata***-Lars W.J. Anderson; USDA/ARS; Botany Dept.; Univ. of California; Davis, CA 95616
- 1:30pm **Electrophoretic Evidence for Two Varieties of Monoecious Hydrilla in North Carolina***-Frederick J. Ryan; USDA/ARS; Botany Dept.; Univ. of California; Davis, CA 95616
- 1:45pm **Karyotypes of Hydrilla Populations in the United States**-K.A. Langeland; Center for Aquatic Plants; Univ. of Florida; Gainesville, FL 32606
- 2:00pm **Autoecological Characterization of Different Strains of Hydrilla verticillata***-Wim Van Vierssen; Agricultural University; Wageningen, The Netherlands
- 2:15pm **Competitive Interactions Between Monoecious Hydrilla and Sago Pondweed and their Implications for Changes in Macrophyte Community Structure***-David F. Spencer; USDA Aquatic Weed Lab; Univ. of California; Davis, CA 95616
- 2:30pm **Competition Between Hydrilla verticillata and Vallisneria spiralis for Light, Sediment Nutrients, and Inorganic Carbon**-R. Michael Smart and John W. Barko; Environmental Laboratory; Waterways Experiment Station; Vicksburg, MS 39180-0631
- 2:45pm **COFFEE BREAK**
- 3:00pm **Carbohydrate Partitioning in Hydrilla Biotypes**-G.J. Pesacreta; Environmental Laboratory; Waterways Experiment Station; Vicksburg, MS 39180-0631
- 3:15pm **The Presence in Leaf Tissue of the Major Tuber Proteins of Hydrilla**-Frederick J. Ryan; USDA/ARS Weed Research Lab; University of California; Davis, CA 95616
- 3:30pm **Herbicidal Metabolites as Indicators of Biological Control Efficacy of Microorganisms against Hydrilla verticillata**-Virginia Joan Prange & Raghaven Charudattan; Plant Pathology Dept.; University of Florida; Gainesville, FL 32611
- 3:45pm **Influence of Substituted Phenols on the Growth of Hydrilla**-Barbara B. Martin* & Dean F. Martin; Dept. of Chemistry; University of South Florida; Tampa, FL 33620
- 4:00pm **Current Status of the Hydrilla Eradication Program for Northern California**-Nate Dechoretz; California Department of Food & Agriculture; 1220 N Street; Sacramento, CA 94271
- 4:15pm **PANEL DISCUSSION-Hydrilla: Where do we go from here???**
- 4:45pm **ADJOURN**

WEDNESDAY, JULY 13, 1988

8:00-11:30am
Registration

9:00-11:00am
Exhibits on Display

SESSION IV

USE OF COMPUTERS IN AQUATIC PLANT MANAGEMENT

Presiding: John Rodgers

North Texas State University; Denton, TX

- 9:00am **An Overview of Simulation Technology Development in the APCRP**-R.M. Stewart; Waterways Experiment Station; Vicksburg, MS 39180
- 9:15am **The Aquatic Plant Information Retrieval System: An Aid in Aquatic Plant Management**-Joe Joyce; Center for Aquatic Plants; University of Florida; Gainesville, FL 32606
- 9:30am **Computer Processing for Aerial Aquatic Plant Surveys**-Terry McNabb; Aquatics Unlimited, Inc.; Kent, WA
- 9:45am **INSECT: A Computer-Aided Tool for Simulation of Waterhyacinth and Its Biological Control Agents**-R.M. Stewart; Waterways Experiment Station; Vicksburg, MS 39180; and Fred G. Howell; Dept. of Biological Sciences; Univ. Southern Mississippi; Hattiesburg, MS 39406
- 10:00am **Herbicide Fate, Target Plant Species Effects, and Population Response Computer Simulations: An Integrated Approach**-Philip A. Clifford and John H. Rodgers, Jr.; North Texas State University; Denton, Texas 76203
- 10:15am **DISCUSSION**
- 10:45am **COFFEE BREAK**
- 11:00am **BUSINESS MEETING**-Richard Comes, Presiding
- 11:30am **ADJOURNMENT OF 28th ANNUAL MEETING**
- 12:00 noon **Board of Directors Luncheon**
- 1:00pm **Board of Directors Meeting**

Honorary Member Nominations

Luciano Val "Lou" Guerra spent 30 years working various aspects of aquatic plant management in the State of Texas. Lou received his Bachelor's and Master's degrees from the University of Texas. His training was in aquatic biology and fishery science and ecology. He worked as a research biologist (4 years) and as an extension biologist (13 years) prior to becoming Director of the Noxious Vegetation Program for the State of Texas Department of Game and Wildlife. After 13 years in this position Lou retired and now resides at 15895 Cadillac Ave., San Antonio, TX, 78248. During his career Lou has written more than 50 articles dealing with various aspects of farm pond management and aquatic weed control in journals, popular magazines, and trade publications. Lou was instrumental in introducing salt water fish species into Texas waters as a means of biological control. Lou has been active in community affairs, being recognized as a "Hildago of San Antonio" for his community service

efforts. Lou has also been active in the Aquatic Plant Management Society, serving as President of the then Hyacinth Control Society in 1974-75, as Director in 1972-73, and as Newsletter Editor from 1979-84. Lou has received the Society's Distinguished Service Award.

John E. Gallagher's career has included a variety of weed science-related topics. He holds a B.S. degree in agronomy from Pennsylvania State University. During the early years of his career John worked for Amchem as their turfgrass weed control specialist. Later his interest turned to aquatic weed control and he became Product Development Manager for aquatic weed control products for the Union Carbide Agricultural Products Company. John has retired and now resides at 6301 Winthrop Dr., Raleigh, N.C., 27612. John has played an important role in the development of

weed science serving as President of the North East Weed Science Society (1968) and the Southern Weed Science Society (1982). He has served on the Board of Directors of the Aquatic Plant Management Society (1965-66), and on committees. He also regularly attends APMS annual meetings. John has written some 20 publications or abstracts dealing with various aspects of weed science. One recent area of interest involved regulatory matter relating to the use of 2,4-D in aquatic plant management. His expertise has been recognized and he has been a member of US EPA workshops, and an Interagency Taskforce. He has been a consultant on international aquatic weed control problems as well. In recognition of his service and contributions, John has received the Southern Weed Science Society Distinguished Service Award and has been elected a fellow of the Weed Science Society of America. John's outside interests include scuba diving, gardening, and a love of traditional Irish music.

Council For Agricultural Science and Technology

The Charles A. Black Award is to be awarded annually to a Food or Agricultural Scientist, actively engaged in research, who has made significant scientific contributions to his/her scientific field, and who is selected on the basis of significant abilities to communicate the importance of his/her work and of agricultural science to layman policymakers and media. These nominees may have demonstrated their ability to communicate either by written material, spoken material, use of television, radio, or other media. They should be recognized by their peers as scientists who have made significant contributions in their professional fields.

Nominations for the award can be made to the Council for Agricultural Science and Technology, 137 Lynn Avenue, Ames, Iowa 50010. Nominations must be made by September 1, 1988, should be accompanied by five letters of support, vita of the individual, and a two-page summary

prepared by the nominator describing the activities of the nominee and the reasons for consideration for the award. Announcements of the award will be published in NewsCAST, circulated to the members and to scientific and agricultural news media.

The award consists of \$1,000 cash, a commemorative plaque inscribed with the name and date of the award, and a \$500 travel allowance for the recipient to receive the award at the annual summer CAST Board meeting.

CAST is solely responsible for the selection of the individual to receive the award. Evaluation of the nominations will be made by a committee from the CAST Board, appointed by the CAST President. In order for individuals to receive the award, they must be present at the Board Meeting and be prepared to make a short verbal acceptance statement and provide a written copy which may be used by CAST in publicizing the annual winner.

Dean Martin Honored

"Dean F. Martin, CHEMS Center, University of South Florida, received the Civic Service Award of the Florida Section of the American Chemical Society at the regional meeting of the Society last November."

New Slide Set Available From UF, IFAS

The Florida Department of Natural Resources, in cooperation with the Center for Aquatic Plants and the Florida Aquatic Plant Management Society, have developed a slide program entitled "Managing Florida's Aquatic Plants." The show consists of 80, 35mm slides and a cassette tape for narration.

The slide presentation is intended as an educational tool for the general public regarding the management of aquatic plants in Florida waterways. A general history is discussed, as well as the who, how, and why of plant management.

If you or your management agency would benefit from this program, you can purchase a copy for \$15.00. Send a check or money order, made out to the University of Florida, to the following address. Please be sure to include program title in your request.

Instructional Materials Service
101 Rolfs Hall
University of Florida
Gainesville, FL 32611

Nominations of APMS Officers For 1988-89

Members of the Nominations Committee have nominated several outstanding candidates for the available positions, and the results of the mail ballot are:

FOR VICE PRESIDENT:
Joseph C. Joyce

FOR DIRECTOR (Two):
Steve De Kozolowski
G. Douglas Pullman

I am personally and professionally delighted by the selection as well as by the cooperation that I received from members.

D.F. Martin, Chairman
Nominations Committee

Spouses Activities...

New Orleans is an old city with an abundance of exciting and historic places to visit. The Fairmont Hotel is within comfortable walking distance of many of these intriguing and memorable locations. With this thought in mind, organization of structured activities for spouses has been limited, thereby allowing individuals to incorporate the many diverse and enjoyable activities into their schedules as would satisfy their desires.



Scheduled for Monday, July 11, is a French Quarter Strolling Tour and a visit to the Hermann-Grima House. You will put on your walking shoes and learn the legends of New Orleans' colorful past! From the heart of the Quarter, Jackson Square, guides will lead you on an exploration of 18th century Nouvelle Orleans. You'll journey under balustrades of spanish wrought iron and through porte cocheres into fountained creole gardens. After winding through the Quarters' narrow streets you will convene on St. Louis Street to tour the lovely Hermann-Grima House. This prominent French quarter homestead was built in 1831 by German immigrant Samuel Hermann. Upon completion of the tour of the house, the



...Activities include a visit to the Audubon Zoo, a French Market tour, shopping/site-seeing in the French Quarter...and of course, the night life of Bourbon Street.

guides will return you to the hotel.

Other activities you may want to consider for your schedule include: visit to Audubon Zoo via ferry from Canal Street dock; French Market tour with cafe' au lait and beignets at Cafe' du Monde; a ride on the St. Charles streetcar; shopping/site seeing in the French Quarter, River Front mall, Jax Brewery, etc.; a visit to some of the famous museums; a visit to Chalmette National Historic Park; and, of course, view or participate in the night-life of Bourbon Street.

Tour information will be available if you need assistance in scheduling these other activities later in the week.
Don Lee, Local Arrangements Chairman



Committees Schedule Meetings At New Orleans

The work that our committees undertake is vital to the success of the Society. Much of this work is done through correspondence or via telephone, but several chairman have requested committee meetings during our annual meeting. Such meetings will give the committee members an opportunity for group discussions and decisions on matters of concern. Those committees that will meet are the Bylaws and Resolutions, Student Affairs, Legislative, Publications, and Necrology. Some of these meetings are scheduled Sunday, July 10, and others are scheduled Monday, July 11. The time and place for each committee meeting will be given in the program. Please check the bulletin board for possible room changes that may occur after the program is printed.

R.D. Comes, President

Annual Meeting - from page 1

The remainder of the contributed papers will be presented in the afternoon sessions, one of which will emphasize "weed and water resource management under operational conditions". Bill Zattau, Jacksonville District, helped organize this section and will moderate it. The other Tuesday afternoon session will emphasize presentations about "Hydrilla". Lars Anderson, who helped organize this part of the program, will serve as moderator.

The Wednesday morning session

was organized, and will be conducted by John Rodgers, North Texas State University. The topic will be "The Use of Computers in Aquatic Plant Management". I understand at least some of the participants may bring computers for "show and tell" demonstration purposes.

I trust you are making plans to attend the 28th annual meeting of the APMS meeting at the Fairmont Hotel in New Orleans July 10-13th. See you there!!!

Richard Couch, Program Chairman

APPLICATION FOR MEMBERSHIP

There are three regular classes of membership available upon application made in accordance with the Charter adopted in 1961. These classes are:

- A. Active Membership \$ 25
B. Student Membership \$ 5
C. Commercial Sustaining Membership \$200

Name of Applicant _____ Spouse's Name _____

Home Address _____ Zip Code _____

Present Title & Employer _____

Business Address* _____ Zip Code _____

Business Phone _____ Home Phone _____

Amount of Remittance \$ _____ Signature of Applicant _____

Membership Type: ACTIVE: _____ COMMERCIAL SUSTAINING _____

STUDENT: _____ SUBSCRIPTION _____

*Please indicate address to be used by our business office.

AQUATIC PLANT MANAGEMENT SOCIETY, INC.

The Aquatic Plant Management Society, Inc., is an international organization of scientists, educators, administrators and concerned individuals interested in the management and control of aquatic plants. The membership reflects a diverse collection of federal, state and local agencies; researchers, professors and students from universities and colleges around the

world; corporations; commercial applicators; and others dedicated to promoting research and sharing information about aquatic plant management.

Originally called The Hyacinth Control Society, Inc., when founded in 1961, The Aquatic Plant Management Society, Inc., has evolved into a respected source of expertise in the

aquatics field. The Society has grown to include several regional or state chapters; and through these affiliates, annual international meetings, newsletters, and the *Journal of Aquatic Plant Management*, members keep abreast of the latest developments in biological, mechanical, chemical and integrated methods of aquatic plant management and control.

The Aquatic Plant Management Society, Inc.
P.O. Box 16
Vicksburg, MS 39180