## PROGRAM "

THIRTIETH
ANNUAL MEETING

THE

AQUATIC PLANT
MANAGEMENT
SOCIETY, INC.



RADISSON ADMIRAL SEMMES Mobile, Alabama July 15-18, 1990 Sunday Through Wednesday

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### THE PROGRAM

## THIRTIETH ANNUAL MEETING OF THE AQUATIC PLANT MANAGEMENT SOCIETY, INC.

July 15-18, 1990

## RADISSON ADMIRAL SEMMES Mobile, Alabama

#### **SUNDAY, JULY 15, 1990**

10:00 a.m. COMMITTEE MEETINGS

Board Rooms - To Be Announced

12:00 Noon BOARD LUNCHEON

Ballroom A

1:00 p.m. BOARD OF DIRECTORS MEETING

Cove Room

3:00 p.m.- REGISTRATION

6:00 p.m. Mezzanine

6:30 p.m.- PRESIDENT'S RECEPTION

7:30 p.m. Ballroom C and Mezzanine

Exhibits on Display

#### **MONDAY, JULY 16, 1990**

#### REGISTRATION

8:00 a.m. — 5:00 p.m. Mezzanine

#### EXHIBITS ON DISPLAY

9:00 a.m. — 5:00 p.m. Mezzanine

#### SESSION I

8:30 a.m. — 5:00 p.m. . Crystal Ballroom

Presiding: David Sutton, President

8:30 a.m. CALL TO ORDER

8:30 a.m. INVOCATION: G. Douglas Pullman

8:35 a.m. WELCOME: Honorable Michael C. Dow, Mayor,

City of Mobile, Alabama

8:45 a.m. ANNOUNCEMENTS: Joseph C. Joyce.

Program Chairman

8:50 a.m. APMS CHAPTER REPORTS Florida APMS: Brian Nelson Sonth Carolina APMS: Ken Manuel Midsouth APMS: Barry Smith\_ Midwest APMS: G. Douglas Pullman Texas APMS: Jovce Johnson Western APMS: David Spencer 9:20 a.m. PRESIDENTIAL ADDRESS: David Sutton 9:35 a.m. ANNUAL BUSINESS MEETING Presiding, David Sutton, President 10:15 a.m. BREAK 10:45 a.m. KEYNOTE ADDRESS: "Aquatic Plant Management - Where have we come from and where are we going?" Alva Burkhalter, Monsanto Corporation, 1515 Johnson Ferry Rd. Suite 20, Marietta, GA 30062. 11:15 a.m. HISTORY AND DEVELOPMENT OF AOUATIC WEED CONTROL IN THE UNITED STATES. William T. Haller and John Gallagher. University of Florida, Center for Aquatic Plants, 7922 NW 71st St., Gainesville, FL 32606 and 6301 Winthrop Dr., Raleigh, NC 27612. 11:45 a.m. ADJOURN FOR LUNCH

#### SPOUSES' BRUNCH

Guest Speaker — History and Sites of Mobile

10:30 A.M. Monday, July 16, 1990

Cove Room

#### IMPACTS OF AQUATIC WEEDS OR WHY WE DO WHAT WE DO

Presiding: Bill Zattau Operations Support Center, Jacksonville District Corps of Engineers, Jacksonville, Florida

Maintaining Navigation: One Aspect of the U.S. Army Corps of Engineers Role in Aquatic Plant Management. Bill Zattau and A. Galloway, Aquatic Plant

Operations Support Center, Corps of Engineers,

P.O. Box 4970, Jacksonville, FL 32232.

1:15 p.m. Aquatic Plants and Public Health Insects. Charlie Morris. Florida Medical Entomological Lab. Institute of Food and Agricultural Sciences. University of Florida, 200 9th Street SE, Vero Beach, FI. 32962-4657.

1:30 p.m. Economic Effects of Aquatic Weeds on Sport Fishing.

Wally Milon. Department of Food and Resource Economics, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL

1:45 p.m. Integrated Aquatic Plant Management in Flood Control Canais of South Florida.

> Joe Schweigart, Division of Resource Operations, South Florida Water Management District, P.O. Box 24680, West Palm Beach, FL 33416-4680.

2:00 p.m. Aquatic Weeds and Irrigated Agriculture in the Southwestern U.S.

> Randall Stocker. Technical Manager, Technical Services Department, Imperial Drainage District. Imperial, CA 92251.

2:15 p.m. Relationship of Aquatic Plants to Water Quality and Sportfish Populations.

> Daniel Canfield. Department of Fisheries and Aquaculture, Institute of Food and Agricultural Sciences, University of Florida, 7922 N.W. 71st St., Gainesville, FL 32606.

2:45 p.m. BREAK

#### **TUESDAY, JULY 17, 1990**

Local Chapter President's Breakfast 6:45 - 8:00 a.m. Stateroom C Sponsor: Vaient USA, Inc.

REGISTRATION

8:00 a.m. - 3:00 p.m.

**EXHIBITS ON DISPLAY** 8:00 a.m. - 3:00 p.m.

**SESSION II** 

8:30 a.m. - 3:30 p.m.

Crystal Ballroom

CONTRIBUTED PAPERS

Chairperson & Moderator: G. Douglas Pullman Cygnet Enterprises, Inc. Linden, Michigan

8:00 a.m. Influence of Spikerush Herbage on Growth of Hydrilla.

> David L. Sutton and K. M. Portier. University of Florida, Institute of Food and Agricultural Sciences, Ft. Lauderdale Research and Agricultural Center, 3205 College Ave., Ft. Lauderdale, FL 33314.

8:15 a.m. The Long Term Effect of 2,4-D on Non-Target Spatterdock.

> Charles Hanlon and W. T. Haller. Center for Aquatic Plants, Institute of Food and Agricultural Sciences, University of Florida, 7922 NW 71st Street, Gainesville, FL 32606.

8:30 a.m. Ecological Aspects of Redroot (Lacnanthes tinctoria Eli.) and its Control

> F. E. Katz and D. N. Riemer. Rutgers University, Dept. of Crop Science. Cook College, Lipman Hall, P.O. Box 231 New Brunswick, NJ Q8903-0231.

STUDENT PAPER

Uptake and Accumulation of Selenium by the Rooted Aquatic Macrophyte, Ruppia maritima,

> Frank C. Bailey, S. J. Klaine and A. W. Knight. Memphis State University and Department of Land, Air and Water Resources, University of California, Davis,

STUDENT PAPER

Effects of Fluridone Treated Irrigation Water on St. Augustine Grass.

> Wendy Andrew. Center for Aquatic Plants, 7922 N.W. 71 St., Gainesville, FL 32606 and Southwest Florida Water Management District, Brooksville, FL 33512-9712.

STUDENT PAPER

9:15 a.m. Comparative Effects of Antagonistic Ions on Glyphosate Efficacy on Torpedograss.

Greg McDonald, D. G. Shilling, W. T. Haller and M. A. Mossler. Department of Agronomy, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL 32611. STUDENT PAPER

GENERAL SESSION

3:00 p.m. Towards Improving Herbicide Application and Detection in Moving Water.

Alison M. Fox and W. T. Haller. Center for Aquatic Plants, University of Florida, 7922 N.W. 71st St., Gainesville, FL 32606.

3:15 p.m. The Use of Herbicides to Control Nuisance Aquatic Species in the Maintenance of Mitigation Areas. Jay R. Heidt, President Aqua-Terra Services, P.O.

Box 6698, Seffner, FL 33584-6698.

3:30 p.m. Herbicide Concentration and Exposure Time Relationships for the Control of Hydrilla and Enrasian Watermlifoil.

Mike Netherland and K. D. Getsinger. U.S. Army Corps of Engineers, Waterways Experiment Station, 3909 Halls Ferry Road, Vicksburg, MS 39180.

3:45 p.m. Eradication of Hydrilla from Eastman Lake and the Chowchilla River

Nate Dechoretz, California Department of Food and Agriculture, Sacramento, CA.

4:00 p.m. Sonar Update - Flowing Water Experimental Use Permit.

> David P. Tarver. DowElanco, 1499 Morning Dove Rd., Tallahassee, FL 32312.

4:15 p.m. Greenhouse Studies for Torpedograss Control with Fluridone.

> Paul L. Thayer, W. T. Haller, D. G. Shilling and C. G. Hanlon, Center for Aquatic Plants, Institute of Food and Agricultural Sciences. University of Florida, 7922 NW 71st St., Gainsville, FL 32606.

4:30 p.m. Opitimizing Diquat Treatment of Benthic Mats of Lyngbya wollel: A Fleid Study.

> Lawrence A. Dyck and B. J. Speziale. Department of Biological Sciences, Clemson University, Clemson, SC 29634-1903.

4:45 p.m. Polyploidy in Hydrilla verticillata.

Kenneth A. Langeland, D. G. Shilling and K. K. Steward. Center for Aquatic Plants, University of Florida, Gainesville and USDA/ARS Aquatic Weed Control Lab, Ft. Lauderdale, FL.

5:15 p.m. Federal Aquatic Plant Management Working Group Mardi Gras Oueens Room

5:00 p.m. ADJOURN

30 a.m. The Role of Iron in the Growth of Lyngbya maiescula. Elsie Gross and D. F. Martin. Institute for Environmental Chemistry, University of South Florida, 4202 E. Fowler Ave. Tampa, FL 33620-5250. STUDENT PAPER Critical P Concentration and Seasonal Variation in Biomass Allocation and Productivity of Myriophyllum aquaticum. Mark D. Sytsma and Lars W. J. Anderson. Department of Botany and USDA/ARS Aquatic Weed Research Laboratory, University of California, Davis, CA 95616. STUDENT PAPER 10:00 a.m. COFFEE BREAK Microbial Degradation of Fluridone. Mark Mossler. Department of Agronomy, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL 32611. STUDENT PAPER 10:30 a.m. Novel Effects of the Herbicide, Mariner, on the Reproductive Biology of Aquatic Weeds: Implications for Long-Term Management Strategies. Lars W. J. Anderson and Stuart Perry. USDA/ARS Aquatic Weed Control Research Lab, University of California, Davis, CA 95616. The Effects of Slow-Release Fertilizer Application on Wild Rice Production. Jan Miller and P. F. Lee. Department of Biology, Lakehead University. Thunder Bay, Ontario, Canada P7B 5E1. STUDENT PAPER Grass Carp — All or Nothing for Submersed Weed Control in Southern Waters. William T. Haller Center for Aquatic Plants, Institute of Food and Agricultural Sciences, University of Florida, 7922 NW 71st Street, Gainesville, FL 32606. Sediment Characteristics That May Influence Aquatic Plant Distributions in the United States. Burton C. Suedal and J. H. Rodgers, Jr. Department of Biology, University of Mississippi. University, MS 38677. STUDENT PAPER 1:30 a.m. Exotic Aquatic Plant Index. M. Christine Flynn, D. F. Martin and C. D. Morris. Institute for Environmental Studies, Department of Chemistry, University of South Florida, 4202 E. Fowler Ave., Tampa, FL 33620-5250. STUDENT PAPER The Peroxidase Response of Hydrilla verticillata, (Royle) to Sublethal Concentrations of Heavy Metals and Sulfometuron Methyl.

Tom Byl and S. J. Klaine. Department of Biology,

Memphis State University, Memphis, TN 38152.

STUDENT PAPER

12:00 Noon RECESS FOR LUNCH

#### INVITED AND CONTRIBUTED PAPERS

Chairperson & Moderator: John Barko
U. S. Army Corps of Engineers
Waterways Experiment Station
Vicksburg, Mississippi

1:00 p.m. Factors Influencing the Distribution and Growth of Lyngbya.

Barbara J. Speziale and L. A. Dyck. Department of Biological Sciences, Clemson University, Clemson. SC 29634-1903.

1:15 p.m. Effects of Sediment Fertility and Initial Plant Density on the Growth of Hydrilla and Potamogeton.
D. G. McFarland, J. W. Barko and N. J. McCreary. Environmental Laboratory, USAE Waterways Experiment Station, Vicksburg, MS 39180-6199.

1:30 p.m. Regenerative Capacity of Myriophyllum aquaticum Cultured in vitro.

Michael E. Kane and D. McDonnell.

Environmental Horticulture Department, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL 32611.

1:45 p.m. Interactions Between Two Pondweeds Across a Light Gradient.

David F. Spencer and G. G. Ksander. USDA/ARS Aquatic Weed Research Laboratory, University of California, Davis, Davis, CA 95616-8537.

2:00 p.m. Competition Among Different Species of Aquatic Macrophytes: A New Zealand Example. Mark R. Rattray. Department of Botany, University of Florida, 3157 McCarty Hall, Gainesville. FL 32611.

2:15 p.m. Growth and Photosyuthesis of Hydrilla as a Function of Temperature.

George Bowes and M. R. Rattray. Department of Botany and Center for Aquatic Plants, University of Florida, 3157 McCarty Hall, Gainesville, FL 32611.

2:30 p.m. The Ecology and Management of Eurasian
Watermilfoil in Lake George, New York.
John D. Madsen. Lewisville Aquatic Plant
Research Facility, Lewisville, TX 75056.

2:45 p.m. Revegetation of Northern Lucustrine Littoral Zones Dominated by Myriophyllum spicatum. Glenn Guntenspergen, J. Keough and D. Les. U.S. Fish and Wildlife Service. 1010 Gause Blvd, Slidell, LA 70458 and U. of Wisconsin, Center for Great Lakes Studies.

3:00 p.m. Ecology of Eurasian Watermilfoil Invasions and Declines.

Craig S. Smith. Environmental Lab, U.S. Army COE, 3909 Halls Ferry Rd., Vicksburg, MS 39180.

3:15 p.m. Role of the Littoral Zone in Lucustrine Nutrient Dynamics.

John W. Barko. Waterways Experiment Station, Environmental Laboratory, Vicksburg, MS 39180.

3:30 p.m. ADJOURN for evening activities at the Beach

4:00 p.m. Buses leave for Gulf Shores

#### WEDNESDAY, JULY 18, 1990

#### SESSION III

8:00 a,m — Noon Crystal Ballroom

Netaland

#### **CONTRIBUTED PAPERS**

Chairperson & Moderator: Ken Langeland Assistant Professor, Center for Aquatic Plants University of Florida — IFAS Gainesville, Florida

- 8:00 a.m. Response of Alligatorweed to Triclopyr Amine.
  Stratford Kay. North Carolina State University,
  Box 7620, Raleigh, NC 27695-7620.
- 8:15 a.m. Mechanical Control of Aquatic Plants via
  Rotovation.
  Thomas J. McNabb. Aquatics Unlimited, 2150
  Franklin Canyon Rd., Martinez, CA 94553.
- 8:30 a.m. Management of Waterhyacinths for Water Quality Improvement.

  David L. Haselow, Amasek, Inc., 402 High Point Dr., Cocoa, FL 32926 and W. F. DeBusk, Department of Soil Science, University of Florida, Gainesville, FL.
- 8:45 a.m. Diquat Residues Following Repetitive Treatments.

  Joseph C. Joyce, K. A. Langeland and Francois

  LaRoche. Center for Aquatic Plants, Institute for

  Food and Agricultural Sciences, University of

  Florida, Gainesville, FL 32606.
- 9:00 a.m. Effective Use of SONAR-SRP in Marginal
  Treatments for Control of Myriophyllum spicatum.
  John H. Rodgers and Philip A. Clifford.
  Department of Biology, Biological Field Station,
  University of Mississippi, University, MS 38677.
- 9:15 a.m. Herbicide Gravity Feeder.

  A. F. Khattab and Z. A. El-Gharably. Research Institute of Weed Control and Channel Maintenance. 22 Galaa Street, Boulag, Cairo, Egypt.
- 9:30 a.m. Effects of Application Rate and Exposure Time of Bensulfuron-methyl ou Hydrilia verticillata.

  Francois LaRoche and K. A. Langeland. Center for Aquatic Plants, Institute of Food and Agricultural Sciences, University of Florida, 7922 NW 71st Street, Gainesville, FL 32606.
- 9:45 a.m. Establishing Grass Carp Stocking Rates for Southeastern Ponds,

  Jay Shelton, Georgia Experimental Station, 1109
  Experimental Station, Griffin, GA 30223.
- 10:00 a.m. Recent Advancements in Mechanical Means of Aquatic Plant Management.
  Ronald W. Niznik and Brian D. Jackson.
  AquaDoc. 95 McNab Park Street, Brooks, Alberta, Canada TOJ OJO.
- 10:15 a.m. The Florida Aquatic Plant Story: A Public Education Video. Center for Aquatic Plants, University of Florida. 7922 N.W. 71st Street, Gainesville, FL 32606.

#### TUESDAY EVENING PROGRAM

**JULY 17, 1990** 

5:00 p.m. - 7:00 p.m. Fun on the Beach

Showers and changing facilities are available at the beach so plan on swimming and volleyball.

7:00 p.m. - 7:45 p.m. Seafood Dinner Gulf Shores State Park Pavilion

7:45 p.m. - 8:15 p.m. Awards & Presentations
President David Sutton

8:15 p.m. - 10:00 p.m. Special Entertainment Dance and Social

10:00 p.m. Buses Leave for Hotel

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10:45 a.m. BREAK

11:00 a.m. BUSINESS MEETING AND INSTALLATION OF

**1989-90 OFFICERS** 

President David Sutton, Presiding

11:30 a.m. ADJOURNMENT OF 30th ANNUAL MEETING

12:00 Noon BOARD OF DIRECTORS LUNCHEON AND

**MEETING** 

Cove Room

## 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.

Originally called the Hyacinth Control Society, Inc., when founded in 1961, The Aquatic Plant Management Society, Inc., is a respected source of expertise in the field of biological, mechanical, chemical, and other methods of aquatic plant management and aquatic plant sciences. The Society has grown to include several regional and state chapters; and through these affiliates, annual meetings, newsletters, and the Journal of Aquatic Plant Management, members keep abreast of the latest developments in the field.

The objectives of the society shall be to:

- Encourage scientific research and assist in promoting the control and management of aquatic plants through scientifically sound procedures.
- Recognize and promote scientific advancement of the members and facilitate the education of aquatic plant scientists through scholarships and other assistance programs.
- Publish the results of meritorious research and other information of value that pertains to aquatic plants and their management.
- Extend and develop public interest in, and understanding of, aquatic plant management problems and solutions.
- Cooperate with local chapters and other societies and organizations with similar and related interests.

#### APPLICATION FOR MEMBERSHIP IN:

## THE AQUATIC PLANT MANAGEMENT SOCIETY, INC.

WILLIAM N. RUSHING, Secretary-Treasurer
Post Office Box 2695
Washington, DC 20013-2695

There are four regular classes of membership available upon application made in accordance with the Charter. These classes are: (A) ACTIVE MEMBERSHIP (\$35.00); (B) STUDENT MEMBERSHIP (\$5.00); (C) SUSTAINING MEMBERSHIP (\$200.00); and (D) SUBSCRIPTION MEMBERSHIP (\$70.00).

Applicant's Name
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City, State, Zip
Home Telephone
Title
Employer
Business Address
City, State, Zip.
Business Telephone
Membership Class Desired:
a. Active (\$35,00):
b. Student (\$5.00):
c. Sustaining (\$200.00):
d. Subscription (\$70.00):
Amount of Remittance Herewith \$
Signature of Applicant
Date

(Detach and Return)

Please indicate by asterisk which address you wish the Secretary-Treasurer's Office to use.

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# FUTURE MEETING SITES OF THE AQUATIC PLANT MANAGEMENT SOCIETY, INC.

1991 — Dearborn, Michigan July 14-17

1992 — Central Florida July 12-15