THIRTIETH ANNUAL MEETING
THE
AQUATIC PLANT MANAGEMENT SOCIETY, INC.

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

6:00 p.m. MEETING OF THE DIRECTORS

6:30 p.m. PRESIDENT'S RECEPTION
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  
South Carolina APMS: Ken Manuel  
Midwest APMS: Barry Smith  
Midwest APMS: G. Douglas Pullman  
Texas APMS: Joyce 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 we are going?”  
Alva Burkhalter, Monsanto Corporation, 1515 Johnson Ferry Rd. Suite 20, Marietta, GA 30062.  

11:15 a.m.  HISTORY AND DEVELOPMENT OF AQUATIC 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  

1:00 p.m.  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, FL 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 32611.  

1:45 p.m.  Integrated Aquatic Plant Management in Flood Control Canals 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
GENERAL SESSION

3:00 p.m. Toward 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 Eurasian Watermilfoil.
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 Chocowilla River
Nate Dechoretz. California Department of Food and Agriculture, Sacramento, CA.

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

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

4:30 p.m. Optimizing Digest Treatment of Benthic Mats of Lyngbya wollei: A Field 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.

5:00 p.m. ADJOURN

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

TUESDAY, JULY 17, 1990

Local Chapter President’s Breakfast
6:45 — 8:00 a.m.
State Room C
Sponsor: Valent 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.

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 (Lactuana tinctoria EL.) 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 08903-0231.

STUDENT PAPER

9:00 a.m. 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.

STUDENT PAPER
9:30 a.m. The Role of Iron in the Growth of *Lyngbya majescula*.
Elsie Gross and D. F. Martin. Institute for Environmental Chemistry, University of South Florida, 4202 E. Fowler Ave. Tampa, FL 33620-5250.

STUDENT PAPER

9:45 a.m. Critical P Concentration and Seasonal Variation in Biomass Allocation and Productivity of *Myriophyllum aquaticum*.
Mark D. Sysma 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

10:15 a.m. 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. \textit{The Effects of 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.

STUDENT PAPER

10:45 a.m. The Effects of Slow-Release Fertilizer Application on Wild Rice Production.

STUDENT PAPER

11:00 a.m. \textit{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.

STUDENT PAPER

11:15 a.m. 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

11:30 a.m. \textit{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

11:45 a.m. \textit{The Peroxidase Response of *Hydrilla verticillata*, (Royle) to Sublethal Concentrations of Heavy Metals and Sulfoateuron Methyl.}
Tom Byl and S. J. Klaine. Department of Biology, Memphis State University, Memphis, TN 38152.

STUDENT PAPER

12:00 Noon \textit{RECESS FOR LUNCH

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\textbf{INVITED AND CONTRIBUTED PAPERS}

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

1:00 p.m. \textit{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. \textit{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. \textit{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. \textit{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, CA 95616-8537.

2:00 p.m. \textit{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. \textit{Growth and Photosynthesis 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. \textit{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. \textit{Revegetation of Northern Lacustrine Littoral Zones Dominated by *Myriophyllum spletum.*}

3:00 p.m. \textit{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. \textit{Role of the Littoral Zone in Lacustrine Nutrient Dynamics.}
John W. Barko. Waterways Experiment Station, Environmental Laboratory, Vicksburg, MS 39180.

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

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

SPONSORS for the Evening Entertainment
AgroInz, Inc.
Applied Aquatic Management, Inc.
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WEDNESDAY, JULY 18, 1990

SESSION III
8:00 a.m. - Noon
Crystal Ballroom

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
Rustication.
Thomas J. McNabb. Aquatics Unlimited, 2150
Franklin Canyon Rd., Martinez, CA 94553.

8:30 a.m. Management of Waterhyacinth 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 Dalia Street, Boulag, Cairo,
Egypt.

9:30 a.m. Effects of Application Rate and Exposure Time of
Bensulfuron-methyl on Hydrilla 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.
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:

1. Encourage scientific research and assist in promoting the control and management of aquatic plants through scientifically sound procedures.
2. Recognize and promote scientific advancement of the members and facilitate the education of aquatic plant scientists through scholarships and other assistance programs.
3. Publish the results of meritorious research and other information of value that pertains to aquatic plants and their management.
4. Extend and develop public interest in, and understanding of, aquatic plant management problems and solutions.
5. 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 ____________________________
Home Address ________________________________
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 ____________________________

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

(Detach and Return)
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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