

Program

TWENTY-THIRD
ANNUAL MEETING

**THE AQUATIC
PLANT MANAGEMENT
SOCIETY, INC.**



**DUTCH RESORT HOTEL
Lake Buena Vista, Florida, USA
July 10-13, 1983
Sunday through Wednesday**

BOARD OF DIRECTORS 1982-1983

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Union Carbide Agricultural Products Company, Inc.
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Jackson, Mississippi 39211

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P.O. Box 708,
Greenfield, Indiana 46140

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345 Courtland Street
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304 Newell Hall
Gainesville, Florida 32611

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134 Braniff
San Antonio, Texas 78216

THE PROGRAM



TWENTY-THIRD ANNUAL MEETING
OF
THE AQUATIC PLANT MANAGEMENT
SOCIETY, INC.
July 10-13, 1983
Dutch Resort Hotel
Lake Buena Vista, Florida, U.S.A.

SUNDAY, JULY 10, 1983

12:00 Noon **Board Luncheon**
Netherlands A

1:00 P.M. **Meeting of the Board of Directors-**
Netherlands B

3:00 P.M. - **Registration**
6:00 P.M. **Main Lobby**

6:30 P.M. - **President's Reception**
7:30 P.M. **Netherlands H, I, J, and K**

MONDAY, JULY 11, 1983

8:00 A.M. - 5:00 P.M.
Registration - Foyer of Netherlands E, F, AND G

9:00 A.M. - 5:00 P.M.
Exhibits on Display - Netherlands I, J, and K

GENERAL SESSION

9:00 A.M. - 12 Noon
Netherlands E, F, and G
Presiding: Emory McKeithen, President

9:00 A.M. **Call to Order**
9:05 A.M. **Invocation**
9:10 A.M. **Presidential Address:** Emory McKeithen,
President APMS
9:30 A.M. **Announcements:** A. Leon Bates, Program
Chairman and President-Elect, APMS
9:40 A.M. **APMS Chapter Reports**
Florida APMS - Carlton Layne, President
Midsouth APMS - David R. Bayne, President
Midwest APMS - Nick Gowe, President-Elect
South Carolina APMS - Mac Watson, President
Western APMS - Leslie Sonder, President

- 10:15 A.M. **Which Aquatic Plant Will Be The Next Nasty Weed.**
Professor Christopher D.K. Cook, Director of the Institute for Systematic Botany and Botanical Garden, Zurich, Switzerland
- 10:45 A.M. **EPA Update.**
Roy P. Clark, Pesticides and Toxic Substances Branch, U.S. Environmental Protection Agency, Region IV, Atlanta, Georgia
- 11:00 A.M. **Herbicidal Control of Aquatic Vegetation in Rangeland Dugouts.**
John R. Allen and Slyver Smoliak, Agriculture Canada Research Station, Lethbridge, Alberta, Canada
- 11:15 A.M. **Requirements to Register Rodeo® Herbicide for Aquatic Uses.**
S.L. Kimball, Monsanto Agricultural Products Co., St. Louis, Missouri
- 11:30 A.M. **Aquatic Plants and Wetland Disposal.**
Mickey Sheffield and Carol Lotspeich, Sheffield Engineering and Associates, Inc., Orlando, Florida and Lotspeich and Associates, Winter Park, Florida
- 11:45 A.M. Recess for lunch

GENERAL SESSION

1:30 P.M. - 4:30 P.M.

Presiding: David L. Sutton

University of Florida, Agricultural Research and Education Center, Fort Lauderdale, Florida

- 1:30 P.M. **The Use of Herbivorous Fish in Eastern Europe and the Soviet Union.**
Karol Opuszynski, Director of the Inland Fisheries Institute, Warsaw, Poland
- 1:45 P.M. **A New Look at the Striped Mullet, *Mugil cephalus* L. as a Potential Biological Control Agent for Algae (Student Presentation).**
Gerald E. Fensch and John A. Osborne, Dept. of Biological Sciences, University of Central Florida, Orlando, Florida
- 2:00 P.M. **Hybrid Grass Carp in California: An Update on Research.**
Paul R. Beaty, Hybrid Grass Carp Research Team, Coachella Valley Water District, Coachella, California
- 2:15 P.M. **The Efficacy of the 1981 Hybrid Grass Carp at Weed Control (Student Presentation).**
Janine L. Callahan and John A. Osborne, Dept. of Biological Sciences, University of Central Florida, Orlando, Florida
- 2:30 P.M. **The Efficacy and Environmental Impact of Hybrid Grass Carp on Lake Jasmine, Florida: First Year Post-stocking Results.**
J.R. Cassani, W.E. Caton, and T.W. Miller, Jr., Lee County Hyacinth Control District, Fort Myers, Florida
- 2:45 P.M. **Remote Sensing as a Tool for Monitoring the Efficacy of Grass Carp.**
R.D. Martyn, W.W. Snell, P.W. Bottoli, and R.L. Noble, Texas A&M University, College Station, Texas

3:00 P.M.

3:15 P.M.

3:30 P.M.

3:45 P.M.

4:00 P.M.

4:15 P.M.

4:30 P.M.

4:45 P.M.

6:00 P.M.

BREAK

Hydrilla Consumption by Hybrid Grass Carp Related to Water Temperature and Size Class of Fish.
Neal Hagstrom, USDA, Hydrilla Control Research Program, Imperial Irrigation District, Conservation Research Center, Brawley, California

Induction of Sessile-Stage Formation of the Red Tide Organism *Ptychodiscus brevis* by Materials Elaborated by *Gomphosphaeria aponina*.

Ligia Pabon de Majid and Dean F. Martin, Chemical and Environmental Management Services (CHEMS) Center, University of South Florida, Tampa, Florida

Detritus Production and Decomposition of the Waterhyacinth (*Eichhornia crassipes*).

T.A. DeBusk and F.E. Dierberg, Harbor Branch Foundation, Ft. Pierce, Florida and Florida Institute of Technology, Melbourne, Florida

Physiological Responses of *Hydrilla* to Treatment by the Inert Dye, Aquashade (Student Presentation).

Denise C. Manker and Dean F. Martin, Chemical and Environmental Management Services (CHEMS) Center, University of South Florida, Tampa, Florida

Activity of Naturally Occurring *Hydrilla* Growth Inhibitors.

John Barltrop, Barbara B. Martin and Dean F. Martin, Chemical and Environmental Management (CHEMS) Center, University of South Florida, Tampa, Florida

Discussion

Adjourn

Bar-B-Que

Orange County Sportsman's Club

TUESDAY, JULY 12, 1983

8:30 A.M. - 5:00 P.M.

Registration - Foyer of Netherlands E, F, and G

8:30 A.M. - 5:00 P.M.

Exhibits on Display - Netherlands I, J, and K

GENERAL SESSION

8:30 A.M. - 12 Noon

Netherlands E, F, and G

Presiding: Randall K. Stocker

USDA, Hydrilla Control Research Program, Imperial Irrigation District, Brawley, California

8:30 A.M.

Seasonal Biomass Patterns of *Hydrilla verticillata* and *Egerla densa* in Impoundments in Piedmont, North Carolina.

G.J. Pesacreta, D. Schiller, R. Hodson, S. Harlan, and G. Davis, Dept. of Zoology, North Carolina State University and Carolina Power and Light Company, and Department of Biology, East Carolina University

- 8:45 A.M. **Culture of Hydrilla in a Hydrosol Composed of Sand and Slow-Release Fertilizers.**
David L. Sutton, University of Florida, Agricultural Research and Education Center, Fort Lauderdale, Florida
- 9:00 A.M. **Production and Mortality of Aquatic Macrophytes as Measured by a Hierarchical Cohort Method.**
Pam Tazik and Kathy Ewing, Illinois Natural History Survey, Champaign, Illinois
- 9:15 A.M. **Prediction of Chlorophyll *a* Concentration in Lakes; The Importance of Aquatic Macrophytes.**
D.E. Canfield, J.V. Shireman, and W.T. Haller, Center for Aquatic Weeds, University of Florida, Gainesville, Florida
- 9:30 A.M. **Aeration of a Small, Hypereutrophic Florida Lake: Changes in Physical-Chemical Parameters, Primary Production and Phytoplankton Standing Crops.**
Bruce C. Cowell and Clinton J. Dawes, Dept. of Biology, University of South Florida, Tampa, Florida
- 9:45 A.M. **Life History of the Filamentous Alga *Pithophora oedogonia* and Resistance to Copper.**
Carole A. Lembi, Steven W. O'Neal, and David F. Spencer, Dept. of Botany and Plant Pathology, Purdue University, West Lafayette, Indiana and Dept. of Biology, Indiana University-Purdue University, Indianapolis, Indiana
- 10:00 A.M. **Relative Tolerance of Filamentous Green Algae to Simazine.**
Steven W. O'Neal and Carole A. Lembi, Dept. of Biology, Indiana University-Purdue University, Indianapolis, Indiana and Purdue University, West Lafayette, Indiana
- 10:15 A.M. **Modelling the Growth of the Filamentous Alga *Pithophora oedogonia*.**
David F. Spencer and Carole A. Lembi, Dept. of Biology, Indiana University-Purdue University, Indianapolis, Indiana and Dept. of Botany and Plant Pathology, Purdue University, West Lafayette, Indiana
- 10:30 A.M. **BREAK**

ANNUAL BUSINESS MEETING

11:00 A.M. - 12:00 Noon

Presiding: Emory McKeithen, President

12:00 Noon **LUNCH**

GENERAL SESSION

1:15 P.M. - 5:00 P.M.

Presiding: Carlton R. Layne

Environmental Protection Agency, Lakeland, Florida

- 1:15 P.M. **An Automatic Herbicide/Algaecide Application System for Recirculating Aquascapes and Irrigation Reservoirs.**
Terry McNabb, American Lake and Canal, Concord, California
- 1:30 P.M. **A Review of Cutrine-Plus Field Evaluations, Labeling, and Uses.**
Jim Schmidt, Applied Biochemists, Inc., Mequon, Wisconsin

1:45 P.M.

Growth and Photosynthetic Rates of Planktonic Algae Following Treatment with Aquashade.

David F. Spencer, Department of Biology, Indiana University-Purdue University, Indianapolis, Indiana

2:00 P.M.

Removal of Nutrients from a Simulated Wastewater Using Aquatic Macrophytes.

K.R. Reddy and W.F. DeBusk, Agricultural Research and Education Center Institute of Food and Agricultural Sciences, University of Florida, Sanford, Florida

2:15 P.M.

Development Constraints: Effect on Rates of Population Growth in Waterhyacinths.

Maxine A. Watson, Dept. of Biology, Indiana University, Bloomington, Indiana

2:30 P.M.

Studies on the Histological Damage of *Eichhornia crassipes* due to Heavy Metal Uptake.

Kaiser Jamil, Vinay Kumar, and G. Thyagarajan, Regional Research Laboratory (CSIR), Hyderabad, India and Division of Entomology and Toxicology, Regional Research Laboratory, Hyderabad, India

2:45 P.M.

Isolation and Pathogenicity of *Cercospora* sp. from Waterhyacinth in Lake Conroe, Texas.

R.D. Martyn, Dept. of Plant Sciences, Texas A&M University, College Station, Texas

3:00 P.M.

BREAK

3:15 P.M.

Status of Development of *Cercospora rodmanii* as a Biological Control Agent for Waterhyacinth.

R. Charudattan and F.M. Hofmeister, Plant Pathology Department, Center for Aquatic Weeds, University of Florida, Gainesville, Florida

3:30 P.M.

Wing Muscle Development in Waterhyacinth Weevils.

Gary Buckingham, Biological Pest Control Research Unit, USDA/ARS, Gainesville, Florida

3:45 P.M.

Environmental Impact of 2,4-D Control of Eurasian Watermillfoil.

D.S. Painter, B.F. Scott, E. Nagy, M. Dickman, and A.J. Niimi, Environment Canada and Fisheries and Oceans Canada, and Brock University, Ontario, Canada

4:00 P.M.

Herbicide Residues in the Sacramento Delta Following Applications of Diquat and 2,4-D for Control of Waterhyacinth.

Lars W.J. Anderson, C. Tennis, and L. Thomas, USDA/ARS, University of California-Davis, U.S. Bureau of Reclamation, and Dept. of Boating and Waterways, Sacramento, California

4:15 P.M.

Evaluations of Control Release Herbicides for Aquatic Weed Control.

Thai K. Van and Kerry K. Steward, USDA/ARS, Fort Lauderdale, Florida

4:30 P.M.

The Effect of Sonar on the Submersed Vegetation in two Central Florida Lakes.

John A. Osborne, Department of Biological Sciences, University of Central Florida, Orlando, Florida

4:45 P.M.

Status Report of Sonar, 1983.

David P. Tarver, Elanco, Tallahassee, Florida

5:00 P.M.

ADJOURN

6:30 P.M.

Cocktail Hour - Netherlands H, I, J, and K

7:30 P.M.

Annual Banquet - Netherlands A, B, and C



TUESDAY EVENING

July 12, 1983

6:30 P.M.
Cocktail Hour

Netherlands, H, I, J, and K

7:30 P.M.
Annual Banquet

Netherlands A, B, and C

Entertainer

Jane Floyd Matheny



WEDNESDAY, JULY 13, 1983

8:30 A.M. - 11:30 A.M.

Exhibits on Display - Netherlands I, J, and K

GENERAL SESSION

8:30 A.M. - 11:30 A.M.

Netherlands E, F, and G

Presiding: Dean Martin

University of South Florida, Tampa, Florida

- 8:30 A.M. **Effects of Water Quality on Control of Hydrilla by AQUATHOL® "K" Aquatic Herbicide.**
Bernalyn McGaughey, Pennwalt Corporation, Tacoma, Washington
- 8:45 A.M. **Explants of *Hydrilla verticillata* in Bioassays for Herbicides and Plant Growth Regulators.**
Lars W.J. Anderson, USDA/ARS, Aquatic Weed Control Research Laboratory, University of California, Davis, California
- 9:00 A.M. **Effects of Glyphosate on Hydrilla in Dewatered Irrigation Canals and Ponds.**
Randall K. Stocker, USDA, Hydrilla Control Research Program, Imperial Irrigation District, Conservation Research Center, Brawley, California
- 9:15 A.M. **Prediction of Maximum Macrophyte Depth from Secchi Disc Transparency.**
K.A. Langeland, D.E. Canfield, and W.T. Haller, Center for Aquatic Weeds, University of Florida, Gainesville, Florida
- 9:30 A.M. **Establishing Slender Spikerush (*Eleocharis acicularis* (L.) R. & S.) in Canals.**
R.R. Yeo and J.R. Thurston, USDA/ARS, Aquatic Weed Control Research Laboratory, University of California, Davis, California
- 9:45 A.M. **Silicone Benthic Barriers: A New Concept in Aquatic Weed Control.**
G. Douglas Pullman and Michael G. Elias, Dow Gardens and Dow Corning Corp., The Dow Gardens, Midland, Michigan
- 10:00 A.M. **A Ropewick Applicator for Ditchbanks.**
R.C. Comes, L.Y. Marquis, and A.D. Kelley, USDA/ARS, Irrigated Agricultural Research and Extension Center, Prosser, Washington
- 10:15 A.M. **Effects of Mechanical Control of Aquatic Vegetation on Juvenile Fish at Saratoga Lake, New York.**
Gerald F. Mikol, Bureau of Water Research, New York State Dept. of Environmental Conservation, Albany, New York
- 10:30 A.M. **Isozymes as Genetic Markers in the Study of Aquatic Plants.**
Richard P. Wain, William T. Haller, and Dean F. Martin, Center for Aquatic Weeds, University of Florida, Gainesville, Florida and Chemical and Environmental Management Services Center, University of South Florida, Tampa, Florida
- 10:45 A.M. **BREAK**

FINAL BUSINESS MEETING

11:00 A.M. - 11:30 A.M.

Presiding: Emory McKeithen, President

11:30 A.M.

Adjourn Twenty-Third Annual Meeting

BOARD OF DIRECTORS

12:00 Noon Board Luncheon
Netherlands A

1:00 Meeting of Board of Directors
Netherlands B

NOTES

THE AQUATIC PLANT MANAGEMENT SOCIETY, INC.

Post Office Box 16, Vicksburg, MS 39180

APPLICATION FOR MEMBERSHIP

There are four regular classes of membership available upon application made in accordance with the Charter adopted in 1961. These classes are: (A) ACTIVE MEMBERSHIP (\$20.00); (B) STUDENT MEMBERSHIP (\$5.00); (C) CORPORATE MEMBERSHIP (\$100.00); and (D) COMMERCIAL SUSTAINING MEMBERSHIP (\$200.00).

Applicant's Name _____

Spouse's Name _____

Home Address _____

City, State, Zip _____

Home Telephone _____

Present Title _____

Present Employer _____

Business Address _____

City, State, Zip _____

Business Telephone _____

Membership Class Desired _____

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)

Affiliated Chapters

COMMERCIAL SUSTAINING MEMBERS

AMERICAN LAKE AND CANAL
Concord, California
APPLIED BIOCHEMISTS, INC.
Mequon, Wisconsin
AQUAMARINE CORPORATION
Waukesha, Wisconsin
AQUASHADE, INC.
Eldred, New York
ELANCO PRODUCTS COMPANY
Indianapolis, Indiana
J.L.B. INTERNATIONAL CHEMICALS, INC.
Vero Beach, Florida
JOYCE ENVIRONMENTAL CONSULTANTS, INC.
Casselberry, Florida
MAGNA CORPORATION
Bakersfield, California
MONSANTO AGRICULTURAL
PRODUCTS COMPANY
St. Louis, Missouri
MUDCAT DIVISION/
NATIONAL CAR RENTAL
East Longmeadow, Massachusetts
NALCO CHEMICAL COMPANY
Oak Brook, Illinois
PENNWALT CORPORATION
Philadelphia, Pennsylvania
SOUTHERN MILL CREEK
PRODUCTS COMPANY, INC.
Tampa, Florida
UNION CARBIDE AGRICULTURAL
PRODUCTS COMPANY
Research Triangle Park, North Carolina

Florida Aquatic Plant Management Society
Carlton R. Layne, President
U.S. EPA
124 South Tennessee Ave. B-2
Lakeland, Florida 33802
1983 Meeting-Holiday Inn
Plant City, Florida 12-14 October

Midsouth Aquatic Plant Management Society
David R. Bayne, President
Department of Fisheries and Allied Aquacultures
Swingle Hall
Auburn University, Alabama 36849
(205) 826-4786
1983 Meeting-Charter House Inn,
Rainbridge, Georgia 12-14 October

Midwest Aquatic Plant Management Society
Nick Gowe, President-Elect
Scientific Aquatic Weed Control
16525 Orchard Valley Dr.
Gurnee, Illinois 60031
1983 Meeting - To Be Announced.

South Carolina Aquatic Plant Management Society
Mac Watson, President
S.C. Wildlife and Marine Resources Department
P.O. Box 167
Columbia, South Carolina 29202
1983 Meeting - Clemson University
Outdoor Laboratory, Clemson, South Carolina,
25-26 August

Western Aquatic Plant Management Society
Les Sonder, President
California Department of Food and Agriculture
1220 N Street, Room A357
Sacramento, California 95814
1983 Meeting - Already Held.



LADIES' PROGRAM

SUNDAY, JULY 10, 1983

6:30 P.M. - 7:30 P.M.
President's Reception
Netherlands H, I, J & K

MONDAY, JULY 11, 1983

12:00 Noon
Ladies' Luncheon
Netherlands A

6:00 P.M.
Bar-B-Que
Orange County Sportsman's Club

TUESDAY, JULY 12, 1983

6:30 P.M.
Cocktail Hour
Netherlands H, I, J & K

7:30 P.M.
Annual Banquet
Netherlands A, B & C



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

- 1984-** Richmond Hyatt House
Richmond, Virginia, U.S.A.
July 15-18
- 1985-** Hotel Vancouver
Vancouver, British Columbia,
CANADA
July 21-24
- 1986-** Sundial Beach and Tennis Resort
Sanibel, Florida, U.S.A.
July 13-16
- 1987-** Hyatt Regency Savannah
Savannah, Georgia, U.S.A.
July 12-15
- 1988-** New Orleans, Louisiana, U.S.A.