## Program

SEVENTEENTH ANNUAL MEETING

# THE AQUATIC PLANT MANAGEMENT SOCIETY, INC.

Formerly
The Hyacinth Control Society



L'hotel SOFITEL

Minneapolis, Minnesota

July 17-20, 1977

Sunday through Wednesday

#### **BOARD OF DIRECTORS 1976-77**

#### **OFFICERS**

Robert W. Geiger, President

The 3M Company 100 Valley Lane Hastings, Minnesota 55033

Donald V. Lee, First Vice President

Louisiana Wildlife & Fisheries 636 Maxine Drive Baton Rouge, Louisiana 70808

Julian J. Raynes, Second Vice President United States Army Corps of Engineers

1567 Knob Hill Drive, N.E. Atlanta, Georgia 30329

Ray A. Spirnock, Past President

Joyce Environmental Consultants, Inc. 414 Live Oak Boulevard Casselberry, Florida 32707

Brandt G. Watson, Treasurer

Collier Mosquito Control District Post Office Box 7069 Naples, Florida 33940

David L. Sutton, Editor

University of Florida 3205 S.W. 70th Avenue Fort Lauderdale, Florida 33300

T. W. Miller, Jr., Secretary

Lee County Hyacinth Control District Post Office Box 2237 Fort Myers, Florida 33902

#### DIRECTORS

Leslie E. Bitting, Sr.

Old Plantation Water Control District 8800 N. New River Canal Road Plantation, Florida 33324

Roy P. Clark

U. S. Environmental Protection Agency 1421 Peachtree Street, N. E. Atlanta, Georgia 30309

Harry McGill

General Development Corporation Post Office Box 2507 Port Charlotte, Florida 33952

William N. Rushing

United States Army Corps of Engineers Post Office Box 631 Vicksburg, Mississippi 39180

Kerry K. Steward

USDA, ARS, SRAO 3205 S. W. 70th Avenue Fort Lauderdale, Florida 33314

Nelson Virden

Virden Weed Control Service Route 3, Box 414 Jackson, Mississippi 39213

#### NEWSLETTER EDITOR

L. V. Guerra

Texas Parks & Wildlife Department 134 Braniff San Antonio, Texas 78204

## THE PROGRAM



SEVENTEENTH ANNUAL MEETING

of

THE AQUATIC PLANT

MANAGEMENT SOCIETY, INC.

July 17-20, 1977

L'hotel SOFITEL Minneapolis, Minnesota

## **SUNDAY, JULY 17, 1977**

1:30 P.M. - Board of Directors Meeting Parlor

3:00 P.M. - 6:00 P.M. - Registration - Foyer

6:30 P.M. - 7:30 P.M. - Reception - Garden Court & Foyer Registration Required for Admission

## **MONDAY, JULY 18, 1977**

8:00 A.M. - 5:00 P.M. - Registration - Foyer Commercial Exhibits - Section 3

## **GENERAL SESSION**

9:00 A.M. - 9:50 A.M.
Sections 4 & 5
Presiding: R. W. Geiger, President
The Aquatic Plant Management Society, Inc

9:00 A.M. - Call to Order:

9:05 A.M. - Invocation: Les Bitting, Old Plantation Water Control District

9:10 A.M. - Keynote Address:

"Conservation of Aquatic Resources"
Robert L. Herbst, Assistant Secretary
Fish and Wildlife and Parks, Department
of the Interior, Washington, D.C.

9:40 A.M. - Presidential Comments: R. W. Geiger, President

"The Effects of Abscisic Acid on Ger-9:00 A.M. pondweed " of American mination 11:00 A.M. - 12:00 Noon (Potamogeton nodosa) and Sago Pond-Sections 4 & 5 weed (P. pectinatus) Winterbuds" - Lars Anderson, ARS, Denver, Colorado "Simazine Residue Levels in Irrigation 9:15 A.M. -Water Following Ditchbank Application 12:05 P.M. -Recess for Lunch for Weed Control" - John Pringle, Lars Anderson, Roger Raines and David South Sisneros, ARS, Denver, Colorado "Lake Conroe Hydrilla Research Program \_\_ 9:30 A.M. and Results" - L. V. Guerra, Texas Parks UTILIZATION OF and Wildlife Department, San Antonio, **AQUATIC PLANTS** Texas "Concentrated Sulfuric Acid: Aquatic = 9:45 A.M. -1:30 P.M. - 5:30 P.M. Floricide or Faunacide?" - Lowell L. Sections 4 & 5 Trent, Rue Hestand and Chris Carter, Fisheries Research Laboratory, Eustis, Aguamarine Corp. Florida Waukesha, Wisconsin "Polymer Application of Aquatic Her-10:00 A.M. bicides" - George E. Wortley, Jr., Nalco 1:30 P.M. -Chemical Company, Longwood, Florida "Preparation of Controlled Release 10:15 A.M. -Aquatic Herbicides" - Mary R. Dykes Vicksburg, Mississippi (Student) and Frank W. Harris, Depart-1:45 P.M. ment of Chemistry, Wright State University, Dayton, Ohio "Aquatic Plant Management: Some Ex-10:30 A.M. periences in Illinois" - Robert C. 2:00 P.M. -Hiltibran, Aquatic Biology Section, Natural History Survey, Urbana, Illinois Refreshment Break - Foyer 10:45 A.M. -Canada 2:15 P.M. to, Ontario, Canada 2:30 P.M. -2:45 P.M. -Lauderdale, Florida

Presiding: R. W. Geiger, President The Aquatic Plant Management Society, Inc.

Garden Court of the Hotel Radisson

# SESSION ON ENVIRONMENTAL

Presiding: C. Brate Bryant,

"The Role of Aquatic Plant Utilization in Aquatic Plant Control" - J. L. Decell, USAE Waterways Experiment Station,

"General Development Corporation's Pilot Program on Plant Utilization" -Harry McGill, General Development Corp., Port Charlotte, Florida

"Utilization of Milfoil for Compost and Animal Fees" - Ivy Wiles and J. H. Neil, Ministry of the Environment, Limnology and Toxicity Section, Rexdale, Ontario,

"The Utilization of Aquatic Plants for Animal Feeds" - J. H. Burton, A. J. Muztar, S. J. Slinger and J. N. Neal, Department of Nutrition, University of Guelph, Guelph, Ontario and Limnos Ltd., Toron-

"Hydrilla Silage Production, Composition and Acceptability" - Larry O. Bagnall, Kathryn E. Dixon and James F. Hentges, Jr., Agricultural Engineering Department and Animal Science Department, University of Florida, Gainesville, Florida

"The Effect of pH and Pi on Growth of Duckweed" - Susan K. Gland and D. L. Sutton, University of Florida, ARC, Ft.

3:00 P.M. -Refreshment Break - Foyer 3:15 P.M. -

"Duckweeds for Renovation of Wastewater Effluent" - D. L. Sutton, University of Florida, ARC, Ft. Lauderdale, Florida

| 3:30 P.M     | "Macrophyte Harvest Techniques for<br>Management of Waste Water Renovation   |    |    |   |
|--------------|--|----|----|---|
|              | Systems" — Darrell L. King and Joseph<br>L. Ervin, Institute of Water Research,<br>Michigan State University, East Lansing,<br>Michigan  | 11 |    |   |
| 3:45 P.M     | "Growth Response of Cattail (Typha latifolia) to Sewage Effluent" — W. Harold Ornes and D. L. Sutton Botany Department, Iowa State University, Ames and ARC, Ft. Lauderdale, Florida           | L  |    |   |
| 4:00 P.M     | "Energy Recovery from Vegetation Wastes" — E. M. Dale, Agricultural Energy Corp., Ludington, Michigan  | _  |    |   |
| 4:15 P.M     | "Nutritional Composition of Water-<br>hyacinths Grown on Domestic Sewage"<br>— B. C. Wolverton and Rebecca Mc-<br>Donald, NASA, National Space<br>Technology Laboratories, Bay St. Louis,      | -  | •  |   |
| 4:30 P.M     | "Utilization and Control of Waterhyacin-<br>ths by Geese" — H. R. Wilson, B. L. Damron, R. H. Harms and W. G. Nesbeth, Poultry Science Department, University of Florida, Gainesville, Florida | ď  |    |   |
| 4:45 P.M     | "Waterhyacinths for the Removal of Lead, Mercury and Cadmium from Polluted Waters" — B. C. Wolverton, Rebecca McDonald, NASA, National   |    |    |   |
| 5:00 P.M     | Space Technology Laboratories, Bay St.<br>Louis, Mississippi<br>"Design of a Pilot Hyacinth Production   |    |    |   |
| 5:15 P.M     | System" — H. Naesekeyl, Boyle Engineering Corp., Orlando, Florida "Protein Production from Waterhyacinth   | n  |    |   |
| J. 13 T .WI. | and Hydrilla Juices" — Larry O. Bagnall,<br>Agricultural Engineering Department,<br>University of Florida, Gainesville, Florida  |    |    |   |
|              |  | -  | *, | - |
|              |  |    |    |   |
|              |  |    |    |   |
|              |  |    |    |   |



## Tuesday Evening July 19, 1977

6:30 P.M.

## Reception

Garden Court and Foyer

7:45 P.M.

## **Annual Banquet**

Sections 4 & 5



## WEDNESDAY, JULY 20, 1977 GENERAL SESSION

8:00 A.M. - 12:00 Noon Sections 4 & 5

Presiding: William L. Maier, Jr. Florida DNR Tallahassee, Florida

8:00 A.M. - "Maintenance Control of Aquatic Plants"

— Joseph C. Joyce, Jacksonville, Florida

8:15 A.M. - "Aquatic Vegetation Management in Urban Lakes" — J. R. Allan and L. Luini,
Agriculture Canada, Lethbridge, Alberta,
Canada and Keith Construction Company, Calgary, Alberta, Canada

8:30 A.M. - "Aquatic Vegetation Management in Irrigation Systems" — J. R. Allan, Plant Physiology, Agriculture Canada Research Station, Lethbridge, Alberta, Canada

8:45 P.M. - "The Computer as a Tool in Aquatic Weed Control" — Vernon V. Vandiver, University of Florida, ARC, Ft. Lauderdale, Florida

9:00 A.M. - "The Use of a Photothermal Unit as an Aquatic Management Tool on Western Irrigation Systems" — James Miller, USBR-E&R Center, Denver, Colorado

9:15 A.M. - "A Management Concept for the Prevention of Aquatic Plant Problems" — D. R. Sanders and J. L. Decell, J. S. Army Engineers Waterways Experiment Station, Vicksburg, Mississippi

9:30 A.M. - "The Corps of Engineers Aquatic Plant Control Program Management Plan" — 2LT Claudia M. Akroyd, HQDA (DAEN-CWO-R), Washington, D.C.

9:45 A.M. - "Aquatic Vegetation and Other Biota
Associated with Various Minnesota Lake
Types" — Howard F. Krosch, DNR, St.
Paul, Minnesota

10:00 A.M. - Refreshment Break — Foyer

10:15 A.M. - "The Role of Harvesting in Aquatic Plant
Management" — Harry McGill, General
Development Corp., Port Charlotte,
Florida

10:30 A.M. - "Bantam Lake Renewal Project" — C.
Brate Bryant, Aquamarine Corp., Waukesha, Wisconsin

10:45 A.M. - "Some Concerns with the Use of the Grass Carp, Ctenopharyngodon idella, as a Biological Agent in Aquatic Vegetation Control in Minnesota" — C. R. Burrows, DNR, St. Paul, Minnesota

11:00 A.M. - "Results of Tests on Hydrilla with Fusarium roseum, a Pathogenic Fungus"

— R. Charudattan and D. E. McKinney, University of Florida, Plant Pathology Department, Gainesville, Florida

11:15 A.M. - "Cercospora rodmanii, a Biological Control for Waterhyacinth" — Kenneth E. Conway, T. E. Freeman and R. Charudattan, University of Florida, Plant Pathology Department, Gainesville, Florida

11:30 A.M. - "The White Amur in California" —
Richard R. Yeo, USDA Botany Department, University of California, Davis,
California

11:45 A.M. - "Interaction of a Duckweed Disease with Environmental Factors" — Ronald A. Stanley, EPA, Washington, D.C.

12:00 Noon - Recess for Lunch

1:45 P.M. -

1:15 P.M. - Board of Directors Meeting — Parlor

#### RESEARCH SESSION

1:15 P.M. - 3:30 P.M. Sections 4 & 5

Presiding: Dana R. Sanders, U.S. Army Engineers Waterways Experiment Station, Vicksburg, Mississippi

1:15 P.M. - "Comparison of the Effects of Chelated Iron on Vallisneria and Hydrilla" — Patricia M. Dooris and Dean F. Martin, Department of Chemistry and Biology, University of South Florida, Tampa, Florida

1:30 P.M. - "Seeking Super Hyacinths" — Thomas N. Cooley, (Graduate Student) Department of Chemistry and Biology, University of South Florida, Tampa, Florida

"Host Specific Testing and Rearing of Parapoynx diminutalis, a Moth which Attacts Hydrilla" — B. David Perkins, USDA Aquatic Plant Management Laboratory, Ft. Lauderdale, Florida

2:00 P.M. - "Uptake by Hydrilla verticillata of Copper and Diquat as Released from Various Invert Emulsions" — K. K. Stewart, A. O. Jones and C. J. Hay USDA, ARS, SR, Aquatic Plant Laboratory, Ft. Lauderdale, Florida

2:15 P.M. - "Aquatic Plant Sampling in Lake Conway, Florida" — Larry E. Nall and Jeffrey D. Schardt, DNR, Orlando, Florida

2:30 P.M. - "Comparitive Effects of Chemical and Biological Control (Grass Carp) on Problematic and Non-Target Plants, Water Quality and Phytoplankton Populations" — Rue Hestand and Chris Carter, Fisheries Research Laboratory, Eustis, Florida

11

2:45 P.M. - "Effect of the Mottled Waterhyacinth Weevil, Neochetina eichhorniae Warner, and the White Amur, Ctenopharyngodon idella Valenciennes, on the Waterhyacinth Biocoenosis" — Ernest S. Del Fosse, B. David Perkins and David L. Sutton, Lee County Hyacinth Control District, Ft. Myers, Florida and USDA Aquatic Plant Management Laboratory, Ft. Lauderdale, Florida and University of Florida, ARC, Ft. Lauderdale, Florida

3:00 P.M. - "Hydrilla Biomass in Central Florida Lakes — A New Biomass Sampler" — John A. Osborne, Department of Biological Sciences, Florida Technological University, Orlando, Florida

3:30 P.M. - Discussion

#### FINAL BUSINESS MEETING

4:00 P.M. - 4:30 P.M. Sections 4 & 5

Presiding: R. W. Geiger, President
The Aquatic Plant Management Society, Inc.

4:35 P.M. - Final Adjournment

6:00 P.M. - Buses loading for trip to Parade Stadium in downtown Minneapolis to view the ■

Minneapolis Aquatennial Night Parade.

10:30 P.M. - Buses return to L'hotel SOFITEL and Hotel Radisson South

## LADIES PROGRAM

**SUNDAY, JULY 17, 1977** 

6:30 P.M. - 7:30 P.M. — Reception Garden Court and Foyer

**MONDAY, JULY 18, 1977** 

12:00 Noon - Ladies Luncheon Garden Court

1:30 P.M. - Shopping tour of downtown Minneapolis

TUESDAY, JULY 19, 1977

12:00 Noon - Luncheon at Hotel Radisson South Garden Court

6:30 P.M. - Reception

Garden Court and Foyer

7:45 P.M. - Annual Banquet Sections 4 & 5

### HONORARY MEMBERS

MR. WALTER A. DUN
Fort Pierce, Florida
(Deceased April, 1977)
DR. F. L. TIMMONS
Tucson, Arizona
MR. WILLIAM E. WUNDERLICH
New Orleans, Louisiana

## COMMERCIAL SUSTAINING MEMBERS

APPLIED BIOCHEMISTS, INC. Mequon, Wisconsin DR. B. WAYNE ARTHUR Greensboro, North Carolina AQUAMARINE CORPORATION Waukesha, Wisconsin ASGROW FLORIDA COMPANY Plant City, Florida HAROLD F. BROWN, INC. Ft. Pierce, Florida CIBA-GEIGY CORPORATION West Palm Beach, Florida MR. PAUL L. DEETS Mount Dora, Florida J & B ASSOCIATES Miami Springs, Florida JOYCE ENVIRONMENTAL CONSULTANTS, INC. Casselberry, Florida KERR-McGEE CHEMICAL CORPORATION Jacksonville, Florida LANTANA BOATYARD, INC. Lantana, Florida MINNESOTA WANNER COMPANY Minneapolis, Minnesota MONSANTA AGRICULTURE PRODUCTS COMPANY Naples, Florida NALCO CHEMICAL COMPANY Oak Brook, Illinois MR. JACK PENNER Bakersfield, California PENNWALT CORPORATION Montgomery, Alabama RHODIA, INC. Atlanta, Georgia MR. WALLACE RUSH Lawrenceville, Georgia SANDOZ, INC. San Diego, California SOUTHERN MILL CREEK PRODUCTS COMPANY Tampa, Florida

14

MR. GEORGE SUCIU
Montreal, Quebec, Canada
THE 3M COMPANY
Pompano Beach, Florida
VELSICOL CHEMICAL CORPORATION
Chicago, Illinois
VELSICOL CHEMICAL CORPORATION
Orlando, Florida
ZOECON CORPORATION
Orlando, Florida

### NOTES:

## **FUTURE MEETING SITES**

- 1978 Jacksonville Hilton Jacksonville, Florida U.S.A. July 9-12
- 1979 Chattanooga Choo-Choo
   Chattanooga, Tennessee U.S.A.
   July 15-18
- 1980 Ramada Inn
   Fort Walton Beach, Florida U.S.A.
   July 13-16
- 1981 Downtown Holiday Inn Jackson, Mississippi U.S.A. July 12-15
- 1982 Caesars Palace Las Vegas, Nevada U.S.A. July 18-21