

Program

THIRTEENTH ANNUAL MEETING

THE HYACINTH CONTROL SOCIETY



HOTEL MONTELEONE

NEW ORLEANS, LOUISIANA

JULY 15-18, 1973

Sunday through Wednesday

BOARD OF DIRECTORS

OFFICERS

Brandt G. Watson, President

Naples Mosquito Control District
Post Office Box 725
Naples, Florida 33940

Dr. Alva P. Burkhalter, First Vice President

Department of Natural Resources
Larson Building, Room 595
Tallahassee, Florida 32304

Ray A. Spirnock, Second Vice President

Central & Southern Florida Flood Control District
10440 S.W. 161st Street
Miami, Florida 33157

Robert J. Gates, President 1971-72

Southwest Florida Water Management District
1000 Marine Parkway, Apt. 205A
New Port Richey, Florida 33552

Dr. Robert W. Geiger, Treasurer

The 3M Company
400 N.E. 27th Street
Pompano Beach, Florida 33064

Dr. 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

C. Brate Bryant

Aquamarine Corporation
Box 616
Waukesha, Wisconsin 53186

Herbert J. Friedman

Southern Mill Creek Products Company
Post Office Box 1096
Tampa, Florida 33601

L. V. Guerra

Texas Parks & Wildlife Department
535 Main, Room 310
San Antonio, Texas 78204

W. L. McClintock

City of Winter Park
1815 Pineview Circle
Winter Park, Florida 32789

William E. Thompson

U.S. Army Corps of Engineers
5013 Tartan Drive
Metairie, Louisiana 70003

THE HYACINTH CONTROL SOCIETY

DEDICATED TO THE CONTROL OF

NOXIOUS AQUATIC WEEDS

FOUNDED 1960

OBJECTIVES

To assist in promoting control of noxious aquatic weeds.

To provide for the scientific advancement of members of the society.

To encourage scientific research.

To promote university scholarships.

To extend and develop public interest in noxious aquatic weed problems.

THE PROGRAM



THIRTEENTH ANNUAL MEETING of THE HYACINTH CONTROL SOCIETY

JULY 15-18, 1973

HOTEL MONTELEONE
New Orleans, Louisiana

SUNDAY, JULY 15, 1973

1:30 P.M.—Board of Directors Meeting—Robert E. Lee
3:00 P.M.-6:00 P.M.—Registration—Mezzanine
6:30 P.M.-7:45 P.M.—Hospitality Hour—Queen Anne

MONDAY, JULY 16, 1973

8:00 A.M.-5:00 P.M.—Registration—Mezzanine
Exhibits—Iberville

GENERAL SESSION

La Nouvelle Orleans — East and West

Presiding: Brandt G. Watson, President
The Hyacinth Control Society

9:00 A.M.—**Call to Order**

Invocation—Father Henry E. Naquin
Saint Monica Catholic Church,
New Orleans, Louisiana

Welcome to New Orleans

The Honorable J. Burton Angelle, Director,
Louisiana Fish and Wildlife Commission

Presidential Address: Brandt G. Watson,
President, The Hyacinth Control Society

10:00 A.M.—**Coffee Break**

PRESENTATION OF PAPERS

10:20 A.M.-12:00 Noon

Presiding: Dr. Alva P. Burkhalter, President-
Elect The Hyacinth Control Society

10:20 A.M.—**"In Harmony with Our Environment,"**
John E. Gallagher, Amchem Products, Inc.
Ambler, Penn.

10:50 A.M.—**"Present Status of FEPCA"**

Tom Evard, Region IV, Environmental
Protection Agency, Atlanta, Georgia

11:10 A.M.—**"Florida's New Aquatic Weed Control
Permits"** Don Widmann, Aquatic Botanist,
Florida Game and Fresh Water Fish Com-
mission, Tallahassee, Florida

11:30 A.M.—**"Coping With New Conservation Prob-
lems"** The Honorable Richard Stone, Secre-
tary of State, Tallahassee, Florida

12:00 Noon—**Recess for Lunch**

APPLICATOR'S SESSION

1:20 P.M.-5:00 P.M.

La Nouvelle Orleans — East

Presiding: Robert D. Blackburn, Past Presi-
dent, The Hyacinth Control Society

1:20 P.M.—**"The Water Management Battle: The Good
Guys versus The Bad Guys"** R. W. Geiger,
Manager, Lakes and Waterways Manage-
ment Service, 3M Company, Pompano
Beach, Florida

1:40 P.M.—**"Mystic Lakes Aquatic Plant Control Prob-
lem"**—Julius M. Mikolaities and E. O. Gang-
stad, U. S. Army Corps of Engineers, Walt-
ham, Massachusetts and Washington, D. C.

2:00 P.M.—**"The Financial Responsibility of Aquatic
Weed Control"**—Robert Gates, Director of
Field Operations, Southwest Florida Water
Management District, Brooksville, Florida

2:20 P.M.—**"Indiscriminate Use of Herbicides"**—John
Kelso, Aquatic Weed Specialist, Southwest
Florida Water Management District, Brooks-
ville, Florida

2:40 P.M.—**"Aquatic Weeds in Australia"**—G. R.
Sainty, Supervisor, Water Conservation and
Irrigation Commission, Griffith, N. S. W.,
Australia

3:00 P.M.—**Coffee Break**

3:40 P.M.—**"A Comparison of Current Aquatic Vege-
tation Control Methods"**—Alexis V. Kuzloff,
Kuzloff Enterprises, Irving, California

4:00 P.M.—**"The Aquatic Weed Control Program Of
the Louisiana Wildlife and Fisheries Com-
mission"**—Don Lee and Louie V. Richardson,
Coordinator and Research Supervisor, Hy-
acinth and Aquatic Weed Control Section,
Baton Rouge, Louisiana

4:20 P.M.—**"Aquatic Weed Control Program In Ven-
ezuela Irrigation Systems"**—Alberto Guerere
Anez and Ciro Balcazar, Caracas, Venezuela

4:40 P.M.—**"Aquatic Weed Control—Better Planning
Before Beginning"**—Harold Brown, South-
eastern Helicopter Services, Inc., Fort Pierce,
Florida

5:00 P.M.—**Adjourn**

RESEARCH SESSION

1:20 P.M.-5:00 P.M.

La Nouvelle Orleans — West

Presiding: Dr. David L. Sutton, Editor
The Hyacinth Control Society

1:20 P.M.—"Some Aspects of the Life History and Ecology of Cabomba caroliniana Gray"—Paula E. Gregory and Dana R. Sanders, Sr., Northwestern State University of Louisiana, Natchitoches, Louisiana

1:40 P.M.—"An Analysis of the Water Quality Parameters Characterizing Lakes With Water Hyacinth and Lakes With Alligator Weed"—Ted D. Center and J. Balciunas, USDA-ARS, University of Florida, Gainesville, Florida

2:00 P.M.—"Decomposition and Nutrient Regeneration of the Water Hyacinth Under Aerobic Conditions"—Bruce E. May, Utah Department of Natural Resources

2:20 P.M.—"The Invasion and Establishment of Aquatic Plants in Lake Ocklawaha During a Drawdown"—Rue S. Hestand, III, and Chris Carter, Florida Game and Fresh Water Fish Commission

2:40 P.M.—"Photosynthetic Characteristics of Hydrilla, Southern Naiad and Vallisneria"—William T. Haller, J. L. Miller and L. A. Garrard, University of Florida, Gainesville, Florida

3:00 P.M.—Coffee Break

3:40 P.M.—"Rate Constants As A Diagnostic Tool For Comparing Hydrilla and Elodea"—George A. Reid, Jr.; Dean F. Martin and Marion T. Doig, III, University of South Florida, Tampa, Florida

4:00 P. M.—"Ultrastructure and Physiology of Hydrilla Tubers"—James L. Miller, W. T. Haller and L. A. Garrard, University of Florida, Gainesville, Florida

4:20 P.M.—"Initial On-Site Testing of Prototype Field CO₂ Laser"—William E. Thompson, Corps of Engineers, New Orleans, Louisiana

4:40 P.M.—"Mechanical Removal of Water Hyacinths"—Wayne Clark, Southwest Florida Water Management District, Brooksville, Florida

5:00 P.M.—Adjourn

TUESDAY, JULY 17, 1973

7:30 A.M.-8:30 A.M.—Commercial Breakfast—Skylite Lounge

Presiding: Herbert J. Friedman,
Past President
The Hyacinth Control Society

8:00 A.M.-5:00 P.M.—Registration—Mezzanine Exhibits—Iberville

APPLICATOR'S SESSION

8:40 A.M.-10:30 A.M.

La Nouvelle Orleans — East

Presiding: Frank Wilson, Past President
The Hyacinth Control Society

8:40 A.M.—"Texas Integrated Program Of Biological and Chemical Control On Noxious Vegetation"—L. V. Guerra, Director of Statewide Noxious Vegetation Control Program, Texas Parks and Wildlife Department, San Antonio, Texas

9:00 A.M.—"Control of Terrestrial and Rooted-Emerged Alligatorweed"—R. D. Blackburn and Willey Durden, Jr. USDA, Fort Lauderdale, Florida

9:20 A.M.—"Combined Agasicles Feeding Plus 2,4-D Amine Treatment For Control Of Alligatorweed in Louisiana"—E. O. Gangstad, U. S. Army Corps of Engineers, Washington, D.C.

9:40 A.M.—"Patterns of Drift Control With Visko-Rhap"—Chuck Hargrove, Rhodia Inc., Longwood, Florida

10:00 A.M.—"Uptake of Bivert-Applied Diquat by Hydrilla verticillata"—W. S. Silver, J. A. Illingsworth and R. L. Mansell, University of South Florida, Tampa, Florida

10:30 A.M.—Coffee Break

RESEARCH SESSION

8:40 A.M.-10:30 A.M.

La Nouvelle Orleans — West

Presiding: Mr. Larry Curtis

8:40 A.M.—“Ecological Preservation of Recreational Lakes”—David A. Bradbury, Environmental Consultant of Oakland County, Michigan

9:00 A.M.—“Processing and Storage of Water Hyacinth Silage”—Larry O. Bagnall, John Baldwin and James F. Hentges, University of Florida, Gainesville, Florida

9:20 A.M.—“Chemical Composition and Ruminant Animal Acceptability of Water Hyacinth Silage”—Larry O. Bagnall and James F. Hentges, University of Florida, Gainesville, Florida

9:40 A.M.—“Converting Water Hyacinths into Various Dried Products”—E. F. Wahl, Anderson IBEC, Inc., Strongsville, Ohio

10:00 A.M.—“Macronutrient Elements for Livestock In Aquatic Plants”—J. F. Easley and R. L. Shirley, University of Florida, Gainesville, Fla.

10:30 A.M.—Coffee Break

ANNUAL BUSINESS MEETING

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

La Nouvelle Orleans — East and West

Presiding: Brandt G. Watson, President
The Hyacinth Control Society

12:00-1:20 P.M.—Recess For Lunch

APPLICATOR'S SESSION

1:20 P.M.-5:00 P.M.

La Nouvelle Orleans — East

Presiding: Mr. Charles F. Zeiger

1:20 P.M.—“Field Uses Of Invert Emulsion”—Leslie E. Bitting, Sr., Old Plantation Water Management District, Plantation, Florida

1:40 P.M.—“Modification of the Bifluid System and Its Use In the Control Of Submersed Aquatics”—Russell C. Lee, Aquatic Weed Specialist, Southwest Florida Water Management District, Brooksville, Florida

2:00 P.M.—“An Evaluation of Several Spray Additives”—Gordon Baker, Central and Southern Florida Flood Control District, West Palm Beach, Florida

2:20 P.M.—“A Nontoxic Lake Management Program”—Robert L. Laing, President, Clean-Flo Laboratories, Inc., Hopkins, Minnesota

2:40 P.M.—“Results of Testing Clean-Flo Lake Treatment Chemical In Florida Lakes”—Lowell Trent and Bill McArthur, Florida Game and Fresh Water Fish Commission and Clean-Flo Laboratories, Lake City, Florida and Hopkins, Minnesota

3:00 P.M.—“Experiments On the Control Of Spatterdock and Fragrant Waterlily With Glyphosate”—Donald N. Riemer and William V. Welker, Rutgers University and USDA, New Brunswick, New Jersey

3:20 P.M.—Coffee Break

3:40 P.M.—“An Improved Aquatic Algaecide, Cutrine-Plus”—A. J. Nemo and D. T. Schulteis, Applied Biochemists, Inc., Mequon, Wisconsin

4:00 P.M.—“Copper and Copper Combinations for Aquatic Weed Control”—R. D. Blackburn, Elroy Timmer and Clayton Barlowe, USDA, Fort Lauderdale, Florida

4:20 P.M.—“Diquat In the Bottom Placement Technique”—W. C. McClintock, J. W. Frye and W. D. Hogan, City of Winter Park and Chevron Chemical Company, Winter Park, Florida and Orlando, Florida

4:40 P.M.—“Studies On Control Of Buttonball With Picloram and 2,4-D”—R. A. Stanley, A. T. Tabereaux and T. F. Hall, Tennessee Valley Authority, Muscle Shoals, Alabama

5:00 P.M.—Adjourn

RESEARCH SESSION

1:20 P.M.-5:00 P.M.

La Nouvelle Orleans — West

Presiding: Dr. Larry Bagnall

- 1:20 P.M.—**"The Paper-Making Properties of Water Hyacinths"**—W. J. Nolan and D. W. Kirmse, University of Florida, Gainesville, Florida
- 1:40 P.M.—**"Plant Nutritional Value of Dried Water Hyacinths"**—Jose V. Parra and Charles C. Hortenstine, University of Florida, Gainesville, Florida
- 2:00 P.M.—**"Aquatic Weed Research in Puerto Rico"**—William N. Rushing, Corps of Engineers, Old San Juan Station, Puerto Rico
- 2:20 P.M.—**"The Effects of A Fungal Metabolite On Hydrilla and Its Potential For Biocontrol of Aquatic Weeds"**—R. Charudattan, University of Florida, Gainesville, Florida
- 2:40 P.M.—**"Energy Balance of the White Amur fed Elodea"**—Jon G. Stanley, Fish Farming Experiment Station, USDI, Stuttgart, Arkansas
- 3:00 P.M.—**"Nutrient Content of Water After Feeding Duckweed to the White Amur"**—David L. Sutton, University of Florida, Plant Experiment Station, Fort Lauderdale, Florida
- 3:20 P.M.—**Coffee Break**
- 3:40 P.M.—**"A Preliminary Report of Food Habits of Yearling Hybrid Carp (*Ctenopharyngodon idellus* X *Cyprinus carpio*)"**—Russell Theriot and Dana R. Sanders, Northwestern State University of Louisiana, Natchitoches, Louisiana
- 4:00 P.M.—**"The White Amur in Georgia and Arkansas"**—H. M. "Steve" Rose, Southwest Florida Water Management District, Brooksville, Florida
- 4:20 P.M.—**"Insect Enemies of Aquatic Weeds: A Progress Report"**—Neal R. Spencer, USDA-ARS, University of Florida, Gainesville, Florida
- 4:40 P.M.—**"Life Cycle and Host Range of *Snyclita oblitalis*"**—E. H. Barman, T. Lloyd Chesnut and Dale Habeck, Florida Technological University, Orlando, Florida and University of Florida, Gainesville, Florida
- 5:00 P.M.—**Adjourn**

TUESDAY EVENING, JULY 17, 1973

6:30 P.M.-8:00 P.M.—**Hospitality Hour**—Queen Anne

8:00 P.M.—**Annual Banquet**—LaNouvelle Orleans—
East and West

Presiding: Brandt G. Watson, President
The Hyacinth Control Society

Principal Speaker: Dr. Marcelino Gonzalez
Special Consultant to the President on Latin-
American Affairs and Minister of the In-
terior, Buenos Aires, Argentina, whose
subject will be **"Economies and Environ-
mentalism—An Analysis of Current Trends"**

WEDNESDAY, JULY 18, 1973

8:00 A.M.-11:00 A.M.—Registration—Mezzanine
Exhibits—Iberville

8:00 A.M.—Buffet Breakfast
LaNouvelle Orleans — East and West

APPLICATOR'S SESSION

8:40 A.M.-12:00 Noon

LaNouvelle Orleans — East

Presiding: Robert J. Gates, Past President
The Hyacinth Control Society

8:40 A.M.—"Greenhouse and Pool Screening of Herbicides For Control of Egeria densa"—D. P. Viator, J. A. Foret, S. L. Solymosy and J. R. Barry, University of Southwestern Louisiana, Lafayette, Louisiana

9:00 A.M.—"Effects of Early Spring Herbicide Applications For Control of Egeria densa"—J. R. Barry, D. P. Viator, S. J. Langlinais and J. A. Foret, University of Southwestern Louisiana, Lafayette, Louisiana

9:20 A.M.—"Algae Control in Irrigation Canals in San Carlos, Venezuela"—Ciro Balcazar, Caracas, Venezuela

9:40 A.M.—"The Utilization of Chara in Water Management"—T. J. Denike and R. W. Geiger, Lakes and Waterways Management Service, 3 M Company, Pompano Beach, Florida

10:00 A.M.—Coffee Break

10:40 A.M.—"Harvesting As A Control For Aquatic Plants"—Stanley Nichols and Grant Cottam, Aquamarine Corporation, Waukesha, Wisconsin

11:00 A.M.—"Water Level Manipulation: A Tool For Aquatic Weed Control"—Louie V. Richardson, Research Supervisor, Hyacinth and Aquatic Weed Control, Louisiana Wildlife and Fisheries Commission, Baton Rouge, Louisiana

11:20 A.M.—"A Preliminary Report Of Effects Of A Late Summer-Early Winter Drawdown On Vegetation and Water Quality of Black Lake, Louisiana"—J. H. Manning, Louie V. Richardson and Dana R. Sanders, Sr., Northwestern Louisiana State University and Louisiana Wildlife and Fisheries Commission, Natchitoches and Baton Rouge, Louisiana

11:40 A.M.—"Effects of Water Drawdown On Submersed Aquatic Plants in Lake Ocklawaha"—R. D. Blackburn, USDA, Fort Lauderdale, Florida

RESEARCH SESSION

8:40 A.M.-12:00 Noon

La Nouvelle Orleans — West

Presiding: Mr. Neal Spencer

8:40 A.M.—"The Caterpillars of Parapoynx (Lepidoptera: pyralidae nympholina) and Their Relationship to Aquatic Plants in Florida"—D. H. Habeck, University of Florida, Gainesville, Florida

9:00 A.M.—"Assimilation, Net Growth, and Gross Growth Efficiencies of Diacrisia virginica Fed Leaves of Water Hyacinths"—E. H. Barman, Florida Technological University, Orlando, Florida

9:20 A.M.—"The Mayfly (Povilla adusta)—A Possible Biological Control For Alligator Weed"—Phillip C. Pierce and Anthony Opoka, Environmental Planners, Corps of Engineers, Washington, D. C.

9:40 A.M.—"The Crayfish, Pasifasticus leniusulus In Natural Aquatic Weed Control"—Ernest F. Hesser, Corps of Engineers, Walla Walla, Washington

10:00 A.M.—Coffee Break

10:40 A.M.—"Effect of Bivert-Applied Diquat On Plant Phenolics Under Natural Conditions"—R. W. Woodard, R. L. Mansell and W. S. Silver, University of South Florida, Tampa, Florida

11:00 A.M.—"Development of Controlled-Release Herbicides For Aquatic Weed Control"—Frank Harris, Wright State University, Dayton, Ohio

11:20 A.M.—"Effects of the Dihydroxy Aluminum Salt of Endothall On the Fishery Environment"—Robert D. Blackburn, Thomas Taylor and Edward Zagar, USDA-ARS, Fort Lauderdale, Florida

11:40 A.M.—"Studies On the Mechanism of Copper Toxicity in Chlorella"—Jeff Swader and Arturo Cedeno-Maldonado, University of California, Riverside, California

FINAL BUSINESS MEETING

12:00 Noon-12:30 P.M.

La Nouvelle Orleans — East

Presiding: Brandt G. Watson, President
The Hyacinth Control Society

12:30 P.M.—Final Adjournment

12:45 P.M.—Board of Directors Meeting—Skylite Lounge

LADIES' PROGRAM

SUNDAY, JULY 15, 1973

6:30 P.M.-7:45 P.M.—Hospitality Hour—Queen Anne

MONDAY, JULY 16, 1973

10:00 A.M.-3:00 P.M.—Hospitality Room—Bienville

10:45 A.M.—Breakfast at Brennans (Meet in Lobby)
Presiding: Mrs. Brandt G. Watson

TUESDAY, JULY 17, 1973

10:00 A.M.-3:00 P.M.—Hospitality Room—Bienville

6:30 P.M.-8:00 P.M.—Hospitality Hour—Queen Anne

8:00 P.M.-11:00 P.M.—Annual Banquet
LaNouvelle Orleans — East and West

WEDNESDAY, JULY 18, 1973

8:00 A.M.-8:40 A.M.—Buffet Breakfast
LaNouvelle Orleans — East and West

10:00 A.M.-12:00 Noon—Hospitality Room—Bienville

HONORARY MEMBERS

DR. F. L. TIMMONS
Tucson, Arizona

MR. WILLIAM E. WUNDERLICH
New Orleans, Louisiana

COMMERCIAL SUSTAINING MEMBERS

APPLIED BIOCHEMISTS, INC.
Mequon, Wisconsin

ASGROW FLORIDA COMPANY
Plant City, Florida

AQUAMARINE CORPORATION
Waukesha, Wisconsin

FOAM SPRAY PRODUCTS
Dallas, Texas

THE 3M COMPANY
Pompano Beach, Florida

HERCULES, INC.
Atlanta, Georgia

KERR-McGEE CHEMICAL CORP.
Jacksonville, Florida

PENNWALT CORP.
Montgomery, Alabama

SEA GUARD, INC.
New Castle, Delaware

SOUTHERN MILL CREEK PRODUCTS CO., INC.
Tampa, Florida

SWEENEY ENVIRONMENTAL CONTROLS, INC.
Homosassa Springs, Florida

INDIVIDUAL SUSTAINING MEMBERS

MR. C. BRATE BRYANT
Waukesha, Wisconsin

INDIAN RIVER FARMS DRAINAGE DISTRICT
Vero Beach, Florida

MR. DICK JOHNSTON
DeLeon Springs, Florida

DR. FULTON KOEHLER
Minneapolis, Minnesota

MR. JAMES L. McABEE, JR.
Chamblee, Georgia

MR. SAM F. McMURRAY
Tampa, Florida

MR. JOHN E. MERK
Jupiter, Florida

MR. MIKE NICHOLS
Orlando, Florida

MR. PAUL J. SCHOUBOE
Winter Park, Florida

MR. DON E. SEYMOUR
Mequon, Wisconsin

MR. CLIFF SUTTON
Lakeland, Florida

MR. NELSON VIRDON
Jackson, Mississippi

MR. ARTHUR H. WILDEN
Sebastian, Florida