PROGRAM

THIRTY-NINTH
ANNUAL MEETING

THE AQUATIC
PLANT MANAGEMENT
SOCIETY, INC.

RADISSON HOTEL ASHEVILLE
ASHEVILLE NORTH CAROLINA
JULY 11-14, 1999
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SUNDAY, JULY 11, 1999

8:30am-3:00pm       APMS Board of Directors Meeting - Cherokee
12:00 noon - 5:00pm  Exhibitor Display Set Up - Asheville Community Theater
12:00 noon - 5:00pm  Poster Display Set Up - Swannanoa
3:00-6:00pm          Registration - Lobby
7:00-9:00pm          President's Reception - Top of the Plaza - All Delegates Invited

MONDAY, JULY 12, 1998

8:00am-5:00pm        Registration - Lobby
8:00am-5:00pm        Exhibits - Asheville Community Theater
8:00am-5:00pm        Posters - Swannanoa
8:00am-5:00pm        Presenters' Slide Viewing - Berkley
8:45am-3:30pm        Spouses' Tour

Spouses Tour

Monday, July 12, 1999
Sponsored by Applied Biochemists

8:45 am - 3:30 pm

Join Applied Biochemists as a participant on the Spouse’s Tour and you will enjoy first hand exposure to Asheville’s style and charm. The group will tour the Folk Art Center on the Blue Ridge Parkway, and The Arboretum and Quilt Garden. A luncheon at the famous Grove Park Inn will complement these site-seeing activities.
SESSION I - Asheville Community Theater -

Plenary

Presiding: David Spencer, President APMS

8:00 am Call to order

8:05 am Announcements: Lewis Decell, Program Chair, President-Elect, APMS, Inc.

8:15 am Presidential Address: David Spencer, President, APMS, Inc.

8:35 am APMS Regional Chapter Reports: Florida - Mid West - MidSouth - Nile Basin - South Carolina-Texas - Western


9:35 am Navigating the 90's - Aquatic Plant Control in Florida Jeff Schardt, Florida Department of Environmental Protection

9:50 am The Santee Cooper Lakes: Lessons Learned After 10 years Steve de Kozlowski, South Carolina Department of Natural Resources

10:05 am BREAK

10:20 am Aquatic Plant Management in Minnesota: The Past 10 Years: Wendy Crowell and Steve Enger, Minnesota Department of Natural Resources, St. Paul, MN.

10:35 am Washington Report Robert Hedberg, Director of Science Policy, Weed Science Society of America, Washington, DC

10:50 am Aquatic Ecosystem Restoration Foundation ... Three Years of Progress Michael Moore, Executive Director, Aquatic Ecosystem Restoration Foundation, Lansing, MI

11:05 am ANNUAL APMS BUSINESS MEETING, President David Spencer Presiding

11:45 am LUNCH

11:45 am Aquatic Ecosystem Restoration Foundation (AERF) Lunch and Board of Directors Meeting Cherokee
SESSION II: Asheville Community Theater -

Chemical

Moderator: Dr. Kurt Getsinger

1:00 pm Industry View of the Aquatic Market
M.C. McLeod, Griffin Inc., Valdosta, GA

1:15 pm Evolution of Fluridone for Hydrilla Control in New Zealand.

1:30 pm Contact Herbicide Combination Efficacy Evaluations. (WU# 32437)
John G. Skogerboe, U.S. Army Engineer Research and Development Center, Lewisville Aquatic Ecosystem Research Facility, Lewisville, TX; K. D. Getsinger, U.S. Army Engineer Research and Development Center, Vicksburg, MS.

1:45 pm Phytotoxins in the Real World: Understanding the Role of Cattail Products in Aquatic Weed Management (Student Paper)
Maria Gallardo, and Dean F. Martin, Institute for Environmental Studies, University of South Florida.

2:00 pm Evaluations of Five Surfactants with Imazapyr for Control of Cattails.
S.T. Hoyle, Stratford H. Kay, North Carolina State University, Raleigh, NC.

2:15 pm Magnitude of Residues of Endothall in Freshwater Fish and Shellfish.
Janice K. Sharpe, Elf Atochem, N.A., King of Prussia, PA; Emily Dionne, Springborn Laboratories, Wareham, MA; Mike Grisham, ABC Laboratories, Columbia, MO and Timothy Formella, Elf Atochem, N.A.

2:30 pm New from Monsanto, "Quicksorb".
Lonnie M. Pell, Monsanto, Merritt Island, FL.

2:45 pm An Evaluation of Microbial Products and Chemical Algaecides Used in Surface Water Management (Student Paper)
Robert J. DuVall, Lars W. J. Anderson, and Charles R. Goldman, USDA/ARS Aquatic Weed Research Laboratory, University of California, Davis, CA.

3:00 pm BREAK

3:15 pm Triclopyr Efficacy Evaluation Against Variable-Leaf Watermilfoil. (WU# 32841)
Susan L. Sprecher and Kurt Getsinger, U.S. Army Engineer Research and Development Center, Vicksburg, MS.
Effects of 2,4-D Treatment on Eurasian Watermilfoil and Native Plant Communities in Loon Lake, WA.

Kathy Hamel and Jenifer Parsons, Washington Department of Ecology, John Madsen, U.S. Army Research and Development Center, Vicksburg, MS.

ADJOURN

RECEPTION - Taylor Ranch - Board Buses in front of hotel at 5:30pm

Join SePRO Corporation for a North Carolina Pig Pickin'! The festivities will be held at the Taylor Ranch, a 500 acre working Paint horse and Texas Longhorn cattle ranch located in the mountains just 30 minutes from downtown Asheville. Buses will board in front of the hotel at 5:30pm for the scenic ride to the ranch. Upon arrival, enjoy a North Carolina Pig Pickin', consisting of barbecue pork, grilled boneless chicken breast, ranch style beans, potato salad, cole slaw, rolls and assorted desserts, along with soft drinks, sweet tea, coffee, beer and wine. The evening wouldn't be complete without the traditional campfire marshmallow roast. SePro is happy to offer a taste of North Carolina heritage at the Taylor Ranch during this year's meeting.

Buses will board in front of the hotel beginning at 5:30 pm.
TUESDAY, JULY 13, 1999

6:30-8:00 am  APMS Regional Chapter Presidents' Breakfast - Cherokee

8:00 am-5:00 PM  Registration - Lobby

8:00 am-5:00 PM  Exhibits - Asheville Community Theater

8:00 am-5:00 PM  Posters - Swannanoa

8:00 am-5:00 PM  Presenters' Slide Viewing - Berkley

SESSION III - Asheville Community Theater -

Ecology

Moderator: Dr. John Madsen

8:00 am  Sediment Resuspension Dynamics in Canopy- and Meadow-Forming Submersed Macrophyte Communities. (WW# 33128) William F. James, U.S. Army Research and Development Center, Eau Gallie Aquatic Ecosystem Research Facility, Spring Valley, WI; John W. Barko, U.S. Army Research and Development Center, Vicksburg, MS; Eva-Maria Koch, University of Maryland at Horn Point, Cambridge, MD; and David P. Hamilton, Centre for Water Research, The University of Western Australia, Nedlands, Australia.

8:15 am  Molecular Markers: Useful for Decision Making in Biocontrol Weed Management Paul T. Maderia, Thai K. Van and Ted D. Center, USDA-ARS, Aquatic Weed Control Research, Ft. Lauderdale, FL

8:30 am  Emergence of Vegetative Propagules of Potamogeton nodosus, Potamogeton pectinatus, Vallisneria americana, and Hydrilla verticillata based on accumulated degree-days in Texas and California. David F. Spencer, John S. Ksander, USDA-ARS, UC Davis, Davis, CA; John D. Madsen, U.S. Army Engineer Research and Development Center, Vicksburg, MS, and Chetta S. Owens, U.S. Army Engineer Research and Development Center, Lewisville Aquatic Ecosystem Research Facility, Lewisville, TX.

8:45 am  Vegetative Propagation of Aquatic Plants by Leaf Cuttings (Student Paper) Danielle Pierandozza and David L. Sutton, University of Florida - IFAS, Research & Education Center, Ft. Lauderdale, FL.
9:00 am  
*Spartina alterniflora* invades San Francisco Bay/Delta: Impacts and Control Strategies.  
**Lars W.J. Anderson**, USDA Agricultural Research Service, UC Davis, Davis, CA; Kathy Zaremba, California State University, San Francisco, CA; Debra Smith, Bodega Marine Laboratory, Alameda/Contra Counties, CA; and Don Strong, University of California Davis, Davis, CA.

9:15 am  
Effects of an Altered Hydrological Regime on a Bottomland Hardwood Forest in Sampson County, North Carolina (Student Paper)  
**Heather D. Patti**, and Jon M. Stucky, Department of Botany, North Carolina State University, Raleigh, NC.

9:30 am  
Formulation of a Fungal Pathogen for Biological Control of Hydrilla: a Challenging Task (WU# 32863)  
**Judy F. Shearer**, U.S. Army Research and Development Center, Vicksburg MS.

9:45 am  
BREAK

10:00 am  
Management Impacts on Tuber Sprouting and Population Dynamics of Dioecious Hydrilla.  
**Michael D. Netherland**, SePRO Corporation, Carmel, IN.

10:15 am  
Flowering, Seed Production, and Germination of Seed of *Hygrophila* (Student Paper)  
**Peter M. Dingler**, and David L. Sutton, University of Florida - IFAS, Research & Education Center, Ft. Lauderdale, FL.

10:30 am  
Allelopathic Effects of Common Reed on the Growth of *Waterhyacinth* and Some Economic Plants.  
**Sayed A. Ahmed** and M. M. Khalifa, Faculty of Agriculture, Assiut University and Plant Protection Research Institute, Assiut, Egypt.

10:45 am  
Integrated Endothall and MT Treatments for Control of *Hydrilla* (WU# 32953)  
**L. S. Nelson** and J. F. Shearer, U.S. Army Engineer Research and Development Center, Vicksburg, MS.

11:00 am  
Survivorship and Biomass Accumulation of *North Carolina Juncus effusus* and *Vallisneria americana* in Four North Carolina Lake Sediments.  
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>11:15 am</td>
<td>Economics of Aquatic Plant Management: Looking at the Costs Side (WU#31557) Jim E. Henderson, U.S. Army Research and Development Center, Vicksburg MS</td>
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<tr>
<td>11:30 am</td>
<td>Influence of Flooding on Growth of Pond Apple (Student Paper) Lyn A. Gettys, North Carolina State University, Raleigh, NC; David L. Sutton, University of Florida-IFAS, Research &amp; Education Center, Ft. Lauderdale, FL.</td>
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<tr>
<td>11:45 am</td>
<td>Potential Recruitment of Sunfishes in a Vegetated Reservoir Based on Larval and Juvenile Fish Abundance (WU# 32944) K. Jack Killgore, U.S. Army Research and Development Center, Vicksburg MS; William D. Pearson, University of Louisville, Louisville, KY</td>
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<tr>
<td>12:00 noon</td>
<td>LUNCH</td>
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<tr>
<td>1:00 pm</td>
<td>The Spread and Spread of <em>Salvinia molesta</em>: David Mitchell, Charles Sturt University, Albury, Australia.</td>
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<tr>
<td>1:15 pm</td>
<td>Chronology and Status of the Current Infestations in Texas. Rhandy Helton and Larry Hartmann, Texas Parks and Wildlife Department, Austin, TX.</td>
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<tr>
<td>1:30 pm</td>
<td>The Status of Giant Salvinia (<em>Salvinia molesta</em>) in North Carolina. Stratford H. Kay, Steve T. Hoyle, North Carolina State University, Raleigh, NC; David T. Patterson, North Carolina Department of Agriculture and Consumer Services, Raleigh, NC.</td>
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<tr>
<td>1:45 pm</td>
<td>Eradication of Salvinia molesta from a Small Pond in Colleton County, SC. Jack M. Whetstone, Clemson University, Georgron, SC; Steven de Kozlowski, SC Department of Natural Resources, Columbia, SC; Cynthia Aulbach, Botanical Services of South Carolina, Columbia, SC.</td>
</tr>
<tr>
<td>2:00 pm</td>
<td>U.S. Distribution and Predicted Range of Salvinia molesta: Using Education to Prevent Spread Colette Jacono, United States Geological Survey</td>
</tr>
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Earl Chilton, Texas Parks and Wildlife Department, Austin, TX

3:30 pm The Role of USDA Plant Protection & Quarantine
Robert Spaide

3:45-5:00 pm Civil Works R & D Program Review for the APCR. Corps of Engineers Representatives Only - Alexander

6:00-10:00 pm APMS Banquet and Awards Ceremony - Off Site - Sponsored by Elf Atochem

WEDNESDAY, JULY 14, 1999
8:00 am-12:00 noon Presenters' Slide Viewing - Berkley

Session V - Asheville Community Theater - Native Plant Restoration

Moderator: Dr. Michael Smart

8:00 am Establishment of Native Aquatic Plants for Habitat Enhancement, Mitigation for Aquatic Plant Management, and as a Deterrent to Exotic Species Invasions (WU# 33048)
R. Michael Smart and Gary O. Dick, U.S. Army Engineer Research and Development Center, Lewisville Aquatic Ecosystem Research Facility, Lewisville, TX

8:15 am Aquatic Plant Introduction Survey.

8:30 am Establishment of Native Vegetation in El Dorado Lake, Kansas
Gary O. Dick, University of North Texas, R. Michael Smart, Army Engineer Research and Development Center, Lewisville Aquatic Ecosystem Research Facility, Lewisville, TX; Ron Marteney, Kansas Department of Wildlife and Parks, El Dorado, KS.

8:45 am Restoring Fish Habitat with Native Aquatic Plants in Arcadia Reservoir, OK.
Gene Gilliland, Oklahoma Department of Wildlife Conservation, Norman, OK; R. Michael Smart, Army Engineer Research and Development Center, Lewisville Aquatic Ecosystem Research Facility, Lewisville, TX.

9:00 am Evaluation of Methods for Establishing Native Aquatic Vegetation in Seven Texas Reservoirs.
Mark Webb, Texas Parks and Wildlife Department, Bryan, TX

9:15 am An Integrated Approach to Managing Aquatic Plants at Lake Jacksonville Texas
Richard Ott, Texas Parks and Wildlife Department-Inland Fisheries, Tyler, TX
9:30 am  Aquatic Plant Establishment as Restitution for a Fish Kill.
**Ken Rice**, Texas Parks and Wildlife Department, Corpus Christi, TX; Dr. R. Michael Smart, U.S. Army Engineer Research and Development Center, Lewisville Aquatic Ecosystem Research Facility, Lewisville, TX; Michael Reed, Texas Parks and Wildlife Department, Ingram, TX.

10:45 am  Modeling Growth of Two Desirable Aquatic Macrophyte Species, Sago Pondweed and American Celery
**Elly P. H. Best** and William A. Boyd, U.S. Army Engineer Research and Development Center, Vicksburg, MS.

9:45 am  Protecting the Native Aquatic Plant Communities of the Comal and San Marcos Rivers, TX.
**Robert D. Doyle**, University of North Texas, Denton; Paula Power and Kathryn Kennedy, U.S. Fish and Wildlife Service.

10:00 am  BREAK

10:00 am  BREAK

**Session VI - Asheville Community Theater**

**General**

10:15 am  Using Remote Sensing and Mapping Technologies to Manage Large Scale Aquatic Plant Management Programs
**Terry McNabb** and Steve Farone, Resource Management, Inc., Tumwater, WA.

11:30 am  Aquatic Moth Stops Formation of Eurasian Watermilfoil Canopy
**Robert L. Johnson**, Cornell University, Ithaca, NY.

11:00 am  Photo-history of the Aquatic Plant Control Program in the Jacksonville District.
**Charles E. Ashton**, U.S. Army Corps of Engineers, Jacksonville, FL.

11:15 am  Population Response of Triploid Grass Carp to Declining Levels of Hydrilla in the Santee Cooper Reservoirs, South Carolina.
**James P. Kirk**, J. V. Morrow and K.J. Killgore, U.S. Army Research and Development Center, Vicksburg MS; S. J. de Kozlowski, South Carolina Department of Natural Resources; J. W. Preacher, U.S. Army Engineer District, Charleston, SC.

10:30 am  A Review of Nautique Laboratory and Field Efficacy Results
**Tyler Koschnick**, SePRO Corporation, Carmel, Indiana

11:45 am  Aquatic Weed Problems in Reservoirs in Brazil.
**Robinson Pitelli**, Brazil Agricultural University, San Paulo, Brazil.
12:00 noon  FINAL BUSINESS MEETING AND
INSTALLATION OF 1999-2000
OFFICERS
President David Spencer,
Presiding
ADJOURN

12:00 noon  APMS Board of Directors Meeting -
Cherokee

Posters
Swannanoa

Distribution of Salvinia molesta (D. S. Mitchell) in the
U.S., and the Status of Cyrtobagous salvinia (Calder
and Sands), a Biocontrol Agent, for its control (WU# 31557). Jan E. Freedman, U.S. Army Engineer
Research and Development Center, Vicksburg, MS.

Insect Biological Control Agents of Hydrilla
verticillata (WU# 33028). Alfred E. Cofrancesco and
Michael Grodowitz, U.S. Army Engineer Research
and Development Center, Vicksburg, MS.

Naturalized Aquatic Insects Impacting Eurasian
Watermilfoil (WU# 33189). Alfred E. Cofrancesco
and John Madsen, U.S. Army Engineer Research
and Development Center, Vicksburg, MS.

Effects of Biocontrol Agents on the Competitive
Interactions Between Nuisance Exotics and Desirable
Native Aquatic Plants (WU# 33117). Michael
Grodowitz, U.S. Army Engineer Research and
Development Center, Vicksburg, MS, Robert Doyle,
North Texas State University, Denton, TX, R. Michael
Smart, U.S. Army Engineer Research and
Development Center, Lewisville Aquatic Ecosystem
Research Facility, Lewisville, TX.

Ecological Attributes of Exotic and Native Plant
Communities (WU# 33186). R. Michael Smart and
Gary Dick, U.S. Army Engineer Research and
Development Center, Lewisville Aquatic Ecosystem
Research Facility, Lewisville, TX.

Effects of Burial Depth and Sediment Type on
Emergence and Growth of Hydrilla verticillata (WU# 33029). Dwilette G. McFarland, U.S. Army Engineer
Research and Development Center, Vicksburg, MS.
Factors Contributing to the Dispersal of Hydrilla in Lakes and Reservoirs (WU# 33188). Chetta S. Owens, ASci Corporation, U.S. Army Engineer Research and Development Center, Lewisville Aquatic Ecosystem Research Facility, Lewisville, TX, John D. Madsen, U.S. Army Engineer Research and Development Center, Vicksburg, MS.

Herbicide Evaluation for Control of Wild Taro (WU# 33199). L. S. Nelson and K.D. Getsinger, U.S. Army Engineer Research and Development Center, Vicksburg, MS.

Comparison of Four Sampling Techniques for Quantifying Submersed Aquatic Plants in L'Anse Creuse Bay, Lake St. Clair (WU# 33127). Mike Stewart, John Madsen, Bruce Sabol, U.S. Army Engineer Research and Development Center, Vicksburg, MS, and Robert Haas, Michigan Department of Natural Resources, Mt. Clemens, Mi.

Measurement Systems for Rapid Detection and Characterization of Aquatic Plants (WU# 33118). Bruce Sabol, U.S. Army Engineer Research and Development Center, Vicksburg, MS.

Macrophyte Influences on Hydrodynamics in Aquatic Systems (WU# 33201). William F. James, U.S. Army Engineer Research and Development Center, Eau Galle Aquatic Ecosystem Research Facility, Spring Valley, WI; Craig S. Smith, Professional Lake Management, Caledonia, Mi; John W. Barko, U.S. Army Engineer Research and Development Center, Vicksburg, MS; Harry L. Eakin, U.S. Army Engineer Research and Development Center, Eau Galle Ecosystem Research Facility, Spring Valley, WI.

Influence of Water Temperature on the Efficacy of Diguet and Endochloa versus Curlyleaf Pondweed, (WU# 33187). John Madsen, U.S. Army Engineer Research and Development Center, Vicksburg, MS, Mike Netherland, SePro Corporation, Carmel, IN; J. D. Skogerboe, U.S. Army Engineer Research and Development Center, Lewisville Aquatic Ecosystem Research Facility, Lewisville, TX; and C. S. Owens, ASci Corporation, U.S. Army Engineer Research and Development Center, Lewisville Aquatic Ecosystem Research Facility, Lewisville, TX.

Population Management of Triploid Grass Carp (WU# 33200). James P. Kirk, U.S. Army Engineer Research and Development Center, Vicksburg, MS.

Residues of Copper in Water. William G. H. Latham and David L. Sutton, University of Florida - IFAS, Research & Education Center, Ft. Lauderdale, FL.

Influence of Sediment Nutrients on Growth of Hyphophila. David L. Sutton and Peter M. Dingler, University of Florida IFAS, Research & Education Center, Ft. Lauderdale, FL.

Application Potential of Simulation Models for Growth of Submersed Aquatic Macrophytes. Elly P.H. Best and William A. Boyd, U.S. Army Engineer Research and Development Center, Vicksburg
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