



THE AQUATIC PLANT MANAGEMENT SOCIETY, INC.

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UNMANAGED ALLIGATORWEED



In conversations among aquatic weed scientists the topic often arises concerning the potential effect of losing registration of an aquatic herbicide that is essential for management of an important aquatic weed such as water hyacinth or alligatorweed. We have observed in North Carolina an excellent example of such a situation.

Alligatorweed management began in North Carolina in 1960 by the United States Army Corp of Engineers, Wilmington District, when various herbicides were evaluated for effectiveness. By 1963, it was determined that silvex was the only labeled herbicide that consistently resulted in adequate alligatorweed control under the conditions present. At this time a survey by the United States Army Corp of Engineers reported a total of 376 acres of waterways infested in North Carolina. Alligatorweed control in North Carolina was stopped in 1970 due to "uncertainty concerning the environmental and health impacts of silvex" and the subsequent cancellation of registration. It was also determined that alligatorweed no longer was occurring at problem levels.

In the mid to late 1970s, the North Carolina Agricultural Extension Service (NCAES) received increasing complaints of alligatorweed blocking agricultural

drainage canals and interfering with recreational activities in coastal rivers and tributaries. In 1983 NCAES began a project to assess the extent of alligatorweed infestation in the state to develop a management program utilizing new herbicide technology.

The results of the alligatorweed survey were impressive with respect to the levels reported in the 1960s and early 1970s. The 1983 survey revealed conservative estimates of 544 acres (561 miles) in drainage canals, 894 acres in ponds and lakes, 1,099 acres in streams and rivers, and 2,574 acres in terrestrial habitats. The 2,537 acre total in waterways represents about a seven-fold increase from the 1963 level. However, since the weed was under management until 1970 the increase from the "no problem" level after management ceased is more dramatic. This example represents the ability of an unmanaged aquatic weed in the northern extremity of its temperate range to proliferate. The proliferation of a more highly productive aquatic plant, such as waterhyacinth, if suddenly unmanaged in a semi-tropical environment such as Florida, assuredly could be catastrophic.

An alligatorweed management program has been developed and

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Alligatorweed #1 "Downunder"

In a recent letter to the editor, Mr. Chris Ripper, Water Resources Commission, New South Wales Government (Box 492 YY, P.O., Griffith, N.S.W. 2680) reports:

"The National Co-ordinating Committee on Aquatic Weeds has recommended to the Australian Water Resources Council that alligatorweed be given top aquatic plant research priority. The NCCAW requested me, through the Water Resources Commission, to prepare a discussion paper on alligatorweed. An executive summary was also prepared for presentation to the Australian Water Research Council. Copies of these papers can be obtained from Mr. Ripper or myself."

Much data on the ecology of the plant as it relates to biological control has been accumulated, but research is urgently needed to identify herbicides that can be used to manage alligatorweed cost effectively, and on the ecophysiology of alligatorweed as it relates to chemical control—especially the effects of the rooted vs. floating growth form. Alligatorweed currently infests approximately 2000 ha of terrestrial and aquatic habitats on the east coast of Australia. It is estimated that the rate of spread is about 10% per annum.

Mr. Ripper also brings to our attention a new book, *Guidelines for the use of Herbicides in or Near Water*, published by the Department of Resources and Energy, Australian Water Resources Council. The twenty-nine page book contains information quickly available on aquatic herbicides and should be useful to aquatic plant managers anywhere. It is available from the Australian Government Publishing Service.

**1986 Annual Meeting
FINAL CALL FOR PAPERS
Deadline — April 18, 1986**

See page 3 for more details



Grass Carp Deemed Safe By USFWS

In an opinion issued December 2, 1985, by Dr. Robert E. Stevens, Chief, Division of Fishery Research, U.S. Fish and Wildlife Service, it was concluded that the stocking of triploid grass carp, in either closed or open water situations, will result in no adverse impact on the environment. Titled, "Use of Triploid Grass Carp in Public Waters of South Carolina," the opinion has impacts beyond South Carolina.

Triploid grass carp were produced by J.M. Malone & Sons Enterprises in 1983 for the purpose of producing sterile grass carp. Triploid fish, in theory, are sterile because their odd chromosomes cannot synapse in gametogenesis. Gonads are structurally deformed and reproduction cannot occur.

To test this concept, the University of California at Davis, conducted histological examinations of the gonads of the original triploid grass carp of both sexes at one year of age in 1984 and again at two years of age in the summer of 1985. It was reported that both investigations demonstrated that the gonads of females were abnormal and that no functional oocytes were visible. It was concluded that female triploid grass carp will be incapable of producing eggs at maturity. The gonads of triploid male grass carp produced only a few sperm cells which lacked flagella. The investigator concluded that the sperm of male triploid grass carp will probably not be functional at the time of spawning.

Several states have long since accepted the triploid grass carp as sterile and have permitted their use in open water systems. In the biological opinion issued by Dr. Stevens, he states, "There seems to be no compelling reason to prohibit the use of certified triploid grass carp in open systems because there is every reason to assume they will not reproduce themselves. Any adverse impact on desirable aquatic plants will be shortlived and reversible."

The Sport Fishing Institute shares in the opinion provided by Dr. Stevens. Given that there may be a diversity of opinion, the Sport Fishing Institute would welcome expressions from those working with grass carp or having experience with grass carp as to how they feel about the biological opinion issued by the Fish and Wildlife Service.

Reprinted from SFI bulletin no. 371. Responses to this would also be welcomed for printing in the APMS Newsletter.

Major Actions of the Board of Directors Annual Winter Meeting, February 4, 1986

1. The Secretary-Treasurer reported that the Society assets were \$10,678 as of December 31, 1985.
2. The Membership Committee reported membership of 354 active, 109 subscription, 14 commercial sustaining, 24 student, and 4 honorary. Fifty active memberships are in jeopardy due to non payment of dues. The Membership Committee will address this problem.
3. The issue of purchasing liability insurance for the Society was tabled indefinitely.
4. Constitution and Bylaws:
 - a. "Commercial sustaining" membership will be reworded to "sustaining."
 - b. Student definition will be clarified.
 - c. The Nominating Committee will notify the membership of nominated officers at least 30 days prior to the annual meeting.
5. The operating manual developed by the Past Presidents Advisory Committee was approved in principle and adopted as standing rules for the Society. This is the product of an outstanding effort by Leon Bates.
6. Cost of the Annual Meeting in Sarasota will be \$55 pre-registration and \$65 at the meeting. An out-of-doors social will be held on Tuesday night in lieu of a formal banquet.
7. APMS will support increased distribution of *Science of Food and Agriculture* by CAST in the form of a \$1,000 grant over the next two years.

T-SHIRTS AVAILABLE

Commemorative "International Symposium on Watermilfoil and Related Haloragaceae Species" T-shirts are still available in all sizes. These T-shirts have the APMS logo on the front and the Milford Symposium logo on the back. Don't miss this opportunity. Contact Bill Rushing immediately to place your order!!

South Carolina APMS 1985 Member of the Year

Each year the SCAMPS honors one of its members who has made a significant contribution to the Society and/or aquatic plant management in general. This year our member of the year is Mr. Tim Drake.

Tim has been active in our South Carolina chapter since 1980. His company, University Lawn and Shrub Care, Inc., is a sustaining member. Tim has served our Society on the Legislative and Membership Committees. He was one of the prime movers in our Applications Workshop at last year's Annual Meeting. From the time Tim took over as Secretary-Treasurer, I could see the books fall in order under his stewardship.

Tim, the Society appreciates your efforts and we are pleased to be able to honor individuals with your skill and enthusiasm.

Harold Ornes

Mid-Atlantic APMS???

A group of people recently met who are interested in forming a new affiliate chapter of APMS tentatively, an Atlantic Coast or Mid-Atlantic Chapter. This chapter would form a nucleus of aquatic plant scientists mainly in the Atlantic coast states. The need for such a body of expertise was recently evidenced by apparent misunderstandings of aquatic weed management practices that arose from hydrilla control recommendations in the Potomac River. Another aquatic plant management problem that is common to this central area is the disappearance of vast areas of aquatic macrophytes in large water bodies such as areas of the Chesapeake Bay and Pamlico River.

The Ad Hoc Committee decided to "test the waters" for interest in this APMS affiliate before proceeding. Comments from interested persons will be appreciated and should be mailed to the editor of this newsletter.

Watermilfoil Proceedings

Proceedings of the First International Symposium on Watermilfoil and Related Haloragaceae Species, Vancouver, British Columbia, which was held July 23, 1985, can be ordered for \$15 from Bill Rushing, P.O. Box 16, Vicksburg, MS 39180; telephone (601) 634-3542. Distribution will be made during March 1986 for those who have already ordered.

Message From the Editor

The response to requests for contributions was excellent for the fall newsletter. Many thanks to all who contributed. However, since then, incoming newsletter items have slacked off, and this may be my own fault for not providing a timetable. The next newsletter is scheduled for June (just before the Sarasota Meeting) and will carry a feature story with meeting details. Please provide newsworthy items by April 11, 1986, to appear in this newsletter.

Future publications are scheduled for March, June, and October; and deadlines for receiving articles will be announced in the preceding newsletters. Thanks!

—Ken Langeland
Newsletter Editor

Unmanaged Alligatorweed

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demonstrated by NCAES that utilizes Rodeo™ in aquatic habitats and Arsenal™ where labeling permits. Implementation of the program in a cooperative effort between NCAES, North Carolina Division of Water Resources, and the United States Army Corp of Engineers, Wilmington District, has resulted in the reduction of alligatorweed to maintenance control levels in one of the heavily infested areas and expansion of the program is planned for the future. Results of the alligatorweed survey and herbicide evaluations will be available soon from the Water Resources Research Institute of the University of North Carolina in a bulletin titled, "Management Program for Alligatorweed in North Carolina."

CALENDAR

Most Important Dates

- **April 11, 1986**
Deadline to submit articles for June APMS NEWSLETTER.
- **April 18, 1986**
Deadline to submit paper titles for APMS 1986 Annual Meeting.
- **July 13-16, 1986**
Aquatic Plant Management Society Annual Meeting.

Chapter Meetings

- **Date TBA**
Canadian
- **March 16-18, 1986**
Midwest
The Abbey
Lake Geneva, WI
- **March 20-21, 1986**
Western
Town and Country Hotel
San Diego, CA
- **August 20-22, 1986**
South Carolina
Pine Island on Lake Murray
Columbia, SC (tentative)
- **October 14-16, 1986**
Florida
Holiday Inn
Plant City, FL
- **Date TBA**
Midsouth

Other Important Dates

- **July 20-24, 1986**
Conference on Research and Application of Aquatic Plants for Water Treatment and Resource Recovery—Orlando, FL
- **September 15-19, 1986**
7th International Symposium on Aquatic Macrophytes—Loughborough, Leicestershire, England
- **November 5-8, 1986**
Lake and Reservoir Management 6th Annual Symposium—Sponsored by the North American Lake Management Society—Portland, OR
- **January 12-14, 1987**
Southern Weed Science Society 1987 Annual Meeting—Hyatt Orlando, Kissimmee, FL
- **February 3-5, 1987**
Weed Science Society of America 1987 Annual Meeting—Adams Mark Hotel, St. Louis, MO

FINAL CALL FOR PAPERS

THE AQUATIC PLANT MANAGEMENT SOCIETY, INC.

You are invited to submit a title for a paper to be presented at the 1986 annual meeting of The Aquatic Plant Management Society, Inc., to be held July 13-16, 1986, at the Sarasota Hyatt House, Sarasota, Florida, USA. Type title authors, organization and location, exactly the way they are to appear on the program. If more than one author is listed, place an asterick after the name of the author who is to present the paper. Fifteen minutes will be allowed for each presentation. Projection equipment for 35mm slides will be provided. Special requests for additional time or specialized projection equipment should be directed to the Program Chairman, and will be considered on the merits of the individual request.

Deadline for Submission is April 18, 1986

Title _____

Author(s) _____

Organization _____

Address _____

Abstract (75 words or less) _____

Submit titles to: Dr. D.F. Martin
Department of Chemistry
University of South Florida
Tampa, FL 33620

Submit student paper titles to:
D.N. Riemer
Cook College
Dept. of Soils and Crops
P.O. Box 231
New Brunswick, NJ 08903

APPLICATION FOR MEMBERSHIP

There are three regular classes of membership available upon application made in accordance with the Charter adopted in 1961. These classes are:

- A. Active Membership \$25.00
- B. Student Membership 5.00
- C. Commercial Sustaining Membership 200.00

Name of Applicant _____ Spouse's Name _____

Home address* _____ Zip Code _____

Present title & Employer _____

Business Address* _____ Zip Code _____

Business Telephone _____ Home Telephone _____

Amount of Remittance \$ _____ Signature of Applicant _____

Membership Type: ACTIVE _____ COMMERCIAL SUSTAINING _____

STUDENT _____ SUBSCRIPTION _____

*Please indicate address to be used by our business office.



The Aquatic Plant Management Society, Inc.

The Aquatic Plant Management Society, Inc., is an international organization of scientists, educators, administrators, and concerned individuals interested in the management and control of aquatic plants. The membership reflects a diverse collection of Federal, state, and local agencies; researchers, professors, and students from universities and colleges around the world; corporations; commercial applicators; and others dedicated to promoting research and sharing information about aquatic plants and the technology of aquatic plant management.

Originally called The Hyacinth Control Society, Inc., when founded in 1961, The Aquatic Plant Management Society, Inc., has evolved into a respected source of expertise in the aquatics field. The Society has grown to include several regional or state chapters; and through these affiliates, annual international meetings, newsletters, and the *Journal of Aquatic Plant Management*, members keep abreast of the latest developments in biological, mechanical, chemical, and integrated methods of aquatic plant management and control.

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