

# Aquatic Weeds – A National Problem

**I**n a climactic display of roll-call voice voting, members declared the Hyacinth Control Society Inc. to be the official name of the 12-year old organization "for at least another year."

Although a direct mail straw ballot earlier indicated that many members desired to change the name to the Aquatic Weed Science Society, open floor discussion apparently swayed the majority's opinion in favor of the older established name.

Site of this year's July meeting was Miami, and while the sun only partially cooperated, attendees willingly participated in the meeting and the associated fun activities. The unofficial registration count showed an increase over 1971 attendance with over 200 attending.

Unlike other meetings of the Society, this year's convention was attended by a greater number of persons outside the imaginary periphery of serious aquatic weed and vegetation problems. Papers presented by scientists, aquatic weed specialists and industry representatives indicated that concern on controlling aquatic vegetation has reached beyond the "gee-whiz" stage in many midwestern states.

In fact, the underlying tone, rumored by more than one member to another, was that aquatic weed science has come into its own. A few members even speculated future meeting sites in Iowa, where Hy-

drilla was reportedly discovered this year.

Following a greeting by Steve Clark, mayor of Miami, President Robert J. Gates addressed the delegates. "Environmental improvement is, in effect, good housekeeping. It begins with the personal habits of individuals. . . . There are no bystanders. Everyone is directly involved, even when the subject is restricted to pesticides," he said. ". . .

We must not sweep any of our problems under the rug. On the other hand, we have the obligation to insist that regulation and control of pesticides be based on sound information and the benefit/risk equation soberly evaluated. . . .

"The greatest threat to all people, in my opinion, is the coalition of those who would sacrifice future economy in the name of ecology, and  
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Grouped by a static display of airboats and assorted equipment used in aquatic weed control, members of the Hyacinth Control Society listen to Bob Blackburn (standing right) discuss application methods. This year the society toured the extensive facilities of the USDA Research Center at Fort Lauderdale.



## Cutrine-Diquat Combo Registered In Florida

Attention hydrilla in Florida. Look out!

The State Department of Agriculture of Florida has just registered Cutrine and Diquat as a tank-mix for the control of hydrilla and other submerged weeds.

According to Applied Biochemists, Inc., manufacturers of Cutrine, hydrilla has been choking Florida's lakes and canals for more than a decade. It is not readily controlled by previously registered products. The combination of Cutrine and Diquat have a somewhat synergistic effect to control this noxious weed.

Cutrine is Federally registered in all 50 states for algae control in potable water reservoirs, irrigation water, lakes and ponds. The Florida registration of the combination per-

mits use in the same areas as the Federal registration of Cutrine alone.

Research on the tank-mix combination was started three years ago. Robert D. Blackburn and his staff at the USDA Agricultural Research Service station in Fort Lauderdale experimented with a wide variety of chemicals and chemical combinations to provide the most effective, economical and safest means of control.

Field testing in 1971 indicated that the combination of Cutrine and Diquat was the most exceptional performer from the standpoint of effectiveness and economy.

Blackburn reported that the combination required less chemical to

achieve control than other products tested. He further observed that there were no fish kills and that weed desiccation was slow.

The Florida registration recommends four gallons of Cutrine and two gallons of Diquat be used per acre, mixed with enough water to allow even distribution of the herbicide in the area being treated.

Application is made by pumping through hoses as the hoses are dragged approximately one foot above the canal or lake bottom. Hoses should not be dragged on the bottom and should be no further than three feet apart.

Waiting periods recommended for the use of Diquat should be followed after application of the combination.

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those who are unwilling to pay for our past and present problems . . ." he continued. "The self-satisfied, selfish interests that refuse to recognize and accept the fact that there are aquaic weed problems and a need for their control is quite another problem.

"We must go forward in weed control on all fronts, chemical, mechanical, and biological. We must accept the obligation to develop new methods with high environmental standards," he concluded.

While delegates to the Democratic Convention, in a nearby hotel, formed the planks of it's political



Roy P. Clark, chief, pesticides branch, Environmental Protection Agency (EPA), Region IV, Atlanta, discusses current pesticide legislation.

platform on problems of society, the general tenor of the papers presented at HCS concerned the solution to problems of ecology, pesticides in the aquatic environment and current pesticide legislation.

Trials with herbicides and reports on their performance constituted a goodly percentage of the 45 papers presented. But it was interesting to note the added enthusiasm created by speakers reporting on other avenues in aquatic weed control.

Most members from the southern states realized that herbicides are an effective tool, but conditions for growth of aquatic weeds — particularly water hyacinth — are so ideal that herbicides alone cannot completely control the problem. For example, it was shown that a single water hyacinth has the ability to increase in volume by 6,000 percent in the short period of one month. Thus, researchers are exploring the use of fungi, insects and herbivorous fish.

Members consequently sat in rapt attention as Dr. Charles R. Walker, chief, branch of pest control research, USDI, discussed "a critical review of the white amur and its evaluation for aquatic plant control in the U.S." He said that tests indicate that "the fish could survive in any latitude in the U.S.; in fact, it is quite salt tolerant." However, it is subject to many diseases. Additionally, it could become a potential threat to sports fishing if not controlled. Walker called the white amur a superfish, capable of growing to a weight of 20 pounds in three years.

Other speakers including Dr. David L. Sutton of the University of Florida said that when the white amur was fed duckweed the conversion factor of vegetation to flesh was greater than that of chickens. It



Robert J. Gates, 1972 president, turns the gavel over to Brandt G. Watson, 1973 president of the Hyacinth Control Society.

was also pointed out that the white amur is docile, very gergarious and highly excitable.

A safe assumption is that the white amur is like the moon rockets at Cape Kennedy — still in the exploratory stage.

While it may be said that insects, snails and certain plant fungi hold potential promise, the general belief by many members was that these control procedures must also be further perfected. None can currently surpass the economic results from the application of herbicides. B. David Perkins, USDA, Fort Lauderdale, pointed out that presently 24 weeds in the U.S. can be biologically controlled by 52 species of insects.

Mechanical weed control was also discussed during the convention. C. Brate Bryant, Aquamarine Corp., Waukesha, Wisc., presented an interesting cost analysis of harvesting weeds in four areas of the U.S. Additionally, Merle R. Chaplin, Winter Park, Fla. described his new aquatic weed harvester in detail. Richard Messinger, Amchem Products, Inc. spoke about Directa-Spra, a new low drift aquatic herbicide applicator that has been extensively tested by the Florida Game and Fresh Water Fish Commission, Aquatic Weed Section. Robert D. Eron, a familiar face to most members, was missing at this year's meeting. However, his new Eron-Aerator and water treatment device was discussed.

This year members also visited the USDA Research Center at Fort Lauderdale. Analytical, biological, entomological and fishery laboratories were toured culminating with a static display of aquatic weed control equipment used by the station. The group was then served a catfish

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Members informally discuss aquatic vegetation control during a break in the formal program.

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dinner. A few lucky persons participated in a white amur tasting experiment.

As usual, exhibitors at the convention reported much interest by members in such products as Cutrine (Applied Biochemists), System M (3M Company), N-Bar floating barrier (Sea Guard, Inc.), Hydout (Pennwalt Corporation), Casoron (Thompson - Hayward Chemical Company, distributed by Southern Mill Creek Products.)

Herb Collins, (l) representative in Florida for Applied Biochemists, talks about the new Cutrine-Diquat tank-mix combination for Hydrilla control in Florida only.

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## Metro Tree Stress Studied At Penn State

Ornamental trees that can endure environmental stresses in metropolitan regions are the subject of a new study at The Pennsylvania State University.

Henry D. Gerhold and Maurice E. Demeritt of Penn State's school of forest resources are developing a practical genetic information system to help planters select better suited varieties for metropolitan regions. Their research is supported by the Pinchot Institute of Environmental Research through funds of the U. S. Forest Service.

Initially, a broad base of information will be obtained through a survey covering all urban and suburban regions of New England, the Middle Atlantic States, Ohio, and Michigan. A complete list is to be assembled of all officials who are responsible for tree planting and maintenance along streets and highways in large and small cities, in parks or plazas, and in other public areas in the Northeast.

Such officials are asked to cooperate by sending their name,

Elected officers for this year are: President, Brandt G. Watson, Naples Mosquito Control, Naples; 1st Vice President, Dr. Alva P. Burkhalter, aquatic plant research and control, State of Florida; 2nd Vice President, Ray A. Spirnock, field station chief, Central & Southern Florida Flood Control District; Secretary, T. Wayne Miller, director, Lee County Mosquito Control District, Ft. Meyers, Fla.; Treasurer, Robert Geiger, 3M Company; Editor, Dr. David L. Sutton, University of Florida.

address, and title to Dr. H. D. Gerhold, Forest Resources Laboratory, University Park, Pa. 16802. When these people are contacted, they will be asked about specific species planted, the varieties within species, and where the trees were planted and their function.

Information also will be collected regarding damage caused by diseases, insects, de-icing salts, and other variables.

Polluted air, de-icing salts, unnatural lighting, and limited rooting space cause declining vigor and death of many of the trees planted in cities and along highways, the Penn State scientists point out. Some species and varieties are genetically better adapted than others to such unfavorable conditions.

In the artificial world of the city dweller, a plant is one of the last tangible reminders of man's dependence on nature, they note.

Trees and shrubs improve the surroundings for residents of towns and cities alike. Vegetation helps to muffle street noises, provides shade and protection against wind, and removes dust and noxious gases from the air.

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