



# AQUATIC PLANT NEWS

A newsletter of the Aquatic Plant Management Society, Inc./No. 26, Nov. 1987

## Concern Spreads Over Swamp Stone Crop In America Will It Invade N. America Next?

**F.H. Dawson** - Freshwater Biological Association, River Laboratory, East Stoke, Wareham, Dorset, BH20 6BB, U.K.

Swamp stone crop, *Crassula helmsii*, a plant alien to Britain and Europe, has rapidly expanded its distribution over the last two decades. It is currently found in over 100 aquatic sites and is doubling the sites of its occurrence every 3-5 years. Concern is growing because 1 in 10 of these natural sites are nature reserves and both common and rare native species are rapidly outcompeted by its dense monospecific stands which often continue to dominate throughout the winter months. Its occurrence can easily be overlooked (compare e.g. Purple Loosestrife) as in swamps it resembles *Sphagnum* moss cover or in ponds, Starworts (*Callitriche*, spp.). Attempts at control, particularly mechanical, have had only limited success because its potential for vegetative growth is very high — each minute node producing at least one and sometimes two new shoots; it has even outcompeted species of *Elodea* and *Nuphar*. Concern was greater when it was realized that it is less demanding in its natural requirements and as such occupies a greater

habitat range than previous invasions of alien plants, e.g. Eurasian Milfoil. It has so far dominated wetland areas of several acres ranging from 0.7 m above water levels, particularly in shallow seasonal ponds of acidic water, to depths of 3 m in lakes of calcareous water. Plant size varies from compact stands of 0.1 m to large submerged ones of 1.3 m. Biomass is always high, ranging from 0.3 to 1.5 kg dry weight  $m^{-2}$ . It is currently confined to static waters but has been shown, experimentally, to grow in moderately fast flowing waters.

The initial occurrences in Britain have been sporadic but may be related to its supply for aquaria and garden ponds as an 'oxygenator-plant,' because of its vigorous growth and tolerance of varied growth conditions. It is similar in appearance to *Crassula (Tillaea) aquatica* already found in N. America but it can be distinguished because its flower stalks are relatively long (2-8 mm).

Considering the high reproductive potential, rapid spread and the difficulty of control of this variety, it is recommended that extreme measures are used to prevent its invasion of North America.



Photo by: F.H. Dawson

*Crassula helmsii*: detail

### Position Available

#### Director, Aquatic Weed Control -

Directs all District aquatic weed control efforts from a central management location. Requires Bachelor's of Science degree in a natural science or engineering discipline supplemented with graduate level courses in Management Science; and five years experience in the management and direction of chemical spray and mechanical harvesting crew operations and results evaluations; or an equivalent combination of training and experience. State of Florida's driver's license. Salary range \$31,241 — \$49,504. For an official application contact **South Florida Water Management District, P.O. Box 24680, West Palm Beach, FL 33416-4680 or call 305/686-8800, x726.** An official application must be received by the Personnel Office no later than 5:00 pm on October 23, 1987. Equal Opportunity Employer.



*Crassula helmsii* invading, progress to second season in swamping out native flora

## USE OF SILVER CARP FOR CONTROL OF NUISANCE ALGAE DISCUSSED

The Israel National Water System (INWS) was built during the 1960's for the purpose of carrying water from the northern part of the country which is rich in rains to the southern desert areas. The system, which originates from Lake Kinneret, consists of a series of lakes along 250 km that range in capacity between 200,000 cubic meters to 9,000,000 cubic meters and depth between 3 m and 13 m. Water from the system is used for irrigation, industry and domestic purposes.

Biological development of these reservoirs has led to nuisances such as taste and odor problems and clogging of intake screens by algae and higher plants. Biological control of these problems, using several fish species, was discussed by H. Leventer in *Biological Control of Reservoirs by Fish* (1979, second 1984). In his new publication, *The Contribution of Silver Carp*



**Silver Carp**  
*Hypophthalmichthys molitrix*

*Hypophthalmichthys molitrix* to the *Biological Control of Reservoirs* (1987) H. Leventer describes the state of the art regarding the silver carp and ways of increasing its contribution to algae control in reservoirs.

For additional information contact:  
H. Leventer  
Reservoir Biologist of Israel National Water System  
Mekoroth Water Co. Jordan District  
Central Laboratory  
Nazareth Ilit 17105 Israel

## SCAPMS NINTH ANNUAL MEETING FOCUSES ON HYDRILLA

The South Carolina Aquatic Plant Management Society held its Ninth Annual Meeting at the Clemson University Outdoor Laboratory in Clemson on August 20 and 21, 1987. Keynote speaker at the meeting was Dr. Max A. Lennon, President of Clemson University. The special topic of this year's meeting was "Hydrilla: Biology, Ecology, and Control." Invited speakers from throughout the Southeast United States discussed their experiences with *Hydrilla*.

The formal meeting was preceded on August 19 by an aquatic plant identification workshop conducted by Cindy Aulbach-Smith, Curator of the University of South Carolina Herbarium. A total of 45 people attended the workshop, while the annual meeting had an attendance of 78 regular members. Among the many highlights of the meeting were the presentation of the Member of the Year Award to Howard Roach, co-founder of the Society; the student paper contest, won by Glenn Turner of Clemson University; and the annual "banquet," which again featured our famous Beaufort stew.

At the annual business meeting, a resolution petitioning the South Carolina Department of Agriculture to aggressively enforce the S.C. Noxious Weed Act was unanimously approved by the membership. Additional

business included the acceptance of five changes in the Society's Bylaws, chief of which was a change in the term of office of the Directors to a two year term. The terms of the Directors shall now be sequenced so that two will conclude each year. The membership also voted on the 1987-88 Officers and Directors, which are:

President-Tim Drake, Palmetto Aquatic Plant Mgt., Inc.  
Vice-President  
(President-Elect)-Cindy Aulbach-Smith, Univ. of S.C.  
Secretary/Treasurer-Pat Walker, S.C. Land Resources Comm.  
Editor-John Inabinet, Santee Cooper  
Directors-Phil Kirk, S.C. Wildlife and Marine Resources Comm.; Steve de Kozlowski, S.C. Water Resources Comm.; Jim Tuten, Santee Cooper; Tony Mishoe, Elanco Products; and George Swearingen, Duke Power Co.

As has been the case over the past several years, membership in the Society remained stable during 1987, with a total of 91 active, student, and sustaining members at the time of the Annual Meeting. Membership was distributed over 8 States, with nearly 95% of the members coming from South Carolina, North Carolina, Georgia, and Florida.

## AQUATIC FEDERAL NOXIOUS WEEDS 1987 UPDATE

Randy G. Westbrook, USDA, APHIS

The Federal Noxious Weed Act of 1974 was passed to protect American agriculture from invasion by foreign noxious weeds. At present 92 taxa have been included on the list. Of these, there are 15 species of aquatic plants. This includes *Azolla pinnata* R. Brown, *Eichhornia azurea* Swartz, *Hydrilla verticillata* (Lf.) Royle, *Hygrophila polysperma* T. Anderson, *Ipomoea aquatica* Forsskal, *Lagarosiphon major* (Ridley) Moss, *Limnophila sessiliflora* (Vahl) Blume, *Monochoria hastata* (L.) Solms-Laubach, *Monochoria vaginalis* (Burman f.) C. Presl, *Sagittaria sagittifolia* L., *Salvinia molesta* D.S. Mitchell, *Salvinia biloba* Raddi, *Salvinia herzogii* de la Sota, *Sparganium erectum* L. and *Stratiotes aloides* L.

The exclusion of FNW species from the United States is the responsibility of USDA, Animal and Plant Health Inspection Service, Plant Protection and Quarantine. Agency personnel inspect all high risk imported goods at U.S. ports of entry for contamination by weeds and other pests. A noxious weed inspection system is now being developed to identify Federal Noxious Weeds that occur in each country and commodities likely to be infested by them. The greatest risk for introduction of aquatic FNW species is as contaminants of plant collections or as commercial shipments themselves for the aquarium trade. Such imported materials are inspected at one of 14 plant inspection stations around the U.S. One recent seizure at the Miami Inspection Station was a commercial shipment of *Hygrophila polysperma* (1000 plants).

### NALMS Publications Available

The following publications are available by contacting the North American Lake Management Society, 1000 Connecticut Avenue, NW, Suite 202, Washington, DC 20036:

*NALMS Management Guide for Lakes and Reservoirs*. 1987. M. Lynn Moore for the North American Lake Management Society. Cost - \$6.00.

*A Layman's Bibliography of Lake Management*. 1985. Cost - \$3.00.

*Starting and Building an Effective Lake Association*. Cost - \$3.00

# EPA'S ENDANGERED SPECIES LABELING DRAWS PROTESTS

EPA's endangered species labeling program will either start over in a rule making mode or be taken to court because it is not. The American Farm Bureau Federation (AFBF) has asked EPA Administrator Thomas to begin rule making for the program. The California Department of Food and Agriculture has also asked the Agency to reevaluate the program before its 1988 effective date. It is also understood that USDA has provided EPA with negative comments on the labeling program.

According to concerns expressed by John C. Datt, Executive Director, Washington Office, AFBF:

- The lack of a formal rulemaking for the program violates FIFRA, the Administrative Procedures Act and the Endangered Species Act (ESA).
- "FIFRA Section (b) also requires that EPA consider mitigation measures short of cancellation or use prohibitions that will permit continued use while at the same time adequately protect environmental interest. By imposing a blanket non-selective prohibition against pesticide use in areas that EPA determines might affect listed species, EPA has ignored this statutory requirement."
- "Notwithstanding a rulemaking requirement, the program must at the very least be postponed until the requested mapping (by the USDI's Fish and Wildlife Service) has been completed, evaluated and published as required."
- "Nearly one-third of the nation's counties will be affected. The use of one or more pesticides — many of them essential to

agricultural production — will be discontinued in more than 900 counties or portions of counties. In many cases, satisfactory substitutes for these products have not been determined or do not exist."

- "The proposal could result in an unfair disadvantage for individual agricultural producers. It is conceivable, for instance, that one farmer would not be allowed to use atrazine on his crop while his neighbor across the road would have no such restriction."
- If strictly enforced, the endangered species labeling program would disrupt important agricultural programs such as weed, grasshopper and boll weevil eradication programs within USDA."

Rex Magee of the California Department of Food and Agriculture stated "Indiscriminate prohibition or restriction of the 90 odd pesticides currently listed for revised labeling could have catastrophic effects on California Agriculture." Magee stated the available bulletin range maps have serious errors and that they do not agree with other range information from EPA and the Fish and Wildlife Service (FWS). He stressed applying error-ridden maps and bulletins to five counties in the state in which agricultural production accounts for over \$3 billion a year could remove large areas from agricultural production. (P&TCN, V.15, No. 37)

## 1-GALLON CONTAINER

### RODEO HERBICIDE AVAILABLE

Landscapers, industrial grounds maintenance managers, city park directors, golf course superintendents, or anyone with an aquatic weed problem will benefit from a new container size and marketing system for Rodeo aquatic herbicide.

The herbicide will now be sold in a 1-gallon size container and users will be able to buy it by telephone for direct delivery to their doorstep. Monsanto spokesperson Sharon Gabel says these changes will make it easier for people who need to control labeled aquatic weeds on a small scale and don't have easy

access to or need larger containers which are sold by herbicide dealers.

"It will be very convenient for those who have just a small problem with aquatic weeds in drainage ditches or small retaining ponds. It will be especially helpful to owners of small recreational swimming and fishing lakes who are troubled with cattails which have over taken the shoreline," Gabel says.

The new container and technical product information will be available to consumers after May 22 by calling 800-544-6116.

## CALENDAR OF EVENTS

### Meetings

#### ■ October 14-16, 1987

Midsouth Aquatic Plant Management Society 8th Annual Meeting, Holiday Inn, Decatur, AL  
Contact: Leon Bates  
(205) 386-2276.

#### ■ October 19-22, 1987

Florida Aquatic Plant Management Society 1987 Annual Meeting, Holiday Surfside Inn, Daytona Beach, FL  
Contact: Ken Langeland  
(904) 392-9613

#### ■ November 3-7, 1987

North American Lake Management Society 7th Annual International Symposium, Applied Lake and Watershed Management, The Role of Standards in Water Resource Management Policy, Peabody Hotel, Orlando, FL  
Contact: Dr. Martin Waniellista  
(305) 275-2841

#### ■ November 16-19, 1987

22nd Annual Aquatic Plant Control Research Program Review Meeting, Red Lion Inn - Columbia River, Portland, OR  
Contact: Bill Rushing  
(601) 634-3542

#### ■ January 18-20, 1988

Southern Weed Science Society 41st Annual Meeting, Sheraton-Kensington Hotel, Tulsa, Oklahoma.

#### ■ February 2-4, 1988

Weed Science Society of America, 28th Annual Meeting, Riviera Hotel, Las Vegas, Nevada.

*Aquatic Plant News* is a publication of the Aquatic Plant Management Society, Inc.  
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Gainesville, FL 32606



# TWENTY-SEVENTH ANNUAL MEETING HELD IN SAVANNAH

The 27th Annual Meeting of the Aquatic Plant Management Society was held July 12-15, 1987, at the Hyatt Regency Hotel in Savannah, GA. The broad range of subject areas that encompassed biological, herbicidal, and mechanical management of aquatic weeds, aquatic plant biology, ecology, and physiology, remote sensing, and wetlands ecology and restoration brought meeting attendees and their spouses out in record numbers.

With his Presidential Address, "Why do you fear me Nellie," President Martin stimulated our thoughts by analogizing "Nellie's"

fear of unknown harms that could be wrought upon her by the black clad, black handlebar mustache twirling villain to the public's fear of unknown dangers of pesticides. Dr. Martin challenged the society to provide the leadership that can minimize these fears of the public:

"...we have a population that is concerned with herbicides and what they may do to non-target species, but it is a population that would appear to be scientifically illiterate on some key aspects, a population that distrusts researchers, but interestingly

enough, this same population defers to leaders and experts who can be trusted. The Aquatic Plant Management Society has those leaders and experts. Leadership in the proper and effective use of herbicides is a tradition of our Society, and it must be our future as well. If it continues to be, then all other problems that we face can be overcome."

Dr. Martin's Presidential Address will be published in the January "Journal of the Aquatic Plant Management Society."

## Herb Friedman Awarded Honorary Membership



President Martin (right), presents honorary plaque to Herb Friedman (center) as Secretary/Treasurer Bill Rushing expresses approval

Herbert J. Friedman, one of three founders and a charter member of APMS, received the society's highest honor, Honorary Member, at the 1987 annual meeting in Savannah. Herb served as the society's first temporary and first permanent Secretary-Treasurer in 1961 and 1962, respectively, and served as our third

President in 1963-64. This award expresses our heart-felt appreciation to Herb for his unfaltering dedication to the society throughout the years, and we hope that Herb and Nellie continue to be familiar faces at Society functions.

CONGRATULATIONS HERB.

## SPECIAL AWARD OF APPRECIATION TO GLORIA RUSHING

President Martin presented Gloria Rushing a Special Award of Appreciation from the Society for her behind-the-scenes efforts for the society. **THANK YOU GLORIA.**

## Certificates of Achievement Awarded

Joe Joyce and Terry Goldsby, outgoing Board Members, were awarded certificates of achievement by the Board of Directors.

## Nominations for Honorary Membership

Each year the society considers members for election to the status of Honorary Member. The Bylaws state that to be eligible a member must 1) have made a significant contribution to the field of aquatic plant management 2) be retired and no longer employed in this field 3) have been a voting member of the Society for at least 10 years 4) have actively promoted the Society and its goals. According to the Bylaws, nominations for Honorary Membership shall be submitted to the Bylaws Committee through a petition signed by 10 members of the Society. Please submit nominations to the Bylaws Committee by November 20, 1987. For further information contact: D.F. Spencer, USDA Aquatic Weed Lab, University of California, Davis, CA, 95616: (916) 752-1096.

# Aquatic Plant Management Society Officers 1987-88



David Spencer-Director (2-years), Scott Painter-Director (1-year), Randall Stocker-Director (1-year), Joe Zolczynski-Director (3-years), Carol Lembi-Director (3-years), Bill Rushing-Secretary/Treasurer, Dave Sutton-Vice President, Richard Couch-President Elect, Richard Comes-President, Bill Haller-Editor, Dean Martin-Immediate Past President.

## COMMITTEE CHAIRMAN FOR 1987-88

The following APMS members have been appointed by the Board of Directors as Chairman for the indicated Committees. Their names and telephone numbers are provided here so that you can contact them with any suggestions or to offer assistance.

|                        |                    |              |
|------------------------|--------------------|--------------|
| Bylaws and Resolutions | Dave Spencer       | 916/752-6260 |
| Exhibits               | Terry McNabb       | 415/680-0320 |
| International Contacts | Scott Painter      | 416/637-4251 |
| Legislative            | Leon Bates         | 205/386-2815 |
| Local Arrangements     | Don Lee            | 504/342-5864 |
| Local Chapters         | Steve de Kozlowski | 803/737-6550 |
| Membership             | Ed Theriot         | 601/634-2678 |
| Necrology              | Max McCowen        | 317/845-0993 |
| Newsletter             | Ken Langeland      | 904/392-9613 |
| Nominating             | Dean Martin        | 813/974-2374 |
| Past Presidents        |                    |              |
| Advisory Council       | Dean Martin        | ibid         |
| Placement              | John Rodgers       | 817/788-2011 |
| Program                | Richard Couch      | 918/495-6940 |
| Publications           | Bill Haller        | 904/392-9613 |
| Publicity              | Doug Pullman       | 517/631-2677 |
| Site Selection         | Don Lee            | 504/342-5864 |
| Student Affairs        | Don Reimer         | 201/932-9771 |
| C.A.S.T.               | Bill Haller (1987) | 904/392-9613 |
| WSSA Representative    | Larz Anderson      | 916/752-6260 |

## STUDENT PAPER CONTEST

After listening to student papers at APMS, I am convinced every year that the most capable graduate students in our colleges are in aquatic programs. This year was no exception. In Don Riemers absence — Don is recovering from an illness — Steve Klaine did an excellent job of organizing the graduate student contest. We thank Steve for his successful efforts and wish Don a rapid recovery so that he can get back to work for the society. The winners of the 1987 APMS Student Paper Contest were as follows:



APMS Student Paper Contest winners Kelly Michella Cassidy, Bruce A. Davis, Patricia M. Rocchio, and first place winner, Barbara J. Knowles.

**FIRST PLACE** — Barbara J. Knowles  
Influence of natural and synthetic plant growth regulators on *Hydrilla verticillata* Royle. Barbara J. Knowles and Steve Klaine, Department of Biology, Memphis State University, Memphis, TN.

**SECOND PLACE** — Patricia M. Rocchio  
Comparative study of the fate and effects of diquat and 2,4-D. Patricia M. Rocchio and John H. Rodgers, Jr., Institute of Applied Science, North Texas State University, Denton, TX.

**THIRD PLACE** — Bruce A. Davis  
Aquatic macrophyte change direction: A remote sensing methodology. Bruce A. Davis and John R. Jensen, Department of Geography, University of South Carolina, Columbia, SC.

**FOURTH PLACE** — Kelly Michella Cassidy  
Relationship between tissue burden and response of hydrilla to diquat. Kelly Michella Cassidy and John H. Rodgers, Jr., Institute of Applied Sciences, North Texas State University, Denton, TX.

# IMPROVEMENTS TO WEED CUTTING

## Details from F.H. Dawson —

Freshwater Biological Association,  
River Laboratory, East Stoke,  
Wareham, Dorset, BH 20 6BB, U.K.  
Telephone No: (U.K.) 44-929-462314  
(U.S. a.m.)

Autumn weed cutting experiments guided by the Freshwater Biological Association's River Laboratory for Wessex Water, one of the United Kingdom's Regional Water Authorities, have successfully produced cost savings of more than 30% of the normal cost of weed cutting on 20 km of the Dorset River Frome — a task which on U.K. rivers and streams annually costs 13 million (\$20 million).

This technique which preemptively reduces the potential for the next season's plant-growth, was based on fundamental studies of weed cutting and observations of the effects of light-dredging by local river engineer, Len Miles. This three-year study was undertaken in cooperation with Wessex Water biologists searching for better weed-cutting techniques. Wessex Water now intends to use this technique at trial sites on another local river.

Benefits also included:

- for riparian users, lower water

levels for longer in spring, reduced waterlogging of land and flood-risk;

- for the river engineer, reduction in the need to cut weed at traditional times, reduction of the cutting-effort with less cut-weed for disposal; preemptive cutting may also result in plant which offer less hydraulic resistance, grow less vigorously, and produce plant stands which are easier to cut and collect; failure to reduce or cease unnecessary summer cutting jeopardises the benefits of autumn cutting;
- for the fisherman, shorter periods of disruption and reduced removal of invertebrates (- fish food) with the cut weed; this technique may invigorate spawning grounds in autumn, reduce the effects of cutting on the kills of fish eggs and fry, increase plant variety and thus 'fry' habitat; these could all lead to better fish production but remain to be studied;
- for the conservationist, less disturbance of river communities and more diverse flora and fauna

Improved techniques such as preemptive weed cutting have wide application in an industry which spends between 45-100 million (\$70-130 million) each year on weed cutting in rivers, drainage channels and ditches.

'We can advise, or provide the right study team on the site when required, and we are looking for contracts to tailor this type of technique to regional needs' said aquatic botanist Hugh Dawson.

Westlake, D.F. & Dawson, F.H. (1982) Thirty years of weed cutting on a chalk stream. *Proc. 6th Eur. Weed Res. Coun. Symp. Aquat. Weeds*, 132-140.

Westlake, D.F. & Dawson, F.H. (1986) The management of *Ranunculus calcaireus* by pre-emptive cutting in Southern England. *European Weed Research Society, Association of Applied Biologists, 7th International Symposium on Aquatic Weeds*, September 1986, 395-400

Westlake, D.F. & Dawson, F.H. (submitted) Effects of revised programmes of weed cutting on water levels in a lowland river. *Verh. Int. Verein. theor. angew. Limnol.* 23

## SONAR IRRIGATION PRECAUTIONS

Elanco has recently received supplemental labeling for irrigation precautions for its aquatic herbicide Sonar A.S., 5P, and SRP. The following statement and precautionary waiting periods will now appear on labels.

"Irrigation with SONAR treated water may result in injury to the irrigated vegetation. Elanco recommends informing those who irrigate from SONAR treated areas of the irrigation timeframes presented in the table below. These timeframes are suggestions which should be followed to reduce the potential for injury to vegetation irrigated with SONAR treated water.

| Application Site                   | Days after Application |    |    |                                       |    |    |   |    |    |
|------------------------------------|------------------------|----|----|---------------------------------------|----|----|---|----|----|
|                                    | Established Tree Crops |    |    | Established Row Crops/<br>Turf/Plants |    |    | Newly Seeded Crops/<br>Seedbeds or Areas<br>to be Planted<br>Including Overseeded<br>Golf Course Greens |    |    |
|                                    | SRP                    | AS | 5P | SRP                                   | AS | 5P | SRP   | AS | 5P |
| Ponds & Static Canals <sup>1</sup> | 7                      | 7  | 7  | 30                                    | 30 | 30 | 30  | 30 | 30 |
| Canals                             | 7                      | 7  | 7  | 7                                     | 14 | 7  | 30  | 30 | 30 |
| Lakes & Reservoirs <sup>2</sup>    | 7                      | 7  | 7  | 7                                     | 14 | 7  | 7   | 14 | 7  |
| Rivers                             | 7                      | —  | —  | 7                                     | —  | —  | 7   | —  | —  |

<sup>1</sup> For purposes of SONAR labeling, a pond is defined as a body of water 10 acres or less in size. A lake or reservoir is greater than 10 acres.

<sup>2</sup> In lakes and reservoirs where one-half or greater of the body of water is treated, use the pond and static canal irrigation restrictions.

Read the SONAR label for additional directions for use, cautions, and precautions prior to use."

## NEW BOOK AVAILABLE

CRAWFORD, R.M.M. (ed.)

Plant life in aquatic and amphibious habitats: produced as a tribute to D.H.N. Spence, 1987. (Special Publ. British Ecolog. Soc., 5).1 portr. Many figures. XII, 452 p.8vo.Cloth. DM 166

The physiological ecology of amphibious and intertidal plants was the subject of a special symposium held by the British Ecological Society in March 1985. 'Amphibious' is not a word usually associated with plants, yet there are many species of higher plants that have to adjust suddenly from dry land to an aquatic existence. The problems encountered by both crops and natural flora under soil flood or tidal flood conditions formed the discussion of this international meeting.

This book has just been published and is available from Koeltz Scientific Books D-6240 Koenigstein, P.O. Box 1360, W. Germany, for prompt supply. VISA, Eurocard, Master, Access and American Express credit cards are accepted. Please give your correct address, card number and expiration date of your card.



# MIMOSA PIGRA UPDATE

Randy G. Westbrooks, USDA, APHIS

*Catclaw Mimosa* (CM) is a thorny shrub that is designated as a Federal Noxious Weed. It occurs in tropical Africa, Madagascar, Thailand, Indonesia, Australia, South America, Costa Rica, Mexico and the United States. If left unchecked, this plant forms dense, thorny thickets on lake shores, rivers and canals that impede water flow and pose a hazard to humans and animals.

CM was first discovered in the United States on July 2, 1984, in Highlands County, Florida, on the edges of Little Lake Bonnett and Lake Letta. The area infested at this site is estimated to be about 3.2 hectares. A much larger infestation of 152 hectares was found in Palm Beach County in an area centering around the intersection of the Loxahatchee River and the Florida Turnpike.

Manual control of CM by cutting is only effective for a short time. Within four months after cutting, the plant grows back to a height of 3 meters. Flowering resumes during the fifth month. Burning the plant is usually ineffective as well.

Chemical control of CM has been accomplished using a 2% premix solution of dicamba and 2, 4-D (Banvel 720®). One month after the initial application in September, 1985, only small, dispersed plants were observed in the treatment area. These are presumed to have emerged after treatment from seed reserves in the



soil. Complete kill of a plant is only possible by thorough coverage of all plant parts. In wet areas, glyphosate is registered for control of vegetation such as CM. However, it is not as effective as dicamba plus 2, 4-D in controlling the plant.

If left unchecked, *Mimosa pigra* will spread extensively through the open waterways and wetlands of Florida. This habitat is very similar to those it has successfully invaded. The successful eradication of *Mimosa pigra* from Florida will require the cooperation of landowners in the infested area to achieve the destruction of all reproducing plants. Repeated application of herbicides will then be necessary to kill all seedlings as they emerge until the seed reserve in the soil is exhausted.

## FIFRA, SAP CONCLUDES DATA INSUFFICIENT TO CLASSIFY 2, 4-D AS CATEGORY C ONCOGEN

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Scientific Advisory Panel (SAP) has reviewed the data on which the Environmental Protection Agency (EPA) Peer Review Committee had based their recommendation to classify 2, 4-D as an Interim Category C Oncogen. A Category C oncogen suggests a possible human carcinogen with limited evidence of carcinogenicity to animals. The SAP concluded that rat and mouse oncogenicity studies in which the data were negative for female rats and both sexes of mice were adequate in design and conduct. Increased incidence of astrocytomas in male rats exposed to 45 mg/kg 2, 4-D was considered equivocal evidence of oncogenicity, and a repeat study was recommended. The panel also expressed the belief that human epidemiology studies represented well-designed and conducted investigations but that

these data are also equivocal data on the oncogenicity of 2, 4-D to humans. Additional studies are currently under way that should help to clarify this.

The SAP concluded that present data is insufficient to determine the oncogenicity of 2, 4-D and it should therefore be classified in Category D which suggests that it is not classifiable as to human carcinogenicity.

The oncogenicity studies were submitted to EPA by the Industry Task force on 2, 4-D Research Data in response to a data call-in letter issued under authority of Section 3(c) (2) (B) of FIFRA to registrants of 2, 4-D. The letter required submission of data on potential health effect related to acute oral and dermal toxicity, oncogenicity in rat and mouse, reproduction, teratogenicity, neurotoxicity and metabolism. All required studies have been submitted. For additional information contact the Task Force at 800-345-5109.

## WATER-HYACINTH AND HYDRILLA IN FLORIDA WATER BODIES

Jeffrey D. Schardt

A survey of the aquatic plants in Florida public waters was conducted by the Department of Natural Resources between April 1 and October 31, 1986. During that period, 479 waterbodies, totalling 1.3 million surface acres were inventoried for the presence and abundance of aquatic plants. This survey represents the 5th in a series of such annual events conducted to:

- 1) detect potential aquatic plant problems before they occur;
- 2) design management programs and
- 3) gauge the success of state and federally funded control efforts.

Of particular interest to the Department are exotic species, especially hydrilla and waterhyacinth. During 1986, 27 exotic aquatic plant species covered approximately 124,000 acres or 37% of all species observed. This represents nearly 4,000 more acres than in 1984, but also represents a decline of 1% since 1984. Although the decline is small, it is encouraging in a state that expended over \$15 million in public funds in 1985 to control aquatic plants.

## PESTICIDE ARTICLE REPRINTS AVAILABLE

AMES, IOWA--"How Risky Are Pesticides?" is an article treating a topic of considerable interest in light of public and governmental concerns about pesticide residues in foods. The feature appeared in the January 1987 issue of CAST's magazine *Science of Food and Agriculture*. Public response was so enthusiastic that CAST is now offering reprints for sale. The article, written by Dr. Keith Barrons, explains how the benefits of pesticide use have been understated while the risks may have been overstated.

Priced at \$1.00 each, the six-page, full-color copy of the article has been reprinted on quality paper stock. Regular discount policies for CAST publications apply to the reprint: 6-100 copies, 25% discount; 100 or more copies, 35% discount. CAST individual members may obtain a single free copy on request. Orders may be placed at CAST Headquarters, 137 Lynn Avenue, Ames, Iowa 50010-7120, phone 515/292-2125.

# 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  
B. Student Membership.....\$ 5  
C. Commercial Sustaining Membership .....\$200

Name of Applicant \_\_\_\_\_ Spouse's Name \_\_\_\_\_

Home Address \_\_\_\_\_ Zip Code \_\_\_\_\_

Present Title & Employer \_\_\_\_\_

Business Address\* \_\_\_\_\_ Zip Code \_\_\_\_\_

Business Phone \_\_\_\_\_ Home Phone \_\_\_\_\_

Amount of Remittance \$ \_\_\_\_\_ Signature of Applicant \_\_\_\_\_

Membership Type: ACTIVE: \_\_\_\_\_ COMMERCIAL SUSTAINING \_\_\_\_\_

STUDENT: \_\_\_\_\_ SUBSCRIPTION \_\_\_\_\_

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

## 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 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.

The Aquatic Plant Management Society, Inc.  
P.O. Box 16  
Vicksburg, MS 39180