

## If you can't bring Muhammed to the mountain, bring the mountain to . . .

by

Gay Hawk  
Media Specialist



Sea Grant Extension Specialist Rick Raymond demonstrates fish printing to New York City elementary school children.

A traveling marine resource center unit called the Marine Mobile has been visiting New York City Schools since March.

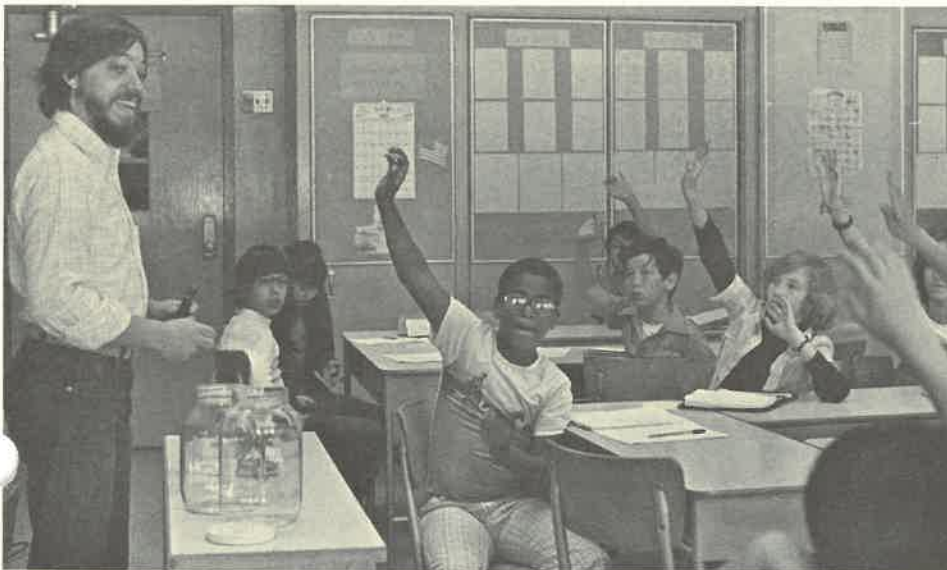
This unique project represents an effort to bring awareness of New York's marine resources plus innovative teaching tools to teachers and school children who have not considered these resources before. It is also geared for those who do not readily use such facilities as the New York Aquarium, Gateway National Recreation Area and South Street Seaport in New York.

The Marine Mobile features learning-by-doing activities for elementary school children. Activities are designed around the history of New York's waterfront, seafood use, marine careers and water quality. A teacher training session is also conducted to enable teachers to carry on marine education projects after the Marine Mobile has visited their schools.

The Marine Mobile is a cooperative effort of the New York City 4-H/Sea Grant Youth Development Program and the Board of Education, which staffs the vehicle with both a full-time teacher (Jay Dagress) and a paraprofessional. Sea Grant coordinates the program; the Umbrella Bureau of the New York City Board of Education funds the project.

The Marine Mobile project was organized because some school officials apparently thought most teachers in New York

*Continued on Page 2*



Marine Mobile teacher Jay Dagress captivates his audience.

### *Special feature in this issue*

The foldout page in this issue is made available by the New York State Coastal Management Program. Entering a period when heightened citizen input and action is important, they desire to reach the important audience represented by you and other COASTLINE readers. The foldout, sponsored and prepared by them, represents the views of the State Coastal Management Program staff.

## Marine Mobile

*Continued from Page 1*

City avoided using the marine resources as useful teaching tools. This was partly due to the teachers' feeling they lacked the experience or materials to teach about the marine environment.

The Marine Mobile project grew from that point — designed to provide both practical classroom experience and teacher training.

The Marine Mobile visits each elementary school for one week. For that week

three classes and their teachers receive hands-on lessons designed to develop an awareness of the important features of the marine environment.

These lessons include information on the history of New York City's waterfront, ocean life and its ecological importance, properties of water, ocean-related careers, and seafood use. As part of the lessons, students experiment with the density of both fresh and salt water; they float a needle on water to demonstrate tension; and they do a Japanese fishprint, thereby, using a marine resource for art

while learning why fish have scales.

Students also taste unusual seafood products and have an opportunity to describe how their parents' occupations or their own aspirations might fit into working with the oceans.

Also, as part of a marine biology lesson on adaptations, the children get a chance to handle and investigate live specimens from New York Wetlands.

The Marine Mobile project is effective as reviewed by elementary school principals. One said, "I must inform you of the tremendous positive response from the teachers and pupils who participated in the Marine Mobile Program." Another added, "Not only did you steer 33 curious minds toward an important, yet unexpected, aspect of their world, but you also brought new ideas and techniques to their teachers."

Teachers also had favorable comments. One reported that the children conveyed highlights of the project to another class and also enriched their vocabulary. A second teacher commented that this program is "very worthwhile and very necessary if we hope to have water resources in years to come."

Students also reflected positively: "Mr Jay, I love you and wish you would come back."

Some teachers and principals noted there was some opportunity to improve several components of the project, but the program's benefits were epitomized when one principal made this comment: "The children cannot stop talking about their experiences. So vivid an impression have you left them with, that this past weekend developed into 'sea' excursions for many of them. Two families took the Circle Line tour, one the Rockaway tour, five went to the beach and returned with various mementos, and several other children rode over bridges and commented on the waters that pass under them.

"I now discover that they have grasped more than I had previously given them credit for in regard to Rick's presentation on careers. (Rick Raymond is a Sea Grant Extension Specialist in Youth Development in New York City.) On their own initiative, several of the children have brought in books and articles on 'sea jobs.'"

Because reactions to this project have been so encouraging, the Marine Mobile will begin visiting New York City elementary schools again this fall.

---

## WHAT IS MARINE EDUCATION?

Marine Education is relatively new. It is more than just studying fish in the ocean. "Marine" encompasses not only oceans, but also lakes, rivers, marshes, ponds and all our water resources. "Education" is not just science, but also language arts, music, social studies, art and mathematics.

Marine Education teaches about the world of water and its importance to the social, economic and environmental well-being of the people and the nation.

To help school officials recognize the importance of marine education, New York Sea Grant and the New York State Marine Education Association will sponsor two workshops this fall focusing on "Marine Education."

The workshops will explain why marine education is important, show how marine education can benefit school programs, show how school administrators can begin marine education programs in their own districts, and enable professional educators to provide direction for an emerging marine education policy. They will also provide information on the kinds of curricula available, cost of marine education programs, and existing marine education programs.

The workshops will be geared toward school superintendents, chief school officers and school administrators such as assistant superintendents, school counselors, curriculum specialists, principals, assistant principals, and department heads.

The first workshop will be held September 27 from 10 a.m. to 4 p.m. at the State University of New York Maritime College, Fort Schuyler, New York. That

workshop will be repeated for upstate residents on October 27 from 10 a.m. to 4 p.m. in Rochester.

The workshops are part of a national effort coordinated through the University of Delaware. Harold L. Goodwin, marine education consultant in Delaware, explained that "those who advocate marine education seek restoration of a balance in subject matter so that the world of water is a normal, integral, balanced part of the total education process." He suggested that marine education cases and examples be in balance with other subjects throughout the curricula from kindergarten through graduate school and continuing education.

Further information about the Fort Schuyler Marine Education workshop can be obtained from Liz Pennisi in our New York City office. Brian Doyle in our Brockport office can answer questions about the conference to be held tentatively in Rochester.

---

## Mariculture Symposium

A Mariculture Symposium will be held on Long Island at Southampton College from 9:30 a.m. to 4 p.m. on Saturday, October 22.

The symposium will feature three panels consisting of leaders in the field discussing existing mariculture activities in New York State, the state of the art of mariculture and its potential in New York, and current mariculture issues in New York, including legal implications and conflicting user interests.

The symposium will be sponsored by

*Continued on Page 3*



# Group influences awareness of St. Lawrence

by

Stephen Brown  
*Sea Grant Extension Specialist*

Every month a group of persons from both the United States and Canada get together to discuss and work on conferences about St. Lawrence River issues. Their goal is to improve the quality of life within the St. Lawrence Valley. This group, the St. Lawrence Valley Conference Council (SLVCC), is a cooperative, voluntary and informal organization with members from twenty groups and agencies.

The list of participants reads like the "Who's Who" of the St. Lawrence Valley. It includes representatives of the St. Lawrence Seaway Development Corporation, Sea Grant Advisory Service, Black River/St. Lawrence Regional Planning Board, C.U.R.E. (Citizens United to Restore our Environment), N.Y. Department of Environmental Conservation, St. Lawrence Parks Commission, Thousand Islands Bridge Authority, Ontario Ministry of Food and Agriculture, and others. The two newest members of SLVCC are the Ontario Ministry of Natural Resources and the Power Authority for the State of New York.

The SLVCC wants to increase awareness and facilitate the flow of information between decision makers on both sides of the St. Lawrence River. To help them in this quest, they identify problems and potentials of the valley, develop and evaluate alternative actions, and foster

cooperation between the U.S. and Canada.

Representatives of SLVCC are concerned about the quality of life in the valley. One member is Winnie Veitch, whose home is on the river in Waddington. A member of the St. Lawrence River Advisory Committee for Sea Grant, Chairman of the Waddington Town Planning Board and Chairman of CLAW (Clean Land, Air, and Water), she says her involvement with SLVCC stems from "love."

"I am very concerned with what happens to the river," she said, "I love the river, and I love the area. I don't want it to deteriorate and become a garbage dump. If someone doesn't wake up to what is going to happen, the river is going to be spoiled. People who make their living along the river are going to lose their jobs, because if you don't have the river as a tourist resource, no one will come."

She added, "It will take both sides, the United States and Canada, working together in a coordinated effort to manage this river. You can't possibly do one side and ignore the other. Pollution doesn't respect boundary lines. SLVCC brings issues to peoples' attention, identifies what impact the issue will have on the region and gives people an opportunity to consider what to do. That is why I am involved in SLVCC."

Since SLVCC's founding in 1975, the group has sponsored three Can-Am Conferences, one St. Lawrence River Forum and a booklet on resource materials available from various agencies. This fall,

SLVCC will sponsor an International Land Use Planning Conference in Kemptville, Ontario on September 27 and a Seaway Transportation Conference November 4 and 5, also to be held in Canada.

The international section of the St. Lawrence River is not only breathtaking and majestic, but it is also functional. The river provides many services—transportation between the heartland of this continent and the world markets, hydroelectric capacity, drinking water, a resource for recreation, and a place for man and wildlife to live.

As time goes on, the river will be accommodating more users. This usage will often occur among incompatible activities in conflicting jurisdictions. Issues are being raised. The issues will create movement and change. Ultimately, the way in which these issues will be resolved will determine who will use the river and how they will use it.

SLVCC was founded to ensure cooperation between the United States and Canada and to inform residents about St. Lawrence River issues. Each member recognizes the fact that anything that occurs on one side of the river will have an impact on the other. SLVCC believes that the valley is a community, and as a community, we must come to grips with issues and solve them in a judicious fashion.

Further information about SLVCC programs is available from me in the Potsdam office or from SLVCC, Ogdensburg-Prescott International Bridge, O.B.P.A. Bridge Plaza, Ogdensburg, New York, 13669 or in Johnstown, Ontario KOE 1 TO.



---

## Symposium

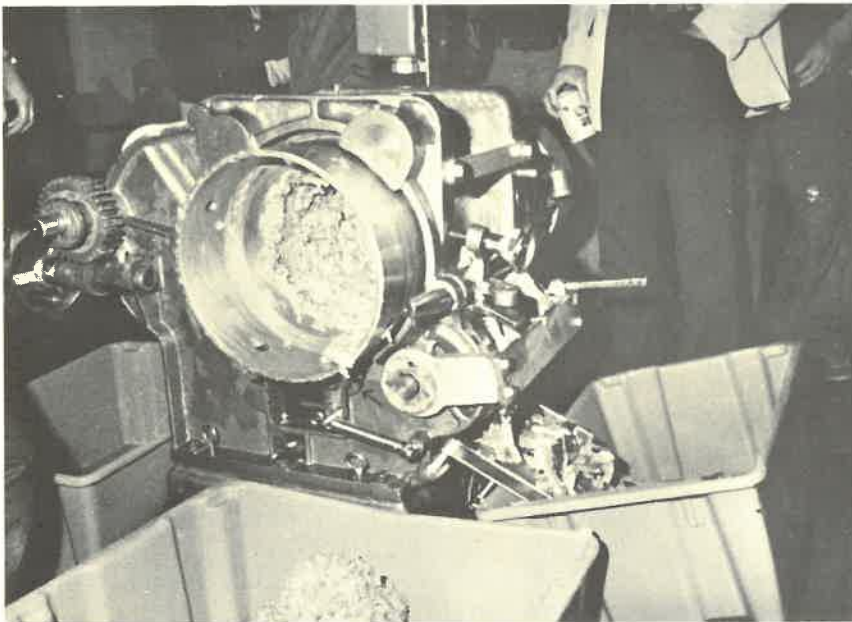
*Continued from Page 2*

Sea Grant, the Department of Environmental Conservation, New York Ocean Science Laboratory, Nassau-Suffolk Regional Planning Board, the Marine Sciences Research Center at Stony Brook, and Southhamton College.

For information about advanced registration contact Steve Hendricksen at DEC 516-751-7900. Further information on the symposium is available from Dave Chase in our Riverhead, Long Island office.



**1** Certain fish that might have been sold for meal or tossed overboard can be brought in. . .



**2** . . . and fed into the deboner where flesh is forced out one place (foreground) while skin, skull and scraps are spewed out another (right side).

**3** Charles Thrall (center) N.Y.S. Dept. of Agr. and Markets, shows one tour group how that works. Don Squires, N.Y. Sea Grant Director, looks on (in background).



**4**

Long Island seafood processors, planners, Sea Grant Directors and others visiting the Amagansett plant on tours see what may help lead to more income for Long Island commercial fishermen and lower cost nutritional fish for millions of New Yorkers.

**5**







6

## Not silk from ears, but food from fish

The folks coming to Stuart's Seafood plant in Amagansett don't see silk purses being made from sows ears, but they do see a process that may dramatically alter our view of what is a useful fish.

William Vorpahl, Stuart's Seafood; the State Dept. of Ag. and Mkts.; and the Long Island Duck Cooperative, are all cooperating with Sea Grant in looking at the use of flesh from fish that today are commonly viewed as worthless. In the first few months the deboning machine operated, 70 people on four tours tramped through Mr. Vorpahl's doors to see the potential promise for Long Island fishermen and consumers.

*Prof. Joe Regenstein of Cornell's Dept. of Food Science (above) demonstrates that the object is to prepare tasty fish dishes. Marine Extension Specialists Dave Chase and John Scotti (below) seem to find this attempt successful.*

7



NEW YORK STATE

# Coastal Management Program



For additional information, contact Robert Hansen, Program Manager, or Dot Fellows, Public Participation Specialist, at the New York Coastal Management Program, Department of State, 162 Washington Ave., Albany, New York, 12231, 518-474-8834 or 474-0025.

## New Directions

The Department of State is undertaking an ambitious third year coastal management program, culminating March 31 with a draft statewide Coastal Management Program.

Department of State staff have been assigned to expand the public participation program in order to provide the public and governmental agencies with opportunities for full participation in the development of the State's coastal management program and to lay the foundation for continuing involvement in coastal decision-making during the State Coastal Management implementation.

**COASTAL ISSUES:** The major emphasis of the third year program is the development of a state coastal management program focusing on ten coastal issues which have been in the forefront of citizen concern in recent years and which have been increasingly the subject of various state programs. A major goal of the coastal management program is to deal with these issues in one single and coordinated program.

### Water Quality

The foremost impact of man's activities in the coastal area is upon water quality. Specific impacts befalling New York's coastal water include the degradation of

## Coastal Management Legislation

**Assembly Bill 8906** was introduced in the New York State Assembly on June 23, 1977. The bill adds a new Article 6-B to the Executive Law to:

(1) provide a legislative declaration of significance of the State's coastal zone and the fact that it is subject to competing pressures, and of the necessity for development of a program for its management to ensure a proper balance between the natural resources of the coastal area and the necessity to accommodate the need of population growth and economic development; (2) direct the preparation of a coastal management program addressing specified elements (which are based on the requirements of the Federal statute and regulations); and (3) direct that program preparation be accomplished so affected public and private interests, including representatives of units of local governments, have been notified and have an opportunity to fully participate in program preparation.

The bill was not reported out of the Assembly Environmental Conservation Committee; it automatically will be carried over into the 1978 session.

water quality from unplanned and uncontrolled waterfront development, loss of swimming and other recreational opportunities due to various forms of pollution, loss of commercial and sport fisheries due to toxic chemicals and other pollutants, loss of high quality water for consumptive purposes, diminution of water quality from urban and rural surface run-off, and from dredge, fill and other water-oriented construction activities.

Under the Coastal Management Program, there should be a strong focus on the maintenance and improvement of water quality. Assistance should be provided for legal/institutional arrangements which will help to preserve or improve water quality. The program should also provide assistance for monitoring and enforcing activities to prevent further degradation.

### Protection of fish and wildlife and their habitat

Under the Coastal Management Program there should be a focus on the public identification and protection of sensitive fish and wildlife areas and assistance in bringing such knowledge into development decision-making processes. Support of water quality and other habitat improvement programs is needed, with funding assistance for acquisition and certain kinds of monitoring and enforcement. Mechanisms are available in New York's coastal zone—such as the tidal and freshwater wetland protection laws—to protect fish and wildlife species.

### Energy resources and related facilities

The siting of energy facilities, the development of long-term environmentally safe energy sources, and the location of energy support facilities are of extreme importance to an industrial and populous state like New York. The development of new energy facilities may result in substantial environmental and social impacts.

Although the State already has established siting laws for power plants and major transmission lines, the siting of other energy facilities is not covered by existing state laws. Under a Coastal Management Program, a variety of procedures and mechanisms must be developed to enable the State to provide solutions to

those and other problems related to the siting of needed energy facilities.

### Economic activity in the coastal zone

The health of the economy in New York State, particularly in terms of the levels of activity in business and industry, is currently a major concern.

The relationships of coastal dependent economic activity to associated activity, such as transportation, and to air and water quality will be examined in the CM program.

A major objective is to maintain viable economic activity in appropriate coastal areas and to promote economic development consistent with the overall CM program. This objective can be achieved through proper planning and through the expeditious handling of project review and permit processes.

### Public access

Increasing public use of limited available segments of shoreline is a major issue in New York. The State's ocean fringe and the lower Hudson estuary lie adjacent to one of the world's largest metropolitan areas. The Hudson River, Great Lakes and St. Lawrence River coastlines serve a wide range of upstate water-oriented recreation. The State, its counties, and local governments provide a variety of opportunities for public water access through parks, marinas, safe launching areas and beach areas. Additional public access is provided at similar facilities owned and operated by private interests.

Public access creates problems of overuse, particularly in areas with a frail ecological balance easily destroyed by large-scale visitation. Physical access to the shore may be cut off by development of shorefront property for private, industrial, commercial, and residential purposes. In many areas, especially along the Hudson River, access is restricted by highways and railroads.

### Recreation

Water oriented recreational facilities in the State are not fully meeting growing demands. Lack of public access to shorefront areas restricts the amount of available sites for such facilities. The supply of

*please turn page over*



## New Directions

(continued)

Coastal recreation opportunities in or near major urban centers is so inadequate that any users are forced to take long, energy consuming trips to reach an acceptable recreational area. In many areas, temporary or chronic pollution of coastal waters by sewage, ocean dumping, or by industrial chemicals or oil has reduced or eliminated swimming and fishing. The state's substantial tourism industry is adversely affected by such deficiencies.

Under the State's Coastal Management Program, water oriented recreation should be supported by beach access acquisition programs; facility development planning including the feasibility of converting urban waterfront areas to recreational use; analysis of existing policies, regulations and implementation mechanisms to determine how water quality in coastal recreation areas can be improved; development of standards for the enhancement of scenic values in coastal areas; and investigation of possible solutions to conflicts among public and private recreational and other coastal resource interests.

### Impacts of Outer Continental Shelf (OCS) related activities

New York State's marine coastal zone is diversified and complex area. On one side New York City—the most highly commercialized area in the nation—where labor is plentiful, yet employment opportunities have been diminishing. Many areas within the Port of New York are presently vacant, underutilized, or undeveloped. Nassau and Suffolk Counties stretch out to provide fragile ecosystems coupled with one of the most highly developed areas in the country—where tourism and recreational industries contribute \$800 million annually. Commercial and recreational fishing and shellfish

industries account for millions more to the country's economies. These industries are highly sensitive to any environmental degradation.

It is hoped that New York's Coastal Management Program can help to examine the critical balance between negative impacts and the positive benefits that may accrue to the State by the possible location of OCS facilities within the Port of New York. Coastal Management funds can help to provide for increased technical local participation in federal OCS related matters, in State government, establish long-term state institutional mechanisms to deal with oil and gas industries, and promote OCS-related industrial development in environmentally compatible areas.

### Agricultural Resources

An appreciable portion of New York's coastal area is devoted to major agricultural enterprises which cannot be accommodated elsewhere. Relatively narrow bands of land along Lakes Erie and Ontario, and on both sides of the Hudson River have unique climates, resulting from the moderating effects of these water bodies. This makes possible the production of a variety of fruits—grapes, apples, pears, plums and cherries—which are important specialty crops. Such production cannot be accommodated elsewhere and an important segment of New York's food processing industry is dependent on it. Eastern Long Island still has large acreages devoted to intensive agriculture, principally potato and truck farming. These areas of the coastal zone are not only agriculturally productive, but the beauty of the orchard areas, for example, makes them an important part of the tourist economy.

The Coastal Management Program offers a means of helping to preserve agricultural resources.

### Erosion, flooding, and other natural hazards

Nearly all of the immediate coastal frontage of New York State is subject to some impacts from flooding, high water and erosion. The consequences are property damage to residences, watercraft, port, harbor and recreational facilities, and destruction of scenic and natural areas. Such problems on the Great Lakes have been exacerbated by recent high lake levels which are partly natural and partly due to management practices for hydropower and navigation.

The CM Program can foster improved information exchange and help to establish policies among the Great Lakes States regarding determination of erosion rates, control of water levels and use of protective devices. The program can also help to give greater public understanding of the use of non-structural protective measures and give guidance to more practical structural devices. The CM program should also give impetus to the Federal Insurance Administration in the establishment of realistic coastal flood and erosion damage policies and for further research into the identification of exact flood erosion hazard areas.

### Coastal aesthetics

The Coastal Management Program has identified a wide range of coastal sites requiring specific attention in terms of preservation or restoration. Solutions to aesthetic protection and enhancement cover such items as mandatory land restoration after mining operations, scenic easements, purchase of development rights, and direct acquisition. Any program developed for improving coastal aesthetic requires strong state leadership and encouragement, coordinated application of all existing laws and mechanisms in partnership with both local and private interests, as well as the review and analysis of current legal approaches and possible additions to existing regulations.

## State Department Staffs up for third year Coastal Management Program

Secretary of State Mario M. Cuomo recently reorganized the Coastal Management staff as a separate unit in the Dept. of State. Robert C. Hansen, Director of the Syracuse Regional Office of the State's Division of Community Affairs, is serving as Acting Coastal Program Manager.

Bob Hansen is a graduate of the University of Massachusetts and attended Boston Architectural Center, Suffolk Law School and State University of New York. A licensed landscape architect, he began his professional planning career as a Senior Planner for the Boston City Planning Board. He began his service with New York State in 1960 as an Associate Planner for the New York State Department of Commerce.

The coastal management staff has been expanded both in terms of personnel and expertise. The technical staff under the direction of Bill Lee has 10 professional and support members working on Land and Water Uses, Federal Consistency, Geographic Areas of Particular Concern, Boundaries and the development of state policy on coastal issues. The technical staff is also responsible for Outer Continental Shelf and Coastal

Energy Impact matters. Public participation will be carried out by two full-time staff persons, Dot Fellows and George Stafford, with other staff assistance. The legal staff, under the leadership of Jim Coon, will work closely with the technical unit to develop legislation and mechanisms for implementing the program. Federal/State/Interstate Coordination, Contract Administration, and other management and administrative matters are being handled by an able staff under the direction of Charles Crangle.

The newly organized coastal management staff are enthusiastic about the new directions of the program. Although much work must be completed in order to develop a draft state coastal management program by March 31, 1978. Bob Hansen is confident that deadlines will be met and the program completed on schedule. "Extensive public input must be encouraged to ensure the success of a state coastal management program." To obtain that input, he is interested in researching a wide public audience including local government officials and interest groups.



# "Important key is communication between researcher and user"

By  
Gay Hawk  
Media Specialist



*Mrs. Marjorie Vesley of Williamsville has been an important citizen voice in New York's Sea Grant Program and a participant on our Advisory Committees since 1972. In 1977, she was named to a reconstituted National Sea Grant Review Panel. Her views on Sea Grant nationally and in New York are knowledgeable, and we think you'll find them interesting as well.*

"New York Sea Grant has built fine communication between the people doing research on coastal issues and the people who are using this information to solve their coastal-related problems."

Marjorie Vesley of Williamsville, NY, a member of the National Sea Grant Review Panel, thinks this is one of the most important reasons Sea Grant exists. "Researchers must know the needs and problems of the users of their information," she said, "and the users must understand the constraints faced by researchers. Good communication can enhance the results of the program."

Mrs. Vesley explained that the National panel annually reviews each State's Sea Grant Program and evaluates a program's usefulness from the point of view of people who receive its services. The panel exists to offer guidance and to assist with planning.

Appointed in January to a three-year term, Mrs. Vesley is the first and only woman to serve on this panel of 15. She is not, however, new to Sea Grant. She has been knowledgeable of the New York program since its start in the early 1970's having served as a member of its first Great Lakes advisory committee.

Since serving on the National Sea Grant Review panel, she has

been a member of site teams which reviewed state programs in Minnesota, Louisiana, and Wisconsin. Commenting on the differences in programs she said, "Sea Grant Programs seem to be suited to the state in which they are located. They seem to reflect the individual philosophies of the institutions involved. New York is unique because it has Atlantic coasts as well as Great Lakes coasts. I think New York's Sea Grant Program has adapted well to this situation, especially with its extension efforts."

Sea Grant's Extension effort is similar to other Cooperative Extension Programs. It provides information to assist coastal residents and users with their coastal-related problems. It is an informal educational effort to help people help themselves.

Commenting further on this extension effort, Mrs. Vesley said, "If a Sea Grant Program has a strong extension effort and a relationship to existing networks, it starts out way ahead. Advisory specialists who are in direct contact with coastal people are invaluable links. As coastal users' needs increase, a Sea Grant Program will be able to grow to meet those needs if it has support."

"With increased links with extension specialists, coastal people seem to care more—they are getting more involved," she continued, "They are beginning to think about the different ways the coast can be developed."

She noted that with proper planning, a coastal area could have industrial functions as well as recreational or commercial fishing functions if people work together to consider the whole picture.

Mrs. Vesley repeated that her main interest is in research and in how that research gets to the people. "Your current work with the contaminant problems, urban waterfront issues, marine education programs and recreation areas shows that New York's Extension effort does get the information to the people," she added.

She suggested that one way to get information to our audiences is to go to them on a regular basis. "This is being accomplished," she said, "with increased use of radio, regular weekly newspaper columns in area newspapers, television appearances, pamphlets and brochures, specialized newsletters like "Coastlines", and meetings with volunteer groups and advisory councils. If you don't have communications, everything will fall apart."

Mrs. Vesley's main interests are in the areas of water and environmental quality. For the past two years, she has been the Environmental Quality Director for the New York State League of Women Voters.

She is also interested in water quality—water resources, safe drinking water, proper uses of aquatic weeds, sewage treatment, and water for recreational use. "I think we can have aesthetically pleasing waters at the same time the water is used for industrial and commercial purposes. Industries have made good progress coping with this problem, as can municipalities, by installing water treatment facilities. If everyone does his part and if we work together, we can have safe drinking water as well as water for recreational, commercial, and industrial uses," she said.

"We have a lot of problems," she continued, "and New York has gone ahead much faster than some other states. But, it is hard for

*Continued on Page 7*



## New hope for drowning victims

Michigan Sea Grant

People who have drowned in cold water aren't necessarily dead—even if they have been under water for half an hour.

This is the conclusion of a new study by a University of Michigan lung disease and diving medicine specialist who reported that he studied nine drowning victims who were submerged in cold water (under 70°F) from four to 38 minutes.

According to Dr. Martin S. Nemiroff, these "victims" not only survived, but they also suffered no brain damage. He noted that in the past, many drowning victims declared dead actually could have had some potential for life.

He offers the following advice to rescue workers and doctors:

"1. First, don't give up, even if the victim looks dead (he may be cold, blue, not breathing, with no pulse or heartbeat and with fixed and dilated pupils);

2. Start resuscitation immediately, external heart massage and ventilation with as near 100 percent oxygen as you have available;

3. Warm the body gradually from the inside by raising the temperature of the oxygen to 110°F with a nebulizer;

4. Maintain CPR (Cardio-pulmonary resuscitation) at least until the body temperature reaches normal. Defibrillation—shocking the heart into action—may not be successful until normal body temperature is reached."

Dr. Nemiroff based his conclusions on 50 near-drowning incidents in Michigan waters he investigated over a three-year span. He selected 13 cases considered to be true "cold water drownings." Of those, nine were successfully resuscitated without brain damage or other ill effects; two died of lung infections contracted in the water; and two suffered brain damage. All had gone beyond the traditional four-

minute oxygen deprivation limit after which, it was previously believed, irreversible brain damage must occur.

How do these victims survive with no brain damage? According to Dr. Nemiroff, cold water sometimes activates the "mammalian diving reflex" which maintains life even after the victim becomes unconscious. This primitive reflex allows many water mammals (seals, porpoises, etc.) to remain under water for long periods. This automatic reflex greatly reduces the blood supply to the skin, muscles, and gut, tissues which are resistant to oxygen-loss damage. The remaining blood takes oxygen to the brain and, since the brain is cooled by submersion, it requires less oxygen than normal.

The "mammalian diving reflex" is most likely to occur in children under three and a half years old, and it works for the victim even though he or she has all the appearances of death, he noted.

A pamphlet entitled "How to Survive in Cold Water," published by the Massachusetts Sea Grant program, is available through New York Sea Grant. (See I WANT MORE)

### Mrs. Vesley

Continued from Page 6

the people writing the legislation to become aware of problems of implementation on the local level. This is when coastal users should become involved—to let their senators and congressmen know their concerns."

Mrs. Vesley summarized today's marine environment situation. "The marine industry is varied," she said, "there are industrial, recreational and commercial uses of our waters. Especially on the Great Lakes, with the decline of water quality and the increased contaminant levels, we are faced with a dilemma—we do not want to kill the industry by shutting them down, but on the other hand, we do not want to shorten people's lives with poor-quality water and potentially harmful contaminants.

She concluded, "To have development, so many things need to be considered. You have to look at the entire picture. We need to work together to both safe-guard the water quality and at the same time allow our industry use of the waterways. Hopefully, Sea Grant's research and educational efforts will help us to do just that."

## I WANT MORE

Additional information which will help you solve coastal problems is available from Sea Grant Advisory Service offices. Check the appropriate boxes of the publications which interest you and send to the Sea Grant office nearest you.

Single copies of the following publications are free.

- \_\_\_\_\_ Hightide—An Agenda for the Coastal Zone, Mitchell Moss, 3 pp., article reprint from "Coastal Zone Management Journal."
- \_\_\_\_\_ Book review of Joseph Heikoff's book "The Politics of Shore Erosion," Mitchell Moss, 2 pp., article reprint from "Coastal Zone Management Journal."
- \_\_\_\_\_ New York Sea Grant and You, pamphlet describing our State's Sea Grant effort.
- \_\_\_\_\_ Your Career in Marine Advisory Services, pamphlet explaining what a career in Marine Advisory Services is like.
- \_\_\_\_\_ How to Survive in Cold Water, 4 pp., Massachusetts Sea Grant Program.

There is a charge for the following publications. Please make checks payable to Cornell University. DO NOT add sales tax.

- \_\_\_\_\_ Lake Ontario Atlas: Lake Temperatures, Eugene Chermack, 1977, 41 pp., \$1.50.
- \_\_\_\_\_ Coastal Resources Management: Institutions and Programs, Joseph M. Heikoff, 287 pp., available from publisher. (See UPDATE.)

# UPDATE

Joseph M. Heikoff, professor of Public Administration, Graduate School of Public Affairs, SUNY Albany, has written a book entitled "Coastal Resources Management: Institutions and Programs."

This new pioneering study examines the 1972 Coastal Zone Management Act and the different ways in which three states—Maine, Rhode Island and Washington—have tried to implement the act. Special attention is paid to state agency structures, state supervision of local land use regulation, the integration of resources management in the coastal zone and statewide, and public participation in program development.

This book is available from the publisher: Ann Arbor Science Publishers,

Inc., P.O. Box 1425, Ann Arbor, Michigan, 48106, for \$15.00.

Heikoff also wrote "Politics of Shore Erosion: Westhampton Beach," an analysis of the problem of intergovernmental and political decision-making through the detailed examination of a specific environmental problem. This book is also available from the publisher for \$15.00.

\* \* \*

Douglas Gordon has joined our Extension staff as a specialist on extended jurisdiction. He has served as a scientist, fisheries advisor and marine biologist with the Ministry of Agriculture and Fisheries in Wellington, New Zealand, and as a high school teacher at Wellington Boys College.

Doug received a MMA degree in Marine Affairs at the University of Rhode Island in 1974 and a bachelor's degree in zoology and botany from Victoria University, New Zealand in 1971. He will be located in our Stony Brook office.

\* \* \*

Dr. Robert Malouf will be joining the SUNY/Stony Brook faculty as a shellfish biologist. He began working in marine fisheries in 1968. His areas of expertise include the culture and management of commercially important marine molluscs, the philosophy and behavior of bivalve molluscs and their larvae, and design and operation of both recirculating systems and shellfish hatcheries.

New York Sea Grant Institute  
State University of New York  
99 Washington Avenue  
Albany, New York 12246  
Tel. (518) 474-5787

Sea Grant Advisory Service  
Fernow Hall  
Cornell University  
Ithaca, New York 14853  
Tel. (607) 256-2162

Youth Development Program  
381 Park Avenue South  
Room 621  
New York, New York 10016  
Tel. (212) 685-5081

Sea Grant Advisory Service  
607 Benjamin Raymond Hall  
SUNY/Potsdam  
Potsdam, New York 13676  
Tel. (315) 268-3303

Sea Grant Advisory Service  
South Campus, Building H  
SUNY/Stony Brook  
Stony Brook, New York 11794  
Tel. (516) 246-7777

Sea Grant Advisory Service  
Cooperative Extension Regional Office  
412 E. Main St.  
Fredonia, New York 14043  
Tel. (716) 672-2191

Sea Grant Advisory Service  
Rich Hall  
SUNY/Oswego  
Oswego, New York 13126  
Tel. (315) 341-3042

Sea Grant Advisory Service  
Morgan III  
SUNY/Brockport  
Brockport, New York 14420  
Tel. (716) 395-2638

Sea Grant Advisory Service  
246 Griffing Avenue  
Riverhead, New York 11901  
Tel. (516) 727-7850

COASTLINES, published bi-monthly, is available free of charge on written request to the editor.



SEA GRANT

Fernow Hall  
Cornell University  
Ithaca, New York 14853  
Tel: (607) 256-2162

Nonprofit Org.  
U.S. Postage  
PAID  
Cornell  
University