

## How Sea Grant Research and Extension Teams Benefit New York

by William Wise, Assistant Director in Albany, and Michael Duttweiler, Program Coordinator in Ithaca

As the popular commentator of televised basketball games, ex-coach Al Maguire is wont to say, "There is no 'I' in 'team'". Just as effective teamwork is necessary in solving the problem of winning basketball games, so it is with attempts to solve the host of problems involving the use and development of coastal resources. Sea Grant epitomizes this team approach in its activities.

Two of the principal players on the team are the extension specialist and the researcher. Let's take a closer look at some examples of effective teamwork between these two players.

Traditional mooring material such as chain, manila and polypropylene rope have become increasingly expensive in recent years. Chain and manila rope are subject to deterioration in 3-5 years, imposing substantial financial burden on boat owners and public marina operators. As Sea Grant Extension programming with this audience developed, the need for investigation of alternative mooring systems incorporating inexpensive yet highly durable materials became clear.

Bruce DeYoung, program coordinator for the Marine District made initial contact with the Department of Engineering Science, SUNY Ag. and Tech. College at Farmingdale, N.Y. Based on previous experience with use of rubber conveyor belting to anchor floating tire breakwaters, a proposal was submitted to Sea Grant to evaluate the more general use of this material in mooring systems. While waiting for funding to be initiated, extension staff and Farmingdale engineers collaborated in field

testing the belting material at eight sites around Long Island. Funding for the project began in March, 1982.

In another case, because of the projected long-term rise in fuel costs, and recent poor prices for fish, the commercial fishing fleet is being forced to increase its overall fuel efficiency to maintain acceptable profit margins. Sea Grant Extension recognized this need and has instituted an emphasis on fuel efficiency within its commercial fishery program. At the initiative of Sea Grant Specialist Chris Smith, a project was developed with the Webb Institute of Naval Architecture to identify and evaluate a variety of modifications in operating style, hull design and propulsion equipment that would yield substantial fuel economies at a minimal initial cost. A vessel owner's questionnaire was developed by the researchers and the specialist, and is being distributed on the docks by the specialist.

Sea Grant has also been closely involved in the developing salmon and trout sport fishery in New York's Great Lakes. A mature fishery will require the establishment of a thriving summer fishery in the open lake waters. Most angling pressure pres-

ently concentrates on the spring and fall spawning runs in tributaries and near shore during the same seasons. Knowledge of the migrations and general whereabouts of stocked salmonids in the summer months is still rudimentary. In response to this problem, Sea Grant researchers have for the past several years been monitoring the summer movements of radio tagged fish. Sea Grant Extension has been intimately involved in these efforts, has brought them to the attention of local sportsman's groups, coordinated public feedback on the project to the investigators and kept the public informed of information developed in the course of the work.

Not all Sea Grant activities feature such effective interaction between extension and research. Many extension programs do not rely directly on information from a specific research project and some of Sea Grant's research efforts are not aimed at developing information for immediate use by extension. However, when a particular situation demands the joint talents of extension specialist and university researchers, we make that marriage. As the well-worn saw goes, "Two heads are better than one".



Sea Grant researchers setting vertical nets for summer salmonid study on Lake Ontario.

# Assistance for the Sportfishing Industry: Sea Grant Aids Communities, Agencies, Businesses and Anglers

by Mike Voiland, Sea Grant Specialist in Brockport

From sharkfishing off Montauk to stalking the mysterious musky in the St. Lawrence, from the tasty Lake Erie walleye to the tackle-busting chinook salmon of Lake Ontario, New York State can be described as an angler's paradise. With an estimated two million recreational anglers, miles of salt and fresh water coast and a number of ambitious fishery management programs, the state boasts a large, diverse and growing sportfishing industry.

Many Sea Grant Extension activities have recently benefited the major "players" in sportfishery development — shoreline communities, private businesses, local and state agencies and of course the individual angler. While a complete accounting of Sea Grant's impact on the state's sportfisheries is more than can be related here, a brief review of some of these extension efforts illustrates the various ways Sea Grant has lent a helping hand.

## Long Island, Lake Ontario Charter Fishermen Learn From Sea Grant

On Long Island, Sea Grant sponsored two charter boatmen's forums in early 1981 and 1982. Information on business management and fishing resources, techniques and equipment was provided to over 200 charter captains and commercial equipment representatives. Also, several Long Island charter boat associations, representing some 200 boatmen, received and adopted suggestions from Sea Grant, strengthening their organizational structure and operation. Five individual businesses were assisted in gaining \$500,000 in financing to either buy or retrofit their craft.

On Lake Ontario, Sea Grant was instrumental in the formation and organizing of the Lake Ontario Charter Boat Association (LOCBA) in 1981. Today, the group represents some 60 operators, working out of ports from the Niagara River to Henderson Harbor. LOCBA is now incorporated, has aided its members in minimizing insurance costs, and has doubled the fledgling industry's advertising dollars through cooperative activities with a tourism development agency.

## Fishing Access: Education Helps to Address the Problem

Sea Grant specialists have continued to assist the State Fish and Wildlife Management Act (FWMA) Board in its effort to enhance public access to Lake Ontario's burgeoning trout and salmon fishery. Information on boat launch needs, economic impacts, and access site potentials was supplied to the board and state conservation and parks agencies. By early 1982, these entities reached consensus that a major state initiative may be needed to meet access demands projected for 1985.

Fishery advisory boards in five Great Lake counties were assisted in understanding boat launch needs and designs, artificial reef potentials, development and research, stream access approaches, fish passage facilities and parking needs.

## Improving the Catch

Sea Grant continued to provide information needed by the individual angler. A myriad of flyers and pamphlets on fish identification, access site locations, fish contaminants and preparation, stocking and other topics were distributed to over 20,000 fishermen around the state.

On the shores of Lake Erie, two Sea Grant-sponsored walleye workshops were held in early 1981 and 1982 to help anglers make better use of the lake's improved walleye stocks. Some 800 fishermen learned of that species' biology, habitat preferences and the techniques required to increase harvests.

Two Sea Grant specialists produced the first guide ever to Lake Ontario's excellent but underutilized smallmouth bass resource. **Angling for Smallmouth Bass in Lake Ontario** quickly "sold out" upon introduction in May of 1981, necessitating a larger reprinting. In sum, over 3,500 copies have been distributed, mostly through individual requests.

## Helping Groups Promote Their Fishing Resources

In Clayton, N.Y., on the St. Lawrence River, an idea suggested in part by a Sea Grant specialist led to chamber of commerce sponsorship of a bullhead festival in 1981. The oft-maligned but very tasty bullhead, a



Sea Grant specialist Mike Voiland (left) and Sterling, N.Y. angler Dave Quinones display their spring morning's catch from Lake Ontario. Sea Grant provides answers to many questions the lake's new sportfishery has stimulated.

relative of the catfish, was used as the focus for a weekend-long, tourist-attracting program of recreational activities. The Clayton community has since adopted the festival as an annual promotional event, and in 1982 Cape Vincent adopted the idea.

Through Sea Grant contact with faculty and students of the Rochester Institute of Technology's tourism program, Monroe and Orleans Counties were able to develop sportfishery marketing plans and promotional visuals. Today, Orleans' "Fish & Feel Free" and Monroe's "A Fish for All Seasons" themes are the hallmark of fishing promotional campaigns. According to Dr. Francis Domoy, the RIT professor who coordinated the students' work, "the two counties, through Sea Grant contact and our own efforts, probably saved themselves thousands of dollars in professional marketing and design services."

These are but a few of the successful education activities carried forth by Sea Grant that have enhanced the sportfishery resource and its use in New York. Contact the author at the Brockport office if you have any questions or would like to know more about sportfishery programming.

# Sea Grant Extension Fisheries Team Formed to Meet Challenges of the '80s

by John Scotti,  
Sea Grant Specialist in Riverhead

New York's commercial fishing industry reflects the typical "boom or bust" syndrome common to the fishing industry nation-wide. Like their counterparts elsewhere, New York's fishermen are stoutly independent in plying their chosen vocation, but this independence reflects the uncertainty of capturing a natural resource that is strongly influenced by the variables of weather and fish behavior.

To meet the needs of this audience, Sea Grant program objectives must offer educational activities that respond to both long-term and fast-changing concerns of commercial fishing with strike-force quickness. Borrowing from the Cooperative Extension concept of team programming, a fisheries team made up of Sea Grant specialists, college-based researchers, and Cooperative Extension agents was formed to respond to fisheries problems. For the past 12 months this team has met many exciting opportunities helping the fishing community realize the potential of New York's marine resources.

Some examples are:

- **Fisheries Development** — To develop a publicly owned natural resource such as fisheries, public policy makers need to recognize the potential for the local economy. Over 90 percent of New York's marine fish and shellfish landings occur in Suffolk County, making commercial fishing an important source of jobs and income. To further develop this industry, Suffolk County leaders sought Sea Grant's help to establish a Suffolk County Fisheries Development Council made up of town supervisors, county legislators, and fishing representatives. Achievements of this council, the first such group in New York, include gaining financial assistance from the New York State Job Development Program for fishing vessels; bond approval for fishing vessels and shoreside facilities by the Suffolk County Industrial Development Authority; and public support

for commercial dock facilities in Southampton and Greenport.

- **Fishery Marketing Opportunity Development** — In addition to facing an unpredictable environment and uncertain fish behavior, commercial fishermen must contend with a fresh seafood market which is particularly susceptible to over supply and low prices. To reduce this dependency on

— This annual, two-day event on technical training and the transfer of information was attended by 700 fishermen. The program, which consisted of 30 hours of workshops with 32 technical speakers, is so successful that it is now funded entirely by contributions from New York's fishing and other supportive industries.

- **Workshops** — Twenty-two com-



Sea Grant specialist John Scotti (right) discusses commercial fishing issues with Richard Miller of the Long Island Fishermen's Association.

the fresh fish market, the Sea Grant fisheries team has sought alternate markets for New York's fish by facilitating joint ventures with foreign buyers, and American fishermen and processors. Although controversial, these short-term joint ventures can help develop an export market for undermarketed species available to American fishermen. Meetings sponsored by Sea Grant were held for New York commercial fishermen and Japanese representatives to determine technical and administrative requirements concerning the export of squid. Although still somewhat reluctant, commercial fishermen entered into their first squid venture in the summer of 1981, and plans for a second venture in 1982 are progressing.

- **New York Fisheries Update** — A monthly bulletin is published by Sea Grant for New York's 1,500 commercial fishermen. Information from this newsletter has led to savings and/or profits worth several thousand dollars for commercial fishermen.

- **Long Island Fisherman's Forum**

mercial fisherman participated in a Sea Grant sponsored all-day workshop on hydraulics and 75 participated in a fish-finding electronics workshop focusing on squid detection using color scopes.

- **Resolution of Conflicts between User Groups** — Because of the inevitability of conflicts between users of New York's marine resources, educational programs were held for recreational boaters and commercial pot fishermen to develop equitable solutions to potential problems.

- **Technology Transfer Programs** — To help the commercial fishing industry adopt improved technology, Sea Grant's Fisheries Team has initiated three new projects. They deal with:

- 1) **The preservation of wood and fishing gear by pressure treatment with chromated copper arsenate (CCA).** Wood boring marine animals can destroy fishing gear such as lobster pots in as little as 10-12 weeks. For many years, CAA-

Continued on Page 8

# Coastal Tourism and Business Development

by Stephen Brown,  
Sea Grant Specialist in Potsdam

Love may make the world go round but innovation ensures prosperity. During this era of high interest rates, recession, and keen competition, innovation has become a necessity. Coastal marine businesses and tourism areas are working hard to meet and beat their competition, and Sea Grant specialists and researchers are lending a hand in this quest by providing ideas and techniques to help.

## Product Development

Developing tourism and recreation products for visitors and residents alike is becoming an important concern. In upstate New York, drive-it-yourself trails are being used to create new tourism products. To lend a hand, Sea Grant Specialist Stephen Brown visited the Americana Trail in New England to learn how a successful trail was organized and promoted. Information on the American Trail was then shared with community and tourism leaders.

The Americana Trail story has now been told and retold many times in upstate New York and ideas from the story are being evaluated and adopted. Those along the Seaway Trail are in the process of forming a Seaway Trail Association much like the Americana Trail Association. The idea of combining the Seaway Trail and the Heritage Highway — to be called the International Seaway Heritage Highway — to form a trail to circumnavigate Lake Ontario and the

St. Lawrence River is also being explored. Lake Erie community and tourism leaders have also heard the story and have formed a Lake Erie Trail Advisory Committee to explore a drive-it-yourself trail. These efforts may help New York attract and satisfy more visitors and thus help strengthen many coastal marine businesses.

Downstate, Sea Grant has lent a hand by providing assistance on waterfront park design to towns, villages and associations. For example, Sea Grant provided information to Nassau Shore's Civic Association on ways to turn vacant land into parks with limited funds. Similarly, the Village of Piermont was also given information on redevelopment options, applications and permits needed to be completed in order to acquire and develop a mile-long earthen pier.

## Visitor Services

Visitors can be helped in their quest to have an enjoyable coastal visit. Sea Grant has provided information on where one can recreate and the kind of weather to expect. This year a **Recreation Climate Guide for Lake Ontario** was released; 5,000 copies have been distributed to date. Recreational safety and how-to information has also been developed and distributed via workshops, publications and a series of articles contained in the **Coastal Living** packet sent to newspapers, radio and TV stations. Topics vary from coldwater drowning, fish contaminants, and ice fishing.

## Coastal Business Development

Private enterprise is the backbone of tourism and recreational develop-

ment. Small businesses supply needed goods and services to visitors and residents alike, while providing jobs and taxes to host communities. Without a healthy small business community, no tourism product or promotional campaign could generate economic growth. Small businesses lack the informational resources of large corporations and thus must rely on outside sources for help. Sea Grant is one of these sources.

Statewide there are over 750 marina/boatyard and 300 charter/party boat enterprises, with the largest concentration on Long Island. During 1981, Sea Grant sponsored meetings for both marine trades and professional boatmen. Over 125 participants identified ways to cut operating costs, promoted their products more effectively and use emerging technology to deliver a better product to their customers.

Marine operators were assisted with specific problems ranging from permit procedures, sources of marine equipment, floating tire breakwaters to appropriate herbicide applications. Information on self-help options and assistance in business management, facilities design, aquatic plant control and new technologies were also given.

This year New York Sea Grant introduced oil analysis, a tool being used by other industries to reduce "down time" and maintenance costs of complicated machinery. The technique calls for periodic samples of lubricating fluids from machinery. When oil samples are analyzed by specialized commercial laboratories, the information indicates why equipment may not be functioning at peak performance and when repairs should be made. This tool was introduced to 24 marinas and charter/party boat owners with good results. One marina operator now offers oil analysis routinely to customers.

Tax workshops, save-energy-save-dollars seminars, a business course, and a food sanitation workshop have also been held for small businesses. Over 200 entrepreneurs have been served with information they otherwise might not have received.

## Conclusion

The Sea Grant Program may not solve all the problems that tourism and small businesses face, but by chipping away at coastal problems, by innovation as shown by these examples, the public will enjoy healthier coastal tourism and business community.



*The Mayflower — on Massachusetts' Americana Trail — attracts tourists by motor coach and car.*



## Coastal Protection, Looking into the '80s

by Chuck O'Neill, Sea Grant Specialist in Brockport

The coast is the most dynamic geographic area imaginable. Wind and water wear shoreline away here, deposit new material there, and carry sand and soil to sea where it remains for countless years. These erosion and deposition processes take place naturally, and have been doing so since the oceans and land were first created.

Can something so natural be a problem? Yes, when people want to use the coast for home, workplace, and playground. When conflicts arise between shoreline landowners and the erosive forces of nature, Sea Grant's coastal protection educational program can be of help.

New York State has some 2,400 miles of coastline on the Great Lakes and the Atlantic Ocean. Shoreline forms range from barrier beaches and tidal marshes on Long Island to high glacial till and shale bluffs on the lakes. Problems such as shoreline erosion, flooding, improper siting and design of coastal development, and poor construction practices are shared by individual property owners, coastal businesses, and government agencies alike.

For the past decade, Sea Grant in New York has been working with these coastal groups on a variety of methods for coping with coastal erosion problems. A coastal construction methods handbook, currently being prepared by Cornell engineering faculty, will assist marine contractors by providing state-of-the-art information on materials and techniques for designing, building, and maintaining coastal structures. Brian Doyle, former Sea Grant specialist now with New Hampshire Sea Grant,

says, "Construction in and along coastal waters is both a science and an art. To be successful, a marine contractor needs training and experience." Sea Grant's handbook will go a long way in providing this training.

In addition to working with contractors and landowners on traditional erosion control structures, Sea Grant has also worked on pioneering new forms of wave control. One of these is the floating tire breakwater. Specialist Bruce DeYoung, author of an FTB educational bulletin, reports that in the last year FTBs have been deployed in six countries, including France, Germany, Australia, and New Zealand. The French government has even translated the bulletin into French for wider applicability. As Sea Grant's work on FTBs continues, a users' manual is being written by DeYoung, and research and extension staff from Rhode Island, Canada and Kuwait. The manual should be available by fall 1982.

Over the past several years, coastal landowners have seen inflation whittle away their ability to afford traditional erosion control structures which cost from \$250 to \$1,500 or more per linear foot of shoreline to be protected. Recognizing that all causes of erosion and coastal erosion problems themselves can not always be solved in a cost-effective manner by heavy construction, Sea Grant has turned to lower cost, non-traditional alternatives in its educational programs. In some instances, it has been found that moving a house away from an eroding shoreline may be more practical and less costly than fortifying the bluff itself. In other cases, a landowner may even choose

to do nothing, use the home for as long as possible, and then "write it off" as a loss rather than spend more money than the land itself is worth to save the home.

Sea Grant also works with prospective landowners to help them make informed decisions about buying coastal property. "Coastal buyers often act without knowledge or awareness of the erosion situation, the condition of existing erosion control structures, or the high cost of erosion control. Educational efforts aimed at these people can often prevent financial losses in the future," says Sea Grant Specialist Peter Sanko.

Many coastal erosion problems are caused not only by wave action, but also by groundwater seepage, surface runoff, wind, steep slopes, or a combination of these factors. Workshops in the Great Lakes region this past year explained the use of slope grading, drainage improvements, and vegetative plantings to slow erosion to more acceptable rates.

Two demonstration projects are now underway. While the end results are at least two years away, these projects will provide a "living laboratory" so landowners can see alternate methods for coping with moderate erosion.

One project deals with bluff instability along Lake Erie, and tests drainage methods illustrated in a Sea Grant fact sheet. Says Sea Grant Specialist Christine Hagerman, "Groundwater seeping through the soil can cause potentially worse erosion problems in an unstable bluff than wave damage. This project will show how removing water from the ground can help stabilize a slope."

The other project is on the Lake Ontario shore. It will demonstrate the use of different types of vegetation, mulching, and fertilizing to help stabilize low, moderately eroding bluffs. This project emphasizes "do-it-yourself" methods as opposed to contract work, and maximizes the cost-benefit ratio. It should be stressed, however, that this project is aimed at slowing down, not stopping coastal erosion.

Research, publications, demonstration projects, workshops, and individual site visits, all part of Sea Grant's repertoire, help coastal landowners get the information they need to do an important job and live in harmony with nature's erosive personality along the shore.

## Seafood sense (or Skate for Dinner)

by Linda O'Dierno,  
Sea Grant Specialist in New York City

Did you ever wonder what shark or skate or squid might taste like? These dishes have long been a favorite of Mediterranean and Oriental groups and are now slowly making their way onto American dinner tables—thanks to Sea Grant.

All across New York State, home economists, food service personnel and others involved with consumer education have had the opportunity to taste exotic denizens of the deep, to attend two-day workshops learning about familiar and not-so-familiar seafood items available in retail shops, and to spread the word to consumers.

Seafood Sense Seminar—the name of this program to increase consumer awareness of seafood — is part of a large-scale project jointly funded by the Mid-Atlantic Fisheries Development Foundation, Cornell Cooperative Extension and New York Sea Grant. The program is targeted toward removing attitudinal barriers to using seafood. According to a recent study conducted by the Food Marketing Institute, most consumers feel they lack the expertise to buy and prepare seafood for home use. Although seafood is rated as a favorite American food, it is generally viewed as a dinner-out item.

The seminars, which were organized by Sea Grant extension and research specialists, focused on an-

swering practical questions such as:

- How do I know that the fish I buy is fresh?
- How do I get rid of the “fishy” smell on my hands after preparing seafood?
- What is the nutritional value of seafood?
- How do I get my kids to eat seafood?

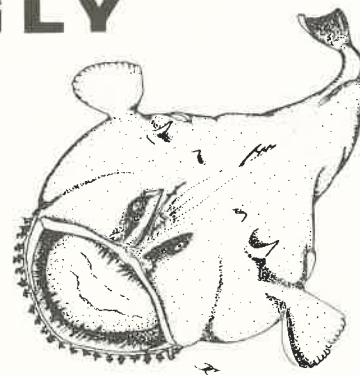
The first day of the program consisted of a hands-on lab session, which provided participants with an opportunity to pick crabs, filet fish, shuck clams, clean squid, and prepare mussels. The day's activities culminated in a dinner consisting of 10 different seafood dishes.

On the second day, participants learned how food scientists at Cornell University are researching the development of fish products from under-marketed species and by-products of fish processing. They learned how to use minced fish, one of these new products, in various dishes such as chili, chowder, curry and oriental stir-fry.



Cornell food scientists researching new methods to keep fish fresh for longer periods of time.

# UGLY



but inviting . . .

**Ugly — in the store, elegant — on the plate, easy — on the budget** was the theme of a special two-hour seafood demonstration Sea Grant Specialist Linda O'Dierno held for members of the national press. By enticing food writers and editors from the state's and nation's leading media, Sea Grant's message will reach consumers by the millions.

workshop, but many are now active in seafood programming. Cooperative Extension agents, for example, are now busy putting together newspaper features, workshops, radio spots and television appearances spreading the word about seafood.

To further support these program efforts and to increase continued awareness of seafood, a series of radio scripts featuring information on seafood nutrition, different species or the “catch-of-the month”, and general consumer tips have been distributed to radio and TV stations throughout the Mid-Atlantic Region. These scripts are available on a bilingual basis. In addition, a brochure on general seafood topics has been developed to serve Spanish-speaking consumers.

In the New York City area, CBS radio has included a “best-buys-in-seafood” feature as a part of its regular programming. Spot features have also been produced for radio and television throughout the state. The programs feature basic information on purchasing, barbecuing, and cooking by the “ten minute rule” in addition to undermarketed species such as squid and mussels.

Comments about the program were overwhelmingly positive. “Excellent workshop! The best I’ve attended in a long time!” “Down-to-earth, useful information.” “Provided the information I needed in order to feel comfortable with a seafood program.” “I used to be a confirmed fish hater.”

Not only were participants positive about the

## Update of Staff Activities, Training Programs and Conferences

Why does the water level of Lake Erie change and often at such a rapid pace? Does the government regulate the water level of the lake? These questions are often asked by Lake Erie coastal property owners. To answer these questions, Christine Hagerman, Sea Grant specialist in Fredonia, and Bill Erdle of the Buffalo District of the Army Corps of Engineers jointly updated a fact sheet on the water levels of lake Erie. To receive a copy, send 25 cents to our Sea Grant office in Fredonia.

\*\*\*\*\*

Two New York Sea Grant staff members were honored by colleagues this year. They are **Michael Duttweiler**, program coordinator in Ithaca, and **Michael P. Voiland**, specialist in Brockport. Duttweiler received the Superior Performance Award from Lambda Chapter of Epsilon Sigma Phi, Cooperative Extension's professional fraternity for using print and broadcast media to increase the public's awareness of human health aspects of fish contaminants. Voiland received three awards: the Outstanding Marine Advisory Agent of the Year Award from Sea Grant representatives of the five Great Lakes states; the first annual Rochester Trout and Salmon Anglers Award; and a certificate of merit from the Monroe County Conservation Council. Voiland's area of expertise is educational efforts related to Lake Ontario's developing sportfishery and access needs.

\*\*\*\*\*

**Oceans 82**, a conference sponsored by the Marine Technology Society and the Council on Oceanic Engineering of the Institute of Electrical and Electronics Engineers will be held on September 20-22, at the Shoreham Hotel, Washington, D.C. The conference theme this year is "Partners in Progress," chosen to convey the coordination and cooperation which will be required of industry, government, and academia to develop offshore resources this next decade. Conference planners anticipate over 1,500 attendees, 100 exhibitors, and 350 papers on ideas, technological products, and services for all inland marine, coastal, and offshore interests. For information contact: Marine Technology Society, 1730 M Street, N.W., Washington, D.C. 20036, Phone (202) 659-3251.

\*\*\*\*\*

The Coastal Society, a non-profit international organization, is holding a **conference on Communicating Coastal Information**, October 11-13, at the Holiday Inn in Harbor Place, Baltimore, MD. Improved communication is a critical issue because of the increased number of participants in coastal studies and reductions in operating budgets of government. Issues to be discussed are: comparative approaches to investigating and managing estuaries; resource extraction in coastal waters — federal and state approaches; evolving U.S. Coastal and marine policy, to name a few. Contact the Coastal Society, 5410 Grosvenor Lane, Suite 150, Bethesda, MD 20814 for more information.

\*\*\*\*\*

Coastlines is published quarterly by the New York Sea Grant Extension Program. This program is funded by the National Oceanic and Atmospheric Administration, the State of New York, and the New York Sea Grant Institute. Subscriptions to Coastlines are free for New York residents. Two-year out-of-state subscriptions are \$4. Request Coastlines from Editor Sally Willson, Sea Grant Extension Program, Fernow Hall, Cornell University, Ithaca, N.Y. 14853.

A teacher training course in marine ecology and field study design will be offered July 13-24. Open to high school and college teachers interested in marine science, the 12-day course taught by Sylvia Earle, marine biologist, California Academy of Sciences; Harold Humm, marine biologist, University of South Florida; Osborne Nye, marine geologist and others will take place at the Caribbean resort of Peurto Morellos, Yucatan, Mexico. Participants will snorkel and dive with instructors, visit archeological sites and study terrestrial biology. The course is intended to help teachers design caribbean programs for students. Contact Jere Hallenbeck, SEA International, 1425 Erie Blvd. East, Syracuse, N.Y. 13210 or call (315) 479-5544; outside New York, call (800) 448-5521.

---

---

# I Want More!

Additional information is available from New York Sea Grant. Please check the publications which interest you and send to your nearest Sea Grant Extension office. Make checks payable to Cornell University.

- \_\_\_\_\_ **Motivations of New York and Virginia Marine Boat Anglers and Their Preferences for Potential Fishing Constraints.** Sea Grant Reprint, C. P. Dawson and B. T. Wilkins, 1981, 8 pp., \$1.50.
  - \_\_\_\_\_ **Onshore Pressures Make Offshore Mining Viable.** Sea Grant Reprint, J. A. Dehais et al., 1982, 5 pp., \$1.50.
  - \_\_\_\_\_ **Aquavet: A Program in Aquatic Veterinary Medicine.** Sea Grant Reprint, D. A. Abt and C. C. Rickard, 1980, 4 pp., \$1.50.
  - \_\_\_\_\_ **Minced Fish: A Critical Examination of the Cornell Experience.** Sea Grant Reprint, J. M. Regenstein, 9 pp., \$1.50.
- 
-

## Fisheries Team *Continued from Page 3*

pressure-treated wood has successfully preserved wooden docks and bulkheads against shipworms and gribbles. Through Sea Grant, CCA-treated lobster pots are being tested, and a fact sheet on this technique has been written to allow fishermen the opportunity to evaluate the use of treated wood for other fishing operations.

2) **Squid jigging and light attraction demonstrations** funded by the Mid-Atlantic Fisheries Development Foundation. With the assistance of

Captain Scott Bennett, his crew and vessel "The Seafarer" of Mountauk, Sea Grant specialists will evaluate the commercial feasibility of automated jigging equipment and light attraction for *Loligo* and *Illex* squid this summer. A Japanese vessel already equipped with similar equipment will provide technical assistance and sea demonstrations. Fishermen will participate and help in this project.

3) **Pair Trawling Project** — Six New York vessels will demonstrate the use of a specially designed high-

rise bottom pair trawl and sophisticated electronic equipment to harvest underutilized species. The use of two vessels pulling one net, when properly executed, has been both feasible economically and effective in harvesting certain species. This project will orient fishermen on these techniques.

New York's commercial fishing industry is an important contributor to the economy and cultural heritage of the state. These activities reflect Sea Grant's commitment to realize the ocean of opportunity that awaits.

New York Sea Grant Institute  
411 State Street  
Albany, New York 12246  
Tel (518) 473-8002

Sea Grant Extension Program  
Farm & Home Center  
21 South Grove Street  
East Aurora, New York 14052  
Tel. (716) 652-5453

Sea Grant Extension Program  
66 Sheldon Hall  
SUNY/Oswego  
Oswego, New York 13126  
Tel. (315) 341-3042

Sea Grant Extension Program  
Cooperative Extension  
111 Broadway — 17th Floor  
New York, New York 10006  
Tel. (212) 587-9722

Sea Grant Extension Program  
Morgan III  
SUNY/Brockport  
Brockport, New York 14420  
Tel (716) 395-2638

Sea Grant Extension Program  
512 Raymond Hall  
SUNY/Potsdam  
Potsdam, New York 13676  
Tel (315) 268-3303

Sea Grant Extension Program  
Cooperative Extension Regional Office  
412 E. Main Street  
Fredonia, New York 14063  
Tel (716) 672-2191

Sea Grant Extension Program  
Fernow Hall  
Cornell University  
Ithaca, New York 14853  
Tel (607) 256-2162

Sea Grant Extension Program  
Rockland County Cooperative Extension  
87 Maple Avenue  
New City, New York 10956  
Tel. (914) 425-5500

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

Sea Grant Extension Program  
Cornell University Laboratory  
39 Sound Avenue  
Riverhead, New York 11901  
Tel (516) 727-3910

The New York Sea Grant Extension Program provides equal opportunities in employment and programs.



SEA GRANT

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

