

COASTLINES

New York Sea Grant

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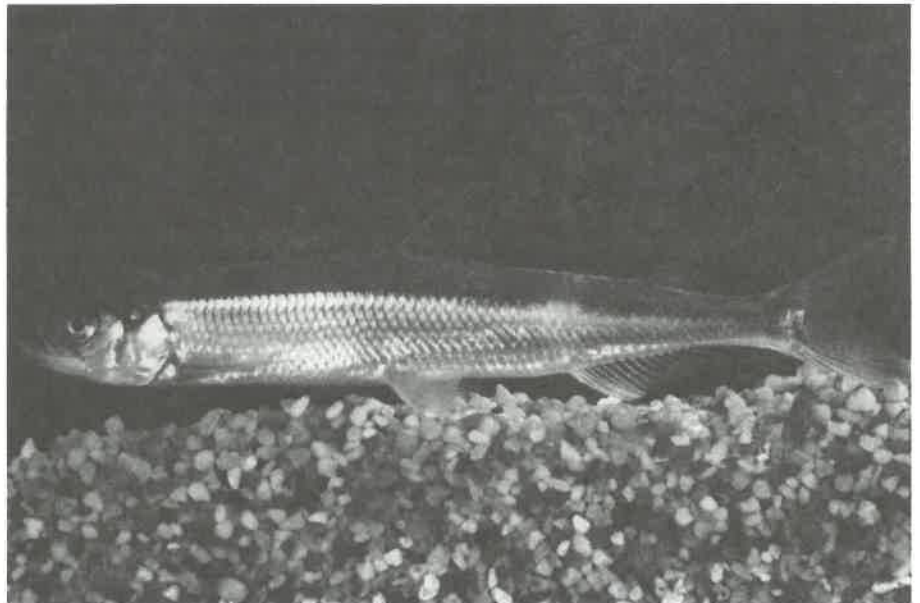
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Lake Ontario Fishery – Under Stress?



Alewives are being stressed by changing conditions in Lake Ontario. As alewives are the major part of the food supply, or forage base, for popular sport fish, changes in alewife populations are of concern.

By Pat Peterson

Forage fish stocks in Lake Ontario appear to be threatened by food scarcity, pressure from predators, and the possibility of a severely cold winter, recent assessments show. The implications for the salmon and trout fisheries are extensive, since forage fish — alewives (*Alosa pseudoharengus*) and rainbow smelt (*Osmerus mordax*) — make up most of the diet of these sport fish. Without sufficient numbers of forage fish to prey upon, fewer sport fish can be expected to survive and grow in Lake Ontario's waters. Fewer fish mean fewer anglers — and because many businesses along the lake shore depend on anglers, there are economic implications as well.

Since the early 1980s, the levels of phosphorus entering the Lake have declined by as much as 25 percent, reducing the levels of phytoplankton (microscopic plants that

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Forage Base Woes

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depend heavily on this nutrient), according to the New York State Department of Environmental Conservation (DEC). The decline in available phosphorus results from improvements in water quality attributable to the ban on phosphate detergents, the development of more effective sewage treatment plants, and possibly, the recent proliferation of an exotic filter-feeder, the zebra mussel. The change in phytoplankton availability in upper water levels has, in turn, affected the amount of zooplankton (microscopic animals that feed on phytoplankton) available for alewives and smelt to consume.

The Current Situation

"Forage fish can be stressed both by food scarcity and by predators," says Dave MacNeill, New York Sea Grant Extension specialist. He adds, "One indicator that this may be happening is that the total weight of smelt and alewife has declined since the 1980s. In addition, there has been at least a 90 to 95 percent reduction in abundance of large alewives and smelt, as they are selectively removed by predators. The surviving alewives have a low body weight relative to their length. These indicators, all of which have been derived from U.S. Fish and Wildlife Service assessments, point to a possible decline in the sportfishery."

A joint U.S. and Canadian panel of fisheries managers and researchers was convened this past summer by the DEC, the U.S. Fish and Wildlife Service (USFWS), and the Ontario Ministry of Natural Resources (OMNR) to review and evaluate existing data on Lake Ontario's forage base trends, predator/prey dynamics, and food chain. This discussion prompted the DEC to issue a statement that "the alewife population, the major component of the prey fish community, is showing signs of stress."

"Changes in the alewife population could have important implications for the future of the trout and salmon fishery in Lake Ontario," according to Thomas C. Jorling, DEC commissioner. "It is important, therefore, that our decisions be based on the best scientific information available and be made only after the greatest possible public participation."

In late July 1992 a select task force of binational scientific experts was brought together by the Great Lakes Fishery Commission's Lake Ontario Committee to review forage assessment data and make recommendations for fisheries management options. The binational Lake Ontario Committee was co-chaired by Dr. Donald Stewart, a New York Sea Grant funded researcher. Using sophisticated sonar devices, Stewart has been conducting bioacoustic surveys of Lake Ontario and using the data in a computer model that produces an estimate of the total biomass (weight of fish) in Lake Ontario.

The predator/prey balance, availability of phosphorus, and overall productivity of the Lake are all related. Each link in the food chain is dependent upon the lower link (see diagram on page 3). Less phosphorus means less phytoplankton and less zooplankton, which translates into fewer or smaller surviving forage fish, and ultimately, fewer predatory (sport) fish.

Adding to the forage base woes is the possibility of a severely cold winter this year. Alewives are very sensitive to low water temperatures. A cold winter, combined with the stress this species already is under, may hasten its decline and even lead to a virtual disappearance of the alewife from Lake Ontario — a collapse of the forage base. Many fisheries experts agree that a combination of cold winters with continued stocking of predators precipitated an alewife population collapse in Lake Michigan during the 1980s.

What Is Being Done?

According to top scientists, Lake Ontario cannot continue to support the numbers of predatory fish that have been stocked in the past. Mathematical modeling procedures such as Stewart's are being used to estimate and evaluate various options available for the management of Lake Ontario's forage base.

In an effort to educate the public about this problem, regional and statewide task forces have been formed by the DEC in its public participation process. Charter captains, biologists, researchers, Sea Grant specialists, marina owner/operators, small business operators, representatives from both statewide and local organizations, and representatives from angler associations are all members of the task forces. These groups will make recommendations to the DEC

and the OMNR for adjustments in the management of the sportfishery.

During these task force meetings, several management options have been presented. These include:

1. *Collapsing the alewife population by maintaining the existing predation pressure on the forage base.* Biologists suggest this might allow populations of native forage species such as lake herring (*Coregonus artedii*) to fill the niche that would be left by the alewife. Lake herring populations tend to be more stable than alewife populations and less prone to dramatic changes in abundance.
2. *Reducing the numbers of predatory fish that are stocked by 50 percent.* Within this one scenario is a range of 10 possibilities for altering the species mix or altering the proportions of each species stocked and creating different results. But even if stocking is reduced, the lag time between such a change and its desired effectiveness is believed to be at least two years.
3. *Eliminating stocking altogether.* Species such as rainbow/steelhead trout,

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Forage Base Woes

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chinook salmon, and coho salmon are already showing limited signs of natural reproduction (see *Coastlines* Vol. 22, No. 2, pp. 4 and 7). But in all probability this option would have serious socioeconomic implications, including a severe decline in the sportfishing industry.

The DEC's next steps include public forums planned for early 1993. In other current efforts to address the situation, New York Sea Grant and the New York State Charter Sportfishing Council sponsored a workshop in Rochester in November to present research on the forage base situation to over 60 representatives of the sportfishing industry and the research community. A follow-up workshop is tentatively scheduled for spring 1993. Fisheries managers, charterboat captains, and Extension specialists will convey their experiences with forage base problems in Lake Michigan.

Lake Ontario Fisheries: A Historical Perspective

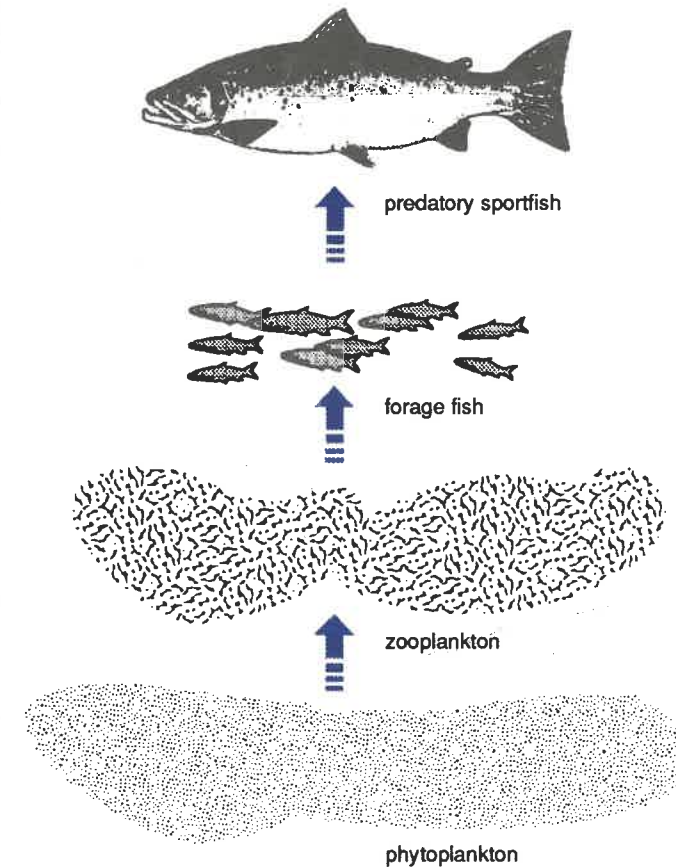
Before the 1800s, Atlantic salmon (*Salmo salar*), lake trout (*Salvelinus namaycush*), and the burbot or freshwater cod (*Lota lota*) were the three major predatory fish in Lake Ontario.

Heavy commercial fishing, along with deforestation throughout the watershed, barriers to spawning migrations, pollution, heavy algal blooms, and toxic chemicals diminished water quality and contributed to the loss of Lake Ontario's Atlantic salmon fishery starting in the late 1800s. As populations of native species of fish declined, exotic species such as smelt, alewife, and the sea lamprey (*Petromyzon marinus*) colonized the Lake. Their spread was assisted by human activities.

Severe predation by sea lamprey on lake trout contributed to the lake trout's disappearance in the 1950s. At this time unknown factors also caused the burbot to decline to very low levels. With no predatory fish to control surplus production of alewives and smelt, their numbers soared.

Severe competition for food caused huge die-offs of these fish along Lake Ontario's shoreline in the 1960s and 1970s. The Lake Ontario ecosystem was out of balance and in trouble.

In 1972 the Great Lakes Water Quality Agreement was signed by Canada and the United States. This committed both countries to improve water quality, which had been diminished largely because of excessive levels of nutrients such as phosphates. Phosphate reduction was begun with improvements to sewage treatment plants and bans on phosphate detergents.



Food Chain in Lake Ontario

Programs were started to control the sea lamprey, reintroduce lake trout, and develop major hatchery- and stocking-supported fisheries for chinook salmon (*Oncorhynchus tshawytscha*), coho salmon (*O. kisutch*), brown trout (*Salmo trutta*), and rainbow trout (*O. mykiss*). Successful lamprey control and improved water quality allowed experimental stocking of sport fish to help control alewife and smelt populations. The stage was set for the creation

of a successful sportfishery and the rehabilitation of the Lake Ontario ecosystem.

Stocking has continued in Lake Ontario and since 1984 has been stabilized at 8.2 million fish annually. The stocked fish — salmonids such as chinook salmon, coho, Atlantic salmon, lake trout, rainbow trout, and brown trout — are all at the top of the food chain. Alewives and smelt, once viewed as nuisance species, became the primary food source for these stocked predators. The alewife in particular is a favorite of the chinook salmon. According to MacNeill, "A typical 30-pound chinook eats almost four times its body weight in alewives during its lifetime. Other salmonids prefer the alewife, too. With millions of fish being stocked, this translates into thousands of tons of alewives eaten each year."

What's Ahead

Will Lake Ontario's forage base collapse? "Until we can assess the winter's impact on the Lake's alewife population, we can't be certain what will happen," MacNeill says. "Ultimately, Mother Nature will cast the deciding vote on the future of the alewife populations in Lake Ontario this winter." In the meantime, efforts on the part of the DEC, the Great Lakes Fishery Commission, the OMNR, New York Sea Grant, and other organizations will continue to keep anglers, researchers, fisheries managers, and the interested public informed about the current forage base situation.

For information on the DEC's public forums, contact Robert Lange at the DEC's Bureau of Fisheries in Albany, (518) 457-5937.

For more information about the forage base situation in Lake Ontario, contact Dave MacNeill, New York Sea Grant, Hartwell Hall, SUNY College at Brockport, Brockport NY 14420-2928, (716) 395-2638. MacNeill is also the technical advisor to the Lakewide Task Force sponsored by DEC.

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Is New York's Health Advisory on Fish Consumption Making a Difference?

By Barbara A. Knuth, Ph.D., and Nancy A. Connelly

New York's health advisory on fish consumption is issued annually to inform anglers about risks that may be associated with the consumption of certain species of sport-caught fish from various waters throughout the State. Cornell researchers Drs. Barbara A. Knuth and Carole A. Bisogni and Ms. Nancy A. Connelly are conducting a New York Sea Grant funded study examining how health advisory changes have influenced fishing habits and fish consumption in New York sport-fisheries.

Their study compares current levels of awareness and kinds of fishing activities with patterns noted in a 1988 statewide angler study conducted for the New York State Department of Environmental Conservation (DEC). Since 1988, the health advisory, which is disseminated in the *Fishing Regulations Guide* given to purchasers of fishing licenses, has been expanded to include more information about why advisories are issued along with increased discussion of general precautions people can take to minimize their intake of contaminants through fish consumption. Overall, Knuth and her colleagues have found that these changed guidelines seem to be more effective than the older ones, as angler awareness has generally increased.

In their project, the researchers contacted 2,000 randomly selected 1991 licensed anglers by mail in January 1992. Anglers were asked to complete a questionnaire about their awareness of the health advisory, personal changes they made in response to the advisory, what fish preparation and cooking methods they used, their fish catch and consumption, the information sources they used to learn about the advisory, and what additional health advisory information they might desire. Over 52% of anglers contacted responded. A telephone assessment sampling those who did not respond revealed that they generally fished less and were less aware of the advisory than anglers who returned their questionnaires. Differences between respondents and nonrespondents were factored into the results wherever possible.

An estimated 85% of licensed anglers

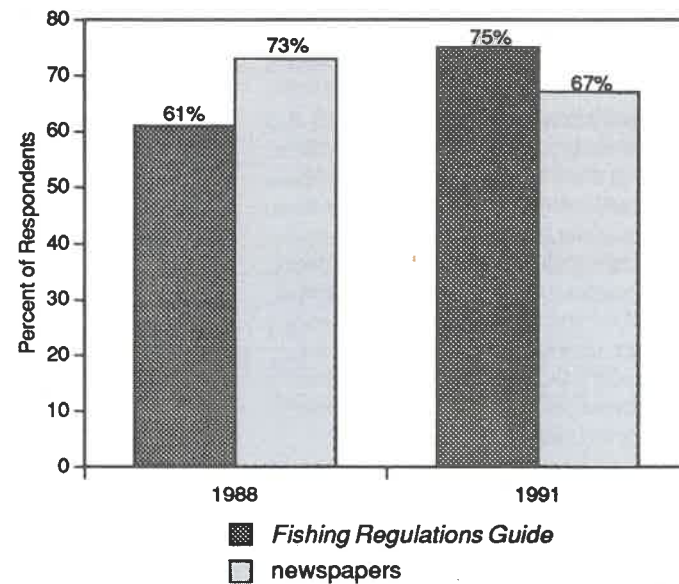
statewide were aware of the health advisory in 1991, up from 80% in 1988. The youngest and oldest anglers, low-income anglers, and female anglers tended to be least aware of the advisory. Differences in awareness between groups of people may be of concern to health professionals. For example, women of childbearing age (or intent) experience higher potential risks if they eat contaminated fish, as they may transfer contaminants to their offspring during pregnancy or through breastfeeding. The health advisory contains a specific low-consumption recommendation targeted toward women of childbearing age, but if this general group is unaware of the advisory, the recommendation would have little effect.

The most common information source used to learn about the advisory in 1991 was the *Fishing Regulations Guide* (used by 75% of respondents), with newspapers the next most important information source (used by 67% of respondents). This represents a reversal from 1988, when 73% of respondents used newspapers and 61% used the *Fishing Regulations Guide* to learn about the advisory. The increased use of the guide is important because it is one of the most comprehensive sources of information available.

Overall, fish consumption averaged 11 sport-caught fish meals per year, but consumption ranged from 0 to 757 meals per person annually. Over half of the respondents did not fish waters specifically listed in the 1991 advisory. About one-quarter fished waters listed in the advisory but did not eat species listed. About 4% ate listed species of fish, but kept within the limits recommended in the advisory. About 7% ate listed species up to three times over the recommended limit, and 7% ate listed species more than three times over the recom-

mended limit.

Respondents who ate more than three times the recommended limit knew significantly less than other anglers about the potential negative health effects of fish consumption. Respondents who ate more than the recommended limit of listed species were more likely to report having used charter boat guides and newspapers as in-



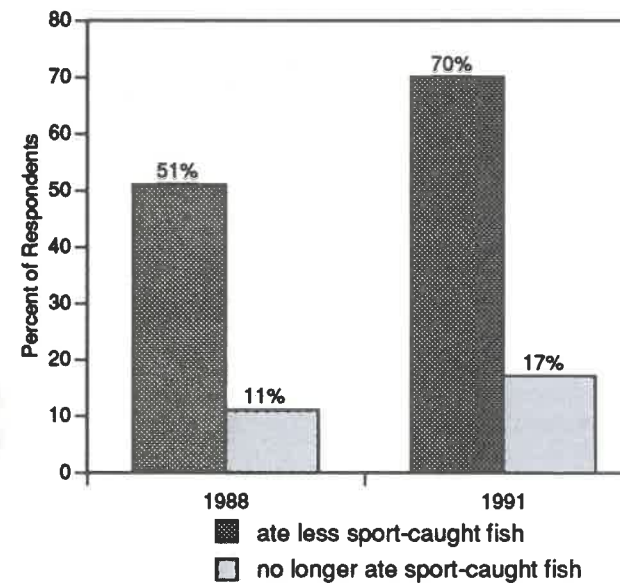
Information Sources Used by Anglers Responding to the Survey

formation sources than those who kept their consumption within the limits. Thus, the different information sources used to learn about the health advisory appear to affect knowledge and behavior.

Anglers can reduce their exposure to contaminants through the use of certain fish cleaning and cooking procedures. The majority (and sometimes close to 75%) of respondents eating fish species listed in the advisory always or usually used such risk-reducing cleaning techniques as trimming dorsal fat and trimming belly meat. About 40% of those eating listed species used risk-reducing cooking methods such as baking or barbecuing.

Among survey respondents who had made changes in response to the advisory, the most notable differences between 1988

and 1991 were that the percent who ate less sport-caught fish increased 19 points and that the percent who no longer ate any sport-caught fish because of the advisory increased 6 points. Younger respondents and those with relatively lower income showed the most dramatic increase in their tendency to eat less fish due to the advisory. An estimated 47% of anglers statewide said



Changes in Fish Consumption in Response to the Advisory

they would eat more sport-caught fish if health risks did not exist. About 84% of respondents felt the advisory had increased their interest in water pollution control and cleanup efforts.

A majority of respondents desired more advisory information on many topics, some of which are mentioned in the 1991 advisory, including risk-reducing cooking and cleaning methods, advice on how to choose fishing locations, description of health benefits and potential problems associated with eating fish, and a comparison of risks from eating fish with risks from other foods.

The 1991 health advisory appears to be an improvement over the 1988 advisory in several respects. More people are aware of the advisory, most anglers are using the *Fishing Regulations Guide*, and more anglers have changed the amount of fish they eat in response to the advisories, either eating less fish to remain within the guidelines, or eating more fish because they feel they can choose relatively safer species, sizes, or locations.

Gill Netting Is Second Video in Sea Grant Marine Heritage Series

By Robert Kent

Many Long Island families have been in the fishing business since Colonial times, often using traditional methods, such as gill netting, to catch fish. In *Gill Netting*, a new video documentary, commercial fisherman Tom Knobel explains the various nets and techniques he uses as he searches for fish in Long Island's marine waters during the course of a season.

The documentary is the second in New York Sea Grant's marine heritage video series and was produced jointly by New York Sea Grant, the East Hampton Baymens Association, and Terra TV Productions.

The marine heritage series, which seeks

to document the lives of fishermen on Eastern Long Island and help people understand the marine heritage of New York, will be of particular interest to educators in the areas of Long Island history, marine science, and food production.

Gill Netting is in VHS format, runs 30 minutes, and may be purchased for \$10 from New York Sea Grant, 39 Sound Avenue, Riverhead, NY 11901-1098. Please make checks payable to Cornell University.

The first video in the series, *Trap Fishing*, is also available for \$10. (See *Coastlines* Vol. 21, No. 1-2, Spring/Summer 1991 for more detail.)

In 1991, a majority of anglers kept their fish consumption within the limits recommended in the advisory, and of those who did not limit their intake accordingly, a majority used at least some risk-reducing cleaning or cooking methods. Room for further improvement exists, however. The survey findings suggest that future efforts might focus particularly on improving awareness among specific groups of people who may be subject to greater relative risk and providing information still desired by the majority of anglers.

Editor's Note: Readers interested in more information about this subject may wish to order *Contaminants in Sport Fish: Managing Risks*, by Ken Gall and Michael P. Voiland, Jr., a 6-page illustrated Sea Grant fact sheet published in 1990, which is available for \$1.00. Send check payable to Cornell University, Cornell Distribution Center, 7-8 Business & Technology Park, Cornell University, Ithaca NY 14850.

PISCES SAMPLER WINS PATENT

John Hassett, a New York Sea Grant funded researcher and associate professor of chemistry at the SUNY College of Environmental Science and Forestry at Syracuse, has been awarded Patent Number 5,110,473 for his passive in-situ, concentration-extraction sampler (PISCES). The pollutants PISCES can sample include polychlorinated biphenyls (PCBs), polynuclear aromatic hydrocarbons (PAHs), dioxins, petroleum materials, and pesticides. The PISCES device offers an alternative to the more laborious methods of water sampling chemists have traditionally used to determine concentrations of organic contaminants in surface waters.

The patent follows extensive field testing by the New York State Department of Environmental Conservation (DEC) and the United States Fish and Wildlife Service (USFWS). (See *Coastlines* Vol. 20, No. 1, Spring/Summer 1990.)



When suspended in water, Hassett's patented PISCES device effectively samples PCBs and other organic contaminants. Photo by Avery Klauber.

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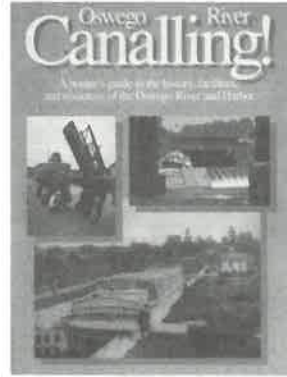
A New Direction for Tourism Publications in New York State

In a successful collaborative effort, New York Sea Grant Extension specialist Diane Kuehn assisted the Oswego County Department of Promotion and Tourism in compiling and producing *Canalling: A Boater's Guide to the History, Facilities, and Resources of the Oswego River and Harbor*.

Among the first of its kind in New York, this 40-page booklet is both a promotional publication and an interpretive guide to the region. As an interpretive guide, *Canalling* presents educational material on the history of the Oswego River, shipbuilding, architectural landmarks, and more in an entertaining and visually appealing way. It also includes useful boating facility information and National Oceanic and Atmospheric Administration (NOAA) navigational charts.

Kuehn recommended the production of the boater's guide to the Oswego County Department of Promotion and Tourism in fall 1991. The participants agreed to model the development of the project on the process outlined in *Developing an Interpretive Guide for Your Community*, a 1991 New York Sea Grant fact sheet written by Kuehn (to order, see page 7). Oswego County agreed to produce the guide and Sea Grant agreed to take the lead in collecting resource information, editing it, and working with an advertising agency on design.

Over 44 historians, agencies, industries, and not-for-profit organizations provided information to Sea Grant for inclusion in the



guide, which was written by freelance journalist Kathleen Cook.

The popularity of the guide so far seems to indicate its success. In September 1992, 10,000 copies were distributed; a reprint is planned for the near future. Boaters and marine trade associations throughout New York State and New England have been the primary audience, but the guide has also received attention from schools. Teachers are using *Canalling* in several school districts along the Oswego River to teach students about the river and the New York State Canal System.

According to Kuehn, many communities and organizations throughout New York are beginning to use the publication as an example of how to develop an interpretive guide. She notes, "This project was the first step in showing communities how to use interpretive techniques to provide visitors with interesting and educational information about local resources, and encourage them to stay longer. In order to further assist communities with the planning and development of interpretive publications, signs, and exhibits,

New York Sea Grant is presently developing a community interpretation planning manual for release late in 1993." For current information about interpretive guides, contact Diane Kuehn at (315) 341-3042.

To obtain a free copy of *Canalling: A Boater's Guide*, call the Oswego Department of Promotion and Tourism at (315) 349-8322. The guide is not available from New York Sea Grant.

New Long Island Sound Study Program Assistant Named



Kimberly Zimmer

Kimberly Zimmer has been hired as the New York Sea Grant Extension program assistant in marine environmental quality. In that capacity Zimmer will serve as liaison between the public and the Long Island Sound Study (LISS).

Before coming to Sea Grant, Zimmer worked for the Town of Southampton, where she dealt with issues of storm water runoff as part of the town's waterfront revitalization efforts.

"I am delighted to have Kimberly on board," says Melissa Beristain, New York Sea Grant Extension specialist and New York's public participation coordinator for

the LISS. "Her background and skills are well suited to dealing with the many issues and groups involved in the long-term revitalization of Long Island Sound."

Zimmer, a graduate of Southampton College, holds a bachelor of science degree in environmental science biology.

Anyone who is interested in learning more about the Long Island Sound Study can contact Zimmer at the Long Island Sound office, (516) 632-9216.

Charter/Party Boat Group Recognizes Sea Grant Efforts

Mark Malchoff, NY Sea Grant specialist in marine sportfisheries and recreation industries, recently received an Outstanding Service Award from the Long Island Commercial Passenger Fishing Vessel Association (LICPFVA). Malchoff is the editor of a quarterly New York Sea Grant newsletter, *Commercial Passenger Fishing Vessel News (CPFVN)*, and he has provided the LICPFVA with organizational assistance since the group's inception in 1990. In presenting Malchoff with a plaque at an annual industry dinner dance, LICPFVA representatives cited Malchoff's "professional dedication and untiring efforts to assist and improve the party and charter boat industry." This is the first award of any kind bestowed by the LICPFVA.

If you are interested in receiving the *CPFVN* or would like more information about the LICPFVA, which strives to represent the commercial passenger fishing vessel industry in New York's marine waters, contact Mark Malchoff at (516) 727-3910.



Mark Malchoff



New Publications from NY Sea Grant

Please send requests for the following publications (including checks payable to New York Sea Grant, unless otherwise noted below) to: Communications, New York Sea Grant Institute, 117 Nassau Hall, SUNY at Stony Brook, Stony Brook NY 11794-5001. Or call (516) 632-9124 for further information.

Fact Sheets, Directories, and Guides

What Is the Long Island Sound Study? New York Sea Grant Extension Program and the Connecticut Sea Grant Marine Advisory Program. October 1992. Long Island Sound Study Fact Sheet #15. 4 pp. Free.

Journal Reprints

Dietary n-3 polyunsaturated fatty acids: effects on membrane enzyme activities and macrophage eicosanoid synthesis. J. E. Kinsella, B. Lokesh, M. Croset, M. Black, and M. Surette. 1989. *Health Effects of Fish and Fish Oils*, pp. 81-126. Not available from New York Sea Grant.

Effect of different dietary triglycerides on liver fatty acids and prostaglandin synthesis by mouse peritoneal cells. B. Lokesh, J. LiCari, and J. E. Kinsella. 1992. *Journal of Parenteral and Enteral Nutrition*, 16(4):316-321. Free.

Frozen storage of unwashed cod (*Gadus morhua*) frame mince with and without kidney tissue. M. Jahncke, R. C. Baker, and J. M. Regenstein. 1992. *Journal of Food Science*. 57(3):575-580. Free.

Please send requests for the following publications (including checks payable to Cornell University, unless otherwise noted below) to: New York Sea Grant Communications, Sweetman Hall, SUNY College at Oswego, Oswego NY 13126-3599. Or call (315) 341-3042 for more information.

Fact Sheets, Directories, and Guides

Contaminants in Great Lakes Fish. Compiled by Minnesota Sea Grant Communications for the Great Lakes Network. 1992. 3 pp. Free.

Developing an Interpretive Guide for Your

Increasing the dietary (n-3) to (n-6) polyunsaturated fatty acid ratio increases tumor necrosis factor production by murine resident peritoneal macrophages without an effect on elicited peritoneal macrophages. I. Hardardottir and J. E. Kinsella. 1992. *American Institute of Nutrition*, pp. 1942-1951. Free.

Kinetics of tumour necrosis factor and prostaglandin production by murine resident peritoneal macrophages as affected by dietary n-3 polyunsaturated fatty acids. I. Hardardottir, J. Whelan, and J. E. Kinsella. 1992. *Immunology*, 76:572-577. Free.

New York's sportfishing and aquatic resources education program: What we've learned about working with volunteers. M. E. Krasny, B. E. Matthews, K. L. Edelstein, G. J. Applebee, and H. D. Greene. 1992. *Transactions of the 57th North American Wildlife and Natural Resources Conference*. 9 pp. Free.

Brochure

New York Sea Grant's Water Quality Stewardship Program. New York Sea Grant Extension Program. 1992. 3-panel brochure. Free.

Community. D. Kuehn. Rev. Nov. 1992. 8 pp. \$0.50.

Sea Grant Aquaculture in the Great Lakes Region. Compiled by Minnesota Sea Grant Communications for the Great Lakes Network. 1992. 4 pp. Free.

Workshops Focus on Seafood Issues & Opportunities

By Ken Gall

How can alternative markets in the Far East and Europe help seafood companies based in the northeastern United States weather sluggish economic conditions? Where can dietitians and home economists get the latest information on seafood nutrition, safety, handling, selection, and preparation?

These and other important questions were topics for discussion at two seafood workshops held on Long Island this fall.

Export Workshop for the Seafood Industry

While export markets can be lucrative, shipping a perishable product like seafood to distant markets is complex and sometimes risky. The Fish and Seafood Export Workshop was designed to assist seafood businesses interested in entering the export marketplace. A collaborative effort, the workshop was sponsored by the New York Seafood Council, the New York Department of State, and New York Sea Grant, with funding from the New York State Department of Economic Development's NETWORKS grant program, which is part of its Global New York initiative.

"Exporting offers the seafood industry the opportunity to stabilize prices and market underutilized species," according to Roger Tollefsen, president of the NY Seafood Council and one of the conference organizers. "Conferences such as this one are a good investment in the industry, and one that will benefit the

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Seafood Issues and Opportunities

Continued from Page 7

economy of both Long Island and New York State."

At the workshop, speakers from both the public and private sectors followed a "nuts and bolts" approach in addressing a variety of topics, including: developing an export strategy; cultural "do's and don'ts"; the hidden costs of exporting; international laws and tariffs that affect profits; financing; and promoting products in the global marketplace. The 45 people in attendance learned about the kinds of services and assistance available from international banks, insurance carriers, freight forwarding companies, air cargo carriers, and federal and state government.

Throughout the course of a busy day, participants had many opportunities to network. "On the basis of contacts I made at the conference," Tollefsen says, "My company has made arrangements to pack and ship products for someone who is entering the export market. And we've received calls from three others."

Seafood Health and Safety Issues Workshop

Consumers frequently look to local food

and nutrition professionals to get answers to their questions about seafood health and safety issues. A conference on seafood issues in the 1990s was organized to provide these professionals with the most up-to-date information available.

New York Sea Grant, the Cornell Cooperative Extension Associations of Nassau and Suffolk counties, the American Heart Association, and the New York Seafood Council sponsored the conference. Sea Grant funding came from a Sea Grant Extension Program small grants project.

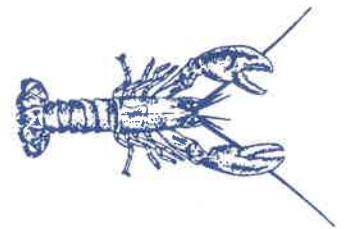
Highlighting the event was keynote speaker Dr. Joyce Nettleton, the author of the highly regarded reference work *Seafood Nutrition* and director of the Institute of Food Technologists' Office of Scientific and Public Affairs. Summarizing current research on omega-3 fatty acids in seafood, Nettleton stated that, in general, the overall health benefits that can be gained from these naturally occurring substances can outweigh potential safety risks.

Presenters included Ken Gall, New York Sea Grant Extension specialist in seafood use and technology, who provided an overview of seafood safety issues, and Linda O'Dierno, a fisheries and aquaculture specialist from the New Jersey Department

of Agriculture (and former NY Sea Grant Extension specialist), who summarized how to select, handle, and prepare seafood properly.

Current U.S. Food and Drug Administration (FDA) regulatory and educational programs were summarized by FDA Public Affairs Specialist Herman Janiger, and current seafood issues in the news were addressed during an industry panel discussion involving the New York Seafood Council and the Seafood Retailers of New York. The workshop also featured Richard Lord, former information officer of Manhattan's famed Fulton Fish Market, who focused on how to help consumers select alternative seafood products. And chefs Steve Bello and Doug Whitcomb demonstrated how easy it can be to prepare convenient, healthful, and tasty seafood dishes.

For more seafood information, contact Ken Gall at (516) 632-8730.



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