

COASTLINES

New York Sea Grant Institute

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New York Researcher Studies Omega-3 Fatty Acids in Fish

Recent research concerning the relationship between dietary fats and health has prompted recommendations of major modifications in the American diet. Many studies have shown that the consumption of large amounts of fats, particularly the saturated fats, is linked to an increase in the risk of coronary heart disease, one of the leading causes of death in the United States.

Researchers are exploring healthful alternatives to high-fat diets. Seafood can be a wise choice for those individuals looking to reduce their consumption of saturated fats. However, researchers are also discovering that seafood may provide additional health benefits. Sea Grant Researchers and Extension Specialists in New York have been contributing actively to the national research effort exploring the health benefits of fish consumption.

Dr. John Kinsella of the Department of Food Science at Cornell University in Ithaca,

New York, has been conducting research into the effects of omega-3 fatty acids found in fish. New York Sea Grant funding has been responsible for some of the success he and his team of research assistants have had in assessing the impact of omega-3 polyunsaturated fatty acids on human disease, such as atherosclerosis, thrombosis, and cancer. With the support of New York Sea Grant, Kinsella has published a book on the effects of fish and fish oils entitled, *Seafood and Fish Oils in Human Health and Disease*, published by Marcel Dekker, Inc.

The major body of Kinsella's research has focused on the effect of omega-3 fatty acids on the cardiovascular system. According to Kinsella, the average American's diet consists of approximately 40 percent fat, a significant portion of which is saturated—a type of fat which hastens coronary artery disease, one of the leading causes of death in the United States.

Omega-3 fatty acids appear to decrease the risk of heart disease by affecting triglyceride levels and possibly cholesterol levels in the blood and by reducing the aggregation of blood platelets, which slows blood clotting. Kinsella has found that omega-3 fatty acids are more effective in diets that also have reduced fat levels.

Another area of concern to Kinsella is the correlation of saturated fat consumption and cancer. According to Belur Lokesh and Mark Black, two Kinsella coworkers, preliminary results show that omega-3 fatty acids may retard the growth of tumors, thus enhancing cancer treatment by keeping tumors dormant. Studies have indicated that there is a reduced risk of certain types of cancer in countries where the diet includes a large amount of fish.

Kinsella's research involving omega-3 fatty acids depends upon an adequate supply
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Walleye Restoration Efforts Show Progress

Walleye, a popular game fish, have been virtually absent in the embayments of New York's Lake Ontario since the late 1950s. However, recent attempts to restore the walleye population apparently have made progress. These efforts have resulted in the stocking of over 130,000 walleye fingerlings in Lake Ontario embayments since 1986.

Evidence of the success of the restoration efforts was produced this past summer. More than 30 catches of sub-legal (less than 15 inches) walleye were reported in Port Bay. Previous to the stocking efforts, no walleye had been caught in that area in recent memory. Similar catches of sub-legal walleye have been reported by members of the Niagara River Anglers Association.

Research conducted by Dr. Joseph Buttner of the State University College at Brockport, in cooperation with the New York Department of Environmental Conservation (DEC), Sea Grant, Cornell University's

Department of Agronomy, and two private angler groups, has contributed to the success of these restoration activities. Buttner has been studying the culture of walleye fingerlings in earthen ponds, with funding provided by New York Sea Grant.

According to Buttner, the walleye has been identified as a fish of national importance, requiring top research priority. His research has helped define and refine the science of growing walleye to fingerling size in earthen impoundments.

Results of Buttner's work have been shared with private angling groups through two workshops conducted by New York Sea Grant Extension specialists in 1986 and 1988. The information presented at these workshops has led to the stocking of an estimated 70,000 pond-raised walleye fingerlings this year. Walleye fry provided by DEC have been raised in earthen ponds by
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From the Director's Chair...

This is the first issue of *Coastlines* to hit the streets for many months; in it you will read much about the changes taking place in New York Sea Grant. It is true that the staff is all new, and that the Institute's main offices have been moved from Albany to a new location in Stony Brook.

However, with new people and surroundings come new approaches and new perspectives. Yet, there are many things, perhaps the most important things, that have not changed about New York Sea Grant.

First of all, our mission remains unchanged. Through activities in research, extension, and education, our mission is to promote the wise use and conservation of the coastal resources of the state and the nation.

We undertake this mission through quality campus-based research closely linked to extension and education programs. That linkage, which in the coastal environment is provided uniquely by Sea Grant, has been strengthened by the recent changes.

Secondly, the Institute's leadership has a long history of experience with New York Sea Grant. In 1977, I was appointed Sea Grant Professor of Shellfisheries in New York. For 10 years I conducted Sea Grant-supported research on Long Island and served as a member of the Institute's Program Advisory Committee.

Dr. Michael Voiland, leader of New York Sea Grant's Extension Program, spent many years as a Sea Grant Extension Specialist on the Great Lakes. He came to his new position in 1987 with as much experience



with New York Sea Grant and knowledge of the state's Great Lakes resources as anyone in the state.

The Institute's 15-member governing board, charged with considering the major policy decisions that shape New York Sea Grant, includes a number of people who have worked with Sea Grant for many years. So, in most cases our individual roles may have changed, but the continuity of leadership has not been lost.

The component of Sea Grant that receives the most attention from the Stony Brook office is the research program. We are now in the process of reviewing research proposals for 1989 funding. In response to

Marine Advisory Council to New York Sea Grant Extension Specialist Ken Gall and Nassau County Cooperative Extension Agent Maria Sant'Angelo will permit the development of informational bulletins on including omega-3 fatty acids in the diet.

Dr. Carole Bisogni and graduate student Carole Sperazza of the Division of Nutritional Science at Cornell University will collaborate with Gall, Sant'Angelo, and Gail Bromley, an Albany County Cooperative Extension Agent, in the development of this information. The publications will focus on a number of issues, including an overview of what is now known about omega-3 fatty acids and health. Other topics will include information on sources of omega-3 fatty acids and the relative amounts found in fish species, and food preparation techniques that maintain seafood's health benefits.

Gall and Sant'Angelo were awarded the grant in February of this year and hope to publish the bulletins by the end of the summer. The bulletins will be available to consumers throughout the Northeast. Watch for the publication announcement in *Coastlines* in the future. ■

a widely-distributed call for proposals, we received about 60 proposals requesting a total of \$3 million. Because we may have only about \$450,000 in uncommitted funds available in 1989, it is possible that no more than eight or nine of the proposals can be funded.

The scientific and technical quality of each proposal was evaluated carefully by at least three peer reviewers from out of state. Later, a panel of experts drawn from the coastal research community throughout the state helped us rank the proposals for funding. Input was also sought from appropriate state

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management agencies as well as from the Sea Grant extension staff.

This process allowed us to select those proposals that combine the highest quality science with societal relevance. Final decisions regarding the 1989 proposals will be reached in October 1988. One thing is certain, we are going to have some very exciting research projects; stay tuned to *Coastlines* for more details.

Research is fun — it is exciting to advance our understanding of natural systems. Although enhanced understanding for its own sake certainly has value, we expect more from a Sea Grant research project.

Our research should also make a difference in the way that we manage coastal resources and in the way we deal with the problems that confront us on our marine and Great Lakes coasts. Therefore, a key component of our program must be our communications effort. The research that we support cannot make a difference if no one knows about it.

One of the key functions of *Coastlines* is to communicate research activities and extension programs to the public. We will introduce you to our many activities through *Coastlines*, as well as through other New York Sea Grant publications.

If you would like more detail regarding any component of New York Sea Grant, it is our hope that you will contact us. We are glad to be back, and we are pleased to have you with us!

— Bob Malouf

Extension Notes...



First things first! On behalf of the entire extension education community, I bid you welcome—maybe welcome back is more appropriate—to *Coastlines*!

The directory of Sea Grant personnel found in this issue should bring you all up to speed on who and where our core group of extension specialists are and their principal areas of expertise. We've also introduced you to the names and activities of those university-based faculty who are

currently funded by New York Sea Grant. In future issues, we'll provide the names of those county extension agents who are providing a large share of the marine and Great Lakes extension activities in the Empire State.

Despite all the changes of recent years in New York Sea Grant, some very positive things remain the same. The Sea Grant Institute's extension program, administered by Cornell Cooperative Extension, is still recognized as one of the finest—if not, THE finest—Sea Grant Extension program in the nation, receiving high praise in its 1987 federal proposal review.

Coastal resource users, including commercial fish harvesters, charter sportfishing skippers, shoreline landowners, marina operators, seafood processors, consumers, and 4-H kids, have continued to tap our field extension personnel for information that results in a more informed decision, a wiser choice, and a more productive, enjoyable, useful, and healthy coastal resource.

Finally, a subtle, but no less important, difference is also worth mentioning. Since January 1987, the new leadership of Sea Grant in New York has worked hard to ensure that our research and extension components function cooperatively and closely. As extension leader, I also serve as the Institute's associate director and participate fully in all major Institute decision-making processes.

Further, as extension leader I am a member of the Institute's research review panel, along with the two extension program coordinators, and ensure that all proposals are reviewed by appropriate extension staff. It is hoped that the end results will be research and extension programs that are as relevant, useful, and on-target as can be!

Until next time ...

—Mike Voiland



Welcome Back!

Yes, we're back in publication, and no, you didn't disappear from our mailing list! For those of you unfamiliar with who WE are, the New York Sea Grant Institute is a consortium consisting of the State University of New York (SUNY) and Cornell University. The main offices of the Institute are located on the SUNY campus at Stony Brook. Cornell University in Ithaca is the home base of the New York Sea Grant Extension program.

New York Sea Grant presently is emerging from a period of dramatic change. In 1986 the Board of Governors of the Institute was conducting a nationwide search for a new Director. However, during the search period, the Board also proposed and approved a relocation of the Institute's main offices from Albany to a research institution. This decision led to the move to SUNY at Stony Brook, located on the north shore of Long Island.

The search for a Director resulted in the hiring of Robert Malouf, at that time a professor at the Marine Sciences Research

Center at Stony Brook. Dr. Malouf assumed the responsibilities of his new position in January of 1987.

The office staff at Albany decided not to make the move to Stony Brook, so the entire complement of personnel had to be replaced. It was then Dr. Malouf's task to replace the staff, and the arduous rebuilding of the Institute began. Later that Spring the Fiscal Officer (Ruth Tompkins) and Assistant Director (Cornelia Schlenk) were hired.

The search was then mounted for a new Communicator and in November, Kathleen Giffin Bartkus came on board. The year 1987 also saw a change in the leadership of the New York Sea Grant Extension Program when Dr. Michael P. Voiland was hired as Program Leader.

It is with this issue of *Coastlines* that the New York Sea Grant Institute will attempt to reaffirm its position as a proponent of the educated use of our most precious and bountiful resource, New York's coastal waters.

For those of you who were familiar with the newsletter in its previous life, there are some changes that may not be too obvious to the casual reader. Preparation and distribution of *Coastlines* now will be handled at the Institute's main office in Stony Brook.

Coverage will take a different course than the previous version of *Coastlines*. We will be exploring different research projects underway in New York and what their impact is and will be on the individual resident. We will show how some of those research results are incorporated in communities throughout the State through the work of our Extension Specialists.

For your convenience, we have included a directory of New York Sea Grant personnel in this issue. Please note the new additions as well as some changes in mailing addresses and telephone numbers.

If your name or address have changed, if you received multiple copies, or if you would like to have your name removed from our mailing list, please take the time to let us know so that we can keep our list current and our production costs down.

We regret the lapse in publishing *Coastlines*. We hope the new version of the newsletter is worth the wait! Any comments? Please drop us a line! ■

What's New In New York

The following publications are available upon request from New York Sea Grant at the address below. Single reprints are free within the United States (unless otherwise indicated), multiple copies and overseas delivery are available for \$1.00 each, check payable to New York Sea Grant.

Please send requests to:

Communicator
New York Sea Grant Institute
Dutchess Hall
SUNY at Stony Brook
Stony Brook, NY 11794-5001

Comparative physiology of young and old cohorts of bay scallop *Argopecten irradians irradians* (Lamarck): mortality, growth, and oxygen consumption. V. Monica Bricelj, Jennifer Epp, and Robert E. Malouf

Evidence of natural reproduction by stocked lake trout in Lake Ontario. J. Ellen Marsden, Charles C. Krueger, and Clifford P. Schneider

Gas-partitioning approach for laboratory and field studies of mirex fugacity in water. Chengqing Yin and John P. Hassett

If you see it—report it! New York Sea Grant Institute and New York State Department of Environmental Conservation

The impact of tourism on employment in New York's coastal areas. Nancy A. Connelly and Tommy L. Brown, \$1.00 per copy, photocopies only available

Interannual fluctuations in the density of sand lance, *Ammodytes americanus*, larvae in Long Island Sound, 1951-1983. Doreen M. Monteleone, William T. Peterson, and George C. Williams

Laboratory studies of predation by the ctenophore *Mnemiopsis leidyi* on the early stages in the life history of the bay anchovy, *Anchoa mitchilli*. Doreen M. Monteleone and Linda E. Duguay

Lake Ontario environmental quality: Are there future surprises? R. Warren Flint

Laminaria cultivation in the Far East and North America. B. H. Brinkhuis, H. G. Levine, C. G. Schlenk, and S. Tobin

Lipoxygenase in fish tissue: Some properties of the 12-lipoxygenase from trout gill. Rudolph J. Hsieh, J. Bruce German, and John E. Kinsella

Measuring the economic damages associated with terrestrial pollution of marine ecosystems. James R. Kahn

Modulation of prostaglandin synthesis in mouse peritoneal macrophages by enrichments of lipids with either eicosapentaenoic or docosahexaenoic acids *in vitro*. B. R. Lokesh and J.E. Kinsella

Overproduction and purification of the *luxR* gene product: Transcriptional activator of the *Vibrio fischeri* luminescence system. Heidi B. Kaplan and E. P. Greenberg

Potential use of organochlorine contaminants to validate a food web model. R. Warren Flint, William H. McDowell, and Greg Yogis

Relative inhibitory potencies of flavonoids on 12-lipoxygenase of fish gill. R.J. Hsieh, J.B. German, and J.E. Kinsella

Seasonal light and temperature interaction effects on development of *Laminaria saccharina* (Phaeophyta) gametophytes and juvenile sporophytes. Jin Ae Lee and Boudewijn H. Brinkhuis

Wave propagation between two breakwaters. Philip L.-F. Liu and Polly Boissevain

Wave transmission through submerged apertures. Philip L.-F. Liu and Jiankang Wu

Westhampton Beach: Options for the Future (Proceedings of a Workshop held March 30-31, 1988). Jay Tanski and Henry Bokuniewicz (eds.), \$2.00 per copy

What is fish quality? Can we incorporate consumer perceptions? Carole Bisogni, Glenn J. Ryan, and Joe M. Regenstein

The following publications are available from New York Sea Grant Extension offices. The name and address of the extension specialist to contact for ordering information are provided for your convenience. Please address all requests for Extension publications to the appropriate specialist.

Please contact Mark Malchoff (Sea Grant Extension Program, C&J Horticulture Lab, 39 Sound Avenue, Riverhead, NY 11901) for the following publications:
Nassau County Recreation and Climate Guide
Marketing Your Charter Boat Enterprise: Putting Relationships to Work
Preparing to Go Party and Charter Boat Fishing
Downrigger Fishing—More Fish for Your Fuel

Specialist Jay Tanski (Sea Grant Extension Program, Dutchess Hall, SUNY Stony Brook, Stony Brook, NY 11794-5001) can provide copies of the following:
Electrical Submetering in Marinas

Please contact Dave White or Chad Dawson (Sea Grant Extension Program, SUNY Oswego, Oswego, NY 13126) for these publications:

New York's Great Lakes Recreational Weather (Fact Sheet 206)
Recreational Development of Your Community Waterfront (videotape rental)
Care and Handling of Charterboat Fishing Customers (videotape rental).
Courtesy is Contagious
A Summary of the 1987 Bed and Breakfast Lodging Industry in New York State
Expenditures of Anglers Fishing in New York's Great Lakes Waters
Fishing License Sales in New York's Great Lakes Counties
New York State Boating Registration Trends
The Great Lakes Charterboat Fishing Industry (selected papers presented at GL Sea Grant Network Charterboat Fishing Workshop, Nov. 13-15, 1985)

The following publications can be obtained from Stan Piszczatowski (Sea Grant Extension Program, Community Programs Center, 300 Park Ave., Deer Park, NY 11729):
Electrical Submetering in Marinas
Equipment Protection through Oil Analysis

Ken Gall (Sea Grant Extension Program, Community Programs Center, 300 Park Avenue, Deer Park, NY 11729) will provide information on how to order the following publications upon request:
Handling Your Catch—A Guide for Saltwater Anglers
Seafood: The Healthy Catch
Buying Hard Clams

Ordering information for the publications listed below can be obtained from Charles O'Neill (Sea Grant Extension Program, 405 Administration Building, State University College, Brockport, NY 14420):
Vegetation Use in Coastal Ecosystems (information bulletin 198)
A Guide to Coastal Erosion Processes (information bulletin 199)
Structural Methods for Controlling Coastal Erosion (information bulletin 200)

Please contact Dave Greene (Sea Grant Extension Program, Farm and Home Center, 21 S. Grove St., East Aurora, NY 14052) for ordering information for these publications:
The Angle on Master Anglers
Coastal Educator's News (bi-monthly newsletter for marine educators in the Great Lakes region)
Aquatic Activities for Youth Cubs
New York's Lake Erie Trout and Salmon Fishery: The basics
Angling for Smallmouth Bass in Lake Erie

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Who's Who Directory of New York Sea Grant

The mailing address for the main office of the New York Sea Grant Institute is:

New York Sea Grant Institute
Dutchess Hall
SUNY Stony Brook
Stony Brook, NY 11794-5001

The telephone number for the office is 516-632-6905. The following people can be reached at that telephone number and address:

| | |
|--------------------|--------------------------------|
| Director | Robert Malouf, Ph.D. |
| Assistant Director | Cornelia Schlenk |
| Fiscal Officer | Ruth Tompkins |
| Communicator | Kathleen Griffin Bartkus |
| Assistant | |
| Communicator | Avery Klauber |
| Program Secretary | Lynn Zawacki |
| Secretaries | Diana Tehan, Sharon Donovan |

The following is a listing of New York Sea Grant Extension Specialists with their current specialities and contact points.

Associate Director/Program Leader/
Sportfishery Development/(Acting)
Marine District Program Coordinator
Michael P. Voiland, Ph.D.
New York Sea Grant Extension Program
12 Fernow Hall
Cornell University
Ithaca, NY 14853-3001
607-255-2832

Coastal Processes/Coastal Facilities
Jay Tanski
Long Island Sound Study
Melissa Beristain
Sea Grant Extension Program
Dutchess Hall
SUNY Stony Brook
Stony Brook, NY 11794-5001
516-632-8730

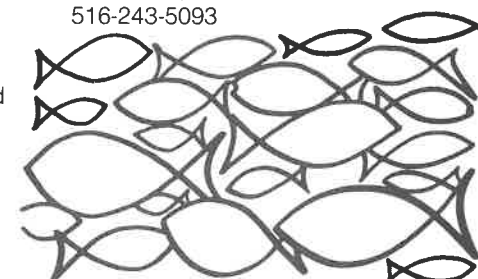
Coastal Resource Management/Coastal Processes and Erosion Control/Coastal Engineering
Charles O'Neill
Fisheries/Aquatic Ecology/Aquaculture
Dave MacNeill
Sea Grant Extension Program
State University College
Brockport, NY 14420
716-395-2638

Great Lakes Program Coordinator/
Recreation Facilities
Dave White
Recreation and Tourism Planning and Development
Chad Dawson, Ph.D.
52 Swetman Hall
SUNY Oswego
Oswego, NY 13126
315-341-3042

Lake Erie Issues/Youth/Recreational Safety
Dave Greene
Sea Grant Extension Program
Farm and Home Center
21 S. Grove St.,
East Aurora, NY 14052
716-652-5453

Marine Recreation Industries
Mark Malchoff
Sea Grant Extension Program
CU Horticulture Lab
39 Sound Avenue,
Riverhead, NY 11901
516-727-3910

Marine Energy
Stan Piszczatowski
Seafood Technology
Ken Gall
Sea Grant Extension Program
Community Programs Center
300 Park Ave.,
Deer Park, NY 11729
516-243-5093



Jack Sobel Awarded 1988 Marine Policy Fellowship

Jack Sobel, a graduate student at the State University of New York at Stony Brook, was awarded a 1988 Knauss Fellowship. The fellowship is a National Sea Grant College program that provides successful applicants with the opportunity to work in federal government offices in Washington, D.C.

Participating state Sea Grant institutions propose candidates for review, and the successful candidates are then awarded one-year fellowships. The program is designed to further the student's understanding of public policy, particularly in relation to the marine and Great Lakes environments.

While serving in Washington, Jack is completing his Masters Degree in Marine Environmental Sciences, specializing in biological oceanography. He is only months away from graduation from the Marine Sciences Research Center at Stony Brook. Jack has been enjoying the challenge of his work in Washington, finding it to be a positive experience.

Upon his arrival in Washington, Jack was assigned to the National Ocean Policy Study (NOPS), under the Committee on Commerce, Science, and Technology in the Senate. NOPS, which functions as a subcommittee, has jurisdiction within the Senate over most ocean-related issues.

Jack's assignments have included setting up legislation and oversight hearings, preparing background information and questions for those hearings, and tracking items of legislation. Some of the legislation that Jack has been involved in include the South Pacific Tuna Act and the reauthorizations of the Marine Mammal Protection Act, the Marine Sanctuaries Program, and the Striped Bass Act.

An increased understanding of the political process and its impact on the marine environment are some of the benefits Jack has credited to his work in Washington. He emphasizes that the program is a "tremendous opportunity which gives the Fellow important insight into the formation of public policy."

According to Jack, this insight is important whether the Knauss Fellow remains in public policy, as many do, or explores other career options. He has expressed surprise that more New York State students don't apply for the Fellowship and encourages others to pursue this opportunity.

After he completes the fellowship assignment, Jack plans to remain in policy-related work in Washington while he weighs his career options. The experience as a Knauss Fellow will shape Jack's future as he contemplates a possible return to graduate school to pursue a doctoral degree.

New York State graduate students now have the same opportunity available to them. Applications for the 1989 Knauss Fellowship were accepted until September 9, 1988, by the New York Sea Grant Institute. Applicants must be students in a Master's, Doctoral, or Professional program in a marine-related subject area. Please contact the Institute's main office at SUNY Stony Brook for further information. ■

New York Sea Grant Currently Funded Research

The following research projects are currently underway with funding by New York Sea Grant. The principal investigators and affiliations are listed for each project.

Aquaculture

Behavior and Behavioral Modifiers of Important Shellfish Predators: The Crabs *Neopanope sayi* and *Ovalipes ocellatus*—Peter Lawton and Glenn R. Lopez, Marine Sciences Research Center, State University of New York at Stony Brook

Creation of Genetic Clones for Increased Commercial Production of Bay Scallops, *Argopecten irradians*—Richard K. Koehn, Department of Ecology and Evolution, and V. Monica Bricelj, Marine Sciences Research Center, State University of New York at Stony Brook

Improved Diagnostic Methodology for Diseases of Salmonids—Paul R. Bowser, Department of Avian and Aquatic Animal Medicine, Cornell University

Uptake and Depuration of Red Tide Paralytic Shellfish Poisoning Toxins in East Coast Bivalve Molluscs—V. Monica Bricelj and Edward J. Carpenter, Marine Sciences Research Center, State University of New York at Stony Brook and Donald M. Anderson, Woods Hole Oceanographic Institution, Woods Hole, Massachusetts

Coastal Processes

Open Marsh Water Management on Great South Bay, Long Island, New York—Thomas S. Litwin, Laboratory of Ornithology, Cornell University

Diving Physiology

Optimization of Oxygen Pressure for Inert Gas Elimination in Divers—Claes E. G. Lundgren and William T. Norfleet, Department of Physiology, State University of New York at Buffalo

Fisheries

Comparison of the Reproductive Success of Hatchery Lake Trout Strains on Different Spawning Shoals in Lake Ontario—Charles C. Krueger, Department of Natural Resources; Bernie May, Section of Ecology and Systematics; and Charles F. Aquadro, Section of Genetics and Development, Cornell University

Development of a Behavioral Model of Lake Ontario Boat Angling—Tommy L. Brown, Daniel J. Decker, and Harlan B. Brumsted, Department of Natural Resources, Cornell University

The Relation Between Oceanic Spawning and Recruitment of Juvenile Bluefish to the U.S. Atlantic Coast—David O. Conover, Robert K. Cowen, and Robert M. Cerrato, Marine Sciences Research Center, State University of New York at Stony Brook

Risk Perception and Communication Regarding Chemically Contaminated Fish in Lake Ontario Fisheries—Barbara Knuth, Department of Natural Resources, Cornell University

Spawning, Early Life History and Larval Transport of Bluefish, *Pomatomus saltatrix*, in the New York Bight—Robert K. Cowen and David O. Conover, Marine Sciences Research Center, State University of New York at Stony Brook

International Projects

Mariculture and Physiology of Commercially Valuable Red Seaweeds from Baja California, Mexico—Boudewijn H. Brinkhuis, Marine Sciences Research Center, State University of New York at Stony Brook

Marine Biotechnology

Manipulation of Seaweed-Microbe Associations—Valrie A. Gerard, Marine Sciences Research Center, State University of New York at Stony Brook and Douglas S. Capone, Chesapeake Biological Laboratory, University of Maryland at Solomons

Methods for Improving the Efficiency of Supercritical Extraction for the Fractionation of Fatty Acids from Marine Oils—Syed S. H. Rizvi, Department of Food Science, Cornell University

Preparation and Elucidation of Beneficial Biological Effects of n-3 Polyunsaturated Fatty Acids from Marine Sources—John E. Kinsella, Department of Food Science, Cornell University and Bruce German

Department of Food Science, University of California at Davis

Regulation of *lux* Genes in *Vibrio fischeri*: Control of a High-level Gene Expression System in a Marine Bacterium—E. Peter Greenberg, Department of Microbiology, Cornell University

Structural and Synthetic Studies on Marine Natural Products—Jon Clardy, Department of Chemistry, Cornell University

Synthesis of Pharmacologically Active Saponins Based on Shark Repellents—Koji Nakanishi, Department of Chemistry, Columbia University

New in New York

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David MacNeill (Sea Grant Extension Program, 405 Administration Building, State University College, Brockport, NY 14420) can provide information on the following publications:

Lake Ontario—Another Lake Michigan? 1985-87 Sportfishery Harvest: Lakes Ontario and Michigan

The Ruffe: Another European Invader?

1988 Lake Ontario Forage Base Update

Update on Invading Zooplankton Species into the Great Lakes

1988 April-May Lake Ontario Fishing Boat Census Summary (from New York State Department of Environmental Conservation)

Ruffe Information Packet (from Great Lakes Fishery Commission)

Freshwater Aquaculture Information Packet

Krueger Receives Presidential Appointment

Cornell University and New York Sea Grant researcher Charles C. Krueger has been appointed as a U.S. commissioner of the Great Lakes Fishery Commission for a four-year term through February 18, 1992. The announcement of the appointment was made by President Ronald Reagan earlier this year.

The Great Lakes Fishery Commission is an international organization that was established in 1955. The commission is dedicated to promoting Great Lakes fishery resources and consists of four members each from the United States and Canada. The Great Lakes Fishery Commission has been responsible for research into the restoration of lake trout in the Great Lakes, in addition to involvement in other issues such as fishery improvement and sea lamprey control.

Krueger's involvement with New York Sea Grant dates to 1986. He is presently studying the reproductive success of various strains of lake trout. He is using mitochondrial DNA for identification of parental origin. The results of his research should prove useful for sportfish stocking programs in the Great Lakes. Stocking of lake trout in the Great Lakes has not had limited success through the years for a variety of reasons, some of which are the presence of sea lamprey, contaminants, and environmental degradation in the waters as well as poor reproductive rates for the lake trout.

It is due to this type of work and his long involvement in addressing Great Lakes issues that Krueger has been honored with the presidential appointment. ■

On the Horizon...

The following announcements are presented as a service by New York Sea Grant. If you know of a conference, meeting, or symposium that you would like to have announced in this column in the future, please send the registration information to: Communicator, New York Sea Grant Institute, Dutchess Hall, State University of New York at Stony Brook, Stony Brook, New York 11794-5001.

International Conference on Tidal Hydrodynamics, November 15-18, 1988, at the National Bureau of Standards in Gaithersburg, Maryland. CONTACT: Dr. Bruce Parker, Chairman Steering Committee, International Conference on Tidal Hydrodynamics, N/OMA14, Room 414, National Ocean Service, NOAA, 6001 Executive Blvd., Rockville, Maryland 20852, or call 301-443-8768 or 301-443-8060.

World Symposium on Fishing Gear and Fishing Gear Design, November 21-24, 1988, St. John's, Newfoundland. CONTACT: Dr. D. M. Campbell at 709-778-0200.

Council of Graduate Schools 28th Annual Meeting, November 29-December 2, 1988, Colorado Springs, Colorado. CONTACT:

Walleye

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two different angler groups, the Niagara River Anglers Association and the Port Bay Improvement Association. The fingerlings then were released into the Lower Niagara River and bays located in Wayne and Cayuga Counties.

The Niagara River Anglers Association has used the information from the workshops to improve restoration efforts undertaken in Niagara County. On the eastern shorelines of Lake Ontario in Wayne and Cayuga counties, the Port Bay Improvement Association has spearheaded the stocking of walleye in Port Bay, Blind Sodus Bay, and Little Sodus Bay (Fair Haven).

Sea Grant Extension Specialist Dave MacNeill emphasizes the importance of these restoration efforts to recreational anglers. According to MacNeill, "the walleye is highly prized because of its fine eating quality and trophy size." The restoration of the walleye to Lake Ontario waters is an attempt to recreate a nearshore fishery that is attractive and accessible to the average angler.

Ultimate success of these restoration activities will depend on survival of stocked fish to harvestable and spawning sizes over the next few years. MacNeill stresses the

Council of Graduate Schools, One Dupont Circle N.W., #430, Washington, D.C. 20036-7311.

Annual Meeting of the American Boat Builders and Repairers Association, November 30-December 4, 1988, St. Martin, French West Indies. CONTACT: Dwight Rockwell at 212-421-5220.

Fish Farming Expo II, December 9-13, 1988, New Orleans, Louisiana. CONTACT: Hugh Purnell, 214 Pembroke Drive, Jackson, Mississippi 39208, or call 601-992-0760.

International Hazardous Diving Symposium, December 13 through 16, 1988, Bethesda, Maryland. CONTACT: Maryland Sea Grant College Program, 1224 H.J. Patterson Hall, University of Maryland, College Park, Maryland 20742.

The Western Society of Naturalists 69th Annual Meeting, December 27-30, 1988, San Francisco, California. CONTACT: American Society of Zoologists, 104 Cirrus Circle, Thousand Oaks, California 91360.

importance of developing programs to monitor the success of the stocking program.

MacNeill currently is coordinating a mark and recapture program to provide data on the restoration efforts. At the present time, a cooperative diary program to monitor fish survival and catches in the Niagara River has been initiated by the Niagara River Anglers Association and the DEC. Anglers voluntarily record information on their catches. The information pertaining to walleye then is evaluated by the DEC.

The DEC also have been valuable to the restoration efforts by providing walleye fry and technical assistance to the projects. The DEC has been supportive of such efforts as it seeks full implementation of a statewide walleye rehabilitation plan, and funding and redevelopment of state walleye hatchery facilities.

Through the continuing cooperative efforts of research, extension, and public education in New York, the walleye may soon thrive again in Lake Ontario waters. According to Buttner, "procedures developed and demonstrated successful in New York may serve as a model for the upper Great Lakes and other inland waters throughout the United States and Canada." It is Buttner's belief that similar cooperative efforts could be applied throughout the Great Lakes to initiate restoration of the walleye in other areas where was historically abundant. ■

Aquaculture '89, February 12-16, 1989, Los Angeles, California. CONTACT: Aquaculture '89, c/o Crest International, 940 Emmett Avenue, Suite 14, Belmont, California 94002, or call 415-595-2704.

Sea Fare '89, February 15-17, 1989, Long Beach, California. CONTACT: Sandi McKenzie, Sea Fare Expositions, Inc., 3510 1st N.W., Seattle, Washington 98107, or call 206-547-6030.

Aquaculture Canada, February 22-24, 1989, St. John, New Brunswick, Canada. CONTACT: Robert Dunnington, Group Show Manager, Aquaculture Canada. Denex Group, Inc., 108 Mount Pleasant Avenue N., Saint John, New Brunswick, Canada E2K 3V1, or call 506-634-1825.

National Fisheries Institute Annual Convention, April 10-13, 1989, Las Vegas, Nevada. CONTACT: Pat McCoy, 2000 M St., N.W., Suite 580, Washington, D.C. 20036, or call 202-296-5172.

Coastal Zone 89, July 11-14, 1989, Charleston, South Carolina. CONTACT: Delores Clark, NOAA Office of Constituent Affairs, Rockville, Maryland 20852, or call 301-443-8031.

The First International Marine Biotechnology Conference, September 4-6, 1989, Tokyo, Japan. CONTACT: Prof. Isao Karube, The Japanese Society for Marine Biotechnology, Secretary General, c/o System Research Center Co., LTD, 505 Asahi Toranomon Bldg., 3-18-6 Toranomon, Minato-ku Tokyo 105, Japan, or call 03-434-1744 or 03-434-2789.

Oceans '89, September 18-21, 1989, Seattle, Washington. Call for papers and exhibits. Abstracts due January 15, 1989. CONTACT: Nancy Penrose, Oceans '89 Program Coordinator, Applied Physics Laboratory, 1013 NE 40th St., Seattle, Washington 98105, or call 206-543-3445.

1989 International Gas Research Conference, November 6-9, 1989, Tokyo, Japan. CONTACT: 1989 International Gas Research Institute, 8600 West Bryn Mawr Avenue, Chicago, Illinois 60631, or call 312-399-8300.

International King Crab Symposium, November 28-30, 1989, Anchorage, Alaska. CONTACT: Brenda Melteff, University of Alaska, Sea Grant College Program, 138 Irving II, Fairbanks, Alaska 99775-5040, or call 907-474-7086. ■

Extension Helps Students Study Marine Pollution Problems

Cornell Cooperative Extension's 4-H Development Program has made marine pollution curriculum materials available to schools throughout Suffolk County. According to Louis A. Iozzi of Rutgers University, the author of the materials, "For many years coastal waters have served as convenient depositories for the wastes of human activities. Such disposal practices used to pose few problems; human populations were small and their waste products were easily assimilated by the seas. Those days are long gone."

If Fish Could Talk is an educational program designed for use in high schools. It contains two units, "Sources of Pollution in New York and New Jersey" and "Effects of Pollution in New York and New Jersey." Each unit contains a 35-mm film strip, cassette recording, key ideas, discussion questions and activities, student readings, and teaching suggestions.

Some objectives of the program are: to provide students with a historical perspective of waste disposal and its problems, to acquaint students with the New York Bight, including its location and importance to the New York-New Jersey area; and to help students realize that coastal problems are

related to social, economic, and political issues, as well as scientific questions.

The Great Garbage Chase was designed for use in elementary schools. Author Iozzi notes that, "Pollution of all types has become so common that it often goes unnoticed—particularly by young children. Today's children were born into a world in which litter and pollution are pervasive; hence, they have to learn that pollution is not the norm."

This program, which features two cartoon characters trying to discover how garbage got on the beach, helps children discover how litter gets into the ocean; understand that people are responsible for the pollution found on beaches; and learn what can be done to protect beaches from pollution.

For more information on these programs and their use in your local school, contact Robert Kent at Cornell Cooperative Extension of Suffolk County, 246 Griffing Avenue, Riverhead, New York 11901, or call 516-727-7850.

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—Robert J. Kent



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