National Shellfisheries Association

QUARTERLY NEWSLETTER

Summer 1989

Lewes, Delaware

Call for Papers Announced for NSA's Annual Meeting

Carter Newell, Vice-President and Program Chairman for the NSA's 82nd annual meeting in Williamsburg, Virginia has announced a call for papers. This will be a joint meeting with SINA and will include a plenary session on water quality organized by Dorothy Leonard with participation of industry, government regulators and members of the scientific community. In addition, special sessions on the following topics are tentatively planned, with session chairs noted:

Reproductive Biology of Molluscs - Peter Heffernan and Arnold Eversole

Bivalve Settlement and Recruitment - William Arnold

General Biology and Physiology - Sandy Shumway

Vibrios - James Oliver

Toxic Dinoflagellates - Sherwood Hall

Shell Disease in Crustaceans - Carl Sinderman

Also in the planning stages are a session on anthropogenic effects on the growth and survival of molluscan shellfish; a workshop on disease, genetics, ecology and management aspects of introductions and transfers of exotic species; a session on the NOAA benthic surveillance and mussel watch program; and a session on West coast oyster culture.

If you have any ideas about additional sessions, please contact Carter Newell as soon as possible.

PRESIDENT'S MESSAGE

Efforts to organize the 1990 Annual Meeting of the NSA are well underway. We will be meeting in Williamsburg, Virginia during the first week of April, at the same (but now renovated) facility in which we held our 1981 meeting. This promises to be an important meeting for several reasons. Most notably, we are once again meeting jointly with our colleagues in industry from the Shellfish Institute of North America (SINA). In addition, the National Blue Crab Industry Association (NBCIA) which has been meeting jointly with SINA will hold meetings in Williamsburg as well. The NSA technical sessions and symposia are being coordinated closely with these organizations, along with several jointly-sponsored sessions and a plenary session. There will be separate registration packages; however, all sessions will be open to all registrants.

The theme of the plenary session, and also some of the technical sessions, focuses on the quality of shellfish growing waters, a topic which spans many important issues of interest to industry, management and research groups. Several NSA members have recently expressed their concerns over the broad spectrum of environmental and regulatory challenges faced by North American shellfisheries. To many, shellfisheries are approaching (or have arrived at) a critical crossroad; our 1990 joint meeting comes at an important point in the deliberations on coastal resource management. Those of us working to organize this meeting hope that many of your can participate and make this meeting a successful forum for our discipline.

Student participation has always been an important aspect of the Association's annual meetings, and to maintain and enhance that tradition, we have established the NSA Student Endowment Fund to defray the costs of students presenting research papers. If you are in a position to help us build this endowment fund, please read about the details of the program in this Newsletter and consider a contribution. If you are a student with a research paper to present, don't fail to apply for support. Even though this is the first year of the endowment, we hope to make some awards for student participation in the Williamsburg meeting.

Again, if you have suggestions or comments, please contact me or any of the officers and committee chairpersons listed in this Newsletter. We need your input.

Scott E. Siddall
President

In Memoriam

With deep regret we report the passing of longtime National Shellfisheries Association member Dr. Robert Winston Menzel Sr. who died at home in Tallahassee, Florida on Sunday June 11, 1989. He was 69 years old.

A native of Toano, Va., he had lived in Tallahassee for 35 years. He joined the faculty at Florida State University in the Department of Oceanography in 1954 after completing a Ph.D. in biology at Texas A&M University. He received a B.S. in Botany (1940) and an M.A. in Aquatic Biology (1943) from the College of William and Mary.

His research interests included biology and mariculture of shellfish, particularly oysters and clams and his research accomplishments include the clarification of the identities of the species of oysters world wide.

He was an active member of the National Shellfisheries Association. In addition to numerous committee assignments, he was a member of the Executive Committee from 1968 to 1974 serving as Member-at-Large (1968-71), Vice-President (1971-72) and President (1972-73). He was recipient of the National Shellfisheries Association's Honored Life Membership Award in 1981.

He is survived by two sons, Robert Menzel Jr. of Russell, Ky., and Gary P. Menzel of Pasadena, Texas; a daughter, Mary Linda Johnson of Bastrop, Texas; a brother, Emil Menzel of Toano, Va, and four grandchildren.

Memorial donations may be made to Menzel Scholarship Fund, in care of Patricia Kline, Department of Oceanography, Florida State University, Tallahassee, Florida 32306-3048.

Pacific Coast Section of NSA

The Pacific Coast Section of NSA reports that the agenda is set for their upcoming annual meeting to be held jointly with the Pacific Coast Oyster Growers' Association (PCOGA) from September 21-23, 1989 at the Sea-Tac Radisson (formerly Hyatt) Hotel in Seattle, Washington. In addition to regularly scheduled technical sessions, a special session on Pacific Rim Shellfish Studies is scheduled along with industry contributed papers on Shellfish Cultivation Practices on the U.S. West Coast. Oil and the Environment will be the subject of the Keynote Address presented by Stephen McAlpine, Lt. Governor of Alaska and former mayor of Valdez, Alaska. For more information about the meeting, registration, etc., contact Tim Smith, 1023 S. Adams St. #129, Olympia, WA 98501 or Chris Langdon, Hatfield Marine Science Center, Oregon State University, 2030 South Marine Science Drive, Newport, Oregon (503) 867-3011.

NOAA releases new study: The Quality of Shellfish Growing Waters on the East Coast of the United States

The Strategic Assessment Branch of NOAA has just released the second in a series of reports on the status of shellfishing waters in the United States. The first covered shellfishing waters in the Gulf of Mexico. The second, The Quality of Shellfish Growing Waters on the East Coast of the United States, examines the waters of 55 estuaries covering approximately 95 percent of the total estuarine area on the East Coast. Information was collected by site visits to 14 states, and through interviews with state and Federal officials, and industry.

Classification Status

The NOAA study results conclude that in 1985, 6.6 million acres of East Coast shellfish growing waters were approved for harvest (82 percent). Two-thirds of this approved area is found in the three largest East Coast estuaries: Chesapeake Bay (2.4 million acres approved shellfishing waters), Pamlico Sound (1.3 million acres), and Long Island Sound (0.7 million acres), estuaries in which almost 50 percent of classified acreage is not productive because of extreme salinities, or lack of suitable depth, substrate, or habitat for molluscan shellfish. Most waters, not meeting approved standards, were conditionally approved (waters are harvested only when they meet approved criteria) and less than one percent were restricted (must be subjected to a suitable purification process). The study also examined trends in classification from 1971 to 1985, concluding that most changes can be attributed to modifications in the administration of state shellfish programs, for example; addition of staff and increased monitoring efforts.

Shellfishing waters are classified for the commercial harvest of oysters, clams, and mussels based upon public health concerns. These molluscan shellfish are filter feeders,

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PRELIMINARY CALL FOR PAPERS

The 1990 Joint Annual Meeting of the NATIONAL SHELLFISHERIES ASSOCIATION and the SHELLFISH INSTITUTE OF NORTH AMERICA, April 1 - 5, 1990, Williamsburg, Virginia

INSTRUCTIONS FOR ABSTRACT FORMS

ABSTRACTS FOR PAPERS MUST REACH THE PROGRAM CHAIRMAN BY DECEMBER5, 1989

At its annual meeting, the National Shellfisheries Association will have papers for both oral and poster presentation. Any individual may submit as many abstracts as he or she desires; however no more than two abstracts from any author or coauthor will be accepted for presentation. Submission of the same subject for a paper for oral or poster presentation is permitted, however only one of the two will be accepted. For poster sessions, tackboards will be provided but no electrical outlets, projection equipment, or tables will be available.

Abstracts will be selected for inclusion in the program on the basis of significance in fields of shellfish research, informative nature and broad interest. Subject matter must not have been previously published. The first author will be notified in writing concerning the acceptance of the abstract for inclusion in the program.

A page charge of $12.50 must be submitted with each abstract. This payment will be returned only if the abstract is not accepted. An additional $10 charge will be assessed if an accepted abstract has to be retyped because of errors, etc.

PREPARING THE ABSTRACT

All accepted abstracts will be retyped and included in the Journal of Shellfish Research. Therefore, it is not necessary as in previous years to have abstracts in camera ready form. However, it is important that the abstracts comply with the instructions below.

Type the title (all capitals) and name(s) of the author(s) (all capitals for last names), indenting lines and punctuating as shown in the accompanying example. An asterisk (*) should be placed after the last name of the author presenting the paper. DOUBLE SPACE all typing on the abstract form. Do not leave more than one space between the title information and the body of the abstract. The body of the abstract should not be indented, although paragraphs other than the first should begin three (3) spaces in from the margin.

The entire abstract must be placed within the rectangular outline of the abstract form. THE SPACE IS DESIGNED TO ACCOMMODATE AN AVERAGE OF 250 WORDS TYPED DOUBLE-SPACED WITH A STANDARD ELITE TYPEFACE. When using abbreviations, spell out in full at first use, followed by the abbreviation in parentheses. Any symbols, such as Greek letters, not in your typing element may be drawn in by hand in black ink. Please proofread abstracts before submission.

The accompanying abstract form can be used for both oral and poster presentations; specify the preferred method of presentation in the space provided on the form. Check the appropriate box if the first author is a student or recent graduate and is therefore eligible for the Thurlow C. Nelson Award. In order to maintain and expand student participation in the Association, a student endowment fund has been established. For those students wishing to apply for travel support for presentation of a paper or poster, please fill out the form attached to the abstract.

Prepare one original (form) and send it with two (2) copies and your personal or institutional check for $12.50 US (checks must be drawn on a US bank and made out to NSA) to the Program Chairman at the address below. Additional abstract forms may be obtained from the Program Chairman. Abstracts must reach the program chairman NO LATER THAN 5 P.M., DECEMBER 5, 1989. If you desire an acknowledgement of the receipt of your abstract, please enclose a self-addressed, stamped envelope.

Send abstracts to:

Carter Newell
Great Eastern Mussel Farms, Inc.
P.O. Box 141
Tenants Harbor, Maine 04860

NATIONAL SHELLFISHERIES ASSOCIATION STUDENT ENDOWMENT FUND

adopted by the Executive Committee May, 1989

OBJECTIVE: to maintain and expand student participation in the Association

APPROACH: Establish an endowment fund by soliciting charitable contributions from members and non-members. Appoint or elect a committee to administer the endowment fund and recommend disbursements. Disburse funds as necessary and when available to meet the above objectives.

GUIDELINES:

1. Contributions to the Fund will be accepted from members and non-members throughout the year. Contributions will be solicited through the Association's Quarterly Newsletter, direct mailings, and personal contacts. The non-profit nature of the Association and potential tax benefits of donations should be emphasized. The Executive Committee can elect to transfer Association funds to this account as well.

Student Endowment Fund (continued)

2.Funds will be maintain in a separate, interest-bearing bank account under the management of the Secretary-Treasurer. The account will have the same signators as do other accounts of the Association. Costs of administering the fund will be borne by the general funds of the Association.

3.Unless otherwise stated by the donor, all funds will be held as principal in the endowment fund; this principal will be used only to generate interest. Only 80% of the interest can be disbursed. The remaining 20% of earned interest will be used to augment the principal of the fund and as a hedge against inflation.

4.Endowment funds can be used to defray costs incurred by students presenting papers at the Association's Annual Meeting. Examples of costs include travel, lodging, drafting and slide preparation, etc.

5.If a donor stipulates how their contribution is to be applied, all of that donation should be used for the stipulated purposes, however the endowment committee will be responsible for choosing the recipient of the award. If there are no student papers qualifying for the stipulated support, the funds would be held over to the next year or their use respecified by the donor.

6.The NSA abstract form will be accompanied by instructions for filing an application for support from the fund. The application should consist of (a) the abstract itself, (b) a single page form to be filled out by the student indicating the details of costs for which support is sought, relevant academic accomplishments such as publications, thesis title, etc., and signatures of the student and an advisor who can confirm the applicant's status as a bona fide student.

7.At each annual meeting, the Executive Committee will appoint an endowment subcommittee to examine all student abstracts and applications submitted for the next annual meeting. The endowment subcommittee will consult with the Secretary-Treasurer on availability of funds, then make recommendations to the Executive Committee for the awards. The endowment subcommittee will submit brief minutes of meetings and a summary of applications received and actions taken. The Secretary-Treasurer's annual report should include a separate section on the endowment fund.

8.The Secretary-Treasurer will disburse award checks directly to successful applicants as soon as possible prior to the meeting. If a recipient cannot use the funds as intended, the check or funds must be returned immediately.

STUDENT ENDOWMENT FUND APPLICATION

Fill out a copy of the application blank below or provide the information requested on a separate sheet of paper. Mail your application plus a copy of your abstract to NSA Program Chair Carter Newell, Great Eastern Mussel Farms, Inc., P.O. Box 141, Tenants Harbor, Maine 04860

Student Name:
Address:
Institution:
Telephone number:

Costs for which support is sought (travel, lodging, drafting and slide preparation, etc.):

Title of enclosed abstract:

Relevant academic accomplishments (publications, thesis title, etc.):

Student signature:

Advisor's signature:

Corrections

The following items on the newsletter's backpage listing of Officers, Committee Chairs and Staff of the National Shellfisheries Association require correction

Mr. Carter Newell, **Vice-President & Chair, Program Committee**
Great Eastern Mussel Company
Tenants Harbor, ME 04860
(203) 372-6317

change area code to:

(207) 372-6317

Dr. George Abbe, **Chair, Audit-Budget-Finance Committee**
Benedict Marine Laboratory
Benedict, MD 20612
(301) 274-3134

change address to:

Mr. George Abbe, **Chair, Audit-Budget-Finance Committee**
Academy of Natural Sciences
Benedict Estuarine Research Laboratory
Benedict, MD 20612

Mr. Michael Castagna, **Chair, Publications Committee**
Virginia Institute of Marine Science
College of William and Mary
Wachapreague, VA 23480
(804) 787-3280

change phone number to:

(804) 787-5816

Employment Opportunity

Graduate Research Assistant - leading to a M.S. degree in Wildlife Ecology with emphasis in Fisheries Management. Program: Research in crayfish aquaculture. Qualifications:B.S. degree in fisheries, biological sciences or related field. 3.00 QPA and a combined GRE score of 1000 for regular admission. Beginning Date: August 1, 1989. Stipend:$7,800/year (tuition waived). Write to the Office of Admissions, Mississippi State University, Mississippi State, MS 39762 for an application form for admission to the Graduate School.

Send application, transcripts and 3 letters of recommendation to: Dr. Robert D. Brown, Department of Wildlife and Fisheries, P.O. Drawer LW, Mississippi State, MS 39762. Refer inquiries to Dr. Louis R. D'Abramo (601) 325-3507.

NOAA Study (continued from page 2)

capable of pumping large volumes of water through their systems and accumulating particles or pollutants present in water. Bacterial or viral pathogens that accumulate in shellfish tissue and digestive systems may be passed to humans who consume partially cooked or raw shellfish. To protect public health, harvest for human consumption is not allowed in waters that are near potential pollution sources or that contain high levels of coliform bacteria or fecal coliform bacteria, the indicator of choice in the National Shellfish Sanitation Program (NSSP).

Fecal Coliform Standard

One of the issues raised by the NOAA report is the validity of the fecal coliform standard in predicting the potential for human disease. The total and fecal coliform standards are used routinely to ascertain the possible presence of enteric pathogens, both bacterial and viral. However, the report suggests that these standards may not be reliable as indicators of viral pathogens because enteric viruses are more resistant than coliforms to temperature and chlorination, and may accumulate and depurate at different rates. The report also raises the question of the public health significance of fecal contamination of animal origin. Enteric viruses, the major disease-causing agent when shellfish are harvested from sewage contaminated waters, are human specific and are not believed to be passed from animals to humans. NOAA's report identifies vast tracts of shellfish beds which are closed to shellfish harvest although human sources are virtually nonexistent: 36 percent of harvest-limited waters in the Southeast in 1985; 11 percent in the Gulf; 8 percent in the Mid-Atlantic; and less than one percent in the Northeast. These areas are affected only by wildlife or agricultural runoff. Additional shellfish waters are affected predominantly by urban runoff, containing mainly animal wastes.

The NOAA report describes efforts underway by scientists and regulators to establish the relationships between pollution sources, indicators, and shellfish-borne diseases. FDA, in cooperation with the Texas Department of Health, is measuring pathogens in growing areas in Texas affected by wildlife. A NOAA/EPA study uses epidemiological studies to examine relationships between indicators and disease at sites affected by potential point sources (STPs) of human pathogens.

In addition, the National Collaborative Shellfish Pollution Indicator Study, a proposed four-year study to evaluate the relationships between indicators and incidence of shellfish-borne disease, will include field studies to evaluate proposed alternate indicators of fecal pollution and health risks associated with consumption of shellfish from sites affected by human/animal and only animal sources. Validation of specific indicators in the environment and verification of the public health risk through epidemiological studies will provide a scientific basis to develop meaningful numerical standards on which to base classification of shellfish growing waters.

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Meetings, Courses, Etc.

The Tenth International Malacological Congress will be held from August 27-September 2, 1989 in Tubigen, Federal Republic of Germany. For additional information, contact: Dr. Claus Meier-Brook, President, Unitas Malacologica, Tropenmed. Inst. d. Univ., Wilhelmstr. 31, D-47000 Tubigen, Federal Republic of Germany.

The Pacific Coast Oyster Growers'Association (PCOGA) and the National Shellfisheries Association (NSA) - Pacific Coast Section will hold their annual meeting September 21-23, 1989 at the Hyatt Hotel, Seattle, Washington. Contact: Chris Langdon, Hatfield Marine Science Center, Oregon State University, 2030 South Marine Science Drive, Newport, Oregon (503) 867-3011.

Aquaculture Europe '89 - International Aquaculture Conference and trade exibition wil be held in Bordeaux, France October 2-4, 1989. For more information, contact: The European Aquaculture Society (EAS), Prinses Elisibethlaan 69, B-8401 Bredene Belgium

An **International Conference on Shellfish Depuration** - will be held from November 5-8, 1989 at the Grosvenor (Walt Disney Village) Resort, Orlando, FL USA. Contact: Dr. Steven Otwell, Food Science Bldg., University of Florida, Gainesville, FL 32611.

The First International Symposium on Abalone Biology, Fisheries and Culture - will be held from November 21-25, 1989 in La Paz, Mexico. Contact: S A Shepherd, Department of Fisheries, l35 Pirie Street, Adelaide, South Australia 5000.

The University of Alaska Sea Grant College Program will host an **International Symposium on King Crab** - to be held in Anchorage, Alaska, November 28-30, 1989. Contact: Brenda Melteff, Symposium Coordinator, University of Alaska Sea Grant College Program, 138 Irving II, Fairbanks, AK 99775-5040.

Fish Farming Expo III - will be held at the New Orleans Marriott and The Rivergate Exhibition Center, December 8 - 12, 1989, New Orleans, Louisiana. Contact: Carroll Trosclair, Aquaculture Productions, Inc., P.O. Box 5038, Brandon, MS 39047-5038 (504) 482-9500.

The Eighth Symposium of Astacology - is scheduled for mid-April 1990 in Baton Rouge, Louisiana. The Symposium will be hosted by the Louisiana State University Agricultural Center. For additional information, contact: L.W. de la Bretonne, Louisiana Cooperative Extension Service, Knapp Hall, Louisiana State University, Baton Rouge, LA 70803 (504) 388-4141, or Robert Romaire, School of Forestry, Wildlife and Fisheries, Louisiana State University, Baton Rouge, LA 70803 (504) 388-4208.

The 56th annual meeting of the American Malacological Union (AMU) - will be held from 3-7 June 1990 at the Marine Biological Laboratory (MBL), Woods Hole, Massachusetts. Contact: Dr. Alan Kuzirian, MBL, Woods Hole, MA 02543 (508) 548-3705, FAX (508) 540-6902.

An **International Workshop on Lobster Ecology and Fisheries** - will be held June 12-16, 1990 at the International Conference Center, Havana, Cuba. Contact: Mrs. Georgine Luis, Conference Organizer, International Conference Center, Apartado l6046, Havana, Cuba. Telex: 511609 Fax: 22-8382.

Shellfish Life Histories and Shellfishery Models - Description and Modeling of Life Cycles for Survey and Management of Invertebrate Stocks will be held on the Campus of the "Universite de Moncton" in Moncton, New Brunswick, Canada, June 25-29, 1990. Contact: Dr. G. Y. Conan, Department of Fisheries and Oceans, Gulf Fisheries Centre, P.O. Box 5030, 343 Archibald Street, Moncton, NB, CANADA E1C9B6, FAX Number: (506) 857-7732, Telex Number: 014-2607, Phone Number: (506) 857-6208.

An **International Crustacean Conference** - is scheduled for Brisbane, Australia, 2-7 July 1990. Tentative subject areas are: aquaculture and fisheries; biogeography, paleontology and evolution; economics; ecophysiology and behavior; fauna of special habitats; feeding and physiology; parasites and commensals; recruitment; reproduction, embryology, and larval development; taxonomy, systematic and phlogeny; and ultrastructure. Contact: Crustacean Conference Secretariat, UniQuest Limited; University of Queensland; St. Lucia, Queensland, 4067 Australia.

Contributions to the NSA Quarterly Newsletter

The purpose of the NSA Quarterly Newsletter is to develop communication between members of the NSA and to serve as a forum for the distribution of information of interest to the membership. The newsletter is published four times a year (spring, summer, fall and winter) and prints items relating to NSA business matters, the Journal of Shellfish Research, recent publications, future meetings, job opportunities, activities of other professional societies and miscellaneous items of interest. The newsletter is produced on an IBM PC using WordPerfect 4.2 (5.0 accepted) and Ventura Publisher software. Whenever possible, your contribution (text) should be accompanied by a 5 1/4 inch diskette as either a WordPerfect or DOS text file. Camera ready text should be typeset or laser printed with 7 1/2 inch margins to insure compatable type size when reduced. All members are encouraged to submit materials by the appropriate deadline to:

John W. Ewart, Editor
NSA Quarterly Newsletter
College of Marine Studies
University of Delaware
Lewes, DE 19958
(302) 645-4060
FAX: 645-4028

The **deadline** for submitting material for the next (fall) issue of the Newsletter is **September 15, 1989.**

NOAA Study (continued from page 5)

The East Coast Shellfish Industry

The NOAA report also addresses changes in primary harvest centers. Over the past 15 years, the East Coast shellfish industry experienced a severe decline in shellfish available for harvest, with a related reduction in landings. This loss is a result of overharvesting, shellfish mortality from shellfish diseases and predation, and increased closures of harvesting areas due to pollution. Although the industry is inclined to blame harvesting losses on increased closures, reduced fecundity, increased mortality, and overharvesting are more influential in the decline. In the oyster grounds of the Mid-Atlantic, including Delaware and Chesapeake Bays, the diseases MSX and derma have devastated the resource. Harvest of oysters has moved mainly to the Gulf Coast, particularly Louisiana. A decline in freshwater inflow is affecting the Gulf production, forcing the industry to increase culture and relay activities. In Maine, and more recently North and South Carolina, closures due to paralytic or neurotoxic shellfish poisoning caused additional closures beyond those experienced due to pollution. Harvest for clams has shifted from Suffolk County in New York, which experienced a 76 percent decline between 1976 and 1985, to the Indian River in Florida, due partially to new Florida programs that allow for relay and depuration.

For more information on the quality of shellfish growing waters read NOAA's latest report: The Quality of Shellfish Growing Waters on the East Coast of the United States or its predecessor, The Quality of Shellfish Growing Waters in the Gulf of Mexico. The west coast report will be released in October 1989.

Contact: Dorothy L. Leonard, NOAA/NOS, Ocean Assessments Division, 11400 Rockville Pike, Rockville, MD 20852, (301) 443-8842.

Publications of Interest

DISEASE PROCESSES IN MARINE BIVALVE MOLLUSKS, W.S. Fisher, ed., 1989, AFS Special Publication 18. Major parasitic and pathologic conditions in commercially important bivalves in both North America and Europe. Available from American Fisheries Society, 5410 Grosvenor Lane, Suite 110, Bethesda, MD USA 20814.

DESIGN AND OPERATING GUIDE FOR AQUACULTURE SEAWATER SYSTEMS, J.E. Huguenin & J. Colt, 1989. Available from Elsevier Science Publishing Co., Inc. P.O. Box 882, Madison Square Station, New York, NY USA 10159 for US $76.25.

ALGAL CULTURE AND USES: MICROALGAE, 1979-1988, Quick Bibliography Series, National Agriculture Library. Listing of 86 citations from AGRICOLA database, series #NAL-BIBL. QB 89-37. To obtain a copy send the title, series number and a self-addressed gummed label to U.S. Dept. Agriculture, National Agricultural Library, Public Services Division, Room 111, Beltsville, MD USA 20705.

NEW AND INNOVATIVE ADVANCES IN BIOLOGY/ENGINEERING WITH POTENTIAL FOR USE IN AQUACULTURE, Proceedings of the 14th US-Japan Meeting on Aquaculture, 1985. A.K. Sparks, ed., NOAA Technical Report NMFS 70, 1988. Available from USDC, NTIS, 5285 Port Royal Road, Springfield, VA USA 22161.

ENVIRONMENTAL QUALITY AND AQUACULTURE SYSTEMS, Proceedings of the 13th US-Japan Meeting on Aquaculture, Mie, Japan, 1984. C.J. Sindermann, ed. NOAA Technical Report NMFS 69, 1988. Available from USDC (address above).

HOW TO JOIN

– Fill out and mail a copy of the application blank below. The 1989 dues are ONLY $30(US) per year ($20 for students) and that includes the *Journal* and the Newsletter!

NATIONAL SHELLFISHERIES ASSOCIATION – APPLICATION FOR MEMBERSHIP
(NEW MEMBERS ONLY)

Name:_____ For the calendar year:____ Date:_____

Mailing address:_____

_____

_____

Institution affiliation, if any:_____

Shellfishery interests:_____

Regular or student membership:_____

Student members only – advisor's signature REQUIRED:_____

Make cheques (MUST be drawn on a US bank) or international postal money orders payable to the National Shellfisheries Association and send to Tom Soniat, Dept. of Biological Sciences, Univ. of New Orleans–Lakefront, New Orleans, LA 70148, USA.

USE OF DISPERSION MODELS FOR PREDICTION OF BIVALVE LARVAL RECRUITMENT

SIDDALL,* Scott E., MALOUF, Robert E., Marine Sciences Research Center, State University of New York, Stony Brook, NY 11794; VIEIRA, Mario E., Chesapeake Bay Institute, Johns Hopkins University, Baltimore, MD 21218.

In support of efforts to manage Long Island's economically important fisheries for the hard clam (Mercenaria mercenaria) and the bay scallop (Argopecten irradians), computer models calibrated against hydrographic data have been developed to predict distribution of larvae in the Great South Bay and the Peconic Bays Estuary. The goal of the research in Great South Bay was to evaluate the potential contributions to recruitment from populations of hard clams in uncertified waters and in man-made "spawner sanctuaries." This quantitative evaluation required the simulation of advective and diffusive dispersal of particles whose number was reduced over time to simulate larval survival. Results of the model forecast locations of maximum recruitment from chosen sanctuary sites. Town shellfish management programs have created spawner sanctuaries at sites predicted to result in maximum recruitment in areas favorable for growth and survival.

The goal of the modeling for the Peconic Bays Estuary was to predict sites for spawner sanctuaries of bay scallops which will be created to help rebuild scallop populations following an apparent failure of natural recruitment caused by an extraordinary phytoplankton bloom in 1985. This more qualitative evaluation of recruitment required forecasting the dispersal of larvae from proposed spawner sanctuaries and hindcasting the locations of spawning stocks whose larvae recruit to areas favorable for growth and survival. The utility of this modeling approach in shellfish management is discussed in view of the physical and biological assumptions inherent in the models.

Abbreviated title (seven words or less):	Dispersion models of bivalve recruitment		
First author's mailing address if different from above:	Same		
First author's telephone number:	(516) 632-8668		
Preferred method of presentation:	X Oral	_ Poster	_ Either
First author is a student or recent graduate? (eligible for Nelson Award)		X No	_ Yes

Abbreviated title (seven words or less):			
First author's mailing address if different from above:			
First author's telephone number:			
Preferred method of presentation:	_ Oral	_ Poster	_ Either
First author is a student or recent graduate? (eligible for Nelson Award)		_ No	_ Yes

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Officers, Committee Chairs and Staff of the National Shellfisheries Association