

National Shellfisheries Association

QUARTERLY NEWSLETTER



FALL 1996

SOUTHAMPTON, NEW YORK

NSA Program 1997

As the end of the year is rapidly drawing to a close, people's thoughts should be turning towards registering for the NSA annual meeting in Fort Walton Beach, Florida from Sunday April 20 through Thursday April 24, 1997 at the Holiday Inn. Find enclosed the registration form and details for travel arrangements and hotel reservations in this issue.

This newsletter will be arriving just after the November 22, 1996 deadline for submitting abstracts. As there was only one prior call for papers, there still may be an opportunity for those short of memory to submit an abstract! There will be no guarantees that an abstract will be accepted, but please contact me by e-mail, fax, or phone and plead your case!

As abstracts are still arriving (at time of writing this article), the program schedule has yet to be finalized. An updated list of special sessions is printed below as well as a tentative schedule of some of the events for the annual meeting.

Special sessions and their organizers are:

- Particle Processing in Bivalves; Capture, Transport, Selection (Peter Beninger)
- Toxic Effects and Shellfish (Fu-Lin Chu, Esther Peters, & Aswani Voley)
- Advances in Shellfish Aquaculture Techniques in the Southeast and Gulf of Mexico (Joth Davis)
- Reproductive Biology and Physiology of Freshwater Bivalves (Catherine Gatenby)
- Impacts of Aquaculture on Native Invertebrate Fisheries and Habitats (Fred Kern)
- Utilization of Population Genetics and Systematics Research in Freshwater Mussel Management (Tim King and Rita Villella)
- Pollution Abatement for Shellfish Restoration (Dot Leonard)
- Scallops: Problems and Solutions (Dan Marelli)
- Crustacean Health (Gretchen Messick, & Carl Sindermann)
- Crabs (Harriet Perry)
- Oyster Disease Research Program (Bill Rickards)
- Crayfish (David Rouse)
- Gulf of Mexico Oyster Culture (Tom Soniat)
- Current Issues and Solutions for Shellfish Sanitation Programs (Mark Tamplin)

Continued on page 4

President's Message

The program for the exciting 1997 NSA meeting is nearly set, but you still may have a last chance to submit an abstract for an oral or poster presentation if you hurry! Dan Kreeger also reports that the deadline for NSA Student Endowments and Awards has been extended to December 15th. Submission guidelines and forms for both of these items can be found in the previous newsletter.

In this issue of the newsletter you will find further information on the program for the 89th annual NSA meeting in Fort Walton Beach, Florida and on the workshop, "Spatial Data and Remote Sensing in Invertebrate Fisheries: Habitat Research and Management" which is scheduled just prior to the NSA meeting. Please find the enclosed registration forms, as well as information on hotel accommodations and travel arrangements. Sign up early and take advantage of the best rates. Bring your family and enjoy the glorious Gulf beaches!

One last plug: when you compile your list of names for your holiday shopping this year, add one more entry - NSA students. When you come across that special item that would delight the shellfish biologist in your life, set aside an extra one for the Auction which will be held at the NSA Annual meeting. Books (old and new), articles of clothing, the latest in shellfish art - they all go like hotcakes at the auction. All proceeds go to the Student Endowment Fund and further the opportunities to which our NSA student members can avail themselves.

Steve Tettelbach

In this issue:

- ***NSA Annual Meeting registration form***
- ***Invitation to Remote Sensing Workshop***
- ***Report from ISSC conference***

- and much more

Industry Update

News from the Interstate Shellfish Sanitation Conference

The Interstate Shellfish Sanitation Conference (ISSC), formed in 1982, fosters and promotes shellfish sanitation, restoration and special studies through cooperation of state and federal agencies, the shellfish industry and the research community. The ISSC has evolved as an effective mechanism to help assure safe and wholesome shellfish in the marketplace. Several foreign nations are active participants in the conference as well.

This year's annual meeting of the ISSC was held in Colorado Springs, Colorado from August 17-23, 1996.

Over 80 issues were submitted for deliberation by the conference delegates. Several significant recommendations having impact on the shellfish industry and state regulatory agencies were adopted. The following list highlights some of the actions taken by the voting delegates at the 1996 Annual Meeting:

- The new federal seafood HACCP regulations were adopted by reference into the National Shellfish Sanitation Program (NSSP) as a requirement for shellfish dealer certification. These added regulations become effective on December 18, 1997.
- Provisions were adopted requiring all shellfish harvesting boats to be equipped with an approved marine sanitation device, portable toilet or other acceptable means of disposing of body wastes.
- Procedure for closing shellfish growing areas following reported illness outbreaks were modified to improve effectiveness.
- The conference acknowledged the potential of emerging technologies and procedures for product safety enhancement as another means of reducing illnesses particularly for high-risk consumers with underlying health problems. A committee will be established to further investigate the integration of food safety enhancing processes into the NSSP.
- The conference adopted a performance based inspection frequency for shellfish firms with established exemplary compliance histories.
- The Research Guidance Committee made recommendations to the ISSC Executive Board regarding *Vibrio vulnificus* research priorities and the establishment of a competitive RFP process for selection of research topics.
- The U.S. Food and Drug Administration has requested input from the conference regarding the establishment of equivalency standards for foreign countries wishing to import shellfish into the United States.
- The conference voted to begin meeting biannually following the 1999 meeting.

Anyone interested in obtaining more information about the Interstate Shellfish Sanitation Conference should contact:

ISSC
115 Atrium Way, Suite 117
Columbia, SC 29223
(803) 788-7559
Fax: (803) 788-7576

John H. Volk, Director
Bureau of Aquaculture
Connecticut Department of Aquaculture

Recruits Corner

With the 89th annual National Shellfisheries Association meeting in Fort Walton Beach rapidly approaching, the time to register and to prepare your abstracts is here. Abstracts were due on November 22nd, but Student Awards Committee Chair Dan Kreeger has agreed to extend the deadline for student submissions and endowments and awards applications until December 15th. If you're planning on presenting your work at the meeting, don't forget to fill out the student award application! You'll be eligible not only for the Thurlow C. Nelson and NSA student poster presentation awards, but for the student travel awards, grants that may defray travel, registration, and/or hotel costs. Travel awards are competitive, with recipients determined using a complicated equation that combines, among other factors, financial need and abstract quality; nonetheless, they are an excellent way for the NSA to encourage student involvement in the meetings, and we should take advantage of them. Further details and forms were published in the last newsletter. Contact newsletter editor Maureen Krause if you've lost your copy and/or need another one.

If you plan to fly to the Fort Walton Beach area, make your arrangements early. Florida is a popular springtime travel destination, and seats on flights from northern cities are filling up rapidly. Bill Fisher referred to Flights to Sights, Inc. travel agency offering 5 to 40% discounted flights to NSA members (see details in this newsletter); try also A Ticket 2 Fly (1-800-333-7999), a "national no fee ticket outlet" that will find the cheapest airfare possible, even if it involves using more than one airline.

As always, the NSA recruits appreciate any suggestions or ideas you may have concerning the annual meeting, the web site jobs database, or anything else of interest to student members. Contact Jeff Springer (jjspring@unity.ncsu.edu), Deb Boswell Lane (lane@chuma.cas.usf.edu), Kerri Bentkowski (kmb7375@sae.ssu.umd.edu), James Anderson (anderj1@mail.auburn.edu) or the address on the back of the newsletter, or me (rcarnegi@apollo.umenfa.maine.edu).

The "Student Information Packet for New Recruits" is just about ready. Keep an eye open for it!

Ryan Carnegie

AUCTION

Make a New Year's resolution to contribute to the next

ANNUAL AUDACIOUS ACTION-PACKED AUCTION

to benefit the STUDENT ENDOWMENT FUND.

Donations of just about any new or used shellfish-related items will be accepted. These include, but are not limited to: books and other publications (historically important reprints), home brews and vintages, jewelry, artwork, and, of course, t-shirts and other articles of clothing. Send donations to Sandy Shumway at the address listed on the back page of this newsletter.



News from our past

In 1949, Victor Loosanoff was President of the NSA and David H. Wallace was Treasurer. At that time, The Oyster Growers & Dealers Association of North America, Inc., the Oyster Institute of North America, and the National Shellfisheries Association held annual joint conventions. The 1949 meeting was held in Old Point Comfort, Virginia, and a few of the featured presentations were:

"What Can Science Offer the Oyster Grower" T.C. Nelson, "Growth Studies on Quahaugs" H. H. Haskin, and "Observations on the Activities of Some Mollusk-Boring Snails" M. R. Carriker.

The program also contained "Features of Special Interest to the Ladies", which included an invitation to join the men for a barbecue one evening, as well as an afternoon tea.

Editor's note: Special thanks to Michael Oesterling for these contributions. If you have any NSA memorabilia that you'd like to share, please contact Maureen Krause.

Second Call

Nominations for NSA Officers

NSA members who wish to nominate candidates for the 1997 slate of officers are encouraged to contact Bill Fisher as soon as possible at the address listed on the back page of this newsletter.

Third International Symposium on Aquatic Animal Health

**August 30 - September 3, 1998,
Baltimore, Maryland, USA.**

The symposium will be the first major international meeting to focus comprehensive presentation and discussion on the health of a diversity of aquatic animals including shellfish, fish, and marine mammals. The symposium will be sponsored by the American Fisheries Society - Fish Health Section, Asian Fisheries Society, European Association of Fish Pathologists, International Association for Aquatic Animal Medicine, Japanese Society of Fish Pathology, and the **National Shellfisheries Association**. The meeting is supported by The Johns Hopkins University and the University of Maryland at Baltimore. For further information please contact: Dr. Sarah L. Poynton, Division of Comparative Medicine, Johns Hopkins University School of Medicine, Ross Research Building 4th Floor, 720 Rutland Avenue, Baltimore, MD 21205, USA.

Phone: 410-955-3273

FAX: 410-550-5068

Email: spoynton@welchlink.welch.jhu.edu

Manual on Harmful Algae Available

Editors G. Hallegraeff, D. Anderson, and A. Cembella have brought together contributions from 42 researchers to produce a comprehensive "Manual on Harmful Marine Microalgae". The volume is No. 33 of the IOC Manual and Guides series, and it features 500 pages of information about the culture, chemistry, detection, taxonomy, and monitoring of harmful algae.

The manual is available free of charge from the IOC Science and Communication Centre on Harmful Algae, University of Copenhagen, Botanical Institute, Øster Farimagsgade 2D, DK-1353 Copenhagen K, Denmark; tel: (45-33) 134446; fax: (45-33) 134447; e-mail: hab@bot.ku.dk. A fee of \$30 to cover postage and handling should be issued to Mr. H. Enevoldsen, IOC, and accompany all orders. Those persons representing marine science libraries or scientists from developing countries can apply for delivery free of charge.

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***Tentative Schedule
89th Annual NSA Meeting***

Saturday, April 19, 1997

AM-PM Remote Sensing Workshop
(please see enclosed brochure)

Sunday, April 20, 1997

AM-PM Remote Sensing Workshop
PM Executive Committee meeting (afternoon)
PM Registration (afternoon)
PM President's Reception (evening)

Monday, April 21, 1997

AM poster session set up
AM Sessions commence
PM Ken Chew's Annual Chinese Banquet

Tuesday, April 22, 1997

PM Poster session and mixer (late afternoon)
PM Student Reception and Auction (evening)

Wednesday, April 23, 1997

PM Business Luncheon and AGM (noon)

Thursday, April 24, 1997

AM Poster removal
PM Sessions conclude

Friday, April 25, 1997

AM-PM Tour of Apalachicola Bay

Note: The posters will be available for continuous viewing from Monday to Wednesday. On Tuesday afternoon, there will be a special poster session and mixer, where all presenters will be available for discussion by their poster.

Remember to check out the NSA website (<http://www.shellfish.org>) for the latest information.

Dr. Jay Parsons, Program Chair, NSA '97
Email: jparsons@gill.ifmt.nf.ca
Fax: 709-778-0535
Tel.: 709-778-0307

**Local Arrangements
89th Annual NSA Meeting**

Hotel Reservation Information

We have reserved a large block of rooms at the Fort Walton Beach Holiday Inn at a special conference rate of \$70 standard, \$80 poolside, \$90 Gulf front, and \$110 suite (prices do not include local and state taxes). For students and others wanting to save money, 3 people are allowed to stay in one room. Please make your hotel reservation as soon as possible by calling the hotel directly at 1-800-732-4853 or 1-904-243-9181. Be sure to mention your participation in the NSA meeting.

The hotel is about 8 miles from the Okaloosa County / Fort Walton Beach Airport. There is no limo service from the airport, but taxi service is available.

Travel Arrangements

The Fort Walton Beach / Okaloosa County Airport is served by several major airlines (most with changes at larger airports required) including Northwest, US Air, Delta, ValueJet, and Atlantic South-East Airlines. "Flights to Sites" offers discounted fares on ALL major carriers to NSA conference attendees. They can be reached Monday through Friday, 9:00 to 17:30 at 1-800-609-0439.

Hertz, Avis, Budget, and National Car Rental services are available at the airport. There is no public transportation.

Local Attractions

The Gulf Beaches of Fort Walton Beach and surrounding areas are absolutely spectacular. For those persons who want to get off of the beaten track and see more pristine parts of Florida, a tour of Apalachicola Bay is being arranged for Friday, April 25th (the day after the meeting officially ends). The tour will begin with an approximately 2 ½ hour van ride from Fort Walton Beach along the scenic panhandle coast, far removed from the major tourist areas. The day will continue with a boat ride (boat provided by the National Estuarine Research Reserve Laboratory), and a break for lunch at a locally well-known restaurant. In the afternoon, we have scheduled tours of two area research facilities: the Florida Dept. of Environmental Protection / NOAA Apalachicola National Estuarine Research Reserve Laboratory and the Florida Dept of Environmental Protection Shellfish Sanitation Laboratory. If you'd like to join the tour, please indicate your interest by checking the appropriate box on the registration form.

William Fisher

**VISIT THE NATIONAL SHELLFISHERIES ASSOCIATION
WORLD WIDE WEB PAGE!
<http://www.shellfish.org>**

Pacific Coast Section of the **NSA**

The Pacific Coast section of the National Shellfisheries Association joined the Pacific Coast Oystergrowers Association in hosting their 50th annual meeting at Campbell's Resort on the shores of beautiful Lake Chelan in Chelan, Washington from September 22 - 24, 1996.

The weather was outstanding, the air already crisp and famous Washington apples were being harvested as a full day of presentations began on the 23rd. Updates on the west coast shellfish industry, actions of the Interstate Shellfish Sanitation Conference, and implementation of FDA's HACCP regulations were covered during the morning session. The NSA-PCS technical section began in the afternoon with a wide assortment of topics covering everything from razor clam and sea cucumber population assessment to oyster drills, *Spartina* control (yes, it is an invasive weed on the west coast), the molluscan broodstock program, and summer oyster mortality studies. Manfred Kittel was awarded the best student paper award for his presentation entitled "Tasmanian Pacific Oysters, *Crassostrea gigas*, in Washington State: Characterization of a Transplanted Population". A total of five students gave presentations and numerous others attended with several new recruits to NSA-PCS. NSA-PCS held its annual business meeting with officer elections. Washington state representative Gary Chandler highlighted the annual shellfish reception and banquet with his talk covering the links between terrestrial agriculture (like the apple orchards in his home district) and aquaculture (and he ate his first oyster!!). Tuesday morning featured a session covering the Washington Department of Fish and Wildlife's shellfish management program and particularly intertidal shellfish management in light of the recent court decision and inception of joint tribal-state-industry resource management in Washington state. Brief updates on the international shellfish market and water quality protection rounded out the final session. Abstracts for the technical sessions will be published in *JSR* and further details regarding the meeting can be obtained from the newly elected chair of NSA-PCS, Brett Dumbauld at the following address: WDFW, P.O. Box 190, Ocean Park, Washington 98640; phone (360) 665-4166; Email dumbabrd@dfw.wa.gov

Congratulations to the new officers for NSA-PCS:

Chair: Brett Dumbauld
Vice Chair: Jonathan Davis
Secretary/Treasurer: Derrick Toba
Members-at-Large: Kristine Feldman
Teri King
Ray RaLonde
Ervin Joe Schumacker
Newsletter co-editors: Doug Thompson
Jennifer Whitney

Brett Dumbauld

Pacific Delegation Visits China

The Pacific Coast Oyster Growers Association sent a 15 member delegation representing California, Oregon, and Washington oyster industries to the China Fisheries and Seafood Expo from October 29 to November 1, 1996, in Qingdao, China. Tim Smith led the expedition with Xin Liu performing as an interpreter and coordinator. The delegation visited local shellfish growing areas and met with growers on the Shandong Peninsula after the expo. Further information about the delegation's activities is available via Tim Smith (PCOGA, 120 State Avenue N.E. #142, Olympia, WA 98501, phone 360 754-2644)

Anja Robinson

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• **The deadline for contributions to the next NSA** •
• **Quarterly Newsletter (Winter '97, Program** •
• **Issue) is February 1st. Send any and all** •
• **submissions to Maureen Krause by email** •
• **(preferred), fax or regular mail to the address** •
• **given on the back page** •
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17th Milford Aquaculture Seminar **February 24-26, 1997**

Quality Inn Conference Center
100 Pond Lily Avenue
New Haven, CT 06525
Phone: (203) 387-6651

Call for Abstracts

Due Date: January 6, 1997

Aquaculturists with a professional interest in the culture of shellfish and finfish or related research activities are invited to submit abstracts for both oral and poster presentations. Abstracts should include the title, names of authors, and affiliations and a complete address with a clear statement of work, methods employed, results and conclusions. Abstracts should not exceed one page in length (single spaced) and should be submitted no later than January 6, 1997 to Walter Blogoslawski, NMFS, Milford Laboratory, 212 Rogers Ave., Milford, CT 06460, in hard copy and on diskette in WordPerfect 5.0, 5.1, or 6.0 and should be IBM compatible and the diskette labelled with the format used. Hard copy may also be faxed to Walter Blogoslawski at (203) 783-4217 before January 6, 1997, for inclusion in the final printed program. All accepted abstracts will be reviewed and edited for publication in the *Journal of Shellfish Research*, June-July 1997 issue.

Upcoming Meetings

Annual Meeting of the Society for Integrative and Comparative Biology (ASZ): December 26-30, 1996, Albuquerque, New Mexico. See the association Website (<http://SICB.berkeley.edu/SICB/SICB.html>) or contact Corinne O'Brien at the SICB Business Office for more information: Phone: 800-955-1236; email corinne_o'brien@sba.com

Fifth International Conference and Workshop on Lobster Biology and Management: February 9-14, 1997, Queenstown, New Zealand. Sponsored by the New Zealand Fishing Industry and the New Zealand National Institute of Water and Atmospheric Research, this meeting will cover all aspects of all specials of lobsters, including spiny, slipper, clawed, and scampi. For details, contact: The Organizing Committee, Convener John Booth, Fifth International Lobster Meeting, NIWA, PO Box 14-901, Wellington, New Zealand; phone: +64 4 386 0300; FAX: +64 4 386 0574; email: j.booth@niwa.cri.nz

Acquacoltura: February 12-16, 1997, Verona, Italy. The 8th International Exhibition of fish products, technologies and equipment for breeders, will take place concurrently with FIERAGRICOLA, the International Exhibition of Agriculture and Zootechnics. For further information, contact the marketing director, Paolo Maccani: phone: (045) 829 8111; FAX: (045) 829 8288

World Aquaculture '97: February 20-23, 1997, Washington State Convention Center, Seattle, Washington, USA. The theme of the meeting is "Linking Science to Sustainable Industry Development". The annual international conference & exposition of the World Aquaculture Society will bring together the technical, producer and supplier segments of the aquaculture industry. The meeting offers a full program of technical sessions, special sessions, producer seminars reception, industry tours, one of the largest aquaculture tradeshow in the world, and more! For more information contact: World Aquaculture '97, Conference Manager, 21710 7th Place West, Bothell, WA 98021. Phone: (206)485-6682; FAX: (206)483-6319. Special Note: NSA will be a sponsor a full day session "Molluscan Aquaculture in the 21st Century, What are the Science Priorities to Enable Industry to Achieve Optimum Development."

17th Milford Aquaculture Seminar: February 24-26, 1997, Quality Inn Conference Center, New Haven, Connecticut. See announcement on page 5.

Feed Ingredients Asia '97: March 18-20, 1997, Singapore International Convention & Exhibition Centre. Exhibitors will display a diverse cross section of products needed to formulate top quality feed. For exhibition booking and other inquiries, contact: Andrew West, Exhibition Sales Manager,

Turret Group plc, Turret House, 171 High Street, Rickmansworth, Hertfordshire WD3 1SN, England. Phone +44 (0) 1923 777000, FAX: +44 (0) 1923 771297.

11th International Pectinid Workshop: April 10 - April 15, 1997, La Paz, Baja California Sur, Mexico. This workshop will focus on pectinid biology, fisheries, and aquaculture. This meeting presents a unique opportunity for science and management to compare and contrast experiences with scallop fondlers from around the world. For registration and further information, contact: Esteban Fernando Félix-Pico, Dept. of Fisheries and Marine Biology, CICIMAR-IPN, Playa el Conchalito S/N, APDO Postal 592, 23000 La Paz, B.C.S., Mexico; Phone: 52-112-25344 (Ext. 2428), FAX: 52-112-25322, email: efelix@vmredipn.ipn.mx

National Shellfisheries Association 89th Annual Meeting: April 20-24, 1997, Ft. Walton Beach, Florida. See this newsletter for details! For questions concerning local arrangements, contact Dr. William Fisher at phone: 904-934-9394, Fax: 904-934-2402, or e-mail fisher.william@epamail.epa.gov. For program information, please contact Dr. Jay Parsons at phone: 709-778-0307, FAX 709-778-0535, or e-mail jparsons@gill.ifmt.nf.ca

Aquaculture Canada '97: June 9-15, 1997, Quebec City, Quebec, Canada. The 14th Annual Meeting of the AAC will be held at the Radisson-Hotel des Gouverneurs. The Theme for the meeting is "From Research to Market". For more information contact: Yves Bastien at phone: 418-368-7656, Fax: 418-356-1275, or e-mail ybastien@quebectel.com.

American Malacological Union: June 22-27, Santa Barbara, California. The 1997 meeting will be held jointly with the Western Society of Malacologists and feature two major symposia, "Deep-Sea Mollusca", convened by Jerry Harasewych, and "Traditional vs. Phylogenetic Systematics", convened by Gary Rosenberg. There will also be a special session on Cephalopods of the North Pacific chaired by Eric Hochberg. The meeting will be held at the Radisson Hotel, and field trips to observe Pleistocene exposures and collect late Pleistocene marine invertebrates will be held. For meeting details, contact: Eugene Coan, President, AMU, at 891 San Jude Ave., Palo Alto, CA 94306-2640, phone: 415-493-8242; FAX: 415-977-5799, or email gene.coan@sierraclub.org

Japanese Society of Fish Pathology, International Symposium on Diseases in Marine Aquaculture: October 3-5, 1997, Hiroshima, Japan. This meeting will stimulate joint research efforts in the field of fish pathology science, and will result in further progress of marine fish and shellfish aquaculture. The official language of the symposium is English. Sessions will consist of presentations on viral, bacterial, fungal, protozoan, parasitic and non-infectious diseases of fish and shellfish in

Upcoming Meetings, continued

the marine environment. Deadline for abstract submission is May 30, 1997. Please contact the Chairperson, Dr. K. Muroga, for more information at the Faculty of Applied Biological Science, Hiroshima University, Kagamiyama I-4-4, Higashihiroshima, 739, Japan; Phone: Japan-824-24-7977 or 7947; FAX: Japan-824-22-7059

Third International Abalone Symposium: October 5-11, 1997, Monterey, California. This meeting will feature symposia on abalone aquaculture, biotechnology, ecology, fisheries management, morphometrics, nutrition, life history biology, and more. Registration is required by June, 1997. For further details, contact: Catherine Ashley, California Sea Grant College, 9500 Gilman Drive, La Jolla, CA 92093-0232. FAX: (619) 534-2231, email cashley@ucsd.edu

III Clama, the 3rd Latin American Malacological Congress: October 13-17, 1997, Ensenada, Mexico. Sponsored by the Committee for the Latin American Malacological Meetings. For information, contact: M.C. Claudia Farfan, Jefe Departamento de Acuicultura, CICESE, Baja California, Apdo, Postal 2732, Ensenada, BC, Mexico; FAX (in Mexico): (617) 44880; FAX (in US): 011 52617/44880, phone: (617) 44501/06 or 5050/53

Second International Conference on Molluscan Shellfish Safety (ICMSS II): November 13-17, 1997, Iloilo City, Panay Island, the Philippines. A forum for growers, processors, and regulators. Oral and poster contributions welcome. Please contact Dr. Thodora A. Corrales, Chair, Organizing Committee, for more information at: Marine Science Institute, University of the Philippines, Diliman, Quezon City 1101, the Philippines; FAX (63-2) 9215967; email rhod@msi.upd.edu.ph

Aquaculture '98: February 14 - 19, 1998, Las Vegas, Nevada. Triennial joint meeting of the World Aquaculture Society, the **National Shellfisheries Association** and the American Fisheries Society Fish Culture Section. Mark your calendar now!

Metamorphoses

Congratulations to **Bill Arnold** for successfully defending his Ph.D. thesis at the University of South Florida. Bill continues to work for the Florida Department of Environmental Protection.

Monica Bricelj recently moved to Canada, where she is working for the National Research Council, Institute for Marine Biosciences in Halifax, Nova Scotia.

Tim Scott has joined the faculty of Roger Williams College in Rhode Island. Good luck in your new position!

How to Join the National Shellfisheries Association

Fill out and mail a copy of the application blank below. The dues are US \$45.00 per year (\$25.00 for students). Membership entitles you to receive *The Journal of Shellfish Research* and the Quarterly Newsletter!

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

Name _____ For Calendar Year _____ Date _____

Mailing Address _____

Institutional Affiliation, if any: _____

Shellfisheries interests: _____

Regular or Student membership? _____

Student members only - Advisor's signature **REQUIRED** _____

Recruited by? _____

Make checks (MUST be drawn on a US bank) or international postal money order for \$45.00 (\$25.00 for students with advisor's signature) payable to the National Shellfisheries Association and send to Ms. Nancy C. Lewis, NSA Bookkeeper, P.O. Box 350, VIMS Eastern Shore Lab, Wachapreague, VA 23480.

National Shellfisheries Association 1997 Annual Meeting
April 20 - 24 1996, Fort Walton Beach, Florida
Registration Form

Please complete a copy of this form for each person registering and mail to:
 Dr. William S. Fisher
 US Environmental Protection Agency, Gulf Ecology Division
 1 Sabine Island Drive
 Gulf Breeze FL 32561 USA

Mailing Information:

Name: _____
 Organization: _____
 Mailing Address : _____
 City: _____ State: _____ Zip: _____
 Country: _____ phone: _____ email: _____

Name Badge Information (max. 25 characters for each line):

Name: _____
 Organization: _____

NSA Registration

Fees include entry into all technical sessions, all coffee and refreshment breaks, President's Poolside Reception on Sunday evening (hors d'oeuvres), buffet lunch on Monday, student reception and auction (hors d'oeuvres, beer, wine) on Tuesday evening, and the buffet Business Luncheon on Wednesday.

	<u>By March 10</u>	<u>After March 10</u>	<u>Total \$</u>
NSA Members	\$150	\$200	\$ _____
Student members	\$115	\$145	\$ _____
Non-Members	\$215	\$255	\$ _____
Daily Registration	\$75	\$75	\$ _____
NSA Membership	Regular: \$45 Student: \$25		\$ _____

Additional Tickets for Activities

	<u>Per ticket</u>	
President's Reception	\$25	\$ _____
Monday Buffet Lunch	\$15	\$ _____
Student's Reception/Auction	\$25	\$ _____
Buffet Business Luncheon	\$20	\$ _____
Total Fees enclosed*		\$ _____

If you're interested in joining the tour of Apalachicola Bay on Friday, April 25th, please check here (no obligation) _____

Name on credit card _____ Signature _____
 Number _____ Circle type of card **VISA MASTERCARD**
 Expiration Date _____ (only ones accepted)

* If you wish to pay by credit card, please add an additional 4% to the total cost.

Please mail a copy of this registration form, credit card information (above), or a check or money order made payable to NSA '97 to the address given above. Questions concerning registration should be directed to Bill Fisher through email (fisher.william@epamail.epa.gov) or fax (904-934-2402).

Dr. Maureen K. Krause, Editor
NSA Quarterly Newsletter
Natural Science Division
Southampton College of Long Island University
Southampton, New York 11968 USA



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