

# National Shellfisheries Association

## QUARTERLY NEWSLETTER



POST MEETING - EARLY SUMMER '96

SOUTHAMPTON, NEW YORK

### President's Message

I am honored to assume the presidency of NSA after the capable direction which Bill Fisher has provided. We have experienced a year of good fortune as a society and we all owe a debt of gratitude to those individuals who have contributed their time and energy to help us reach our current position. We are fresh off a highly successful meeting in Baltimore, thanks largely to the efforts of Roger and Christine Newell, and Bill Fisher has the planning well underway for an exciting (and hurricane-free) 1997 meeting in Fort Walton Beach, Florida. Jay Parsons is already organizing a variety of special sessions for that meeting and I know he would welcome suggestions from the membership.

Lest we get ahead of ourselves, however, there is much work to be done in the year ahead. There are 3 major areas on which I plan to focus during my term in office: membership, industry involvement in NSA, and participation of new individuals in the functioning of the society.

While we have prospered financially over the last several years, membership has slipped somewhat to the current level of ~750 members; I would like to see us reach 1100 by year's end. We will far surpass this number if each one of us recruits just one new member during the next year. Surely we can do this! Joedy Gray, Dave Bushek (Membership Committee co-chairs) and I have discussed a variety of special incentives for recruiting new members (see elsewhere in this newsletter). We have also deputized many individuals from points throughout North America who have agreed to carry the torch and membership forms to the uninitiated wherever they may encounter them (particularly at meetings which they plan to attend). We would be glad to hear from any members who need copies of membership forms, particularly from those of you outside North America - we can always use more good deputies.

I am committed to the idea that NSA should work to increase the value of the society to industry members. John Kraeuter and the Industry Committee have worked very hard toward this goal and they are enthusiastic about continuing their efforts. Look for additional industry-related items in future newsletters and perhaps for more special industry sessions at future meetings.

By now it may sound cliché, but NSA really needs the help of enthusiastic and energetic volunteers to continue the running of the organization. I have already asked several

individuals to serve on committees for the first time and would welcome additional help. If any of you out there are interested in getting more involved in the functioning of NSA, please contact one of the people listed on the back page of this newsletter.

If you haven't yet done so, be sure to check out NSA's outstanding site on the World Wide Web (which had its debut during the NSA Annual Meeting in Baltimore). Scott Siddall has done a wonderful job of constructing the site and compiling essential NSA information. There's something for everyone here, including: job announcements, the NSA constitution and bylaws, instruction to prospective JSR authors, links to other shellfish-related websites, and even transcripts of NSA meeting programs from the 1930's. To access the NSA homepage, use the following address: <http://www.shellfish.org> Great work, Scott!

Another item of note is that Mel Carriker has generously agreed to work on compiling and documenting the long and interesting history of the NSA. With help from Mike Castagna, Hal Haskin, Susan Ford and others, NSA materials from some of the earlier days are being retrieved and consolidated. This will undoubtedly prove to be a fruitful effort, and, if any of you have older NSA-related items which might be valuable in this regard, please let us know.

I consider myself very lucky to be part of an organization which has such a high concentration of wonderful people. I look forward to working for and with you in the next year.

Steve Tettelbach

***NSA recognizes the  
contributions of our newest  
Honored Life Members:  
Robert R. L. Guillard  
and  
R. Tucker Abbott  
(awarded posthumously)***



## **88th Annual NSA Meeting - Baltimore, Maryland**

The 88th Annual NSA Meeting was held April 14th - 18th, 1996, at the Holiday Inn, Inner Harbor in Baltimore, Maryland. The meeting was a great success, with a total of 152 oral and 26 poster presentations! This year's conference included reunions with the Molluscan Shellfish Institute (Formerly SINA), which held a concurrent one-day session with NSA, and the National Blue Crab Industry, which met from April 17th to 19th, overlapping the NSA meeting. Let's hope for many more years of continued interaction with these organizations. April was a great time for NSA members to visit Baltimore, and participants enjoyed the sights and sounds of Baltimore's Inner Harbor Area, especially the bird's eye view of Camden Yards from our hotel. Thanks to all who helped to organize this very productive and fun meeting!

The conference started Sunday evening with a wonderful reception at the National Aquarium in Baltimore. Everyone particularly was impressed by the new display of jellyfish! On Monday evening Ken Chew was able to organize another scrumptious traditional Chinese Dinner for NSA members at Uncle Lee's Szechuan Restaurant. A continuous stream of heaping platters seemed to arrive at the tables all night. Many attendees were also treated to a night of baseball on Tuesday - the Baltimore Orioles hammered the Boston Red Sox. On Wednesday evening, in lieu of our traditional lunchtime business meeting, we held a banquet, business meeting, auction, and jam/dance session in one fun-filled, action-packed night. During the business meeting, Bill Fisher and all of the officers kept their addresses short (thank you!), and Bill assured us that Fort Walton Beach, Florida, will be recovered from Hurricane Opal and ready to receive us for next year's Annual Meeting. Bill passed the President's gavel to Steve Tettelbach and thanked those members who served the Association well during the past year. Following dinner, NSA Honored Life Member Awards were presented to Robert Guillard and posthumously to R. Tucker Abbott. Once business was completed, the evening continued with Sandra Shumway's Action-packed and Audacious Auction in Aid of the Student Endowment Fund. \$1,824 was raised for the Fund, although we're not sure everyone remembers what items (or why) they bought! The quality of the auctioned home brews and vintages is definitely improving. Following the auction, Carter Newell, Austin Farley, Gary Wikfors and cohorts entertained us with some down-home music and dancing. All-in-all it was a great night!

Students made a strong showing at this year's conference, with a total of 30 presentations! Competition was fierce, but the Thurlow C. Nelson Award for best student paper was given to Margaret Dekshenieks, Old Dominion University, for her talk "Size and depth dependent larval mortality: A modeling study." Honorable mentions were awarded to Daniel J. McGoldrick, University of California, Davis, for "Microsatellite marker development in the Pacific oyster

(*Crassostrea gigas*): Variability, transmission, linkage and QTL mapping", and to Andrew G. Bauder, Dalhousie University, for "Kinetics of diarrhetic shellfish toxins in the bay scallop, *Argopecten irradians*." This year's award for best student poster was given to Kerri M. Bentkowski, Salisbury State University, for "Paddles or sieves: Testing the mechanisms of particle retention in bivalves." Congratulations to all of the winners and to all students for their fine presentations. The Student Awards Committee was chaired by Dan Kreeger and included Peter Beninger, Monica Bricelj, Bruce MacDonald, Evan Ward, Jay Parsons, Rick DeVoe, Darrell Donahue, Maureen Krause, David Bushek, Karolyn Mueller-Hansen, Carolyn Friedman, Sandy Shumway and Mike Castagna (sorry if we left anyone out!). Thanks to all who helped. A record number of students received Student Endowment Fund Awards to cover housing and/or registration for the meeting. Receiving awards were: James Anderson, Andrew Bauder, Kerri Bentkowski, David Brown, Ryan Carnegie, Margaret Dekshenieks, Gregory Dietl, Suifen Lyu, Daniel McGoldrick, Marguerite Pelletier, Conrad Pilditch, Jeffrey Springer, Karin Tammi, Jeffrey Wakefield, and Ami Wilbur. Congratulations and thanks for helping out at the NSA sales booth and with the AV equipment during the talks!



**Bill Fisher passes the gavel to new President  
Steve Tettelbach**



## Resolutions

The following resolutions were passed by the EXCOM at its annual board meeting:

**WHEREAS**, the National Shellfisheries association, Inc. (NSA) is a not-for-profit corporation; and, **WHEREAS** members serve as officers and committee members on a voluntary basis; **BE IT RESOLVED** that on April 17th, 1996, the National Shellfisheries Association formally recognized and thanked Bill Fisher, President, Richard DeVoe, Secretary, Christine Hodgson, Treasurer, John Ewart, Member-at-Large, Bill Green, Chair of the Industry Committee, and Tom Soniat, Chair of the President's and Elections Committees, for their outstanding contributions to the prosperity and well-being of the National Shellfisheries Association during their terms of service.

**WHEREAS**, the National Shellfisheries Association, Inc. (NSA) is a not-for-profit corporation; and, **WHEREAS** the National Shellfisheries Association depends on the scientific contributions of its members and their associated research laboratories; and, **WHEREAS** the National Shellfisheries Association and the shellfish industry of the United States have greatly benefited, over more than half a century, from research conducted at the National Marine Fisheries Service's Milford Laboratory, and that the laboratory acted as the cradle of molluscan aquaculture in the United States; **BE IT RESOLVED** that the National Shellfisheries Association, assembled at its 88th Annual Meeting on April 17th, 1996, in Baltimore, Maryland, recognized the important role that the National Marine Fisheries Service's Milford Laboratory has played in the development of shellfish aquaculture in the United States, and strongly supported continuation of its essential research and extension activities in the future.

**WHEREAS**, the National Shellfisheries Association, Inc. (NSA) is a not-for-profit corporation; and, **WHEREAS** Christine and Roger Newell have together organized the program for the 88th Annual Meeting of the National Shellfisheries Association in Baltimore, Maryland; **BE IT RESOLVED** that on April 17th, 1996, the National Shellfisheries Association formally recognized and thanked Roger and Christine Newell for putting together such an enjoyable and successful program.

The deadline for submission of contributions for the next *NSA Quarterly Newsletter* is September 3rd. Contact Maureen Krause at the address listed on the back page for more information.

## Membership Committee

As President, one of Steve's primary goals is to increase our current NSA membership to at least 1100 members. In an effort to achieve this goal, we are initiating a **Membership Contest** to recruit new members into NSA. The first person who recruits 8 new members will have a choice of receiving a free registration to the 1997 NSA Meeting or 3 years free membership. Anyone recruiting 5 new members will receive a 1 year free membership, and those recruiting at least 2, will be able to select a free NSA cap or walleye pin at the 1997 meeting. The contest will begin immediately. In order to enter the contest, you must be an active member of NSA. To enter, simply include your name as the recruiter when you provide someone with a membership form.

Any questions or requests for additional membership forms can be directed to Joedy Gray, Dave Bushek or Steve Tettelbach. Good Luck!!

## Metamorphoses

Congratulations to the following students for recently completing their doctorates:

**Ami Wilbur**, University of Delaware

**Paul Rawson**, University of South Carolina

**David Brown**, Duke University

**Joan Manuel**, Dalhousie University

and congratulations to **Karin Tammi** for completing her Masters degree at the University of Rhode Island.

**Dr. Kim Harrison** is the new Executive Director at the Northeast Regional Aquaculture Center in North Dartmouth, MA. We look forward to working with her.

**Greg Bacon** has started his Ph.D. at the University of New Brunswick with Dr. Sharon McGladdery of DFO, Moncton, NB.

**Rich Bohn** is the new Executive Director of the National Aquaculture Association. Congrats!

NSA gratefully acknowledges the assistance of recruits who worked the NSA sales booth during the annual meeting: Lisa Bramble, Justin Pittinaro, Deb Pellitier, Kerri Bentkowski, Cal Baier Anderson, David Brown, Deb Boswell, Bianca Garder, Hannah Heartsill, Andrew Bauder, Paul Rawson, Greg Bacon, Guy Bruni, Jeff Springer, Margaret Deksheniaks, Ryan Carnegie, Betsy Orbacz, Karin Tammi, Marty Chintala, and Jeff Burst (forgive us for any misspellings or omissions). Thanks to Jay Parsons and Sandy Shumway for your continued efforts "in the booth".

If you have an item for this column, please contact either Jay Parsons or Maureen Krause at the addresses listed on the back page.



## Audit-Budget-Finance Update

The National Shellfisheries Association is in the strongest financial position in its history. Total revenues for the 1994-95 fiscal year (October 1994 through September 1995) were \$141,287 (including \$26,140 from the San Diego meeting), and expenses were \$75,129 for an increase of \$66,158 to our overall balance. While this is a tremendous gain, some of it was actually deferred from the prior year. After an off year in 1994, we have made important steps toward reaching our five-year goal of \$126,000 in cash reserves by the end of our 1997-98 year. Our projected goal of \$88,000 by the end of 1994-95 was surpassed as we ended the year with \$108,600.

Administrative revenues and expenses for 1994-95 were \$29,289 and \$6,339, respectively, for an increase of \$22,950. Publication revenues climbed to \$85,858, and expenses were \$68,790 for an increase of \$17,068. And the San Diego meeting (Aquaculture '95) netted \$26,140 (but because it was a joint meeting we don't have a breakdown on revenues and expenses). Our 94-95 ending balance of \$108,600 compares very well with our \$42,427 at the end of 93-94, \$61,260 at the end of 92-93, \$34,809 at the end of 91-92, and \$10,155 at the end of 90-91.

The proposed budget for the 1997 fiscal year, which begins 1 October 1996, projects a gain of \$925 from administrative activities, a gain of \$3,100 from publications, and a gain of \$10,900 from our annual meeting in Ft. Walton Beach, Florida in April 1997. If these revenues and expenses are realized it would increase the Association's balance by \$14,925. Changes in our accounting procedure shift \$15,000 from administrative revenues to publication revenues, and newsletter costs will also be covered by administrative revenues; this helps reduce or eliminate the decreases previously encountered by publications each year.

No critical review of NSA financial ledgers was conducted by A-B-F in 1995 since Christine Hodgson remained as treasurer. A review consists of analyzing the financial data presented by the treasurer and is substantially less in scope than an audit. An outside audit would probably cost us several thousand dollars, an outside review would cost us several hundred dollars, but an inside review costs nothing. An inside review will be conducted in 1996 after Christine closes the books and passes them on to our new treasurer Evan Ward.

George Abbe, Chairman  
Audit-Budget-Finance Committee

## From the Desk of the Treasurer PAST

As my last duty as Treasurer, it is my pleasure to report on the outstanding success of the Annual Meeting held in Baltimore.

The meeting was attended by 265 registrants, of whom 35 became new NSA members. In brief, the meeting generated:

Total Revenues	\$43,553
Total Expenses	\$27,435
Total Profit	\$16,118

Credit is due to Roger Newell, Program Chair and Organizer, and the many people who organized sessions and speakers. A special thanks is extended to Christine Newell for keeping Roger organized and making my job of collecting the money so easy.

### Student Endowment Fund

As usual, Sandy Shumway did an outstanding job as auctioneer at the Student Auction. Over 145 items were auctioned off with dazzling style, generating \$1,824. Some of the bidders still have debts outstanding. To embarrass you all, here are the names:

Anita Wright	\$25
Arnie Eversole	12
Marty Chintala	15
Justin (student)	15
Roxanna Smolowitz	12
Greg Bacon	21
Michael Lesser	21

Please advise us if you already paid. If not, please arrange to make payment to the SEF at your earliest convenience.

The SEF Booth also generated substantial income at the meeting, grossing over \$2,235. Special thanks to Sandy who always finds new and interesting items to flog at the Booth. The ties were a real hit.

Adios.

As I pass the role of Treasurer to Evan, I thank each of you who helped make my job easier over the past two years. It was a busy but rewarding job. I especially enjoyed the opportunity to correspond with some of you as NSA members.

Christine Hodgson

**ANNOUNCING THE NATIONAL SHELLFISHERIES ASSOCIATION  
WORLD WIDE WEB PAGE!  
POINT YOUR WEB BROWSERS TO:  
<http://www.shellfish.org>**



## **Recruits Corner**

The student turnout in Baltimore was outstanding, with about 30 papers being presented. Congratulations to Margaret Dekshenieks for winning the Thurlow C. Nelson Award. Thanks to all students who helped with the AV equipment, registration desk, and sales booth. The recruits information packet which describes the NSA Endowment Fund, Thurlow C. Nelson Award, jobs database and upcoming events was being passed around at the Annual Meeting for final editing, and should be available soon.

This year's meeting was a little different than those in the past. The auction, usually held in conjunction with the student reception, was held during the banquet. The banquet was a welcome addition to the program, but it left little time for the traditional student gathering. There was one opening; however, the Orioles game would have been tough to compete with. Rest assured, the reception will return next year. Many interesting items were auctioned this year. A couple worth mentioning were a steamy romance novel and Justin Pittinara, who went for the bargain price of \$3 to Marty Chintala. The auction was followed by a night of dancing. We all had fun.

As some of you may know, NSA now operates a Web page ([www.shellfish.org](http://www.shellfish.org)). We're moving up in the world. In order to be more accessible we are transferring the jobs database to the Web. There will be a standard format for the postings which will eliminate possible confusion.

Karin Tammi and Margaret Dekshenieks have recently set sail for bigger and better things. The void left in their wake has been filled by Jeff Springer ([jjspring@unity.ncsu.edu](mailto:jjspring@unity.ncsu.edu)), Ryan Carnegie ([rcarnegi@apollo.umenfa.maine.edu](mailto:rcarnegi@apollo.umenfa.maine.edu)), Deb Boswell Lane ([lane@chuma.cas.usf.edu](mailto:lane@chuma.cas.usf.edu)), and Kerri Bentkowski ([kmb7375@sae.ssu.umd.edu](mailto:kmb7375@sae.ssu.umd.edu)). If you have any questions, just send me a note at [anderjl@mail.auburn.edu](mailto:anderjl@mail.auburn.edu). Thanks to all.

James Anderson

## **Joint Subcommittee on Aquaculture to Revise National Aquaculture Development Plan**

The Joint Subcommittee on Aquaculture (JSA) is presently revising the National Aquaculture Development Plan. The Plan was originally prepared by the JSA in 1983 and has not been updated since. In 1995 the JSA agreed that a revision of the Plan is necessary and timely. The revised Plan will address the Federal government's role in aquaculture - specifically, how the Federal government can best support the development of a sustainable and internationally competitive U.S. aquaculture industry. The primary audience for the Plan revision is Congress and the Federal Administration.

With substantial input from the national aquaculture industry, including a working session hosted by the National Aquaculture Industry Forum in September 1995, from Federal agencies, and from other interested parties, a first draft of the Plan has been completed and is undergoing review by the JSA. The draft is being shared with stakeholders throughout the country for comment and suggestions, and during this summer workshops were held with the assistance from Regional Aquaculture Centers to solicit comments on the draft. It is anticipated that the revised Plan will be completed in late 1996, when it will be presented to the Federal Administration and U.S. Congress.

Further updates on the activities of the JSA will be provided in the next newsletter. For information on the revised Plan, please contact Dr. Henry S. Parker, JSA Chairman (202 401-5787, email: [hparker@reeusda.gov](mailto:hparker@reeusda.gov)) or Dr. Gary Jensen, JSA Executive Secretary (202 401-5787, email: [gjensen@reeusda.gov](mailto:gjensen@reeusda.gov)).

## **Bookkeeper Hired to Help with Treasurer's Duties**

One sign of a growing, thriving society is change, and NSA is about to change the way in which it handles its business. For several years there has been discussion about the need to hire a person to help handle the day to day business of NSA, brought about by a rise in membership, increase in subscriptions to JSR and other activities. Starting with the newly elected treasurer (Evan Ward), NSA will have a part-time bookkeeper on hand to help with the duties of the treasurer's office. NSA's first bookkeeper will be Ms. Nancy Lewis who works at the V.I.M.S. Eastern Shore Laboratory, Wachapreague, VA. Some of Nancy's duties include issuing invoices and receiving payments for membership dues, student endowment fund, and journal subscriptions. This means that members will now submit all payments, membership dues, etc directly to the bookkeeper and not to the treasurer.

The hiring of a part-time bookkeeper will benefit NSA in a variety of ways. For example, the treasurer will now have more time to update membership information, keep better track of book and journal charges, evaluate future needs for database programs, and better communicate with new and current members. All in all, these changes should make the treasurer's office run much more smoothly and allow the treasurer to better serve NSA members.

Evan Ward, Treasurer



## **David H. Wallace Award**

For the Wallace Award, the Awards Committee of the National Shellfisheries Association selects individuals whose actions most demonstrate the principles and actions concerned with programs in shellfisheries, aquaculture, and conservation as exemplified by Mr. David H. Wallace during his lifetime in promoting understanding, knowledge, and cooperation among industry members, the academic community, and all levels of government, and who has had outstanding success in bringing together shellfish scientists and industry officials for the benefit of shellfisheries.

Bylaws of the NSA

The biographies of Wallace Award recipients from 1991 to the present are being published in this and recent issues of the NSA Quarterly Newsletter as they were presented at the time of award receipt.

### **Dr. Neil Bourne, 1991**

Neil Bourne obtained his training in Freshwater Biology in Ontario with a M.Sc. at the McMaster University in Hamilton and Ph.D. at the university of Toronto. Between his graduate programs he studied Marine Biology at the University of Kiel in Germany. He was in charge of sea scallop investigations at the Biological Station in St. Andrews, New Brunswick for six years prior to his over twenty-five years of outstanding intensive bivalve research at the Pacific Biological Station in Nanaimo, British Columbia. He was seconded to the Canadian International Development Agency in the mid 1970's for one and a half years, serving as the Director of the Fisheries Training Program at the University of the South Pacific in Fiji.

Neil's research and training accomplishments cover a wide area of shellfish studies involving population dynamics, stock assessment, life histories, rearing technology and most recently the feasibility of scallop culture on the Pacific coast of Canada. His wide ranging experiences are captured in his more than 135 publications.

Neil was the first non-American President of the National Shellfisheries Association in 1981-1982; President of the Aquaculture Association of Canada in 1987; World Mariculture Society Board Member from 1984 to 1986 and was an Affiliate Professor in the College of Fisheries, University of Washington, Seattle, from 1972 until his retirement in 1995. He has served on countless advisory, graduate student, aquaculture organizational, federal and provincial committees throughout his eminent career.

The National Shellfisheries Association enthusiastically acknowledges the extensive and critical contributions that Neil Bourne has, and continues to make, to the field of shellfish research.

Dr. Mel Carriker & Dr. Cathy Enright

### **Clyde L. Mackenzie, Jr., 1993**

Clyde MacKenzie's professional career is exemplified by his alliance between fisheries science and industry. He has devoted 35 years studying factors limiting shellfish abundance and distribution, and, more importantly, the transfer of that knowledge to benefit industry and the citizenry.

Mr. MacKenzie, whose career began with the National Marine Fisheries Service in 1958, is probably most noted for his 1989 monograph "A Guide for Enhancing Estuarine Molluscan Shellfish" which was first published in *Marine Fisheries Review*. This guide was subsequently reprinted independently by the Pisces Publishing Group. He recently realized a dream with publication of *The Fisheries of Raritan Bay*, Rutgers University Press. This is an extensive documentation of the history of fishing and shellfishing in Raritan Bay (New York/New Jersey). He painstakingly sought out retired and active shellfishermen to interview and piece together historical data and information which would have been lost forever without his efforts.

He has been recognized on four occasions for the NMFS Outstanding Publication Award for the best annual publication in *Marine Fisheries Review*, the first four-time achiever of this award!

Clyde has nearly 60 publication on the ecology of shellfish and methods of enhancing the fisheries. His practical, user-oriented approach has been greatly appreciated by shellfishermen and is a credit to the agency. His contributions, however, go far beyond research and writing. He has worked closely with other scientists, fishermen, and industry to enhance shellfish populations and harvests in six North American estuaries.

For the first 12 years of his career, he cooperated closely with the oyster industry in Long Island Sound, developing predator control methods and more efficient fishing techniques. That industry now produces more oysters than any Atlantic coast oyster industry southward to Florida. In 1972 he had a long-term assignment with the Prince Edward Island Provincial Department of Fisheries to advise on revitalizing its depressed oyster industry. He developed a program which is still in effect 20 years later. It increased oyster production and fisher's income. He also created a plan for the Mississippi Marine Conservation Commission to help revive its oyster industry. More recently, Clyde served as consultant to the New Jersey Division of Marine Fisheries to enhance the Delaware Bay oyster industry where he engendered a program for direct marketing of bay oysters.



Mr. MacKenzie has also been invited to make keynote presentations before several prestigious groups, including the 1991 Annual Conference of the Shellfish Association of Great Britain. He was invited to participate with a small group of experts in a workshop to determine strategies for managing Virginia and Maryland oyster populations. Based on his contributions, he was asked to write a chapter on management of natural oyster populations for a volume on oyster, biology, culture, and management.

Finally, Mr. MacKenzie is working currently on a major task of editing 44 manuscripts for a monograph on the molluscan fisheries of North America and Europe. The monograph will represent the proceedings of a 1992 symposium which he co-sponsored and moderated. In addition, he has been identifying factors limiting production of soft clams in New Jersey, and is working with the fishermen and state officials to develop a management program that will ensure larger harvests in the future. The list of Mr. MacKenzie's contributions to furthering the knowledge of shellfish and shellfisheries, and their management, goes on and on. He is a most worthy recipient of the David H. Wallace Award, and exemplifies all that it stands for.

Dr. John Pierce, Woods Hole NMFS



## **50 years ago in the NSA**

In 1946, the NSA Convention was held in New York City, June 5-7, 1946. Richard Meser was NSA President, and Victor Loosanoff served as Secretary. Even in the 1940s, the topics of interest were similar to those of today, and some of the names were the same, too! Thurlow C. Nelson published a paper on the need for developing new strains of oysters through selective breeding of domestic stock, cross breeding with other species and the introduction of species from other areas. Other papers by Loosanoff, Chestnut, and Mel Carriker described various problems in oyster biology, including the culture of Japanese oysters in Washington, movement of larvae, management, salinity and mortality, bacteria, feeding, growth at different ages, and regulation of the oyster industry by the federal government. "The loss of oyster producing bottoms has caused deep concern to the oystering industry of Virginia" states one researcher. Still other papers complained about the use of coliform bacteria counts to evaluate shellfish waters. Guess things haven't changed all that much.

## **World Aquaculture '97** **NSA Symposium** **Call for Papers**

NSA will sponsor a one day session at the annual meeting of the World Aquaculture Society in Seattle, Washington, February 19-23, 1997. The theme of the WAS annual meeting is "Linking Science to Sustainable Industry Development."

The theme for the NSA session is: "Molluscan Aquaculture in the 21st Century, What are the Science Priorities to Enable Industry to Achieve Optimum Development." The session will focus on consideration of scientific bottlenecks that are preventing full development of molluscan aquaculture: genetics, disease, mortalities, large scale production of inexpensive seed, improvements in hatcheries, growout technology, need for new species, importation of exotics, socio-economic factors, etc. This is a chance for researchers in the field of molluscan aquaculture to discuss bottleneck problems and offers solutions. It is also an opportunity to experience the warm, moist climate of Seattle in Winter!

Each speaker will have 30 minutes to present a paper. The final half hour will be an open discussion that will permit all attendees to participate in a lively discussion on this subject. Mark this date on your calendar and plan to attend.

The session is being organized by Neil Bourne and Linda Townsend. Any NSA members interested in participating in this session or requiring additional information about it are requested to contact Linda or Neil:

Neil Bourne (Pacific Biological Station, Nanaimo, B.C. Canada V9R 5K6, Phone: (604)756-7037, FAX: (604)756-7053) or Linda Townsend (Mel-Mor Science, 3146 King Richard Drive, Nanaimo, B.C. Canada V9T 3Z9, Phone (604) 751-0489, FAX: (604)756-4862).

Titles and abstracts of papers are required by July 31, 1996.

## **Announcing a new LIVESEA** **List Serve!**

A new list serve is available to provide a forum for seafood industry workers involved with the live holding and shipment of seafood, including aquatic plants, destined for markets worldwide. The forum is limited to technical and other practical challenges facing this developing industry.

The Livesea mail group is managed by Brian Paust and Brenda Kleinfelder of the University of Alaska. Both are located at Petersburg, Alaska.

If you would like to participate in this list-serve, please contact Kleinfelder or Paust via email at: TSBLK@ACAD1.ALASKA.EDU or FFBCT@ACAD1.ALASKA.EDU



## Industry Update

I would like first to acknowledge Robert Rheault's contributions to this column as I initiate a Pacific coast perspective on industry concerns and opportunities. My particular interests for this column are applied research efforts in shellfish aquaculture, including technology transfers, invertebrate population assessment and fisheries with a focus on the western United States and Canada. If you are interested in contributing to this column, please don't hesitate to contact me at [jdavis@wolfenet.com](mailto:jdavis@wolfenet.com) or (206) 842-0894.

Provision of an industry niche within an academically inclined association remains of particular value as research-driven innovation continues to help steer shellfish growers and harvesters towards cost-effective solutions to emerging problems and opportunities. Speaking of industry concerns and opportunities, here we are in the mid-1990's with shellfish aquaculture seemingly forever poised to fulfill its potential as a supplier of high quality products ranging from seed produced for the enhancement of public fisheries to vertically integrated efforts aimed at producing gourmet shellfish for white table cloth restaurants. While considerable gains have been made in many areas as this country's overall production continues to increase, biological constraints hamper the industry today as they have for years. Increasing problems relating to shellfish diseases, no year round availability of shellfish seed, predation problems, larval and seed mortalities in the hatchery, few demonstrable, long-term gains in industry production due to genetic improvements of broodstocks, incomplete knowledge of nutritional requirements of cultured species, especially in post-set and early juvenile life stages, knowledge of and control of noxious phytoplankton blooms and overall declines in the quality of near-shore waters are but a few of the problems that limit the growth of the shellfish industry in both this country and world-wide.

For shellfish producers nationwide, more than at any other time the need is greater for coordinated, industry-driven voices in legislative affairs, and research in pertinent areas and as an aid in opening and sustaining new markets. By and large, the Pacific coast shellfish industry is oriented towards aquaculture production (including the harvest of naturally recruiting shellfish from intensively cultivated beds). In addition, important decapod fisheries exist off the Pacific coast and north into the Gulf of Alaska and Bering Sea, and the geoduck clam (*Panopea abrupta*) has evolved into a very valuable wild fishery in Washington State and British Columbia in recent years, as well. With respect to aquaculture production, however, the role of the Pacific Coast Oyster Grower's Association (PCOGA) in helping an industry address problems common to west coast shellfisheries has been critically important in recent years. It may be useful to outline some of the interactions between organizations such as the PCOGA and the industry. Currently 125 members (mostly shellfish growers and harvesters) support PCOGA efforts and operate an annual budget of \$124,000 generated from annual dues. As a group, PCOGA members produce approximately 30% of the nation's oysters. Particularly effective have been recent PCOGA activi-

ties associated with legislative lobbying and research, the opening in 1995 of an export trade desk to assist industry members in marketing shellfish in Asia, HACCP plan development services, and ongoing efforts to protect shellfish growing waters from pollution threats and closures.

With respect to research activities, the Pacific Shellfish Institute (PSI) was formed in October, 1995, by the PCOGA in order to provide an administrative vehicle to conduct and manage research projects of interest to and benefiting the west coast shellfish industry. Two research projects are ongoing. First, in conjunction with the Washington State Sea Grant Program, the Summer Mortality Reporting and Response Network is an ongoing project administered by PSI. Intermittant and episodic mortalities of Pacific oysters during the summer months continue to baffle growers and researchers alike, and this project is intended to establish a reporting network among companies from different geographic areas in Puget Sound, Willapa Bay and other coastal locations. Environmental data collected here, including information on nutrient levels and phytoplankton populations, will be combined with data from other sources, integrated in a G.I.S. mapping program and maintained by the PCOGA in order to provide an aid to resolving similarities in oyster mortality patterns, as well as provide information on spatial and temporal aspects of noxious phytoplankton blooms.

A second PSI sponsored project currently getting underway with the direction of Dr. Ralph Elston is a Saltonstall/Kennedy Program funded study on oyster seed mortality. The main objective of this project is to determine causes of Pacific oyster seed mortalities which have recently impacted west coast hatcheries and growout areas. Juvenile oyster mortalities (not to be confused with JOD/JOM (juvenile oyster disease/mortality) on the east coast) have been increasing since 1990 with oyster losses in Puget Sound waters (Quilcene Bay on Hood Canal and Westcott Bay on San Juan Island) and Humboldt and Tomales Bays in California. There are no clear causes associated with the seed mortalities at present (see Elston, 1995), however, it is clear that mortalities of Pacific oyster seed due to a variety of factors are increasing worldwide. Pacific oyster seed mortalities in France have reached epidemic proportions in recent years as well (see Renault et al., 1994). This project will focus mainly on histological analyses of oyster seed produced from several shellfish hatcheries and nursery growout sites in Washington, Oregon and California.

The PCOGA has been intensely involved over the years in maintaining and improving the quality of growout waters in Alaska, Washington, Oregon and California by serving as an industry lobby in local, regional and national legislative arenas. The organization plays a critical role in working with local governments in lobbying for water quality protections, as well as serve as an active lobby for reauthorization of the federal Clean Water Act on the national level. An annual meeting, held jointly with the Pacific Coast Section of NSA, also attracts a substantial gathering of industry and academics which has been particularly effective in transferring information from university and private research groups to the industry. An excellent example of this was the development and



dissemination of technical information to the industry relating to triploid Pacific oyster development in the mid-1980's which occurred largely through PCOGA and Pacific Coast Section of the NSA annual meetings and PCOGA financial support of research. This year's meeting will be held September 22-24 in Chelan, Washington. Inquiries for attending this meeting should be directed to (360) 754-2744.

The PCOGA may serve as an example for other regions as an effective means for coordinating legislative and research concerns, as well as some marketing and HACCP training for a regional shellfish industry. The Maine Aquaculture Innovation Center, in coordination with the Maine Aquaculture Association, for example, also provides an excellent mechanism (and funding) for rapid response research project development. Similarly, other state shellfish industry groups and the various U.S.D.A. regional aquaculture centers provide critical regional project and research support to the industry. The PCOGA, however, represents a curious hybrid of services to its members which has included a long history of intense and ongoing representation in legislative lobbying efforts, increased marketing efforts, and recent interest in supporting research aimed at tackling specific problems facing industry members.

The PCOGA may offer a good model of how an industry can develop cooperative interactions among its members without stepping on too many toes amongst a competitive group of business-oriented people to address a range of problems from legislative watchdog activities to cooperative research efforts. This work may, in the long run, yield significant benefits to the industry as a whole.

Joth Davis (jdavis@wolfenet.com)

### **HELP!** **Student Papers Needed!**

***The Pacific Coast Section of the NSA will be holding its annual meeting September 22-24, 1996, in Chelan, Washington. To encourage student participation at the meeting, the PCS is offering FREE REGISTRATION (INCLUDING MEALS!) FOR STUDENTS presenting papers. To take advantage of this offer, please contact Tim Smith at (360)754-2744 BEFORE AUGUST 11TH.***

### **89th Annual NSA Meeting is just around the corner!**

*It's time to start planning again! The 89th Annual NSA Meeting will be held April 20th to 24th, 1997, at Fort Walton Beach, Florida. Dr. Jay Parsons, Program Chair, is busy organizing sessions for the meeting, but he needs your assistance. If you are interested in organizing or chairing a session, please contact him at the address on the back page! This is your opportunity to see that the NSA represents your interests, so get involved!*

### **Aquaculture '98 Special Sessions Wanted**

*Plans are forging ahead for the meeting to be held in Las Vegas, Nevada, February 14-19, 1998.*

*Organizers are still needed for special sessions, especially shellfish-related ones. If you want to be sure that your favorite topic is covered, organize a session! Don't wait until the meeting to voice your complaints that "there was nothing there for you".*

*Sessions can be 1/2- or 1-day and the list of possible topics is endless. If you are interested, please notify Sandy Shumway as soon as possible so we can get started.*



## *In Memoriam*

### *Professor Albert Lucas*

Last May the marine scientific community lost one of its eminent bivalve specialists, Albert Lucas. Albert was blessed with many endearing qualities and diverse talents; he will be missed by workers in several other fields as well. The dominant leit-motiv of his professional life was that of an architect and a builder, from ideas to actual physical structures devoted to the study of life.

Prof. Lucas was born on Aug. 7, 1928, in the town of Guilers, in Brittany, France. He grew up speaking French and also Breton, a quality which was to serve him in good stead among the Breton fishermen. From his childhood he was keenly interested in all aspects of the natural world. He obtained his Licence in 1951, DEA in 1953, CAPES in 1954-55, Aggrégation in 1955, and his Doctorat d'Etat in 1965 (at the University of Rennes). Together with a small group of scientists, he established the Brest Scientific University-College in 1959, under the aegis of the University of Rennes. This institution then became the Brest Science Faculty of the University of Rennes, finally metamorphosing into a full-fledged Science Faculty of the new University of West Brittany in 1970. In 1966 Albert, well-versed in French and Breton but rather inexperienced in English, travelled nevertheless to the U.S. where he undertook an extensive tour of the bivalve hatcheries there, including the now-famous Milford lab in Connecticut. He also visited the Conway lab in Great Britain, and following these travels he introduced to France the "Anglo-Saxon" rearing techniques. These early days of pilot cultures were both laborious and colorful. As in many other installations at the time, early development was carried out in 20 L plastic rubbish bins (effective and economical), which the cleaning lady regularly emptied regardless of contents!

With persistence and verve, Albert created the Laboratoire de Zoologie, initially comprising three main axes: biological bases of bivalve culture, culture techniques, and microbiology; the nucleus of his laboratory included Drs. Marcel Le Pennec and Daniel Prieur. At the same time, the impressive Centre Océanologique de Bretagne (now part of IFREMER) came into being a scant 15 km away, resulting in many years of collaboration between this government agency and the new university. The Laboratoire de Zoologie soon became one of the foremost French university laboratories for the study of marine bivalve biology. Prof. Lucas established and maintained collaborations with marine laboratories worldwide, including Plymouth, Menai Bridge, and Oban in Great Britain.

As one of the founders of the doctoral programme in biological oceanography, Albert's laboratory was particularly open to students from abroad. Many of these students came from Europe, Latin America, Africa, and Asia, although I know I was not the only Canadian to have studied there. Albert's influence on these graduate students can be attested to by the fact that once back in their native lands most of them did not tarry to invite Albert to visit their institutions and continue his commitment to the development of aquaculture and related

research in these countries. Although viscerally attached to his native Brittany, Albert spent much time abroad assisting his former students.

The Laboratoire de Zoologie rapidly gained renown for two things: its work in bivalve biology, and its convivial atmosphere, exemplified by "Friday Afternoons" (characterized by hop-and-malt refreshments at the end of the day). This was a tradition in Albert's lab; any lab member who had a birthday, a new baby, a promotion, a successful thesis defense, a lucrative research grant, etc. would sponsor a celebratory Friday afternoon. Since the lab was composed of approximately 25 - 30 people, the number of non-festive Fridays was limited indeed!

A seemingly tireless builder, Lucas was instrumental in creating one of the first commercial bivalve hatcheries in France at Tinduff in 1974; this was a co-op of Breton fishermen affected by dwindling wild stocks. This acted as a nucleus for the crystallization of several other hatcheries throughout France, where some of his former students can be found today. On the academic front, he co-founded the French Malacological Society (SFM) in 1971 and served as its first President; his efforts here, together with a small group of colleagues, led to the establishment of *Haliotis*, the journal of the SFM. The research interests of his Laboratoire de Zoologie rapidly diversified to cover almost every imaginable aspect of bivalve biology, from prostaglandins and neuroendocrine systems to population dynamics, pathology, and even hydrothermal vent species. Albert periodically returned to an early interest, gastropod biology, and even ventured in cetacean research! Toward the end of his career he personally concentrated on the field of bioenergetics, which to his mind was in need of some unifying concepts. After his retirement he was able to devote enough of that most precious resource - time - to write a very well-received treatise on the subject, entitled: "Bio-energetics of Aquatic Animals", published (in French) by Masson et C<sup>ie</sup>. I have been informed that it is in the process of translation to English and will be published by an "Anglo-Saxon" editor. Nevertheless, his sheer presence and his way of inspiring others influenced French molluscan research far more than his academic publications.

Albert Lucas was a consummate conservationist and environmentalist long before these terms had even taken root in our vocabulary. He co-founded the naturalist journal *Penn ar Bed* in 1953, and the Society for the Study and Protection of Nature in Brittany in 1959. This organization participated in the creation of 13 natural reserves in Brittany, which it continues to manage today. His interests included a passion for botany (all too rare among today's zoologists), and his last official appointment was that of Scientific Advisor for the Stangalar Botanical Gardens in Brest. At his home he worked laboriously and patiently at creating new varieties of rare wildflowers. Albert loved the living world with an abiding passion. We were indeed fortunate to have him among us.

P. G. Beninger, Département de Biologie, Université de Moncton, Moncton, N.B. Canada E1A 3E9 and M. Le Pennec, Laboratoire de Biologie Marine, Université de Bretagne Occidentale, 29287 Brest France





This Year's Student Presentation Winners. Pictured from left to right are: Kerri Bentkowski, winner of the Best Student Poster Award, Andrew Bauder, Honorable Mention, Dan McGoldrick, Honorable Mention, Margaret Dekshenicks, Thurlow C. Nelson awardee, and Dan Kreeger, Chair of the Student Awards

## NAA Seeking Shellfish Members

The National Aquaculture Association serves as a non-profit representative to provide a collective voice of producers to agencies and legislators in Washington, DC. Most state aquaculture groups and species organizations are a part of NAA. The Association identifies issues, policies and programs of national importance that support the aquaculture industry, and works toward a regulatory system that provides for an economically-viable industry. In recent months, increasing activity has surrounded issues in marine and coastal aquaculture, and industry input will be critical in developing rational and enduring laws and regulations. However, the shellfish industry is not well organized nationally to respond to these challenges, and NAA would like to encourage and enable greater industry awareness and participation in this process. Decisions are being made today in Washington that will shape the future. Whether you are part of production aquaculture, sales or research, consider joining the National Aquaculture Association to support One Industry: One Voice. For membership information, contact NAA at 304-728-2167 (FAX: 304-728-2196, or e-mail: [naa@intrepid.net](mailto:naa@intrepid.net)).

Rich Bohn

## NSA co-sponsors symposium

NSA has agreed to serve as a co-sponsor of the Third International Symposium on Aquatic Animal Health (ISAAH), which is slated to be held in Baltimore in Fall 1998. In this capacity, NSA will help promote the meeting and will assist in the organization of a session or sessions on shellfish disease for the symposium; we have made no commitment to financially subsidize the meeting.

Dr. Sarah Poynton of the Division of Comparative Medicine at Johns Hopkins University and the National Aquarium in Baltimore and Dr. Andrew Kane of the Aquatic Pathobiology Center at the University of Maryland are serving as the lead organizers for the symposium. Dr. Poynton has confirmed that several other organizations have agreed to serve as co-sponsors, including the Fish Health Section of the American Fisheries Society and the European Association of Fish Pathologists. Two very successful Symposia on Aquatic Animal Health were held previously - in Vancouver (1988) and Seattle (1994). The symposium planned for 1998 is expected to cover a wide range of topics on the pathobiology of finfish, shellfish and marine mammals.

Steve Tettelbach



## Upcoming Meetings

**Second World Fisheries Congress:** July 28 - August 2, 1996, Brisbane, Australia. The theme of this conference is "Developing and Sustaining World Fisheries Resources: The State of Science and Management." The following questions will be addressed: Why do some fisheries survive while others collapse? What are the roles of science, economics, sociology and politics in fisheries management? How can fisheries resources be allocated? Who owns the fish? What is the scope for development of wild stock fisheries? What is needed to manage fisheries successfully? For information, please contact the congress secretariat: Second World Fisheries Congress, PO Box 1280, Milton QLD 4064 Australia. Phone: (07)3369-0477; FAX: (07)3369-1512; email: im@cc.uq.oz.au

**International Astacology Association:** August 11-16, 1996, Lakehead University, Thunder Bay, Ontario, Canada. Paper and poster sessions will cover all aspects of crayfish science, including culture, physiology, management, taxonomy, zoogeography and ecology. For information contact Dr. Walter Monmot, Dept. of Biology, Lakehead University, 955 Oliver Road, Thunder Bay, Ontario P7B 5E1 Canada. Phone: (807)343-8277; FAX: (807)343-8023; email: Walter.Monmot@lakeheadu.ca

**Fifth Canadian Workshop on Harmful Marine Algae:** September 11-13, 1996, St. John's, Newfoundland, Canada. For information please contact: Randy Penney at phone: 709-772-4704, FAX: 709-772-3578, or e-mail: penneyr@nflorc.nwafc.nf.ca

**San Francisco Seafood Show and Conference:** September 25-27, 1996, Moscone Center, San Francisco, CA. The conference, held on September 25th, will consist of 4 full sessions designed to enhance your knowledge of the seafood industry. The show will run September 26-27th, and is dedicated to representing every type of seafood in every product from around the world. The seafood-specific nature of this show makes it a one-stop resource for market leaders in the industry. When it comes to seafood, this will be the new West Coast venue for sourcing, buying, selling, exchanging ideas and information, tasting and comparing products. Register by mail: San Francisco Seafood Show, P.O. Box 3421, Boston, MA 02241-3421, or by FAX at (207)842-5505. For more information call (207)842-5599

**Pacific Coast Section of the National Shellfisheries Association and Pacific Coast Oyster Growers Association:** September 22-24, Lake Chelan, Washington. For further details, contact Tim Smith at (360) 754-2744

### *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.



## ***Upcoming Meetings, continued***

***Fourth International Congress on Medical and Applied Malacology:*** October 7-11, 1996, Santiago, Chile. The congress will include topics on medical and veterinary malacology, on molluscs in regard to fisheries, aquaculture, agriculture, conservation, biodiversity, and biology (ecology, taxonomy, distribution, genetics, etc.) of mollusc hosts and pests, mollusc-parasite relationships, parasite faunas of molluscs, control of noxious molluscs, etc. The official language of the Congress will be English; however, posters in Spanish with an English summary will be accepted. For information, please contact Prof. Laura Huaquin, Congress Secretary, Departamento Tecnico de Investigacion, Universidad de Chile, Diagonal Paraguay 265, Office 1603, Santiago, Chile. Phone: (56 2)678 55 49; FAX: (56 2)635 39 51

***Marketing and Shipping Live Aquatic Animals and Plants:*** October 13-15, 1996, Port of Seattle Convention Center, Seattle, Washington. This Industry Conference and Exhibition will address the practical considerations of the live seafood industry. Individuals, companies, and agencies involved in the growth, harvesting, processing, regulation, and shipping of live aquatics are invited to participate. For further information contact John B. Peters, Nor'Westerly Food Technology Services, 2743 56th Ave. SW, Seattle, WA 98116. Phone: (206)938-0676; FAX: (206)933-7937; email: 103243.675@Compuserve.com or email Brian Paust at fbcp@acad1.Alaska.edu

***Improving the Health of Coastal Ecosystems Through Shellfish Restoration: An International Conference:*** November 20-23, 1996, Hilton Head, South Carolina, USA. See accompanying ad on page 15. For meeting details, contact Elaine Knight by email at knightel@musc.edu, voice mail: (803)727-6406, or FAX: (803)727-2080

***Annual Meeting of the Society for Integrative and Comparative Biology (ASZ):*** December 26-30, 1996, Albuquerque, New Mexico

***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 sponsor a full day session "Molluscan Aquaculture in the 21st Century, What are the Science Priorities to Enable Industry to Achieve Optimum Development." For details see the story on page 14.

***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. The NSA meeting will be held at the Holiday Inn. For more information contact Dr. William Fisher for local arrangements 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

***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. Abstracts are due in September, 1996, and 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

***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!



## *Publications of Interest*

### Proceedings Available

The proceedings of an international workshop, "Invertebrate Neoplasia: Initiation and Promotion Mechanisms" are available for those who find comparative approaches useful for studies of invertebrate neoplasia. Sponsored by the Society for Invertebrate Pathology and the Society for In Vitro Biology (formerly the Tissue Culture Association), the Proceedings represent a compilation of extended summaries of research reports submitted by workshop participants. The summaries cover a broad spectrum of issues concerned with neoplasia, including: xenobiotics and environmental pollution; screening for human cancer genes; types and diversity of neoplasia in invertebrates; the role of developmental and growth regulatory genes; the possible role of viruses in invertebrate neoplasia; etc. For copies of the Proceedings, please write to: Mrs. Susie K. Hines, Librarian, US Dept of Commerce, NOAA/NMFS/SEFSC, Cooperative Oxford Laboratory, 904 S. Morris Street, Oxford, MD 21654-9724

### Abstracts Available

The Institute of Marine Biology of Crete is pleased to announce the availability at its site on the WWW of abstracts from papers presented at the Second International Conference on the Mediterranean Coastal Environment (MEDCOAST 95), held at Tarragona, Spain, on October 24-27. These abstracts cover a wide variety of topics from marine ecology to remote sensing to management practices. Also available at this web site are texts of various publications by the staff of the IMBC. To access abstracts online via the IMBC homepage, use URL = <http://www.imbc.gr>

### New Journal

*Mangroves and Salt Marshes* is an international journal concerned with the interdisciplinary science and management of tidal wetlands, primarily mangroves and salt marshes. The journal will cover both pure and applied science in physical, chemical and biological oceanography, as well as studies in siltation, fisheries, forestry, aquaculture, and the sustainable use of mangroves and salt marshes. The journal aims to encourage the exchange of information between environmental managers, local and national authorities and scientists by providing a forum for papers dealing with scientifically-based management issues surrounding mangroves and salt marshes. For more information about this quarterly journal, including paper submissions, please contact SPB Academic Publishing BV, P.O. Box 11188, 1001 GD Amsterdam, The Netherlands.

### New Book Release

*Evolution and the Aquatic Ecosystem: Defining Unique Units in Population Conservation*, Jennifer L. Lielsen, Ph.D., editor, ISSN 0892-2284, 435 pp., 1995. These proceedings from a 1994 symposium sponsored by the American Fisheries Society include papers by authors from applied and basic science backgrounds who address conservation of aquatic diversity from an evolutionary and ecological point of view. Information is organized into six topic areas: Perspectives, Morphology and Systematics, Behavior and Life History, Genetics, Ecosystems, and a Panel discussion. Available from: American Fisheries Society, (412) 741-5700, FAX: (412) 741-0609. Price: \$69, AFS members \$41.

## Strengthen industry ties

NSA's Industry and Membership Committees want to attract more members with commercial interests in order to strengthen the link between shellfish research and industry. ***They need your help*** to contact various state, province, and national industry organizations. If you work for Sea Grant, Cooperative Extension, or a similar agency, please send Gef Flimlin the names and addresses of commercial shellfish organizations: Gef can be reached at the New Jersey Sea Grant Marine Advisory service, 1623 Whitesville Road, Toms River, NJ 08755, Phone: (908) 349-1152, FAX: (908) 505-8941



**Announcing:**  
**An International Conference**

***Improving the Health of Coastal  
Ecosystems through Shellfish  
Restoration***

November 20-23, 1996

Hilton Head, South Carolina, USA

The International Conference on Shellfish Restoration (ICSR) will provide an ideal opportunity for government officials, resource managers, local residents and industry representatives from the United States, Canada, Europe, New Zealand, Japan and many other countries to discuss approaches to improve the health of coastal ecosystems through shellfish restoration. Case studies of successful projects will be presented with opportunities for roundtable discussions.

The original concept for this conference was developed by the US National Oceanic and Atmospheric Administration (NOAA) and Environment Canada through a joint East Coast of North America Strategic Assessment Project and has sparked interest throughout the world.

The conference is planned for November 20-23, 1996 at the Crown Plaza Resort on Hilton Head Island, SC, and will consist of oral presentations, panel discussions, and abstracts.

Three themes will be pursued:

I. Remediation

- Pollution Abatement/Point Sources
  - Sewage Treatment Technology
  - Biological Systems for Waste Disposal
  - Design of On-site systems
- Pollution Abatement/Nonpoint Sources
  - Stormwater Runoff Controls
  - Best Management Practices
- Land Use
  - Innovations in Community Design
  - Coastal Management

II. Habitat Restoration

- Artificial Reef Development
- Constructed Wetlands
- Substrate Preparation
- Management of Freshwater Inflow

III. Stock Enhancement

- Relay
- Hatcheries/Remote Setting
- Public Enhancement of Shellfisheries
- New Technology in Equipment and Techniques

Those interested in participating in the conference should request more information by contacting Elaine Knight: email <knightel@musc.edu>; voice mail: (803)727-6406; or FAX (803)727-2080. If you are interested in submitting an abstract, contact Rick DeVoe: email <devoemr@musc.edu>; voice mail, (803) 727-6417 or FAX (same as Elaine's).

***World Aquaculture '97***

***The Annual Conference & Exposition  
for the  
World Aquaculture Society***

February 20 - 23, 1997

Washington State Convention Center  
Seattle, Washington

Hosted by: U.S. Chapter of  
World Aquaculture Society

Sponsors and Associate Sponsors include many Aquaculture Producer and Professional Associations, including the **National Shellfisheries Association**

A major international aquaculture event, this meeting brings together the technical, producer, and supplier segments of the aquaculture industry. The conference offers a full program of technical sessions, special sessions, producer seminars, receptions, industry tours, one of the largest aquaculture tradeshows in the world, and more!

The conference program will address a full range of topics of critical importance and interest to the industry. Technical sessions will include (but not be limited to) the following areas: Biotechnology, Computer Technology, Drugs/Therapeutics, Economics, Education/Extension, Effluents, Engineering, environmental Monitoring, Farm Production, Feeds/Nutrition, Fish Culture, Fish Health, Fisheries Enhancement, Genetics, Marketing Mollusc Culture, Offshore Technology, Polyculture, Quality Assurance/HACCP, Regulations and Shrimp Culture. **Papers on farm management, production systems and international policy & development are encouraged. Papers that focus on the role of science and technology in the future global development of sustainable aquaculture are also encouraged.**

Producer seminars will address concerns of farmers, processors and the marketing of farmed product. The latest in aquaculture technology will be presented by industry leaders.

The entire program will address all aspects of aquaculture for species from all over the world regardless of the culture environment.

To receive the full conference brochure, please contact World Aquaculture '97, Conference Manager, 21710 7th Place West, Bothell, WA 98021. Phone: (206)485-6682; Fax: (206)483-6319.



**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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