

National Shellfisheries Association

QUARTERLY NEWSLETTER



POST MEETING/EARLY SUMMER 1997

SOUTHAMPTON, NEW YORK

President's Inaugural Message

The National Shellfisheries Association started almost a century ago as just that.... a National Association of growers and scientists. However, since its inception it has grown well beyond those initial aims to become a truly international association with members in 37 countries throughout the world. This growth has only come from the concerted efforts of many volunteers who have been motivated by a common interest in shellfish. Many details of these earliest activities of NSA are gradually becoming lost in the mists of time. Therefore, we should all be grateful to Mel Carriker who is devoting his time to writing up some of the early history of this organization. It is indeed an honor for me to be elected president of such an esteemed professional society with its illustrious history. I am especially pleased to recognize the efforts of my immediate predecessor, Steve Tettelbach, who has served NSA in many capacities, including the onerous job of Treasurer.

I am also very appreciative of Sandy Shumway's ENORMOUS contributions to NSA over the last 15 years. She has served in many elected positions, including President and in the non-elected capacity as fund-raiser-in-chief for the Student Endowment Fund, auctioneer and, dare I say, "Den Mother" and the repository of all details on how NSA runs. The only other person who also serves as "corporate memory" is Mike Castagna, to whom NSA neophytes such as me can always turn to for sound advice. But perhaps Sandy's greatest contributions to the Society are her indefatigable efforts to raise the visibility of *The Journal of Shellfish Research* and make it a true international journal. I would like to ask NSA members to help Sandy with that task by reviewing papers to ensure a consistently high standard and also to submit relevant research papers for publication in our journal.

In addition to *JSR*, the *Quarterly Newsletter* has continued to become an ever more valuable source of information. Carolyn Mueller Hansen initiated these changes and Maureen Krause has amplified them in recent years. This autumn Maureen will be passing the editorship into the capable hands of Jay Parsons. But whoever the editor, the newsletter, like so many aspects of a professional society, depends on the members to make it a success. Therefore, I encourage you to reap the personal satisfaction of contributing to the newsletter, and other aspects of YOUR society. All members of the EXCOM will be pleased to help you become more involved in NSA.

One reason I enjoy being a member of NSA is the wonderful combination of science and camaraderie that we all experience at our Annual Meetings. This spirit was again in evidence at our 89th Annual Meeting in Fort Walton Beach...a perfect beachfront venue for a spring meeting of marine scientists. Bill Fisher, chair of the local arrangements committee, and Bess Ormond who ran the registration desk, are to be congratulated on putting together a good meeting. Jay Parsons, VP and Program Chair, coordinated the strong program of posters and papers, including a record number of student presentations. Dan Kreeger and the members of the student awards committee had the hard but rewarding task of evaluating these presentations and posters for various awards. As detailed elsewhere in the newsletter, Lisa Bramble is to be congratulated for being awarded the Thurlow C Nelson award for her presentation. Alison Sipe also deserves congratulations for winning the poster award. This active participation by students is very heartening and bodes well for NSA being able to stay a healthy and useful organization for many years to come.

In addition to the usual thematic sessions typical of our annual meetings we were treated to strong sessions on Freshwater Bivalves organized by Tim King, Rita Villella, and Catherine Gatenby. The involvement in the meeting by colleagues working on freshwater shellfish builds on their session at the Baltimore meeting last year. It is one of my objectives as President to strengthen this cooperation. I believe that by embracing all groups working on shellfish, NSA will become stronger and of more value to its members. Such participation may also help foster collaborative programs between researchers working on marine and freshwater animals.

Although it is easy to discuss where NSA has come from, it is considerably more complicated to help direct it to meet the challenges that lie ahead. In my capacity as President, I will try to focus on ways to make NSA most relevant to the needs of the membership. To this end I have organized an *ad hoc* committee to evaluate how the Web page (www.shellfish.org) that Scott Siddall has organized for NSA can be made even more useful. Ideas we are thinking about include putting membership and member's research interests in a searchable database. This will allow other scientists or industry find members with particular expertise.

I am also interested in continuing to further the participation in NSA of groups outside academic research, a plan

initiated by John Kraeuter when he was President. I believe that this includes both the shellfish industry and other beneficiaries of our research, such as Federal and State resource management personnel. We have already seen such cooperation with special sessions at recent annual meetings or follow-on meetings after the NSA meetings have closed. Joth Davis is chairing the industry committee and is working on ways to ensure that these ambitious goals can be achieved. But Joth will need ideas from NSA members in order to succeed; therefore, please contact him with your ideas and suggestions.

Finally, some practical matters. Our next NSA meeting is part of the Triennial Aquaculture Meetings organized in conjunction with the World Aquaculture Society and American Fisheries Society. The meeting is going to be in Las Vegas between February 15 and 19, 1998. Sandy Shumway, the NSA representative on the organizing committee, and Rick De Voe, Program Chair, are working on making the meeting a success. If you wish to present a paper or poster remember that abstracts have to be submitted by July 31st (see details elsewhere in the newsletter).

Roger Newell

89th Annual NSA Meeting - Fort Walton Beach, Florida

The 89th Annual NSA Meeting was held April 20-24, 1997 at the Fort Walton Beach Holiday Inn and was a tremendous success. A total of 148 oral presentations and 20 posters informed and occasionally entertained conference attendees. The quality of the presentations, particularly those given by students, was exceptional. This year's conference included two full-day sessions devoted to freshwater mussels, as well as several industry-oriented sessions. I believe that most members will agree that the freshwater folks contributed a great deal to the meeting and were a very welcome addition. The conference was preceeded by the "Spatial Data and Remote Sensing in Invertebrate Fisheries Workshop" organized by Aaron Rosenfield and Gary Smith, and was followed by a blue crab stock assessment workshop. Let's hope that similar groups join our meetings in the future since we all benefit from these interactions. Fort Walton Beach was a pleasant site for a spring meeting - the beaches were truly magnificent - and with the exception of a bit of wind, the weather was great. Thanks to everyone who helped organize and run this fantastic meeting!

The conference opened with reception by the "Tiki Bar" and pool, complete with delicious and fresh Gulf oysters. On Monday we enjoyed a poolside buffet lunch between sessions. Following the afternoon poster session, many of us were treated to what has become an annual event to anticipate - Ken Chew's Chinese Banquet. This year's dinner was arguably one of the best ever. Guests enjoyed an delectable buffet that even

featured a whole roasted pig! The waterfront location was a bonus, as well. Tuesday's meeting included a full day of presentations followed by an enjoyable and exciting evening at the student reception and "annual action-packed and audacious auction" in aid of the Student Endowment Fund. Sandy Shumway was, as usual, an able auctioneer and the audience was enthusiastic (and generous) in their participation. (Let's hope that all of the neon-pink NSA baseball caps were sold!) All monies raised have been added to the Student Endowment coffers which help support student travel and participation in our annual meetings. Thanks to everyone who contributed or purchased items. The home brews were especially tasty this year!

Wednesday's events were highlighted by the business meeting and lunch which included the passing of the gavel from Steve Tettelbach to our new President, Roger Newell. Thankfully most of the official addresses by the officers and committee chairs were brief, allowing plenty of time for the awards presentation. Mike Castagna presented the Wallace award (see picture on next page) to John Kreauter, a very deserving individual. Congratulations!

Forty-six student presentations made for tough competition for the Thurlow C. Nelson Award at our 89th Annual Meeting. Dan Kreeger, chair of the Student Awards Committee, presented the Nelson Award to Lisa Bramble, University of Maryland, for her talk entitled "Chemiluminescent response of oyster hemocytes to *Listonella*." Honorable mentions were awarded to Ryan Carnegie, University of Maine, and Matt Patterson, Virginia Polytechnic and State University. Alison Sipe, University of Delaware, was the winner of the best poster award for "Molecular determination of symbiont transmission strategies in wood-boring bivalves". Congratulations to all! Record student participation was matched by record support for students to attend the meeting. Seventeen students received Student Endowment Fund Travel Awards: Congratulations to Heather Yarnall, Carrie Deming, Martha Smith, Christine Scanlon, Anita Wright, Xin Liu, Matt Parker, Kevin Strychar, Julie Gauthier, Maya Crosby, Ryan Carnegie, Cathleen Coss, Scott Medler, Kelly Toy, Lisa Bramble, Francisco Cordoza-Velasco, Suzanne Dufour, Marrit Caers, and Eva Fernandez. Along with other volunteers (Catherine Gatenby), these students assisted with A/V chores and manning the registration table. Thanks for your help! Dan Kreeger is to be commended for the tremendous task of organizing and administering the student awards. Thanks as well to all of the NSA members who volunteered their time to judge either student presentations and/or travel award applications: Peter Beninger, Monica Bricelj, David Bushek, Mike Castagna, Fu-Lin Chu, Lou D'Abramo, Darrel Donahue, Brett Dumbauld, Carolyn Friedman, Karolyn Mueller Hanson, Maureen Krause, Dan Kreeger, Bruce MacDonald, Jay Parsons, Anja Robinson, David Rouse, John Scarpa, Sandy Shumway, Aswani Voley, and Ami Wilbur.

All in all, the 89th Annual NSA Meeting was a grand success. Hope to see you all in Las Vegas for Aquaculture '98, which marks our 90th Annual Meeting!

1997 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 are published in the *NSA Quarterly Newsletter* as they were presented at the NSA Annual Meeting.

Dr. John N. Kraeuter

It is with a great deal of pleasure that I make this presentation for the David Wallace Award. You have heard Bill Fisher explain what the award is for. It is often difficult to find a person with the interest, background and personality to qualify for the position. This nominee is eminently qualified to receive this honor.

I have had the pleasure of his friendship since his student days and had the honor of working and collaborating with him for more than a decade.

The Executive Committee voted unanimously to bestow the David Wallace Award on John Kraeuter.

Most of you know John by his good humor and booming laugh.

John was born in New Jersey. He grew up in Florida and Maine. He majored in biology at Florida State University with minors in chemistry and geology, received his Masters at William and Mary, then earned his doctorate from the University of Delaware working on scaphopods.

From there he worked at Sapelo Island, GA and then moved to the Virginia Institute of Marine Science. While at VIMS he designed elegant experiments on clam aquaculture techniques. He coauthored a book on clam aquaculture, one of Sea Grant's best sellers, and helped a fledgling clam growing industry get started. He was tireless and enthusiastic in his extension work.

He next worked for Baltimore Gas and Electric where he was charged with starting a fish hatchery. He then moved to his present position at the Haskin Shellfish Research Laboratory of Rutgers University where he is presently immersed in establishing a mariculture center. He is deeply involved in extension work with the industry, editing a book on *Mercenaria*, and reviewing manuscripts for a number of journals including *JSR*. He helped the National Aquaculture Association develop the new Quality Assurance Guidelines standards and is active with the Northeast Aquaculture Center. That's only a partial list of his activities, and he and his wife Carol still run the family summer cottages in Kennebunkport, Maine. He is a past president of NSA, serves on the publications committee and has served as an editor for *JSR*.

It is with pleasure that I present the David Wallace Award to John N. Kraeuter.

Michael Castagna



Congratulations to John Kraeuter, 1997 winner of the David Wallace Award. Pictured here is John (right) receiving his award from Mike Castagna (left).

Resolutions

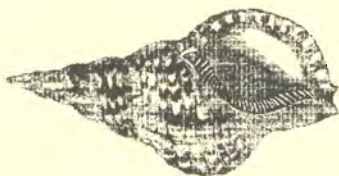
WHEREAS, the National Shellfisheries Association (NSA) is a not-for-profit corporation; and **WHEREAS**, NSA as a whole aspires to use its knowledge and expertise for the responsible stewardship of shellfisheries resources; and **WHEREAS**, Bob Ingle, during his career on the Gulf Coast and as a member of NSA, served as an outstanding liaison between often competing regulatory, industry, and scientific issues, therefore **BE IT RESOLVED** that on April 23, 1997 the NSA expressed its deep regret over Bob's passing and sends its condolences to Bob's family and friends.

WHEREAS, the National Shellfisheries Association (NSA) is a not-for-profit corporation; and **WHEREAS**, record keeping and communications within NSA are critical for the continued success of our Association; and **WHEREAS**, these systems are maintained from year to year by goodwill and volunteerism; and **WHEREAS**, Scott Siddall's outstanding and unceasing work to create, maintain, and upgrade the NSA database system has served the whole of NSA; and moreover **WHEREAS**, his creation of the NSA website and Shellfish discussion group has further enabled widespread communication between NSA members and other interested individuals and organizations; therefore **BE IT RESOLVED** that on April 23, 1997 the members of NSA recognized and expressed their deep gratitude to Scott for these contributions.

WHEREAS, the National Shellfisheries Association, Inc. (NSA) is a not-for-profit corporation; and **WHEREAS**, the program for the 89th Annual Meeting of the NSA in Fort Walton Beach was crafted by the spirit and hard work of Program Chairman Jay Parsons; therefore **BE IT RESOLVED** that on April 23, 1997, NSA formally recognized and thanked Jay for his efforts in organizing another successful and rewarding program.

And on a lighter note:

WHEREAS, the National Shellfisheries Association (NSA) is a not-for-profit corporation; and **WHEREAS**, the majority of our time at NSA meetings is spent sitting on one's butt; and **WHEREAS**, sitting on one's butt can generate surprisingly keen appetites considering the sedentary nature of it, therefore, **BE IT RESOLVED** that on April 23, 1997, the NSA formally requested that all dinner plates used in association with buffets and refreshments exhibit a minimum size of 8".



NSA Membership Report

As of the annual meeting in April, NSA membership stood at a healthy 822 members. This represents an increase of 37 members. According to Evan Ward, seventy of these members are new, so we gained nearly twice as many as we lost over the past year. Demographically, our membership represents 37 countries. The United States continues to dominate the membership with 600 members. The U.S. is followed by Canada (70), Australia (17), Japan (14) and New Zealand (10). Personal contacts with colleagues continues to be our most successful method for increasing membership. We would like to thank those individuals that served on the committee: Gef Flimlin, Jeff Davidson, Bill Arnold, Jim Lester, Tim King, Robert Vega, Marie Castiglione, Megan Davis, Lou D'Abramo, and Dan Molloy. Your efforts are appreciated. This year, Dave Bushek will continue to co-chair the membership committee, but Joedy Gray will step down and pass his responsibilities on to Lou D'Abramo. Thanks for all your great work Joedy!

MEMBERSHIP RECRUITMENT CONTEST CONTINUES!

Incoming president Roger Newell has requested that the membership committee continue the recruiting contest initiated last year by Joedy Gray. Last year approximately forty new members joined the society, many as a result of these recruiting efforts. Sandy Shumway recruited the most new members followed by Catherine Gatenby. Sandy received a free registration to the annual meeting in Fort Walton Beach, FL which she used to help bring Scott Siddall to the meeting and assist the ExCom members with NSA administration. Catherine Gatenby receives a free one year membership in the society.

Congratulations to both of you. This year, we cannot offer free registration to the triennial meeting with WAS in Las Vegas, but we can offer free memberships in NSA. To qualify for a prize you must recruit at least three new members (more for 1st and 2nd prize). First prize is three years free membership, second prize is two years and third prize is 1 year. To enter, simply recruit new members and add your name to the top of their membership application. A copy of the application form is enclosed in this newsletter or can be copied from a recent issue of JSR or can be printed from the NSA website (<http://www.shellfish.org>). Nancy Lewis will forward us copies of applications from newly recruited members and we will keep a tally of how many new members each current member recruits. New applications must be received before the Las Vegas meeting in February where we will announce the winners. ExCom members as well as the co-chairs of the membership committee are not eligible (so you don't have to worry about Sandy's recruiting prowess). Contact membership committee co-chairs Dave Bushek or Lou D'Abramo for any questions that you may have. Good Luck.

Dave Bushek

Book Review

The Eastern Oyster, *Crassostrea virginica*. Edited by V.S. Kennedy, R. I. E. Newell, and A. F. Eble. Maryland Sea Grant College. Publication UM-SG-96-01. College Park, Maryland. 1996. 734 p. \$95.00.

The standard single-volume reference for *Crassostrea virginica* has been Galtsoff's 1964 tome, "The American Oyster." Many refer to it as the "bible" of oyster biology, an appellation with which I agree (but perhaps for the wrong reason), for both are large, old books that can't always be taken literally. At the risk of "bivalvian blasphemy," Kennedy, Newell, and Eble have edited a work of greater depth, breadth and authority than its predecessor. That this could be achieved is not surprising; that it was achieved is a testimonial to their efforts. It has been more than 30 years since Galtsoff's contribution; the literature has expanded greatly, new techniques have provided new insights, and a natural specialization in the field has occurred. Indeed, few if any oyster biologists today would attempt the kind of synthesis accomplished by Galtsoff. The editors and contributors acknowledge their debt to Galtsoff and, in fact, many articles start where he finished.

The Eastern Oyster, Crassostrea virginica is a major work that has been years in the making. (One of my shellfisheries colleagues quipped that the book was going to be a "classic" before it was published.) Whereas more than half of Galtsoff's book dealt with oyster anatomy, *The Eastern Oyster* has a much greater coverage of topics. It contains chapters on taxonomy (M. R. Carriker and P. M. Gaffney), general anatomy (A. F. Eble and R. Scro), the shell and ligament (M. R. Carriker), adductor and mantle musculature (C. M. Morrison), physiology of feeding (R. I. E. Newell and C. J. Langdon), digestion and nutrition (C. J. Langdon and R. I. E. Newell), the circulatory system (A. F. Eble), hemocytes (T. C. Cheng), reproduction and early development (R. J. Thompson, R. I. E. Newell, V. S. Kennedy, and R. Mann), biology of larvae and spat (V. S. Kennedy), biochemical and population genetics (P. M. Gaffney), chromosomes, biology, and breeding (A. C. Longwell and S. S. Stiles), natural environmental factors (S. E. Shumway), response to metals (G. Roesijadi), effects of lipophilic organics (J. M. Capuzzo), predators, pests and competitors (M. E. White and E. A. Wilson), diseases and defense mechanisms (S. e. Ford and M. R. Tripp), genetic improvement (G. Newkirk), culture applications (M. Castagna, M. C. Gibbons, and K. Kurkowski), transfers and introductions (J. T. Carleton and R. Mann), and management of natural populations (C. L. MacKenzie, Jr.).

There are inherent editorial difficulties in producing a multi-authored volume. The editors have done an excellent job at maximizing the advantages and minimizing the disadvantages of multiple authorship. The contributions are of a high technical quality and, although there are stylistic differences from chapter to chapter, they are all well written. A

disappointing difference in the chapters was that, whereas some provided stimulating suggestions for future research and satisfying end-of-chapter summaries, others provided neither. Also, although it is desirable to bring in supportive literature from other bivalves, occasionally the eastern oyster literature was not fully exploited. Material in some chapters overlapped topics in others and some identical figures appeared in more than one chapter; however, this makes for a more readable text and allows the chapters to better "stand alone." Helpful cross references to similar discussions in related chapters occur throughout the text. The book is almost free of typographical errors, misspellings and reference errors. (Curiously, one of the two copies of the book I saw has type style differences within and between chapters.) The figures are of variable quality, from the poor reproductions of figures taken directly from Galtsoff's work to the excellent, thoughtful figures drawn especially for this volume. For a work of such breadth, it seems an unfair desire, but I truly would have liked to see a good synthetic chapter dealing explicitly with population and community ecology. In any case, my criticisms are few and my praise is abundant. This is an essential book for all practicing oyster biologists and oyster resource managers. It is useful to malacologists and estuarine ecologists, and deserves a place in every university and marine-science library.

Thomas M. Soniat

Reprinted from *Estuaries* 20(1):250

Important Notice to all Members:

The Treasurer's Office is Moving

NSA Treasurer, Evan Ward, is moving to a new position at the University of Connecticut. This will not effect new member applications and membership dues, which should continue to be sent to the Bookkeeper, Ms. Nancy Lewis, in Virginia. As of September 1st, 1997, all items for the Treasurer should be sent to:

Dr. J. Evan Ward, Treasurer
National Shellfisheries Association
c/o Department of Marine Sciences
University of Connecticut
Groton, CT 06340-6097

Metamorphoses

Karolyn Mueller Hansen and clan are moving from the Washington Area to Knoxville, TN, where her husband has taken a job with EG&G Instruments at the end of July. By the way, Karolyn and her husband Doug recently welcomed a new baby into their home. Kirsten Anne Hansen was born on February 26, 1997. Congratulations and good luck with your move!

It is with regret that we report the passing of **Robert M. Ingle**. Bob suffered a stroke and passed away on April 3, 1997. He is survived by his wife Ann, four sons, a daughter, and four grandchildren. His biography will be published here or in *JSR* at a later date. Our sympathies to his family - he will be missed.

Evan Ward is leaving Salisbury State University in Maryland and moving a bit closer to his native Canada. He will join the faculty of the University of Connecticut starting this fall. Congratulations and good luck in your new position!

If you have an item for this column, please contact either Jay Parsons or Maureen Krause.

Audit-Budget-Finance Update

The National Shellfisheries Association remains in the strongest financial position in its history. Total revenues for the 1995-96 fiscal year (October 1995 through September 1996) were \$183,990 and expenses were \$172,915 for an increase of \$11,075 to our overall balance. Our goal of \$126,000 in cash reserves by the end of our 1997-98 year seems within sight, although we now think we will actually need more than that to operate when that time comes. At the end of the last six fiscal years our resources have gone from \$10,150, to \$34,800, to \$61,250, to \$42,400, to \$108,600 and finally to \$119,700 by the end of September 1996.

Administrative revenues and expenses for 1995-96 were \$37,243 and \$27,265, respectively, for an increase of \$9,978. Publication revenues climbed to \$101,204 and expenses were \$109,842 for a decrease of \$8,638. And the Baltimore meeting revenues were \$45,543 and expenses were \$35,808 for a gain of \$9,735.

The proposed budget for the 1997-98 fiscal year, which begins 1 October 1997, projects a gain of \$5,290 from administrative activities, a decrease of \$825 from publications, and a gain of \$30,000 from our triennial meeting in Las Vegas in February 1998. If these revenues and expenses are realized it would increase the Association's balance by another \$34,465. Changes in our accounting procedure shift \$15,000 from administrative revenues to publication revenues, and newsletter costs are also covered by administrative revenues; this helps reduce the decreases previously encountered by publications each year.

A detailed review of the NSA financial ledgers was conducted at the end of the 1995-96 year following a transfer of the books from Christine Hodgson to Evan Ward. A review consists of analyzing the financial data presented by the treasurer and is substantially less in scope than an audit, the objective of which is the expression of an opinion regarding the financial statements taken as a whole. An outside audit would probably cost us several thousand dollars, an outside review would cost several hundred dollars, but an inside review costs nothing. Based on this review there appear to be no material modifications that should be made to the 1995-96 financial statements in order for them to be in conformity with generally accepted accounting principles for nonprofit organizations.

George Abbe, Chairman
Audit-Budget-Finance Committee

Recruits Corner

I hope these past months have been exciting and productive for all. The 89th Annual Meeting of the National Shellfisheries Association at Fort Walton Beach was a great success, and was marked by an impressive showing by students, over forty of whom presented papers or posters. The future of the NSA does look bright. Congratulations on a job well done, especially to Lisa Bramble, winner of the Thurgood Nelson Award for best student paper, and Alison Sipe, winner of the best student poster award.

Thanks too for all your help with the audio-visual responsibilities and with the registration and sales desks. The involvement of students is always appreciated, and in the case of the sales desk—proceeds from which support the NSA Student Endowment Fund—facilitates the future attendance of students at the NSA's meetings. We are especially grateful to Sandy Shumway and Jay Parsons, who have worked so hard to build the Student Endowment through sales and the annual auction.

It seems a bit strange to be concerned with the next meeting so soon after the last. The abstract deadline of July 31 for the triennial joint meeting next year of the NSA with the World Aquaculture Society and the American Fisheries Society Fish Culture Section makes this necessary. If you're interested in applying for travel assistance from the NSA Student Endowment Fund or entering the contest for one of the presentation awards, be sure to submit your abstract in time, and to submit the application for student awards enclosed in this newsletter.

Student attendance at the Las Vegas meeting should be high, particularly since we have a good chance to recover all our travel expenses (and augment our meager stipends) at the gaming rooms. If you have any questions regarding gambling etiquette, rules, or the odds of winning specific games, feel free to contact James Anderson (anderj1@mail.auburn.edu). Have a great summer!

Ryan Carnegie

In Memoriam

This past September of 1996 Paul Chanley, one of the pioneers of molluscan aquaculture, died of a brain tumor. Those of us who had the pleasure of working with Paul will remember his charm, great disposition, his sense of humor, and especially his brilliance. Paul not only threw great parties but was a party wherever he went.

Paul was born 3 December, 1930, in Dublin, Indiana and received his BA from Denison University, Granville, Ohio, and an MA from William and Mary, Williamsburg, VA in 1967.

In June of 1989, Paul suffered a near-fatal automobile accident which resulted in some brain damage from which he never fully recovered. He was not able to work after that event.

Professional experience:

- 1950-52 Fish Conservation Aid, Ohio Conservation Department, Granville, Ohio. This was a student position in which Paul assisted in studies of growth, reproduction, and hybridization of several species of freshwater fish.
- 1952-62 Fisheries Research Biologist, National Marine Fisheries Service, Annapolis, MD (1952), Milford, CT (1953-62). Paul assisted in laboratory and field studies of commercially important bivalve mollusks initially, and later designed, conducted, and reported on experiments on cultivation of bivalve larvae.
- 1962-69 Assistant Scientist, Virginia Institute of Marine Science, Wachapreague, VA (1962-67), Gloucester Point, VA (1967-69). Paul designed, conducted and reported on experiments on adult bivalves and on larval culture and behavior. He managed the larval culture lab and produced selected strains of oysters. He also developed a useful key to common bivalve larvae of Virginia.
- 1969-1971 Biologist, Marinus Laboratories (which later evolved into Off/Shore Sea Development Co.), Melbourne, FL. Paul designed plans to develop a shellfish hatchery and seafood business. Both companies lacked capital and went out of business before the plans were put into practice.
- 1971-77 Biologist, Shelter Island Oyster Company, Greenport, NY. Paul established and managed their commercial shellfish hatchery and farm. Primary production was in oysters (*Crassostrea virginica*) and hard clams (*Mercenaria mercenaria*). Experimental production was established in scallops (*Argopecten irradians*) and lobsters (*Homarus americanus*). Paul, with his wife, obtained an NIH contract to develop methods for rearing and shipping squid (*Loligo pealei*) for neurological research.

- 1978 Senior Research Fellow, Fisheries Research Division, Wellington, New Zealand. Paul reared and described larvae of New Zealand bivalve mollusks. With New Zealand scientists and his wife, he also investigated the bacteriology of shellfish hatchery culture systems.
- 1979 Marine Biologist, Fundacion Chile, Coquimbo, Chile. Paul established and managed a shellfish hatchery at Universidad del Norte. While there he cultured 10 species of commercially important Chilean mollusks (mussels, clams, scallops, and oysters) to determine their mariculture potential. This was a consultant position through ITT.
- 1980-89 President, Indian Rivers Mariculture, Inc., Grant, FL. Paul established the company to own and operate a commercial shellfish hatchery and farm. He also provided consulting and laboratory services and undertook contract research. Major income was from the sale of farm-raised clams (*Mercenaria mercenaria*). Principal consultant clients included Universidade Federal, Salvador, Bahia, and Sergipe, Aracaju, Brazil, to advise on commercial oyster farming and an experimental oyster hatchery for *Crassostrea rhizophorae*; University of Puerto Rico and the National Marine Fisheries Service in Parguera, PR, to develop mass culture techniques for the queen conch (*Strombus gigas*) and determine the feasibility of mariculture for restocking; IQF del Pacifico, Lima, Peru, on the feasibility of establishing a scallop farm; Rutgers University, Bivalve, NJ, to establish large-scale breeding of disease-resistant oysters. Paul and IRMI had a National Science Foundation SBIR contract for preliminary research to develop a mariculture source of inexpensive clam meat for processed products.

Professional Organizations: National Shellfisheries Association, World Aquaculture Society, Florida Aquaculture Association, Shellfish Farmers Association, New England Estuarine Research Society, Atlantic Estuarine Research Society (former Secretary-Treasurer)

Paul published 45 scientific papers between 1953 and 1986.

His surviving family includes a sister, Juanita Jahn of Ann Arbor, Michigan; a brother, Henry Chanley of Syracuse, NY; wife, Mattie Chanley of Palm Bay, FL; a son, David Chanley of Grant, FL; a daughter, Karen Bellenir of Brighton, MI; and three grandchildren, Michael, Elizabeth, and Andrew Bellenir, all of Brighton, MI.

Contributed by Mike Castagna

Visit www.shellfish.org for the latest updates on meeting information, an electronic version of the registration form, as well as links to other shellfish-related sites

NATIONAL SHELLFISHERIES **ASSOCIATION STUDENT ENDOWMENT** **FUND**

The National Shellfisheries Association Student Endowment Fund was established in 1989 to maintain and expand the participation of students in the Association. Contributions for the Fund are tax-deductible and are used to defray the costs associated with presenting oral and poster presentations at the Annual Meeting. The funds are administered by an appointed committee which reviews student applications and makes recommendations for disbursement of funds.

STUDENT ENDOWMENT/AWARDS **Aquaculture '98, Las Vegas**

Students participating in the 1998 meeting in Las Vegas are invited to apply for **travel awards** and **presentation awards**. For consideration for either award, students must present only their original research. Recent graduates will also be considered if they present only research gathered while a student. A short description of these awards and the requirements for consideration follow. Please note that incomplete applications may not receive equal consideration for either type of award.

PRESENTATION AWARDS

At every annual meeting, the best oral and poster presentations by students are acknowledged.

The **Thurlow C. Nelson Award** is to be given for the outstanding oral presentation of research that represents a distinctive and valuable contribution to shellfisheries science. The award is named after the distinguished shellfish biologist who served as NSA President from 1931 to 1933 and contrib-

uted more than 125 papers, many relating to oyster biology. The award includes a certificate of accomplishment and membership for four years in the Association. Oral presentations are judged on the following aspects: a) written abstract, b) scientific content and relevance, c) oral and visual aspects of the presentation, and d) handling of questions.

The **NSA Student Poster Award** is to be given for an outstanding poster presentation of research that represents a distinctive and valuable contribution to shellfisheries science. The award includes a certificate of accomplishment and membership for one year in the Association. Poster presentations are judged on the following aspects: a) written abstract, b) scientific content and relevance, c) quality of figures and text, and d) handling of questions.

STUDENT TRAVEL AWARDS

To facilitate the active participation by students in Aquaculture '98, travel awards will be granted to cover either registration and/or lodging. These funds are competitively awarded based primarily on abstract quality and secondarily on financial need (i.e., distance of travel, support level).

AWARD REQUIREMENTS

Students will not be considered for travel and presentation awards unless they complete all of the following items. Students who do not need assistance but still wish to be considered for a presentation award must still complete these tasks.

- 1) Check the appropriate box on the abstract submission form requesting consideration for student presentation awards.
- 2) Include the proper abstract fee.
- 3) Mail the abstract transmittal form as requested in the Call for Papers (i.e., send or electronically submit to Aquaculture '98 Conference Manager).

continued on next page



Congratulations to the winners for this year's student presentations. The quality of all of the students' talks was exceptional. Pictured here from left to right are NSA (then) President Steven Tettelbach, Nelson Award winner Lisa Bramble, recipients of Nelson award Honorable Mentions Ryan Carnegie and (far right) Matt Patterson, and the Poster Award winner Alison Sipe.

- 4) Fill out the Student Award Application Form below. Send this along with a copy of the abstract submission form to the Chairperson of the Student Awards Committee.
- 5) Complete both 3 and 4 before the **July 31st** abstract deadline.

Note that this is a departure from the normal procedure of sending both the awards application and transmittal package to the same person, the NSA Program Chair. Two envelopes must be mailed - the first should contain the fee and original abstract transmittal form sent to the Conference Chair and the second should contain a copy of the abstract transmittal form and the completed awards application form sent to the NSA Awards Committee Chair listed below:

Dan Kreeger, Patrick Center for Environmental Research, Academy of Natural Sciences, 1900 Franklin Parkway, Philadelphia, PA 19103; phone: 215 299-1184; FAX: 215 299-1079; Email: kreeger@acnatsci.org

Members: Does your Institutional Library subscribe to the Journal of Shellfish Research? If not, please ask them to do so!

STUDENT ENDOWMENTS AND AWARDS

APPLICATION FORM FOR STUDENT PRESENTATION AND TRAVEL AWARDS FOR THE 90TH ANNUAL MEETING OF THE NATIONAL SHELLFISHERIES ASSOCIATION LAS VEGAS, NEVADA, FEBRUARY 15 - 19, 1998

NAME: _____

INSTITUTION: _____

PRESENTATION TITLE: _____

IS THIS AN ORAL OR POSTER PRESENTATION (Circle one)? ORAL POSTER

DO YOU WANT TO BE CONSIDERED FOR A PRESENTATION AWARD (Circle One)? YES NO

DO YOU WANT TO BE CONSIDERED FOR A TRAVEL AWARD (Circle One)? YES NO

ADDRESS: _____

PHONE: _____ EMAIL: _____

REFERENCE (Advisor / Mentor): _____

APPLICANT'S SIGNATURE: _____

DEADLINE FOR RECEIPT OF APPLICATIONS BY DAN KREEGER IS 7/31/97!

PUBLICATIONS AVAILABLE

Clam Farm:

A Shellfish Culturist's Managment Software

The hard clam culture industry on the East Coast of the US has grown steadily over the past fifteen years. There are many growers from New England to the Gulf of Mexico. Shellfish hatcheries provide seed for the growers who raise the seed to market size in various sized plots in the bay bottom. Clam farmers manage various numbers of these plots for two to three years until the seed become marketable clams. Presently what data is recorded about the individual leases or plots is logged mostly on paper. Yields are rarely calculated and the disposition of each plot is usually left to memory. Clam farmers may not have a true idea of what type of survival they have during their growout phase, and thus can't determine whether the areas which they lease are actually a good or bad place for shellfish culture. Farm management programs have not been developed to assist the industry in realizing the successes or failures of their operations, and to begin a

documentation of one production cycle versus another. Until now.

An innovative computer program for the management of the long line culture of mussels on Prince Edward Island (PEI), Canada, was developed by Dr. Jeff Davidson of the Department of Health Management at Atlantic Veterinary College in PEI. Gef Flimlin, Marine Extension Agent, with the help of a NJ Sea Grant Development Grant and the Northeastern Regional Aquaculture Center, worked with Dr. Davidson to modify the program so that it would be applicable to the hard clam culture industry from Massachusetts to Florida.

This software program is designed to be both simple and effective, and serve as a business management tool for clam growers.

The software program which runs as a DOS program is very simple to use since it follows a Windows style of presentation. The software allows the grower to input his planting regime including seed source and size, lease and plot used,

continued on the next page

Recruited by? _____

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) which may be paid by credit card, check, or money order. 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: _____

Phone: _____ Fax: _____ Email: _____

Shellfisheries interests: _____

Regular or Student membership? _____

Student members only - Advisor's signature REQUIRED _____

If paying by credit card: Type of card: VISA MASTERCARD (circle one)

Name on card: _____ Signature: _____

Expiration Date: _____ Number: _____

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.

predator screen size, and other environmental parameters from the time of planting. The grower can then add comments later about various situations which impact the plot such as a storm or hurricane, holes in the screens from outboards, predator data, blow-out tides during freezes, ice damage, or heavy biofouling. Once the original plots are created in the data-base, information can be added in batches of plots instead of one plot at a time. This helps simplify the process and make it more user friendly. Management notes can be reviewed at harvest time to assess impacts on the success, or lack of, for that planting.

Graphs of various components of the growout can be accessed in report form comparing growth of shellfish over various time periods.

ClamFarm is available from the NJ Sea Grant Marine Advisory Service. The cost of the computer disc with the program and a copy of the manual is \$44.95. Checks can be made out to "Ocean County Board of Agriculture," and sent to the Ocean County Extension Center, 1623 Whitesville Road, Toms River, NJ 08755. If there are any questions about the software, you may contact Gef Flimlin, the marine extension agent at (908)349-1152.

Oyster Culture: Fundamentals and Technologies of the West Coast Industry

Publication of the Western Regional Aquaculture Center
F.S. Conte - S.C. Harbell - R.L. RaLonde

Oyster Culture: Fundamentals and Technology of the West Coast Industry was written through a grant provided by the Western Regional Aquaculture Center (WRAC). The publication is prepared in a computer-digitized format for application as hard-copy, on the Internet, and CD-ROM. The loose-leaf format allows for corrections and expansions to be distributed for inclusion within the original document. The first printing of the document was in 1994. Since that time, changes have been made that reflect errata that were discovered and corrected, new information or data that were added, or inclusion of entire new sections.

The current publication consists of two packets containing material of the 1994 and 1996 releases. Of the material, the original 1994 printed packet contains a brief introduction to the Regional Aquaculture Center concept and a list of the five centers, and the original 14 sections. The second packet contains pages to replace sections of the 1994 release, corrections to the 1994 release, and a new section.

The publication is available in a preassembled 3-ring binder for \$50 plus postage or as a sectional with instructions for assembly for \$35 plus postage.

Payment Policy: Prepayment is required for all orders; all sales are final. Checks and money orders should be made payable to the **Regents of the University of California**. Funds must be in US dollars drawn on a US Bank. Orders made in the United States and Canada will be mailed 1st class. Other orders will be mailed as "Air Printed Matter".

	<u>publication</u>	<u>publication</u>	<u>postage</u>
US* & Canada	\$35.00	50.00	3.00
Mexico, Central & South America	\$35.00	50.00	7.00
U.K. & Europe	\$35.00	50.00	10.20
Australia	\$35.00	50.00	13.75
Asia	\$35.00	50.00	13.75

* California residents add 7.25% sales tax

Multiple copy order discounts and educational discounts are available. Please contact the following for additional pricing information:

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Crustacean Nutrition Advances in World Aquaculture, Volume 6

Editors: Louis R. D'Abramo, Douglas E. Conklin, and Dean M. Akiyama, ISBN #1-888807-00-8, 1997. 587 pp., 40 Figures, 64 Tables.

This hard bound book is the first book of its kind, a synthesis of the last thirty-five years of crustacean nutrition research prepared by members of the International Working Group on Crustacean Nutrition of the World Aquaculture Society. The book contains twenty chapters that were written by twenty-five authors representing ten countries and is divided into three parts, classical nutrition, practical nutrition, and future trends. The classical nutrition part contains fourteen chapters that include research methodology, amino acids, energy and protein energy ratio, phospholipids and sterols, fatty acids and triacylglycerols, carbohydrates and fiber, vitamins, minerals, carotenoids, digestibility, anatomy and physiology of the digestive system, chemoattraction and feeding stimulation, larval nutrition, and broodstock nutrition and maturation diets. Part II contains chapters on feed ingredients, standards for assessing quality of feed ingredients, feed formulation principles, and the commercial pelleting of crustacean feeds. The final two chapters found in Part III address future directions for research in Asia and in the Americas. All chapters are thoroughly references and generally concentrate on those species of crustaceans that are commercially cultured throughout the world. This book is an excellent resource and teaching tool for anyone interested in the nutrition of crustacean species.

Price: \$50 (Non-WAS members) or \$40 (WAS members) (US\$) plus \$5 / volume shipping and handling for parcel post / international surface mail delivery). Add \$25 for International Airmail Delivery. Available from the World Aquaculture Society, 143 J.M Parker Coliseum, Louisiana State University, Baton Rouge, LA 70803 (USA). Phone: +1-504-388-3137; FAX: +1-504-388-3493. Please direct check or money orders to "World Aquaculture Society".

Upcoming Meetings

6th International Aquaculture Exchange: July 25-28, 1997, Wrest Point Convention Centre in Hobart, Tasmania. For information, contact Karen Adams, Mures Convention Managment at Phone: 03 62 341 424; FAX: 03 62 344 464

American Fisheries Society Confernce: August 24-28, 1997, Monterey Marriott and Doubletree at Fisherman's Wharf, Monterey, California. For details, contact Betsy Fritz at extension 212 or Kristin at extension 220, Phone (301)897-8616, or write The American Fisheries Society, 5410 Grosvenor Lane, Suite 110, Bethesda, Maryland, USA 20814-2199

EAAP Eighth International Conferences on Diseases of Fish and Shellfish: September 14-19, 1997, Edinburgh, Scotland. For information, contact Dr. Eva-Maria Bernoth, P.O. Bag 24, Geelong, VIC 3220, Australia, Phone: +61(52)27 5000 (ext. 5528); FAX: +61(52)27 5555; email: Eva@aahl.dah.csiro.au

Symposium on Marine Finfish and Shellfish Aquaculture, Marine Stock Enhancement, and Open Ocean Engineering: September 16-18, 1997, University of New Hampshire, Durham, New Hampshire. The Aquaculture panel of the United States/Japan Natural Resources Committee (UJNR) will meet at the University of New Hampshire in September 1997. This three-day symposium is designed to bring scientists from the two countries together to exchange knowledge and to plan collaborative research. The symposium will consist of oral presentations poster sessions, and panel discussions in the areas of nutrition, genetics, health management, marine stock enhancement and engineering for open ocean aquaculture. For details contact Dr. Hunt Howell in the Department of Zoology, Univ. of New Hampshire, Durham, NH 03824; Phone: (603)862-2109; FAX: (603)862-3784; email: whh@christa.unh.edu

Aquaculture Pacific Exchange: September 18-20, 1997, Strathcona Gardens, Campbell River, British Columbia. This all new conference and exposition is designed as an exchange of ideas and technology featuring a world class trade show combined with a strong line-up of technical sessions covering the diverse variety of species cultured in the Pacific Northwest. Contact Sydney Jane Brittain at Master Promotions for more information. Phone: (506)658-0018; FAX: (506)658-0750; email: show@nbnet.nb.ca

PCOGA-NSA/PCS Annual Meeting: September 25-27, 1997, Hotel Newport, Newport, Oregon. Annual joint convention of the Pacific Coast Section of the NSA and the Pacific Coast Oyster Growers Association. For further information, contact NSA/PCS Chair Brett Dumbauld at the address listed on the back page of this newsletter and see the ad on page 14

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 the marine environment. Please contact the Chairperson, Dr. K. Muroga, for more information at the Faculty of Applied Biological Science, Hiroshima University, Kagamiyama 1-4-4, 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

14th International Estuarine Research Federation Conference: October 12-16, 1997, Rhode Island Convention Center, Providence, Rhode Island. The theme of this year's conference, "The State of Our Estuaries", will provide a benchmark and summary of the state of the world's estuaries and estuarine resources. Phone: (410) 586-0997, Fax: (410)586-9226 or visit the ERF website at <http://cbl.cees.edu/erf/erf97.html> for more information

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

Sustainable Aquaculture Second International Symposium: November 2-5, 1997, Soria Moria, Holmenkollen, Oslo, Norway. For further details, contact Nils Svennevig, MARINTEK, P.O. Box 4125, Valentinlyst, N-7002, Trondheim, Norway, FAX: +47 73 595660

Second International Conference on Molluscan Shellfish Safety (ICMSS II): November 17-21, 1997, Iloilo City, Panay Island, the Philippines. A forum for growers, processors, and regulators. Oral and poster contributions welcome. Please contact Dr. Rhodora 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

Upcoming Meetings continued

Latin American Fishing and Seafood Exposition: December 2-4, 1997, Centro Costa Salguero, Buenos Aires, Argentina. For information call (207)842-5500 (in U.S.), and (54-1) 904-0446 (in Buenos Aires)

Aquaculture '98: February 14-19, 1998, Las Vegas, Nevada. Triennial meeting of the World Aquaculture Society, the National Shellfisheries Association and the American Fisheries Society Fish Culture Section. Mark your calendar now! ABSTRACT DEADLINE IS JULY 31ST! See this newsletter for more details.

**Announcing:
2nd International Conference on
Shellfish Restoration
November 18-22, 1998
Hilton Head, South Carolina, USA**

The 2nd International Conference on Shellfish Restoration (ICSR '98) will provide an opportunity for government officials, resource managers, and users to discuss approaches to restore coastal ecosystems through habitat quality assessment and restoration; stock enhancement, management, restoration; and habitat remediation through watershed management. Throughout the world there is a growing commitment to restoring degraded coastal ecosystems. Everywhere there seems to be a renewed interest in preserving and enhancing coastal resources at all levels of government. More than 200 professionals representing eight countries attended the first ICSR Conference in 1996.

The conference is planned for Nov. 18-22, 1998, at the Crowne Plaza Resort on Hilton Head Island, S.C., and will consist of invited and contributed oral and poster presentation and workshops. A session also will be organized by the Oyster Disease Research Program. The mornings will feature internationally recognized plenary speakers, and the afternoon will feature concurrent sessions organized around theme areas.

Those interested in participating should request more information by contacting Elaine Knight: e-mail <knightel@musc.edu>; voice mail (803) 727-6406; or fax (803) 727-2080. If you would like information on submitting an abstract, contact Rick DeVoe: e-mail <devoemr@musc.edu>; phone (803) 727-2078; or fax (803) 727-2080. You may also find updated information on the workshop at <http://www.csc.noaa.gov/SCSeaGrant/text/ICSR.html>.

Third International Symposium on Aquatic Animal Health: August 30-September 3, 1998, Renaissance Harborplace Hotel, Baltimore, Maryland. Please see announcement on this page and contact the symposium office to be added to the mailing list for detailed announcements

International Association of Astacology: August 3-9, 1998, Augsburg, Germany. Please contact the IAA web page at <http://www.valdosta.peachnet.edu/vsu/dept/cas/bio/iaa> or email jhuner@usl.edu. Information is also available from the permanent Secretariat, phone: (318)482-5239, FAX: (318)482-5395, P.O. Box 44650, Univ. of Southwestern Louisiana, Lafayette, LA 70504, USA

If you know of meetings or workshops that might be of interest to NSA members, please contact either Maureen Krause at the address listed on the back page or Jay Parsons at jparsons@gill.ifmt.nf.ca, Phone (709)778-0307.

**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. The symposium will cover four days of plenary lectures and contributed oral and poster presentations. Tours will be offered of facilities at the Aquatic Pathobiology Center, U. of Maryland, the Center for Marine Biotechnology, and the National Aquarium in 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

NSA Pacific Coast Section **Annual Meeting**

The Pacific Coast Section of NSA will meet jointly with the Pacific Coast Oystergrower's Association on September 25-27, 1997 in Newport, Oregon. We expect this year's meeting to be one of the best ever as an expanded format will include three days of work and play on the Oregon coast. NSA-PCS plans several special sessions with an applied focus on: 1) The Impact and Management of Invasive Species including the European Green Crab; 2) General Aspects of Shellfish Biology; 3) New and Practical Tools for Shellfish Farming; 4) Management of Shellfish Diseases and Health and 5) Hatchery and Culture Methods for Shellfish Farming with a focus on developing techniques for non-traditional native species. We are also interested in putting together a special session with invited speakers covering modeling of bivalve growth and production. PCOGA plans include sessions on shellfish marketing, product quality and exporting, HACCP updates and workshops on insurance and liability, information retrieval on the Internet and agriculture / aquaculture cooperatives. The NSA/PCS reception will be held after the business meeting on Thursday afternoon and is being sponsored by Oregon Oyster Farms and Mo's. Papers may be submitted for any of the planned sessions or any other area relating to shellfish biology, husbandry, or ecology. We greatly encourage student submissions. The NSA/PCOGA meeting is an excellent forum for presenting your research and initiating a foray into professional biology with a very receptive audience. In order to encourage students to attend, NSA/PCS once again offers free meeting registration to all student presenters. Abstracts should be submitted in *Journal of Shellfish Research* format to Joth Davis, Vice Chair PCS at WDFW, P.O. Box 190, Ocean Park, WA 98640 and be postmarked by August 15th. You can also contact Joth at jdavis@wolfenet.com or Brett at dumbabrd@dfw.wa.gov for further information.

Brett Dumbauld

Web page updated

The Web Page of the Institute of Marine Biology of Crete (IMBC) (<http://www.imbc.gr>) has been redesigned to incorporate some of the latest Internet capabilities and to allow faster and more efficient access to resources. Features available on the site include a news section, details of IMBC research, a bibliographic services section, and an excellent guide to marine science Internet links.

The Sustainable Fisheries Act and the 21st Century:

A Critical Examination of Issues Associated with Implementing the New Federal Fisheries Law

A conference at Tulane University, New
Orleans
September 5-6, 1997

Co-Sponsors:

National Marine Fisheries Service,
Southeast Region
Center for Marine Conservation
SeaGrant Legal Program, LSU
Tulane Law School

What will implementation of the amended Magnuson-Stevens Act really mean for fishing in the 21st century? How will the new law deal with over-fishing and bycatch? What challenges confront the new "essential fish habitat" provisions? What are the prospects for ITQs? What are the connections with international fisheries management regimes?

These issues and more (hypoxic zones, coral reefs, marsh management) will be addressed by those responsible for implementing the Act, and by fishermen, conservationists, scientists and lawyers. Gary Matlock, Director of Sustainable Fisheries for the National Marine Fisheries Service, will provide a historical perspective on the Act at a luncheon address. Senator Trent Lott is the invited keynoter.

Who should attend? Fishermen, resource managers, conservationists, academics, lawyers and students. This is not just for lawyers.

For more information, contact Sharon Stevenson at the Tulane Law School, 504-865-5925 or via E-mail at srsteven@law.tulane.edu

Just a reminder:
Abstracts for Aquaculture '98 are due July 31st, 1997!



**NSA
IS
90!**

*Aquaculture '98 marks the
90th year that NSA has met
as a professional society. Join
us in Vegas to celebrate!*

Pectinid Workshop Papers Available

Selected papers from the 10th International Pectinid Workshop are now available as a Special Issue of *Aquaculture International* (Vol. 4 no. 3). If you would like to order a copy, please send £36 to Chapman & Hall at the following addresses:

In the US and Canada
Subscriptions, Chapman & Hall
400 Market Street
Suite 750
Philadelphia, PA 19106
Tel: (215) 574-2266
Fax: (215) 574-2292
Email: chsub@itps.co.uk

In other countries:
Subscriptions Dept., Chapman & Hall
International Thomson Publishing Services Ltd.
Cheriton House
Andover, Hampshire SP10 5BE UK
Tel: (01264) 332424
Fax: (01264) 333471
Email: chsub@itps.co.uk



Planning for Aquaculture 2001 is underway. Joe Tomasso and Sandy Shumway recently had a hardhat survey of the meeting site, the still-under-construction Coronado Resort at Walt Disney World in Orlando.

Dr. Maureen K. Krause, Editor
NSA Quarterly Newsletter
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Sandra Shumway
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