

National Shellfisheries Association

QUARTERLY NEWSLETTER



FALL 1997

SOUTHAMPTON, NEW YORK

President's Message

For those NSA members who have been too busy working in the field or classroom to read previous newsletters it is time to take action so that you can attend Aquaculture 1998. This triennial meeting of NSA, World Aquaculture Society, and the American Fisheries Society Fish Culture Section, will be held at the Bally's Hotel in Las Vegas from February 15 to 19th, 1998. Registration forms for this meeting have been sent by separate mailing to all NSA members and those must be returned by December 17th in order to secure the lowest possible registration costs.

These triennial meetings are an important forum for interaction between NSA members and other fisheries scientists and allow us to broaden the context in which we perform our own work. The meetings are also important in a more practical sense as they form the most important source of revenue for NSA. The sponsoring societies share revenue generated by those huge trade shows in direct proportion to the numbers of members from each society that attended the meeting, therefore, please ensure that you clearly mark on side two of the registration forms that you are a member of NSA. Past NSA president John Kraeuter set the goal in 1993 of having sufficient financial reserves to sustain the society and journal for one year. NSA accumulated that reserve by 1997 but the revenue stream from the triennial meetings was crucial in enabling us to achieve that goal.

Needless to say, two NSA stalwarts helping organize the meeting, Sandy Shumway, the NSA representative on the organizing committee and Rick DeVoe, Program Chair, have done an outstanding job on our behalf. Rick summarizes available information on the session topics elsewhere in this newsletter. The schedule of talks for this meeting is still being finalized and will be printed in the next newsletter. Sandy does need our help in one further matter... turn out your drawers and bookshelves to provide unusual items for her annual auction to benefit the Student Endowment Fund! These items can be sent to Sandy before the meeting or for those attending you can bring them with you.

This February meeting marks the 90th year that NSA has met as a professional society. This longevity is real testimony to the value and benefits that NSA provides its membership. Much of the credit for sustaining a professional

society goes to those members who volunteer over the years to serve in various ways to further the goals of the society. Past President Steve Tettelbach, Chair of the NSA Elections Committee, has spent some time in assembling another group of such volunteers to run for elected office in NSA. The elections ballots are being mailed separately but I urge you to vote and participate in helping YOUR society to last another 90 years.

For those NSA members who are really forward planners, the 1999 NSA meeting is going to be in Halifax, Nova Scotia. Further details, including meeting dates, will be provided in the next newsletter by Jay Parsons, who is the chair of the organizing committee.

Roger Newell

In this issue:

- ***Aquaculture '98 info***
- ***Call for Papers, Aquatic Animal Health Symposium***
- ***Conference announcements***
- ***Constitution and Bylaws***

Aquaculture '98 Update

Plans are being finalized for what appears to be a very promising and exciting conference and trade show at Bally's in Las Vegas, Nevada. More than 620 abstracts for special and technical sessions and poster presentation have been received and reviewed by the Aquaculture '98 Program committee. I am pleased to report that a number of special sessions will be of particular interest to all NSA members. These include sessions on Oyster Culture in North America (Tom Soniat), Pearl Oyster Culture (Richard Fassler), Sea Urchins (Mike Lesser and Charles Walker), Environmental Impact of Shellfish Aquaculture (Gavin Burnell), Microalgal Feeds (Gary

Wikfors), Scallop Culture (Rick Karney, Dale Levitt, and Jay Parsons), Abalone Culture (Ray Gordon), General Shellfish (Sandy Shumway), Crayfish Aquaculture (Jay Huner) and Oyster Disease Research (Bill Rickards). Additionally, producer sessions will be held on aquaculture media relations / crisis management, Implications of HACCP Implementation for Aquaculture, Aquaculture for Bait, Internet and Aquaculture and others. In total 39 special sessions will be offered, along with 20 producer-related sessions and more than 200 poster presentations. Aquaculture '98 will have the largest aquaculture trade show in the United States and one of the largest anywhere in the world with over 250 booths! Farm tours are now being arranged, as are special activities unique to the Las Vegas environment. I don't have to tell you about the amenities of Las Vegas, so come with your knowledge, slides, money, and enthusiasm (is anyone planning on getting married while there?) for a fun time, and to renew old acquaintances and meet new colleagues.

Housing - Aquaculture '98

This year's Conference will be held February 15-19, 1998 at Bally's Las Vegas, in Las Vegas, Nevada. The facilities are exceptional and exciting! Please plan on making your reservations soon before the room block is exhausted.

The rates are \$103 per night single / double, plus taxes. In order to register for a room, we recommend that you contact the hotel directly at 1-800 833-3308 (or 1-702-739-4591) for rates. Information regarding the hotel's cancellation policies and other matters can be directly obtained from the hotel.

Directory of Canadian Aquaculture

A complete directory of Canadian Aquaculture is available from Contact Canada™. This directory is available in hardcopy, CD-ROM, or over the Internet, and includes profiles of over 1800 producers of finfish, shellfish, and seaweeds. The guide also features information about research, engineering, educational resources, and provides contact information for suppliers and services. For further details and orders, call or write: Contact Canada™, 358 Delrex Blvd., Georgetown, ON Canada L7G 4H4, Phone: (905) 873-1295, Fax: (905) 873-6133, email ccinfo@CanAqua.com, web <http://CanAqua.com>

Membership Update

Since the meeting in Fort Walton Beach over fifty new membership applications have been received and they continue to come in! The Web site has clearly attracted some new members, particularly those from outside North America, but personal recruiting seems to be the major source — eighteen members are on record as having recruited new members. As usual Sandy Shumway leads the pack in recruiting efforts (17). All others have recruited only one or two colleagues. That means it shouldn't be difficult for someone to step out in front with Sandy for some special honors at the Aquaculture meeting. Keep getting the word out and let me know if you would like any membership forms or a few extra copies of our newsletter to help in your recruiting efforts (contact information on back page).

Dave Bushek

It's Election Time for NSA

Your ballots will be mailed to you separately. PLEASE, our Society is only as effective as its members. Make your voice heard, and VOTE!

Recruits

The 90th annual meeting of the National Shellfisheries Association is just around the corner. This meeting promises to be both rewarding and exciting. As you may already know, this year is the Triennial Meeting which has an outstanding number of attendees. This should provide plenty of informative oral and poster presentations in many fields of interest. More importantly, it is being held in one of the most exciting cities, Las Vegas. There will be no shortage of entertainment while at the conference. The Las Vegas meeting provides an excellent opportunity for students to become involved in NSA. There will be a fun-filled student reception held in conjunction with one of the best auctions you'll ever have the pleasure to witness. Students will also be needed to help out with the sales booth and NSA desk. These activities are a great way to meet other students. For more information please visit our web page at www.shellfish.org. If you have questions or comments relating to the web site, annual meeting, or anything of interest to student members, please feel free to contact Kerri Bentkowski (kmb7375@sae.ssu.umd.edu), Ryan Carnegie (rcarnegi@apollo.umenf.maine.edu), Deb Boswell Lane (lane@chuma.cas.usf.edu), Jeff Springer (jjspring@unity.ncsu.edu), or myself at anderjl@mail.auburn.edu. If you don't have access to email, and wish to contact me, my address is on the back page of the newsletter. I hope to see you there.

Journal of Shellfish Research Survey

Results

Dear Colleagues,

I have just reviewed the questionnaires that you received on the tenth anniversary of Sandy Shumway's editorship of the *Journal of Shellfish Research (JSR)*. We only received 49 responses, which was disappointing. This either indicates a certain apathy or satisfaction, assuming no news is good news. Here is a summary of the comments:

Q. Is JSR generally useful to you?

A. A unanimous yes.

Q. What do you think of the quality of recent papers in JSR?

A. Excellent: 22% Very good: 41%
Good to variable: 18% Fair: 14%

Some answered good to "excellent", "good as any", and "it varies". These were placed in very good, good, and fair categories, but these results did not change the percentages.

Q. On average how many papers do you read in a given issue?

A. All: 4%
Most: 2%
10-12: 12%
5-10: 14%
4-6: 8%
2-4: 22%
1-3: 14%
All abstracts and most: 8%
All disease papers: 2%

Q. Have you published in JSR? If not, why not?

A. Yes: 61%. The "why nots" state that 41% plan to, others state "wrong audience", "don't do research in this field" or "not well circulated in his home country", etc.

Q. Would you send your best work to JSR?

A. Yes: 78%. The others say "It depends" or "No." The reasons are "page charge consideration", "depends on content", "wrong audience" or "too small an audience". Two disturbing comments were "poor reputation in some circles" and "not a premier journal". Sort of a Catch 22, don't you think? One thought we were too regional in scope, which makes me wonder if we are talking about the same journal. One respondent pointed out that we did not have a high rating in *Current Contents*. JSR was 26th in 1996 which is pretty good since we are fairly new to *Current Contents*.

Q. Are you interested in reviewing manuscripts?

A. Yes: 91%. Most of the others cited time constraints as a reason for not volunteering.

Most of the general comments were laudatory. Over half complemented Sandy for a fine job. I do too. One of the

comments might even be construed as a proposal if you held it up to the light just right.

The answers we received were useful and informative. I hope members will feel free to contact either Sandy or any of the publication committee whenever you have a suggestion that would help us improve the journal. I want to extend my sincere thanks to those of you who took the time to respond to our questionnaire.

Mike Castagna
Chair, Publications Committee

New Members From Brazil

Aquaculture Center - CAUNESP is a unit of Sao Paulo State University - UNESP, placed at Sao Paulo State, Brazil. It was created with the objective of promoting the generation and diffusion of knowledge related to the biology, culture and processing of aquatic organisms as well as to the structure and management of aquatic ecosystems.

CAUNESP has a Group of Studies on Crustacean Biology, Ecology and Culture (NEBECC). This group actively works on crabs, swimming crabs, hermit crabs, and marine and freshwater shrimps. Their primary research programs focus on Population and Developmental Biology, Ecology, Physiology and Aquaculture (Hatchery, Grow-out Management and Feeding of Freshwater Shrimps).

The NEBECC members have published more than 100 peer-reviewed articles in Brazilian and International Journals and some books and book chapters. They are involved with three graduate programs leading to the M.S. and Ph.D. degrees in Aquaculture, Biology of Aquatic Living Organisms and Zoology. Their extension work includes short-term courses on marine biology and freshwater aquaculture, technical assistance on project design, set up operations and management guidance aimed to improve the productivity of the aquafarms.

The NEBECC members are now new members of NSA and there is great interest to promote increased participation in the Society's activities. Members are encouraged to contact Dr. Adilson Fransozo and Dr. Maria Lucia Negreiro-Fransozo at the Botucatu campus (Fransozo@surfnet.com.br, Fax: +55-14-9213744); Dr. Deborah Ismael (deborahi@caunesp.unesp.br), Dr. Marcelo A. A. Pinheiro (pinheiro@fcav.unesp.br), Dr. Wagner C. Valenti (wagva@convex.com.br) at the Jaboticabal campus (Fax: +55-16-3232268); Dr. Nilton J. Hebling at Rio Claro campus (Fax: +55-19-5348250); Dr. Fernando L. M. Mantelatto (now working at São Paulo University, flmantel@usp.br, Fax: +55-16-6335015).

Please visit their Home Page on the Internet or write to the home office of the Aquaculture Center at the following address:

Centro De Aquicultura -- UNESP
14870--000 Jaboticabal SP Brazil
<http://www.convex.com.br/funep/caunesp.htm>
Phone +55 (16) 323 2110; Fax +55 (16) 323 2268

NOAA Releases the 1995 National Shellfish Register

NOAA's national Ocean Service announces the release of *The 1995 National Shellfish Register of Classified Growing Waters*, the seventh edition in a series begun in 1966 to evaluate the status and condition of U.S. shellfish-growing waters. It characterizes the status of over 4,200 shellfish-growing waters in 21 coastal states, reflecting an assessment of nearly 25 million acres of estuarine and non-estuarine waters. Over 77 million pounds (meat weight) of molluscan shellfish were harvested from these waters in 1995, having a dockside value of \$200 million. The report contains, for the first time, an evaluation of relative shellfish abundance, the basis for classification, the status of shellfish restoration effort, and the potential to upgrade harvest classification for each growing water. The data elements collected in previous registers are also provided; these include growing water name and location, harvest classification, area, and the types of pollution sources contributing to harvest limitation.

The *National Shellfish Register* is published every five years as a cooperative effort among the nation's shellfish-producing states, Federal agencies such as the U.S. Food and Drug Administration (FDA) and the National Oceanic and Atmospheric Administration (NOAA), and the Interstate shellfish Sanitation Conference (ISSC). The purpose is to summarize the status of growing-water classification of the nation's commercial shellfish resource. The 1995 Register includes information on the status of estuarine and non-estuarine commercial shellfish-growing waters as of January 1, 1995.

The 1995 Register reports an increase of 2.1 million acres and 1,058 shellfish-growing areas since the 1990 Register. This increase is due primarily to the rise in the number of states classifying non-estuarine waters. The main categories into which shellfish waters are classified are: "approved," "conditionally approved," "restricted," "conditionally restricted," and "prohibited." The total area of approved waters is at an all-time high of 14.8 million acres (59 percent of all classified waters). In addition, there were only 2.8 million acres of prohibited waters (13 percent of all classified waters) reported in 1995. The only Register year that had less prohibited acreage was 1966 (2.0 million acres), and the percentage of prohibited waters has never been below 20 percent in any previous Register.

Nationally, 6.7 million acres of shellfish-growing waters are harvest limited. For 72 percent (4.9 million acres) of these waters, the limitation was attributed to water quality. Thirteen percent (873,000 acres) were attributed to administrative decisions, 8 percent (566,000 acres) lacked a complete and up-to-date sanitary survey, and less than 1 percent (119 acres) were limited for conservation reasons. For 13 percent

(888,000 acres), the state shellfish management personnel could not provide information regarding the basis for harvest limitation.

The top five pollution sources reported as contributing to harvest limitation were urban runoff (40 percent, 2.7 million acres), upstream sources (39 percent, 2.6 million acres), wildlife (38 percent, 2.5 million acres), individual wastewater treatment systems (32 percent, 2.2 million acres), and wastewater treatment plants (24 percent, 1.6 million acres). For 350 harvest-limited growing waters (accounting for 6 percent, 544,000 acres) the state shellfish management personnel could not provide information on contributing pollution sources.

Compared to the 1990 Register, there is a significant decrease in the acreage that is harvest-limited due to contributions from industry, wastewater treatment plants, and direct discharges. There is an increase in the acreage limited by boating, marinas, urban runoff, and agricultural runoff.

State shellfish management personnel reported almost 500 shellfish restoration activities taking place in harvest-limited waters in 1995. Restoration of shellfish-growing areas includes activities that improve water quality, restore habitat, or enhance shellfish stocks. Nineteen of the 21 coastal states were engaged in at least one restoration activity. The Middle Atlantic region led the way with 667,000 acres (44 percent of the national total). New Jersey reported restoration efforts in 287,000 acres (19 percent of nation total), followed by Florida with 259,000 acres (17 percent national total), and Louisiana with 173,000 acres (12 percent national total).

State shellfish management personnel also reported that 74 percent (5 million acres) of harvest-limited waters had some potential (either high, medium or low) for classification upgrade.

The data and information contained in the report are also available on the World Wide Web and on a CD-ROM. The 1995 REGISTER data can be accessed through ORCA's web site at: <http://www-orca.nos.noaa.gov/projects/95register>.

The 1995 Shellfish REGISTER CD-ROM can be run on the IBM® PC or Apple Macintosh® platform. It provides a brief multimedia introduction to guide the user, and contain all data files characterizing the 4,230 individual shellfish-growing waters. The data files of individual states can be viewed in a desktop mapping application. The CD-ROM also contain and electronic version of the report.

For more information or to obtain a complimentary copy of the report or of the CD-ROM, contact:

NOAA/SEA Division
1305 East-West Highway, 9th Floor
Silver Spring, MD 20910-3281
Phone: (301) 713-3000
shellfish@seamail.nos.noaa.gov

Update on the NSA Pacific Coast Section

The annual gathering of the Pacific Coast Section of NSA was held jointly with the Pacific Coast Oyster Grower's Association on September 24-27 in Newport, Oregon. Before a magnificent backdrop of the wild Oregon coast, approximately twenty-five NSA-

PCS members joined 150 affiliated growers, processors and agency people at an ocean front convention center for three days of technical meetings and updates on a wide variety of issues of concern to shellfish growers and biologists.

A NSA-PCS sponsored session on shellfish modeling was a highlight of the meeting. Invited speakers, Carter Newell (Great Eastern Mussel Farms) and Marcel Frechette (Institut Maurice-Lamontagne, Ministère des Pêches et des Océans, Mont-Joli, Quebec), were very well received by the shellfish growers from the Pacific northwest region. Both speakers focused on practical aspects of bivalve mollusk rearing and the need to focus on the relationship between food availability and stocking density in culture areas. Both speakers also presented a practical approach to modeling shellfish populations to the growers, with the idea of integrating some future research on the impacts of food availability on oyster grow out density as a result of specific grower concerns over reduced oyster condition during El Niño events.

Of particular interest to NSA-PCS members as well was an update on the introduction of green crabs on the Oregon Coast - Greg Jensen (University of Washington) and Sylvia Yamada (Oregon State University) both presented information on the recent range expansion of green crabs. At present, green crabs have been reported with sporadic abundance as far north as Coos Bay, Oregon - including a recent discovery of gravid females. Of particular interest, as well has been the observation of a larger maximal size observed in Pacific coast green crabs compared to Atlantic coast crabs. Of particular concern was the observation by a Tomales Bay, California shellfish grower of significant green crab predation on Manila clams (*Tapes philippinarum*) and Pacific oysters on intertidal mud flats. Proposed research for both Oregon and Washington will be focused on green crab effects on Pacific coast estuarine environments, including the impacts to commercially important bivalves.

There were two NSA-PCS sessions during the three day meeting. Noteworthy talks of the first session included presentations on the polyculture of red abalone (*Haliotis rufescens*) and dulce (*Palmaria mollis*) by Ford Evans (Hatfield Marine Science Center), and on a stock rebuilding plan for Olympia oysters by Anita Cook (Washington Department of Fisheries). Student presentations dominated the remaining portions of the sessions, and included talks on PSP toxin testing in geoduck clams, rock scallop culture techniques, and papers on Pacific oyster genetics, mussel genetics and oyster condition indices. Papers at the second session included updates on the Molluscan Broodstock Program (Chris Langdon), floating upwelling systems in Alaska (Ray Ralonde),

Kumamoto genetic screening (Pat Gaffney), and burrowing shrimp control and eelgrass distribution (Brett Dumbauld) among others.

The NSA-PCS annual business meeting was convened with approximately 20 members present. New business initiatives included a decision to incorporate a special session at next year's joint PCOGA /NSA-PCS meeting on habitat impacts of shellfish culture, and continued solicitation of student papers. There were nine students presenting at this year's meeting, compared to four a year earlier. Special thanks are due to Ken Chew for his efforts in getting students to present research results and updates on research in progress. In addition, new officers were elected for the coming year including Joth Davis as Chair, Doug Thompson, Vice Chair and Derrick Toba as Secretary/Treasurer.

Finally, the Best Student Paper presentation was awarded to Kristine Feldman (School of Fisheries, University of Washington) for her outstanding paper entitled "Burrowing Shrimp Recruitment to Estuarine Intertidal Habitats". In addition, a special award (a membership to NSA) was presented to a high school student, Colleen Burge (Quilcene-Brinnon Schools Shellfish Science Club), for her excellent presentation of a nationally recognized project on the development of model shellfish farm by local high school students.

Joth Davis

Latin American Malacological Meetings

The Third Congreso Latinoamericano de Malacología (CLAMA) was held jointly with the Seventh Reunión Nacional de Malacología y Conquiliología in the beautiful Centro de Investigación Científica y de Educación Superior de Ensenada, October 13-17, 1997. The Center faces the bay in the picturesque Ensenada, on the cool Pacific coast of Baja California, Mexico.

Mel Carriker attended by invitation to give a Conferencia Magistral and to serve as a member of the fourteen member Congress Scientific Committee. At the closing ceremony of the Congress, Mel presented greetings on behalf of NSA and complimented CLAMA for continuing these excellent biennial congresses. The first was held in Simon Bolívar University, Caracas, Venezuela, under the guidance, among others, of Pablo Penchaszadeh. Presidents of the Ensenada Organizing Committees were M.Sc. Claudia Farfán and Dra. Martha Reguero Reza. Mel's paper was entitled "Do deep-sea predatory gastropods drill boreholes?"

Roughly 150 persons registered for the Congress, representing most countries in Central and South America, also Canada, the United States, Australia, Spain, and Portugal. The next congress, scheduled for 1999, will be held at the Pacific seacoast university / tourist community of Coquimbo, Chile. Pablo Penchaszadeh is the new CLAMA President.

I urge NSA'ers to seriously consider attending the Coquimbo congress - it should be a delight! If not this one, certainly try to attend the following one in the year 2001, as plans are afoot for a possible joint meeting with a U.S. malacological association in a location closer to the U.S.

Melbourne R. Carriker

In Memoriam

The aquaculture industry lost a great friend recently. Bob Ingle passed away at 2:00 PM on April 3, 1997, when his family made a decision to suspend his life support system at Tallahassee Regional Memorial Hospital. Bob had suffered a heart attack a few days earlier and had not regained consciousness. He is survived by his wife, Ann Ingle, three sons, Bob Jr, Al, and Charlie, four grandchildren, and numerous cats. For those of us who knew Bob, it was a great loss. For those of you who didn't know Bob, you missed knowing one of the greatest marine biologists and overall funniest characters to ever reside in our great state. Bob was very wise and knowledgeable, a master of the English language, and was quick witted with a great sense of humor. Most aquaculturists remember Bob as a founding father and Board member of FAA, an original member and Chair of the Aquaculture Review Council, and long time editor of the FAA Newsletter. He performed all these functions during his retirement years. This was fortunate for FAA since he had the time to really devote to issues.

As a former state government official and political insider, Bob often told it like it is, challenging agencies on issues of concern to the aquaculture industry. Nor had he any hesitation about putting it in print in the FAA Newsletter. He often criticized agency officials which didn't make him too popular with government. Bob fought hard to help develop our industry, especially clam farming. He and Paul Chanley were a real one-two punch at many of the early meetings on leases to allow clam farming. As a result, Bob also took a great deal of criticism, but since he was not an active farmer, he viewed it as his industry role. He would have been very pleased with the end results of this past Legislative session which removed the ability of county commissions to veto submerged land leases. Bob often told folks he thought it was unconstitutional. When Bob saw that he had served his purpose and that positive change was imminent for aquaculture, he quietly retired again, removing any possibility of being indicated as the source for poor industry-government communication.

Bob took the FAA Newsletter to new heights. He expanded coverage of government activities and members and their farms. His Who We Are columns were both popular and helped create an identity for our industry. He also wrote articles from a historical perspective and covered related information originating from other disciplines. Bob's famous words of advice to all FAA members were "Do you know who your Legislator is?"

Robert M. Ingle began his career in Florida as a graduate student at the University of Miami under Walton Smith. In 1949, Bob was hired as Florida's first marine biologist working for the then Board of Conservation (this later became the Department of Natural Resources and now DEP). He was first dispatched to Cedar Key to study oysters and mullet. He was later sent to Apalachicola where he was to spend a great deal of his career and also retirement years. It was in Apalachicola Bay that Bob perfected a shellfish culture technique, initially

designed for natural recruitment but which remains in practice today among the oyster farmers in the bay, known as the Ingle Method. Bob simply took clean, sun bleached oyster clutch (shell), loaded it onto a barge, and carefully blew it off with water jets into the receiving waters. This created a fairly uniform artificial oyster reef higher than the naturally muddy bay bottoms. Oyster spat would naturally set during the warmer months on the clutch material producing a productive reef. Many of the reefs Bob and his crew built during the 1950's, 60's, and early 70's remain productive wild harvest areas today. Oyster growers in Apalachicola Bay use the same technique, except they routinely add new clean clutch to the lease site immediately preceding massive summer spawning. They then work the lease much like a farmer works his fields, keeping the shell from becoming too embedded in silt through harvesting and re-clutching. This method may still be the best method for farming oysters in Florida.

Bob became Director of what is now the Division of Marine Resources within DEP. He founded the Marine Research Lab (Florida Marine Research Institute) in St. Petersburg where he felt it could focus on science rather than be influenced by Tallahassee politics. At the time, it took an entire day to drive from Tallahassee to St. Pete! Over the years the lab produced massive amounts of scientific data and peer reviewed papers on Florida's marine environment and the plants and animals which inhabit it. Bob set a professional and scientific standard at the lab that is still practiced today. Once while at an aquaculture conference, a crawfish farmer came up to our table where we were having coffee to ask me a question. When he found out the gentlemen sitting next to me was Bob Ingle, he got down on his knees and paid homage to Bob. Bob was both simultaneously thrilled and embarrassed as he had no idea who this guy was. Turns out, the man obtained his first job at the Marine Lab shortly after Bob had retired in 1973. He had been indoctrinated with the Ingle philosophy in his very first job and had carried that professional philosophy on in his aquaculture career without ever knowing Bob Ingle.

Bob was a prolific publisher of scientific papers, many of which are still used by students studying shellfish biology. Many of the people he hired and trained at the Marine Lab have gone on to have distinguished careers in marine science or aquaculture. After his retirement, the first ever new building constructed at the Marine Lab (the lab was initially located in old Coast Guard buildings) was named the R.M. Ingle Building. It still stands today.

Bob played a key role in early aquaculture in Florida. He granted permits on his signature in the late 1960's to grow pompano. Most farms operated by catching juveniles out of the wild prior to growing them to market, although most killed them in their culture systems. Bob always wanted in later years, but never could get any funding interest, in continuing Frank Hoff's work on larval rearing of pompano juveniles. Bob also was instrumental in getting the first version of the aquaculture lease law passed in 1969, due to the interest of group from Delaware who wanted to culture shrimp in Panama

City. This same law in Chapter 253, Florida Statutes, after numerous changes, remains the law under which all aquaculture leases are granted today in Florida.

During this same period Bob brought together Florida Power, Ralston Purina and members of his DNR staff to Crystal River to examine potential to raise penaeid shrimp in power plant effluent. One story has it that after a long day of meetings, the crew was headed back to St. Pete at night and Bob decided to stop and have a beer. It was still rural Florida back then and no drinking establishments were open. Bob took the crew to the local tavern owner's house, woke the proprietor out of bed, made him open up the bar, and then proceeded to buy rounds for everyone. The point to this story is that while not too many shrimp were raised at Florida Power in Crystal River, this is where modern day shrimp culture was initiated. *Penaeus vannamei* was one of the species studied there, Purina became a major player worldwide in shrimp feeds, and the many young men who became graduates of the Crystal River experience read like a who's who today in shrimp farming, shrimp consulting, and shrimp research programs.

I first met Bob in 1982 while undertaking an aquaculture feasibility study for Apalachicola Bay. He lived part time in a 100 year old house overlooking the bay. I had made an appointment and when I arrived all I could find were piles of stuff everywhere and numerous cats. His office was littered with papers which covered the entire floor. I went to the main house only to find more of the same. Then I met Bob, a big man who looked a little like Ernest Hemingway but with old shabby clothes and eyeglasses which needed to be cleaned. He was, as it turned out, living in squalor and loving every minute of it. We adjourned to a small room with a Caribbean bar motif known as Trader Bob's. Trader Bob's Bar had two simple rules: you had to drink and you had to have intelligent conversation. If Bob thought your conversation wasn't intelligent, then out you went. Thus began a fifteen year mentorship and friendship which I shall always cherish.

I, like many others before me, learned a great deal from Bob. One day we borrowed a boat and went out into Apalachicola Bay to view some of the artificial oyster reefs he had developed. The water over the reefs was only about chest deep, so we waded and dove checking out the condition of the clutch. After a while Bob said to me: "You know Mike, marine biologists should never go onto the water without taking along a knowledgeable fisherman". I asked him why and he pointed to our borrowed boat which had drifted about 3-400 yards from us. Fortunately, Bob had been a competitive swimmer in his younger years and made it back to the boat, me just barely.

The stories about Bob Ingle go on and on. He was quite a character and quite a wonderful person. He was always a lover of food and at one time, knew every good place to eat in Florida (This has now passed on to Don Sweat). During the last few years, Ann often referred to their kitchen as Roberto's Ristorante. Bob stayed active until his passing. He was planning to attend the recent National Shellfish Association meeting in Fort Walton Beach and had recently published an article in Aquaculture Magazine describing the work he had done years earlier with oyster fattening. Bob had made

summer oysters taste like winter oysters simply by providing them more food. He fed them corn meal which he sifted in a device called a Vibrascrew prior to feeding to the oysters. I know that Bob would have wanted me to mention the Vibrascrew in this remembrance of him.

Ann Ingle, Bob's widow, who also has many stories she could tell about Bob, can be reached at 2311 Miranda Avenue, Tallahassee, FL 32304.

Compiled by Mike Ednoff

AUCTION

Fall cleaning? Christmas shopping? It's time to contribute to the next
ANNUAL AUDACIOUS ACTION-PACKED AUCTION
to benefit the **STUDENT ENDOWMENT FUND.**

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



Metamorphoses

- **Peter G. Beninger** has moved from Canada to his new digs in France. His new address is: Laboratoire de Biologie Marine, Faculté des Sciences, Université de Nantes, BP 92208, 44322 Nantes Cedex 3 France. Fax: (01 133) 240292042. Email: Beninger@svt.univ-nantes.fr.
- **Carolyn Friedman** and husband **Rob Armstrong** are the new proud parents of a healthy bouncing baby boy - Nicholas. The urchin and parents are all doing well.
- **Stan Allen** is heading south from Rutgers to Virginia. Stan will be moving to William and Mary's Virginia Institute of Marine Science to initiate and direct their Aquaculture Genetics and Breeding Technology Center. Effective December 1st, his new address will be: School of Marine Science, VIMS, Gloucester Point, VA 23062-11346, Phone (804) 684-7710, Fax (804) 684-7186, Email ska@vims.edu Congratulations on your new position!

**The National Shellfisheries Association Constitution and Bylaws appear on the following pages.
Date of most recent Executive Committee approval appears just below the title. The
Constitution and Bylaws were last printed in the Late Summer 1994 issue of the National
Shellfisheries Association Quarterly Newsletter.**

**CONSTITUTION
of the
NATIONAL SHELLFISHERIES ASSOCIATION, INC.
(A Corporation Not for Profit)
Approved November 13, 1990**

ARTICLE I. NAME AND ADDRESS

The organization shall be known as the National Shellfisheries Association, Inc., hereinafter referred to as the Association or NSA.

The official permanent address of the NSA shall be:

National Shellfisheries Association, Inc.
National Marine Fisheries Service
Laboratory
Oxford, MD 21654 USA

ARTICLE II. OBJECTIVES AND PURPOSES

The National Shellfisheries Association is organized as a non-profit society. The objectives and the purposes of the Association shall be:

Section 1. To encourage research on molluscs, crustaceans, and associated organisms with emphasis on species of economic importance known as "shellfish".

Section 2. To gather and disseminate scientific and technical information on shellfish.

Section 3. To promote and advance shellfisheries research and the application of results to the shellfish industry.

Section 4. To hold annual meetings for presentation, exchange, and discussion of information on scientific and professional aspects of shellfish research and management.

ARTICLE III. MEMBERSHIP

Section 1. Membership in the NSA shall be open to all individuals who actively support the objectives and purposes of the Association.

ARTICLE IV. TERMS OF EXISTENCE

Section 1. This corporation is to exist perpetually.

ARTICLE V. OFFICERS

Section 1. The officers of the Association shall be a President, a President-Elect, a Vice President, a Secretary, and a Treasurer, elected to perform to usual duties of their respective offices.

Section 2. The signing officers of the Association are the President, the President-Elect, and the Treasurer or their appointees.

Section 3. All officers shall be elected for one year, or until the next regular annual meeting. The President-Elect shall, upon completion of the term, accede to the Presidency. Therefore, elections shall be for President-Elect, Vice President, Secretary and Treasurer. The President Elect will be installed as President at the opening of New Business of each regular annual business meeting. No officers, except for the Secretary and Treasurer, may succeed themselves.

Section 4. Nomination for office shall be made by an Elections Committee appointed by the President. All persons nominated by this committee shall be members in good standing and eligible to hold office in the Association. The Elections Committee shall present the list of consenting nominees to the Secretary, who shall prepare a mail ballot to be sent to the membership at least sixty (60) calendar days prior to the annual meeting. The ballot shall permit write-in votes for each office. Ballots must be returned to the President Elect fourteen (14) calendar days before the annual meeting, and they shall be audited as the Executive Committee directs.

Section 5. A simple majority of the votes received by the President-Elect fourteen (14) days prior to the annual meeting of the Association shall be necessary for the election of officers and the members of the Executive Committee. Elected officers other than the President-Elect take office at the end of each annual business meeting.

Section 6. In the event that any officer other than the President-Elect resigns or otherwise leaves a position vacant, the Executive Committee shall, by a simple majority vote of committee members present at a properly constituted meeting, at which business may be conducted, appoint a replacement to fill the remainder of the term. Any vacancy in the office of the President-Elect must be filled through membership ballot.

Section 7. No elected officer may receive any compensation for services rendered. Certain travel expenses may be defrayed when authorized by the President with the concurrence of the Treasurer. Clerical and other operational funds may be paid by the Treasurer when so authorized by the President.

ARTICLE VI. EXECUTIVE COMMITTEE

Section 1. The Executive Committee shall consist of the elected officers, the immediate past-President, the Chairperson of the Pacific Coast Section, the Editor of the Journal of Shellfish Research (JSR), formerly known as Proceedings, and three (3) persons elected by the Association to serve as Members-at-Large for a term of three (3) years or until their successors are elected. Each Member-at-Large shall not

be eligible for re-election to the same office within a period of three (3) years after their term of office has expired.

Section 2. The Executive Committee shall manage the business and the affairs of the Association, subject to the provisions of the Constitution and By-Laws. A quorum of the Executive Committee consists of a simple majority of its members. A properly constituted meeting of the committee is any meeting in which all of the members have been notified in advance and of which a simple majority of all members have agreed to the meeting. All decisions of the Executive Committee shall be by a simple majority vote of the quorum.

Section 3. At each Executive Committee meeting prior to the annual meeting the President-Elect with coordination of the Treasurer shall submit for Executive Committee approval a proposed budget for the ensuing calendar year.

Section 4. The Executive Committee shall approve budgets, approve appointments, present proposals, and describe other activities that may require discussion and approval by the membership. The Secretary or a duly appointed member of the Association shall keep minutes of Committee meetings and deposit copies with the Secretary. Minutes shall be open to members or sent to them.

ARTICLE VII. BYLAWS

Section 1. The structure and function of the National Shellfisheries Association within the context of the Constitution shall be described in the Bylaws. The Executive Committee of the Association may provide such Bylaws for the conduct of its business and the carrying out of its purpose as they may deem necessary from time to time. The Bylaws can be amended by a two-thirds (2/3) majority of the Executive Committee.

ARTICLE VIII. AMENDMENTS

Section 1. The Constitution, after adoption by a 2/3 majority of the voting membership, shall supersede all existing Constitutions and Bylaws, and will take effect immediately.

Section 2. The Constitution may be altered or amended on recommendation of the Executive Committee, by a 2/3 majority of the voting membership, by a mail ballot, provided the membership shall receive written notice of such amendments at least sixty (60) calendar days prior to the deadline for voting. Ballots shall be collected and counted by the Secretary and validated by the President within twenty (20) calendar days after the voting deadline.

ARTICLE IX. ACQUISITIONS

Section 1. In order to promote the purposes of this corporation, it may acquire property by grant, gift, purchase, devise or bequest, and hold and dispose of such property as the Association shall require for the benefit of its members and not pecuniary profit.

ARTICLE X. DISTRIBUTION OF ASSETS

Section 1. In the event of dissolution, any assets of the National Shellfisheries Association shall be distributed to a non-profit fund, foundation or corporate organization operated exclusively for the purpose as specified in Section 501 (C) (3) of the United States Internal Revenue Code. The fund, foundation, or corporate organization to which the National Shellfisheries Association assets will be distributed shall be selected by the National Shellfisheries Association Executive Committee at its last meeting.

BYLAWS of the NATIONAL SHELLFISHERIES ASSOCIATION, INC. (A Corporation Not for Profit) June 23, 1991

BYLAW I. NAME AND PURPOSE

Section 1.

The name of the organization shall be the National Shellfisheries Association, as described in the Constitution.

Section 2.

The purpose and activities of this Association shall be as described in the Constitution.

BYLAW II. MEMBERSHIP AND DUES

Section 1.

Any individual or institution that qualifies for membership under the Constitution and Bylaws may become a member in good standing of the Association by having a genuine interest in the purposes of the Association, by paying the appropriate dues, and by adhering to the rules and regulations laid down in the various sections and subsections of the Constitution and Bylaws.

Section 2.

Dues, payable in U.S. dollars on or before January 1 of each calendar year, may be changed as necessary by a vote of the Executive Committee present at the annual meeting.

(a) Any member whose dues are in arrears for a period of more than one (1) year, and after two (2) written notices from the Secretary, shall be dropped from the membership within thirty (30) days after the second notice.

(b) *The Journal of Shellfish Research* shall not be distributed to members who have been dropped for non-payment of dues.

(c) Any person, firm, society, club, or state or federal agency, on approval of the Executive Committee and by payment of a sum to be established annually by the Executive Committee, may become a Patron of the Association. Patrons are entitled to six (6) copies of the *Journal of Shellfish Research*. Corporations, agencies and commercial companies may not use membership in the Association as a substitute for their duties and obligations to the Shellfish Institute of North America.

(d) Libraries and agencies not desiring to become Patrons may subscribe to the *Journal of Shellfish Research* and purchase copies for a subscription cost to be established by the Executive Committee.

(e) Any person, upon the recommendation of the Awards Committee, may be made an Honorary Member with all the privileges of a Member, by a simple majority vote of the Executive Committee contacted by telephone or mail before the Association annual meeting, and shall be exempt from payment of dues.

BYLAWS III MEETINGS, VOTINGS

Section 1.

The annual meeting of the membership shall be held at the time and place set by the Executive Committee. The Secretary shall serve by mail a written notice thereof, not less than sixty (60) calendar days prior to such meeting, to each member at their address as it appears on the records of the Association. The newsletter may serve as the written notice. There is no quorum requirement for the annual meeting.

Section 2.

In all matters of business on which the membership is entitled to vote, all members shall be eligible to cast one vote.

Section 3.

The annual meetings of the Association shall consist of a program of papers, discussions, symposia, demonstrations and other activities.

Section 4.

The business meeting shall include, but not be limited to, the following:

- (a) Report of the President
- (b) Reports of the Secretary and Treasurer
- (c) Reports of Committees (Audit-Budget-Finance, Membership, Resolution, etc.)
- (d) Report of the Editor of the *Journal of Shellfish Research*
- (e) Announcements of changes in editorship, editorial board, page charges, and page or budget limitations with respect to the *Journal of Shellfish Research*
- (f) Old and new business
- (g) Installation of officers
- (h) Appointment of new committees and associate editors

BYLAW IV DUTIES OF OFFICERS

Section 1.

The President is responsible for the conduct of business and the organization of the Association. This individual shall preside over all annual and special meetings, shall make such appointments as are authorized in the Bylaws, and shall exercise such other functions and responsibilities as may be determined from time to time by action of the Association or the Executive Committee of which she or he is chair. The President is authorized to, from time to time, appoint ad hoc committees from the membership of the Association to perform various duties as in the discretion of the President may seem appropriate. The President shall also serve as ex-officio member of all committees.

Section 2.

The President-Elect shall, at the end of the term, accede to the Presidency. During this term as President-Elect, he or she shall perform the duties of the President in the absence of the President. The President-Elect shall serve as chair of the Site Selection Committee and appoint the members of the Arrangements Committee for the annual meeting at which she or he will serve as President.

Section 3.

The Vice President shall act in the capacity of President-Elect in the former's absence, or, in the absence of both the President and the President-Elect, shall perform the duties of the President until a new President-Elect has been elected. The Vice President shall serve as chair of the Program Committee and shall appoint other committee members.

Section 4.

The Secretary shall be responsible for distributing ballots and the minutes of Association meeting and meetings of the Executive Committee, for maintaining an updated record of policy and operational actions decided by both groups, for maintaining contact with institutional subscribers of the journal, and for preparing the annual report for the Executive Committee meeting.

Section 5.

The Treasurer shall be responsible for maintaining or overseeing the maintenance of membership and mailing lists. The Treasurer shall ensure that documented accounts of all transactions are maintained, that accepted bookkeeping and accounting practices are followed, and that the Association's financial resources are managed according to procedures adopted by the Executive Committee. The Treasurer shall, at the annual meeting, present a draft budget for the next fiscal year, and shall submit a detailed financial report audited in such a manner as shall be specified by the Executive Committee.

Section 6.

No officer of the Association or member of the Executive Committee shall be answerable for any act, receipt, neglect, or default of any other officer or Executive Committee member. No officer or Executive Committee member shall be liable individually or collectively for any judgement or for any act done or step taken or omitted under the advice of counsel, nor for any mistake or fact or law nor for anything which they may do or refrain from doing in good faith.

BYLAW V PUBLICATIONS

Section 1.

The Association shall publish semiannually the *Journal of Shellfish Research* to include scientific and applied papers which satisfy the requirements of the Editorial Board. Papers may be submitted at any time. Accepted manuscripts will be published in the earliest convenient *Journal of Shellfish Research*. Authors shall be notified of the current page charge for publication when a receipt of a manuscript is acknowledged. Rates including Life Membership rates shall be reviewed annually by the Publications Committee and the Editor. The

Executive Committee shall vote to approve or disapprove these rates and the rates shall be published in the Newsletter.

Section 2.

The Editor and six (6) or more Associate Editors shall be nominated by the Publications Committee and selected by the Executive Committee for determinate periods to serve on the Editorial Board.

Section 3.

Special publications, symposia, and other reports may be issued as determined by vote of the Executive Committee.

BYLAW VI STANDING COMMITTEES

Section 1.

The President, with the approval of the Executive Committee, shall appoint the following committees, of at least two (2) members each, to serve for a term of one (1) year unless otherwise specified, or at the discretion of the Executive Committee.

(a) An Audit-Budget-Finance Committee to manage the financial affairs of the Association and to examine the financial report of the Treasurer before its presentation to the Association for approval.

(b) An Awards Committee to review and nominate members who, by their exemplary service to the Association or to the profession, deserve recognition as Honorary Member of the Association. These nominations are to be presented to the Executive Committee prior to the annual meeting. The Committee shall also review and nominate individuals for the Wallace Award, which will be awarded by simple majority vote of the Executive Committee before the annual meeting.

The Awards Committee is responsible for preparing a nomination package. The nomination package shall consist, at a minimum, of:

1. The identity of the nominee
2. A written biography suitable for publishing in the society journal.

If the Executive Committee agrees to the selection, the Awards Committee shall be:

1. In charge of the presentation ceremony
2. In charge of, with consultation of the Treasurer, obtaining a suitable plaque or award for the awardee
3. In charge of ensuring that the biography is published in the society journal.

For the Wallace Award the Awards Committee should select individuals whose actions most demonstrate the principles and actions concerned with programs in shellfisheries, aquaculture, and conservation as exemplified by Mr. David Wallace during his lifetime in promoting understanding, knowledge, and cooperation among industry members, the academic community, and all levels of government (states, national, and international), an who has had outstanding success in bringing together shellfish scientists and industry officials for the benefit of shellfisheries. The award is not linked to NSA membership.

The Committee is responsible for preparing a nomination package. The nomination package shall consist, at a minimum, of:

1. The identity of the nominee
2. A written statement concerning the general contributions of the individual

If the Executive Committee agrees to the selection, the subcommittee shall be:

1. In charge of the presentation ceremony
2. In charge of, with consultation of the Treasurer, obtaining a suitable plaque or award for the awardee
3. In charge of preparing and submitting the award statement to the society newsletter for publication

(c) A Membership Committee to ensure that all people actively interested in the objectives of the Association are invited to become members.

(d) An Election Committee composed of the immediate Past President, the current President, and the President-Elect, to submit a list of nominees for all offices and members-at-large whose terms are expiring, with a short vitae of each to the Executive Committee six (6) months prior to the annual meeting. Upon selection by the Executive Committee, the candidates will be presented to the membership by special mail ballot within sixty (60) calendar days prior to the annual meeting. The ballots will be returned to the President-Elect who will be responsible for collecting and collating the votes and reporting the results to the Executive Committee. The candidates will be notified of the election results at least one week prior to the annual meeting. The Executive Committee will validate the election at their annual meeting.

(e) A Publications Committee to manage the publishing affairs of the Association. The Treasurer and/or the Journal Business Manager and the Editor of the *Journal of Shellfish Research* shall be a member of the Committee.

(f) A Resolutions Committee to draft and recommend resolutions considered prudent and necessary for the promotion of the objectives and purposes of the Association.

(g) A President's Committee consisting of all Past Presidents of the Association to assist the Executive Committee in broad policy matters and special issues. This committee shall be chaired by the immediate Past President.

Section 2.

The President-Elect, with the approval of the Executive Committee, shall appoint the following committees, of at least two (2) members each, to serve for a term of one (1) year unless otherwise specified, or at the discretion of the Executive Committee.

(a) An Arrangements Committee to arrange for programs at the annual meeting for which the President-Elect will serve as President. This committee will be chaired by the President-Elect.

(b) A Site Selection Committee composed of the current President, the President-Elect, the Vice President, and one or more other members selected by the President, if desirable, to select the location of the annual conference for the next conference for which a location has not been chosen. The President-Elect will serve as chair and will appoint an on-site Registration Coordinator to schedule and perform registration duties (in conjunction with the Treasurer) during the annual meeting at which the President-Elect will take office. Normally this committee will secure sites for meetings at least two years in advance.

(c) An Endowment Committee to examine student abstracts and applications for support to present papers at the next Annual Meeting. The committee will include the Treasurer who will report on the availability of funds. The committee will make recommendations to the Executive Committee for the awards. The committee will also be responsible for organizing the review of all qualified student presentations for the Thurlow C. Nelson Award at the annual meeting.

Section 3.

The Vice-President, with the approval of the Executive Committee, shall appoint the following committees, of at least two (2) members each, to serve for a term of one (1) year unless otherwise specified, or at the discretion of the Executive Committee.

(a) A Program Committee to arrange for programs at the upcoming annual meeting. This committee will be chaired by the Vice President.

Section 4.

All Standing Committees will conduct business based on voting by a simple majority of the members present at their meetings.

BYLAW VII MEMBERSHIP LIST

Section 1.

The official membership list of the Association shall be distributed to all members as frequently as necessary at the discretion of the Executive Committee.

BYLAW VIII RESOLUTIONS

Section 1.

The Association may express opinions and recommendations by resolution(s) or other appropriate action(s), except on specific numbered bills of federal or state legislatures.

BYLAW IX AMENDMENTS

Section 1.

These Bylaws may be amended, altered or rescinded by a two-thirds (2/3) majority vote of those members of the Executive Committee present at any scheduled meeting of the Executive Committee for which proper notice has been given. The Secretary shall ensure that all such changes to the Bylaws are communicated to the membership at the earliest opportunity. Changes to the Bylaws may be made by teleconference provided a duly constituted meeting has been called and appropriate notification has been given to all members of the Executive Committee.

Section 2.

A petition for change in the Bylaws can be submitted to the Executive Committee by ten percent (10%) of the membership. The Executive Committee shall review the recommended changes and offer them, with recommendations, to the membership for majority vote.

BYLAW X REGIONAL SECTIONS OF THE ASSOCIATION

Section 1.

The Pacific Coast Section (PCS) of the Association is authorized to elect its own officers and hold meetings at times and places selected by its members. Local dues will be assessed. All members of the Association are invited to attend PCS meetings.

Section 2.

The purpose of the Pacific Coast Section shall be to further the aims and interests of the Association on the Pacific Coast. The PCS shall operate under a constitution and bylaws established by its members insofar as they are not inconsistent with the constitution and bylaws of the parent Association.

BYLAW XI MISCELLANEOUS

Section 1.

No member, committee chair, Executive Committee member or Office of this Association shall use the seal, logo or name of the Association to endorse, condemn or express an evaluation of any product or service of any firm or individual.

Section 2.

No part of the financial resources of this Association may be used to defray the travel expense of any officer or member where the purpose of such travel is to influence or intervene in the internal legislation of any country.

Important Notice to all Members: The Treasurer's Office has Moved

NSA Treasurer, Evan Ward, has moved to a new position at the University of Connecticut. This will not affect new member applications and membership dues, which should continue to be sent to the Bookkeeper, Ms. Nancy Lewis, in Virginia. All items for the Treasurer should now be sent to: Dr. J. Evan Ward, Treasurer, National Shellfisheries Association, c/o Department of Marine Sciences, University of Connecticut, Groton, CT 06340-6097

Book Available

Shells & Shellfish of the Pacific Northwest: A Field Guide by Rick M. Harbo. \$24.95 paperback, ISBN 1-55017-146-1.

This is the indispensable guide for beachcombers, sea-shell collectors, divers or anyone who wants to know more about the shells and shellfish found along the saltwater beaches and intertidal areas of the Pacific Northwest. Everyone from weekend adventurers to serious collectors will love this book!

This comprehensive field guide introduces more than 250 species of mollusks - clams, oysters, scallops, chitons and more - whose range extends from Alaska to B.C. to Washington, Oregon and California. Rick Harbo has included detailed descriptions and color photos of familiar species like the mussel as well as more obscure ones like the checkered hairsnail and the gutless awning clam. Shells and Shellfish

of the Pacific Northwest is also packed with information on places to find shells, the importance of shells in Native art and culture, and guidelines on edibility and conservation. A special full-color section on identifying clams by their siphons or "shows" is a first for shell guidebooks.

To order, contact Harbour Publishing, P.O. Box 219, Madeira Park, BC Canada V0N 2H0, Phone (604) 883-2730 / Fax (604) 883-9451, Email harbour@sunshine.net

Marine Microalgal paste business website

Reed Mariculture, Inc., a microalgal paste business has created a new website at <http://www.seafarm.com>. They welcome comments and suggestions from our members.

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.

Upcoming Meetings

Fourth International Symposium on Tilapia in Aquaculture: November 9-12, 1997, Coronado Springs Resort, Walt Disney World, Orlando, Florida. Features trade show and contributed and invited papers. Call 304 728-2175 or visit the web site at <http://ag.arizona.edu/azaqua/ata.html> or www.aquaculture-online.org

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

PESCAL, The Latin American Fishing and Seafood Exposition: December 2-4, 1997, Centro Costa Salguero, Buenos Aires, Argentina. For information call Diversified Expositions at (207)842-5500 (in U.S.), and (54-1) 904-0446 (in Buenos Aires), or write to them at PO Box 7437, Portland, ME, U.S.A. 04112

International Aquaculture Technology Expo '98: February 4-6, 1998, Kobe, Japan. This international symposium is organized by the Japan Aquaculture Society and is sponsored by JIFAS and Kobe City. For information contact: Kazuo Ide and Assoc., Exhibition Office, Sumitomo Building 4F, 8-10-24 Akasaka, Minato-ku, Tokyo, Japan, 107. Phone +81-3-5474-9526, Fax +81-3-5474-4333

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. Contact 425 485-6682 for meeting information and look for related articles throughout this newsletter.

18th Milford Aquaculture Seminar: February 23-25, 1998, New Haven, CT. Aquaculturists and researchers interested in finfish and shellfish culture and / or stock enhancement are invited to attend. The formal abstract deadline is Jan 5th, 1998. For more information, please contact Walter Blogoslawski, National Marine Fisheries Service Milford Lab, 212 Rogers Ave., Milford, CT 06460. Phone: (203)783-4235, Fax (203)783-4217, or email walter.blogoslawski@noaa.gov

Aquaculture International: March 18-20, 1998, Glasgow, Scotland. Sponsored by Fish Farming International. For information write to Emap Heighway, Meed House, 21 John Street, London WC1N 2BP UK, or call +44 (0) 171 470 6245, email sueh@meed.emap.co.uk or alisonb@meed.emap.co.uk

Concepts and Controversies in Tidal Marsh Ecology: April 5 - 9, 1998, Cumberland College, Vineland, NJ. Abstract deadline is November 15th, 1997! For further details, please see ad on page 15 and contact Program Chair Dan Kreeger at kreeger@acnatsci.org, Phone (215) 299-1184, Fax (215) 299-1079

Aquaculture Canada '98: May 31-June 3, 1998, Delta Hotel, St. John's, Newfoundland, Canada. 15th Annual Meeting of the Aquaculture Association of Canada. Theme is "Research: An investment in the future". For more information, contact Dr. Jay Parsons at tel. 709-778-0307, email jparsons@gill.ifmt.nf.ca or visit www.ifmt.nf.ca/mi/aac.

IIFET TROMSØ: July 8-11, 1998, Tromsø, Norway. The conference themes are Seafood Trade & Markets, Fisheries Management & Development, Coastal Zone Management & Aquaculture, Methods, and Special Topics. For details, contact IIFET Secretariat, Oregon State University, Dept. of Ag. & Resource Economics, Corvallis, OR 97331-3601, Phone (541) 737-1414, Fax (541) 737-2563, Email mandigod@ccmail.orst.edu or Ann.L.Shriver@orst.edu

2nd International Conference on Recirculating Aquaculture Systems: July 16-19, 1998, Hotel Roanoke Conference Center, Roanoke, Virginia. Topics include recirculating aquaculture design, operation and management, business plans, economic analysis, marketing and market development, fish health and disease, food safety and HACCP, quality control, and system engineering and waste management. For information contact Dr. George Libey at Food Science Bldg. #0418, P.O. Box 850, Blacksburg, VA 24063-9959, Phone (540) 231-6805, Fax (540) 231-9293, Email cfast@vt.edu

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

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

Bordeaux Aquaculture: October 7-10, 1998, Bordeaux Convention Centre in Bordeaux Lac, France. Biennial conference, workshop, and exhibition. For further details contact BCF- Fax: 011 (33) 556 43 1776

Upcoming Meetings continued

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

ExpoPesca '98: December 2-5, 1998. Santiago, Chile. For details, call Sue Hill at +44 (0) 171 470 6340, Fax +44 (0) 171 831 2509

Fifth International Congress on Medical and Applied Malacology: December 27-30, 1998, Chiangmai, Thailand. Please contact Prof. Dr. Suchart Upatham or Prof. Dr. Maleeya Druatrachue, Department of Biology, Faculty of Science, Mahidol University, Rama 6 Road, Bangkok 10400, Thailand. Phone and Fax: 662-2477058, Email scsut@mucc.mahidol.ac.th, or access the web at <http://www.mahidol.ac.th>

Announcing a Special International Conference

Concepts and Controversies in Tidal Marsh Ecology
April 5 - 9, 1998
Cumberland College
Vineland, NJ

The theme of this Symposium is to review the status of salt marsh research and revisit the existing paradigm(s) for marsh function (especially the nexus between primary and secondary production). Hence, this meeting will be of great interest to anyone involved with marshes and wetlands, including scientists, managers, restoration groups, conservation groups and regulatory personnel. This conference will consist of contributed poster presentations and invited oral presentations over a span of three full days. No sessions will be concurrent. The first two days will be devoted to tidal marsh ecology, with an emphasis on functional relationships. The third day will be devoted to ecological engineering and restoration concepts, addressing state-of-the-art methodology and specific case histories. Several challenge papers arguing for and against our ability to restore functional salt marshes will lead off the session. The final half day of the meeting will consist of field trips in Southern New Jersey to natural and restoration salt marshes, the Pinelands, and LEO-15. Abstract deadline **November 15th, 1997**. For information please contact Dan Kreeger, Academy of Natural Sciences, 1900 Ben Franklin Parkway, Philadelphia, PA 19103, USA; Phone: (215) 299-1184; Fax: (215) 299-1079; Email kreeger@acnatsci.org

If you know of meetings or workshops that might be of interest to NSA members, please contact Jay Parsons at jparsons@gill.ifmt.nf.ca, Phone (709) 778-0307.

18th Milford Aquaculture Seminar
February 23-25, 1998

Call for Abstracts
Due Date: January 5, 1998

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

Aquaculturists and researchers with a professional interest in the culture of shellfish and finfish or research activities related to stock enhancement are invited to submit abstracts for both oral and poster presentations. Abstracts should include the title, names of authors, and affiliations and a complete address with a clear statement of work, methods employed, results and conclusions. Abstracts should not exceed one page in length (single spaced) and should be submitted no later than January 5, 1998 to Walter Blogoslawski, NMFS, Milford Laboratory, 212 Rogers Avenue, Milford, CT 06460, in hard copy and on diskette in WordPerfect 5.0, 5.1 or 6.0 and should be IBM compatible and the diskette labelled with the format used. Hard copy may also be faxed to Walter Blogoslawski at (203) 783-4217 or emailed to walter.blogoslawski@noaa.gov for inclusion in the final printed program. All accepted abstracts will be reviewed and edited for publication in the *Journal of Shellfish Research*, June-July 1998 issue.

Visit **www.shellfish.org** for the latest updates on meeting information and your association, as well as links to other shellfish-related sites

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