

# National Shellfisheries Association

QUARTERLY NEWSLETTER

MARCH 2009

ORONO, ME



## President's Message

Greetings all! The upcoming meeting in Savannah marks our 101<sup>st</sup> anniversary – it's the beginning of another century of shellfish, and you are all part of it! Lou D'Abramo, Leroy Creswell and their army of volunteers have put together an exciting program that is described in this Newsletter. I look forward to seeing many of you in Savannah and hope that those of you unable to attend this year will join us next year in San Diego.



It has come to my attention that many members still don't realize all that is available on our Website. Most of you have learned to manage your account, pay dues, submit abstracts and register for Annual Meetings. Your e-mail functions as your username so that you can easily and automatically obtain a password if you've misplaced yours. Current and past issues of the Quarterly Newsletter are available under the Publications tab — see the "Go Green" notice in this Newsletter if you wish to stop your paper delivery. The Website provides you access to recent issues of JSR via the link to BioOne and older issues back through The Proceedings of NSA via the BioHeritage Library Website. These benefits, arranged by Susan Ford, serve our mission of communicating shellfish science by significantly expanding access to both current and older literature. Other benefits of the Website include a wealth of information about our history, including our Constitution and By-Laws. The Recruits have a page with information on NSA travel awards and grants as well as links to current job opportunities. The industry committee has an evolving page of useful information and there is an RSS feed called "Shellfish in the News" that scours the internet hourly for anything happening about shellfish. A Shellfish Forum allows members and non-members to develop discussion threads on topics of interest while the announcements box on the front page is a place where we can post information about upcoming events within and outside of NSA. Be sure to visit shellfish.org and explore for yourself and then help to improve the site by sending comments and ideas to

webmaster@shellfish.org which is conveniently provided as a link at the bottom of every page.

Communicating shellfish information is a primary mission of NSA and the web plays an increasingly important role. NSA must adapt as new technologies are developed, but the path forward is not always clear. We can't jump feet first into every new technology. New ideas and technologies must be considered and evaluated carefully and openly to maintain our position as an effective professional society.

Continued on page 10



*The sights and sounds of Savannah await those coming to the 101<sup>st</sup> Annual Meeting this March. Be sure to check out pages 2 & 3 for more information on special events and pages 4-6 for the meeting Schedule of Activities.*

### ***In this issue:***

- ***Annual Meeting Schedule***
- ***Romancing the Clam***
- ***Newsletter "Go Green" Initiative***
- ***Happy Birthday Sammy Ray!***
- ***Book Review: The Pearl Oyster***

## Annual Meeting Information

Final plans are being made for the 101<sup>st</sup> Annual Meeting of the National Shellfisheries Association to be held at the Marriott Riverfront Hotel in Savannah, GA on March 22 - 26, 2009. The meeting program has over 200 oral and poster presentations in 23 sessions covering topics as diverse as seafood science, shellfish biology and management, and aquaculture. The Schedule of Activities outlining the concurrent sessions, social and business events associated with the meeting can be found on pages 4-6 of this Newsletter and the Full Program is now available on the NSA Website (<http://shellfish.org/>). Although time is running short, registration information, hotel reservations, and travel and sightseeing information can also be accessed through the NSA Website.

Those in attendance will not want to miss two special events, Romancing the Clam and a Traditional Low Country Shrimp Boil. Tickets to these events may still be available. For more information on these events and ticket availability check out the information on page 3.



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**HAPPY 90<sup>TH</sup>, SAMMY!**



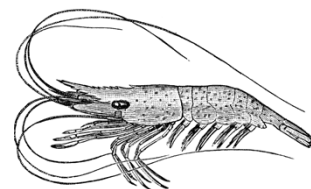
## Student Travel and Presentation Awards

NSA student members will give thirty-four oral presentations and fourteen posters at the Annual Meeting in Savannah, GA. Thirty-seven students competed for Student Endowment Fund travel awards. Registration waivers were given to Colleen Burge, Lisa Crosson, Emma Green-Beach, Emily Scarpa, and David Stick. Lodging awards were earned by Maxine Chaney, Benjamin Daly, Mackenzie Gavery, Valerie Hall, Benjamin Morga, Mickael Perrigault, Jacquelyn Shelton, Mark Sherman, Rachel Smith, Bethany Stevick, and Caitlin Vaughn. We thank judges Shirley Baker, Marty Chintala, Jan Cordes, Joth Davis, Anu Frank-Lawale, Julie Gauthier, Steve Geiger, Marta Gomez-Chiarri, Karolyn Hansen, Sean McDonald, Gulnihil Ozbay, Emmanuelle Pales Espinosa, John Scarpa, and Nancy Stokes for all their hard work in evaluating these applications.

Once again, all student oral presentations will be in the running for the Thurlow C. Nelson Award and all posters will be eligible for the Gordon Gunter Award. To evaluate these presentations, the Student Awards Committee needs your help! Many of you have already indicated your willingness to judge presentations, but if you have not, please contact us (Ami: [wilbura@uncw.edu](mailto:wilbura@uncw.edu); Ryan: [carnegie@vims.edu](mailto:carnegie@vims.edu)). We will organize judging assignments as the meeting program is finalized.

Students have asked: How are presentations going to be evaluated? Judging is based first and foremost on the science. Does the student clearly describe the question or problem, and understand the context? Is a hypothesis clearly stated and the experimental design clearly presented? Are the techniques employed appropriate to the question or problem? Are the data properly analyzed, the results appropriately interpreted, and the conclusions logical? Is the student aware of the limitations of the study and any remaining unanswered questions? What is the overall effort and depth of study, and level of creativity? Evaluations are based secondarily on the visual and oral aspects of the presentation including the organization and quality of graphics and the student's overall demeanor and poise while presenting and responding to questions. Good luck and see you in Savannah!

**Ami Wilbur & Ryan Carnegie**  
Student Awards Co-Chairs



## Romancing the Clam

A very special evening, "Romancing the Clam" is being hosted in Savannah by the East and Pacific Coast Shellfish Growers Associations to coincide with the kick off of the NSA annual meeting. On Monday, March 23rd, from 7-9pm at Bryson Hall (Chippewa Square) participants will have the opportunity sample an array of clam dishes prepared by some of the country's top chefs. The whole idea behind the event is to encourage the eating of sustainably farmed clams. Chefs will be filmed preparing clams in a variety of regional dishes, and the DVD and recipe cards will subsequently be distributed to seafood dealers nationwide as a marketing tool. Food writers will join in tasting the dishes and help 'spread the word'. In addition, the Cedar Key Aquaculture Association and the University of Florida will oversee a professional taste characterization of raw clams from different regions.



Come and sample clam dishes from Florida, Georgia, South Carolina, Virginia, New Jersey, Massachusetts and Washington, and root for your favorites: hard clams/quahogs, Manila clams, geoducks and even the sunray venus. There will also be a wine/beer pairing, and an assortment of breads, cheeses and fruit. This is great opportunity to support the growers' associations and have a thoroughly enjoyable evening as well. There are only 50 tickets available for the event, so reserve yours early! For more information: Alan Power (alanpowr@uga.edu), Bob Rheault (bob@moonstoneoysters.com) or [www.ecsga.org](http://www.ecsga.org).

See you at the bar!

**Alan Power**  
**Bob Rheault**

## Old Fort Jackson Tour and Low Country Shrimp Boil

There are so many sites to see in Savannah, but a visit to Fort Jackson along the Savannah River is sure to be memorable. Fort Jackson is Georgia's oldest standing fort. An original earthen fort was built on the site in 1776, but was abandoned after the Revolutionary War. During the War of 1812, the first stages of a brick fortification were constructed and the fort was named after James Jackson. The fort was manned almost continuously during the early months of the War of 1812 in response to British privateers attacking and burning ships off the Florida, Georgia and South Carolina coasts. The fort was defended as British Vice Admiral Alexander Cochrane's fleet commenced raiding American towns in southern Georgia and northern Florida. Thereafter, the fort was abandoned but was reoccupied during the Civil War when it was re-opened, rebuilt and greatly expanded as the confederate forces prepared to defend the port of Savannah from Union naval forces, a confrontation that never occurred. The fort was decommissioned in 1905 and today is owned and operated by the Coastal Heritage Society.

Fort Jackson along the Savannah River will be the host site for the National Shellfisheries' Low Country Shrimp Boil. The event will be held on Monday, March 23rd from 6:00 to 9:00 pm. Events include a presentation of the history of the fort and a museum tour to view artifacts, a cannon firing demonstration, and a performance by interpretive musicians while you partake of a traditional low country shrimp boil. DON'T MISS IT! Attendance is limited and by the number of reservations that have been made through registration, not many vacancies remain. You can still sign up as part of registration for the meeting. If you did not make a reservation through registration, you can still sign up at the registration desk on Sunday, March 22. The total cost is \$50.00 and transportation to and from the fort will be provided by NSA.

**Lou D'Abramo**  
**Randy Walker**

### Student Endowment Fund Auction

**Tuesday, March 24<sup>th</sup>**

Send items to Sandy by March 10<sup>th</sup> or bring them to the meeting. Remember, nothing too tacky or trivial!

**101<sup>st</sup> ANNUAL MEETING**  
**NATIONAL SHELLFISHERIES ASSOCIATION**

Marriott Savannah Riverfront Hotel, Savannah, Georgia

March 22 - 26, 2009

**SCHEDULE OF ACTIVITIES**

TIME	FUNCTION	LOCATION
<b>Sunday -Thursday</b>		
7:30 am – (midnight)	SPEAKER READY ROOM	General MacIntosh
<b>SUNDAY, March 22</b>		
8:00 am – 9:00 am	EXCOM Breakfast with Hotel Staff	Pulaski
9:00 am – 5:00 pm	EXCOM Meeting	Forsyth
Noon – 1:00 pm	EXCOM Lunch	Mercer
3:00 pm – 6:00 pm	Registration	Prefunction Boardroom A
6:30 pm – 9:00 pm	President's Reception	Atrium/Savannah Riverfront
1:00 pm – (midnight)	Poster set-up	Savannah D
<b>MONDAY, March 23</b>		
All Day	Posters on Display	Savannah D
7:00 am – 8:00 am	Student Breakfast Buffet (students only)	Plaza
<b>CONTINENTAL BREAKFAST</b>		
7:00 am – 8:00 am		Prefunction D&E/Savannah D
8:10 am – 9:50 am	Shellfish and the Environment	Savannah C
	Managing <i>Perkinsus</i>	Oglethorpe
	Blue Crab Biology and Fisheries	Savannah E
<b>MORNING BREAK</b>		
9:50 am – 10:20 am		
10:20 am – 12:00 pm	Shellfish and the Environment	Savannah C
	Managing <i>Perkinsus</i>	Oglethorpe
	Blue Crab Biology and Fisheries	Savannah E
<b>LUNCH (ON YOUR OWN)</b>		
12:00 pm – 1:30 pm		
12:00 pm – 1:00 pm	Past Presidents' Luncheon	Mercer
1:30 pm – 3:10 pm	Shellfish and the Environment	Savannah C
	The Threat of Human and Shellfish <i>Vibrios</i>	Oglethorpe
	Crustacean Population Biology and Genetics	Savannah E
<b>AFTERNOON BREAK</b>		
3:10 pm – 3:40 pm		
3:40 pm – 5:20 pm	Student Session: Writing Successful Grant Proposals	Savannah C
	The Threat of Human and Shellfish <i>Vibrio</i>	Oglethorpe
	Crustacean Population Biology and Genetics	Savannah E
6:30 pm – 8:30 pm	Low-Country Shrimp Boil	Old Fort Jackson, Savannah



TIME	FUNCTION	LOCATION
<b>TUESDAY, March 24</b>		
All Day	POSTERS ON DISPLAY	Savannah D
7:00 am – 8:00 am	CONTINENTAL BREAKFAST	Prefunction D&E/Savannah D
8:10 am – 9:50 am	Out on the Water: Industry Activities and Perspectives	Savannah C
	Promises and Pitfalls of DNA-based Parasitic Diagnostic Methods	Oglethorpe
	Shellfish Genetics and Genomics I	Savannah E
9:50 am – 10:20 am	MORNING BREAK	
10:20 am – 12:00 pm	Out on the Water: Industry Activities and Perspectives	Savannah C
	Promises and Pitfalls of DNA-based Parasitic Diagnostic Methods	Oglethorpe A&B
	Shellfish Genetics and Genomics I	Savannah E
12:30 pm – 1:30 pm	LUNCH (ON YOUR OWN)	
1:30 pm – 3:50 pm	Out on the Water: Industry Activities and Perspectives	Savannah C
	Shellfish Quality and Safety	Oglethorpe
	Shellfish Genetics and Genomics I	Savannah E
4:00 pm – 6:00 pm	POSTER SESSION	Savannah D
7:00 PM – 11:00 PM	STUDENT ENDOWMENT FUND AUCTION	SAVANNAH A
<b>WEDNESDAY, March 25</b>		
Until 5:00 pm	POSTERS ON DISPLAY	Savannah D
7:00 am – 8:00 am	CONTINENTAL BREAKFAST	Prefunction D&E/Savannah D
8:10 am – 9:50 am	<i>Mercenaria</i> Biology, Fisheries, and Culture	Savannah C
	Shellfish Archeology	Oglethorpe
	Recent Advances in Shrimp Aquaculture in the United States	Savannah E
9:50 am – 10:20 am	MORNING BREAK	
10:20 am – 12:00 pm	<i>Mercenaria</i> Biology, Fisheries, and Culture	Savannah C
	Shellfish Archeology	Oglethorpe
	Recent Advances in Shrimp Aquaculture in the United States	Savannah E
12:00 pm – 2:00 pm	NSA BUSINESS LUNCHEON	SAVANNAH A
2:00 pm – 5:00 pm	Shellfish Restoration and Enhancement	Savannah C
	Molluscan Diseases	Oglethorpe
	Crustacean Shell Diseases	Savannah E
6:00 pm	Posters must be removed by 6 pm	Savannah D

**TIME**

**FUNCTION**

**LOCATION**

**THURSDAY, March 26**

7:00 am – 8:00 am

**CONTINENTAL BREAKFAST**

**Prefunction D&E**

8:10 am – 9:50 am

**Invasive and Introduced Species**

**Savannah C**

**Shell Formation**

**Oglethorpe**

**Environmental Influences**

**Savannah E**

**Shellfish Genetics and Genomics II**

**Savannah D**

9:50 am – 10:20 am

**MORNING BREAK**

10:20 am – 12:00 pm

**Crustacean Health Management**

**Savannah C**

**Crustacean Biology**

**Oglethorpe**

**Environmental Influences**

**Savannah E**

**Molluscan Ecology**

**Savannah D**

12:00 noon

**END of NSA 101<sup>st</sup> Annual Meeting**

**Recruits' Corner**



Hello Recruits! I hope that many of you are joining us in Savannah for the 101<sup>st</sup> Annual Meeting. The meeting program will be excellent and Savannah is a beautiful location. If you are attending, please join us for the **Student Orientation Breakfast** on Monday

morning at 7 a.m. Although that may be bright and early for some, I will provide plenty of useful information and tips to help you get the most out of the conference. Later that same day, don't miss our **Annual Special Student Session** which will focus once again on a topic near and dear to all of us students – **FUNDING!** The session will specifically address writing successful grant proposals. Sandy Shumway, who has plenty of experience on the topic, will provide an introduction and overview and then lead a panel discussion that will include a host of distinguished colleagues. The panel has a wide range of perspectives and has been assembled to answer your questions. Many thanks to Sandy for graciously heading up this effort. So, whether you are submitting applications for graduate fellowships, proposals for grants-in-aid of research, or your first major research grant proposal, please come to the session prepared with questions and take advantage of this unique opportunity to learn how to write well enough to get yourself funded.

As regular readers of this column know, my former Co-Chair Dane Frank and I have reached a stage in our academic development where we are competent for metamorphosis (a.k.a. we are nearly done with our Ph.D.s). We need volunteers to replace us as the NSA Student Representatives (please see Recruits' Corner in the December 2008 Newsletter for details). As the current

Recruits' Chair, I will be seeking out successors at the meeting in Savannah. If you have an interest in gaining service experience (looks great on your C.V.!!) while helping out the scientific society that is always helping students, please find me at the conference (you will recognize me from my picture or from my position behind the NSA Sales Booth). Alternatively, you can get in touch with me anytime by e-mail (namcginn@ucdavis.edu).

As always, I welcome your comments and suggestions and I definitely welcome volunteers to help out at the meeting (we always need runners for the Student Endowment Fund Auction on Tuesday). See you in Savannah!

**Nature McGinn  
Student Recruits**

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**Molluscan Genetics and  
Broodstock Development**

Each year a meeting of researchers and industry partners interested in shellfish genetics and the development of shellfish breeding programs occurs in conjunction with NSA's Annual Meeting. Although this association has been on-going for several years, many in NSA may be unaware of the history and purpose of the group. In 1994, the Western Association of Agricultural Experiment Station (AES) Directors established a Western Coordinating Committee (WCC099) for Broodstock Management, Genetics and Breeding Programs for Molluscan Shellfish. This was the first marine WCC in the US. Lavern Weber of Oregon State University became the first advisor for the committee. In 2001, WCC099 became WERA099 (Western Education/Extension and Research Activity 099). Despite the name change, the overall purpose has remained

consistent over the years: to encourage discussions, exchange of ideas and planning future projects among a small group of molluscan shellfish geneticists, breeders and industry in an informal environment. The meetings are facilitated by an Advisor nominated by the AES Directors as well as a Chair and Secretary elected by the membership.

The initiation of WCC099 occurred due to greater national and international interest in molluscan shellfish breeding programs and genetics in the early 1990's. On the mid-Atlantic Coast, USA, populations of the Eastern oyster continued to decline and established breeding programs to develop *Haplosporidium nelsoni* (MSX)-resistant Eastern oysters were revised and extended to include resistance to Dermo (*Perkinus marinus*). The collapse of the Chesapeake Bay oyster fishery also resulted in considerable debate on the best strategies for restoring oyster populations and these debates are still vigorous and ongoing. On the West Coast, USDA-WRAC (Western Regional Aquaculture Center) funded a long-term project on cross-breeding Pacific oysters to improve broodstock. Plans were also in place to start The Molluscan Broodstock Program (MBP) as a selection program for improvement of Pacific oysters. WCC and WERA meetings have been very important in developing these breeding programs. In addition, the contributions of French participants have greatly increased our understanding of summer mortality of Pacific oysters and have resulted in several US-French collaborative projects. Since the WRAC cross-breeding and MBP projects were established, Pacific oyster breeding programs have been established in Australia and New Zealand. International researchers from these countries have participated in the meetings and brought new perspectives and ideas.



*Selective breeding of oysters is only one of many topics discussed at annual WERA099 meetings.*

One of the major factors underlying the greater interest in molluscan shellfish genetics and breeding programs are the technical advances in molecular genetics, such as PCR, microarrays and high-throughput sequencers. The availability of genetic markers has allowed identification of different wild and broodstock populations, determination of pedigrees for breeding programs as well as development of markers linked to quantitative traits, such as resistance

to disease and shell color. Future developments in molecular genetics will no doubt provide additional tools to improve the efficiency and effectiveness of breeding programs.

WERA099 usually meets one or two days before the annual meeting of the National Shellfisheries Association (NSA). This year meeting will be held on March 20<sup>th</sup> and 21<sup>st</sup> in Savannah, Georgia, in conjunction with the 101<sup>st</sup> NSA meeting. After introductions and updates from members, the meeting will focus on oyster breeding programs on the US East and West Coasts and in Australia. Visit the WERA099 website for more details: <http://nimss.umd.edu/homepages/pub.cfm?trackID=8296>.

**Chris Langdon, Oregon State University**  
**Anu Frank-Lawale, VIMS**

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## **Pacific Coast Section Update**

Great things are ahead for the Pacific Coast Section this year. The newly elected PCS board met late last fall in Kingston, Washington. On the agenda was a discussion of expanding PCS involvement in more regional conferences to provide additional opportunities for scientific exchange and education for PCS members. A committee formed at the PCS Annual Meeting last year also explored this topic. One of the first new partnerships stemming from this effort will be the PCS sponsorship of the Conference for Shellfish Growers, on March 2<sup>nd</sup> and 3<sup>rd</sup>, 2009 in Union, WA (for more information go to: [www.wsg.washington.edu](http://www.wsg.washington.edu)). Sessions at this conference will include the history of natural seed sets, hatchery development, current hatchery challenges and possible solutions, climate change impacts on harmful algal blooms and tidal vegetation in Puget Sound, culture techniques, shellfish growing area rainfall analysis and geoduck biology. Members are encouraged to be on the lookout for more events with which the PCS can become involved and support in our region.

PCS member Sean McDonald is spearheading the latest student fundraiser, the PCS 2010 photo calendar. Shellfish photos, submitted by PCS members over the past month, have been voted on via an on-line poll. The top 12 vote winners will appear in the calendar which will debut and be on sale at the 101<sup>st</sup> NSA meeting in Savannah, GA. In addition, PCS members will also be selling our ever popular, limited edition geoduck t-shirts at the Savannah meeting.

Planning will begin shortly for our Annual Meeting with the Pacific Coast Shellfish Growers Association. More details on this fall conference will appear in the next edition of this Newsletter.

Hurray for daylight low tides....

**Teri King**  
**PCS Chair**

## First NSA Meeting

What do you remember about your first NSA meeting? Dr. Albert Sparks is well known for his studies of Dermo alongside shellfish pathologists John Mackin and Sewell Hopkins and his many publications on molluscan and crustacean pathology, including the classic 1972 book *Invertebrate Pathology* and its sequel *Synopsis of Invertebrate Pathology Exclusive of Insects*. In the following passage, Dr. Sparks, a former faculty member at Texas A&M University and the University of Washington, a retired NOAA/NMFS senior scientist, co-founder of the Society of Invertebrate Pathology, and former NSA President (1969-1970), recalls his memories of the 48<sup>th</sup> Annual Meeting in Miami, FL. I hope you enjoy his recollection of the event as much as I have (ed.).

In the Spring of 1956, I accepted a job as Chief Biologist and Assistant Director of the Texas A&M Research Foundation Laboratory in Grand Isle, LA. I had barely settled in when the lab Director, Dr. J.G. Mackin, informed me that my wife Pat and I would attend the 1956 National Shellfisheries Association meeting in Miami Beach. Because Pat had never been to Florida and I had only landed in a couple of cities by plane or boat, we decided to drive. We left Thibodaux at 7:55 on the morning of July 28, 1956 for the first of many drives along the beautiful white beaches of the northeastern Gulf of Mexico. Since it was all new to us, we were in no hurry and spent the night in DeFuniak Springs-only 221 miles from Thibodaux. According to my journal, the motel cost \$5.00 for Pat, Elisa and me. Breakfast the next morning was also expensive; my eggs, sausage, grits, milk and coffee was \$0.85. We arrived in Miami Beach in mid afternoon on the 30<sup>th</sup> and checked into the Algiers Hotel, the site of the joint Oyster Growers and Dealers Association and National Shellfisheries Association Convention. The convention included some joint sessions but, for the most part, the two organizations had separate programs. However, the social events were all joint sessions. Although I did not realize it at the time, this tradition was unusual, if not unique, for a trade association and the scientists involved in research on the same resource.

After settling Pat and Elisa in the room, I returned to the lobby to register for the convention and found Dr. Mackin there talking to a group of people. I joined the National Shellfish Association, paying the annual dues of \$2.00, and paid the \$17.00 registration fee. Mackin then began introducing me to people standing around the registration desk, beginning one of the most exciting weeks of my professional life. I met virtually everyone in American oyster research, almost all of whom I knew from the literature but only a few of whom I had met face to face. That first group included Al Chestnut, from North Carolina, Francis Beaven, from Solomon's Island, Maryland and President of NSA, and Bob Lunz, from Bears Bluff, South Carolina. Shortly afterward, Mackin and I drifted into the bar, where he introduced me to and we had drinks

with Thurlow Nelson, the venerated Dean of American oyster biologists, and his first and last PhD. students, Roy Eelsey from British Columbia and Carl Shuster from the University of Delaware. In the bar, I also met Lyle St. Amant, Louisiana Wildlife and Fisheries, and Fred Dieler from the Freeport Sulfur Company in Louisiana.

Early the next morning, I put on my bathing suit and went down for a run and swim. I learned the facts of life of Miami Beach; there was a fence between the Algiers' beach and the beach of the Fontainebleau on one side and the hotel on the other. I settled for a swim and initially had the entire beach as far as I could see to myself. Soon, however, a slender man who looked distinguished even in a bathing suit joined me. He introduced himself as Gene Cronin from Solomon's Island, Maryland and was attending the NSA Convention.

Subsequently, I met Laurie McHugh, Phil Butler and Bill Hargis. I knew Hargis well from correspondence; he had worked on the Monogenetic Trematodes of the Gulf of Mexico for his PhD under Robert Short at Florida State while I was working on the Digenea. I became well acquainted with the others, most of whom were important in my professional life over many years. I don't remember much else about the convention, scientific or social except for Keith Lewis' paper on the Public Health Aspects of Paralytic Shellfish Poisoning. I found it interesting without suspecting that PSP would be a major research interest some years later.

**Dr. Albert Sparks**

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## SPECIAL SESSION ORGANIZERS NEEDED FOR AQUACULTURE 2010

Organizers are still needed for scientific sessions to be presented at Aquaculture 2010 in San Diego. If you are willing to organize a session, please get in touch with Sandy Shumway, Teri King or Ryan Carnegie (email addresses on the back of this Newsletter) **AS SOON AS POSSIBLE**.

We are especially looking for organizers for the following topics: growth and reproduction, innovative technology, scallops, clams, oysters, new species for aquaculture, crabs, lobsters, gastropods, pearl oysters, freshwater mussels, shellfish genomics, shell disease, ecology, physiology. (Note: some topics are not listed here because they are already covered - but if you have ideas for additional sessions, do contact us!).

The meeting will only be as interesting and successful as the participants make it, so please consider volunteering. We look forward to hearing from you.

**Sandy, Teri and Ryan**



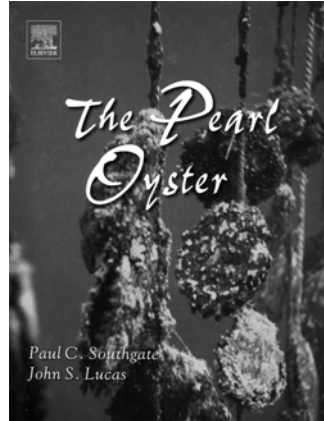
## Book Review

*The Pearl Oyster*, Edited by Paul C. Southgate and John S. Lucas. Elsevier, 2008. 574 pages. ISBN-10: 0-444-52976-4, \$US111 (hardcover).

This book, comprised of 16 chapters written by 26 contributors, begins with a fascinating history of the pearl from the times of Plinius, Caesar, Charlemagne, and Christopher Columbus to current culture efforts and interest globally. The chapter, Taxonomy and Phylogeny, includes much material that would appear to be more appropriate in the chapter on anatomy (mantle structure, shell morphology, labial palps, ctenidia, musculature, feeding and digestive system, circulatory system, excretory system, nervous system, reproductive system) or a separate chapter on ecology (distribution, habitat and ecology). There is a separate chapter on Soft Tissue Anatomy, Shell Structure and Biomineralization where there is some overlap of information, and certainly confusion as to where one should look for pertinent information. The chapter on Feeding and Metabolism is an interesting read, but mostly a review of the very few papers on the topic and some speculation - this is obviously a field of research in need of more data. The chapter on Reproduction, Development and Growth is a comprehensive review of the literature and identifies other key areas of research needs, e.g. energetics and the nutritional basis of gamete development, and management of growth rate. Some topics are discussed, again as speculation based upon other species of bivalve molluscs, as the topic pertains to pearl oysters. There are notations regarding the potential role of dissolved organic material, but no data available on the topic, a discussion of 'buffering against rapid salinity changes' - which actually refers to shell valve closure followed by mortality. The section on oxygen has several statements that I would argue are incorrect, perhaps the result of papers that are in Japanese where only the abstract is available in English or translation is not exact, and, again, speculation in the sections on toxic phytoplankton and other toxins, and modeling

environmental influences - again, discussions are based upon studies of other bivalve molluscs and assumptions that pearl oysters are 'the same'.

The chapters on Pearl Oyster Culture, Disease and Predation, Population Genetics and Stock Improvement, Economics of Pearl Farming are the most substantial, more in-depth and based upon numerous sources of information and experience. This is quite obviously because these are the topics that have been of greatest practical use to the industry over the centuries. The chapter on the Pearl Market seemed very 'thin', (only two literature citations), but provides an interesting discussion of challenges to the industry. I was very pleased to see an entire chapter devoted to Environmental Impacts of Pearl Farming with a balanced discussion of the impacts of pearl farming in different geographical regions. Chapters on Biofouling and Future Developments round out the volume.



The book overall is well written and presented. Unfortunately, many of the figures appear to be straight from spreadsheet programs, many of the black and white photographs suffer from lack of contrast, and I found few typos. The placement of some figures is rather odd, some in black and white within the text, and then duplicated in color plates at the end of the book. The lower quality, non-gloss paper is not in keeping with prior volumes in the series and takes away from the presentation of the book.

One recurring theme in many of the chapters is that there has been little experimental or field research on the basic biology of pearl oysters, and hopefully this book will stimulate new studies. The Pearl Oyster is a welcome addition to the Elsevier series on individual species and the editors are to be congratulated for their efforts in assembling a wealth of information, much from obscure sources and personal experience.

**Sandy Shumway**  
University of Connecticut

### Go Green with E-delivery of the Quarterly Newsletter!

Getting the newsletter in the mail is a member benefit but many of you have asked if you could just get it electronically. Well you can. The Newsletter is posted as a pdf file to <http://shellfish.org/pubs/qnl.htm> once it is completed. You can always access the current and archived issues there. If you would like to 'Go Green' and save some trees, postage and energy, simply send a note to Paul Rawson ([prawson@maine.edu](mailto:prawson@maine.edu)) and we'll add you to an e-mail delivery list. Once an issue is posted you will be sent the direct link via e-mail so that you can easily access the pdf file. Let's save some trees and some Association funds.

## President's Message... Continued from page 1

Tried and true methods like this Newsletter, JSR and our Annual Meeting will undoubtedly remain essential components for disseminating information about all things shellfish, but many changes are already upon us. Our Website has evolved into a web portal that is functional, yet we're still learning how to take advantage of its power. This is a critical place where web-savvy members can volunteer to provide valuable assistance.

So what's in store for the future as technologies change and there is an increasing need for sound science-based management to maintain shellfish resources? How will NSA continue its primary function of facilitating the exchange of information and needs within and among academia, management and industry regarding shellfish? I see little change in the need for producing our Newsletter, JSR or our annual meetings. These constitute our core activities. We're now taking advantage of web-based technologies. One-way electronic exchange is well-established, as described above, and is providing significant benefits to our members and the larger shellfish community. However, we've not taken much advantage of the rapidly evolving interactive mechanisms that cyberspace now provides. What began as e-mail listserves and bulletin boards has evolved into complex interactive formats such as Myspace™ and Facebook©. Members are even using YouTube™ to communicate shellfish information (e.g., [www.youtube.com/watch?v=mFC96vWNC4](http://www.youtube.com/watch?v=mFC96vWNC4) shows our own Rick Karney, Industry Committee Co-Chair, spawning *Mercenaria mercenaria* this past summer). Video and web conferencing (including webcasts and webinars) are now practical and productive means of communication for some purposes. One day, many of you that cannot attend an annual meeting in person may be able to participate from wherever you are in the world through your computer connected to the Internet. How will we incorporate these technologies into our efforts? How will we prevent misinformation from proliferating via these rapid and efficient modes of communication? Perhaps not all will become effective tools for us, but they are worth exploring and cannot be ignored.

Since joining NSA I've learned much about the Association's ability to maintain an active core of volunteers to keep it running, focused and relevant. In recent years, the organization has moved cautiously when considering new technologies. Such a strategy can serve an organization well or can leave it in the dust. To date, I believe that this strategy has served NSA well. I suspect, however, that NSA may have to move quickly in the coming years. As I watch current students develop into young scientists, I can't help but notice how much they depend on these newer modes of communication. NSA will need to determine if, how and when to take advantage of these new technologies.

As I pass the gavel, Joth Davis will start his tenure as President with a new strategic plan. Wait, I can already see eyes glazing over. Yes, strategic planning can be a torturous process. But strategic plans serve important roles by providing critical guidance for those leading an organization so that it does not end up the pet project of a single individual. Like the struggle to get JSR online, the development of NSA's strategic plan has been difficult. Through Lou D'Abramo's perseverance, however, this task is nearly complete. Input was initially obtained from the Past Presidents through a standard SWOT analysis in which they were asked to comment on strengths, weaknesses, opportunities and threats that face NSA. Nearly all responded. This information was supplemented by the Excom and then drafted into a strategic plan that was reviewed by the Past Presidents and is now under review by the Excom. The document will be made available to the membership in the Newsletter and posted to the Website so that it can be referenced readily, revised as needed, and not be 'swept aside as a bunch of nice ideas'. It is a living document to help guide NSA into the future. Joth Davis and I have agreed to initiate action on the goals articulated in the strategic plan and we will welcome your input and assistance as we begin NSA's second century with you.

Finally, this being my last column as President, I'd just like to express my sincere thanks and gratitude to all of the Excom and Committee members, including members that were not formally appointed to any committees, that have helped to keep me on track and keep NSA moving forward. Please give Joth Davis your support. I know he'll appreciate it as much as I have.

**Dave Bushek**  
President

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## NEW BOOK



Look for this new title at the upcoming 101st Annual Meeting or visit [www.woodhousepublishing.com](http://www.woodhousepublishing.com)

# Aquaculture Canada<sup>OM</sup> 2009



26th Annual Meeting of the AAC  
26e Réunion Annuelle de l'AAC  
Partners:



## May 10-13, 2009

THE COAST BASTION INN, NANAIMO, BRITISH COLUMBIA

*Aquaculture: Meeting the Challenges • L'Aquaculture: Réalisons les défis*

### Keynote Speaker:

Dr. Barry Costa-Pierce, University of Rhode Island  
*Making Aquaculture Part of Our Culture: Aquatic Foods and the Localvore*

### Plenary Speakers:

Dr. Richard Beamish, Fisheries and Oceans Canada  
*The Importance of Aquaculture and Hatcheries to Fisheries in British Columbia as our Climate Changes*

Mr. Tim Davies, Redcorp Ventures Ltd.  
*Navigating Sustainable Development*

### Sessions Planned:

1. Aquaculture Certification and Traceability – Global and Local Solutions
2. Fish Welfare
3. Application of Genome Science to Sustainable Aquaculture
4. First Nations' Opportunities and Challenges in Aquaculture Development
5. Aquatic Invasive Species
6. Integrated Multi-Trophic Aquaculture
7. Alternative Finfish Aquaculture
8. Alternative Shellfish Aquaculture
9. Canadian Freshwater Aquaculture – Research, Development, and Commercialization
10. Aquaculture Education and Training
11. The Human Dimensions of Aquaculture
12. Aquaculture Innovation and Market Access Program (AIMAP) Update
13. Ecosystem Approaches: Strategies, Tools and Techniques to Meet the Challenge of Sustainability
  - A. Strategies for an EBA Approach
  - B. Tools for an EBA Approach
  - C. Techniques: the Nuts and Bolts for an EBA Approach
14. Environmental Interactions: New Perspectives
  - A. New Perspectives on Predator Protection
  - B. New Perspectives on Closed Containment
  - C. New Perspectives on Sustainable Feeds
  - D. New Perspectives on Sea Lice

### General information/ Renseignements généraux:

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<http://www.aquacultureassociation.ca/ac09/index.html>

## Upcoming Events

**National Shellfisheries Association, 101<sup>st</sup> Annual Meeting:** March 22-26, 2009, Savannah Marriott Riverfront, Savannah, Georgia, USA. For information visit [www.shellfish.org](http://www.shellfish.org).

**17th International Pectinid Workshop:** April 22-28, 2009, University of Santiago de Compostela, Galicia, Spain. For information contact Luís Sánchez ([bnluis@usc.es](mailto:bnluis@usc.es)) or Luz Pérez-Parallé ([bnmalu@usc.es](mailto:bnmalu@usc.es)).

**World Aquaculture Meeting:** May 25-29, 2009, World Trade Center, Veracruz, Mexico. For information visit <https://www.was.org>.

**International Conference on Molluscan Shellfish Safety:** June 14-19, 2009, Nantes, France. For information and to register online visit <http://www.icmss09.com>.

**The Crustacean Society Summer Meeting:** September 20-23, 2009, Tokyo University of Marine Science and Technology, Shinagawa, Tokyo. For information visit <http://www.vims.edu/tcs>.

**Aquaculture Europe 2009:** August 14-17, 2009, Trondheim, Norway. For information visit [www.easonline.org](http://www.easonline.org).

**Aquaculture 2010 / National Shellfisheries Association, 102nd Annual Meeting:** March 2-5, 2010, San Diego, CA, USA. More information coming soon.

**World Congress of Malacology:** July 18-24, 2010, Phuket, Thailand. For more information, registration and abstract submission visit <http://www.wcm2010.com> or <http://www.ucd.ie/zoology/unitas/>.

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If you would like to announce a meeting, conference, workshop or publication that might be of interest to NSA members, please contact Paul Rawson ([prawson@maine.edu](mailto:prawson@maine.edu)).



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Forwarding Service Requested

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