

National Shellfisheries Association

QUARTERLY NEWSLETTER

JUNE 2006

GROTON, CT



President's Message

The end of March was capped by the 2006 annual meeting in Monterey, CA, and marked the end of the first year of my two-year term as President of the Association. The annual meeting was a resounding success and, except for some momentary periods of drizzle, the weather was quite comfortable and cooperative. It was such a pleasure to work with the staff of the Monterey Marriott and I thank them for their efforts.

To inaugurate the meeting, there was no better way than the President's Reception at the Monterey Bay Aquarium. The chance to visit with colleagues and friends surrounded by the environs of the Aquarium combined with an all star cast of marine denizens, particularly the "living art" jellyfish exhibit, was just wonderful. The buffet featured a vast array of gastronomic delights that would be difficult to surpass anywhere. NSA is indeed indebted to Sandy Shumway and Julie Packard for making the reception at the Monterey Bay Aquarium a reality. It was truly an unforgettable experience. The Aquarium buffet was just the start of a superb food experience throughout the meeting. Over 150 people attended Ken Chew's Chinese Dinner on the following evening. With all the food and the number of courses (I lost count), this dinner was quite an encore. NSA is so fortunate to have Ken's continued assistance, serving as the up-front person to plan this event which has become an NSA tradition.

Special thanks go to the local arrangements committee, Paul Olin, Susan Scholsser and Debbie Marshall, for all their efforts to help make the 2006 annual meeting such a success. Vice-President LeRoy Creswell also did a yeoman's job of putting together a diverse and interesting program with many timely topics. The meeting was well attended and featured a total of 285 oral and poster presentations by people from across the United States and from Europe, South America, Central America and Asia.

Another major highlight of the 2006 meeting was the Student Endowment Auction. The proceeds from this event totaled \$2,525, a new record. Thanks to Sandy Shumway for serving as auctioneer, appropriately in costume as Ed Ricketts, and Maureen Krause and Gef Flimlin

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Monterey moments - Top: President Lou D'Abramo discusses plans at the annual Executive Committee meeting; Bottom: Meeting attendees enjoy food and conversation at the annual business meeting. See pages 8 & 9 for additional photographs.

In this issue:

- ***Monterey Recap - Science & Fun***
- ***Hurricanes & Gulf-Coast Industry***
- ***Gordon Gunter Biography***
- ***Student Award Winners***
- ***Wallace Award and more***

Gulf Oyster Industry Struggles to Rebuild after Katrina

The efforts to clean up and rebuild in the Gulf States after Hurricanes Katrina and Rita decimated the area have been difficult. Efforts to rebuild the oyster industry have been no different. With a large proportion of the infrastructure destroyed, and no water or electricity, managers, processors and fishermen have had to have all of their supplies brought in from other locations. For many in the area it has been a slow and frustrating process.



According to Mr. Corky Perret of the Mississippi Department of Marine Resources (DMR), approximately 90% of the reefs in Mississippi were damaged by the hurricanes. This computes to an estimated 60 million dollar loss. Given that most of the processors and 70% of the vessels were destroyed, the road to recovery is going to be a long one. Many estimate that it will take several years and 50 million dollars to restore Mississippi's 12,000 acres of oyster bottom. Due to the impacts, oyster grounds were not opened during 2005 in the state of Mississippi, but DMR found other ways to employ displaced oyster fishermen while at the same time working on the recovery process. With the help of local oyster fishermen, the entire oyster resource, or what is left of it, as well as the extent of the debris has been gridded and mapped, "...and they did it all the old fashioned way" says Mr. Perret, "by taking a pole and probing the bottom to see what's there." The next step in the plan is to hire the oyster fishermen to help with the debris removal and subsequent placement of cultch material this spring. According to Mr. Perret, "There wouldn't be enough people to do all of the work needed without the fishermen's help and at the same time the program is putting much needed money in the fishermen's pockets."

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Congratulations to Student Award Winners !!

The following student awards were presented at the 98th Annual Meeting in Monterey, CA. Thank you to all of the members who judge the student talks and posters. Judging is a time consuming but important task, and the NSA greatly appreciates your efforts.

The **Thurlow C. Nelson Awards** for best student oral presentations were presented to Eli Meyer, University of Southern California, for his talk "Genomic Analysis of Growth in Larvae of *Crassostrea gigas*"; and to Kirstin K. Holsman, University of Washington, for her talk "Autogenic Ecosystem Engineers and the Influence of Habitat Complexity on Intertidal Migrations by a Transient Predator." An honorable mention for an outstanding student presentation was also awarded to P. Sean McDonald, University of Washington, for his talk "Use of a Bioenergetics Model to Investigate the Habitat Use and Behavior of a Non-indigenous Crab, *Carcinus maenas*."

The **Gordon Gunter Poster Award** was presented to H el ene H egaret, University of Connecticut, for her poster "Bivalve Shellfish Can Be Vectors of Transport of Harmful Algae." Two posters earned honorable mentions: Coren A. Milbury, University of Delaware, presented "The Use of Molecular Markers to Assess Native Oyster Restoration Efforts", and Jie Xiao, Virginia Institute of Marine Science, presented "Genetic Differentiation among four *Crassostrea ariakensis* Populations in Asia by Microsatellite Polymorphism."

Congratulations Student Award Winners!



Nelson Award recipient Eli Meyer (back center), Gunter Award recipient H el ene H egaret (front left) and honorable-mention recipient Jie Xiao (front right) pose with co-Chair of the Student Awards Committee Maureen Krause (front center) and President Lou D'Abramo at the annual meeting in Monterey.

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

who took the auction to another level by offering their versions of a clothing ecdysis for the sake of contributions (if you were not there, then use your imagination). NSA is indeed a professional meeting where special talents of our members do come to the forefront and are highly appreciated!

I also thank all the members of the NSA Executive Committee and the chairs/co-chairs of standing committees for 2005-2006. They made major contributions to the planning process. Behind the scenes, but so integral to the success of the meeting, were Steve Allen who downloaded all the presentations for the sessions and organized the AV, and Maureen Krause and Ryan Carnegie who organized the judging of all the student presentations. NSA is also indebted to its student members for their unselfish volunteerism. And thank you to all of those who attended and reserved accommodations at the Marriott. All of you contributed to lowering the meeting costs by helping NSA meet its room-block commitment. Your support is sincerely appreciated. Last but not least, the generous contributions of the meeting sponsors (Florida Sea Grant, California Sea Grant, Woods Hole Sea Grant Mississippi-Alabama Sea Grant Consortium, South Carolina Sea Grant Consortium, Oregon Sea Grant, The Nature Conservancy and NOAA Chesapeake Bay Office) really make a big difference in addressing all the costs associated with a professional meeting.

As I enter my second year as NSA President, the composition of the Executive Committee for 2006-2007 has not changed very much. I am blessed to have a group of co-members who, despite responsibilities to family and employment, still find the time to make unheralded contributions to NSA. The Monterey meeting is only one part of the fruits of their efforts. All the other services that you enjoy and the national and international recognition that NSA enjoys are realized through their work. David Bushek is serving his second year as President-Elect and his knowledge of the financial intricacies of NSA was a real benefit to me. He'll take over the duties of President next year at our annual meeting in San Antonio, Texas. LeRoy Creswell has completed his term as Vice-President and is replaced by Rick Karney. Maureen Krause begins a two-year term as Secretary, replacing Marty Chintala who completed her two-year term. Being Secretary often means attending to a lot of follow-up tasks (by-laws, meeting notes, committee reports, etc.) and I thank Marty for all of her dedicated service to NSA. Joth Davis and Karolyn Hanson continue their terms as members-at-large and Bill Walton begins his first year. Nature McGinn and Dane Frank remain as co-chairs of the Recruits Committee.

The Treasurer's duties remain in the very capable hands of Chris Davis. Evan Ward will continue to bring NSA members a truly top-notch, informative publication in the

form of the NSA newsletter. Membership Chairman for 2006- 2007 will be Bill Walton. Bill and 2005-2006 co-chair Gef Flimlin introduced some strategies that will hopefully be successful in increasing and sustaining membership. As Immediate Past President, Sandy Shumway continues with her office-related responsibilities of Chair of Awards, Elections, and Past Presidents Committees. Sandy also continues as Editor of the *Journal of Shellfish Research*. During the annual NSA Business Luncheon in Monterey, she was honored for her 20 years of devoted service as Editor with the presentation of a plaque of recognition. John Kraeuter will continue on as Chair of the Publications Committee, whereas Susan Ford will assume the duties of Historian. The Industry Committee will be co-chaired by Gef Flimlin and Joth Davis, two NSA veterans who have made notable progress in getting more producers and industry-serving people interested in participating in NSA. Their recent 2006 industry session was very well attended and proved to be highly informative. A similar session is in the planning stages for the 2007 annual meeting in San Antonio. Special thanks to Past-President Jay Parsons for his comprehensive review of NSA By-Laws to ensure that they are current and accurate.

Just like last year, the EXCOM meeting in Monterey resulted in a number of points of action that we will try to address to improve the operation of NSA and the benefits provided to the membership. Keep an eye out for the inauguration of a major funding raising activity, and also be prepared for a "new look" to the NSA website. The current design, which offers members so many different services, will be improved. Those improvements will be principally focused on producing an attractive cover page with a more user friendly design.

To new members and past members who have returned after a respite of inactivity, welcome or welcome back to NSA. I know that you will be impressed with the wide array of services that your very reasonable membership fee provides. To all members, I ask that you begin thinking about attending the next NSA annual meeting in San Antonio, Texas. It is a triennial meeting which means that NSA jointly meets with the World Aquaculture Society and the Fish Culture Section of the American Fisheries Society. This once-in-three year opportunity should not be missed. Many timely and interesting sessions are planned and more information about this meeting will be provided in the next newsletter. Contact Sandy Shumway or Leroy Creswell if you have ideas concerning the program, particularly special sessions.

It has been a pleasure to serve as your President in 2005-2006, and I look forward to your support and input for 2006-2007 so that all of our goals can be achieved and your expectations as a member are met. Contact me if you have ideas about how to make NSA even better.

Lou D'Abramo
President

Recruits' Corner

To all of the students that helped out during the meeting at the NSA Sales Booth or Tuesday night's auction we want to extend a big THANK YOU for helping make the Monterey meeting a great success. The proceeds from the booth sales and auction go to the Student Endowment Fund that helped some of us defray the costs of attending this year's meeting. And to those of you that volunteered out of the kindness of your hearts (an especially big THANKS to you!), we encourage you to apply for the Student Endowment Fund Awards for next year's meeting.

Speaking of next year's meeting...start planning early. Next year is a triennial meeting when we meet along with WAS and the Fish Culture Section of AFS. This big, exciting meeting will take place in San Antonio earlier in the year than our regular meeting time (February 26 – March 2, 2007), so the abstract deadline is earlier as well. Abstracts for AQUACULTURE '07 are due August 25, 2006. Keep an eye on the WAS (www.was.org) and NSA (www.shellfish.org) websites for details about abstracts and the meeting. See you in Texas, yee haw!

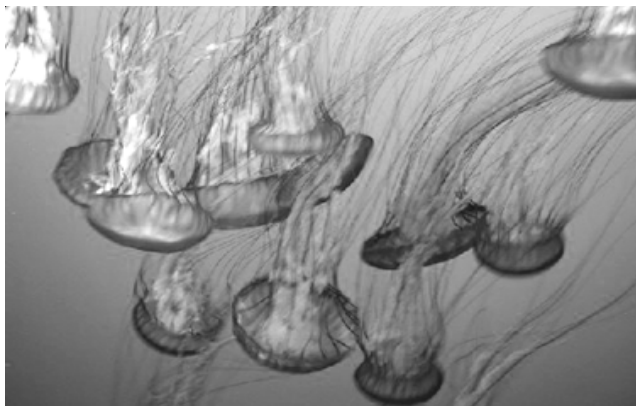
Also, watch the Recruits web page of the NSA web site for information from the Philly and Monterey special Student Sessions. We have had such a positive response to the information presented in the two sessions about publishing and funding that we will be posting the pertinent stuff on our web page as soon as possible. So visit the Recruits page (shellfish.org/recruits.htm) soon for more details. Thanks to all of you that attended "Funding: a Primer" during the Thursday morning session. If you have suggestions for future special Student Sessions or any other comments or compliments about the Recruits, please feel free to drop us a line. You can find our contact info on the back page of the newsletter.

Wishing you a productive summer,

Nature McGinn

Dane Frank

Student Recruits



Jellyfish swim in the Monterey Bay Aquarium.

Student Research Grants Awarded

The annual competition for the Carriker and Castagna Student Research Grants concluded in March. Student proposals were reviewed for quality and intellectual merit by a five-member panel and the following awards were made.

Dane Frank, University of Connecticut (Advisor – Evan Ward) was awarded the Carriker Grant for his proposal, "An experimental approach to elucidate functional mechanisms of control in the bivalve pump." An honorable mention was given to H  l  ne H  garet.

H  l  ne H  garet, University of Connecticut (Advisors – Sandy Shumway, Gary Wikfors) was awarded the Castagna Grant for her proposal, "The persistence of cysts and cells of harmful dinoflagellates after ingestion by bivalve mollusks and their transport through transplanting of bivalves." An honorable mention was given to Andrea Barber of the University of Central Florida.

Congratulations to the award recipients !!



Carriker Grant awardee Dane Frank (left) and Castagna Grant awardee H  l  ne H  garet (right) with Member-at-Large Karolyn Hansen (center).

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Biography: Gordon Gunter

Aug. 18, 1909 - Dec. 19, 1998

Dr. Gordon Pennington Gunter was many things, but uninter-esting wasn't among them. He was a gifted scientist and naturalist, Director of Research in Texas and Mississippi, devoted Civil War enthusiast and father to five children. Gordon Gunter devoted nearly his entire career to the study of the complex system of the Gulf of Mexico and the creatures living in it. In fact, his fisheries research led him to coin the phrase "fertile fisheries crescent" to describe the U.S. coast of the Gulf of Mexico. He led one of the first research teams developing shrimp feed for use in commercial aquaculture, which in 1968 was a new and burgeoning field. His research aided in the determination of the presence of the parasite *Dermocystidium marinum* (Dermo) and its contribution to oyster mortalities in the Gulf of Mexico.

Gordon Gunter was born in 1909 in Goldonna, Louisiana. Goldonna is located in what was then one of the poorest counties in the south, Natchitoches Parish in the Red River county of Northwestern Louisiana. The Civil War had taken a heavy toll on the citizens of Natchitoches, people who had little to lose in the first place. His grandfather, Miles Osborn Gunter, served in the Confederate Army. Gunter was proud of his ancestral heritage and was an active member of at least three patriotic organizations: The Sons of the American Revolution; The Sons of the Confederate Veterans, honoring the memories of those who fought with valor for the south during the Civil War; and The Order of the Stars and Bars, an organization for male descendents of commissioned officers in the Confederate Army.

In 1929 Gunter received a B.A. degree in zoology from Louisiana State Normal, now Northwestern State University of Louisiana, and his M.A. from the University of Texas in 1931. He then became a researcher for the U.S. Bureau of Marine Fisheries in Louisiana and Florida, and studied ichthyology in California at the Scripps Institute of Oceanography. He returned to Texas in 1939 and worked for the Texas Game, Fish and Oyster Commission and for the University of Texas as an instructor of physiology. During this time he also pursued his Ph.D. in physiology and zoology and finished his doctoral work under Professor Elmer Julius Lund in 1945. Dr. Lund had a great effect on Gunter's life and subsequent employment. In 1945, two other achievements of Dr. Lund came to fruition; the opening of the Institute of Marine Science at Port Aransas, and the printing of the first issue of the journal *Publications of the Institute of Marine Science*. Gunter conducted research at the Institute of Marine

Science at Port Aransas and served as Acting Director of the Institute from 1949 to 1954 and director until 1955. Gunter also served as editor of the *Publications of the Institute of Marine Science* from 1950-1955.

In 1955, Gunter became the 3rd Director of the Gulf Coast Research Laboratory (GCRL) in Ocean Springs, Mississippi. He stepped down from that position in 1971, but stayed on as Director Emeritus and professor of zoology, retiring in 1979 at the age of 70. It is from his tenure as Director of the GCRL that Gunter is best known.

The mission of the Gulf Coast Research Laboratory was three-fold: education, research and public service. To these ends, Dr. Gunter was well suited. He had a talent not only for salient research and a skill for relating important matters of science, but was also a gifted leader. Under his direction, the GCRL grew from a part-time, summer facility to a full-time research station with greater than 100 researchers and supporting staff becoming one of the best known and most respected marine research laboratories on the Gulf Coast^{1,2}.

Gunter's interest in research was equaled by his drive for dissemination of this information and open access to published findings. He was an avid reader who understood the importance of keeping apprised of current literature. Dr. Gunter began amassing literature for a lending library soon after his appointment as

Director of the GCRL³. In 1961, the first issue of *Gulf Research Reports* was published. This journal, established by Gunter, served two important functions: a forum for research on the Gulf of Mexico and a publication that he could trade for other scientific journals to add to the collection. He bought and donated much of the early works that served as the foundation of the collection³. The Board of Trustees of the Institutes of Higher Learning named the library on the grounds of the Gulf Coast Research Laboratory facilities in Ocean Springs, Mississippi after Dr. Gordon Gunter on December 21, 1972. It is now one of the largest repositories of marine science publications on the Gulf Coast³.

Gordon Gunter wrote about and published papers on a diverse set of topics. In fact, he published over 330 works in both scientific and popular formats, and grey literature^{1,2}. In addition to his widely known research on salinity and its effects on regional biota^{4, 5, 6}, he published numerous articles in assorted journals and popular publications on topics such as the habits and abilities of shore



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Gulf Oyster Industry... Continued from page 2.

Oyster production in Louisiana also took a serious hit. They lost billions of dollars in infrastructure and approximately 2/3 of the harvest was significantly impacted. For an industry that provides 40% of the oysters consumed in the United States, that has been a serious blow with an estimated 150 million dollar loss in 2005 alone. In the months immediately following the hurricanes, the price of oysters rose 15 to 30% with other areas of the country having to increase their production to make up for the lack of oysters coming out of the Gulf States. Managers had to make decisions that under other circumstances they may not have made. For example, the Virginia Marine Resources Commission decided to increase the harvest limit and open the public harvest areas earlier than normal. This decision was made to keep the Virginia shucking houses, which normally get 70 to 80% of their oysters from the Gulf region, open until oyster production in the Gulf once again picked up.

According to Mr. Mike Voisin, Chairman of the Louisiana Oyster Task Force and owner of Motivait Seafood Inc., the majority of the loss in Louisiana occurred in the eastern part of the state. In an attempt to boost production, they developed areas that were relatively unharmed in the western part of the state (about 6,000 acres) and opened them, for the first time in years, in the beginning of 2006. Another area, Sabine Lake, has never been opened to harvest, but plans to open the area from April through October 2006, are in the works.

As in Mississippi, debris on the Louisiana oyster beds is still a major problem. In the words of Mr. Voisin, "In those areas most heavily impacted, there's lots of debris on top of lots of shell and the extent of the debris coverage is still being analyzed." Money received from the Emergency Conservation Program is slated to help remove the debris. The program is set up to provide emergency funding for farmers and ranchers to rehabilitate farmland damaged by natural disasters. It specifically provides aid for the removal of debris, and private lease owners in Louisiana are ready to begin the process as soon as the funds are received. Following debris removal, the next step in the plan is to put down cultch material to repair the reefs and replace some of the buried and/or damaged shell. They hope to use a mixture of shell, limestone and concrete. There is even a proposal to use sections of the hurricane-damaged I-10 road as cultch material.

The Louisiana Sea Grant's, Grand Isle Oyster Hatchery was destroyed by a 12-foot storm surge. Dr. John Supan of Louisiana State University reports that plans for rebuilding the structure are currently in the design phase. Among the improvements are plans to build the hatchery 13 feet off the ground. The intention with the new facility is to have the ability to produce larvae year round. The money for the project has been identified with expected completion of

the new facility by summer 2007. Once the hatchery is up and running Dr. Supan says they hope to have the capability of producing 60 million larvae per week, which can then be used to produce spat on shell. With the completed facility both diploid and triploid spat on shell will be produced for use in aquaculture and restoration efforts, and plans are in the works to have the Federal Emergency Management Agency partner in that effort. In the mean time some of the broodstock from the damaged facility has been shipped to a hatchery in Kona, Hawaii, for production of seed, which will then be shipped back to Louisiana to help jump-start the recovery process. With the help of the seed produced by the hatchery, the Louisiana Oyster Task Force has expectations that they will be able to increase oyster production in Louisiana such that in 4 to 5 years production levels will be higher than it was before the hurricanes.

A positive side effect of the hurricanes has been the idea of crop insurance for oysters. Currently under the Federal Crop Insurance Act, farmers can insure anything from apples to pecans to wheat. There is currently a proposal to include oysters in the list of insurable crops in the hopes that at least for growers with private leases, they will be protected against losses from future hurricanes.

Missy Southworth
NSA Newsletter Reporter



Volunteers Needed to Organize Shellfish Sessions at Aquaculture 2007

Contact Sandy Shumway, Program Chair, or Leroy Creswell, NSA Program Representative, as soon as possible with your ideas (contact info on back page).

Gunter Biography... Continued from page 5.

birds^{7, 8}, insects^{9, 10} and primroses¹¹. He was genuinely curious about the world around him, and was considered by his peers and associates as an avid and competent naturalist. His name is even known amongst animal-rights advocate groups whose websites quote Gunter's 1961 submission to *Science* stating that the boiling of lobsters is an "unnecessary torture"¹². He also compiled many books of writings on topics such as family and nature calling them "Gunter's Archives". Many of these Archives are today housed in the Gunter Library^{13, 14}.

His scientific vision had a wide scope and he asked big questions. For many years Gunter was the sole expert consultant to the Army Corps of Engineers in Mississippi¹². From his research on the paleogeography of the Mississippi river¹⁵, Gunter projected a current-day course for the river, a course that might have occurred if the Army Corps of Engineers had not interrupted the seasonal ebb and flow of the Mississippi. He determined that the Atchafalaya would have expanded to approximately the size of the Mississippi River and would not meander through New Orleans, but would empty into the Gulf further west of where it does today^{1, 15}. He examined how changes in salinity affect populations and species diversity in the northern rim of the Gulf of Mexico^{4, 5, 6}. He was an early proponent of aquaculture¹⁶ and was a charter member and later president (1973-1974) of the World Mariculture Society, now the World Aquaculture Society. He was also a lively member of the National Shellfisheries Association. Gordon Gunter became the first paid Life Member in 1959 and was named Honored Life Member of the National Shellfisheries Association in 1973, the society's most prestigious award. He was further honored by our organization with the eponymous Gordon Gunter Poster Award¹⁷.

The American Fisheries Society named Gordon Gunter an Honorary Member, synonymous with our Honored Life Member and is likewise reserved for those whose achievements in the field merit this type of singular distinction. Gunter's merit as a scientist and his contributions to our understanding of the ecology, comparative physiology of the biota, and commercial fisheries of the U.S. Gulf of Mexico was recognized by other groups as well. In 1966 Gunter was elected President of the Mississippi Academy of Sciences. And for his contributions to marine fisheries sciences, the National Oceanic and Atmospheric Administration recommissioned the research vessel *Relentless* to the Gulf of Mexico where it was renamed the *R.V. Gordon Gunter* on August 28, 1998^{1, 2, 3}.

Dr. Gordon Gunter was a pioneer in the fields of comparative physiology of shellfish and fish and fisheries science. He was a well known and well respected figure in

science and in his adopted hometown of Ocean Springs, Mississippi. Each person I spoke with about Dr. Gunter recalled him as intelligent, curious about the natural world, with many diverse interests and opinions and an outgoing mannerism^{13, 14, 18}. Each one called him a "great man", and I wish I had the opportunity to know him personally.

Acknowledgements

I would like to gratefully acknowledge the help of Joyce Shaw, head Librarian at the Gunter Library, Ed Gunter, Gordon Gunter's son, and Mrs. Lydia Lee Rasor, Dr. Gunter's secretary for many years. They were all extremely helpful, and generous with their time and knowledge.

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Dane Frank
University of Connecticut

IMAGES FROM THE 98th ANNUAL MEETING IN MONTEREY



Student Endowment Awards Given for Monterey Meeting

NSA students presented an impressive 42 talks and 40 posters at the Annual Meeting in Monterey, California. A total of 16 students received NSA Student Endowment Awards in the form of free registration or lodging for the meeting. Congratulations go to Dane Frank, Justin Manley, Aaron Bennett, Hélène Hégaret, Susan Pate, Leanne Harris, Kristine Sommer, Elizabeth Hemond, Laurie Perino, Ko-hyung Kang, Binglin Li, David Stick, Robert Leaf, Jie Xiao, Kristina Straus and Colleen Burge. Special thanks are owed to Tim Scott, Mike Oesterling, Eric Lund, Jan Cordes, Jamie King, Troy Alphin, Chris Dungan and AJ Erskine for judging endowment award applications. Also, congratulations to those students who received Nelson and Gunter presentation awards (see pg. 2).

The Student Awards Committee also thanks the following NSA members for donating their time and expertise to judge talks and/or posters at the meeting: Brett Dumbauld, Chris Davis, Joth Davis, Earl Melancon, Bill Arnold, Dianna Padilla, Shirley Baker, Marty Chintala, Marta Gomez-Chiarra, Stan Allen, Russell Mitchell, Laura Rogers-Bennett, Missy Southworth, Anne Boettcher, Gef Flimlin, Bill Walton, Amy Ringwood, Chris Dungan, Catherine Gatenby, Inke Sunila, Leroy Creswell and Karolyn Mueller Hansen. Our apologies if we left anyone off of the list. If you would like to help judge student presentations at next year's meeting, be sure to check the box on the registration form indicating your willingness to help.

After several years of serving as co-chair of the NSA Student Endowment Awards Committee, Maureen Krause is stepping down (up?) to assume the duties of NSA secretary, and Ryan Carnegie welcomes Ami Wilbur as his new co-chair starting with the San Antonio Meeting, Aquaculture 2007. We look forward to seeing everyone in Texas.

Maureen Krause
Ryan Carnegie
Student Endowment and Awards Committee



National Oyster Beauty Contest Winners Revealed

Beauty truly is in the eye of the beholder. Just ask everyone who voted in the Beautiful Oyster Contest, all attendees at the opening reception of the National Shellfisheries Conference in Monterey Bay, California, where oysters from across the U.S. competed for the coveted title of "MOST BEAUTIFUL OYSTER."

The briny beauties were divided by species, including eastern (aka American) oysters from the East and Gulf Coasts; and Pacific, Kumamoto and Olympia oysters from the West Coast. And the winners were:

In the eastern oyster category, the winner hailed from Sweet Neck Farm in Edgartown, Massachusetts. California oysters won in both the Pacific and Kumamoto oyster categories. The winner for the most beautiful Pacific came from Drakes Bay Oyster Company, in Inverness, California, and the Kumamoto winner was from Coast Seafoods, Eureka, California. The Olympia oyster winner came from Little Skookum Shellfish Growers, Shelton, Washington.

The oysters began the contest fully enclosed in their shells, where voters considered the attractiveness of their outer appearance, such as shell shape and coloring. Each contestant was then carefully shucked and revealed in the buff, where factors such as the texture and color of the meat and ratio to shell size were considered. One hungry participant promptly ate all the winners after the votes were tallied, declaring them all "delicious."

There was absolutely nothing scientific about the contest, organizers admitted, but judges were passionate about their choices. Heated arguments about the merits of the outside shell versus the inside meat were heard to erupt in the voting area.

For more information on the contest, contact Robin Downey, 360-870-9611 or Paul Olin, 707-527-3449.

Winners' contact info:

Eastern: Sweet Neck Farm, Jack Blake, 508-693-0391, jblake321@verizon.net

Pacific: Drakes Bay Oyster Farm, Kevin Lunny, 415-669-1149, kevin@drakesbayoyster.com

Kumamoto: Coast Seafoods, Greg Dale, 707-442-2947, pgd@sbcglobal.net

Olympia: Little Skookum Shellfish Growers, Carl Barringer, 360-426-9759, littleskookum@direcway.com



Bill Dewey Presented with Wallace Award

During the annual meeting in Monterey, CA, Bill Dewey (Taylor Shellfish) was selected by the Executive Committee to receive the David H. Wallace Award. This award was developed in honor of David Wallace in recognition of his long and dedicated service in promoting research, understanding, and cooperation among shellfish scientists, culturists, managers, producers, and regulators (for more information about the Wallace Award see <http://shellfish.org>).

Since graduating from the University of Washington's School of Fisheries in 1981, Bill Dewey has spent 20 plus years as a shellfish farmer in Washington State, and has taken an active role in shaping public policy as it affects the shellfish culture industry. He was featured in the Western Regional Aquaculture Center (WRAC), Water-lines Newsletter (Spring/Summer 1997 issue) when he first served on the Industry Advisory Council of WRAC and was Division Manager of Taylor Shellfish, serving the needs of the company as well as the whole industry. It was stated in that newsletter, "In all aspects of his involvement with aquaculture in the State of Washington, Bill has served the industry with integrity and with an eye toward the future. His training, experience, and expertise in the shellfish industry have put him in high demand, and we are fortunate that he has been willing to further expand his efforts on behalf of the WRAC program." Needless to say, Bill has been a most recognized advocate in the aquaculture arena.

From his start at Rock Point Oyster Co. and then Taylor Shellfish, his keen interest in promoting the well-being of the shellfish industry on the west coast was apparent. He started his own shellfish farm (Chuckanut Shellfish Farm) in 1991. Through the years Bill has had an exceptional record of effectively bringing together research scientists and industry groups/producers so that the products of research are effectively applied for the benefit of the shellfish industry. He has tirelessly made it his personal charge to be aware of any legislative and/or political matters that can be of potential concern for the industry, and has shared that information with industry members for action. His broad training, expertise and accomplishments have led to his appointment to the National Aquaculture Association (NAA) Board of Directors, as well as several other task force committees and councils both locally and

nationally. Thus, he is a true "watch dog" for the shellfish industry.

Bill works closely with the Pacific Coast Shellfish Growers Association (PCSGA) and has served as its President. He was also instrumental in helping to organize the Pacific Shellfish Institute (PSI), which develops and disseminates scientific and technical information to the general public, shellfish farmers and public officials in connection with shellfish related environmental and

animal/human health and safety issues. Well known are Bill's efforts as major organizer and synthesizer of user documents such as the "North America West Coast Shellfish Industry's Research and Initiatives Priorities 2010". This document was first published in 1999, and revised in 2003. Through his involvement in PSI, Bill was able to get cooperation from many members in the PCSGA and the Pacific Coast Section of NSA to develop and revise this document which is important not only to the west coast, but as a reference throughout other coastal areas of the U.S. He is presently working with key scientists and growers in updating this important user document to 2015 priorities. Bill was also a major co-investigator in the 2002 publication, "Environmental Codes of Practice for the Pacific Coast Shellfish Industry", a useful document for orienting shellfish growers of their need to

stay on top of environmental issues/impacts when farming shellfish.

In many ways, Bill has shown similar attributes defined for David H. Wallace in his accomplishments to assist the shellfish industry. Congratulations are extended to Bill for being honored with the NSA David H. Wallace Award for 2006.

Ken Chew
Past President
Wallace Awardee



Report Says Rhode Island Aquaculture Industry Making Progress

WAKEFIELD - The RI Coastal Resources Management Council has released its annual status report on the aquaculture industry in Rhode Island, and the results indicate that the industry, though still a small part of the state economy, grew in leaps and bounds in 2005. "Through the work that the CRMC has done over the years to support growers and the industry-at-large, the state has seen a resurgence of interest in aquaculture," said CRMC Chairman Michael M. Tikoian. "We are excited about this industry's future in Rhode Island and will continue to support farmers and researchers at our universities in their efforts."

The aquaculture industry reported significant growth in 2005. Farmgate value (the value for the product paid to the farmer) of raised aquaculture products rose 29.9 percent, a marked increase from 2004's improvement of 1.6 percent; it was the ninth increase in the last decade. The number of farms in Rhode Island increased from 22 to 25, and total acreage under cultivation grew from 70 acres in 2004 to 85 acres. And for the first time in six years, there was a fin fish proposal under consideration by the CRMC. Aquaculture-related industries in Rhode Island reported gross revenue of \$3.5 million in 2005. According to the report, the American oyster accounted again for 97 percent of the total harvest; the remaining 3 percent was the hard clam or Quahog. For the sixth consecutive year, 100 percent of all Rhode Island-grown aquaculture products were shellfish. Last year also marked the first time in six years that an application for a freshwater finfish farm was proposed. This application, which is currently under review, proposes raising Koi for the ornamental market.

The Rhode Island Aquaculture Initiative, established in 2002 with the efforts of Senator Jack Reed, and managed and operated by the CRMC, the University of Rhode Island (URI), Roger Williams University (RWU) and the Rhode Island Sea Grant College Program (RISG), continues to serve as a resource for investment in the future growth of the industry in the state. These universities and state entities serve as major partners in administering these funds, and coordinating the programs to be conducted under the Initiative. In 2005, competitions for research grants and mini-grants for growers were held and grants awarded to the best grant proposals. Two aquaculture extension positions funded in partnership with Roger Williams University and the University of Rhode Island provided benefits to the industry and prospective participants. Research at the universities continued to be a vital part of the aquaculture industry in Rhode Island in 2005.

The report is available online, at www.crmc.state.ri.us, under Publications and then under the subheading of Annual Reports. For a hard copy, contact Laura Ricketson, public educator and information coordinator, or David Alves, CRMC aquaculture coordinator at 783-3370 or dalves@crmcc.state.ri.us.



Aquaculture 2007

Cowboys, rodeos, the River Walk, barbeque and aquaculture - it's all happening in San Antonio, Texas at AQUACULTURE 2007 from February 26 - March 2, 2007. The Plenary Speaker will be Jason Clay of the World Wildlife Foundation and the theme for the meeting is: **'Sustainable Aquaculture Through Science.'** That leaves plenty of room for your imagination to run wild and for you to develop a special session for the program. If you have a session you'd like to organize, please contact either Leroy Creswell (NSA Program Representative) or Sandy Shumway (Aquaculture 2007 Program Chair) as soon as possible. NSA will only be as visible at this conference as our members make it, so please give some extra thought to organizing a session. If you don't have the time or inclination to organize a session yourself, give us your ideas on what topics you'd like to see covered and we'll find an organizer (and no...., armadillo do not count as Texas shellfish). We need volunteers if shellfish and NSA are to have a strong showing at this conference — we look forward to hearing from you!



Audit, Budget, Finance Information

Total revenues for the 2004-05 fiscal year (October 2004 through September 2005) were \$332,054 and expenses were \$313,302 for an increase of \$18,752 to our overall balance. This year-end balance was \$107,552 including more than \$39,000 in Student Endowment Funds.

Administrative revenues and expenses for 2004-05 were \$47,755 and \$20,838, respectively, for an increase of \$26,917. Publication revenues were \$209,925 and expenses were \$235,243 for a decrease of \$25,318. And revenues from our annual meeting in Philadelphia were \$67,075 while expenses were \$55,135 for an increase of \$11,940.

The proposed budget for the 2006-07 fiscal year, which begins October 1, 2006 projects a gain of \$42,775 for administrative activities, a decrease of \$34,500 for publications, and a gain of \$26,200 from Aquaculture '07 which will be in San Antonio in late February 2007. If these revenues and expenses are realized, the NSA balance will increase by \$34,475. Because the *Journal of Shellfish Research* is our most important product, and because it is expensive to produce with the quality we expect and receive, we realize that its production cost will generally exceed publication revenues. Administrative Revenues (primarily Member Dues), Institutional Subscriptions and Meeting Revenues help subsidize these excess costs.

NSA financial ledgers were examined in detail in late 2005 after transfer of the books from Dave Bushek to our new Treasurer Chris Davis. Although our balance declined in recent years, we are now back on track, and our financial condition remains solid. With recent adjustments made to improve our revenue stream, the financial strength of NSA should continue to improve.

George Abbe
Audit-Budget-Finance



NSA 2008: Celebrating a Century of Shellfish

The NSA Centennial meeting is now set for Providence, Rhode Island in the spring of 2008. Few scientific societies can boast a 100-year history and we plan to celebrate in style. Some have already signed up to work on the planning committee, more are always welcome. Ideas for a logo, themes, special sessions, historical displays or other attractions (in addition to our usual fun-filled sessions, auction and downtown Providence) should be sent to Sandy. Watch the newsletter for details.

Special Thanks for Seafood Donations !!

NSA would like to thank the following companies for donating shellfish to the President's Reception at the 98th Annual Meeting in Monterey, CA. The quality and freshness was indeed superb.

Baywater Inc., Bainbridge, WA
California Sea Urchin Commission
Chelsea Farm, Olympia, WA
Drakes Bay Oyster Company, Point Reyes, CA
Hog Island Oyster Company, Marshall, CA
JJ Brenner Oyster Company, Shelton, WA
Little Skookum Shellfish Growers, Shelton, WA
Monterey Abalone Company, Monterey, CA
Pemaquid Oyster Company, Dammeroscota, ME
Taylor Shellfish Farms, Shelton, WA
Taylor United Farms, Shelton, WA
The Abalone Farm, Cayucos, CA
The Cultured Abalone, Goleta, CA
Tomales Bay Oyster Company, Pt. Reyes Station, CA
Seattle Shellfish, Olympia, WA
US Abalone, Davenport, CA

Eleanor Munch keeps Sales of Shellfish Cookbooks Brisk

Eleanor Munch runs the Marine Resources, Permit Office (New York Department of Environmental Control), in East Setauket, NY, and for the past 10 years she and her staff have been selling NSA Shellfish Cookbooks. "I honestly can't remember the story as to how we started selling the cookbooks," says Lisa Tettlebach of the Permit Office, "...we think we started selling them around 1996 or 1997."

Recently, sales have topped 250 books! Proceeds from the sale of these books goes to the Student Endowment Fund to support student travel to annual meet-ings. NSA extends a hearty THANKS to Eleanor, Tim, Ann, Dawn, Diane, Scott and Lisa Tettlebach for their efforts.



Scallops: Biology, Ecology and Aquaculture

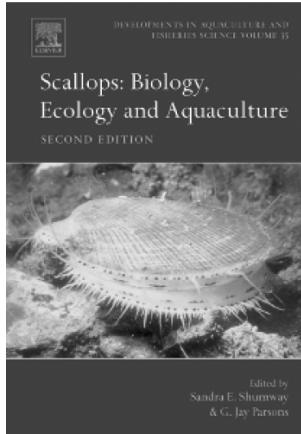
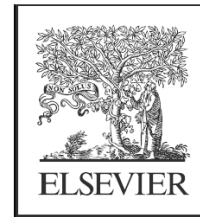
Edited by

Sandra E. Shumway

University of Connecticut, Department of Marine Sciences, Groton, U.S.A.

Jay Parsons

Fisheries and Oceans Canada, Aquaculture Science Branch, Ottawa, Ontario



KEY FEATURES:

- Offers over 30 detailed chapters on the developments and ecology of scallops
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Upcoming Events

10th International Congress, International Society for Developmental and Comparative Immunology: July 1-6, 2006, Charleston, SC. For information see www.isdci.org.

15th World Congress on Animal, Plant and Microbial Toxins: July 23-28, 2006, University of Strathclyde, Glasgow, Scotland. For information see <http://www.angelfish.co.uk/IST/> or www.toxinology.org.

12th International Echinoderm Conference: August 7-11, 2006, University of New Hampshire, Durham, NH. For information see www.iec2006.unh.edu.

Austral-Asian Aquaculture 2006: August 27-30, 2006, Adelaide, South Australia.

5th International Symposium on Aquatic Animal Health: September 2-6, 2006, San Francisco, California. For information see www.fisheries.org/fhs/isaah_2006.htm.

41st EMBS Meeting: September 4-8 2006, University College Cork in Ireland. One of the themes will be 'Sustainable fisheries and Aquaculture.' For information contact Douglas Watson at D.Watson@ucc.ie.

International Workshop, Physiological aspects of reproduction and nutrition in mollusks: November 6-9, 2006, La Paz, B.C. S Mexico. For information contact moluscos2006@cibnor.mx or visit www.cibnor.mx/anuncios/moluscos.

Aquaculture Canada 2006, Culturing Quality and Confidence: November 19-22, 2006, Westin Nova Scotian

Hotel, Halifax, Nova Scotia, Canada. For information contact AAC President, Chris Hendry, at chendry@gov.nl.ca or see AAC website www.aquacultureassociation.ca

Northeast Aquaculture Conference & Exposition 2006: December 6-8, 2006, Mystic Marriot Hotel & Spa. For information and updates contact Tessa Getchis at (860) 405-9104 (tessa.getchis@uconn.edu) or visit www.northeastaquaculture.org.

Restore America's Estuaries, 3rd National Conference: December 9-13, 2006, Hilton Riverside Hotel, New Orleans, Louisiana. The conference theme will be "Forging the National Imperative for Restoration." For information contact Steve Emmett-Mattox at sem@estuaries.org.

Aquaculture 2007: February 26 - March 2, 2007, San Antonio Convention Center, San Antonio, Texas. For information contact the Conference Manager at worldaqua@aol.com.

International Congress on Invertebrate Sclerochronology (ICIS): Spring 2007, St. Petersburg, Florida. For information and pre-registration contact Bill Arnold at bill.arnold@myfwc.com or (727) 896 8626.

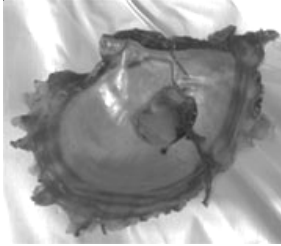
International Pectinid Workshop: Spring 2007, Halifax, Nova Scotia. For information contact Jay Parsons at ParsonsJa@dfo-mpo.gc.ca.

If you would like to announce a meeting, conference or workshop that might be of interest to NSA members, please contact Evan Ward (see back page for contact information).

THE PENULTIMATE PAGE

Get to know your shellfish

Pinctada mazatlanica (Hanley, 1856) - Panamanian Pearl Oyster. This rather heavy bivalve in the family Pteriidae grows to 4 to 5 inches in height. Externally the shell is blackish purple to olive-brown with a spiny, often brittle perisotracum that occurs in concentric layers. This common pearl-oyster ranges from Baja California to Peru. [Source: American Seashells, 1974, R.T. Abbott, Litton Ed. Publ., Inc.]



Callinectes sapidus (Rathbun, 1896) - Blue Crab. This aggressive crab in the family Portunidae can grow to 9 inches wide between the tips of the longest spines. It has an olive or bluish-green shell above and claws that are bright blue below. The blue crab is a common inhabitant of estuaries, ranging from Cape Cod (USA) to Uruguay. [Source: A Field Guide to the Atlantic Seashore, 1978, K.L. Gosner, Houghton Mifflin Co. Publ.]



Recipes of the Quarter

Oyster Fritters

Cooking Time: 20 minutes

Yield: 4 to 6 servings

24 shucked oysters, with ¼ cup of their liquor
1 large egg, separated
½ cup all-purpose flour
Salt and freshly ground black pepper
Pinch cayenne
1 quart vegetable oil for deep-frying
Tartar sauce, for serving

1. Check oysters and remove any bits of shell. Put oysters in a bowl. Lightly beat egg yolk. Whisk in oyster liquor and flour. Season with salt and pepper.
2. Heat oil to 375 degrees in a deep-fryer, a saucepan or a wok. When oil is hot, beat egg white until stiff and fold into batter. Place oysters in batter and stir to coat them.
3. Drop well-coated oysters one at a time into oil and fry,

turning them once with tongs, until golden brown. Transfer to paper towel to drain briefly. Serve with tartar sauce.

Oyster Pigs in Blankets

Cooking Time: 20 minutes

Yield: 4 servings

16 thin slices bacon (1 pound)
16 plump shucked oysters
Lemon wedges

1. Place a strip of bacon on a work surface. Place an oyster in the middle, wrap bacon around oyster, and secure with a toothpick. Repeat with remaining oysters and bacon.
2. Place a large skillet over medium heat. Fry bacon-wrapped oysters until bacon is golden brown, turning them once. Drain briefly, then serve with lemon.

Both recipes adapted from "The Big Oyster" by Mark Kurlansky (Ballantine Books)

In the News

Building a Better Oyster. In the April 10th, 2006 edition of *The New Yorker*, writer Bill Buford weaves an historic and gastronomic tale of the eastern oyster and the New York and Long Island Sound oyster industry. Of note are comments and quotes from several NSA members.

For up-to-date news about shellfish, from around the world visit the following NSA webpage:

<http://shellfish.org/aggregator>

NSA now has trademark rights to its official logo! Thanks go to President Lou D'Abramo for his efforts in obtaining this status.



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