

# National Shellfisheries Association Quarterly Newsletter



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## President's Message



Thank you for the opportunity to serve the National Shellfisheries Association as your President, it is truly an honor. I've been a member of NSA since 1988 and have served in a variety of positions over the past 27 years and it has always been a privilege to work

with our diverse membership. And we are quite diverse, with members from academia, government, and industry. I don't know of many other scientific associations that are 100+ years old that serve such a wide member base. Past-President Chris Davis left large shoes to fill and I thank him for his tireless efforts as President over the past two years; he will be a tremendous resource for me as we make the transition. In addition to Chris, there are several other Past-Presidents who have been instrumental in helping me learn about and move up the association management ladder: LeRoy Creswell, Joth Davis, Dave Bushek, Sandy Shumway, John Kraeuter, and George Abbe to name a few. Indelible impressions were made by Mel Carriker and Mike Castagna when I was an NSA-neophyte in the early 1990s – they modeled character, integrity, and a healthy dose of practicality. Thank you to all of the NSA Past-Presidents for your stewardship of the Association, you've provided us a well-crafted road map for the stability, sustainability, and growth of NSA.

A big part of the stability and longevity of NSA is due to the efforts of many, many people who devote countless hours of time to association management. There are plenty of stalwarts in our stable and they serve in a variety of roles: Sandy Shumway is our *Journal of Shellfish Research* Editor-extraordinary and is also our Meeting Coordinator. She has the dedication, talent, and skill to make both jobs look easy (they are not). John Scarpa has done a tremendous job as Treasurer, as has Linda Kallansrude as our Secretariat. We've been fortunate over the past several years to have Noreen Blaschik on-call for any number of jobs (meeting preparation, newsletter mailings, website updates). And last, but certainly not least, Chris Davis has almost single-handedly managed the website migration from Longsight to MemberClicks – it was a thankless job and at times took on a life of it's own. Thank you all for your past and continued service, and I look forward to working with you closely over the next two years.

The newly elected NSA Executive Committee (EXCOM) members are Steven Allen as President-Elect (2015-2017), Shirley Baker as Vice-President (2015-2016), and Lewis Deaton as Member-at-Large (2015-2018). Thank you to all who agreed to stand for election and welcome aboard to Steve, Shirley, and Lew. Thank you to outgoing NSA Vice-President Steve Allen and Member-at-Large Nature McGinn, we greatly appreciate your service on the EXCOM and you obviously aren't off the hook yet. The continuing EXCOM members are: Lisa Milke as Secretary, John Scarpa as Treasurer, and Leslie Sturmer Taiani and Julie Davis as Members-at-Large. The rotation of EXCOM members may at times seem like a tap dance but the overlapping terms serve to provide a much-appreciated continuity. NSA has many standing committees that serve the membership in diverse ways: John Kraeuter will continue in his role as Chair of the Audit-Budget-Finance Committee, in his role as Past-President, Chris Davis will serve as Chair of the Past-Presidents' and Elections and Awards Committees, Susan Ford and John Kraeuter will continue as Co-Chairs of the Publications Committee, and Lisa Milke, Stan Allen, and Nature McGinn will serve as Co-Chairs of the Endowment/Student Awards Committee. Thanks to Bill Walton and Peter Kingsley-Smith for serving several years as Membership Committee Co-Chairs. We are actively seeking a new Chair/Co-Chairs for the Membership Committee if you are interested, contact me. We thank John Supan for his years of service as Industry

### *In this issue:*

- *Honored Life Member Award*
- *Bourne - Chew Award*
- *In memoriam – John W. Hurst, Jr.*
- *Shumway Award for Best Student Paper in JSR*
- *Student Research –*  
*Michael Castagna Award,*  
*Melbourne R. Carriker Award,*  
*George R. Abbe Award*

Committee Chair and look forward to working with Rick Karney and Bill Dewey as Industry Committee Co-Chairs. Our Student Recruits are an active group and Co-Chairs Maria Rosa and Hillary Lane will be joined by Lillian Kuehl as the Recruits Co-Chairs triumvirate. We look forward to all the fun and interesting things they plan for future meetings. The Pacific Coast Section of NSA is chaired this year by Laura Hoberecht. Our association benefits greatly from direct communication with the membership and there are three people who go above and beyond to make that happen: LeRoy Creswell as the NSA *Quarterly Newsletter* Co-Editors, Sandy Shumway as *JSR* Editor, and Chris Davis as Webmaster. Any communication you receive from NSA has been vetted and prepared by this phenomenal crew – please note that they are all Past-Presidents, so not only did they serve the Association for many years on EXCOM, they continue to serve in essential roles in their ‘retirement’.

The 107<sup>th</sup> annual meeting held March 22-26 at the Marriott in Monterey, CA was a huge success at a prime venue. We were thrilled to have four excellent plenary speakers at the meeting and their topics were diverse: A Taste of Ocean Acidification (Sam Dupont), Hot Oceans and Chemosymbiotic Shellfish (Bob Vrijenhoek), the World Abalone Market (Peter Cook), and The Loss of Nature and the Nature of the Loss (Paul Dayton on the importance of Storytelling). The plenary talks generated many questions, comments, and discussion from the audience and the meeting rooms were quite full, even with the 8 am start time each day. There were 22 sessions with over 300 oral and poster presentations and excellent student participation (90 students). A cadre of individuals was instrumental in making the meeting a success: Meeting Coordinator Sandy Shumway, Miss-Behind-The-Scenes Noreen Blaschik, and the registration table crew (Dane Frank, Eric Heupel, Sarah Kingston), and the Recruits Co-Chairs Maria Rosa and Hillary Lane and their student volunteers at the Student Endowment Fund (SEF) table. The annual auction was once again a resounding success with auctioneer Sandy Shumway ‘paddling’ in as a sea otter complete with a (purple) sea urchin. John Scarpa, Chris Davis, Maureen Krause, and multiple student runners efficiently handled distribution of materials to the winners and the collection of proceeds while dealing with the raucous crowd. We had another banner year for the SEF: \$3914 was added to the endowment. We had a special treat this year: the displays of two artists, Bruce Koike and Sylvia Gottwald. A special thanks to Bruce for the generous donation to the SEF of 10% of proceeds from his fish/shellfish print sales at the meeting.

Improvements continue to be made to the NSA Website, [www.shellfish.org](http://www.shellfish.org). Chris Davis is our ‘new’ Webmaster who will be looking for an even ‘newer’ Webmaster or Webmistress. The recent transition between web vendors was a laborious process and we continue to learn about the extensive functions available through our new vendor, MemberClicks. We will continue to update the membership as new website functions are made available. The website is as important to the EXCOM and committee chairs as to the membership – dues payments, meeting registration, and mailing label generation are just a few of the many key activities that go on behind the scenes of the home page. Thank you, Chris, for your dedication and the many sleepless nights you spend making things work.

Plans are well in hand for the 108<sup>th</sup> NSA annual meeting to be held February 22 –26, 2016 in Las Vegas, NV as part of Aquaculture 2016, the Triennial Meeting of NSA, World Aquaculture Society, AFS-Fish Culture Section, and the National Aquaculture Association (Vegas, Baby!!). Steve Allen and Sandy Shumway have been actively soliciting topics and presentations for the meeting – please contact them directly if you are interested in organizing a session, there may still be time. Visit [www.shellfish.org](http://www.shellfish.org) for the most recent information on Aquaculture '16. And it's never too early to mark your calendars for the 109<sup>th</sup> NSA annual meeting – contract negotiations are complete with the Marriott Hotel in Knoxville, Tennessee for March 26-30, 2017. It's a great location (Great Smoky Mountains NP, Dollywood, Gatlinburg) with plenty to see and do and the timing will dovetail nicely with school Spring Break for many NSA members with families.

Thanks for 27 great years of NSA membership, so far; I count so very many NSA members as part of my extended family. I look forward to many more years in active service to NSA, it is by far my favorite professional association!

### ***Karolyn Hansen*** **President**



## ***AQUACULTURE 2016***

Get ready for AQ 2016 – Las Vegas! The Triennial will be held February 22-26, 2016 and plans are already underway to get the program ready. The program can only be as strong as the contributions, so give some thought now to your submissions and mark your calendar. Steve Allen is the NSA Program Committee Representative and is recruiting topics and organizers for special sessions. This conference is a great opportunity to interact with colleagues from the World Aquaculture Society and the Fish Culture Section of the American Fisheries Society and the trade show is the largest in the world – don't miss it! Send your ideas to Steve as soon as possible to be sure they are included.

***See you in Las Vegas!***

## Honored Life Member Award to Dr. Richard Lutz



*NSA President, Karolyn Hansen, newest Honored Life Member, Rich Lutz, and HLM Sandra Shumway.*

The Honored Life Member Award is reserved for those few individuals who ‘by their exemplary service to the Association or to the profession, deserve recognition as Honorary Life Member of the Association’. Rich Lutz is one of those few individuals and his service to the Association and the profession has both extraordinary depth and breadth. As one of his supporting references states: “*There are probably no other NSA members with both a Wikipedia entry and an IMBD film entry on the web, nor an internationally acclaimed feature length IMAX film listed on their CV that documents some of their scientific discoveries. As impressive at that may be, however, it is the collection of research and discoveries amassed during his career combined with the leadership he has provided in our field to make significant advances with a lasting impact*”. Rich’s contributions span the breadth of shellfish research and have been presented as journal articles, books, presentations, and films on a range of topics including: shellfish biology and ecology, elemental composition of mollusc shells, geology of deep-sea hydrothermal vents, ecology of deep-sea hydrothermal vent communities, genetic variation in deep-sea vent organisms, apoptosis in soft corals, and drug discovery/natural products chemistry in deep sea vent organisms. As a testament to his impact in the fields of shellfish research and marine ecology his scientific publications have been cited more than 4500 times.

A full biography will appear in a future issue of *JSR*.

**CONGRATULATIONS, RICH!**

**Karolyn Hansen  
Sandra Shumway**

## *Support NSA*

*Recruit a new member (or more)!*



### *Why Join NSA?*

- Receive the award winning scientific publication, the *Journal of Shellfish Research*, and have online access to all NSA publications from 1943 to present
- Receive the *Quarterly Newsletter*
- Enjoy a discounted registration rate at the annual meeting
- Opt to be listed in the online membership directory, and search for other members with similar interests
- Meet fellow scientists, students, managers and industry members at the annual meetings



# Recruits' Corner

## Hello, Recruits!

Hope this Newsletter finds you all well and ready for the start of the summer field and research season. We are wrapping things up after the Monterey meeting. What a great meeting it was and to see all of you and catch up on your research is always fun! The Recruits had a lot of new faces this year; with over half the student participants being new to NSA and attending their first meeting. We hope you all had a good time as well. As expected, Monterey was a great host city, giving some much needed warmth to those travelling from the colder climates.



Recruits enjoyed a great visit and behind-the-scenes tour at Monterey Bay Aquarium. We learned a lot about their operations and some of the science that makes such a big institution run. Our thanks to Brian Albaumb for hosting us, as well as the Aquarium staff and volunteers who were such great tour leaders.

The Recruits were lucky to have a diverse group of speakers at our student panel titled "The Career Path is Rarely Straight". We heard great career advice from Donal Manahan, Karolyn Hansen, Kevin Stokesbury, Deb Columbo, Nature McGinn, Ray RaLonde, and Kay McGraw. It was a



*Behind-the-scenes at the Monterey Bay Aquarium*

great experience to hear from these scientists and learn about the choices they made that led them to their current positions. Their best advice seemed to be to follow your passion, persevere, and to be ready to seize opportunities.

Our thanks to all the student volunteers, as always your hard work ensured this meeting ran smoothly. Students helped with A/V and covered the sales booth. All proceeds raised go to the Student Endowment Fund (SEF), which funds student activities, subsidizing the costs for students to attend meetings. Congratulations to all winners of this year's research and travel awards. Remember, you can apply for travel awards even if you have received one in the past. All information regarding the requirements and how to apply for each of the research awards is available online at [www.shellfish.org](http://www.shellfish.org)

Finally, this year marks Maria's last as Recruits Co-chair. Hillary Lane Glandon will remain as Co-Chair, and we are happy to announce that Lillian Kuehl is joining as the new Co-Chair. Lillian is a grad student in Deb Donovan's lab at Western Washington University. She works on pinto abalone restoration, specifically larval outplanting. After her undergraduate studies at Reed College, Lillian worked for Taylor Shellfish and also in New Jersey for 4Cs Breeding Technologies prior to returning to school. We are excited to have a West coast recruit join our leadership and the academic and industry perspective Lillian will bring to the table as a new Co-Chair.

Next year's meeting is the Triennial and will in be Las Vegas, Nevada. Plans are already underway for student activities and sessions for the meeting. If there is anything that you would like to see at the meeting, let us know! As always, we are here if you have any questions or concerns.

**See you in Vegas!**  
*Maria, Hillary, and Lillian*

A poster with a parchment-like background. At the top, the word "WANTED" is written in a large, bold, black, serif font. Below it, the word "REVIEWERS" is written in a smaller, bold, black, serif font. Underneath that, the text "JOURNAL OF SHELLFISH RESEARCH" is written in a smaller, black, serif font. The main body of the poster contains a paragraph of text: "Peer-review is integral to the success of any journal. Timely review is important not only to the *Journal*, but to the authors. If you are willing to review manuscripts in a timely manner for the *JSR*, please send an email to the Editor listing your areas of expertise." Below this paragraph, the text "Your contributions are greatly appreciated." is written in a smaller, black, serif font. At the bottom of the poster, the word "REWARD" is written in a large, bold, black, serif font, matching the "WANTED" text at the top.

## The Inaugural Bourne-Chew Award Presented to Dr. Brian Beal

The Bourne-Chew Award was established to recognize “outstanding contributions to education, outreach, extension, aquaculture or shellfisheries. It is expected that the recipient will excel in each of these arenas...It should be reserved for truly outstanding individuals who excel in each of the areas of specialization.” Dr. Brian Beal is the inaugural recipient of this award.



*Brian Beal in front of screen during presentation of a taped interview with Neil Bourne and Ken Chew. Special thanks to Linda Heimstra for facilitating the interview which took place in Nanaimo, B.C.*

Brian has a distinguished career as an educator, researcher, grantman, and dedicated outreach specialist. What is perhaps most impressive is that he has managed to do all of this at a satellite campus of the University of Maine, in an economically and educationally deprived environment, Washington County, Maine. This is a true testament to his dedication, perseverance, and above all, talents. While engaging in all of the normal activities of a university professor - the courses, the committees, the time sinks - Dr. Beal was engaged in an active and highly productive research program studying shellfish biology, population biology, resource management, aquaculture, and environmental impacts on several commercially important species including the softshell clam, northern quahogs, lobsters, and most recently sea urchins. His work is of the highest caliber and published in top-tier journals. He also serves as Director of the Marine Field Station for the University of Maine at Machias, and regularly serves on national and international advisory groups.

His outreach activities are unparalleled. The Downeast Institute for Applied Marine Research and Education (formerly the Beals Island Regional Shellfish Hatchery) is a stellar example of what is possible under the right guidance and leadership. This facility was established in 1987 and since that time has flourished as a research center, an aquaculture facility, and as a classroom, not only for university students, but for grammar school and high school kids also. Their mission is “to improve the quality of life for the people of Downeast and coastal

Maine through applied marine research, technology transfer, and public marine resource education. Brian serves as their Director of Research and has done an outstanding job of shaping the research efforts to fit with local needs and scientific realities, i.e. he has provided a realistic sense of what questions can be answered and directed the research to answer them - all the while engaging students at all levels in

associated outreach activities, projects, and hands-on experiences in the aquaculture arena. Several of these projects are summarized in the attached materials including clam enhancement efforts, growth of clams to transplantable sizes using upwellers, green crab trapping and predator exclusion studies, enhanced wild clam recruitment and even sediment buffering for coastal acidification. His 27-year efforts culturing juvenile American lobsters were summarized in the NSA Quarterly Newsletter (2013(3)).

Many of Brian’s efforts have been in conjunction with small business development in an economically deprived section of the country where one in three children live in poverty and where education is not always a top priority. He has embraced this challenge and increased participation in NSF-supported programs for these under-represented groups of K-12 students, teachers, undergraduates students and fishers as they have been encouraged to become engaged in hands-on, inquire-based activities designed to better understand the local marine environment and the role that fisheries and aquaculture can play in local economies.

He freely gives of his time and talent to other organizations and currently serves as Chairman of the Maine Aquaculture Innovation Center and Treasurer of the Cobscook Bay Resource Center. In a recent testimonial, Dr. John Federico established an endowment fund for educational scholarships at the DEI and said “I see the work at the Downeast Institute as a most tangible manifestation for how we should all work with and within our natural surroundings. I hope that we can all become worthy stewards and cohabiters of this very beautiful region, and would like others to appreciate the effort that it takes to be responsible stewards of the land and sea around us”. There is little doubt that Brian Beal’s research and educational efforts have had, and will continue to have, a profound impact on shellfish aquaculture in particular and on the regional economic and environmental well-being overall.

### **From his nomination letters:**

“Brian exemplifies what both Ken Chew and Neil Bourne represent: commitment to sound science, a genuine desire to help integrate the shellfish/aquaculture community into the local ambiance at all levels – from beginning students to the working waterfront by demonstrating what can be done and providing hands-on access to resources to get the answers to questions of importance to the community.” John Kraeuter



“In my mind, Dr. Beale exemplifies what we look for in individuals who have the breadth of experience that enables them to foster outreach effectively in ways that are transformative to the industries they serve.” — Joth Davis

“Brian Beal is the ideal recipient of the Bourne-Chew Award” — Rich Lutz

**CONGRATULATIONS, BRIAN!**

# NSA 107<sup>th</sup> ANNUAL MEETING WRAP-UP



*Monterey is now a memory, and a good one to be sure!*

There were over 300 presentations and almost 100 students in attendance. The weather was spectacular and folks were able to explore the striking Monterey coastline, Cannery Row and Monterey Bay Aquarium - who generously offered a behind-the-scenes tour for the students. Two artists, Sylvia Gotwald and Bruce Koike, joined the conference and their exhibits

were not only beautiful, but stimulated a lot of enthusiastic conversation - and a special thank you to Bruce for donating 15% of his sales to the SEF!

The hotel staff was extraordinary, especially Michelle Pearce—who all pulled together to be sure that every detail was handled perfectly. The conference was generously sponsored by Washington, Oregon and California Sea Grants, Reed Mariculture and the Monterey Bay Aquarium and their support is gratefully acknowledged and made it possible to enhance the experience for several students. Thanks to Joth Davis for a yeoman's job of harvesting shellfish donations for the President's Reception and to Chef Chuck Dumont for turning it all into a feast. And of course, thanks for the generosity of the seafood donors - Taylor Shellfish, Pemaquid Oyster, Hama Hama, Hog Island Oyster, Baywater and Seattle Shellfish.

The auction was a lot of fun, very generous donations from so many people made it a financial success as well.

It takes a lot of people to make these meetings happen and a special thanks goes to thanks goes to Linda Kallansrude and Noreen Blaschik who handled many of the 'behind-the-scenes' tasks prior to the meeting, and to all the volunteers who kept things running during the conference, especially Dane Frank and Eric Heupel, and Maria Rosa and Hillary Lane and their team of Recruits. It was really encouraging to see so many new student participants.

*So now it's on to Las Vegas and setting the sites for 2017 and 2018!*

*Sandy Shumway  
Conference Manager*

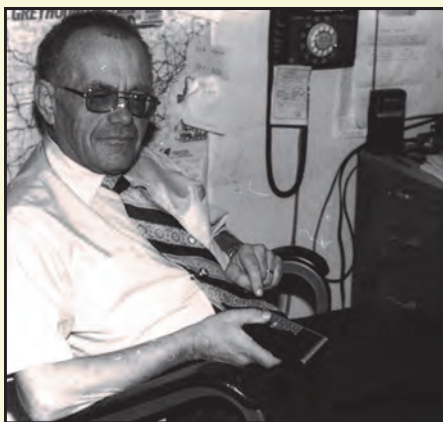


***IN MEMORIAM***  
***John W. Hurst, Jr.***  
***1927 - 2015***



For 53 years, John W. Hurst, Jr. was a fixture at the Maine Department of Marine Resources, and known throughout the world for his contributions to the field of harmful algae and public health. John was born and raised in Bozeman, Montana and after graduating from Montana State University in 1949, he began his life-long career at the Maine Department of Sea and Shore Fisheries (now Department of Marine Resources - DMR) where he developed the monitoring system for PSP. Over the course of his career he was called many things, “Grandfather of Red Tide”, “the Czar”, and the “Red Tide Guru” among them. But to most who knew him, he was John - a very giving mentor and friend.

John started the Maine Paralytic Shellfish Poisoning (PSP) monitoring program in 1958 following a serious outbreak of toxicity in neighboring Canada. Over the ensuing 52 years, John continued to develop and perfect that program, and guarded and protected the State of Maine shellfisheries in the face of a highly unpredictable public health issue. It is a testament to his knowledge and perseverance that his program has been held up to the rest of world as the ‘gold standard’ of monitoring programs. One cannot think about shellfish safety or red tide anywhere in the world without hearing the name John Hurst. John understood the importance of long-term data sets before it was a ‘term’ and made his data available to many scientific collaborators over the years -



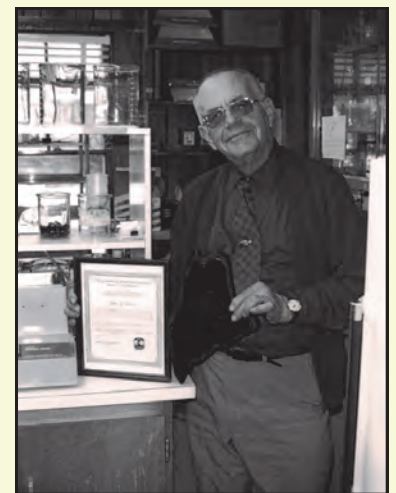
indeed, many of the models being developed today are based on what John knew to be true 40 years ago! Perhaps of even more consequence was his very special ability to engage young kids and fuel their curiosity and enthusiasm.

His office was filled with testaments to his accomplishments. He and his several teams were recognized with the Commissioner’s Special Citation from the U.S. Food and Drug Administration and the Governor’s Award for Special Teamwork, the Canadian Food Inspection Agency, the Maine legislature, and Governor Angus King. In 2001, John was awarded the Wallace Award from the National Shellfisheries Association, and in 2002 he was presented with a Lifetime Achievement Award for his contributions to research and monitoring of marine biotoxins at the Xth International Conference on Harmful Algae. The International Society for the Study of Harmful Algae (ISSHA) designated John as a Trailblazer (see <http://www.issaha.org/Welcome-to-ISSHA/HAB-Trail-Blazers/John-Hurst>). All of these recognitions were richly deserved, but John was most proud of the fact that no cases of PSP were ever reported in the State of Maine from commercially harvested shellfish while he was on the job. He listened to the industry and they listened to him and together they built a stellar monitoring program which was emulated globally. John was a constant source of data and experience and shared his knowledge freely with scientists and managers from all corners of the globe for over five decades.

On a more personal note, John was my introduction to the world of toxic algae in 1982 and we remained friends and colleagues for the decades that followed. He was encouraging early on when I suggested that the toxins might well be affecting the shellfish, always interested in research questions, and always willing to provide support where he could and lively discussions and wisdom on a daily basis to any who asked (and to some who didn’t!). He and his young son Dan (who predeceased him) named their basset hound after me and I always smiled when I saw John walking the legs off that dog on their daily jaunt to town. After I left the DMR, John and I remained colleagues and friends and I always knew where to turn when I needed some common sense advice and information. He’s missed.

John is survived by his wife Nancy, sons John and Peter, daughter Lucy, their spouses, three grandchildren, and a global cadre of people who are better for knowing him and for his contributions.

***Sandra E. Shumway***



## Student Achievement and Research Awards Presented at the 107th Annual Meeting

A long-standing priority of our Association is the support of our student members and recognition of their academic achievements. This year, four students were awarded Grants-in-Aid to support their research. A team of NSA judges carefully evaluated each application based on three criteria – the significance of the work, the quality of the science, and how well the proposal was written. The student applicants whose proposals most demonstrated a clearly defined hypothesis, coupled with a sound research plan were presented their awards at the Annual Business luncheon.

*The George R. Abbe Student Research Grant*, established in 2013, is awarded annually to recognize excellence in the areas of crustacean biology and fisheries management. This grant is named in honor of Honored Life Member and distinguished past President, George R. Abbe. The Award is reflective of George's research interests including long-term population monitoring, and research on Chesapeake Bay blue crab and eastern oysters. The 2015 George R. Abbe Student Research Grant was awarded to Hillary Lane, University of Maryland, for her proposal titled: "The Effect of Climate Change on the Physiology and Ecology of Juvenile Blue Crab (*Callinectes sapidus*)".



Hillary Lane

*The Melbourne R. Carriker Student Research Grant* recognizes excellence in the area of shellfish research. The Melbourne R. Carriker Student Research Grant is named in honor of one of the Association's most distinguished past Presidents and historian. As such, Dr. Carriker authored "*The Taming of the Oyster: A History of Evolving Shellfisheries and the National Shellfisheries Association*". This year, our distinguished judges felt that the quality of the proposals was quite exceptional, and after deliberation the Awards Committee chose to present two awards in this category. The recipients for the 2015 Melbourne R. Carriker Student Research Grant are: Maria Rosa, University of Connecticut, for "Mechanisms of Particle Retention, and Selection in Suspension-feeding Bivalve Molluscs", and Katherine Silliman, University of Chicago, for "Population Genomics and Phylogeography of *Ostrea lurida*".



Maria Rosa and Katherine Silliman are presented the Melbourne R. Carriker Student Research Grant award from LeRoy Creswell, Chair NSA Awards Committee

*The Michael Castagna Student Grant for Applied Research* is a competitive grant that is awarded annually to recognize a student who excels in the area of shellfish research with an emphasis on applied research. It is named in honor of one of the Association's most distinguished past Presidents, a recipient of the Wallace Award, and an Honored Life Member, Mike Castagna. The 2015 recipient of this prestigious award is Lydia Bienlien, Virginia Institute of Marine Science, for her proposal titled: "Influence of *Perkinus marinus* Infection on Levels of Human-Pathogenic *Vibrios* in Aquacultured Oysters".



Faye Helidoniotis

*The Sandra E. Shumway Award* for the Best Student Paper in the *Journal of Shellfish Research* recognizes an outstanding manuscript published in our peer-reviewed journal based upon: the quality of science, the importance of the work in the field of shellfish research, and the quality of writing. Our judges from the JSR Editorial Board read, evaluated, and re-evaluated 43 manuscripts from Volume 32. Based on the committee recommendation, the Best Student Paper published in 2013 was awarded to Faye Helidoniotis, Institute for Marine and Antarctic Studies, University of Tasmania, Hobart, Australia:

Helidoniotis, F. and M. Haddon. 2013. Growth models for fisheries: the effect of unbalanced sampling error on model selection, parameter estimation, and biological predictions. *Journal of Shellfish Research* 32(1):223-235.

Helidoniotis, F. and M. Haddon. 2013. Growth models for fisheries: the effect of unbalanced sampling error on model selection, parameter estimation, and biological predictions. *Journal of Shellfish Research* 32(1):223-235.

Congratulations to all the awardees, and my heartfelt thanks to everyone who graciously dedicated their time and expertise to serve as judges for these prestigious academic awards. I encourage students to visit the NSA website for information regarding the *Student Grants in Aid of Research* and submit their applications for research awards in the months ahead.

**LeRoy Creswell**  
Chair, Awards Committee



## Plenary Speakers—Monterey

The plenary speakers at the 107<sup>th</sup> Annual NSA meeting brought together a unique and impressive blend of exciting and socially relevant issues in science ranging from ocean acidification, to shellfish poaching, to evolution of deep sea organisms, and the loss of nature. All speakers emphasized the importance of our role as humans in the story of scientific discovery and its future.

**Dr. Sam Dupont**, a marine ecophysiologicalist at the University of Gothenburg began the plenary series with “A taste of ocean acidification.” His research focuses on the impact of increased CO<sub>2</sub> and the related changes on marine species and ecosystems. He has published more than 90 papers in journals including *Nature*, *PNAS*, and *TREE*. His work aims to reveal the mechanisms behind species and ecosystem responses and to develop the needed unifying theory for large-scale predictions. He is in direct contact with various stakeholders, both at local and global levels.

Dupont emphasized that as ocean acidification continues to impact and change our marine systems, we need to think about how to respond to rather than waiting for those changes. He stated, “When it comes to ocean acidification, the science is strong and there is little doubt that it will impact shellfish and shellfisheries. The challenges of the day are to convince all stakeholders that it is time to act now and develop solutions together.” Further, he said that information is actually the worst driver of social change, and what really matters is social consensus on doing something about an issue. He highlighted a beautiful case of asking people to see if they could taste the effects of ocean acidification in their seafood. The individuals participating in the study actually could taste the difference, and combined with a timely press release, at a local level, this stimulated research. But was it enough to drive change? Dupont left us wondering what else we can do to drive societal change to value science.

The second plenary shifted gears from the taste of ocean acidification on the plates of fishmongers to the evolution of shellfish in the deep sea. **Dr. Robert Vrijenhoek** is a Senior Scientist at the Monterey Bay Aquarium Research Institute (MBARI) in Moss Landing, CA, where he specializes in genetic and evolutionary studies of marine and aquatic organisms. He is well-known for his early work on clonal reproduction and the conservation genetics of desert stream-dwelling fish. Over the past two decades, his interests have shifted to studies of genetic connectivity and the evolution of deep-sea animals and their associated chemosynthetic symbionts.

Vrijenhoek took us from the thin layers of the oxic/anoxic interface of bacteria to where the evolution of deep sea hydrothermal vent organisms stands today in “Hot anoxic oceans and the history of chemo-symbiotic shellfish.” One major question of his lecture was, “are deep sea ecosystems protected from climate change?” It is the largest habitat on earth and is nourished mostly by snow. He reviewed the twenty plus year history of examining the fossil record and genetics to determine the evolution of these endemic creatures of the deep. As of now, the genetics show major bottlenecks that may have coincided with previous large, global environmental changes, suggesting we may see changes in deep sea fauna as our climate changes. Vrijenhoek reminded us that “scientists are not prophets. There are no true prophets, but there are good historians who learn from the past to make educated predictions

about future trends. Evolutionary biologists examine the fossil record and phylogenetic patterns to learn about relationships between past climates, mass extinctions, and biological diversification. In a time of rapid climate change, there is much to learn from the evolutionary records left by molluscs and crustaceans of the past.”

On the third day of the meeting, we headed back to the dinner table with the topic of abalone – tackling not only the science, but also the economic and political aspects driving the market. **Dr. Peter Cook** has spent his career studying various aspects of the biology of mariculture species such as mussels, oysters, and abalone. He headed an active Abalone Research Group in Cape Town and he, and his research team, have published widely on many aspects of abalone biology and aquaculture. His research on this group was recognized internationally when, in 2000, he was elected President of the International Abalone Society.

In his overview of the worldwide abalone market, Peter revealed the black market and the problems that drive poaching, particularly in South Africa. He stated that the illegal exploitation of abalone is still an extremely important problem worldwide. The production of abalone in China reached a historical peak of 110,000 metric tonnes, but despite this abundance of legal product, illegal catch is still putting downward pressure on prices internationally. The source of this trouble is the ‘luxury market’ for larger, imported animals. Cook explained that “poachers generally compete with the luxury market for the large animals and, because the total size of that market is rather small, the negative influence of the illegal product is very important. Even in California, it is estimated that at least 250,000 individual abalone were taken illegally each year, representing a huge loss of potential income to California. Poaching could be significantly reduced, but only if additional resources are put into control measures.”



*Paul Dayton with his grandchildren. Photo credit: Drew Talley.*

The plenary sessions couldn’t end more appropriately than with **Dr. Paul Dayton**. A renowned marine ecologist and biological oceanographer, Dayton has studied coastal and estuarine habitats, including benthic and kelp communities, as well as global fisheries. He has studied nearshore benthic

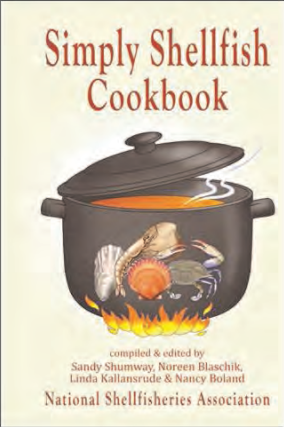
Continued from page 10

communities in many parts of the world and is presently working on California kelp communities. Dayton's studies also include the impacts of overfishing on marine ecosystems. His career has been motivated by the belief that one must understand nature to protect it, and he has attempted to use analytical techniques to understand marine community ecosystems. His message was clear: that storytelling is what matters to people. While "science defines the truth, values define ourselves." Successful conservation of the environment requires both truth and values. Dayton emphasized that to have our society value nature, role models who include parents and teachers must teach our future generations about the importance of the environment and take them outside and tell them stories. Dayton told us his own story about the mammals, birds, and plants that coexist in the desert where he takes his grandchildren to camp.

All plenary speakers were wonderful storytellers in their own right – not just telling, but *showing* us the significance of their science and the values that we all hold dear as a community of scientists looking to the future of shellfisheries.

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## NSA Pacific Coast Section News

What a treat to connect with so many NSA (and NSA-PCS) members at the 107<sup>th</sup> Annual Meeting in Monterey this past March! Monterey was a nice break from the Seattle gray, though I must admit we've had more sunshine than usual this year (which, unfortunately, may contribute to more harmful algal blooms affecting shellfish harvest too).

In keeping with the primary mission of PCS, to foster student involvement in shellfish research, the PCS provided financial assistance to 15 west coast students attending the NSA Annual Meeting. These students represented six academic institutions including:



California State University at Fullerton and Moss Landing, Oregon State University, University of California at Santa Barbara, University of Southern California, and University of Washington.

*Student volunteers at the PCS table.*

All 15 students participated in the conference with oral or poster presentations. All 15 students also volunteered to work at the PCS table for which the PCS officers would like to say THANK YOU!!

The PCS mixer held at the NSA Annual Meeting was a huge success with over 40 participants, comprising of students and professionals mingling in a relaxed environment. The highlight of the evening was the Shellfish Mixer Bingo organized by PCS Vice Chair Sean McDonald, which created a fun, social atmosphere where people could learn interesting facts about others. Stay tuned for another round of bingo in Las Vegas, 2016.

Before that, the Pacific Coast Shellfish Growers Association and the NSA-PCS encouraged you to attend our Annual Shellfish Conference being held September 22 – 24, 2015 in Hood River, Oregon. Conference attendees include shellfish growers, suppliers, service providers, researchers, academicians, government agencies, environmental organizations and students. Although the deadline for submission of titles has passed, your talk may still be considered for inclusion if an abstract is submitted by June 30. Conference information and the link to submit abstracts may be found at: <http://pcsga.org/annual-conferences/>

The NSA-PCS Twitter feed and Facebook page are your best resources for news and information about the Pacific Coast Section and our events and annual meetings. Please join our community online. You can follow NSA-PCS on Twitter: [@nsapcs](https://twitter.com/nsapcs). You can like NSA-PCS on Facebook:

<https://www.facebook.com/pages/Pacific-Coast-Section-of-the-National-Shellfisheries-Association/1438569826443936>

I look forward to seeing you in Hood River, OR.

**Laura Hoberecht**  
Chair, Pacific Coast Section

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## Upcoming Events

**International Conference on Aquaculture & Fisheries.** July 20-22, 2015, Brisbane, Australia.

For more information, visit:

<http://aquaculture-fisheries.conferenceseries.com/index.php>.

**40<sup>th</sup> Annual Milford Oyster Festival.** August 16, 2015. For more information, visit:

<http://www.milfordoysterfestival.org>

**Aquatic Biodiversity and Ecosystems.** August 30 – Sept. 4, 2015, University of Liverpool.

For more information, visit:

<http://www.aquaticbiodiversityandecosystems.org>

**The NSA-PCS & PCSGA 69<sup>th</sup> Annual Shellfish Conference & Tradeshow.** Sept. 22 – 24, 2015, Hood River, Oregon. For more information, visit:

<http://pcsga.org>.

**Goal 2015 – “Global Outlook on Aquaculture Leadership”.** October 26 – 29, 2015, Vancouver Canada. A Global Aquaculture Alliance sponsored conference. For more information, visit:

<http://gaalliance.org/GOAL>.

**Aquaculture 2016.** February 22 – 26, 2015, Las Vegas, Nevada. Triennial meeting of WAS, NSA, AFS, USAS. For more information, visit:

<http://www.shellfish.org>.

If you would like to announce a meeting, conference, workshop, or publication that might be of interest to NSA members, please contact the *QNL* Editor, LeRoy Creswell (creswell@ufl.edu).