

National Shellfisheries Association

QUARTERLY NEWSLETTER

June 2013

ORONO, ME



President's Message

I am honored to begin serving as President of this wonderful Association and am continually impressed by the diversity of scientists, managers, and commercial growers comprising its membership. Filling the shoes of outgoing President LeRoy Creswell won't be easy and I am very grateful for his tireless leadership advancing the goals of our Association over the past two years as well as assisting me with the transition. I look forward to working with him in his new capacity as Past-President. A tremendous number of hours go into making this Association work and it's important to acknowledge those who have pulled together for the benefit of the entire membership. Outgoing Past-President Joth Davis has been instrumental in both his leadership and assistance to me during this transition from President-Elect to President. Thank you Joth for all your help and what you do for NSA. Thanks to Sandy Shumway, Editor of our *Journal of Shellfish Research* and Meeting Coordinator, due to her generous efforts we have both a high quality and relevant journal and well organized, meaningful and enjoyable annual meetings. NSA has numerous "behind the scenes" people who work to keep the Association functioning well such as our Secretariat Linda Kallansrude, Treasurer John Scarpa and Webmaster Karolyn Mueller Hansen. They are among the several dozen people actively involved in running the NSA and we are all grateful for their service.



Newly elected members to the NSA Executive Committee (EXCOM) include Karolyn Mueller Hansen as President-Elect (2013-2015), Marta Gomez-Chiarri as Vice-President (2013-2014) and Leslie Sturmer as Member-at-Large (2013-2016). Congratulations and thanks to all the people running for office this year. Bill Walton and Dan Cheney are stepping down from their positions of Vice-President and Member-at-Large, respectively. Thank you both for your service to NSA. Steve Allen will continue his term as Secretary, as will John Scarpa in the Treasurer position. Stephen Roberts and Nature McGinn will continue on in their positions as Members-at-Large. Thanks are due to each of you for the time you devote

to the NSA. The NSA Standing Committees accomplish much work during the year as led by the following Committee Chairs: George Abbe will continue running the Audit-Budget-Finance Committee (How could this Association continue without your sage advice?). Karolyn Mueller Hansen will continue on as Webmaster. The Membership Committee will be chaired by Bill Walton and Peter Kingsley-Smith. Leroy Creswell will head up the Elections and Awards Committees, Susan Ford and John Kraeuter will continue to

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The 106th Annual Meeting of the National Shellfisheries Association will be held at the Hyatt Regency Riverfront Hotel in downtown Jacksonville, FL from March 29th to April 2nd, 2014. The venue is located on a four-mile riverfront boardwalk close to area attractions including some of the nation's best beaches. More information on the upcoming meeting can be found on page 3 of this Newsletter.

In this issue:

- *David H. Wallace Award*
- *Carriker & Castagna Awards*
- *Book reviews: "Harvesting the Bay" & "Abalone: Worldwide Haliotidae"*

Recruits' Corner



Hello Recruits!

Hopefully this note finds you all preparing for a wonderful summer full of research, field work, and experiments. The Nashville meeting was fantastic; we were so pleased to meet many of you and hear about your interesting research projects and plans. NSA Recruits really stepped it up this year and made their presence felt at this meeting. There were 18 student presentations and 12 student posters this year, all of which were well received!

We want to extend a big "Thanks!" to all the student volunteers and everyone who came out and took part in the Recruits' activities. The NSA booth was a huge success, thanks to the efforts of all the NSA student volunteers who helped man the booth. All of the funds raised by sales at the NSA booth support the Student Endowment Fund. Other student activities at the meeting included the scavenger hunt, which was more competitive than its ever been. This year's first prize winners were Soxi Lee and Joyce Lau, who found 28 of the 30 items and scored some great NSA swag for their efforts. The winning team at the Student Quiz Bowl was made up of several NSA Recruits, and we all had a great time cheering them on. The NSA Student Endowment Fund auction was a big hit as usual, with over \$1500 raised thanks to special guest, country star auctioneer (aka Sandy Shumway, below). Nashville was a great host city, and hopefully all of the Recruits in attendance got to see some of the sights and sounds Music City had to offer.

The Student Endowment Fund helped cover the travel or lodging expenses of eight students, allowing them to attend the Nashville conference. We greatly appreciate the support from the SEF. Travel and registration support from the SEF will be available for the upcoming meeting in Jacksonville, as well; keep an eye out for more information in the next

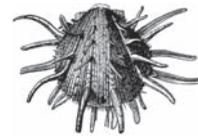


edition of this *Newsletter* and on the NSA Recruits' Webpage. Remember, you can apply for an SEF Travel Award every year, even if you have previously received SEF support, but to receive support you must apply.

There are also two grant opportunities currently offered by the National Shellfisheries Association specifically aimed toward the support of student research; the Melbourne R. Carriker Award for Student Research and the Michael Castagna Award for Applied Research. They are worth \$1,250 to cover research costs. Applications for these two prestigious grants are due November 30, 2013. We encourage you to take advantage of these grants and apply! More information on both awards and application instructions can be found at <http://www.shellfish.org/student-members>.

The Student Recruit's Co-Chairs are looking for an additional student volunteer to help us at meetings and in assisting fellow Recruits. If you are interested, please email Allison or Maria (see back page for our email addresses) and we will provide you with more details. In addition to the new Recruits Webpage, keep an eye out for the revamped Facebook page that will be launching soon. We will be communicating with the Recruits through these pages, and as always, you can email us with any questions or issues you may have about the Recruits, Recruit activities, and NSA.

Allison Mass and Maria Rosa
Recruits' Co-Chairs



FUTURE NSA MEETINGS

NSA 106th Annual Meeting

Jacksonville, FL

March 29 – April 2, 2014

NSA 107th Annual Meeting

TBA

AQUACULTURE 2016

Las Vegas, NV

February 22 – 26, 2016

106th Annual Meeting JACKSONVILLE, FLORIDA March 29 - April 2, 2014

No, it's not a typo, this year the meeting will begin on Saturday evening, March 29th with the President's Reception and end on Wednesday, April 2nd. The EXCOM will meet on Saturday, the 29th, the Student Endowment Fund Auction will be on Monday, and the Business Luncheon on Tuesday. It was an unavoidable change necessary to get the venue and, who knows, may turn out to be better than our traditional schedule.

Jacksonville is a great location, the facilities are outstanding, and the weather should be delightful. Lots of attractions nearby including some of the nation's best beaches, and St. Augustine is only about 45 minutes away - I'm sure more and more of us could do with a visit to the Fountain of Youth!

The program is already taking shape and promises some great sessions and four outstanding plenary speakers: Brian Bayne, Nicki Holmyard, João Ferreira, and Eddie Allison (bios and titles will be available soon - check the NSA Website).

Thanks to those who have already stepped up to organize special sessions (all subject to change!): Dave Bushek (shellfish disease), Dane Frank and Evan Ward (molluscan filter-feeding), LeRoy Creswell and Bruce MacDonald (Caribbean molluscs/conch), Bill Walton (Down on the Farm), João Ferreira (modelling and molluscan aquaculture), Dorothy Zimmerman (communication and outreach), George Waldbusser (acidification), Helene Hegaret (harmful algae), Anita Wright and Steve Jones (Vibrio), and several others under discussion.

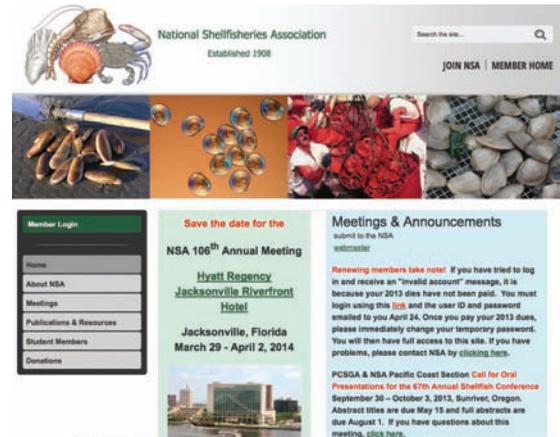
There is plenty of room for more - so if you have an idea for a session or would like to organize one, contact the Conference Manager (below) as soon as possible.

Watch the website for updates, mark your calendars, and see you in Jacksonville!

Sandy Shumway
Conference Manager
sandra.shumway@uconn.edu



NSA has a New and Improved Web Site



Those of you visiting www.shellfish.org in the past few months will have noticed that NSA has a new presence on the web. Our new site, hosted by Atlanta-based MemberClicks Inc., will bring improved member services to our association. All recent members should have received an announcement (dated April 24) with your personal login credentials which will allow you to both renew your 2013 membership dues and then receive full membership benefits such as access to the NSA membership directory, current and past issues of the *NSA Quarterly Newsletter* and of course full access to the *Journal of Shellfish Research* via our link to BioOne. Once you have logged in to the NSA portal, please be sure to confirm and update your account profile. Keeping this information current is critical to receiving full membership benefits. If you have any questions or comments about our new web presence, please contact NSA Webmaster Karolyn Mueller Hansen (webmaster@shellfish.org).

Karolyn Mueller Hansen and Chris Davis

New Editorial Team to Produce the *Quarterly Newsletter*

This edition of the *Quarterly Newsletter* is my last as Editor. I would like to express my appreciation to all the authors and contributors who provided the *Newsletter* with a wealth of informative and interesting articles over the past five years. I have enjoyed serving NSA as *Newsletter* Editor and tried to maintain the quality of the publication established by my predecessors. LeRoy Creswell (creswell@ufl.edu) and Joth Davis (jothpdavis@gmail.com) have agreed to take over production of the *Newsletter*; please send them your articles, stories, and photos, I know they will be more than happy to receive your timely submission of materials for the *QNL*.

Paul Rawson
University of Maine

Wallace Award Presentation NSA Business Luncheon February 25, 2013

According to the NSA By-Laws,

“The Wallace Award is presented to an individual whose actions most demonstrate the principles and actions concerned with programs in shellfisheries, aquaculture and conservation as exemplified by Mr. David Wallace during his lifetime in promoting understanding, knowledge, and cooperation among industry members, the academic community and all levels of government (states, national, and international), and who has had outstanding success in bringing together shellfish scientists and industry officials for the benefit of shellfisheries.”

The newest awardee clearly represents the spirit and basis of this award. Kevin Stokesbury.

Kevin received his B.S. and M.S. degrees from Acadia University in Nova Scotia and in 1994 received his Ph.D. from Université de Laval in Quebec. After 2 years at the Center for Marine Science Research at the University of North Carolina, and 2 years at the University of Alaska he joined the University of Massachusetts Dartmouth as an Associate Fellow and now serves as Professor and Chair of the Department of Fisheries Oceanography, School for Marine science and Technology (SMAST). He has done all of the usual academic things, published over 40 peer-reviewed papers, several book chapters, and supervised many graduate students, and secured millions of dollars in research funding.

Kevin has also worked closely with the commercial fishing industry for his entire career, and specifically the sea scallop industry for decades - as their scientific advisor, their advocate, their spokesman, and their friend. He has been employed by them as an expert witness and has also worked tirelessly *pro bono*. In 1999 he conceived a plan to videotape and map the seafloor; the resulting survey would actually count scallops with the intention of determining the size of the biomass. He engaged local fishermen and has since amassed a video library consisting of a quarter million video samples that have been used in every scallop fisheries management plan since that time. Today the work is acclaimed as some of the leading environmental work regarding sea floor habitat and the marine benthic community.

In 2004, he received the David L. Belding Award for marine resource conservation from the Massachusetts Marine Fisheries Advisory Commission presented to the individual who has done the most to promote the conservation and sustainable use of the Commonwealth's marine resource. He also received the President's Award for Public Service from the University of Massachusetts for 'outreach and scientific work, involving both students and fishermen, that led to the

re-opening of the scallop beds on Georges Bank and enabled an additional \$55 million of catch in 1999-2000.’

I believe most telling of Kevin's efforts was in 2008 when he was recognized by the people in the fishing industry of New Bedford with the Friend of the Fisherman Award for 'his efforts on behalf of the fishing industry in New England, and for his role in the continued success of the scallop fishery.' He has been able to demonstrate that a thriving commercial fishery can be run in an environmentally responsible and sustainable manner - a concept not always met with the same acclaim from many of his peers. Congressman Barney Frank was personally disappointed that he could not be present for the presentation of the award at the New Bedford Fishermen's Festival and formally commended Kevin in the Congressional Record. In his words, "One of the great successes - probably the greatest success - we have seen in regulation of the fishing industry in New England is with the scallop fishery, and no one is more responsible for this success than Kevin Stokesbury." Most recently, he was invited to chair the ICES Scallop Assessment Working Group.

A quote I have invoked frequently comes from Louis Pasteur: "To him who devotes his life to science, nothing can give more happiness than increasing the number of discoveries. But his cup of joy is full when the results of his studies find practical application. There are not two sciences. There is only one science and the application of science, and these two activities are linked as the fruit is to the tree."

The National Shellfisheries Association is honored to present the David Wallace Award to KEVIN STOKESBURY in recognition of his longstanding contributions to the commercial fishing industry as a science advisor, advocate, spokesman, and friend, and for his continuing efforts to invoke scientific discovery to shape policy and regulations at the highest levels.

Dr. Sandra E. Shumway
University of Connecticut



Sandy Shumway presents Kevin Stokesbury with the Association's David H. Wallace Award at the recent NSA Business Luncheon in Nashville, TN.

Presidents Message... continued from page 1

head the Publications Committee, and Lisa Milke and Stan Allen will continue to lead the Endowment/Student Awards Committee. The Industry Committee will continue to be led by John Supan, Rick Karney, Bill Dewey, and Gef Flimlin. We all greatly benefit from the hundreds of volunteer hours put in by these committees. Thank you.

I'm sure you will agree that the 105th Annual Meeting of the National Shellfisheries Association held February 22-25 in Nashville, TN was a great success. This Triennial meeting, held in association with the World Aquaculture Society and the Fish Culture Section of the American Fisheries Society, brought together over 2500 researchers and industry attendees from around the world. I am always amazed at the incredible diversity of aquaculture interests in attendance at these meetings, and am convinced that the cross-fertilization of ideas - whether it be aquaculture engineers discussing new environmental sensor designs with oyster habitat restoration biologists or fish geneticists sharing their breeding designs with bivalve hatchery managers - we all come away from this meeting with new ideas and renewed energy which is really the whole point after all.

Meetings of this scale don't just "happen" and many people worked long hours to make this one a success. Special thanks are due to the Association's Conference Coordinator, Sandy Shumway, who worked tirelessly with WAS Conference Manager John Cooksey along with other steering committee members. Additionally, thanks are due to Sandy Shumway, Jay Parsons, Jim Bowker, and Steve Allen who did a masterful job organizing 98 sessions within the four day program. The NSA sales table was ably managed by The Recruits' Co-Chairs Maria Rosa and Allison Mass along with their cadre of student volunteers. This table has the dual role of helping to raise awareness about our Association and also generates much needed funding for the Student Endowment Fund. And then there was the infamous SEF Student Auction. Auctioneer "Dolly" Shumway ably assisted by Steve Allen, Maureen Krause, and a multitude of student runners once again pulled out all the stops to raise funds for the SEF, this year grossing nearly \$2000.

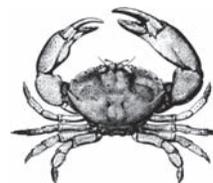
As you are undoubtedly aware, the NSA has a new and improved Web presence. After nearly a decade of Web support by Scott Siddall and his company, The Longsight Group, it was mutually determined that another web hosting firm could better meet our needs. Last year, Scott undertook a thorough evaluation of Web hosting companies capable of supporting membership-based organizations. This review ended with the selection of Atlanta-based MemberClicks to manage our Web portal. Although the transition took longer than expected, Karolyn Mueller Hansen and I spent many weeks developing the new site and we are pleased to say that www.shellfish.org is up and running! Not only did Scott bring us into the 21st Century with his Web-savvy skills, but he also developed the accounting and membership system

(remember dBase?) we have relied upon for nearly thirty years. We are currently working on an online accounting system to match the sophistication of our Web presence. Thanks are due to Karolyn Mueller Hansen and Nichole Eichelberger of MemberClicks for their tenacious work pulling this all together. Past members should have received an email announcement with their login credentials and instructions on how to renew their 2013 dues. Once online, members will be able to search for other current members, download the NSA *Quarterly Newsletter*, access papers in the *JSR* through *BioOne* and more. Given the delay in implementing the new Web portal and online payment system, we have extended publication benefits (excluding *BioOne* access) to all 2012 members through May, 2013. You should receive Volume 32(1) of the *Journal* soon if it has not arrived already. But to continue receiving the *Journal* in 2013, you must renew your membership, so please do so today. Online abstract submission and registration for the Annual Meeting will be available in the Fall.

This will be the last issue of the NSA *Quarterly Newsletter* with Paul Rawson on the masthead as Editor. Paul has cajoled people for articles for the past five years and is ready to pass the quill to new Editors. Thank you Paul for the tremendous amount of work you have devoted to keeping our membership informed about our Association's activities. Fortunately, our two most recent Past-Presidents, LeRoy Creswell and Joth Davis, have offered to co-edit the *Newsletter* from diagonally opposite corners of the continental U.S., so they will become the first points of contact for all things related to the NSA *QNL*, starting with the summer 2013 edition. Their contact information is found on the last page of this issue.

Although the 105th Annual Meeting has just recently occurred, planning is well underway for the 106th Annual Meeting in Jacksonville, Florida. We will be convening at the Hyatt Regency Jacksonville Riverfront Hotel literally on the Harbor in downtown Jacksonville. Session planning is already underway, but there is still time to pull together a special session. Please contact Sandy Shumway with your ideas. I look forward to my term as President and will work hard to keep the National Shellfisheries Association the vibrant and prestigious organization that it has been for over 100 years.

Chris Davis
President



2013 SEF Travel and Presentation Awards

We received 24 applications from NSA student members seeking funds to support their travel to present at the 105th Annual Meeting of the National Shellfisheries Association meeting in Nashville, TN. While many exceptional applications were received, we were able to give awards to only a fraction of the deserving applicants. Congratulations to Andrea Larsen, Joyce Yuk-Ting Lau, Soxi Lee, Katie McFarland, Jessica Piesz, and Saebom Sohn, who received lodging awards, and Elizabeth Brunner and Anne Rolton who received registration waivers.

There were 18 student oral presentations vying for the Thurlow C. Nelson Award and 12 student posters competing for the Gordon Gunter Award in Nashville. Thanks to the tremendous effort of our judges, there was an average of 7 judges per presentation or poster. While there weren't as many student oral presentations as in previous years, trying to view all of them among 15 concurrent sessions led to a lot of running around...literally! This year the distinction for most avid judge (i.e., fastest runner?) goes to Maureen Krause, who scored 15 of the 18 presentations. After taking into consideration the scores from all our judges, the following students excelled:

The winner of the Thurlow C. Nelson Award for outstanding oral presentation is **Anne Rolton**, Université de Bretagne Occidentale for her talk, *Effects of *Karenia brevis* exposure on the physiology and reproductive performance of *Crassostrea virginica* and the quality of the gametes that are produced*. The Awards Committee and judges would also like to extend an Honorable Mention to two other presentations; **Julie Davis**, Auburn University who presented the talk, *Effects of stocking density and basket orientation when using the adjustable longline system for oyster grow-out: measures of production*, and **Emma Timmins-Schiffman**, University of Washington for the presentation, *From genes to proteins: ocean acidification impacts on the physiology of the Pacific oyster, *Crassostrea gigas**.

The winners of the Gordon Gunter Award for outstanding poster presentation are **Joyce Yuk-Ting Lau**, Stony Brook University, for the poster titled, *What are the source and function of hemocytes associated with oyster pallial mucus?* and **Saebom Sohn**, University of Rhode Island for the poster, *Evaluation of the efficacy of two probiotic strains in an oyster hatchery*. **Melissa Pierce**, University of Connecticut, received an Honorable Mention for her poster, *Functional and species diversity of the gut and pallial fluid microbiomes of the eastern oyster *Crassostrea virginica**.

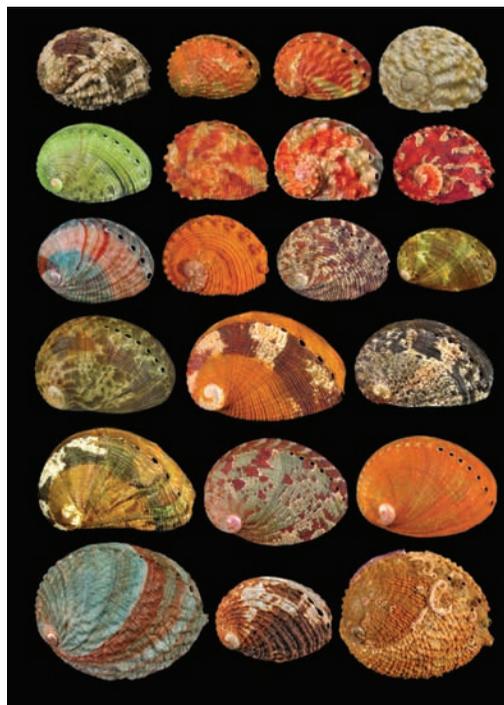
While the intention of the awards process is to highlight the exceptional work of the students, we would be remiss if we didn't acknowledge the volunteer judges who donated a considerable amount of time and energy to help make

this process possible. Our sincerest thanks to the following individuals for reviewing travel awards: Marta Gomez-Chiarri, Emmanuelle Pales Espinosa, John Scarpa, Missy Southworth, and Bill Walton; judging oral presentations: Steve Allen, Dan Cheney, Brett Dumbauld, Marta Gomez-Chiarri, Peter Kingsley-Smith, Maureen Krause, Nature McGinn, Gulnihal Ozbay, Angela Padeletti, John Supan, Missy Southworth, John Scarpa and Bill Walton; and spending their happy hours scoring poster presentations: Steve Allen, Dan Cheney, LeRoy Creswell, Brett Dumbauld, Anu Frank-Lawale, Marta Gomez-Chiarri, Maureen Krause, Nature McGinn, Gulnihal Ozbay, Sandy Shumway, Missy Southworth and Leslie Sturmer. It is only with the help of dedicated members serving as judges that these awards are possible!

Lisa Milke and Stan Allen
SEF Awards Committee Co-Chairs

Abalone Quiz

The recent book *Abalone: Worldwide Haliotidae*, by Daniel Geiger and Buzz Owen, includes over 60 pages of beautiful images and information on taxonomy and systematics of abalone. See page 10 for a review of this book by Peter Cook. The image below, which appeared on the cover of the April 2013 edition of the *Journal of Shellfish Research*, is a selection of rare abalone collected by Buzz Owen. How many of the abalone in this image can you identify? See page 14 for the answers.



Student Awards Presented at the 105th Annual Meeting

Aquaculture 2013 in Nashville, TN proved to be a productive meeting for NSA members. An impressive delegation of NSA students from many disciplines attended, presented their work, and participated in the many of the events sponsored by the three participating societies. As in years past, the winners of this year's student research awards were announced at the NSA Annual Business Meeting, held on February 25, 2013. The Melbourne R. Carriker Student Research Grant is a competitive grant that supports promising basic research in the area of shellfisheries while the Michael Castagna Student Grant for Applied Research, also a competitive grant, supports applied areas of research in shellfish and aquaculture. I would like to emphasize that these awards are open to all M.S. and Ph.D. students who are NSA members, so students should take advantage of the opportunity to participate in this prestigious competition. All of the information necessary to apply for the two research grants is found on the NSA Website (www.shellfish.org). Additional questions about the awards or the application process may be directed to the Recruits' Co-Chairs, Maria Rosa or Allison Mass, or the Past-President and current Chair of the Awards Committee, LeRoy Creswell (creswell@ufl.edu). Both grants provide \$1,250 to the recipient; these funds may be used for direct support of your research project with few restrictions. So, I encourage all MS and Ph.D. students to apply this fall.

I am very pleased to announce that Allison Marie Colden, a Ph.D. student at Virginia Institute of Marine Sciences, was the winner of the 2012 Michael Castagna Student Grant for Applied Research. Her proposal, titled *Structural effects of restored oyster reefs on persistence and ecological function*, was very well received by the panel of judges who reviewed all the proposals submitted this year. Similarly, I am pleased to announce that the winner of this year's Melbourne R. Carriker Student Research Grant is Emily Grason, a Ph.D. student at the University of Washington. Her proposal, titled *Risk-recognition and behavioral plasticity in invasive oyster drills*, was also very well received by the judges. Congratulations to both of these students for their fine proposals. We look forward to seeing updates on their research progress in later editions of this *Newsletter*.

The Business Luncheon was also the occasion to announce the winner of the Best Student Paper Published in the *Journal of Shellfish Research* for 2011 as well as a significant change in the title of the award. At the recent Executive Committee meeting (held prior to the Aquaculture 2013) the EXCOM voted unanimously to change the name to the **Sandra E. Shumway Award for the Best Student Paper Published in the JSR**. This change in name is a reflection of the long and dedicated service (28 and counting) to the Association's *Journal* by Editor, Sandy Shumway, who encouraged the

creation of the competition several years ago. Because there were several highly ranked papers in this year's competition, the Awards Committee agreed to name both an Honorable Mention and overall winner. Honorable Mention for the Sandra E. Shumway Award for the Best Student Paper Published in the *JSR* in 2011 goes to Jonathan Carey for his paper *An assessment of juvenile and adult sea scallop, Placopecten magellanicus, distribution in the northeast Atlantic using high-resolution still imagery*. The winner of this year's competition is Leila Basti for her fine paper *Effects of the toxic dinoflagellate Heterocapsa circularisquama on larvae of the pearl oyster Pinctada fucata martensii (Dunker, 1873)*. It should be noted that Ms. Basti had two papers published in *JSR* in 2011 with both contributions rising to the very top of the group of 35 papers considered. Congratulations to all student award winners.

Joth Davis Awards Committee Chair



The recipients of the Association's top student awards were announced during the Annual Business Luncheon at the 105th Annual Meeting in Nashville, TN. Allison Colden (left) is 2013 winner of the Michael Castagna Award for Applied Research, Emily Grason (center) is the 2013 winner of the Melbourne R. Carriker Award, and Leila Basti (right) is the winner of the Sandra E. Shumway Award for Best Student Paper Published in the *JSR*. For more on these awards, be sure to visit www.shellfish.org.

What's Cookin'?

SHELLFISH! Plans are underway for another NSA Shellfish Cookbook. Details to follow, but start digging out your favorite recipes - send at any time to Sandy Shumway.



IMAGES FROM THE 105th ANNUAL



ANNUAL MEETING IN NASHVILLE



News from the Pacific Coast Section

It was great to see all of you West Coast shellfish aficionados that made the trek to the Aquaculture 2013 in Music City! Aah, finally spring with daylight low tides, graduation, baseball, a new field season, budget cuts, proposals due, final exams, and lawns to mow. Yikes! also time to respond to the call for papers for the fall meeting of the Pacific Coast Section of NSA and Pacific Coast Shellfish Growers Association!

The 67th Annual Conference will be held at Sun River Resort near Bend, Oregon from September 19-22, 2013. If you haven't been to eastern Oregon you are in for a treat; beautiful mountain country for hiking, fabulous biking, golf, and horseback riding. It's also desert and volcano country with Lava Lands, the Newberry Volcanic Monument, and High Desert Museum, too. Bring your family and friends, if you can! Keynote speakers this year will include well known economist David Batker from Earth Economics who co-authored the book, *What's the Economy for Anyway?*, and our own Dan Cheney and Duane Fagregen who will give us the scoop on their trip to the World Oyster Congress in France!

Some important deadlines to keep in mind:

May 15, 2011 – Abstract titles were due. If you didn't get one in there may still be room - we will be setting the conference schedule in early June. Our Website (<http://www.nsapcs.org>) is under re-construction, but in the interim visit www.pcs.ga.org to submit titles and full abstracts, call 360-754-2744, or call me at 541-867-0191 for more information.

August 1, 2011 – Full abstracts are due.

NSA-PCS will once again present an award for best student presentation at the meeting. Some financial assistance for registration and lodging will be available to NSA student members through the Ken Chew Student Endowment, and potentially from other sources. Students requiring assistance should contact Bethany Stevick (Bethany.Stevick@dfw.wa.gov; 206-851-6805).

Further details on conference registration, hotel rates, and registration deadlines will be posted on the above PCSGA Website as it becomes available. We're also planning some splashing fun activities again and if you have other ideas for NSA fundraising please check in with Chris Kaplan (ckaplan@jamestowntribe.org, 360-681-4630), or any one on the board. Hope to see you in Sun River and have a great summer!

Brett Dumbauld
Pacific Coast Section Chair

Audit-Budget-Finance 2013 Update



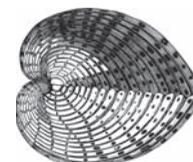
Total revenues for the 2011-12 fiscal year (October 2011 through September 2012) were \$414,801 and expenses were \$381,566 for an increase of \$33,235. This does not include the Student Endowment Fund which increased \$5,162 from a year earlier.

Administrative revenues and expenses for 2011-12 were \$55,470 and \$36,350, respectively, for an increase of \$19,120. Publication revenues and expenses were \$195,146 and \$223,305 for a decrease of \$28,159. Revenues from our Seattle meeting in March 2012 were \$164,185 and expenses were \$121,911, for a gain of \$42,274.

The proposed budget for the 2013-14 fiscal year, which begins October 1, 2013 projects revenues of \$391,925 and expenses of \$356,650. Realization of these projections could increase NSA assets by another \$35,275, not counting SEF activities. Because the award-winning *Journal of Shellfish Research* is our most important product, and because it is costly to produce with the quality we expect and receive, its production expenses are generally expected to exceed its revenues, as they did during 2010-12, however, by limiting the number of pages published and by having Special Issues fully paid for by sponsors, we have a better chance to cover JSR production expenses.

Our asset base has improved dramatically during seven of the last eight years, making our financial picture more solid and enabling us to provide more services for members than ever before. I would like to take this opportunity to thank former Treasurer Chris Davis for his time-consuming efforts during the past 7+ years as Treasurer. These duties were recently handed off to John Scarpa. It was a pleasure working with Chris during that time, and I look forward to working with him in his new role as President. I also look forward to working with Treasurer John Scarpa during the next year as we continue to strengthen the finances of the National Shellfisheries Association.

George Abbe
Financial Officer
Audit-Budget-Finance



Shellfish Industry Mourns the Passing of Michael Voisin

Michael C. Voisin died peacefully, surrounded by family and friends, on February 2, 2013 in his hometown of Houma, LA, after a brief illness. He was 59. Mike was a native of Los Angeles, CA. Since 1971 he was CEO and owner of Motivait Seafoods in



Houma, a major producer and processor of eastern oysters. Motivait Seafoods is known for the development of high hydrostatic pressure (HPP) processing of oysters to eliminate Vibrio bacteria. The process was also found to destroy the attachment of the oyster adductor muscle to each valve. The resultant automation of shucking as well as the elimination of Vibrio bacteria through HPP are recognized as significant advancements to oyster processing as well as contributions to the sustainability of the oyster industry. Mike's father, Ernest Voisin, is considered the inventor of high pressure processing of oysters and the company was awarded several patents pertaining to this process.

In addition to the obvious financial success of his company, Mike made immeasurable contributions to his local community as well as the seafood community nationally. Those seafood organizations for which Mike was an active and critical contributor are diminished with his passing. Among them are: the Louisiana Oyster Task Force, the Louisiana Oyster Growers and Dealers Association, the Louisiana Seafood Promotion and Marketing Board, the National Fish and Seafood Promotion Board, the National Fisheries Institute, the Gulf and South Atlantic Fisheries Foundation, the Gulf Seafood Marketing Coalition, the Louisiana Wildlife and Fisheries Commission, and the Gulf Oyster Industry Council. Among many local community organizations, Mike served on the Board of Directors of the Terrebonne General Medical Center where he was hospitalized. He was also a regional leader in the Church of Jesus Christ of Latter Day Saints, serving as bishop.

An important aspect of Mike's legacy is the large group of men and women whom he inspired to grow, to learn and to broaden their perspectives. We should remain hopeful that these individuals will come forward and, as described in Mike's favorite quotation from Theodore Roosevelt, climb into "the arena". The full quotation was read by Greg Voisin at his father's funeral service. It was on the entrance to Mike's office at Motivait Seafoods in Houma. He shared it with us many years ago and it sums up our friend nicely. Below is the quotation in its entirety:

"It is not the critic who counts: not the man who points out how the strong man stumbles or where the doer of deeds could have done better. The credit belongs to the man who

is actually in the arena, whose face is marred by dust and sweat and blood, who strives valiantly, who errs and comes up short again and again, because there is no effort without error or shortcoming, but who knows the great enthusiasms, the great devotions, who spends himself for a worthy cause; who, at the best, knows, in the end, the triumph of high achievement, and who, at the worst, if he fails, at least he fails while daring greatly, so that his place shall never be with those cold and timid souls who knew neither victory nor defeat."

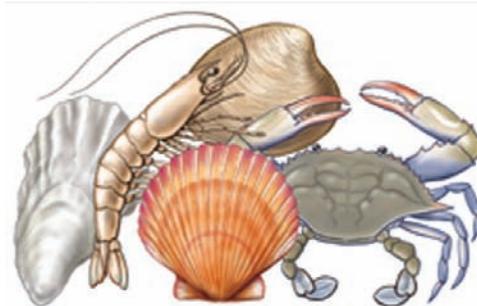
It was our privilege to serve with Mike in many "battles" and in many of the above mentioned organizations, but it was primarily our privilege for him to consider each of us as his friend, him ours, and to be influenced by his kind and irrepressible spirit for more than 25 years. Mike's presence will continue to be felt by all who knew him. And the wonderful memories of times spent with this great spirit while he resided on this Earth will be cherished forever.

Respectfully submitted,
Chris Nelson, Vice President, Bon Secour Fisheries, Inc.,
Al Sunseri, President, P&J Oyster Co.

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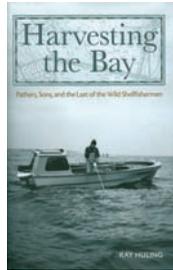
Book Reviews

Harvesting the Bay: Fathers, Sons, and the Last of the Wild Shellfishermen, Ray Huling, Lyons Press, Guilford, CT; 270 pp; U.S. \$24.95.

This book is about quahogs (note, not hard clams!), quahoggers, quahogging and a way of life in Narragansett Bay, Rhode Island. *Harvesting the Bay: Fathers, Sons, and the Last of the Wild Shellfishermen* captures this industry and lifestyle and recounts in remarkable and starkly real prose the men and women who do the digging. The author, Ray Huling, is a 12th generation Rhode Islander and a graduate of the New York University School of Journalism. He was also a Fellow in the Reynolds Program in Social Entrepreneurship - all of which come through clearly as his book unfolds.

This book is very readable, rich in personal and sharp observations, and presents the quahogging industry as a model for sustainable food production. It is also a memoir that covers the participation of the author, his father, and his grandfather in this rugged industry.

Quahogging is hard work, bullrakes are still the order of the day, and the diggers make up a small and unique fraternity, but as the book rightly points out, they love their work, their lifestyle, and the fact that theirs is a sustainable effort. The book paints a vivid and colorful picture of the industry and the players, from their strenuous and sometimes superhuman



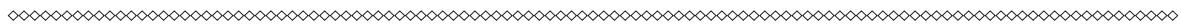
physical efforts to their salty, often crude, but unique language (this aspect a bit overdone in several instances).

A full chapter is devoted to the bullrake - a seemingly simple piece of equipment, but with a rich history of development. Tang angle, tooth bar or tooth angle, tooth curve, tooth count, basket shape, and throat opening all come together with but a handful of small-scale manufacturers who each capitalize on subtle differences to produce their version of the perfect rake.

There are a few misconceptions, one most notably is the idea that spider crabs are major predators of quahogs. With almost no strength in their pincers and a penchant for detritus, the spider crabs are being falsely accused and their population suffering as the quahoggers try to wipe them out by crushing them or pulling off their claws!

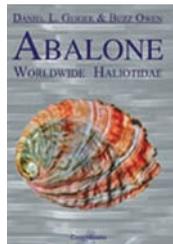
I found the content to drag as I got toward the last few chapters, but all in all, this is an interesting account of a traditional fishery. I dug my first quahogs in the Sakonnet River around the age of 3, and I knew from the very beginning that it was a special experience - this book simply reinforces and validates that belief!

Sandra Shumway
University of Connecticut



Abalone: Worldwide Haliotidae, Daniel L. Geiger & Buzz Owen, ConchBooks, 2012. 361 pages. ISBN 978-3-939767-43-5. €98.00

This is the most comprehensive book on abalone taxonomy ever published. It is also beautifully illustrated. The two authors are both extremely well qualified in the field of abalone biology. Daniel Geiger has been working on abalone for many years, and earned a PhD from the University of Southern California in 1999 for his work on abalone systematics. His long term passion for abalone shows through in this beautiful book. Buzz Owen's interest in abalone started from his time as a sport diver, followed closely by a career in commercial abalone diving. He then worked in a commercial shellfish hatchery for several years, and it was there that he developed an interest in abalone hybrids, and in the systematics and taxonomy of the Haliotidae.



with abalone biology and includes material on internal and external anatomy, the radula, life history, ecology, feeding, and relationships with epizoans, parasites, and commensals. Although a minor section of the book, the paragraphs on fisheries, poaching, conservation, and collecting raise some interesting and challenging questions. A particularly useful section is that dealing with the radula. Being an important taxonomic feature, the numerous photographs of the radulae of almost all known species could become an essential tool for abalone taxonomists.

The rest of the book is dedicated to an index of all known abalone species. For each species, detailed taxonomic information is provided and this is supplemented, where possible, by clear and informative illustrations. Many people will find the final section the most impressive of all because it contains clear and informative colour photographs of almost every known abalone species. For many species, a series of photographs shows size and colour variation, as well as illustrating both the external and internal features of the shell. This is the most comprehensive collection of abalone photographs ever published. This book is an essential for abalone enthusiasts, researchers, and serious taxonomists.

Peter Cook
University of Western Australia

Although the primary focus of the book is abalone systematics, it is far more than just a taxonomic list. The first section of the book contains a detailed description of the family Haliotidae, including sections on shell morphology, the fossil record, classification, and species and subspecies relationships. For anyone wishing to understand the taxonomic relationships between the various abalone species, this section is a must. The following section deals

Shellfish in the News

Ocean Acidification - Climate change and ocean acidification figured prominently in Edward Allison's plenary address on the first morning of Aquaculture 2013 in Nashville, TN. NSA members contributed to the discussion, as well, with several timely presentations. Yet, as a recent story on National Public Radio (<http://www.npr.org/templates/story/story.php?storyId=184845126>) has shown, public misconceptions about climate change and climate change science persists. According to the NPR story, a recent paper in the journal *Environmental Research Letters* (Cook et al. 2013 Environ. Res. Lett. 8 024024) conducted a survey of nearly 12,000 scientific studies and found that 97% of scientists who expressed an opinion, support the opinion that human activity is causing climate change. Yet, 40% of the American public believe that there is disagreement among scientist about whether climate change is real. Further, public opinion on climate change varies depending upon the weather.

Members of the shellfish industry and shellfish research community have figured prominently, however, in efforts to educate the public about the detrimental effects of increasing carbon dioxide in the atmosphere. For example, Bill Dewey of Taylor Shellfish Farms was interviewed by the CBS Evening News (http://www.cbsnews.com/8301-18563_162-57531002/changing-climate-hurting-shellfish-market/) in October of 2012 about ocean acidification and its effects on shellfish culture. More recently, Dewey, along with Benoit Eudeline of Taylor Shellfish Farms, Richard Feely of NOAA, and others were interviewed for a special report series on climate change impacts that is being carried by USA Today (<http://www.usatoday.com/story/news/nation/2013/03/27/climate-change-seas/2024759/>). This report described how low pH water, brought into the coastal region by upwelling, has negatively affected the shellfish industry and provides a preview of how ocean acidification is likely to impact the shellfish industry in other regions of the country and globally. Only time will tell, but with continued efforts like theirs perhaps the word will spread about the all too real dangers of climate change and ocean acidification.

Lingering Effects of Superstorm Sandy - By some estimates, superstorm Sandy cost in excess of \$65 billion in damages along with 159 lives lost. Over six months later, the recovery continues as communities persevere through a long rebuilding process. As a recent on-line USA Today article highlights, shellfish farmers and baymen in New Jersey and neighboring states are still recovering from the storm, too! Throughout the region, lost boats, gear, and time-at-sea resulted in immediate financial losses. Just as troublesome, however, shellfish beds were closed as the storm approached and many remain closed due to pollution associated with heavy storm run-off. Baymen throughout the region have assisted state officials with the collection of shellfish to help with testing in order to expedite the opening of beds while also ensuring public health. Gef Flimlin, NSA member and Rutgers University Extension Specialist noted in the article

that harvesters in the region were unable to market shellfish during some of the busiest holiday periods of the year. With luck, however, the industry hopes that more beds will be open by Memorial Day weekend. More on this story can be found at <http://www.usatoday.com/story/news/nation/2013/04/02/shellfish-slow-to-recover-from-sandy/2048077/>.

Georges Bank Shellfish Beds Opened - A recent press release from the Woods Hole Oceanographic Institution highlights how the efforts of a team of researchers has led to improved understanding of toxic algal blooms on Georges Bank. The prevailing view held that coastal blooms in the Gulf of Maine essentially seeded blooms on Georges Bank. Research conducted under several programs, including the Gulf of Maine toxicity project (GOMTOX) and the NOAA Ecology and Oceanography of Harmful Algal Blooms program (ECOHAB) identified several key and unique features of the toxic blooms on Georges Bank. It came as no surprise that *Alexandrium fundyense*, the species responsible for coastal blooms, was also found to be responsible for Georges Bank blooms. The latter blooms, however, were found associated with colder and saltier water than the conditions under which coastal blooms typically form. At the same time, it appears that the toxin content of the *A. fundyense* cells on Georges Bank is lower than that observed in coastal *A. fundyense* cells, and the toxins produced at the surface are not delivered to the benthic shellfish beds in quantities that lead to human health concerns. Additional research indicates that the Georges Bank *A. fundyense* is genetically distinct; together the evidence suggests that the harmful algae on Georges Bank are a separate population.

The shellfish industry has estimated that shellfish beds on Georges Bank, including beds of ocean quahogs and surfclams, have an estimated annual value in excess of \$10-15 million. The threat of harmful algal blooms and paralytic shellfish poisoning, however, had kept the beds closed to commercial harvests. A collaboration between the GOMTOX researchers and the U.S. Food and Drug Administration devised improved testing protocols. These protocols, along with the increased knowledge regarding the dynamics of the toxic algal blooms on Georges Bank, prompted regulatory agencies to open the shellfish beds on Georges Bank for the first time in over two decades. More information on the research collaborative that helped open the shellfish beds on Georges Bank can be found at http://www.whoi.edu/news-release/Georges_Bank_fisheries.

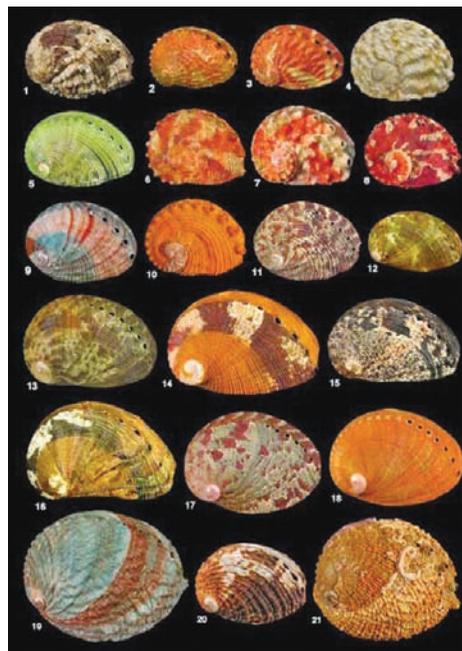
Paul Rawson
University of Maine



Haliotis Quiz Answers

Below, are the identities of the abalone shells that appear in the image recently published on the cover of the *Journal of Shellfish Research*.

1. bizarre abnormal *H. tuberculata* form *lamellosa* Lamarck, 1822
2. *H. pourtalesii pourtalesii* Dall, 1881
3. *H. pourtalesii pourtalesii* Dall, 1881
4. *H. barbouri* Foster, 1946
5. *H. mykonosensis* Owen, Hanavan & Hall, 2001
6. *H. melculus* Iredale, 1927
7. *H. unilateralis* Lamarck, 1822
8. *H. queketti* Smith, 1910
9. *H. rufescens* x *H. sorenseni* X *H. corrugata* x *H. walallensis* (Hybrid)
10. *H. queketti* Smith, 1910
11. *H. supertexta* Lischke, 1870
12. *H. stomatiaeformis* Reeve, 1846
13. *H. multiperforata* Reeve, 1846
14. *H. tuberculata* Linnaeus, 1758
15. *H. mykonosensis* Owen, Hanavan, & Hall, 2001
16. *H. mykonosensis* Owen, Hanavan, & Hall, 2001
17. *H. alfredensis* Bartsch, 1915
18. *H. alfredensis* Bartsch, 1915
19. *H. corrugata* Wood, 1828 x *H. walallensis* Stearns, 1899 (Hybrid)
20. *H. virginea stewartae* Jones & Owen, 2004
21. *H. corrugata oweni* Talmadge, 1966



According to Buzz Owen, who provided the quiz, number 9 is a “four species” hybrid he cultured in a marine shellfish hatchery in 1969. It is a cross between two hybrids of dissimilar parentage. A female *H. rufescens* x *H. sorenseni* hybrid, and a male *H. corrugata* x *H. walallensis* hybrid.

Upcoming Events

Aquaculture Canada 2013: June 2-5, 2013, Guelph, ON, Canada. For more information visit www.aquacultureassociation.ca.

Aquatic Ecosystems at the Edge - 11th Biennial Conference of Aquatic Ecosystems Health & Management Society: June 17-20, 2013, Victoria, BC, Canada. For more information visit <http://conferences.aehms.org/AEHMS11/>.

The Crustacean Society & Latin American Association of Carcinology Summer Meeting: July 7-11, 2013, Radisson San Jose, San Jose, Costa Rica. For more information visit <http://www.crust-costarica2013.org/>.

67th Annual Meeting of the Pacific Coast Shellfish Growers Association/NSA Pacific Coast Section: September 30-October 3, 2013, Sun River Resort, Bend, OR, USA. For more information visit www.nsapcs.org.

22nd Biennial Conference of the Coastal & Estuarine Research Federation: November 3-7, 2013, Town and Country Resort & Conference Center, San Diego, CA, USA. For more information visit www.erf.org/cerf2013.

Aquaculture Conference 2013: To the Next 40 Years of Sustainable Global Aquaculture: November 3-7, 2013, Palacio de Congresos de Canarias, Las Palmas, Gran Canaria. For more information visit <http://www.aquaculture-conference.com/>

Asian Pacific Aquaculture 2013 - Positioning for Profit: December 10-13, 2013, Ho Chi Minh City, Vietnam. For more information visit www.was.org.

106th Annual Meeting of the National Shellfisheries Association: March 29-April 2, 2014, Hyatt Regency Riverfront Hotel, Jacksonville, FL. For more information visit 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* Editors, LeRoy Creswell (creswell@ufl.edu) and Joth Davis (jothpdavis@mail.com).

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