

National Shellfisheries Association Quarterly Newsletter



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2016 (1)

President's Message



For the second year, thank you for the opportunity to serve the National Shellfisheries Association as your President. I am still savoring the sights and sounds of our 108th Annual Meeting in Las Vegas, Nevada in February 2016. Aquaculture 2016, the Triennial Meeting of

NSA, World Aquaculture Society, AFS-Fish Culture Section, and the National Aquaculture Association, was a resounding success. See the centerfold for a summary of meeting data. The meeting venue was spectacular – the Paris Hotel and Bally's Hotel were 'meeting central' with the meeting rooms and trade show floor space located conveniently in the walkway connecting both hotels. Not only was it a great opportunity to engage in aquatic science, policy, and commerce, we all actually engaged in significant exercise. My Fitbit logged over 18,000 steps for one day at the meeting (!). Our annual NSA Auction was once again a not-to-be-missed event with auctioneer Sandy Shumway arriving as a resurrected version of her Nashville character. John Scarpa, Chris Davis, Maureen Krause, and multiple student runners efficiently handled distribution of materials to the winners and collection of proceeds while dealing with the large crowd. We had another banner year for the SEF: \$3300 was added to the endowment. Thanks to the Cooksey Family (John, Mary, Noah, and Matya) for organizing another excellent meeting. Thanks also to our NSA 2016 meeting representatives, Steve Allen and Sandy Shumway, for carrying the banner for NSA during meeting planning. Be sure to see the pictures in the center of this QNL issue – we really had a fabulous time in Las Vegas.

The stability and longevity of NSA are due to the efforts of many, many people who devote countless hours of time to association management. Some members serve in many roles, while some serve in just one role, but we appreciate the efforts of *all* members who voluntarily give of their time to serve NSA. We are a volunteer-driven association and would not be viable without you. A special thank you is extended to Sandy Shumway, our *Journal of Shellfish Research* Editor and Meeting Coordinator. She has the dedication, talent, and skill to make both jobs look easy (they are not). Our financial and back-office people are John Scarpa, who continues to do a tremendous job as Treasurer, and Linda Kallansrude, who staffs our Secretariat. Noreen Blaschik is our on-call, can-do person for any number of jobs (meeting preparation, program preparation, newsletter mailings, ballot mailings, website updates). Chris Davis has single-handedly managed the website through our website ven-

dor MemberClicks – and let it be known that Chris is looking for a replacement! All good things must come to an end and Chris is ready to hand the website tasks to another NSA member. Thank you all for your past and continued service and I look forward to working with you closely over the next year.

The newly elected NSA Executive Committee (EXCOM) members are Nature McGinn, Vice-President (2016-2017), Lisa Milke, Secretary (2016-2018), and Brett Dumbauld, Member-at-Large (2016-2019). Thank you to all who agreed to stand for election and welcome aboard to Nature, Lisa, and Brett. Thank you to outgoing NSA Vice-President, Shirley Baker and Member-at-Large, Leslie Sturmer Taiani, we greatly appreciate your service. The continuing EXCOM members are: Steve Allen, President-Elect, John Scarpa, Treasurer, and Julie Davis and Lewis Deaton, Members-at-Large. The rotation of NSA EXCOM members may at times seem like a tap dance, but the overlapping terms serve to provide a much-appreciated continuity and corporate memory. NSA has many standing committees that serve the membership in diverse ways: John Kraeuter is Chair of the Audit-Budget-Finance Committee, Chris Davis is Chair of the Past-Presidents' and Elections and Awards Committees, Susan Ford and John Kraeuter are Co-Chairs of the Publications Committee, and Lisa Milke and Nature McGinn are Co-Chairs of the Endowment/Student Awards Committee. A special thank you goes to Stan Allen who has been a long-time Co-Chair of the Endowment/Student Award Committee – Stan was key in developing standards and formats to ensure a fair judging system and leaves the committee in the very capable hands of Nature and Lisa. Two NSA members have stepped up to take on the role of Membership Co-Chairs – Shirley Baker and Tessa Getchis. Membership is an essential component of our operations and we are thrilled to have Shirley

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In this issue:

- ***In Memoriam:***
Sara V. Otto and Roger N. Hughes
- ***Aquaculture 2016 recap***
- ***2016 Student Awards***
- ***BioOne and Journal of Shellfish Research***

Roger N. Hughes (1944-2015)

(continued from page 1)



Distinguished marine ecologist and molluscan expert, Dr. Roger Neville Hughes (Bangor University, Wales, UK) died in 2015. He was the Lloyd Roberts Professor Zoology at Bangor University. His research and teaching career spanned five decades, he produced over 200 primary publications, 3 influential books, edited several scientific journals, and inspired generations of graduate students (27 M.Sc., 36 Ph.D., and at least 6 Postdoctoral Fellows). Many will be most familiar with his book, *The Functional Biology of Marine Gastropods*; others, perhaps with *An Introduction to Marine Ecology*.

Professor Hughes was awarded a first-class honors degree in zoology from (then) University College of North Wales and a Ph.D. from the same for his studies on feeding and reproduction of a bivalve mollusc. He was a Killam Postdoctoral Fellow at Dalhousie University and then returned to Bangor where he became a beloved member of the faculty. He served as a Reader, received a D.Sc., and was appointed to a personal chair.

Poignantly, Roger never really retired. He continued as Emeritus Professor and as an Editor of the *Journal of Experimental Marine Biology and Ecology*, *Marine Ecology Progress Series*, and *Oceanography and Marine Biology: an Annual Review*. When he left, one of his most important pursuits into the role of genetics in determining dogwhelk morphology was incomplete. Not only was that quest one of his favorites, but also a key enigma in marine ecology stretching back 40 years.

Roger was an accomplished musician, playing lead guitar with his rock band, the Scapegoats. He loved fishing for trout on the River Ogwen and mountain walking in Snowdonia. He is survived by his wife Helen, their daughters, Ruth and Anne and three grandsons, by his brother, Michael, and a cadre of grateful students, colleagues, and friends.

A fund to perpetuate his legacy has been established and Bangor University has pledged to waive the fees of a Ph.D. student to continue Roger's work. Please consider supporting the "R.N. Hughes Memorial Fund" by sending your contribution to either Sheila O'Neal, Executive Director of Development, Bangor University, College Road Bangor, Gwynedd, LL57 2DG, UNITED KINGDOM; or British School and Universities Foundation 575 Madison Avenue, Suite 1006, New York, NY, 10022-2511, USA. Enclose a note indicating the gift is for the "R. N. Hughes Memorial Fund", Bangor University.

(enhanced from an obituary which appeared in the Manchester Guardian and notes from his former student and long-time friend, Robert Elner)

and Tessa aboard. Our student *Recruits* are an active group with Co-Chairs Hillary Lane Glandon, Maria Rosa, and Lillian Kuehl. They did an excellent job at the 2016 meeting in Las Vegas and we look forward to what they will put together for the students next year in Knoxville. Communication with our diverse membership is essential and we have four people who go above and beyond to make that happen: LeRoy Creswell as NSA *Quarterly Newsletter* Editor (ably assisted by Noreen Blaschik), Sandy Shumway as *JSR* Editor, and Chris Davis as Webmaster. As I mentioned last year, 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'.

Plans are well in hand for the 109th NSA annual meeting to be held March 26-30, 2017 in Knoxville TN. It's a great location (Great Smoky Mountains NP, Dollywood, Gatlinburg) with plenty to see and do. See the article on Page 3 in this *Newsletter* issue for all the details. I believe this venue is an excellent choice for our members: it is affordable, is easy to get to by plane or car, and is located in a beautiful area of the country – if you haven't been to east Tennessee, this is your chance.

The 2016-2017 year will be a busy one for NSA - we have identified three core areas of association management on which EXCOM will focus this year: membership, improving our member services, and the revision of our association Strategic Plan. You will be hearing a lot more about these initiatives in the next few issues of the *Quarterly Newsletter*. See the back page of this newsletter for the contact information for all of your NSA officers and committee chairs. Remember – we represent YOU and we love to hear from our members.

As I mark 28 great years of NSA membership, I can state unequivocally that our Association remains viable, vibrant, and relevant. I look forward to many more years in active service to NSA, it is my favorite professional association!

Karolyn Hansen, President

SAVE THE DATE



Plans for the 109th annual conference in KNOXVILLE, TN are underway!



The Program is under development. If you have any ideas for special sessions or would like to organize one, NOW is the time to step up. Several sessions are already underway, thank you to Eileen Hofmann, Andy Mount, Karolyn Hansen, Evan Ward, Aswani Voley, George Waldbusser, Ryan Carnegie, Kim Reece, and Eddie Allison for early commitments.

We also need organizers for the seafood donations (and donations!) to ensure a memorable President's Reception, and for the 'Down on the Farm' session. Any volunteers?

For the more energetic participants, there are plans for a 'run', or perhaps a *gastropod glide*. Contact Lewis Deaton if you are interested in participating or just helping out.

Student participation is key to the success of the conferences and Hilary Glandon and team will be contacting students soon to get things started.

This is your annual conference! If there is anything you would like to see included, now is the time to make suggestions. Even if you don't want to organize a session yourself, perhaps you have an idea for a topic that would be of timely interest – pass it along and we'll see if we can make it happen.

All volunteers, comments, and suggestions welcome. Watch the Web page for developments.

See you in Tennessee, March 26-30, 2017

Sandy Shumway
Conference Manager

Future NSA meetings

**2017: March 26-30 Knoxville, TN Marriott
Hotel and Resorts**

2018: Portland, OR (planning underway)

2019: Aquaculture '19 New Orleans, LA

2020: TBD



Journal of Shellfish Research Online at BioOne



This year, *JSR* will mark nine years since it first appeared online via BioOne, a nonprofit organization started in 1999 by scientific societies and libraries to help those societies publish online. BioOne now serves a community of over 140 society and institutional publishers, 4,000 accessing institutions, and millions of researchers worldwide. Through 2014, BioOne returned more than \$31 million to societies through royalties and revenue-sharing.

At present, 11 volumes of *JSR* starting with Volume 24 (2005) are available at (<http://www.bioone.org/loi/shre>). In 2015, *JSR* received nearly 140,000 "hits" from individuals who viewed abstracts and HTML versions of articles and/or downloaded pdfs. A link on the *JSR* page will take you to the Biodiversity Heritage Library (<http://www.biodiversitylibrary.org/creator/2352#/titles> where you can find earlier (open access) publications of NSA. These include all earlier volumes of *JSR* (1981 – 2004) as well as all volumes of the *Proceedings of the National Shellfisheries Association* (1955 – 1980) and the *Convention Addresses of the National Shellfisheries Association* (1944-1953).

BioOne has two search features: a "quick" search for short terms and an advanced function that searches for authors, titles, DOIs, or for text found anywhere in the abstract, figure or table captions, or full text of an article. Users can also access BioOne content on mobile devices by first "pairing" their device with their institutional account using their institutional email address and password. Instructions for pairing can be found on the BioOne home page.

BioOne has just added a new feature to the tagging of articles: the Journal Article Tag Suite (JATS). In addition to fostering publishing best practices, JATS enhances content discoverability. With JATS, searchable article content is extended from standard author metadata to include author identifiers such as ORCID numbers, links to authors' self-generated profiles, funding data and specific grants awarded, as well as licensing and re-use information. Tagging to JATS was rolled out in early February 2016, with all future issues to be marked up according to the JATS specification.

NSA members whose dues are paid can access the BioOne site via the Association website, but if your institution subscribes to BioOne.2 or BioOneComplete, **please access BioOne via your library's portal**. "Hits" from libraries (but not the NSA site) count when it comes to royalties. Because BioOne is a non-profit organization, most of the money that it receives from subscriptions is returned to publishing societies. From 2007 when NSA joined BioOne, through 2015, NSA has earned nearly \$425,000.

In late 2013, BioOne launched a new venture: an open-access journal called *Elementa: Science of the Anthropocene* (<http://www.elementascience.org>). *Elementa* accepts manuscripts in seven different knowledge domains, including Ecology, and Earth and Environmental Sciences, all focused on human impacts on the environment.

Susan Ford
Publications Committee

Sara (Sally) V. Otto
Sept. 2, 1942 – Jan. 9, 2016



Born an only child to dairy industry parents of Pittsburgh, PA in 1942, Sally Otto relocated with her family to the Eastern Shore of Chesapeake Bay as a young woman in 1962.

In 1964 she earned her B.A. (Biology) from MacMurray College, and quickly went to laboratory work on both surfclam histology and electrophoretic characterization of marine invertebrate blood proteins, at the new Bureau of Commercial Fisheries Biological Laboratory in Oxford, Maryland. Sally then broadened her skills during a year of virology research at Johns Hopkins University. In 1967, she returned to the Oxford Laboratory to begin what became an accomplished 34-year career with the Maryland Department of Natural Resources (DNR) as a microbiologist and pathologist of molluscs, and also occasionally of crustacea and finfish.

During three of those years, Sally served a pioneering role as the first female co-editor of *Proceedings of the National Shellfisheries Association* (now *Journal of Shellfish Research*), in partnership with Bill Shaw (1972) and Haskell Tubiash (1973-1974). Sally was well-educated, highly literate, and articulate in both English and French. She routinely exercised a sharp wit that issued a steady stream of buoyant, occasionally salty, observations and commentary. Among her many research and monitoring efforts on diseases and reproduction of marine invertebrates, the results of several were published in collaboration with renowned co-authors.

In 1989, Sally helped develop and implement revised methods for the DNR annual Fall Survey of oyster populations, whose consistent and systematic data inform the management of Maryland oyster resources today. Sally expertly and diligently analyzed oyster and clam histological slides for such surveys until her retirement in 2001. Her knowledge of parasites, pathogens, and diseases of oysters and clams was encyclopedic, and it was Sally's passion to share that knowledge enthusiastically with several generations of oyster pathologist protégés. Her generous and illuminating torch has now been passed.

Publications:

Otto SV, Tubiash HS & Rosenfield A 1966. Improved destaining tube for use in disk electrophoresis. *Chemist-Analyst* 55: 93.

Harshbarger JC, Chang SC & Otto SV 1977. Chlamydiae (with phages), mycoplasmas, and rickettsia in Chesapeake Bay bivalves. *Science* 196: 666-668.

Otto SV, Harshbarger JC & Chang SC 1979. Status of selected unicellular pathogens, and prevalence and histopathology of Inclusions containing obligate prokaryotic parasites, in commercial bivalve mollusks from Maryland estuaries. *Haliotis* 8: 285-295.

Johnson PT & Otto SV 1981. Histology of a bilateral gynandromorph of the blue crab, *Callinectes sapidus* Rathbun (Decapoda: Portunidae). *Biol. Bull.* 161: 236-245.

Farley CA, Otto CV & Reinisch CL 1986. New occurrence of epizootic sarcoma in Chesapeake Bay softshell clams, *Mya arenaria*. *Fishery Bulletin* 84(4): 851-857.

Kennedy VS, Newell RIE, Krantz GE & Otto S 1995. Reproductive capacity of the eastern oyster *Crassostrea virginica* infected with the parasite *Perkinsus marinus*. *Dis. Aquat. Org.* 23: 135-144.

1996 -2001 Maryland Oyster Population Status reports, Maryland DNR, Annapolis, MD 21401. <http://dnr2.maryland.gov/fisheries/Pages/shellfish-monitoring/reports.aspx>

Recruits' Corner

Hello, Recruits!

We hope this Newsletter finds you well as the school year draws to a close and brings the start of the summer field and research season. We are wrapping things up after the Triennial meeting in Las Vegas. It was great to see all of you and catch up on your research. We hope you had a good time as well! The Triennial meeting provided the opportunity for the Recruits to make professional connections both within and outside of NSA. Las Vegas was an exciting city for the meeting; there were plenty of opportunities for fun and entertainment all week long!



The Recruits were given the opportunity to join students from the other Triennial organizations for a student field trip on Monday, prior to the start of the meeting. Students visited the Supreme Lobster and Seafood Company to get a behind-the-scenes look at a seafood wholesaler and then went on to the Golden Nugget Casino to learn about the operation of their shark tank. The field trip was well attended and gave students a unique perspective into a side of the aquaculture industry rarely seen at our annual meetings.

The Student Spotlight Session showcased student research from each member organization (World Aquaculture Society, NSA and Fish Culture Section, and American Fisheries Society) in a competition for the top 3.5-minute research presentations. Congratulations to the Recruits' own Melissa Pierce, who won third place at the competition out of 12 student presenters! The student session at this year's Triennial focused on career development both within and outside of academia. The session provided students with information on preparing for the career search as well as first hand advice from professionals in various career paths related to shellfish and aquaculture. In addition to all of these activities, the students had the opportunity to participate in a career fair allowing them to interact directly with companies and universities that were actively hiring. It was great to see the NSA Recruits participating in the plethora of student-focused activities at this year's Triennial meeting and we hope to keep this up for our annual NSA meetings in the future!

Our thanks to all the student volunteers, as always, your hard work ensured this meeting ran smoothly. At the Triennial meetings, the Recruits are responsible for manning the sales booth, and this year we had a fantastic crop of volunteers! All proceeds raised go to the Student Endowment Fund (SEF), which funds student activities, subsidizes the costs for students to attend meetings. Congratulations to all winners of this year's research and travel awards. Remember, you can apply for these awards even if you have received one in the past. All information regarding requirements and how to apply for each of the research awards are available online at www.shellfish.org.

We are in the process of revitalizing the NSA Facebook Page! If you haven't already, please "Like" the National Shellfisheries Association on Facebook so that we can increase our Internet

presence as a society. While this page is available to all NSA members, we expect much of the activity on the page will be driven by the younger membership (aka: the Recruits!). If you have any NSA photos or other suggestions for content, please forward them onto Hillary (hlane@umces.edu) and she will be sure they are available on the page.

Mark your calendars for next NSA meeting in Knoxville, Tennessee from March 26-30th, 2017! Knoxville is a great central location for our meeting and we hope this site allows many Recruits to attend the meeting! Plans are already underway for student activities and sessions, so if you have 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.

Happy Spring!

Hillary, Maria, & Lillian

NSA Student Achievement Recognized at Aquaculture 2016



Melissa Pierce received the Johnnie Castra Montealegre Award from the FUCOBI Foundation. The FUCOBI foundation is an international collaboration of researchers and NGO focused on "One Health" - a program aimed at conserving healthy ecosystems to maintain biodiversity and healthy animals to protect human health. The \$500 scholarship was presented by Dr. Acacia Alcivar-Warren.

Melissa also placed second (\$200) in the Spotlight speed talk competition for her presentation: "A Tale of Two Gut Microbiomes."

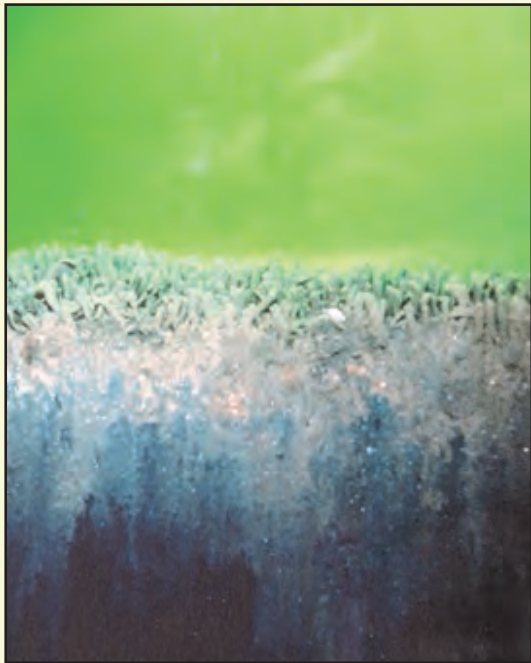
Congratulations, Melissa!

MEMBERSHIP DRIVE CONTEST

The first 3 people who recruit 10 **new** members will receive free registration at the 109th annual meeting in Knoxville, TN.

Quahog Recruitment Fails After Amphipod Tubes Disappear

In a 2006 paper by C. L. MacKenzie, Jr., R. Pikanowski and D. G. McMillan (*Journal of Shellfish Research* 25(3):841-847) it was suggested that the presence of wide-spread, dense tube mats constructed by the amphipod, *Ampelisca abdita*, provided a habitat that allowed northern quahogs to populate the extensive mud bottom of Sandy Hook Bay, New Jersey. This mud bottom has an area of about 4,500 acres; the average water depth in the bay is about 7m. Abundances of the amphipod tubes were surveyed in the mud area from 1999 to 2005. The tube mats formed a dense cover over the entire mud bottom. The tubes had a length of about 3.5 cm that extended above the bottom. Their density was around 24,000 m². Each tube is created by an individual amphipod, but the amphipods colonize in a dense aggregation in which individual tubes are touching one another to form a mat over the bottom. The tubes and the mat deteriorate if unoccupied, so mat maintenance depends upon continuous occupation. The bottom surface between the tubes was covered with fecal pellets produced by the *Ampelisca*, benthic diatoms, and silt. In the early 1970s, the mud bottom did not have these *Ampelisca* tubes and few quahogs were present. Fishermen were digging quahogs but only in sand bottoms around the borders of the bay's mud. By 1986, the amphipod tubes had covered the entire bottom, and, by then, fishermen had discovered that quahogs were abundant in the mud bottom. Typically, about 30 boats, each with one bull raker, harvested the quahogs each day during all the late 1980s, the 1990s, and early 2000s. A fisherman's harvest was around 2,500 littlenecks (3.5 bushels) and 2 bushels of cherrystones



Cross-section of bottom in Sandy Hook Bay, New Jersey, showing position of Ampelisca abdita mud tubes on the mud surface. Photograph taken during 1990s.

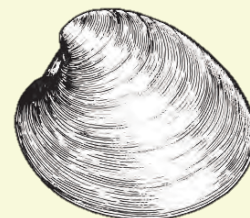
and chowders mixed. Chowder-sized quahogs were abundant, but fishermen returned most to the bottom because consumer demand for them was slow. The authors of the paper believed that the presence of the tube mats might have encouraged settlement of larval quahogs, reduced water flow that prevented the quahog larvae from burying in mud in the swift water currents, reduced water siltation allowing the juveniles to feed, and deterred predation, thereby providing a suitable habitat for the quahogs that previously had been unsuitable.



*Surface of bottom in Sandy Hook Bay currently consists of mud. The *A. abdita* mud tubes are no longer present. Photograph taken in August, 2014.*

What has happened since 2005? Have the amphipods and their tubes persisted? Was there an effect on the quahogs if they disappeared? Clyde MacKenzie surveyed for the presence of the tubes since 2005. Dense mats were consistently present each year through 2010 and also in February 2011, but few tubes were found in November 2011. They disappeared sometime in 2011 and they have not returned. No tubes have been found since in surveys in 2012, 2013, 2014, and 2015. The bottom surface now consists of fine silt, clay, and benthic algae. Since 2013, the fishermen have found little or no quahog seed in the area. In 2013, they harvested much smaller quantities of littlenecks than they had in earlier years because few were recruiting; and in 2014 and 2015, there were almost no littlenecks. The 5 to 7 fishermen who have remained harvesting in the bay find only large chowder quahogs, the size category they had been returning to the bottoms for years before. We cannot explain why these amphipods disappeared during 2011 or subsequently. The effects of Hurricane Sandy that drove wave surges across the bay cannot be the reason because it occurred on October 20, 2012. By following the parallels in abundances of the *Ampelisca* mud tubes and the quahogs for the past 5 decades, we feel confident that the consistent presence of the dense mats of *Ampelisca* tubes in Sandy Hook Bay was likely responsible for the quahogs being able to inhabit this area.

Clyde MacKenzie



NSA 108th ANNUAL MEETING WRAP-UP



Viva Las Vegas!

AQUACULTURE 2016
“All in for Aquaculture”
Paris Hotel & Convention Center
Las Vegas, Nevada USA

Aquaculture 2016 is now a memory and a very good one. The very successful triennial meeting of the World Aquaculture Society, National Shellfisheries Association, and Fish Culture Section, AFS was held in Las Vegas, Nevada February 22 – 26. The United States Aquaculture Society (chapter of the World Aquaculture Society, USAS/WAS), the National Aquaculture Association (NAA) and the Aquaculture Suppliers Association (ASA) hosted AQUACULTURE 2016.

AQUACULTURE 2016 included over 2700 participants from 88 countries. The conference offered 14 concurrent sessions over 4 days with 87 sessions, both technical and industry-oriented, with 800+ oral presentations and 200 posters. The trade show featured 207 booths with many companies new to aquaculture.

The facilities at the Paris and Bally’s hotels were outstanding, the hotel staff very helpful and, as always, John and Mary Cooksey did a yeoman’s job of organizing the conference. Mario Steal organized one of our largest trade shows to date – always a high point of the Triennials. Even the weather cooperated and folks were able to enjoy the wonders that make Las Vegas a fun and interesting destination.

A special thanks to Hillary Lane Gordon and the Recruits who organized all of the NSA student activities and made sure that our sales table was staffed, 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.

There were only 129 NSA members registered. Yes, the Triennial meetings are larger than our annual conferences and yes, it is sometimes difficult to find people and venues, but the opportunities for networking and learning about topics outside one’s area of specialization more than compensate for any misgivings about size. Start planning now to attend Aquaculture 2019 in New Orleans.

So now it’s on to Knoxville – see you there!
Sandy Shumway
Conference Manager



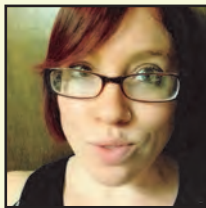
2016 NSA Student Research Awards Presented

Student awards were announced during the Annual Business Meeting at 108th NSA Annual meeting in Las Vegas, NV. These competitive grants provide support funding earmarked for student research projects as well as for the best student paper published in the *JSR*.



The **George R. Abbe Student Research Award** in the area of crustacean biology and fisheries management was presented to Joseph Caracappa, Rutgers University, Department of Marine and Coastal Sciences, Haskin Shellfish Research Laboratory. Joe's proposal, "Consequences of phenotype in blue crab (*Callinectes sapidus*) larvae" aims to test three hypotheses: (1) larval morphology varies within broods reared under ideal conditions, (2) phenotype varies in response to salinity, and (3) a differential response to salinity occurs within broods. According to Joe, "the proposed experiments will be a fundamental first step in connecting the small-scale factors that influence individual larval survival to the large-scale factors influencing recruitment for an economically and ecologically important species."

The **Melbourne R. Carriker Award** supports a student's research project in any topic of shellfisheries. The 2016 Carriker Award was presented to Carrie Schuman, University of Florida for her proposal "Estimating *in situ* oyster filtration rates and subsequent control of primary production in the Guana Tolomato Matanzas National Estuarine Research Reserve (GTM NERR), St. Augustine, FL". Carrie's work will focus on how height above the seafloor affects filtration rates of *C. virginica* and how aggregation of *C. virginica* into clumps affects filtration rate relative to isolated individuals.



The **Michael Castagna Award** for student research is an award devoted to the area of applied shellfisheries. Winning this year was Lillian Kuehl, Western Washington University for her proposal "The effect of diet on Pinto abalone (*Haliotis kamtschatkana*) postlarval survival, growth, and radula morphology". According to Lillian, her proposed research "addresses a current need for improved postlarval survival in hatcheries, by examining the effect of diet on survival and growth of newly metamorphosed abalone, and by considering how an energy budget and radula morphology relate to optimal diets."



Judging of the **Sandra E. Shumway Award** for Best Student Paper Published in the *JSR* has specific selection and evaluation criteria: (1) The lead author must have been a student when the work was completed, (2) the paper must present the student's work, not that of a co-author, (3) it will be evaluated on the quality of science and writing, and (4) the importance of the work to the field of shellfish research. Thirty-four manuscripts were in competition



for the prestigious award for 2016. A panel of nine judges deliberated, and the award was presented to Andrew M. Cathey, East Carolina University, Department of Biology for his manuscript:

Cathey, A. M., Miller, N.R., and Kimmel, D.G. 2014. Spatio-temporal stability of trace and minor elemental signatures in early larval shell of the northern quahog (hard clam) *Mercenaria mercenaria*. *Journal of Shellfish Research*, 33(1) 247-255.

I wish to thank all the students for submitting their proposals as well as the reviewers for taking the time to thoughtfully evaluate each these proposals and student papers.

Chris Davis
Past-President

JSR Wins Award



The *Journal of Shellfish Research* has been honored with a bronze level award in Scholarly/Technical/Scientific Journal in *Association TRENDS'* 2015 All-Media Contest. It was one of nearly 400 entries in the association publications contest, and one of three awardees in the Scholarly/Technical/Scientific Journal category.

NSA Pacific Coast Section News

Greetings from the Pacific Coast!

Although the venue was a bit overwhelming, it was great to reconnect with many of you at the Triennial in Las Vegas this past February. One of the high points for me was seeing west coast researcher Fred Conte, Ph.D. receive the 2016 Joseph McCraren Award for his outstanding contributions in promoting the growth of aquaculture. The McCraren Award, named in honor of Joseph P. McCraren, the first chairman and executive director of the National Aquaculture Association (NAA), is the most prestigious honor given by the NAA. Dr. Conte's research focuses on shellfish sanitation, modeling, and software development. Congratulations, Dr. Conte.

Another highlight from the Triennial was the Shellfish Initiative Session which included representation from all the west coast states: AK, WA, OR, and CA. At the last Triennial in 2013, I presented the Washington Shellfish Initiative as the last speaker, in the last session, on the last day of the conference. I think there were about 5 people in the room and I knew them all. It was the only Shellfish Initiative talk that year. Fast forward to 2016 where there were ten Shellfish Initiative talks from around the country! The session was so popular that it was standing room only. It was exciting to hear about the interest and enthusiasm these Initiatives are generating for shellfish resources. It was also insightful to see the different ways the Initiatives are being implemented. Many thanks to Tessa Getchis for organizing a thorough, excellent and well attended session.



Presenters in the Shellfish Initiative Session at Aquaculture America 2016

Planning for the 70th annual meeting of the Pacific Coast Shellfish Growers Association (PCSGA) is underway. The Pacific Coast Section of the National Shellfisheries Association (NSA-PCS) meets in conjunction with the PCSGA. The 2016 PCSGA/NSA-PCS annual conference will be held October 10 – 13, 2016, at Campbell's Resort in Chelan, WA. Abstracts titles are due May 5 and full abstracts due June 30. Titles and abstracts may be submitted at: <http://pcsga.org/annual-conferences/abstract-login/>

Let us know early if you have an idea for a special session. Conference attendees include shellfish growers, suppliers, service providers, researchers, academicians, government agencies, environmental organizations and students. The annual conference is an excellent venue to share your research and network with shellfish professionals.

Fostering student development continues to be the focus of NSA-PCS. In that vein, we are happy to announce that we will be offering financial support to NSA-PCS student members who are presenting at the annual PCSGA/NSA-PCS conference in Chelan, WA. These awards will be in the ballpark of \$300 depending on the number of requests we receive, and can be used by the student to help fund their conference or travel needs.

As a reminder, the NSA-PCS Twitter feed and Facebook page are your best resources for news and information about the NSA-PCS and our events and annual meetings. Please join our community online.

You can follow NSA-PCS on Twitter: @nsapcs

You can like NSA-PCS on Facebook:

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

Looking forward to seeing you in Chelan, WA, in October.

Laura Hoberecht
Pacific Coast Section Chair

Call for Presentations

70th Annual Shellfish Conference
October 10 – 14, 2016 ▪ Chelan, WA

Abstract Deadlines:

May 5, 2016 – abstract title due

June 30, 2016 – full abstract due

The Pacific Coast Shellfish Growers Association and the National Shellfisheries Association – Pacific Coast Section invite submissions of abstracts for **ORAL** presentations at the 2016 Annual Shellfish Conference, October 10-14 in Chelan, WA. Conference attendees include shellfish growers, suppliers, service providers, researchers, academicians, government agencies, environmental organizations, and students.

Register abstract at <http://pcsga.org/annual-conferences/abstract-login/>



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Upcoming Events

70th Annual Shellfish Conference (PCSGA/NSA-PCS): October 10-14, 2016. Chelan, Washington (USA). For more information, visit: <http://pcsga.org/annual-conferences/>

Aquaculture UK: May 25-26, 2016. Aviemore, United Kingdom. For more information, visit: <http://www.aquacultureuk.com>

109th NSA Annual Meeting: March 26-30, 2017. Knoxville, Tennessee (USA). For more information, visit: www.shellfish.org

21st International Pectinid Workshop: April 19-25, 2017. Portland, Maine (USA). For more information available soon.

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).

For more information on these conferences:
www.was.org

Asian Pacific Aquaculture 2016: Apr. 26 - 29. Surabaya, Indonesia

Aquaculture Europe 2016: Sept. 20-23. Edinburgh, Scotland

LAQUA 16: Nov.8 - Dec.1. Lima, Peru

Aquaculture America 2017: Feb. 12-22. San Antonio, Texas, USA

World Aquaculture 2017: Jun. 27-30. Cape Town, South Africa

Asia Pacific Aquaculture 2017: Aug. 26-29. Johor Bahru, Malaysia

Aquaculture Europe 2017: Oct. 16-20. Dubrovnik, Croatia

Aquaculture America 2018: Feb. 19-22. Las Vegas, Nevada, USA

AQUA 2018: Aug. 25-29. Montpellier, France

Aquaculture 2019: Mar. 6-10. New Orleans, Louisiana, USA

Aquaculture 2022: Feb. 27-Mar. 3. San Diego, California, USA

Aquaculture America 2023: Feb. 19-22. New Orleans, Louisiana, USA