

President's Message



Greetings and Happy New Year from Maine! The 110th Annual Meeting of the National Shellfisheries Association in Seattle, WA is rapidly approaching. This year's meeting is shaping up to be one of our biggest yet and the schedule it jam packed with great sessions ranging from 'Omics to HAB, and

from Climate Change to Disease. There will also be a few micro-workshops for those interested in diving deeper with some hands-on practical examples in the world of Genomics, Disease, and even the art of Gyotaku. We are set to close to 400 papers presented as well as some amazing plenary speakers to kick off each day (Peter Beninger, Donal Manahan, Suzanne Williams, and Gary Wikfors). If you have not yet registered for the 2018 Annual Meeting, you still have time. Seattle is an NSA favorite for meeting locations. There is plenty to do and see when you are not being wowed by the presenters. Be sure to head to the Pike's Place Fish Market, but watch out for flying fish. We are happy to have our second annual Scallop Gallop on Wednesday March 21st, so bring your running shoes for a fun 5K around downtown Seattle. As I am writing this, I was informed that our hotel block is full at the Renaissance, but there are a number of other hotels within walking distance that should be able to take care of your room needs. As always, our Student Endowment Fund auction is a night not to be missed. If in your travels you see something that might fit the nature of the auction please bring it along and drop it off at the meeting registration table.

Like most non-profit organizations, NSA thrives on volunteers from within its membership who contribute their time to guarantee jobs are accomplished when needed. Take the periodical that you are currently reading, it is carefully created by Leroy Creswell and Noreen Blaschik, who rely on members to contribute reviews, articles, and other news items. The Student Awards Committee and Membership Committee are also great places for interested members to contribute. If you are a student member you can help the Association by volunteering some time with the Recruits. Think about where you might be able to help out and contact me or the appropriate Committee Chair. Our members are the lifeblood of our organization and without them (you) the Association will struggle. Being an active member does not only mean serving on a committee, but also promoting NSA to those who may be

unfamiliar with us as a group. While on your travels to other meetings around the globe, spread the word about NSA and encourage people to become members. Word of mouth is probably the most effective means for our organization to flourish. If you are one of the first three people to recruit five new members, you will receive a FREE REGISTRATION to our 2020 Annual Meeting. Just make sure to let our Secretariat, Linda Kallansrude, know who you recruited.

It is never too early to look ahead to next year either. I, along with Sandy Shumway, are currently recruiting session organizers for Aquaculture 2019, our Triennial Meeting. The Triennial meetings can be intimidating for some that like the size of our annual meetings, but they should not be missed due to the great opportunity to network with individuals within the industries we aim to assist with our work. Not only are the Triennial meetings intellectually stimulating, they are financially stimulating to the NSA coffers. Your attendance at these meetings helps the Association as an entity remain on the stable financial footing that we are currently on.

With that, I look forward to seeing you all in Seattle for what is sure to be one of our largest meetings on record.

Steven Allen, President

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Susan Elizabeth Ford 1942 – 2017



Susan Ford passed away on December 5, 2017, quietly leaving a legacy in the field of molluscan pathology and in the National Shellfisheries Association. pursuit of knowledge was patient and persistent. Her expertise was sought by academics, regulators industry members around the world. Susan was an asset to NSA throughout her career, regularly volunteering to ensure the Association remained functional, stable, and successful. She organized sessions and special events at Annual Meetings such as the Centennial Roundtable at our 100th Anniversary. She served as on the Editorial Board of JSR for many years and was an Editor of the Quarterly Newsletter. Most recently and perhaps most significantly, Susan co-chaired the Publications Committee with John Kreauter. In this role, she shepherded JSR into the digital age, negotiating a favorable relationship with BioOne to publish JSR online. A Thurlow Nelson Award winner herself (1972), Susan often judged student presentations and routinely

mentored students and younger scientists. The Association recognized her contributions with both the David H Wallace Award (2004) and as an Honored Life Member (2012). A full '*In Memoriam*' will appear in a future issue of *JSR*, and there will be a memorial presentation at the 110th Annual Meeting in Seattle, WA. Her obituary can be found at https://wydaily.com/2017/12/08/obits-164101/

Dave Bushek

MEMBERSHIP UPDATE

Last year Maria Rosa received the prize of a free registration for the upcoming Seattle conference by recruiting new members. The award for membership recruitment this year has gone unclaimed! There is no easier way to earn free registration - just convince five of your friends and colleagues to join the NSA. It's an easy sell - access to the *Journal of Shellfish Research* (print and on-line), the *Quarterly Newsletter*, reduced registration at annual conferences, and a strong and friendly group of like-minded individuals to share their interests in all things shellfish. There will be an influx of new members who join us in Seattle, but many of them will be transient - students who go on to other things, local shellfish folks who attend for only a few specific sessions, and others that, for various reasons, will not become regular, long-term members. This is common with all meetings. The NSA needs a strong membership base not only to sustain current efforts, but to be able to expand offerings to the membership, especially students, in the future. If every member recruits just one new member, the NSA will double in size. It's not that difficult, you all know someone (probably several people) with an interest in shellfish who are not currently members, or who perhaps

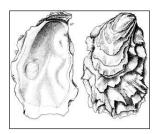


let their membership lapse. Encourage your students and post-docs to become members. Carry a few membership brochures with you to relevant conferences. Take a few minutes to identify potential new members and then recruit them! And when you do, be sure to tell Linda Kallansrude to credit you with that new member — the first three people to recruit five new members will receive a free registration to our 2020 annual conference.

Sandy Shumway

Crassostrea gigas or Magallana gigas: A Community-based Scientific Response

Recently, the oyster research, aquaculture, and trade communities were shaken up by the publication of two papers by Daniele Salvi et al. (2014, 2017) in which the genus *Crassostrea* was split into three different genera, such that the genus *Crassostrea* was shrunk to



include only the Atlantic species, while the Pacific species were assigned to the genera Talonostrea and Magallana. The consequence of this taxonomic action was that the well-known Crassostrea gigas was rebaptized to Magallana gigas. This nomenclatural change was almost immediately endorsed and "World implemented by the Register of Marine (WoRMS), which could give the erroneous Species" impression that from now of the name Crassostrea gigas should be abandoned in favour of Magallana gigas. Such a rash nomenclatural change for this well-known species worldwide is, however, not necessary and, in my opinion, even ill-advised for it would destabilize a long-term use of a commonly accepted, unequivocal name. Luckily, this point is also recognized by WoRMS itself, since it does recognize the name Crassostrea gigas as an "accepted, alternate representation" of Magallana gigas. In the same spirit, WoRMS does recognize Crassostrea talonata as an "accepted, alternate representation" of Talonostrea talonata. Hence, Crassostrea researchers, students, and the oyster stakeholders community in general, should not contribute to possible confusion or make life difficult by starting to implement the name Magallana gigas or by applying the names Magallana and Talonostrea to the former Pacific Crassostrea species. There is neither a nomenclatural obligation, nor a scientific need to do so! On the contrary, let us maintain nomenclatural stability and continue using the genus name Crassostrea in its former, well-accepted sense for both the Atlantic and Pacific cupped oysters. This use is perfectly supported by morphological, cytogenetic and DNA sequence evidence, showing that the former genus Crassostrea is a well-defined clade (monophyletic taxon), a point that was raised by Bayne and 25 co-authors (2017), who argued strongly against the split of Crassostrea into three genera. I'm far from alone with my concerns and I recommend reading the Bayne et al. (2017) paper for a compelling rationale to maintain the genus Crassostrea as it was.

Of course the preceding statement could easily be interpreted as the reaction of old-fashioned, grumpy, taxonomists, who want to stick to old habits and who do not want to accept scientific progress. Yet, this is not the case, for the co-authors in the rebuttal paper of Bayne et al. (2017) are all well-known oyster biologists, except for myself. In fact, as a Molluscan taxonomist, I personally do not reject the work by Salvi et al. (2014, 2017) as such, for on the basis of nuclear and mitochondrial DNA sequence data they do provide good evidence that the former Crassostrea clade indeed is split into an Atlantic (= Crassostrea sensu stricto) and a Pacific clade, both well-supported, and that this Pacific clade can be further divided into two well-supported clades that can be referred to as Magallana and Talonostrea. This Atlantic vs Pacific division of Crassostrea was, however, already observed long before the work of Salvi et al. (see e.g. O'Foighil et al. 1995; Wang et al. 2004), but it was never felt necessary to translate this division into a genus-level split. Now one can discuss how many and what sort of data are needed to delimit genera (since

there is no operational definition of a genus, except that it should be a monophyletic taxon) and one can question a number of specific issues in the work of Salvi et al. (as is done by Bayne et al. 2017), but the main point I wish to make here is that taxonomists should always try as much as possible to maintain nomenclatural stability and thus should wonder about the relevance and added value of introducing a new taxonomy and its concomitant nomenclatural changes. As such taxonomists should, by default, act conservatively. In the present case of *Crassostrea*, there simply is no added value to splitting this genus into three separate genera, since the former Crassostrea clade remains phylogenetically unaltered. On the contrary, by dividing Crassostrea into three genera one complicates nomenclature for the users since now three generic names have to be remembered and associated with the correct species. So, who gains from this? How does it help the users of *Crassostrea* taxonomy? Moreover. one will always be able to divide a "genus" into subclades (up to individual species), but is that a logical ground to give such subclades a genus-level rank? Of course not, for there is no general definition of what a genus really is (in fact it is just one of the, many, human hierarchical classificatory categories to delimit clades). As such, the former genus Crassostrea is just as well acceptable as a genus, as are the three "genera" into which it was split. All in all... the whole issue comes to a choice between splitting and lumping, and in that perspective I would always advocate to use nomenclatural stability as a decisive benchmark.

Against this background, there is no reason to drop the current use of *Crassostrea* for the Atlantic and Pacific cupped oysters jointly, and hence let us appreciate the work of Salvi et al. (2014, 2017) for its contribution to documenting the relationships among these two clades, without destabilizing a long-standing, commonly accepted nomenclatural framework. This is not only my opinion, but the opinion of a large community of oyster biologists, who expressed their concerns in the Bayne et al. (2017) rebuttal paper.

So, the name *Crassostrea gigas* should prevail, and the genus *Crassostrea* should be maintained as it was before its split into two or three genera.

Thierry Backeljau Royal Belgian Institute of Natural Sciences & University of Antwerp, Belgium

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Salvi, D., Macali, A. & Mariottini, P. 2014. Molecular phylogenetics and systematics of the bivalve family ostreidae based on rRNA sequence-structure models and multilocus species tree. *PLoS ONE* 9: e108696.

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Wang, Y., Xu, Z. & Guo, X. 2004. Differences in the rDNA-bearing chromosome divide the Asian-Pacific and Atlantic species of *Crassostrea* (Bivalvia, Mollusca). *Biological Bulletin*, 206: 46–54.

THE SEATTLE CONFERENCE IS BREWING!



The Seattle meeting truly looks to be one of our biggest and best ever. The number of submissions is record-breaking (almost 400 abstracts) and we are looking forward to a very full and productive conference. Every effort was made to accommodate all submissions and unfortunately, there are five concurrent sessions on each day. It was either that or

eliminate the Wednesday afternoon play-time and Scallop Gallop, or shunt everybody to posters and we already had over 60 of them. There will be inevitable conflicts with regard to interests and that is just unavoidable, but there will be something for everyone. We fully understand that some folks will be unhappy with the schedule, but there are just so many ways one can arrange the jigsaw. Thank you all for your understanding.

The Program is now posted on the web page (www.shellfish.org) and features a number of special sessions, new topics, and workshops. A very special thank you to those who organized special sessions and welcome to all the newcomers to the NSA! We are especially happy to welcome participants from the Pacific Northwest Tribes and our friends from several foreign countries. And another special thanks to Acacia Alcivar-Warren and the FUCOBI Foundation for their continued support of science in developing countries and the NSA students.

Another big thank you to all (well, most) of the participants for getting your talks submitted by the posted deadline. The NSA community continues to be a last-minute crew – we had 23 abstracts submitted by November 25th and 360 by December 4! Only one minor glitch with the web page due to the volume of activity all on one day.

Still a lot of editing to be done, instructions seem to elude many people. Almost all of the submissions required corrections, some major and some minor, but all take time. Yes, we could print them as they were submitted, but no sense embarrassing people who can't even spell their own names or their species of interest correctly!

All of the regular activities are on the schedule. The opening reception is already laden with shellfish donations. Thanks to the Pacific Coast Shellfish Growers Association, Becky Mabardy for organizing, and to the shellfish producers for their continued support. A more detailed update on this will be provided at a later date. The Student Breakfast will take place on Monday morning, there will be two poster sessions with happy hours, and the Auction and associated festivities will take place as usual on Tuesday evening. Wednesday is the Business Luncheon (included in your registration), Wednesday afternoon you can run off all those calories in the Scallop Gallop – and put them all back at the Ken Chew Chinese Dinner on Wednesday evening. Tickets are available for reservation now and must be purchased before Monday, March 19th at 5 p.m. The students are organizing an oyster crawl on Monday evening, and by Thursday afternoon we'll all be ready for the closing happy hour!

So plan to join us in Seattle for a great week of shellfish, and visits with friends old and new.

Aquaculture 2019 Update

Plans are already underway for AQUACULTURE 2019 – the Triennial meeting of the NSA, Fish Culture Section of AFS, and the World Aquaculture Society. The meeting will be held in New Orleans, March 6-10, 2019. It's time to start thinking about sessions that you would like to see on the program. If you want to organize one, great! If not, but still have some ideas, pass them along and we'll see if we can find someone to take on the task. Mark your calendars now and watch for updates.



The Steering and Program Committees for AQ 2019 Sitting left toright: Jay Parsons, Jim Tidwell; Standing L-R: Mike Denson, Steve Allen, John Cooksey, and Mike Masser. (missing from photo, holding the camera—Sandy Shumway).

Sandy Shumway Conference Manager

26th Annual Auction

to benefit the STUDENT ENDOWMENT FUND

Remember, nothing is too big or too small or too tacky!

Send items ahead to Sandy Shumway (by March 1st at the latest) or send with a colleague.

Books, trinkets, posters, shells, and old souvenirs – it's a great opportunity to clean

Recruits' Corner

As we enter a new year, our 110th annual National Shellfisheries Association meeting from March 18th-March 22nd in Seattle, Washington is now right around the corner. Abstract submissions are now officially closed, though you can contact Sandy Shumway regarding submitting a poster (see www.shellfish.org for details). An exciting program of speakers and activities is being assembled. Please continue checking the updated program online as the meeting draws near. We are excited to announce a special session on the first morning of the conference on science, art, and communication that should be of particular interest to graduate students, you won't want to miss it! These speakers have been invited specifically for the students and are highly regarded in their fields.

As you all know, student volunteers are a big part of the meeting success, and we will be counting on your help to make this meeting happen. Decisions for lodging or registration awards are currently being made, and awardees will be notified as soon the results become available. EARLY REGISTRATION FOR STUDENTS ENDS FEBRUARY 23rd, but please register as soon as you are able.

The annual meeting is a fantastic opportunity for students to expand professional networks. Attending will give you the chance to meet potential collaborators, present your work, get a quick "download" on shellfish research nationwide, and it's fun! There are many student-specific activities planned for the



meeting including the student breakfast and the Oyster-Crawl through downtown Seattle. Other activities include the 2nd Annual Scallop Gallop, the Auction, the President's Reception to kick-off the meeting, poster sessions, happy hours, the annual business luncheon, and the closing reception happy hour. A special treat this year will be another not-to-be missed Ken Chew Chinese Dinner. Tickets for this event can be reserved with your registration, and we highly encourage you to do so. Networking during the meeting is very important for students and every effort should be made to attend the social events as well as the technical sessions throughout the day.



The NSA Recruits play a vital role in the success of the annual meeting. We are involved with meeting registration on-site as well as A/V for the sessions. Additionally, we are responsible for running the sales booth throughout the meeting. All proceeds from the sales booth go to the Student Endowment Fund, so it is very important that the booth is

staffed during the entire meeting. Those who receive travel awards are obliged to help, and we will be putting out a call for volunteers for all of these duties in January. We don't expect to be let down by this batch of Recruits!

Feel free to email Erin (erin_roberts@my.uri.edu) or Laura (lhs3@uw.edu) with any ideas or concerns. Also, if you have travel questions ask Laura since she lives in Seattle. If you haven't already, be sure to "Like" the National Shellfisheries Association on Facebook to get regular updates, and look for a meeting hashtag.

Laura & Erin

SAVE THE DATE



Aquaculture 2019 March 6th-10th New Orleans, Louisiana, USA

Want to know what is going on in the shellfish industry?

Be sure to check out the newsletters of the East Coast Shellfish Growers Association and the Pacific Coast Shellfish Growers Association for the latest news on shellfish aquaculture.



www.ecsga.org



www.pcsga.org

NSA Pacific Coast Section News

Greetings from the Pacific Coast!

The 71st annual meeting of the National Shellfisheries Association Pacific Coast Section (NSA-PCS) was held from September 17-21 in Welches, Oregon, in conjunction with the Pacific Coast Shellfish Growers Association (PCSGA). Over 285 people registered for the conference, of which approximately 25% were NSA members. The NSA-PCS sincerely thanks the shellfish industry and the Conference Planning Committee, especially Margaret Barrette, Connie Smith, and Becky Mabardy, for making this annual joint conference a great success. Another special thank you to Bethany Stevick for organizing NSA-PCS student support, and P. Sean McDonald for coordinating student volunteers and judges, and handling the conference A/V.

The keynote speaker was Charles Yarish, (University of Connecticut), who spoke about marine algal cultivation. The third recipient of the John Lentz Profiles in Innovation Speaker Series was Niels Lindquist (Sandbar Oyster Company) who presented his novel techniques to improve oyster restoration for living shorelines. Dr. Lindquist has developed a new material to use in oyster restoration, and applied it successfully in conjunction with seagrass restoration. Other key presentations included Parker MacCready on tidal variation, Jan Newton on ocean acidification, and representatives from the Billion Oyster Project. The luncheon speaker was Jonathan White, author of Tides, a book about the science and spirit of the ocean.

Other excellent sessions included shellfish disease, seafood safety, selective breeding and genetics, permitting, non-oyster shellfish science, community engagement, changing ocean conditions, farm practices, ecosystem services, and microplastics. Several valuable workshops included oyster herpes virus, harmful algal blooms, ISSC, and genetic management of farmed native shellfish.

Student involvement continues to be a primary focus of the NSA-PCS and funding was provided to support participation of 12 students. The Best Student Presentation was awarded to David Madison (Oregon State University) for his talk, "Bacteriophages significantly reduce larval oyster mortality caused by Vibrio corallilyticus", and honorable mention went to Lisa Crosson (University of Washington) for her talk, "Elucidating abalone withering syndrome disease dynamics: low pathogen viability and infectious dose." Both students received NSA-PCS memberships and cash awards. Support for students was generously provided by the Ken Chew Student Scholarship Fund, the NOAA Office of Aquaculture, Arcadia Point Seafoods, Chelsea Farms, Chuckanut Shellfish, Humboldt Bay Oyster Co., Rock Point Oyster Co., Seattle Shellfish, and Whiskey Creek Shellfish Hatchery.

The NSA-PCS hosted two fund-raising events: the Van Gogheduck Art Challenge and the annual silent auction. Special thanks go to Chris Eardley, Pippa Kohn, Ralph Riccio, Molly Jackson, Kelly Toy, and Brent Vadopalas for instigating the fun and creative art challenge, which required teams to construct fictitious shellfish species using only the array of odd supplies provided. Big thanks also go to all those who solicited and donated items for the silent auction, especially the generous donations from the Jamestown S'Klallam Tribe. Proceeds from both events will sponsor student attendance at future meetings.



The winners of the Van Gogh-e-duck Art Challenge present the abyssopelagic feathered sand flea.

The NSA-PCS business meeting included discussion of more cohesive sessions at upcoming conferences, a code of conduct, inclusion, and diversity; the need to highlight NSA-PCS in conference materials; and conference environmental footprint. New leaders include: Chair, Laura Hoberecht (NOAA); Vice-Chair, Sean McDonald (University of Washington); Secretary, Lillian Kuehl (Western Washington University); Treasurer, Bethany Stevick (WA Dept. of Fish and Wildlife); and Members-at-Large, Julie Barber (2015-18; Swinomish Tribe), Chris Eardley (2016-19; WA Dept. of Fish and Wildlife), and Sandy Zeiner (2017-2020; Northwest Indian Fisheries Commission).

The 2018 NSA-PCS/PCSGA conference will be at the Semiahmoo Resort in Blaine, WA from October 16-18, 2018. Abstract submission will open April 1, 2018 with titles due May 1, 2018, and full abstracts by June 30, 2018. Please let us know early if you have an idea for a special session.

As a reminder, the NSA-PCS Twitter feed (@nsapcs) and Facebook page are your best resources for news and information about the PCS and our events and annual meetings.

Laura Hoberecht NSA-PCS Chair



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Upcoming Events

110th NSA Annual Meeting: March 18-22, 2018. Seattle, Washington (USA). For more information: www.shellfish.org

10th International Abalone Society Symposium: May 8-12, 2018. Xiamen, China. For more information: http://internationalabalonesociety.org

11th Global Summit on Aquaculture & Fisheries: May 24-25, 2018. Suminoe-Ku Osaka, Japan. For more information: www.aquaculture.global-summit.com

International Symposium on Aquatic Animal Health (ISAAH): September 2-6, 2018. Charlottetown, PEI Canada: For more information: www.isaah2018.com

72nd Annual Shellfish Conference & Tradeshow: Oct 16-18, 2018. Blaine, Washington (USA). For more information: http://pcsga.org/annual-conferences/

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

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

AQUA 2018: Aug. 25-29. Montpellier, France **Aquaculture 2022**: Feb. 27-Mar. 3. San Diego, California, USA

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

