

PERSpectives

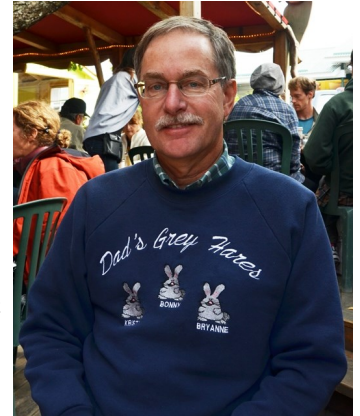
Newsletter of the Pacific Estuarine Research Society

Spring 2014

PRESIDENT'S REPORT

As we roll into March, PERSians are preparing for the onset of spring and all the wonderful estuarine processes that come with it. It also marks the buildup to our Annual Meeting April 3-5 to be held in Newport, OR. Our President-Elect, Tony D'Andrea, and his Organizing Committee have been busy with preparation for the 37th PERS Annual Meeting to be held at the Hallmark Inn April 3-5, 2014. Hopefully, PERSians are making plans to attend and join with their estuarine friends and colleagues to make it another great meeting. Check out the PERS website for online registration and accommodation links. Our traditional Thursday night social will be at the Rogue Brewery, which is a great venue to kick off the meeting.

The meeting also will include our annual business meeting where I will move from President to Past-President and Tony takes over as President. Steve Rumrill will have completed his term as Past-President, and has made an outstanding contribution during his 6 year tenure on the PERS Executive Board. Pascale Goertler, the PERS Board student representative will be graduating with her M.S. so will also be leaving the Board. Continuing on the governance theme we will need to fill the President-Elect and Student Rep positions. Jude Apple has kindly stepped up to serve as President-Elect, and PERS has received



nominations from Emily Lemagie and Stuart Munsch for student rep. An online election will be held to have the new board members in place prior to the PERS Annual Meeting in Oregon.

I also call on PERSians to pay up their memberships to keep PERS financially strong and encourage you to send in your CERF membership dues that include a subscription to the highly regarded journal **Estuaries and Coasts**. With the recent relocation of the CERF head office to Seattle and Executive Director Mark Wolf-Armstrong living in Twisp, WA, CERF has very strong connections to the Pacific Northwest and PERSians could now have a much greater influence on our parent federation. Also keep in mind CERF 2015 will be held in Portland, OR. With Ron Thom and Walt Nelson

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OCTOBER 2013

Special article of interest:

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- * Update on PERS 2014 meeting

ELECTIONS

Election time again! A few weeks ago we sent out an open call for nominations for President-Elect and Student Representative. We received one nomination for President Elect, Jude Apple. He will be officially elevated to President-Elect at the 2014 meeting. You can read all about him on page 4 of this newsletter.

We received two nominations for Student Representative to the Executive Board, Emily Lemagie, and Stuart Munsch. You can read their candidate statements in this newsletter on pages 5 and 6. They are great candidates and I urge you to read their statements and vote using the link in the email or right here [VOTE](#) please vote by March 23 so we can have the results ready for the annual meeting.



The last meeting of the Boynton Administration CERF Governing Board meeting was held on Saturday, November 2013, in San Diego at the San Diego Town and Country Hotel and Convention Center, just prior to the 22nd Biennial CERF Conference. It was the last meeting for President Walter Boynton, Past President Susan Williams, and PERS President Gary Williams. At the meeting, the new President Ken Heck assumed the CERF leadership role and the Heck Administration began. The new CERF President-Elect, Robert Twilley was also introduced. Walter and Susan did an outstanding job in leading CERF to new and greater heights and all are very appreciative of their service. Walter will continue on the Governing Board as Past-President so CERF will continue to benefit from his sage advice and wise counsel.



A congregation of CERF Presidents. (from left to right) Mark Wolf-Armstrong, Executive Director; Ken Heck, President; Susan Williams, Past-President; Walter Boynton Past President; and Robert Twilley, President-Elect.

The meeting also marked the 'retirement' of Chris Tanner as Finance & Investment Committee Chair, to be replaced by James Hagy. Linda Blum completed her term as Secretary in the Boynton administration, as did members-at-large Robert Diaz and Janet Nestlerode.

The new CERF Governing Board will also include Enrique Ryes as Secretary, Sharon Herzka as Member at Large, Elizabeth Canuel as Member at Large, and Leanna Heffner as Student Member at Large. The meeting marked a whole suite of new Affiliate Presidents, including Tony D'Andrea who will serve as PERS President on the Heck Administration Governing Board.

Other new Affiliate Presidents include Gail Chmura, AC-CESS; Treda Smith Grayson, AERS; Martha Sutula, CAERS; Ken Dunton, GERS; Jamie Vaudrey, NEERS; and Eugene (Geno) Olmi, SEERS. More information on the Governing Board affiliations can be gleaned from the CERF website,

Another important change is that PERSian Si Simenstad becomes Co-Editor in Chief with Wayne Gardner of the CERF journal *Estuaries and Coasts*. And PERS continues to make the CERF news with PERSians Ron Thom and Walt Nelson serving as CERF 2015 Co-Chairs for the Conference to be held in Portland, OR.

CERF has moved offices to the Pacific Northwest with a new head office in Seattle and Administrative and Membership Services, being provided by SBI Management Services. Mark Wolf-Armstrong, Executive Director, and Sarah Rudback, Communications and Events Coordinator, make up the lean CERF staff.

The CERF Biennial Conference was a great success, with CERF 2013 being distinguished as being the largest CERF conference yet. Steve Weisberg, Chair, and PERSian Jan Newton, Vice-Chair and their team did a tremendous job. More on the conference can be obtained from the CERF website.

So 2014 promises to be an exciting year for CERF. PERSians are encourage to join our parent society and make plans for attending a sure to be wonderful conference in Portland in the fall of 2015.

Student Profiles

Continuing our previous tradition of providing profiles of some of our student members in the newsletter, please find below two of our presenters from PERS 2013 and we look forward to this years student presentations.

1) Adaptive capacity of tidal wetlands to future climate change in Puget Sound: Implications for strategic conservation and restoration

Brittany Jones is a MS student in the Simenstad research group at the University of Washington School of Aquatic and Fishery Sciences. The aim of her research is to conduct a spatially-explicit assessment of the adaptive capacity of tidal wetlands to future climate change in order to plan for strategic conservation and restoration of tidal wetlands in Puget Sound. Currently, she is assessing opportunities for tidal wetlands to transgressively migrate into adjacent uplands under future climate change scenarios.

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(President's Corner continued from page 1)

being the Co-Chairs, it promises to be a “not-to-be-missed” event. I was one of the fortunate PERSians to have attended the last CERF meeting in Portland, and it was one of the best conferences I have attended.

In closing, looking forward to seeing everyone in Newport. So get your oral and poster presentations prepared and abstracts in.

Gary Williams, President

Continued from page 2—Student profiles)

Brittany received runner up in the student poster award at PERS in 2013 and plans to give an oral presentation at the 2014 PERS meeting in Newport, OR.

(2) Population dynamics of the Olympia oyster (*Ostrea lurida*): Implications for the Coos Bay management plan

Rose Rimler is a Master's student at the Oregon Institute of Marine Biology, the coastal field station of the University of Oregon. Her project is part of a large grant aimed at investigating the biology and ecology of the Olympia oyster in Coos Bay. The Olympia oyster, or *Ostrea lurida*, is the only oyster species native to the west coast but was heavily over harvested in the early 20th century and has never made a full comeback. She has found that population bottlenecks varied even on a relatively small spatial scale within a single estuary. Last year, she was awarded first place among the graduate student posters at PERS and received the Neil Richmond Memorial Scholarship in 2012. Rose is graduating in mid-March of this year and currently pursuing opportunities to continue working in estuarine research and restoration.



Acidification of Nearshore and Estuarine Waters along the Pacific Northwest Coast: A Merger of Minds in the Realms of PERS and CAERS

Steve Rumrill / PERS

Acidification of ocean waters has recently gained widespread recognition as a global problem caused primarily by emission of greenhouse gasses into the atmosphere coupled with uptake of carbon dioxide by the ocean. Results reported by speakers during the CERF 2013 special symposium indicate that Increased acidity of the ocean results in disruption of the delicate chemistry associated with building calcium carbonate skeletons by a myriad of planktonic, demersal, and benthic organisms in the open ocean, in nearshore waters, and within estuaries. In particular, acidified ocean waters can decrease the saturation state for calcium carbonate and can be corrosive to marine organisms that incorporate different forms of calcium carbonate (*i.e.*, calcite and aragonite) into their shells. In addition, ocean acidification has important ecological consequences that may extend well beyond the building of calcium carbonate skeletons by impeding the physiological processes of early development, growth, and metabolism.

Marine and estuarine scientists throughout the world have been alerted to the realization that continued emissions of greenhouse gasses and elevated carbon dioxide levels in the atmosphere will result in changes to the chemistry of the ocean. Along the Pacific Northwest coastal region of North America, a cadre of our scientists, funding agencies, resource managers, shellfish growers, coastal stakeholders, and elected officials are on high alert about the dangers and threats precipitated by an acidified ocean environment.

Ocean acidification is a pressing concern in the Pacific Northwest because the continental shelf waters along Oregon and northern California are now recognized as a hot-spot for the seasonal upwelling of deep cold ocean waters that have a low saturation state for calcium carbonate. Shoaling of acidified waters in the shallow nearshore zone is strongly linked with wind-driven upwelling and formation of hypoxic areas where very low dissolved oxygen concentrations frequently contribute to periodic displacement and die-offs of fish communities and benthic invertebrates. In addition, decreased carbonate saturation states in upwelling waters have already been strongly implicated in hatchery failures during mariculture of imported Pacific oysters and decreased growth and survival of post-

larvae from native Olympia oysters. *But how does acidification of nearshore ocean waters impact the carbonate chemistry and life-histories of diverse communities of organisms that reside in estuaries where environmental conditions are influenced by ocean waters as well as inputs from rivers, creeks, and streams?* These realizations and questions point to the need to develop increased scientific understanding of the ecological processes and consequences associated with ocean acidification in the nearshore continental shelf waters as well as in the bays, inlets, and estuaries. In particular, long-term monitoring and directed research are needed to determine time-frames and trajectories for coastal changes that can be attributed to elevated pCO₂ concentrations, to recognize the hazards posed to at-risk species, and identify target habitats and coastal index areas for intensive studies.

Marine science experts from British Columbia, Washington, Oregon, and California are now working together as members of the new West Coast Ocean Acidification and Hypoxia Science Panel (OAH Panel) to establish a more complete knowledge base concerning what is known and not known about the potential consequences of OAH, increased pCO₂ concentrations, and decreased pH in the marine/estuarine environment. The OAH Panel was assembled in 2013 on behalf of the California Ocean Protection Council not only to address important science questions, but also to evaluate a suite of possible management actions to minimize detrimental impacts in the future. The extensive knowledge base established on OA issues developed by the Washington Blue Ribbon Panel (2010-12) will provide a solid foundation for advancements by the new OAH panel as they work to address the core science questions identified by coastal resource managers all along the West Coast. Moreover, the West Coast Governors Alliance on Ocean Health recently (2013) signed an international agreement that identifies ocean acidification as a priority issue for widespread cooperation. The challenges before the OAH panel are monumental, and it is already clear that collaborative work will be needed in the coming years between academic scientists, agency resource managers, private sector interests, citizen scientists, and coastal stakeholders throughout the geographic realms of PERS and CAERS to address the complex problems posed by the dual threats of ocean acidification and hypoxia. It is incumbent on the members of PERS, CAERS, and the greater membership of CERF to continue to devote considerable attention to this pressing coastal issue as a largely unforeseen manifestation of global climate change.

(ELECTIONS—continued from Page 1)

President-Elect Candidate

Dr. Jude Apple, Marine Scientist

Shannon Point Marine Center, Western Washington University and Centers for Ocean Sciences Education Excellence – Pacific Partnerships (COSEE-PP)

I arrived in the Pacific Northwest in early 2008, relocating from the estuaries of the mid-Atlantic to take a position as a Marine Scientist at Shannon Point Marine Center. One of the first things I did after arriving was to attend the PERS meeting in Newport, and I was both comforted and excited to have found such a welcoming community of like-minded estuarine scientists who shared commitment to understanding, preserving and supporting education of estuarine and coastal ecosystems. I have been an active member of PERS ever since.

My involvement with PERS has varied over the years. In 2009 I worked closely with Jim Brennan and Jeannie Gilbert to organize the PERS meeting in Bellingham, serving as coordinator of the scientific program and helping assemble a panel on “bridging the gap between science and management”. Over the past few years I have transitioned into a role of promoting and highlighting undergraduate and graduate student involvement in the annual meeting by coordinating student judging and awards. This has been a growing (and important) focus of PERS that I am happy to be a part of and look forward to continuing our growth in this area, as the annual meeting is an excellent setting for students to become more comfortable presenting their research.

I am also interested in helping PERS continue our transition into the 21st century by exploring ways that technology can best serve the needs of the PERS community – as well as enhancing our impact on the greater community of scientists, managers, students and citizens concerned about coastal and estuarine resources in the Pacific Northwest. In this time of increasing coastal development, growing population, and climate change, I believe that PERS and its constituents are poised to make a strong collective contribution to our growing understanding of the impacts of these changes to coastal ecosystems and resources, and that we offer valuable insight for adaptation strategies. I would like to work with the PERS community to explore mechanisms – either through annual meetings or beyond – that our organization as an entity can be more deliberate

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(Jude Apple, continued from page 4)

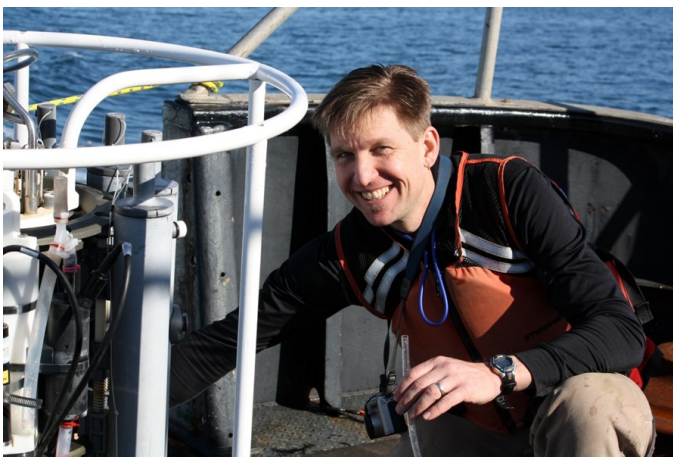
about addressing local and regional challenges facing our coastal and estuarine ecosystems.

I look forward to the possibility of a new dimension of my service to PERS and appreciate your support in my candidacy for the position of President Elect.

Thanks and regards,

Jude

Below: Jude Apple preparing the CTD for sampling on the RV Centennial



line on my resume, and, to pass the time, a few interesting talks—maybe even one or two in my field. What I found instead was PERSpective. Most of the talks were in separate disciplines, but they followed a thread that was relevant to me. Many displayed photos of researchers stuck in the mud and I thought, *I've been there*. The tools for collecting data on mudflats and in shallow estuaries are interdisciplinary; so is the larger goal. As I made more and more connections, they challenged me to think about my research in a more creative and holistic context and to better appreciate the role of my niche interests and expertise in estuarine research. I still remember the conversations that I had at that meeting, and it was the first time I was handed a business card and asked to collaborate with another researcher. My work was well received, but more importantly, people were interested in what I was *going* to do. The experience expanded my mindset of how my own work fit into estuarine science more broadly and strongly motivated my decision to pursue a PhD. I came away feeling like part of a community—and when I showed up at CERF later that year, I *knew* people.

PERS is the kind of group that inspires people to want to give back, and for me this would be a symbiotic opportunity. My skill sets and interests fit this role: I love writing and communicating (including, recently, blogging and tweeting) and have lab and field experience across oceanographic disciplines. I also hope from this that I can hone my leadership skills, learning from role models within PERS so that I can help other students to benefit from their involvement as I have.

A Little About Me:

I am an Oregon State University (OSU) first year PhD student in Physical Oceanography studying the freshwater output from Oregon coast estuaries. For the last five years I have conducted research with Jim Lerczak at OSU, where I received an MS in Marine Resource Management as an Oregon Sea Grant Malouf Scholar and then worked as a Faculty Research Assistant on numerical modeling and field projects in three Oregon estuaries. I recently submitted a paper to *Estuaries and Coasts* about estuarine residence time. Prior to coming to OSU, I started my oceanographic career working in labs at the University of Washington and the Hatfield Marine Science Center (HMSC) in Chemical, Geological, and Biological Oceanography. I continue to value and apply an interdisciplinary aspect to my science, having developed an exhibit about the transport of Olympia Oyster larvae in the Yaquina Bay at the HMSC Visitor Center, an Individual Based Model interface for a graduate level ecology class, and collaborating closely with scientists, managers, and educators across disciplines in my research.

Student Representative candidate—Emily Lemagie

“Why I want to become PERS Student Rep”

It is easiest to illustrate why I want to become PERS Student Rep through a brief anecdote of how I became a PERSian: Coming out of my first year as a master's student, I was growing increasingly nearsighted from long hours spent with my head buried in books or bobbing precariously close to a computer screen. Graduation was already looming and my psyche was nagging me to figure out where I was taking my career and how my work fit into the grander picture. It had been a long northwest winter and I hadn't seen much sun in months. Maybe coral reefs were in more need of my scientific scrutiny than these tiny pacific coast estuaries? I arrived at the 2011 annual meeting in Astoria with my poster fresh off the printer, hoping that the loss of three days of research would be balanced by some useful feedback, a



Student representative candidate—Stuart Munsch



Stuart Munsch

Background:

I am a third year graduate student in the Wetland Ecosystem Team at the University of Washington School of Aquatic and Fishery Sciences. My research explores the

effects of shoreline modifications on shallow water fish and crabs. My current study system is the downtown Seattle waterfront and our team's research is contributing toward the improvement of the downtown habitat as the seawall is currently undergoing reconstruction.

Interest:

One area that I think PERS could be especially helpful for students is to elucidate the career-training pipeline in the context of estuarine scientists. Resources that outline the development of scientists from undergraduate students to career-track professionals are generally rare, likely because of the diversity of fields within the broad realms of science, biology, and even aquatic ecology. As an undergraduate student, this information was slowly made available to me through word of mouth and undirected internet searches, when a focused presentation of the process would have been more informative. PERS is comprised of people with similar areas of expertise working primarily in the Pacific Northwest. This creates a unique opportunity to provide relatively specific information on the career development process. For undergraduate students, it would be helpful to understand the graduate research model (e.g., Where does funding come from? What are the responsibilities of graduate students? What schools are available for to attend?). For graduate students, helpful resources might include an explanation of the strengths and weaknesses of career options (e.g., academia, government, private, non-profit), a list of employers in the area, and a discussion of what skills are most valuable to employers. If other students shared my interest, portions of the annual PERS meetings could be devoted to addressing this issue or resources made available online. I would be happy to outline the process of getting accepted and attending graduate school and would source advice from senior members of PERS to provide advice in how to earn a career-track position following graduation.

Contribution:

I have attended and presented my research at PERS (2012, 2013, and 2014 [anticipated]) and CERF (2013). I have created

and helped PERS maintain their Facebook page beginning in 2013.

PERS 2014 Annual Meeting

Just a quick reminder that the 2014 PERS Annual Meeting in Newport is rapidly approaching (April 3-5, 2014). For those new to PERS, it should be a great opportunity to present your work in a friendly setting and make contacts within the Pacific Northwest estuarine community. We are especially pleased with the number of student talks that have already been submitted.

Important Date:

March 19: Early registration cut-off date

We encourage everyone to make it to the Thursday night PERS social at the Rogue Brewery in South Beach. Included in the registration are beverage tickets and we have also arranged for a selection of salads and appetizers during the social. If you make it early, Rogue staff will also be giving a tour of their brewing and distilling facilities as well as a visit to the Rogue museum displaying 25 years of Rogue Brewery history.

The Hallmark Inn resort is an exciting venue for the meeting offering spacious conference facilities and stunning views of the Pacific Ocean. There are still some rooms available for PERS members until March 12 so make your reservations soon. There is a restaurant on-site - Georgie's Beachside Grill – and the hotel is within a couple minutes' drive (or 10-15 minute walk) from the Nye Beach area of Newport with numerous restaurants, coffee shops, and pubs.

Presentations will follow the typical 15 minute time limit, allowing 12 minutes for the talk and 3 minutes for questions. Guidelines for oral presentations (e.g. format, etc.) will be posted soon on the conference website (<http://www.pers-erf.org/pers2014.html>). Poster guidelines have already been posted (http://www.pers-erf.org/pdf/Poster_Abstract_guidelines..pdf) so refer to this document for guidance. Maximum poster size is 36" wide (91cm) and 48" tall (122 cm) oriented vertically to accommodate a larger number of posters in the main lobby area overlooking the ocean. Posters should be hung in the morning on Friday and presenters should remember to be by their posters during the coffee breaks on Friday (morning, afternoon) and Saturday (morning) to share their research with other PERSians. All poster presenters should prepare a poster preview which entails each presenter to give a short 2 minute oral summary of their poster in a rapid sequence blitz format. This format has been well received in recent meetings. This allows the audience to get an overview of each poster and forces authors to condense their poster to a few bullet points to convey the key information from their poster.

**PACIFIC
ESTUARINE
RESEARCH
SOCIETY**

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We are very fortunate to have Sally Woodin and Dave Wethey visiting from the University of South Carolina. They will be giving a plenary talk on Saturday morning on the biogeographic shifts in invertebrate ecosystem engineers and ramifications for estuarine invertebrate communities. They have over 40 years of research experience in the areas of population and community ecology, biogeography, and climate change.

The 2014 organizing committee is looking forward to seeing everyone in Newport. It is looking like a great collection of presentations and posters that will provide informative, engaging sessions amid the Oregon coast backdrop. We want to thank all for supporting PERS and continuing to keep the Annual Meeting a special and rewarding event. We also want to give a special thanks to Oregon Sea Grant for sponsoring the meeting.

Looking forward to seeing everyone soon.



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