

PERSpectives

Newsletter of the Pacific Estuarine Research Society November 2004



PERSpectives is published by the Pacific Estuarine Research Society. To obtain a copy of this newsletter, request information or apply for membership, visit our website at <http://www.pers-erf.org/>

PRESIDENT'S MESSAGE

Ted DeWitt, PERS President
dewitt.ted@epa.gov

I'd like to take a moment of your time to briefly lay out my plans for my term as PERS President. First, though, I want to acknowledge that I'm starting off in a great position because of the successful jobs done by my predecessors, particularly **Brett Dumbauld** (2002-2004) and **Jan Newton** (2000-2002), and the hard work of the PERS governing board. These are the folks who have brought us our website, newsletters, and annual conferences. I look forward to helping them deliver more of the same to all of you.

My two goals for my term are to increase the value of PERS for its members and to ensure the long-term success of PERS. To achieve the first goal, I will work to enhance our annual meetings and to encourage improvement of the PERS website. Efforts on both fronts are underway. I have co-sponsored an ERF-wide initiative to make available to each affiliate society (such as PERS) up to \$800 per year for the purpose of improving its annual meeting. These funds could be used to invite special speakers, organize workshops, or hold short courses. The goal of this funding from ERF is to help make the affiliate societies more successful, which may ultimately improve the success of ERF if more members are attracted to the parent society or the ERF conferences. These funds will become available in 2005, and I will be working with **Steve Rumrill** to obtain funding to spice up the '05 annual meeting in Charleston.

Thanks to our webmaster, **Jeannie Gilbert**, a major upgrade to the PERS website is well underway. Last May, the PERS governing board voted to empower Jeannie to establish a new domain and home for our website, and to totally revamp the website appearance and contents. Although we're still working on getting content to her, Jeannie has made great strides by obtaining a unique domain for us (www.pers-erf.org), selecting a new ISP to host our website, and for creating the structure and new look for our website.

continued on page 5

PERS 2005
March 18-20 in Charleston, OR
Meeting Announcement and
Call for Papers in this issue!

Salmon in the Nearshore: PERS '04
Special Session Summary

Anne Shaffer shaffjas@dfw.wa.gov

The 2004 Pacific Estuarine Research Society (PERS) meeting was held on 17-18 April at Ford Worden Conference center in Port Townsend, Washington. The conference ended with an all-day special session entitled 'Salmon in the Nearshore,' which included 16 presentations and a half hour overview discussion. Approximately 100 people participated in the dialogue. This summary provides an overview of session findings and recommendations from group dialog.

The all day session focused on salmon in the nearshore and included work by researchers from the University of Washington, Tribes, local/state/federal agencies, and private consulting firms. Abstracts are available on the PERS website (<http://www.pers-erf.org/>). Collectively the work covers a large geographic area including Puget Sound, North Puget Sound, Hood Canal, and the Strait of Juan de Fuca. The presentations focused on physical processes that define habitat function and use, seasonal and temporal variation in habitat use, geographic extent of nearshore habitat use, and details on how specific nearshore habitats function for feeding, refuge, and migration for Chinook, coho, and chum salmon (both hatchery and wild), as well as forage fish.

continued on page 6



Image from new PERS website Photo Gallery.
Photograph courtesy of Greg Hood.

PERS 2004 Synopsis

Ted DeWitt, PERS President
dewitt.ted@epa.gov

It's hard to believe that six months have passed since PERS '04 in Port Townsend, WA, May 17-18. Those who were there will agree that it was a very successful meeting. The venue at Fort Worden State Park was wonderful, with spacious meeting rooms located within a short walk to the dining hall and accommodations, all on a historic site. And the weather was excellent! One hundred fifteen people came to present and attend 43 talks and 20 posters that were distributed among six sessions. Anne Schaffer organized a symposium session on Salmon in the Nearshore that ran all day on Tuesday, May 18. That session culminated in a spirited discussion on lessons learned and how to integrate the findings into fisheries management and policy, which have been captured in a synthesis white paper (see separate article in this newsletter and the full report on the PERS website). We were treated to a thoughtful, philosophical keynote address by Olympic Peninsula artist and poet, Tom Jay, on science, art, poetry, and their intersections through language and with the environment. With Tom's permission, we have reprinted his essay on the PERS website. As usual, the student presentations were wonderful. Please see the article on page 3 for a lists of student awards presented at the meeting.

A huge fanfare of thanks go to Jim Norris, his organizing committee (alphabetically, John Cambalik, Ian Fraser, Cindy Ann Joyner, Michelle McConnell, Anne Schaffer, Dave Shreffler, Ron Thom, Greg Williams), and volunteers (Neil Harrington, Karen Lull, Roger Risley, Rebecca Wyllie-Echeverria, and Tessa Wyllie-Echeverria) for orchestrating a great meeting. Great job folks!

PERS 2005 Announcement

Steve Rumrill, PERS 2005 Meeting Organizer
steve.rumrill@state.or.us

Mark your calendars! The PERS 2005 Annual Meeting, which will be held in **Charleston, OR**, on Friday - Sunday, **March 18-20, 2005**. We've arranged to hold the meeting at the Oregon Institute for Marine Biology campus, which is a lovely and cozy setting.

The theme of the meeting is "Scaling Up from Site-Specific Studies to Regional Understanding." Papers appropriate to that theme will be grouped into one session. As always, we encourage submission of oral and poster presentations on a wide array of estuarine or coastal topics, including ecology, natural history, fisheries, environmental toxicology, physics, chemistry, economics, history, culture, etc.

There will likely be a session on seagrass ecology at PERS 2005, which will segue into a workshop on "Regional Understanding of Seagrass Ecology in the Pacific NW" that we've proposed for Sunday, March 20, immediately following the annual meeting. PERS is looking into applying for ERF funds to invite a prominent seagrass ecologist from outside our region to serve as keynote speaker for the meeting (see President's message). Details to follow!

Note that the meeting date is significantly earlier in the year than recent PERS meetings. It was specifically selected in response to requests at the last meeting that we hold our annual meeting in conjunction with Spring break *to make it easier for faculty and graduate students to attend*. Conveniently, Spring break for OGI, OSU, PSU, UO, UW, and WWU starts on the weekend of March 18, and ends on that weekend for WSU-Vancouver. Unfortunately, Spring break UBC and Simon Fraser doesn't occur until early April, but we sincerely hope that won't deter our colleagues in BC from trekking to Oregon. Thus, we expect a rousing turnout from our members in academia, as well as the usual great attendance from our members in public agencies and private practice.

Stay tuned for more details on the meeting and start getting your abstracts ready! See the Call for Papers in this issue of the Newsletter.

GRADUATE STUDENT CORNER

Donna Ball donnaball2000@yahoo.com

Our featured graduate student for this issue is Mark Stamey. Mark received his undergraduate education from the University of Washington in Community and Environmental Planning in 2000, and recently graduated with his Master's degree from the University of Washington, School of Marine Affairs. He is currently employed by Mid Puget Sound Fisheries Enhancement Group as a Project Manager. His Master's thesis researched the performance of eelgrass transplantation efforts in Puget Sound. His thesis committee was chaired by Professor Terrie Klinger.

Eelgrass transplantation is often proposed, and has been widely adopted in the US as a compensatory mitigation (CM) technique in order to avoid a loss of habitat. A 1990 review of eelgrass transplantation projects in the Pacific Northwest showed that some of the transplanted eelgrass survived in 65% of those projects, but concluded it was premature to use eelgrass transplantation as a reliable CM technique without further research. The objective of this study was to follow a stepwise process to evaluate the continued use of eelgrass transplantation as a compensatory mitigation technique in Puget Sound.

The step-wise research methodology used was to: 1) a case review of recent eelgrass transplantation efforts in Puget Sound, 2) performance evaluation of each transplantation effort, 3) overall performance assessment of eelgrass trans-



Recent UW graduate Mark Stamey

plantation in Puget Sound, and 4) evaluation of eelgrass transplantation attributes influencing the performance of eelgrass transplantation projects.

Information was collected from fifteen distinct eelgrass transplantation efforts in Puget Sound between 1990 and 2000. The performance of individual transplantations was highly variable, between as well as within, individual transplantation efforts. The high variability and moderate level of overall success (13-80%, depending on the metric used) suggests that eelgrass transplantation has not reached a point where it can be reliably used as a compensatory mitigation technique in Puget Sound. However, he found that 13% of the projects reviewed achieved or exceeded success in all the metrics that were applied, demonstrating that eelgrass transplantation can be successful in some cases.

NOTES FROM THE WEBMASTER

Jeannie Gilbert, PERS Webmaster
webmaster@pers-erf.org

WWW.PERS-ERF.ORG is up and running!

PERS has a new website hosted on a commercial ISP. We've created a new look for the website, with links from the home page to pages with current and back issues of the newsletter, announcements about new PERS meetings, programs of past PERS meetings, our By-Laws and Constitution, and contact information for the PERS officers. We also have a photo gallery that currently contains images from Skagit estuary (WA) donated by **Greg Hood** (three of Greg's images can be seen in this newsletter), and [we invite all PERS members to donate photos](#) to the gallery. Photos donated to the gallery are available to be copied by any visitor to the website, with the provision that the artist and website be acknowledged. We hope to expand the features of the website to include scientific and educational materials, such as regionally-relevant topical bibliographies, curricula from estuarine and coastal science courses, more information about projects that our members are involved with, and more information for students and possible members to see what we are all about. We have lots of room to expand the website, so all ideas are entertained.

We welcome contributions of materials to the website and suggestions for improvements (or corrections of problems). Please contact me (webmaster@pers-erf.org), **Aimee Kinney** (aimee.t.kinney@nws02.usace.army.mil), **Amy Sewell** (pers_sec.treas@pers-erf.org), or **Ted DeWitt** (dewitt.ted@epa.gov) with comments or suggestions.

PERS 2004 Awards

Amy Sewell, PERS Secretary/Treasurer
pers-sec.treas@erf.org

There were some wonderful student presentations at our annual meeting in Port Townsend last April. We want to thank all the graduate and undergraduate students who gave oral presentations or prepared posters. As usual, the judges had a hard time distributing the awards. For the first time ever, we had a tie for the Heinle Award (best graduate student presentation). Congratulations to all of our student award recipients!

Graduate Student Awards

The Heinle Award went to **Danielle Heatwole** for her presentation on the *Influence of habitat on arthropod assemblages in tidally restricted and natural Puget Sound salt marshes* and **Amanda Babson** for her presentation on *Dissolved oxygen variability as determined by a box model tracer in Puget Sound*. Both won \$500 towards travel to the next ERF conference.

Second place went to **Neil Banas** for his poster on *Tidal mixing rates and residence times from data and modeling for Willapa Bay, Washington*. This award came with a \$100 gift certificate and membership to ERF.

Alexandra von Saunder won a \$50 gift certificate and membership to ERF for her third place presentation on *Juvenile salmonid foraging associated with rehabilitated habitats in two highly industrialized northwest estuaries*.

Undergraduate Student Awards

First place went to **Jonathan Kellogg** for his presentation on *Correlations of Puget Sound temperature and salinity with climatic factors, 1992-2003*. He won a \$250 gift certificate and membership to ERF for his effort. **Teegan Boruch-McDonough** won the second place spot, a \$100 gift certificate, and a membership to ERF for a poster on *Increased diversity of free-living bacteria in the euphotic zone and bacterial proteorhodopsin presence in Puget Sound, Washington*. Third place went to **Cheryl Williams** for her presentation on *Genetic characterization of *Synechococcus* in Puget Sound*. With the award came a \$50 gift certificate and membership to ERF.

New PERS Governing Board

PERS' Governing Board saw several changes and a few new faces in May as result of transitions, elections and appointments made during the PERS 2004 annual meeting. **Ted DeWitt** became our new President, a position he will hold until Spring 2006, and **Brett Dumabuld** transitioned to Past President. **Jan Newton** stepped down from the Board as her term as Past President ended. Thanks Jan for your dedication and leadership – the Board will miss your experience, judgement, and good humor. Don't go too far away, as we're sure we'll have need for your counsel again!

At the business meeting, **Sandy Wyllie-Echeverria** was elected as President-Elect, which he will serve until Spring 2006. **Amy Sewell** was re-elected to the post of Secretary/Treasurer, which she will hold for 1 year. Amy has indicated that she would like to pass the baton in 2005, and *we need nominees for Secretary/Treasurer, to be elected in Spring 2005* – self nominations are welcome!

Two Board positions that had been vacant for several years were filled by appointment by Ted DeWitt, in his first action as PERS President. He nominated **Cynthia Durance** to serve as Member-at-Large and **Carl Young** to serve as Student Representative, and both appointments were approved by the Executive Committee of the Governing Board. Cynthia and Carl will be a great addition to the Board, especially as they bring perspectives representative of British Columbian and student members of PERS.



Image from new PERS website Photo Gallery.
Photograph courtesy of Greg Hood.

PRESIDENT'S MESSAGE

continued from page 1

We expect to post much more information than was available on our previous site; please see the article on the website in this issue of the newsletter. We welcome suggestions or contributions to improve the website.

To achieve the second goal, I have plans for three actions. The first action is to reinstate and fill two currently-vacant board positions, the Member-at-Large and Student Representative. This was accomplished by a vote of the governing board in May, and I am very happy to welcome **Cynthia Durance** and **Carl Young** as Member-at-Large and Student Representative, respectively. By bringing the PERS governing board up to full size, more people will be involved in the governance and operations of PERS, which helps to spread the work load and bring new ideas to improve the Society. The second action is to develop an operations manual for governance and operations of PERS, containing practical guidelines for running annual meetings, electing officers, finances, legal responsibilities, etc. This may sound mundane, but this manual will be useful for future governing board members and will help ensure the long-term continuity of PERS activities. Fortunately, operations manuals have been developed for other ERF affiliates, and we will draw heavily from those documents to develop our own manual. No need to reinvent the wheel! And finally, the third action is to review PERS legal status (particularly our non-profit incorporation and tax-status) to ensure that we are square with IRS, etc. ERF is undergoing a similar review, and I will take advantage of the guidance they receive to suggest ways that PERS might better position itself for the future.

So that's the plan. Nothing evolutionary or revolutionary, but hopefully providing tangible enhancements to the value of PERS to its members, and improving aspects of how we do business to ensure PERS' long-term success.

Are you working on a project you'd like to publicize? Do you have an announcement that would be of interest to PERS members?

If so, please contact one of our co-editors:

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*Image from new PERS website Photo Gallery.
Photograph courtesy of Greg Hood.*

Salmon in the Nearshore: PERS '04 Special Session Summary

continued from page 1

Some general common findings follow. First, use of the nearshore is very complex, and dependant on a number of variables including the species, size of fish, geographic area, and time of year. In fact, nearshore use may be density dependant and a limiting factor for wild stock survival. A number of studies revealed that once in the nearshore juvenile fish are not restricted to using the habitats in close proximity to their natal streams and will move widely in the nearshore. This is strong evidence that proximity to natal streams may not be a deciding factor in nearshore habitat function for juvenile salmon. Many authors reported finding extensive juvenile salmon use along the estuarine and nearshore landscape, as well as strong evidence from coded-wire tag data of cross-Sound migration. Fish from north Puget Sound areas are found consistently in central and south Puget Sound studies, and vice versa. This cross-Sound migration is compelling, and is a high priority for future more detailed work.

Significant revelations from work presented in this session include debunking the following fallacies: 1) The existence of an outmigration 'window.' Juvenile salmon use the nearshore much of the year, and peaks in abundance can extend well past the June 15 end point used by managers for decades. 2) Coho don't use the nearshore. Findings presented in this session indicate that in some areas coho use the estuarine nearshore for up to a month. 3) Puget Sound stocks get to the nearshore, take a right turn and then a left turn, and head out through the Straits of Juan de Fuca to the Pacific Ocean. Work in this session clearly reveals that salmon use the Puget Sound basin widely, and migrate back and forth within it, heavily. 4) Foraging salmon don't feed on terrestrial insect assemblages. Work from a number of these presentations clearly indicates otherwise. Several authors showed that for Chinook, in particular, terrestrial insects can be the dominant prey (based on IRI) found in gut contents. 5) Most mortality of salmon occurs in the ocean, and thus freshwater and nearshore life history stages are less important in determining survival to spawning age. Research presented in this session suggests the opposite is true—the early life history stages are the most important in determining ultimate survival. 6) Hatchery practices don't affect salmon life history diversity. Several authors provided evidence that one legacy of past hatchery practices is dramatic loss of life history diversity, especially for Chinook salmon.

The top data gap is basic life history information on salmonid use in the nearshore. Participants agreed on the pressing need for a long-term monitoring effort of an appropriate spatial

and temporal scale to answer life history questions. The monitoring should focus on agreed upon metrics and use standard techniques including (but not exclusively limited to) beach seining and tow netting. The long-term monitoring should not focus just on salmon, but should also include relevant trophic resource and survival studies. If the framework for such a monitoring is developed, then local groups, for example Marine Resource Committees (MRC's) and local citizens groups, such as Surfrider Foundation, and local non-profit businesses, such as the Menzies project, can help to implement the work.

The following additional data needs were discussed: 1) The role of marine riparian zones as a prey resource base and their contribution to plankton and neuston available for prey. 2) The role different kelp species play in habitat function for juvenile salmon and forage fish. 3) Sediment quality and toxicity in the nearshore and relationship with salmonid resource is also a stated research need. Commencement Bay is a key candidate for this work. 4) Hatchery monitoring, and the compelling need for consistent marking (i.e., coded-wire tag and fin clipping) was agreed on by all the participants.

Finally, the group agreed that historical data sets are an invaluable resource for long-term assessment of population trends in the nearshore. Participants voiced a strong concern that, as researchers from past decades retire, these data sets will be lost. Critical data sets to be archived include the MESA studies, the long term data sets from Bruce Miller and the UW fisheries classes, and data from the Golden Gardens study. Finding, preserving, and disseminating these data sets (not just the reports) are a high priority.

The discussion concluded with the suggestion that PERS consider a position statement on priorities raised in discussion. PERS officers will consider taking the recommendation forward to the governing board for action. There is much work to be done, and time is of the essence. If researchers, co-managers, and local citizen stewards work together as a team at both the cross-region and site scale, we have a strong potential for achieving our goals of understanding and better managing nearshore habitats and salmon. But we need to begin now.

A full report with more information from individual contributors and a more complete treatment of these issues for prospective funders will be available on the PERS website soon. For more information on *Salmon in the Nearshore* session or dialog on proceeding with the session recommendations, contact Anne Shaffer at 360-457-2634 or shaffjas@dfw.wa.gov.

CALL FOR PAPERS
Pacific Estuarine Research Society (PERS)
28th Annual Meeting
March 18 – March 19, 2005
Oregon Institute of Marine Biology, Charleston, OR

Preliminary Meeting Announcement and Call for Papers

PERS will hold its 28th Annual Meeting on March 18 - 19 at the Oregon Institute of Marine Biology in Charleston, OR. Our local host will be the South Slough National Estuarine Research Reserve. Details on the conference activities and registration will be forthcoming. This is the first announcement of the meeting and call for papers.

Call for Papers

Abstract Deadline: February 15, 2005

This is a call for papers and posters on estuarine science, especially those related to “Scaling Up from Site-Specific Studies to Regional Understanding.” All coastal and estuary-related topics are welcome, however, and there will be contributed and poster sessions on physics, chemistry, ecology, history, culture, or economics as papers are submitted. We especially encourage student presentations.

Abstract Submission

An abstract fee of \$25 U.S. (check made out to PERS) is required at the time of submission. Abstracts must be submitted by email in either Microsoft Word or plain text format to Derek Sowers (derek.sowers@state.or.us). The abstract should consist of: title, authors (presenting author indicated by *), affiliations and addresses of all authors, phone number and email contact for presenting author, and abstract text (200 word maximum); see example below. Please indicate if you are submitting a poster or an oral presentation.

Student Awards

Awards will be given for the best undergraduate and graduate student presentations (oral or poster). Awards will include membership in the Estuarine Research Federation and travel assistance to the 2005 ERF meeting in Virginia.

Example abstract submission:

Ecological Role and Potential Impacts of Oyster Culture in the Estuarine Environment of Humboldt Bay, California

Victoria Poulton and Steven Rumrill. Estuarine and Coastal Sciences Laboratory, South Slough National Estuarine Research Reserve, Charleston, OR*

Humboldt Bay, CA, is the leading producer of Pacific oysters ...blah, blah, blah ... but did not differ substantially between oyster plots and control sites. [abstract body limited to 200 words]

Victoria Poulton – presenting author
(address, phone, email)

Membership Form

2005 Dues

Pacific Estuarine Research Society



The Pacific Estuarine Research Society (PERS) is a non-profit organization formed to bring together, for educational purposes, persons interested in estuarine and coastal issues of the North Pacific. Serving scientists in the U.S., Canada, and Japan, PERS conducts annual meetings where estuarine and coastal researchers, managers, policy makers, students and others share their work and ideas. As the need arises, PERS also sponsors meetings of special interest. The PERS Newsletter is published regularly and can be accessed, along with other information about the Society, through our website at <http://www.pers-erf.org/>. PERS is one of several regional affiliate organizations of the Estuarine Research Foundation (ERF). ERF conducts biennial meetings that draw attendees throughout the world. The journal *Estuaries* and a quarterly newsletter are published by ERF. More information about ERF can be obtained from their website at <http://www.erf.org/>.

Annual dues are \$10 (US), \$15 (CA); please make checks payable to PERS.

Member's Name: _____

Affiliation: _____

Address: _____

Telephone Number: _____

Fax Number: _____

Email Address: _____

2005 Dues _____

Donation to the Quammen Fund for Student Awards _____

Donation to PERS for General Operations _____

Total \$ _____

Send completed forms and checks to:

**Amy Sewell
1722 Legion Way SE
Olympia, WA 98501**