President’s Greetings

A Big (and Busy) Summer and Fall Ahead for CERF…

Walter Boynton
CERF President 2011-2013
boynton@umces.edu

This is the time of year when lots of things end and start for CERF members. Some of us are completing a semester of teaching and final exams and research papers are soon due…some of us are grading these items and CERF student members are taking exams and writing those research papers. Others are gearing up for a field season, writing proposals or waiting to hear if proposals have been funded…at least I’m waiting to hear about funding, with fingers and toes crossed, and I suspect I have lots of company.

Along these lines CERF is also gearing up for a busy summer and fall with two important events that I want to bring to your attention.

CHOW 2103

The first of these is CERF’s involvement in an annual event in Washington, DC called Capitol Hill Oceans Week, or CHOW for short. This is a week-long event where issues, problems and possible solutions related to the oceans, and coasts, play a prominent role on Capitol Hill.

In this realm of policy and outreach, CERF adopted an important objective in our Strategic Plan:

To enhance communication and technical information flow of valid and credible scientific information concerning coastal and estuarine science to CERF’s target audience to assist in making science-based policy and management decisions. The target audience includes non-scientists involved in making/developing policy and scientists and non-scientists who implement policy and make environmental decisions based on existing laws.

With this objective in mind CERF participated in CHOW during 2011, and will participate in CHOW continued on page 8

Phone a Friend

Are you are considering submitting an abstract to the CERF 2013 conference in San Diego? Consider phoning a friend and both of you submitting abstracts that are topically linked.

The real strength of a scientific meeting is when we have multiple talks on a similar topic that engender discussion and interaction. That dialog is the real strength of a CERF meeting and we try to encourage it by creating topical sessions to which you can submit talks. This year, we have enhanced our approach by creating plenary themes (see the accompanying article on these), a first for CERF. However, we also have general sessions where we can accommodate several speakers on a topic that we haven’t already created a session about.

Phoning a friend will do more than contribute to the conference program; it can also help build professional relationships ahead of the meeting. We are fortunate to work in a collaborative field and CERF meetings are a great way to create relationships that can last decades. Some of my best friends in the field are ones that I met as fellow speakers continued on page 22
CERF Newsletter is published by the Coastal and Estuarine Research Federation®, associated with the following regional societies: Mid-Atlantic (AERS), California (CAERS), Gulf (GERS), Canadian Atlantic (ACCESS), New England (NEERS), Pacific (PERS) and Southeastern (SEERS). Newsletter inquiries should be addressed to Mark Wolf-Armstrong, Paula Evans-Duncan or Sarah Rudback (see contact information below). Membership form is enclosed on the inside back cover. Visit the Federation’s web site: http://www.erf.org

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The following list presents the candidates for office as members of the Federation’s Governing Board in the upcoming election. The members elected this spring will formally take office at the CERF annual business meeting on 6 November 2013, in San Diego, California, and serve as members of Ken Heck’s administration from 2013 to 2015.

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**LEANNA HEFFNER**  
Ph.D. Candidate, University of Rhode Island

**BRENT HUGHES**  
Ph.D. Candidate, University of California Santa Cruz

Thank you to each of these fine members for agreeing to stand for office. Thank you to all members who take their valuable time to read the candidates’ statements and to vote. Voting is an important duty of membership. Our elected leaders guide the Federation’s routine operations and set the course for future work. Ballots and information on the candidates’ qualifications and their statements about the Board’s business will be sent to members in good standing in early June.
CERF 2013 Scientific Program

Scientific Program Committee Co-Chairs:
John Largier, jlargier@ucdavis.edu
Skyli McAfee, skyli.mcafee@caloast.org

Coastal and estuarine waters are challenged by nutrient pollution, sea-level rise, species invasions and acidification, amongst other challenges posed by environmental change and the continued migration of people and business to the coastal zone. Within CERF-2013, we will host four symposia on these four critical issues – each symposium could be a stand-alone meeting in it’s own right, with experts gathering from around the world to present cutting-edge science and address real-world solutions. Take a look!

Not only that – of course there will be a wide diversity of special sessions on interesting and involving topics, as you have come to expect from CERF. And your talk or poster can be in one of them … if you submit an abstract by 10 June. With your involvement, we will again enjoy an exchange of ideas at CERF that is convivial and constructive – but this time in San Diego. Take a look!

Through the combination of special sessions and symposia we expect to jointly take steps “towards resilient coasts and estuaries”, offering “science for sustainable solutions” – indeed this is the theme of the conference. Now more than ever, the role of science in supporting management of complex stressors is critical. CERF provides this link and helps us as members to work in ways that are connected to real-world problems and to ensure that our combined efforts are transmitted to key decision-makers.

Sessions will include a tribute to Scott Nixon, remembering the man and his synthesis work plus the insight that it has yielded, in turn guiding sound management. This link naturally to the session on systems and synthesis science, being convened by Mike Kemp and others, and across to a series of sessions on resilience in coastal ecosystems (stressors, conservation, and services) being convened by Ben Fertig, Rob Coles, David Yoskowitz and others. Of course, there are several sessions on our changing climate and associated concerns with hypoxia in upwelling systems (Steve Litvin), plankttonic food webs (Michael Wetz), stresses on species interactions (Walt Nelson), carbon sequestration in coastal systems (Matt Kirwan), GHG fluxes from salt marshes (Serena Moseman-Valtierra), synergy with land-use change (Mike Williams), long-term phytoplankton data sets (Hans Paerl, et. al., SCOR WG 137), and more.

There are also sessions that link explicitly to policy, including EBM (Meg Caldwell), EBM communication (Bill Nuttle), sustainable port development (Gary Williams), science to inform decision-makers (Emily Knight), bi-national water issues (Francis Reilly), perceptions of models (Michael Paolisso), models for ecosystem services (Ted DeWitt), nutrient management (Brita Jessen), trophic subsidies (James Nelson), the role of information technology in resource management (Tony Hale), integrating science into restoration management (Lynn Wingard), marine debris (Sherry Lippiatt), managing protected areas (Dave Rudnick), monitoring programs (Treda Grayson), MPA evaluation and management (Liz Whiteman), and a general session on science, policy and management (Skyli McAfee).

There are also education sessions – strategies for mentoring (Tim Della-penna, et. al.), research and the classroom (Laura Murray and Linda Duguay) – and you can present a paper in one of these as well as a research paper.

And there is one special mega-session on physical aspects: hydrodynamics and sediment dynamics (Arnoldo Valle-Levinson, et. al.).

Other sessions are more focused on special places, like the one on coastal ecology in China (Lora Harris and Nengwang Chen), one on San Francisco Bay (Jim Cloern, et. al.) – and a special one on South and Central America following CERF’s 2012 meeting in Argentina. There are also sessions on special systems or populations, like one on horseshoe crabs (Mark Botton, et. al.), two on estuarine shallows (Jessie Lacy; Carl Cerco), and one on bar-built estuaries (John Largier, et. al.) – and many on methodology, including genomics (Angel Borja, et. al.), tools for studying migrations (Ben Walther and Karen Limburg), ecological tracers (Joel Hoffman), bio-optical techniques (Jusy Yaqin), numerical modeling (Tate McAlpin), and engineering with nature (Tom Fredette).

And there are more that we have not mentioned – go to http://www.sgmeet.com/cerf2013/ to see the full list of sessions, including a set of general sessions and the sessions that are part of the four symposia (see more below). There is something for everyone – but did we

TAKE A LOOK! IT’S ALL AT
http://www.sgmeet.com/cerf2013/
If it’s MONDAY, it must be Nutrients.

Nutrient pollution and eutrophication of the world’s coastal zone is a major consequence of anthropogenically-induced global change. To meet the challenge of developing effective policies to prevent or mitigate coastal nutrient pollution we need to gain a sufficient quantitative understanding of ecological and socio-economic processes. Appropriate information is needed to relate human activities in watersheds, nutrient inputs to coastal systems, and ecological change. Managing nutrients requires a well-defined goal for the ultimate status or condition of the coastal ecosystem – and then a scientific rationale can be used to determine what water quality is consistent with achieving that goal. Monitoring and assessment informs goal setting and enables evaluation of progress. There is a great deal of uncertainty regarding how to define environmental goals, how achieving these goals may relate to human activities, and the nature of environmental degradation and recovery trajectories. Addressing the complex causes and consequences of nutrient pollution is a formidable challenge.

The theme “Managing Nutrients in a Changing World” will be convened by Martha Sutula, Jim Hagy, and Suzanne Bricker. It will be introduced through two keynote speakers in a plenary session: Ephraim King (previously at EPA) will speak about the challenges in using science to inform water quality goals and Dan Conley (Lund University) will speak about successes in water quality goals. Through Monday and continuing on subsequent days, there will be a series of special sessions on nutrients, including eutrophication assessment frameworks (Martha Sutula, et. al.), socio-economics (David Yoskowitz and Cristina Corolla), management strategies (Julie Rose and Suzanne Bricker), nutrient fluxes and accounting (Dennis Swaney), eutrophication tipping points and restoration (Daniel Conley, et. al.), Chesapeake Bay (Lewis Linker, et. al.), and watershed restoration (Mike Allen, et. al.).

If it’s TUESDAY, it must be Sea-Level Rise.

Perhaps you’ve heard – sea level is rising! It has risen through the last century and will continue through the next, increasing the risk of coastal flooding, storm surge inundation, coastal erosion and shoreline retreat. We stand to lose many coastal wetlands and other coastal habitats. More directly impacting humans is the increased vulnerability of coastal cities and infrastructure to damage from storms (remember Superstorm Sandy?). Globally, it is estimated that as many as 20 million people already live below normal high tide levels, and over 200 million people are at risk of flooding during temporary storm-induced sea-level rise. The exposure and risk levels will increase as coastal populations continue to grow. In addition to large-scale rise, there are many short-term and more local processes, such as large waves, storm surges and high tides that may add together during episodic extreme events. We need to anticipate and plan – and do so, science meets policy.

The theme “Responding to Sea-Level Rise” will be convened by Gary Griggs. It will be introduced through keynote speakers in a plenary session and further explored through a series of special sessions that include geomorphology (Aaron MGregor and Dave Revell), local communities (Becky Smyth), coastal cities (John Largier), storm effects on estuaries (Peter Tango), monitoring (Philippe Hensel), and geospatial analysis (Tom Allen).

You want more details? They’re coming very soon.

If it’s WEDNESDAY, it must be Acidification.

What are the controls and impacts of acidification in coastal and estuarine waters? Coastal waters are subject to high levels of primary production, rapid rates of biogeochemical processing, and significant amounts of freshwater runoff – processes that are weaker in large-scale ocean environments. Perhaps nowhere else does acidification pose a greater threat to marine ecosystems and the economic and cultural services that rely on the sustained health of marine organisms. Yet, acidification in estuaries and near-shore waters is not well understood, and although increasingly recognized it is not yet at the forefront of estuarine science. There is an urgent need for scientific insight on which to base policies that are being developed and management decisions that are being taken – witnessed, for example, by the establishment of a Blue Ribbon Panel on Ocean Acidification by the Governor of the State of Washington.

The theme “Marine Acidification in Estuaries” will be convened by Jan Newton, Libby Jewett and Skyli McAfee. It will be introduced by keynote speakers in a plenary session that include Dick Feeley (NOAA), who will set the stage talking about trends and current scientific understanding; Sam Dupont (University of Gothenburg), who will address what is known about biological responses; Alan Barton (Whiskey Creek Shellfish Hatchery), who will talk about hatcheries and their science needs; and a member of the Washington Blue Ribbon Panel. Through Wednesday and Thursday, there will be a series of special sessions, including the drivers of acidification (George Waldbusser), links to hypoxia (Tawnya Peterson, et. al.), links to hatchery concerns (Burke Hales), quality of...
The Fall 2013 CERF meeting in San Diego, CA will feature a new event – the COASTAL AND ESTUARINE RESEARCH FEDERATION (CERF) BOWL! Scheduled for Wednesday evening (November 6th), this is a team-based estuarine trivia competition that will show off the extensive estuarine and coastal knowledge of society members. Modeled after NOAA’s National Ocean Science Bowl, this evening event promises to be a fun and entertaining venue for members to compete against one another, earn prizes, cheer on colleagues, and meet new people.

In order to make this event possible, we need your help!

- **We need five contestants from each regional chapter;** these contestants should represent 2 PIs, 1 post-doc, 2 graduate students. We will encourage you to assemble the teams from diverse institutions and locations within the regional membership.

- **We need questions!** Question/answer writers play a very important role in making sure the competition happens. The competition will include multiple choice or short answer questions and critical thinking team challenge questions. The type of questions we are hoping to receive are estuary- and ocean-themed questions in a similar style to those on the NOSB webpage (http://www.nosb.org/teams/sample-questions/).

- **We need volunteers** to serve as moderators, judges, scorekeepers, timers, runners, and set-up assistants on the day of the actual competition.

- **Finally, we need your attendance and enthusiasm!!!!** If you opt not to participate yourself, come out during the meeting and cheer on your friends and colleagues. Regional chapters will earn points for how many people from their chapter attend the CERF Bowl.

Please email Christine Whitcraft (Christine.whitcraft@csulb.edu) if you wish to participate as a contestant, as a question/answer or as a volunteer. This fun event cannot happen without YOU!

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**Scientific Program**

Continued from page 5

If it’s THURSDAY, it must be Invasive Species.

The runaway anthropogenic facilitation of estuarine and coastal species invasions presents special challenges to environmentalists and managers of marine and estuarine habitats. Decisions on how to respond to invasive species inevitably must be based on the admittedly controversial view that all species invasions are not catastrophes. Instead decisions regarding control or eradication of estuarine invaders must be based on assessments of realized or potential damage of the invasion weighed against the feasibility (in terms of cost and effort) of attempts to control the invasion. Whereas species invasions and the resultant changes in the ecosystem are natural occurrences, this phenomenon has been greatly accelerated by anthropogenic activities – either through direct introduction of foreign species or through habitat changes. This symposium will address the role of anthropogenic activities in accelerating species invasions of estuarine habitats, and the compromises faced by environmentalists, managers, and regulators who must use extremely limited resources to choose which invasions to attempt to control and how control efforts must be approached.

The theme “Anthropogenic Facilitation of Species Invasions” will be convened by Jeff Crooks and Jim Eckman. The plenary session will feature Greg Ruiz (Smithsonian) addressing the status of invasion science in marine/estuarine systems, and a second speaker addressing risk assessment & management challenges associated with invasions. Throughout the day, a series of special sessions will address the dynamics, control and impacts (Crooks & Eckman) as well as specifics of Spartina (Joel Gerwin) and impacts on ecosystem functioning (Pedro Morais and Ronaldo Sousa).
Connect with CERF on Facebook and Twitter!

Want to stay up-to-date on the latest CERF news? Looking for ways to network with CERF members and seek out professional opportunities? Interested in discussing coastal issues with experts from all over the world? Then all you have to do is connect with CERF on Facebook and Twitter!

Get the latest updates on CERF events and activities, especially as we gear up for the widely anticipated CERF conference in San Diego this November! We are regularly posting information on Facebook and Twitter regarding conference activities, such as plenary talks, workshops, student events, oral and poster sessions, and social gatherings. Connecting with CERF online also means that you can learn more about highlighted speakers and guests, engage in live web discussions during conference activities, and connect with other conference attendees. For those unable to attend the upcoming San Diego conference, following CERF on Facebook and Twitter will be a great way to learn about key highlights from the meeting, including following live tweets of selected events such as plenary talks.

Connecting with CERF on Facebook and Twitter also keeps you up-to-date on other important info such as the kick-off to CERF’s webinar series, highlights from our journal *Estuaries & Coasts*, and CERF business such as the upcoming Governing Board elections. Facebook and Twitter is also a great way to connect students and professionals and to get the latest news in coastal and estuarine science.

To connect with CERF on Facebook, like us at “Coastal and Estuarine Research Federation CERF”:
(www.facebook.com/CERF.Estuaries.Coasts)

To follow us on Twitter, you can find us as “CERF Science” (handle @CERFScience).

Students! For all things student-related, we also encourage you to like our “CERF Students” Facebook page (www.facebook.com/CERFstudents) and on Twitter use the hashtag #CERFStudents.

For some additional fun, check out the “CERF Coozie Challenge (CCC)” page on Facebook!

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We are thrilled to announce ...
Margaret Spring as the featured speaker at the Women In Science Luncheon

Margaret Spring joined the Monterey Bay Aquarium in April 2013 as Vice President of the Conservation and Science Division where she provides leadership and strategic guidance for the Conservation Research, Policy, and Seafood Watch Programs.

Margaret, a graduate of Duke University Law School and Dartmouth College, has had a distinguished career in ocean policy, having recently served as Principal Deputy Under-Secretary for Oceans and Atmosphere and Chief of Staff at NOAA, working closely with NOAA administrator Jane Lubchenco. In this role, she worked to develop and drive strategic priorities for NOAA with a particular focus on external constituents, interagency initiatives, and administration priorities.

Prior to this, Margaret was with The Nature Conservancy’s California chapter from 2007 to 2009 as Director of its Coastal and Marine Program, where she led one of the largest U.S. marine programs at the Conservancy, focusing on innovative projects designed to address major threats to marine ecosystems. Before joining the Conservancy she served for many years as Senior Counsel, then General Counsel, to the Senate Committee on Commerce, Science, and Transportation, playing an important role advising members of Congress on ocean issues and developing key ocean legislation.
Planning these events is a significant challenge and we are all indebted to Susan and Bob for making these events such a success.

CERF 2013
The second item has to do with our rapidly approaching biennial conference in San Diego on 3-7 November 2013.

Steve Weisberg, Conference Chair and Jan Newton, Conference Vice-Chair, along with John Largier and Skyli McAfee, co-chairs of the science program committee, and many other committee volunteers have put together a wonderful program featuring classic CERF themes and adding new events as well.

The abstract deadline has been extended to 10 June. I am sure most of you have already submitted a presentation abstract. For those of you who have not, NOW is the time. Your presentations are always the core of our conferences.

I also want to draw your attention to the workshops being presented on Sunday November 3, 2013. CERF has had workshops as part of the meeting for a number of years and they have been a successful and growing part of the biennial event. It seems to me, the San Diego workshops will move to an even higher level.

In all there will be ten different workshop opportunities offered to meeting attendees. The diversity is awesome! For example, the offerings include graduate student mentoring, scientific writing led by Jim Cloern, a past editor-in-chief of Estuaries and Coasts, coastal marsh sustainability, techniques for communicating scientific knowledge to those who really need it, a day-long and hands-on session on monitoring ocean acidification and much more. I find this to be a wonderful and growing addition to CERF meetings...and, there are a number of other new additions awaiting us in San Diego.

So, I’m hoping you have San Diego on your radar for early November. It is a major event on my science calendar and I trust it is on yours as well. See you there!

[Signature]

President’s Greetings
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again this spring. This year, our CHOW event will be a congressional briefing on the theme of Human Health Issues in Our Nation’s Estuaries and Coasts.

The CERF briefing includes three presentations preceded by Capitol Hill office visits to make Members of Congress, and their staff aware of these issues, and of CERF and the expertise of our members. We are delighted to have Joanna Burkholder, Pat Conrad and Steve Otwell speaking at CERF’s briefing this year. (There is an article later in this newsletter with more description of this event.)

Both the 2011 and the 2013 CERF briefings at CHOW have been developed by the CERF Policy Committee headed by Susan Williams (CERF Past-President) and Bob Diaz (CERF member at Large).
CERF 2013 IS OPEN FOR ACTION.
Our Website has the latest info: www.sgmeet.com/cerf2013

Join the premier scientific gathering for coasts and estuaries on November 3-7, 2013 in San Diego.

Post and share this message with friends; contribute to the scientific program by encouraging your colleagues and students to do so too.

You can submit a second abstract to an Education session without paying an additional abstract fee: http://www.erf.org/news/did-you-know-you-can-submit-second-abstract-education-session
To send your abstract, please visit: http://cerf2013.abstractcentral.com/

Find the list of sessions directly at: http://www.sgmeet.com/cerf2013/files/CERF2013_Special_Sessions.pdf

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CERF’S UP!
Abstract submission is now open. Deadline has been extended to 10 June 2013!

Toward Resilient Coasts and Estuaries, Science for Sustainable Solutions

Abstract Deadline: Extended to 10 June 2013
Early Registration Deadline: 3 October 2013

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SEE YOU IN SAN DIEGO!
CERF ‘13 Workshops

Workshops, workshops, WORKSHOPS. Sixteen conveners are developing ten workshops for CERF 2013. This line up of workshops looks to be among our most exciting and diverse yet, including two full day workshops! Workshops will be held on Sunday before the conference, so be sure to schedule your flights for an early arrival. When you register online, please indicate which workshops you plan to attend, and we will remind you when you arrive!

Contact Workshop Conveners or Workshops Chair (Karen McLaughlin, karenm@sccwrp.org) for more information about specific offerings. See you in San Diego!

Real Time Data Retrieval and Storage Methods in Coastal Datalogging Applications
Convener: Jeff Adams
(judams@campbellsci.com)
(3:30 – 5:00 pm)
The ability to view data in real time is becoming the touchstone in a number of coastal monitoring programs. This 90 minute workshop will include a discussion of best practices and a hands-on demonstration of available technology for real time data retrieval and storage methods. Discussion will cover factors like quantity and frequency of data collection, accessibility of sites, and availability of service, that help determine best storage and retrieval methods. The second part of the workshop will include the design, configuration, and programming of a wireless datalogger network that measures water quality and meteorological variables. Mobile Apps will be utilized to send programs, view the real time data in numerical and graphical formats, check network status, and collect historical data over cellular or Wi-Fi networks. The goal of the workshop is to gain experience with real time data logging networks for use in coastal settings.

Data Infrastructures for Estuarine and Coastal Ecological Synthesis
Convener: Anne Thessen (annethessen@gmail.com), Ben Fertig (fertig@marine.rutgers.edu)
(1:30 – 3:00 pm)
Synthesis in estuarine and coastal science has recently been defined as the inferential process whereby new models are developed from analysis of multiple data sets to explain observed patterns across a range of time and space scales. Furthermore, understanding coastal/estuarine resiliency and developing sustainable solutions will be aided by synthesis of large, distributed data sets. Though data sets are becoming accessible for synthesis in increasing quantity and volume, the infrastructures for data sharing, management and integration are often fractured and underutilized. With the advent of the NSF Data Management Plan requirement, EarthCube and DataNet, as well as the increasing scope of the “semantic web” researchers need to be informed about data tools they can use and potential solutions to data issues. This 90 minute workshop will include discussion on available data tools and their utility for large scale analysis. The goal of the workshop is to formulate best practices, available resources, and new technologies that can aid data-centric research/synthesis through discussion amongst academia, government, and industry.

Integrated Ecosystem Assessment: From Concept to Practice
Convener: Michael Reiter (reiterm@cookman.edu), Gary Matlock (gary.c.matlock@noaa.gov)
(3:30 - 5:00 pm)
An Integrated Ecosystem Assessment (IEA) is a scientifically-based synthesis and analysis of existing information on relevant physical, chemical, ecological and human processes in relation to specified societal goals and ecosystem management objectives. An IEA examines the causes and consequences of the current status of an ecosystem, provides a forecast without any changes to current management of the system, examines alternative actions that might be considered to achieve or maintain ecosystem health, estimates the costs and benefits of each alternative, and identifies research priorities. This 90 minute workshop will focus on the purpose, design, and use of IEAs, including presentations of IEA methods such as the Integrated Assessment and Ecosystem Management Protocol and completed IEAs that reach conclusions about the health of coastal and aquatic ecosystems, followed by a panel discussion that examines the utility of IEAs and lessons learned by managers responsible for achieving healthy ecosystems. The goal of the workshop is to familiarize

Ocean Acidification Monitoring Instruments
Convener: Mario Tamburri (tamburri@umces.edu)
All Day (8am-5pm)
The need to incorporate ocean acidification parameters into new and existing coastal monitoring programs is becoming increasingly apparent. This full day workshop will build off of the information and experience gained through ACT workshops and technology evaluations and will begin with introductions/reviews of impacts of ocean acidification and approaches to in situ measurements of pH and pCO2.

The bulk of this training workshop will involve demonstrations of, and hands-on interactions with, several commercially available in situ pH sensors and pCO2 analyzers. In one to two hour sessions, participants will rotate from station to station where sensor manufacturer representatives will demonstrate the steps required from the proper use of pH and pCO2 instruments (from set up and calibration to maintenance and data management). The goal of the workshop is to meet experts in the field ocean acidification and to gain experience with existing and emerging technologies that will lead to better monitoring, assessment, and understanding of the acidification of coastal waters.
participants with the process, use, and implementation of IEAs.

____________________________________________________________________________

**Advancing Expert Judgment of Ecosystem Health for Science-Informed Ocean Management Decisions**

Convener: Tess Freidenburg (tess.freidenburg@calost.org) (3:30 – 5:00 pm)

Expert judgment, in which a diverse group of experts is asked to consider a broad range of scientific data and results and to provide a synthetic assessment, is increasingly being used to inform a variety of ocean resource management decisions. Despite different motivations for using expert judgment, there are common themes and approaches in how expert judgment is used. Taken together, these form the basis for an emerging body of practice that can increase the legitimacy of expert judgment processes. This 90 minute workshop will include discussion between scientists, managers and decision-makers exploring the ways in which expert judgment is used in a variety of arenas and how the results of these judgments have been taken up and used to inform management decisions. The goal of this workshop is to formulate best practices for gathering expert judgment and how to utilize it in a variety of settings.

____________________________________________________________________________

**Creating Mutually Beneficial Links Between Citizen Science and Ocean and Coastal Resource Management**

Convener: Ryan Meyer (ryan.meyer@calost.org), Aaron McGregor (aaron.mcgregor@calost.org) (1:30 – 3:00 pm)

Citizen science, also referred to as public participation in scientific research, has many potential benefits. It may involve local communities in rewarding, educational activities, and promote stewardship of natural resources. It can tap knowledge and capacity in areas and at scales beyond the traditional confines of academic science. And it has the potential to inform long-term monitoring and adaptive management of natural resources. This 90 minute workshop will include discussion amongst researchers and practitioners on the different goals of citizen science with particular focus on informing coastal and ocean management decisions, and the challenges this brings. The goal of this workshop is to formulate different models for organizing and sustaining citizen science.

____________________________________________________________________________

**Linking Knowledge with Action: Empirical Evidence of What Works and What Doesn’t**

Convener: Kalle Matso (kmatsos@wildcats.unl.edu) (1:30 – 3:00 pm)

The actions science funders, practitioners, policy makers and decision makers take to better connect estuarine ecosystem knowledge with productive action is critical in addressing pressing environmental issues. This 90 minute workshop will include short presentations based on actual case studies from various actors in the knowledge to action arena (e.g., funders, scientists, boundary spanners, managers) and facilitated discussion. The goal of this workshop is to create the following workshop products, which are designed to be arrayed in a Structured Decision Making—a common collaborative framework—matrix: 1) knowledge to action objectives; 2) indicators of successful linking of knowledge and action; 3) interventions; and 4) high-priority questions to fill information gaps.

____________________________________________________________________________

**A Short Tutorial on Scientific Writing: How to Optimize Chances for Success in Publishing a Paper in *Estuaries and Coasts***

Convener: James Cloern (jcloern@usgs.gov), Iris Anderson (iris@vims.edu), Wayne Gardner (wayne.gardner@utexas.edu) (1:30 – 5:00 pm)

Scientific publication is the cornerstone of research. This is an encore presentation of a popular workshop from two previous CERF meetings on scientific writing and publishing. This workshop will include the following topics: (1) attributes of a well-written paper, including four essential for an excellent manuscript, using examples from a paper that participants will read in advance (Kling, G.W., M. A. Clark, G. N. Wagner, H. R. Compton, A. M. Humphrey, J. D. Devine, W. C. Evans, J. P. Lockwood, M. L. Tuttle, and E. J. Koenigisberg. The 1986 Lake Nyos Gas Disaster in Cameroon, West Africa, Science 10 April 1987: 169-5. [DOI:10.1126/science.236.4798.169]); (2) mechanics of submitting a manuscript including how to choose a journal, write a cover letter to the editor, respond to reviewer comments, review papers yourself, authorship ethics, and what to do when your paper is rejected; and (3) How the processes of submission, review, and publication work at *Estuaries and Coasts*. The goal of this workshop is to familiarize participants with the process of scientific publication with special focus on the CERF association journal.

____________________________________________________________________________

**Graduate Student Mentoring of Undergraduates**

Convener: Tim Dellapenna (dellapet@tamug.edu) (1:30 – 3:00 pm)

Research is an important component of the undergraduate experience in the sciences. This 90 minute workshop will focus on what works in mentoring undergraduate researchers. The workshop will include a panel of experienced graduate student mentors who will talk about their mentoring styles and give examples of approaches to specific problems. Topics will include: fostering independence in undergraduate researchers, successful work and meeting schedules, keeping students motivated, responsibilities of graduate student mentors in passing on research ethics and conventions of the discipline, and continued on page 12
strategies for dealing with problems or issues. The goal of the workshop is to communicate effective strategies for mentoring undergraduate students.

SCOR Working Group 137, Global Patterns of Phytoplankton Dynamics in Estuarine and Coastal Ecosystems
Conveners: Kedong Yin (yinkd@mail.sysu.edu.cn) and Hans Paerl (hpaerl@email.unc.edu)
All Day (8:00am – 5:00 pm)

Phytoplankton biomass and community structure have undergone dramatic changes in estuarine and coastal ecosystems over the past several decades in response to climate variability and human disturbance. These changes have short- and longer-term impacts on global carbon and nutrient cycling, food web structure and productivity, and coastal ecosystem services. The SCOR Working Group 137. “Global Patterns of Phytoplankton Dynamics in Coastal Ecosystems: Comparative Analysis of Time Series Observations” was formed in 2009 to examine the questions: 1) the qualitative character of the ecosystem responses (“what changes”), 2) their amplitudes (“by how much”), and 3) their timing and spatial and temporal scales (“when and where are rates of change the strongest.” This two day workshop is the fourth in a series aimed at identifying the underlying processes and measuring rates at which phytoplankton alter coastal ecosystems on a global scale. Day 1 (2 Nov.) of the workshop is a closed meeting during which SCOR Working Group 137 members will discuss and synthesize long time-series data sets from estuarine and coastal systems worldwide in order to examine patterns of anthropogenic and climate-driven change. Day 2 (3 Nov.) is an open meeting during which CERF members who have experience with decadal observational data from geographically diverse regions to join the Working Group to continue discussions. The wealth of information in these data sets provides an unprecedented opportunity to develop a global analysis and investigation of the dynamics and status of ecosystems where land and sea meet. For more information please visit the SCOR Working Group 137 website: http://wg137.net/

YOU ARE URGED TO DONATE TO THE CERF CONFERENCE CARBON EMISSION OFFSET FUND

One hundred percent (100%) of each contribution will support carbon sequestration projects, local to the state of California. Donations can be placed with your conference registration, or can be made separately by contacting the conference management office (cerf2013@sgmeet.com) for more information.
Thank You to the CERF 2013 SPONSORS

The Coastal and Estuarine Research Federation is grateful to the following sponsors and contributors who have stepped forward to support the CERF 2013 biennial conference:

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Tijuana National Estuarine Research Reserve
AZTI Tecnalia
The Scripps Research Institute
University of Rhode Island
CERF San Diego Field Trips

The San Diego Embarcadero - The Maritime Museum of San Diego, the USS Midway Museum, and the Historic Tuna Harbor

Sunday, 3 November 2013
Duration: 9:30 AM - 3:30 PM
Cost: $50

Once home to the world’s largest tuna fleet, the San Diego waterfront now provides various opportunities to explore San Diego’s connection with the sea. This trip offers a glimpse into San Diego’s past, including tours of the aircraft carrier the U.S.S. Midway and the Maritime Museum of San Diego. The maritime museum has a premier collection of historic vessels, including submarines and the world’s oldest active ship, the Star of India.

The trip will start at the Town and Country Resort and Conference Center, and proceed via the San Diego Trolley to the waterfront. After the tour of the museums, feel free to wander around the Embarcadero, walk to the shops at Seaport Village, or hop back on the Trolley to visit nearby Old Town or some other San Diego locale. Box lunch and an all-day Trolley pass will be included.

www.sdmaritime.org; www.midway.org
10 people minimum, 25 people maximum

Scripps Institution of Oceanography, the Birch Aquarium, and Tidepooling in La Jolla

Sunday, 3 November 2013
Duration: 10 AM - 4:30 PM
Cost: $35

Scripps Institution of Oceanography, part of the University of California San Diego, is a renowned center for ocean, earth, and atmospheric science research and education. It is also home to the popular San Diego attraction, the Birch Aquarium at Scripps. Trip participants will visit the Aquarium as well as the Scripps Pier, where they will learn more about the activities of the Southern California Coastal Ocean Observing System from Scripps scientists. The trip will conclude by taking advantage of an excellent low tide and exploring the tidepools of the Scripps Coastal Reserve. Box lunch and transportation will be provided.

Attire: Please be prepared for tidepooling (e.g., shoes you don’t mind getting wet).

sio.ucsd.edu; www.sccoos.org
14 people minimum, 28 people maximum

Natural and Human History at the Cabrillo National Monument and Tidepools

Sunday, 3 November 2013
Duration: 11 AM - 5 PM
Cost: $30

The Cabrillo National Monument, part of our National Park System, is a wealth of cultural and natural resources. Situated at the end of the Point Loma peninsula jutting into the Pacific Ocean, the Cabrillo National Monument boasts an unsurpassed view of the coast, San Diego Bay, and the greater San Diego area. Trip participants will visit the Monument’s Visitor Center, historic military sites, and the Old Point Loma Lighthouse (one of the original eight lighthouses on the West Coast). The rocky intertidal area at the base of the peninsula is one of the best-protected tidepool systems in southern California, and the trip will conclude with a low tide excursion to this area. Docents are available to provide interpretation. Box lunch and transportation will be provided.

Attire: Please be prepared for tidepooling (e.g., shoes you don’t mind getting wet).

www.nps.gov/cabr/index.htm
14 people minimum, 28 people maximum

Tijuana River National Estuarine Research Reserve and the US / Mexico Border

Sunday, 3 November 2013
Duration: 9 AM - 2 PM
Cost: $25

The Tijuana River Estuary is one of 28 reserves in NOAA’s National Estuarine Research Reserve System, and is situated immediately north of the US / Mexico border. The tour will lead participants across the Coronado Bridge over San Diego Bay and down the Silver Strand to Imperial Beach. The tour will stop at the Tijuana Estuary Visitor Center to orient participants to local marsh habitats and the Reserve’s many partners (including California State Parks, the Tijuana Slough National Wildlife Refuge, and the Southwest Wetlands Interpretive Association).

The tour will continue to the southern Tijuana River Valley and along the international border. Tour stops will demonstrate the complex ecological and social setting of the largest intact coastal wetland in southern California, and highlight efforts underway to understand, protect, and restore this vital area. Box lunch and transportation will be provided.

www.trnerr.org
7 people minimum, 20 people maximum
Ocean Discovery Institute

**Sunday, 3 November 2013**

Duration: 10 AM – 2:30 PM  
Cost: $30

Ocean Discovery Institute leverages San Diego’s unique watershed environments as a means to engage young people from underserved communities and inspire them to become part of the next generation of scientific and environmental leaders. Ocean Discovery Institute has received the White House’s Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring, the highest honor bestowed by the United States government for efforts that advance those fields of education.

During this trip, participants will take a hike through urban canyon habitat to gain a watershed view of the complex connections between urban and coastal environments. They will also learn through interactive experiences how community-based habitat restoration efforts and watershed science education practices have been transformative in improving the local habitats and benefitting coastal environments downstream.

Numerous partnerships, such as those with the University of San Diego and UCSD Sea Grant Extension, allow students to make tractable change and achieve remarkable results in the pursuit of careers in these fields. Transportation and locally-made Mexican food, enjoyed in a water conservation garden that was installed through community efforts, will be provided.


**20 people minimum, 25 people maximum**

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The San Dieguito Wetlands Restoration Project

**Sunday, 3 November 2013**

Duration: 10 AM - 3 PM  
Cost: $25

At San Dieguito Lagoon, just north of San Diego, the power company Southern California Edison is restoring 150 acres of coastal salt marsh wetlands to mitigate the impact on marine fish populations of the cooling water systems for San Onofre Nuclear Generating Station. The goal of the San Dieguito Lagoon restoration project is to preserve, improve, and create a variety of habitats to increase and maintain fish and wildlife and to ensure the protection of endangered species.

Monitoring the success of major environmental restoration projects can be difficult, however, and an independent long-term monitoring plan was developed to assess restoration success. A team of scientists from the University of California Santa Barbara is leading the monitoring program, and they and partners from San Diego State University and California State University Long Beach will show trip participants the core modules of the restoration and discuss the research supporting a better understanding of the functioning and restoration of this coastal lagoon. Box lunch and transportation will be provided.

[www.marinemitigation.msi.ucsb.edu/mitigation_projects/wetland](http://www.marinemitigation.msi.ucsb.edu/mitigation_projects/wetland)

**14 people minimum, 26 people maximum**

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Join us at CERF ’13 for the Tuesday night field trip: A private, 2-hour tour around San Diego Bay on the Inspiration Hornblower. See and hear about San Diego Bay now—with its working waterfronts and natural resources—and into the future through discussion of the San Diego’s climate adaptation plans and commercial fisheries revitalization plan.

Included in the ticket price are dinner, music, the tour and discussions, and the beautiful nighttime San Diego skyline.

The cruise terminal is walking distance from the San Diego trolley line and we got a great deal on the tickets at only $76 per adult ticket (regular cost for all of this on one of their public cruises is $120).

Photo courtesy of portofsandiego.org

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**TUESDAY NIGHT San Diego Bay Tour**

For more information on the vessel, Inspiration, see Hornblower’s website:

[http://www.hornblower.com/port/yacht/sd4](http://www.hornblower.com/port/yacht/sd4)
# CERF 2013 Conference Leadership Committee

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<td>Alejandra Garza, CERF HQ</td>
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<td>Karen Setty, Southern California Coastal Water Research Project</td>
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<td>Helen Schneider-Lemay, The Schneider Group</td>
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Scientific images are powerful informational tools, and transcend their functional role when they possess beauty that may be beheld as art. One of the most memorable images from CERF 2011 was the stunning artwork by Paul Baliker which graced the conference materials. Baliker’s piece “Ocean’s Eleventh Hour” wordlessly described the diversity of aquatic environments and the feedback among life forms which depend on functioning ecosystems. During the silent auction at CERF 2013, a handful of carefully selected “science as art” works will be on display. All proceeds from the auction will support CERF student activities. To date, we have secured pieces from accomplished part-time artists (and full time scientists) which describe unique, striking and multidisciplinary perspectives of the aquatic realm. We encourage CERF members to submit works from their own collections and to bid on items during the auction to benefit the greatest work of art – CERF students. In addition to art, we seek in-kind donations (e.g., vacation time share, boat rentals), CERF memorabilia, and scientific equipment for the auction. If you can donate an item or would like to get involved in the auction please contact Leila or Janet.

Leila Hamdan (leila.hamdan@nrl.navy.mil) and Janet Nestlerode (Nestlerode.janet@epa.gov), Silent Auction Co-Chairs

Potomac Solstice (1999 Leila Hamdan – photograph on archival paper) will be available during the Silent Auction at CERF 2013. “Some are inclined towards tiny stars, yet they still illuminate our world.”
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<th>SUNDAY</th>
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<tr>
<td>Various Field Trips</td>
<td>8:00 - 9:45 am Morning Sessions</td>
<td>8:00 - 10:00 am Early Morning Sessions</td>
<td>7:00 - 8:00 am President’s Breakfast (By Invitation)</td>
<td>8:00 - 10:00 am Morning Sessions</td>
<td>9:00 am - 12:00 pm CERF Governing Board Meeting (By Invitation)</td>
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<tr>
<td>11:00 am -12:30 pm Student Worker Orientation and Training</td>
<td>9:45 - 10:30 am Break</td>
<td>10:00 - 10:30 am Break</td>
<td>7:00 am 5K Fun Run</td>
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<td>1:00 pm Registration Opens</td>
<td>10:30 am - 12:00 pm Plenary Session - Nutrient Criteria</td>
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<td>12:00 - 1:30 pm Lunch</td>
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<td>4:00 - 5:30 pm Awardee &amp; Sustaining Members Reception (By Invitation)</td>
<td>3:30 - 5:00 pm Late Afternoon Sessions</td>
<td>3:30 - 5:00 pm Late Afternoon Sessions</td>
<td>5:00 - 7:00 pm Poster Sessions/Happy Hour</td>
<td>5:00 - 7:00 pm Poster Sessions/Happy Hour</td>
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<td>5:30 - 8:30 pm Close Out Party and Student Awards Presentation</td>
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**PLEASE NOTE:**
ALL TIMES ARE PRELIMINARY.
INTRODUCING EXO...
BREAKING THE SONDE BARRIER

- Calibrates in minutes
- Collects data for 90 days unattended
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  - Conductivity, Temp, Depth/Level, DO,
  - Turbidity, Total Algae, fDOM,
  - Ammonium, Chloride, Nitrate and more

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Student Conference Activities and Funding Opportunities for CERF 2013

Student Conference Activities
The Federation recognizes that there are many long-term benefits to students who attend our conferences, in addition to the experience and acclaim (and sometimes prizes!) that are received for making presentations, you, as a student, can:

- Have your student presentation judged – earn cash prizes and receive valuable commentary.
- Participate in student-oriented workshops and events – several throughout the week.
- Attend the Student Pizza Social and Career event – meet newly graduated students just beginning their careers, senior scientists, and managers in a fun, relaxed setting. (Event held on Monday evening of the conference.)
- Become a student worker – your registration is paid!!
- Apply for student travel aid – help offset your travel costs.
- Hear the latest developments in coastal and estuarine science and management – from the people who are doing this exciting work.

Most people find that the best part of a Federation conference is the other people they meet. Many lifelong collaborations and friendships begin at Federation conferences. CERF conferences are excellent opportunities for students in this field to begin to create their own unique networks of professional contacts that will be important throughout their careers.

Student Career Networking Dinner

All undergraduate and graduate students are invited to attend the popular STUDENT CAREER NETWORKING DINNER, hosted by Leanna Heffner. This event provides students a fantastic and unique opportunity to network with established professionals and recently employed graduates in a fun and casual atmosphere. You will be able to meet professionals that work in a variety careers (academia, federal and state agencies, NGO’s, consulting, and more!). This is a great opportunity to establish new contacts, inquire about employment and internship opportunities, and garner valuable advice about career options and career preparation! Email leheffner@gso.uri.edu for more info. (AND DID WE MENTION FREE PIZZA AND SOFT DRINKS?!)
**Student Pub Night**

Want to get out for a night on the town? Want to meet other CERF students in a fun and laid-back atmosphere? Come out for the **STUDENT PUB NIGHT** at CERF to meet and mingle with your peers! (Non-student CERFs are welcome to join!). Location TBD.

**Super-Social Social Media!**

CERF Students! Be sure to hop online and “Like” the **CERF STUDENTS FACEBOOK** page! We will be posting student-related info on CERF activities, as well as general student opportunities (workshops, webinars, fellowships, and more!). It’s also a great place to network and meet other CERF students! **ON TWITTER?** Check us out at @CERFScience and #CERFstudents.

---

**Student Registration Reimbursement**

Want to come to the CERF conference in San Diego but money is tight? We’ve all been there and we can help. You may apply to work at CERF 2013 San Diego in exchange for your registration for the conference. Beside the financial benefit, you will have the chance to work alongside the conference organizers to see how such a large event works; and you’ll get a free t-shirt! Typically student workers will run the audio-visual equipment during the conference, work on processing visual presentations, registration, the poster hall, and other general conference support. Your registration fee will be reim-bursed in exchange for working two (2) half-day shifts (up to 6 hours each shift). Upon completion of your volunteer shifts, you will be able to get a check for your registration fee from the registration desk. This means you must pre-pay your registration. For further information, please contact: **The Schneider Group, cerf2013@sgmeet.com, 254-776-3550**

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**Student/Recent Graduate (Early Career) Travel Awards Available for CERF 2013**

**APPLY BY 1 JULY 2013**

Paul Carlson, Student Travel Awards, paul.carlson@MyFWC.com

Students and recent graduates (including early career professionals) in need of financial assistance to attend the CERF 2013 conference may request travel support (William E. Odum Memorial Award and Scott W. Nixon Travel Award) from CERF.

Awards will range from $150 to $300 per person depending on how far you are traveling. Although a CERF Travel Award will probably not cover all of your travel costs, you can use it as leverage for additional support from your academic department or your employer.

**Eligibility Criteria**

- Be enrolled as a current undergraduate or graduate student OR be within 3 years of your graduation date as of November 1, 2013.
- Not previously received a CERF travel award for past CERF conferences.
- Be a CERF member (Student or Early Professional Member) in good standing when you apply (a membership application form can be found on the CERF web site: www.erf.org).
- Be registered for the CERF 2013 conference (registration opens March 2013) be present at the CERF 2013 conference to pick up your check.
- Agree to fill out the meeting evaluation form following the conference, including your feedback and recommendations for student-related activities at future CERF conferences.
- **NOTE:** You do NOT need to be presenting at the conference in order to apply for a travel award.

**How to Apply**

Register online for the conference (https://www.sgmeet.com/cerf2013/registio. asp) by 1 July 2013. When you register, sign up for “Student Early Registration” or “Early Career/Recent”.

By the way, the CERF Affiliate Societies (ACCESS, AERS, CAERS, GERS, NEERS, PERS, and SEERS) may award conference travel money to students. To find out more about these awards, visit the societies’ web sites (accessible through www.erf.org) or contact the president of your regional Affiliate Society. Students — your participation in the CERF 2013 conference is important to you and to the Federation. So if you need assistance, please apply for a travel award.
Phone a Friend

continued from page 1

at CERF and the biennial conference is one of the key means for keeping up with these friendships, many of which were forged more than 30 years ago.

It is important to create these relationships as students and CERF has invoked a new approach this year that we hope will enhance student participation, as well as student presentations. Recognizing that it can be financially challenging for a faculty member to send multiple students to a conference, we now offer a package deal. With this package, the registration costs for four or more students of a single professor will be substantially discounted (in form of rebates) to the students.

Each student will need to register and attend as usual. The professor must request the rebate in writing to CERF HQ. All students and the professor must attend the conference. Procedures for this will be posted soon on the conference website. We are hoping that this multiple registration discount will enhance participation by early career colleagues.

I hope that we see you in San Diego and that you find the conference to be the same great way to remain connected that I have always found it to be.

— Steve Weisberg, Conference Chair

Are you a manager with too much to do and too little time?

Coastal and Estuarine Science News — CESN
Where coastal managers stay on the leading edge

Coastal and Estuarine Science News (CESN) is an electronic newsletter that provides brief summaries from the journal, Estuaries and Coasts.

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• Recent scientific results every coastal manager should know.
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CESN is an electronic publication of the Coastal and Estuarine Research Federation®
The Federation thanks the EPA for their generous sponsorship of CESN
CERF 2013
Toward Resilient Coasts and Estuaries, Science for Sustainable Solutions
3 - 7 November 2013
Hotel Mission Valley San Diego Town & Country Convention Center
San Diego, California USA

CERF 2013 CONFERENCE REGISTRATION INSTRUCTIONS AND FORM
CERF Activities: The full registration fee for members and non-members includes admission to all oral and poster sessions, exhibits, breaks, Sunday’s Plenary and President’s Reception, Thursday’s Closing Party, most workshops, plus the program book. The student registration fee includes all of those events, plus the Monday Night Student Career Event. The social registration fee includes admission only to the President’s Reception, Wednesday Night Student Career Event, the Closing Party and to the breaks. Optional events such as the field trips, the Women in Science breakfast and Tuesday evening’s party are not included in the conference registration fee. If these optional events are of interest to you, we urge you to sign up when you register for the conference. Space is limited.

On-line registration and payment is preferred. Please fill out both the registration information and the fee worksheets. Please note: Registrations cannot be accepted without payment. Credit card charges are debited by Schneider & Associates, not CERF.

To fax or mail the registration form, please return the completed two-page registration form, but not this instruction page. Please be sure to complete the fee worksheet to calculate your total payment.

Please mail the completed forms with a check, credit card information, or a purchase order to CERF 2013, 5400 Bosque Boulevard, Suite 680, Waco, Texas 76710-4446. Make checks payable to CERF 2013. Send faxes complete with credit card information to 254-776-3767. Questions about your method of payment? Please contact The Schneider Group at 254-776-3550 or cerf2013@sgmeet.com.

CONFERENCE CANCELLATION AND REFUND POLICY:
After registering, if you are not able to attend the conference, we encourage you to send a substitute attendee. You may substitute at any time, even on-site at the conference. However, if you must cancel after you have already paid, we can refund your conference fee (less a $50 cancellation fee) if we receive your request by post, fax or e-mail on or before 4 October 2013. No refunds will be issued after 4 October 2013. Send the cancellation notice refund request to: CERF 2013 Conference Manager, 5400 Bosque Boulevard, Suite 680, Waco, Texas 76710-4446, fax your request to 254-776-3767, or send via e-mail to cerf2013@sgmeet.com.

Note: Abstract fees are not refundable and are payable whether or not your registration is later cancelled.

STATEMENT OF PROGRAM CHANGE AND LIMITATION OF LIABILITY:
The Federation, conference organizers, and sponsors reserve the right to revise the conference program content and presentations, or to cancel the conference if registration criteria are not met or when conditions beyond the Federation’s control prevail. If the conference is not held, the organizers’, sponsors’, and Federation’s liabilities are limited to a refund of the registration fee paid by each registrant.

ADDITIONAL INFORMATION:
Additional information concerning fees, workshops, field trips, the conference program and more is available on-line at the conference web site through http://www.sgmeet.com/cerf2013.
CERF 2013 Conference Registration Form (Please complete the fee worksheet on the back of this form): Please mail the completed form with a check, credit card information, or a purchase order to CERF 2013, 5400 Bosque Boulevard, Suite 680, Waco, Texas 76710-4446. Make checks payable to CERF. Send faxes complete with credit card information to 254-776-3767. Questions about your method of payment? Please contact The Schneider Group at 254-776-3550 or cerf2013@sgmeet.com. Registrations cannot be accepted without payment. Credit card charges are debited by Schneider & Associates. This is the payee you will see on your credit card statement, not CERF.

Registrant Information:

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NAME FOR BADGE (IF DIFFERENT FROM FIRST NAME ABOVE):

ORGANIZATION, INSTITUTION OR AFFILIATION

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MAILING ADDRESS LINE 2

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Abstract ID:
If you do not have access to your Abstract ID, please e-mail cerf2013@sgmeet.com and be sure to include the title of your abstract in the body of your message.

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Judging of Student Presentations:
We encourage established professionals and graduate students to consider judging student presentations. Graduate students will be assigned to judge undergraduate presentations.

☐ I am willing to volunteer to judge student presentations. Check the days you are willing to judge: ☐ Mon ☐ Tues ☐ Wed ☐ Thurs

I am ☐ or am not ☐ a graduate student

☐ I am confident judging the following checked categories:

☐ Benthic Ecology ☐ Biogeochemistry and Eutrophication
☐ Coral Reefs ☐ Climate Change and Adaptation
☐ Fisheries and Upper Trophic Levels ☐ Education
☐ Habitat Mapping and Assessment ☐ Geomorphology and Sediments
☐ Macroalgae and Benthic Algae ☐ Integrated Ecosystem Assessment
☐ Modeling ☐ Microbial Ecology
☐ Watershed and Estuarine Restoration ☐ Plankton Ecology
☐ Wildlifec and Marine Mammals ☐ Wetlands

Roommate Information Request:
☐ I am interested in receiving information about the conference roommate service. The purpose of this service is to connect students and other attendees with those who wish to share a room at the conference. Neither CERF nor the CERF conference management organization is responsible for individual roommate choices or referrals.

Student Workers:
☐ I am interested in participating as a student worker.

Emergency Contact Information:
The following information is requested for conference management purposes only.

IN CASE OF EMERGENCY, PLEASE CONTACT EMERGENCY CONTACT PHONE NUMBER

During the conference, I will be staying at the following hotel/facility:
☐ Hotel Mission Valley San Diego Town & Country ☐ Other:

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This is for informational purposes only. You must make your hotel reservations directly with the appropriate hotel or facility. Please provide this information even if you are not staying at one of the CERF conference hotels.

If you have a disability or limitation that may require special consideration in order to fully participate, please contact the conference manager, Helen Schneider Lemay, at 254-776-3550 or helens@sgmeet.com to discuss how we can assist you during the conference.

Payment Information:
Please note that credit card charges will be processed by Schneider & Associates. The charge on your credit card statement will show a payment to Schneider & Associates, not CERF. Registrations cannot be accepted without payment. Organizations can be invoiced only if a copy of the purchase order accompanies the registration either by fax or by mail. Purchase orders must include purchase order number, complete address for sending invoice, and contact person with contact information.

Payment Method:
☐ Check (Make checks payable in US dollars to CERF.) ☐ Purchase Order
☐ Credit Card (Please check type of card: ☐ Visa ☐ MasterCard ☐ American Express)

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Workshops:
Meeting workshops are free to attend, but your indication to attend one of them will help conference organizers better prepare for them. Workshops will be held before the conference from 1:30-5:00 pm on Sunday, 6 November. Please mark the workshop you plan to attend:

- Real Time Data Retrieval and Storage Methods in Coastal Data-logging Applications
- Ocean Acidification Monitoring Instruments
- Linking Knowledge with Action: Empirical Evidence of What Works and What Doesn’t
- How to Optimize Chances for Success in Publishing a Paper in Estuaries and Coasts
- Creating Mutually Beneficial Links Between Citizen Science and Ocean and Coastal Resources
- Data Infrastructures for Estuarine and Coastal Ecological Synthesis
- Integrated Ecosystems Assessment: From Concept to Practice
- SCOR Working Group 137, Global Patterns of Phytoplankton Dynamics in Estuarine and Coastal Ecosystems
- Graduate Student Mentoring of Undergraduates

Registration Fees:
The full registration fee for members and non-members includes admission to all oral and poster sessions, exhibits, breaks, Sunday's Plenary and President's Reception, Thursday's Closing Party, most workshops, plus the program book. The student registration fee includes all of those events, plus the Wednesday Night Student Career Event. The social registration fee includes admission only to the President's Reception, the Closing Party and to the breaks. Optional events such as the field trips, Women in Science breakfast, and Tuesday evening's event are not included.

Registrations made on or before 3 October 2013 receive a substantial discount. Check appropriate registration fee(s):

- Member Early Registration (On or before 3 October 2013) .................................................................$400
- Member Late Registration (After 3 October 2013) ..........................................................................................$500
- Member One-Day (Mon, Tues, Wed, Thurs) ...............................................................................................$250
- Non-member Early Registration (On or before 3 October 2013) ...............................................................$530
- Non-member Late Registration (After 3 October 2013) ..............................................................................$630
- Non-member One-Day (Mon, Tues, Wed, Thurs) ......................................................................................$375
- Student Early Registration (On or before 3 October 2013) .........................................................................$180
- Student Late Registration (After 3 October 2013) .....................................................................................$220
- Student One-Day (Mon, Tues, Wed, Thurs) ..............................................................................................$95
- Social Early Registration (On or before 3 October 2013) ...........................................................................$130
- Social Late Registration (After 3 October 2013) ......................................................................................$150

NAME FOR SOCIAL REGISTRATION FEE (FIRST NAME AND LAST NAME)

Abstract Submittal Fee:
The abstract fee for the 2013 CERF Meeting is $70.00 USD per abstract ($60 if paid online). Please pay the abstract fee once only. Abstract fees are not refundable.

- Mail-in Abstract Submittal Fee .................................................................................................................$70

Field Trips:
Pre-registration is required to participate in the field trips. All transportation is included. When noted, lunch is provided. Please go to the conference web site (http://www.sgmeet.com/cerf2013/fieldtrips.htm) for full information concerning each guided trip and for self-guided tours.

Sunday, 3 November
- Natural Human History at the Cabrillo National Monument and Tidepools (6 hours) .........................................................# @ $30/person
- Tijuana River National Estuarine Research Reserve and the US/Mexico Border (5 hours) .........................................................# @ $25/person
- Ocean Discover Institute (6 hours) .................................................................................................................# @ $30/person
- The San Dieguito Wetlands Restoration Project (5 hours) ....................................................................................# @ $25/person

Ticketed Social Events:
- Women in Science Lunch – Regular Fee (Tuesday, 5 November, 12:00 pm) .................................................................# @ $30/person
- Women in Science Lunch – Student Fee (Tuesday, 5 November, 12:00 pm) .................................................................# @ $25/person
- Fun Run (Wednesday, 6 November, 7:00 am) .................................................................................................................# @ $20/person
- Hornblower Cruise CERF Social – Regular Fee (Tuesday, 5 November, 6:00 pm, 3 hours) .................................................# @ $75/person
- Hornblower Cruise CERF Social – Ages 4-12 Fee (Tuesday, 5 November, 6:00 pm, 3 hours) .......................................................# @ $45/person
- Hornblower Cruise CERF Social – Ages 3 and under - Free (Tuesday, 5 November, 6:00 pm, 3 hours) ......................................# Included
- Student Awards and Farewell Party (Thursday, 7 November, 5:30 pm; ticket included in registration fee) ..............................................# Included

Donation to Offset Conference-generated Carbon Emissions:
CERF conference activities impact climate change by generating carbon emissions. Such activities include participants’ air and ground transportation, plus electricity and natural gas usage at the convention center and other event facilities. We invite you to donate to the CERF Conference Carbon Emissions Offset Fund. One hundred percent of each contribution will support community-based carbon sequestration projects such as planting and restoring salt marshes and planting trees. This contribution is tax deductible. Donations may be made separately.

Contact the conference management office for information.

- Developed country attendees ($20)
- Developing country attendees ($5)

Payment Total:
PERS Annual Meeting Held
April 4-6, 2013, in Delta, B.C.
PERSians migrated north this year to Delta B.C. to celebrate our 36th Annual Meeting April 4-6 at the Delta Town and Country Inn. Under the theme “Towards an estuarine ethic: integrating science and stewardship”, approximately 95 estuarine scientists and students congregated to share oral presentations and posters, reconnect with colleagues, and engage in passionate discussion on all things estuarine. Typical of our meetings, the quality of the presentations and posters was excellent and everyone enjoyed the camaraderie and chance to catch up on the latest in estuarine science and initiatives in the Pacific Northwest (PNW).

The Thursday evening mixer was held at the Riverhouse Pub situated on Deas Slough in the Fraser River estuary. The river rock fireplace and cozy pub ambience was well attended by PERS members from Oregon, Washington, and British Columbia, as well as a large number of students new to our society. With ample, tasty estuarine hor d’oeuvres and B.C. Stanly Park beer and Sonoma Ranch wine, there was a foraging frenzy led by hungry students. The Riverhouse manager Katrina Wynn’s dedicated staff provided a super opening venue and more than met our expectations. The mixer has always been a great introduction to our meetings and sampling local beers, wines and food made for a special PERS social experience.

The Friday morning meeting began with an opening prayer from Shirley Landen, a Tsawwassen First Nation (TFN) elder. Delta, the community selected for the 2013 meeting, is located within the traditional territory of the TFN who have resided and lived off the resources of the Fraser River estuary for thousands of years. Estuarine scientists and tribes in the PNW have enjoyed a close interaction in habitat restoration and resource management, and it is something PERS would like to develop further.

I was pleased to welcome PERSians to Delta, in the Fraser River delta, and especially encouraged by the large number of students and new faces to our meeting. Mark Wolf-Armstrong provided a welcome from our parent federation, the Coastal and Estuarine Research Federation (CERF), and encouraged PERSians to send in abstracts for presenting at the CERF 2013 biennial conference to be held in San Diego, November 7-11, 2013.

The scientific sessions began with a Poster Profiles, suggested by Si Simenstad, in which each of the poster authors did a two-minute poster blitz consisting of a personal identification and summary of their poster. It was quite successful in introducing the authors, both professionals and students, as well as the content of the posters. I was impressed on how accomplished the profiles were and felt reassured that the PNW estuarine ethic was strong and bids well for the future. The Poster Profiles provided a great introduction to the Poster Sessions and were held during the coffee breaks.

The oral presentations began following the coffee break and first poster session. In total there were six Oral Presentation sessions over the course of the meeting. Presentations were very well done and reflected the high quality science being used to determine the ecological functioning and stewardship of our estuarine environments.

Friday sessions were immediately followed by our PERS business meeting. The 2013 business meeting set an all-time attendance record due in part to the fact that we launched immediately into the business issues before anyone could escape the room.

Members provided meaningful feedback on a range of PERS issues and provided useful guidance and suggestions for the PERS Board. Of particular note was the strong input from the student members on ways to improve PERS, such as initiating social media initiatives on Facebook and Twitter, and making the PERS newsletter, PERSpectives, more relevant. In fact, a subcommittee was created to guide these initiatives, and Facebook and Twitter sites were already set up a day after the meeting. Thanks are extended to Pascale Goertler for her efforts on the student front and to Stuart Munsch for setting up the sites.

A highlight of the meeting was the Friday night PERS banquet that featured a welcome from Darrell Desjardin, Director, Environment and Sustainable Development, Port Metro Vancouver, and the keynote address of Shirley Landen, a Tsawwassen First Nation elder. Delta, the community selected for the 2013 meeting, is located within the traditional territory of the TFN who have resided and lived off the resources of the Fraser River estuary for thousands of years. Estuarine scientists and tribes in the PNW have enjoyed a close interaction in habitat restoration and resource management, and it is something PERS would like to develop further.

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A highlight of the meeting was the Friday night PERS banquet that featured a welcome from Darrell Desjardin, Director, Environment and Sustainable Development, Port Metro Vancouver, and the key-
note address by Dr. John Rybczyk, Professor and Chair, Department of Environmental Science, Western Washington University. The PMV was a major sponsor of the meeting for which PERS is very appreciative.

Dr. Rybczyk’s presentation entitled “Estuarine restoration and rising sea levels: lessons from the Red Queen” was excellent, being both topical and very entertaining. Based on his work in the Venice Lagoon, Mississippi River delta, and local estuaries in the PNW, it was very well received.

The Friday night banquet food was expertly prepared and catered by the Delta Town and Country Inn and PERSians were well satiated with healthy entrees and a decadent assortment of freshly baked deserts, paired with B.C. red and white wines. Based on the positive comments received from our members, the evening provided good value.

On Saturday, the scientific oral and poster presentation ended at noon. Following the lunch break, the student awards were presented, silent auction items dispensed, and closing comments and acknowledgements made. The meeting was a great celebration of our estuarine research and PERS members left smiling, reinvigorated, and inspired to continue their efforts on behalf of coasts and estuaries.

PERS is proud to salute the student award winners and wants to acknowledge the excellent effort of all the oral and poster presenters.

- Brian Turner, Portland State University, Heine Award for best student presentation, entitled “Over compensation and the European green crab”;
- Stuart Munsch, University of Washington, First Place graduate talk, “Salmon, seawalls, and Seattle: assessing the effects of shoreline modifications on the ecology of fish in Elliott Bay, WA”;
- Joel Harding, Simon Fraser University, Runner up graduate talks, “From earth and ocean: the importance of upstream landscapes, salmon and cross-ecosystem subsidies to a mobile estuarine consumer”;
- Julia Alards Tomalin, Michael Jeffery, and Courtney Lahue, British Columbia Institute of Technology, First Place undergraduate talk, “Restoration of MacKay Creek Estuary”;
- Deanna MacTavish and Michelle Holst, British Columbia Institute of Technology, Runner up undergraduate

PERS REPORT
Members in good standing:
- PERS membership estimated at 95 members
- Members split approximately: 52% Washington, 35% Oregon, 11 % B.C., and 2 % other.
- Accurate numbers will be compiled in May 2013 once the Schneider membership data are released and Annual Meeting registrations and membership payments are compiled.

Current Executive Officers:
- President: Gary Williams, G.L. Williams & Associates Ltd., Coquitlam, BC
- Past-President: Steven Rumrill, Oregon Department of Fish and Wildlife, Newport, OR
- President-Elect: Tony D’Andrea, Oregon Department of Fish and Wildlife, Newport, OR
- Secretary/Treasurer: Jeannie Gilbert, Western Washington University, Bellingham, WA
- Professional Member At-Large: Cynthia Durance, Precision Identification, Inc., Vancouver, BC
- Professional Member At-Large: Pascale Goertler, University of Washington, Seattle, WA

Finances (as of 10 April 2013):
- PERS General Fund (website, email list, CERF travel, etc.) …… $5,279.02
- PERS Savings (meeting start-up, contingencies) …………..…….. $4,422.01
- PERS Annual Meeting (conference fund) …………………….. $7,325.00
- Quamon Memorial Fund (student travel) …………………….. $5,433.94
- Eldridge Memorial Fund (student research support) ……… $3,174.00

Annual dues by type of member:
- Full membership dues: $20 yr⁻¹
- Student membership dues: $10 yr⁻¹

Recent meetings:
- 36th PERS Annual Meeting, April 4-7, 2013, Delta, B.C.
- 35th PERS Annual Meeting, April 12-14, 2012, Anacortes, WA
- PERS Business Meeting, November 7, 2011, Daytona Beach, FL
- 34th PERS Annual Meeting, March 4-6, 2011, Astoria, OR
- 33rd PERS Annual Meeting March 29-31, 2010, Nanaimo, BC
- 32nd PERS Annual Meeting, April 2-5, 2009, Bellingham, WA

Upcoming meetings:
- CERF 2013, November 3-7, 2013, San Diego, CA

Website, Listserv, and Newsletter:
- Website: www.pers-erf.org (Jeannie Gilbert webmaster)
- PERS Newsletter: PERSpectives
- PERS utilizes a Google groups listserv (218 subscribers)

Ongoing projects:
- PERS is initiating social media sites on Facebook and Twitter, as well potential other sites

Special or new projects:
- Summary document/textbook: Ecology of Pacific Northwest Estuaries (collaboration among PERS science investigators)

Elections:
- Jeannie Gilbert acclaimed PERS Secretary/Treasurer (2013-2015) at the PERS Business Meeting, April 5th, during the 36th Annual Meeting in Delta, B.C.

Other Society business:
- Maintain the PERS tradition of no concurrent sessions: each annual PERS conference typically includes oral presentations and, coupled with social events, PERS banquet, PERS Business meeting, and an optional field trip.
- PERS Silent auction using PERS members and donor contribute items, is held during each annual PERS Conference to generate revenue to support student travel.
- PERS to provide support to students for CERF 2013 Conference in San Diego, CA
- Investigate collaboration opportunities for PERS with Pacific Rim estuarine scientists
NEERS is on a good streak. Not only has meeting attendance been relatively high over recent years, student presentations have been extraordinary. We’ve also seen an increase in undergraduate participation and overall quality of presentations, both graduate and undergraduate. The Spring 2013 NEERS meeting was held in Portland, Maine. Local organizers included Bev Johnson, Susan Adamowicz, Will Ambrose, Curtis Bohlen, and Laura Sewall. Additional support was provided by Hilary Neckles, Cindy Delpapa, and Sara Grady – core NEERSians that consistently make each meeting succeed on many levels. The Special Symposium, Current Coastal Research: A Symposium in Honor of Michelle Dionne, was emotional though packed with excellent presentations and parallels to Michele’s life. After welcoming words from meeting organizer Bev Johnson, an introduction by Paul Best described how truly remarkable Michele was and how far her influence radiated throughout our community. The 10 symposium presentations synthesized several topics: salt marsh and eelgrass ecology, climate change, restoration of coastal systems, and conservation decision making processes. The latter was one of Michele’s early core interests and an area where she was quite creative and influential.

There are several Spring 2013 student rewards to report. This is the first year that NEERS adopted honorable mentions as necessary. The Rankin Prize for Best Undergraduate Paper was awarded to Hansen Johnson and Kathleen Bringley received honorable mention. The Ketchum Prize for Best Graduate Paper was awarded to Sarah Feinman and Marianne McNamara received honorable mention; the Warren Prize for Best Undergrad Poster went to Rachel Morrison, and the Dean Prize for Best Graduate Poster was awarded to Kenly Hiller and Matt Simon received honorable mention. Past-President Steve Hale provided banquet entertainment and he was funny.

The themes that have been presented at recent NEERS meetings point to the future of estuarine research in the New England region. Nutrient over-enrichment will continue to be on the forefront as development along coastal margins continues to modify ecosystems across multiple scales. As we continued on page 29
GERS: What’s new? Keeping busy, busy, busy

GERS members have been keeping busy this spring, starting new work, participating in a variety of research, education, and outreach events, and even supporting our New England affiliate society (NEERS) by sending them one of our own.

In March, Dr. Mike Lowe, a graduate of University of Southern Mississippi under Dr. Mark Peterson, started a position as a Jointly Appointed Postdoctoral Researcher with the Woods Hole Oceanographic Institution and NOAA’s Northeast Fisheries Science Center. Mike will be using long-term food habit, plankton survey and multi-frequency acoustic data to characterize predator-prey dynamics in relation to basin scale processing the Northwest Atlantic shelf break ecosystem to develop a larger ecosystem model for the Georges Bank fishing grounds. Mike said his doctoral research at USM well prepared him for his new job, but he will grieve leaving the GERS region and the warm weather, “I blame Mark for all of this!” We wish Mike lots of luck and know he will be an asset to NEERS.

GERS members Tina Miller-Way (GERS Secretary-Treasurer, DISL) and fellow CERF Education Committee member Tim Della-Suena (TAMU) hosted CERF’s first-ever career development webinar, “Graduate Student Mentoring of Undergraduates in Coastal & Estuarine Research”. The April 24th webinar was geared toward helping participants become better mentors and overcome common pitfalls. Several Dauphin Island Sea Lab (DISL) personnel and GERS student members attended the nationally broadcast event. Huge thanks go to DISL IT staff for providing technical and logistical support and for allowing CERF to use the Lab’s WebEx license for the event. We look forward to more CERF-hosted career development webinars in the future, and plan to provide useful feedback and topic suggestions. If any affiliate society members are interested to share their input or lead a webinar, contact Janet Nesslerode (Nesslerode.janet@epa.gov).

GERS members including Mike Murrell (US EPA, Gulf Ecology Division) and Ken Dunton (UT Austin) also attended recent meetings in Florida, Mississippi, and Texas. GERS members shared their expertise at the Ocean Carbon Biogeochemistry workshop at USGS in St. Petersberg, FL in late March; the NOAA hypoxia Forum for Gulf of Mexico Hypoxia Research Coordination and Advancement at Mississippi State University Science and Technology Center, Stennis Space Center, MS in mid-April; and at the Texas Bays and Estuaries Meeting at the University of Texas Marine Science Institute in late April.

It is inspiring to see GERS members active in the scientific community contributing to basic science as well as advancing scientific education and outreach. As we approach summer it is also time to think about nominations for our next slate of GERS officers. Before the end of July we will elect a President-Elect, Secretary-Treasurer, Student Representative, and 2 Members-At-Large. Each of these is a two-year term, beginning at CERF 2013 and ending at CERF 2015; President-Elect will roll into President for a second two-year term. Please consider nominating yourself or someone you know who will make a strong regional representative to keep our vital Gulf of Mexico affiliate society as active and responsive as our members. The GERS board and I welcome your nominations by 1 June 2013 (rcarmichael@disl.org or tmiller-way@disl.org) as well as any feedback or suggestions for the coming year.

Until next time, provide those nominations, check out our website www.gers.us, ‘Like’ us on Facebook (as Gulf Estuarine Research Society), submit your abstracts for CERF 2013, and keep an eye out for GERS upcoming Student Travel Award opportunity.
I come to this edition of the AERS News fresh off of hosting our Spring 2013 meeting in Williamsburg, VA. I find myself totally inspired by the vitality of our membership, strength of our society, and outstanding scientific quality that were on display during the meeting which took place April 11-13 at the Woodlands Conference Center adjacent to Colonial Williamsburg. Given the location of the meeting, our theme was “Revolutionary Thinking: Historical Reconstructions in Coastal Systems”, and featured keynote and contributed presentations on methods and applications in historical ecology.

The meeting began with keynote presentations focused on the theme by Grace Brush (Johns Hopkins University), Norb Jaworski (US EPA, retired), Michael Kemp (UMCES), Anna Wachnicka (Florida International University), Roger Mann (VIMS), and John Waldman (CUNY Queens College). The meeting had 97 attendees and featured 26 contributed talks (12 by students), and 18 contributed posters (13 by students), and ended with a special keynote seminar by Kent Mountford entitled “John Smith’s Chesapeake Bay: A Report Card from 1608”.

A highlight of the meeting was our inaugural combination silent-live auction to support student travel to AERS and CERF. Members had the opportunity to peruse and make silent bids on a range of items during the poster session, reception, and banquet, as well as purchase raffle tickets for selected items. Contributed items ranged from marine themed art and pottery, books, field services for the day, and 1960s-70s era photos of famous AERS scientists in action. Following the banquet, we were treated to a live auction in which members bid on a number of items including donated boat time, YSI instrumentation, a flight lesson, more classic photos and artwork, a famed secchi disc fragment storied with AERS lore, and field services by yours truly. The event was a total blast and we are indebted to the herculean efforts of Chris Heyer, Jeremy Testa, and Sam Lake for organizing it.

Meeting attendees were able to take advantage of the beautiful, warm spring weather to explore Colonial Williamsburg, and some were treated to a post-meeting kayak trip in Powhatan Creek near Jamestown Island, led by Chesapeake Experience. A number of students also took advantage of a special lunch with the keynote speakers following their talks.
Congratulations go to our student presentation award winners:

- **Cassie Gurbisz (UMCES)**, Best Graduate Oral Presentation, “Impacts of extreme weather on a large submersed plant bed in Chesapeake Bay: analysis of time series data”
- **Ann Arfken (VIMS)**, Best Graduate Poster Presentation, “Salinity effects on bacterial community composition in a tidal freshwater ecosystem”
- **Elizabeth Lee** (St. Mary’s College of Maryland), Best Undergraduate Presentation Award, “Comparison of substrates for St. Mary’s River oyster reef restoration”

We also congratulate our student travel award recipients:

- **Tunde Adebola** (George Mason University)
- **Talia Dibbell** (University of Virginia)
- **Cassie Gurbisz** (University of Maryland)
- **Peter Jacobs** (George Mason University)
- **Audrey Pleva** (East Carolina University)
- **Catherine Schlick** (George Mason University)
- **Amanda Sills** (George Mason University)
- **Ryan Weaver** (Virginia Commonwealth University)
- **Chantel Wilson** (Virginia Tech)
- **Joe Wood** (Virginia Commonwealth University)

AERS also extends congratulations to our newly elected President-Elect, **Treda Smith Grayson**, and Secretary, **Danielle Kreeger**, and our newly appointed student representative **Joe Wood**, who takes over for **Jeremy Testa** (thanks Jeremy!). Thanks also to Past-President **Pete Straub** and outgoing Secretary **Jessie Jarvis**, who now rotate off the board and get a much deserved break. Finally, AERS congratulates our two new honorary members, **Bob Diaz** and **Jerry Williams**, and our newest Venerable Clam honoree, **Linda Blum**.

I thank my meeting co-host **Sam Lake**, our terrific Program Committee (Ben Ferwig, Jeremy Testa, and Sam Lake), our webmaster **Chris Heyer** for setting up a new online registration and abstract submission page (along with a new online membership/renewal database and our new email listserv – he has been busy!), our Treasurer **Bryce Brylawski**, and our student judging coordinator and Endowment Chair **David Yozzo** for putting on an outstanding meeting. We are also most grateful to our incredible sponsors, CERF, the Chesapeake Bay National Estuarine Research Reserve in Virginia, the Coastal Systems Ecology and Modeling Program at VIMS, the College of William and Mary, HDR, Maryland Sea Grant, the Richard Stockton College of New Jersey, VIMS, Virginia Sea Grant, and YSI.

AERSians will next meet for our fall business meeting which will take place during the biennial CERF meeting in San Diego (I promise a happy hour!), and our pride will be on the line during the first ever CERF Bowl competition. And plans are already underway for the Spring 2014 meeting which will be held in Ocean City, MD. A team of local hosts is being led by **Judith Stribling** (Salisbury State University).

Until we meet this fall far from the Mid-Atlantic in San Diego, be well and enjoy a productive summer field season – and some time for rest and relaxation. As for me, I’m off tomorrow to the spring CERF Governing Board retreat on Dauphin Island, AL. See you out west this fall!

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1. **AERS Endowment Chair David Yozzo** (left) and President **Mark Brush** (right) present the student travel awards for the AERS Spring 2013 meeting to **Tunde Adebola** (George Mason University), **Talia Dibbell** (University of Virginia), **Cassie Gurbisz** (University of Maryland), **Peter Jacobs** (George Mason University), **Audrey Pleva** (East Carolina University), **Catherine Schlick** (George Mason University), **Amanda Sills** (George Mason University), **Ryan Weaver** (Virginia Commonwealth University), **Chantel Wilson** (Virginia Tech), and **Joe Wood** (Virginia Commonwealth University). Photo (also #6): David Yozzo
2. **AERS President Mark Brush struts his stuff while auctioneer and friend of AERS Aaron Williams auctions him off for a day in the field during the live auction.**
3. **AERS President Mark Brush presents the Venerable Clam to former AERS President and current CERF Secretary Linda Blum at the AERS Spring 2013 meeting.** Photo (also #8): Leila Hamdan
4. **Keynote speaker Kent Mountford peruses items during the silent auction.**
5. **Judith Stribling presents an honorary membership to former AERS President and current CERF Member-at-Large Bob Diaz at the AERS Spring 2013 meeting.**
6. **AERS Endowment Chair David Yozzo (left) and President Mark Brush (right) present the award for Best Graduate Student Oral Presentation to Cassie Gurbisz (UMCES) at the AERS Spring 2013 meeting.**

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**Upcoming Affiliate Society Meetings**

All Fall 2013 Affiliate Society meetings will be held concurrently at the CERF 2013 conference in San Diego, California.

**WHERE:**
Hotel Mission Valley San Diego, Town and Country Conference Center, San Diego, CA

**WHEN:** TBD
The locations and times will be posted on the CERF 2013 website.

For detailed information, please check the Affiliate Societies’ websites via www.erf.org. Choose the “Affiliates” heading near the top of the home page.
The Spring 2013 semi-annual meeting in Charleston, SC, April 17-19 (Wed. - Fri.), was one of the best attended and most collegial in years. All events were held at the Fort Johnson complex on James Island. A total of 110 people, including 50 students, attended the meeting. Meeting sponsors included YSI Inc., Hach Hydromet, North Carolina Sea Grant, South Carolina Sea Grant Consortium, Savannah State University, Schweizerbart Science Publishers, South Carolina DNR, and NOAA. Our gracious local hosts, Denise Sanger (SC DNR) and Marie DeLorenzo (NOAA), orchestrated the meeting without a hitch.

The meeting began with water quality monitoring workshops given by YSI and Hach Hydromet and a Green Infrastructure Workshop hosted by NOAA Coastal Services Center staff. With abundant food and beverage, the poster session on the evening of April 17, highlighted 24 poster presentations. Lively discussion continued until Board members had to shoo students out in preparation for a Board meeting. The SEERS meeting continued April 18, and the morning of April 19, with 18 excellent oral presentations.

Following the recent elections, President Bob Virnstein thanked David Eggleston (Secretary), Sylvia Schaefer (Student Representative), and Joan Sheldon (Treasurer) for their service during the past 2 years. We also welcomed to the Board our new Secretary Virginia Shervette (USC Aiken), new Treasurer Amanda Kahn (UNC Wilmington), and new Student Representative Mary Grace Lemon (also UNCW).

Richard F. Dame (1941-2013) was honored for his extensive contributions to shell-
fish biology, especially the ecology of oyster reefs, and to SEERS. He was a dedicated educator, generous colleague, and a true southern gentleman. Our community will sorely miss Richard.

**Students starred!**
About half the attendees were students. Of the 53 presentations, 33 (62%) were given by students, including 10 by undergraduates. Impressive! SEERS awarded five full student travel grants of $500 each for travel to CERF in San Diego. Only one of these has been won by an undergraduate. Is there a -- the third time in a row this award has dent, teachers) also went to an undergraduate stu-

Richard served as a program officer in the Ecosystem Studies Program at the National Science Foundation from 1992-1994, and was a visiting scientist in Texel, the Netherlands from 1986-1988. Richard was an avid supporter of the Southeastern Estuarine Research Society (SEERS) throughout his professional career and served as President of the Society from 1996-1998. Richard’s expertise was in invertebrate physiological ecology, ecological energy flow and nutrient cycling as well as ecosystem processes, modeling, and complexity. He published over 60 peer-reviewed articles in professional journals (1972-2013) and was author/editor of several books.

Rich will be remembered for his many contributions that have advanced our fundamental understanding of suspension feeders in ecosystems, particularly the role and importance of oyster communities in the functioning of Southeastern salt marsh and tidal creek ecosystems. In 1992, Richard organized two NATO conferences on the role of filter feeders in marine ecosystems – in 1992 in The Netherlands and in 2003 in Lithuania. His last book, “Ecology of Bivalves: An Ecosystem Approach,” second edition (2011) was an expression of his thoughts on the important role bivalves have in the functioning of marine ecosystems including suggestions for applying ecosystem-based management approaches to their populations. Richard was largely responsible for building the CCU undergraduate marine science program into a well regarded and popular program throughout the country.

Richard was beloved by his students and will be remembered as a mentor, friend, and colleague. He exposed many to a broad scientific community and provided opportunities to foster others careers. SEERS bestowed an Honorary Membership to Richard, presenting this to his widow, Meri Dame, who attended the Thursday evening banquet. Rick DeVoe also presented her with a proclamation from the National Shellfish Association.
ACCESS annual meeting
May 9-11th 2013
ACCESS 2013 is in the final planning stages! Our host Tim Webster has been working closely with the conference planning team to put the finishing touches on this year’s conference. We are expecting 60 people to attend the meeting, many old friends and making new.

Our special symposium on Friday morning, Advances in Mapping Techniques for the Coastal Zone, will be opened by our keynote speaker John Brock. His talk is titled “Establishing the USA coastal national elevation dataset for science and resource management”. John is visiting us from the Coastal Marine Geology Program with USGS, in Reston Virginia. Not only will he attend ACCESS, but John will also give a lecture at the Bedford Institute of Oceanography, in Dartmouth NS, titled “Responding to Hurricane Sandy with a new experimental airborne topobathymetric Lidar.” John will have a busy 4 days!

We are also looking forward to our contributed oral and poster sessions. This year, we will have a large variety of talks and posters related to invasive species, coastal and nearshore habitats, faunal ecology, monitoring, and climate change. Our schedule is packed full, but there is lots of time available for socializing and meeting up with old friends and new.

We are delighted to have a large number of undergraduate and graduate students joining us again this year. We have a strong tradition of supporting student conference travel and research. In partnership with Hoskins Scientific, student prizes are awarded at each conference at both the graduate and undergraduate levels. Below, our graduate student poster presentation prize winner from last year’s conference tells us about his research.

STUDENT HIGHLIGHTS: poster prize winner from ACCESS 2012
Jeff C. Clements – MSc candidate (with co-author Heather Hunt)
Department of Biology, University of New Brunswick, Saint John, New Brunswick

The influence of surface sediment pH and aragonite saturation state on soft-shell clam (Mya arenaria) recruitment in the Bay of Fundy, New Brunswick, Canada

In the past couple of decades, southwestern New Brunswick has seen drastic declines in soft-shell clam (Mya arenaria) populations, which, along with other factors, has led to a loss of clam digging in the area. Although many factors have been shown to play a role in bivalve recruitment (a key factor in determining population success), failed management strategies suggest inadequate research efforts in the area. However, one potential influence that is not yet well established is the effect of surface sediment carbonate saturation state (Ωaragonite) – the ability of sedimentary pore water to precipitate calcium carbonate. Numerous studies show that increasing CO2 levels in the atmosphere can drastically lower oceanic pH and subsequently reduce carbonate availability, resulting in negative impacts on calcifying organisms. Being less well buffered against declining pH, estuarine habitats are highly susceptible to the impacts of ocean acidification. Moreover, estuaries are also susceptible to decreased pH as a result of acidic freshwater input and eutrophication. Although it has been demonstrated that declines in water column pH can negatively affect calcifying organisms, few studies have assessed these effects in estuarine habitats and even fewer in surface sediment pore water – a necessary component in assessing the consequences of climate change on infaunal organisms, particularly given that pore water pH is typically lower with a steeper gradient than that of the water column. The extent to which low surface sediment pH and carbonate saturation affects the recruitment of Mya arenaria and other bivalves is currently unknown and a better understanding of these processes is necessary for the management of their populations.

As such, my MSc research at the University of New Brunswick under the supervision of Dr. Heather Hunt is assessing the variability of both clam recruitment and Ωaragonite and whether or not a relationship between these two parameters exists. A laboratory experiment conducted in a flume will also be undertaken to determine whether or not Ωaragonite has an effect on clam resuspension and dispersal rates under varying flow conditions. I am hypothesizing that surface sediment pH and Ωaragonite will vary within and across sites in the Bay of Fundy, and that low levels will negatively impact clam recruitment. Ultimately, this study will provide a better understanding of M. arenaria recruitment processes which may lead to possible modifications to current management strategies for enhancing and sustaining their populations in southwestern New Brunswick.

For further information about ACCESS, including membership, upcoming meetings, research news, job links, and student opportunities, please visit: www.cerf-access.ca
Coastal and Estuarine Science News, which provides summaries of selected articles from the Federation’s journal, Estuaries and Coasts, is funded by the National Estuary Program of USEPA to strengthen the link between science and management in coastal systems.

CERF is grateful for the support of the United States Environmental Protection Agency National Estuary Program, a network of voluntary community-based programs that safeguards the health of important coastal ecosystems across the country.

Visit USEPA-NEP’s Website at: http://water.epa.gov/type/oece/nep
CERF Angels and Sustainers

As of 22 April 2013, the following Federation members donated to the William E. Odum Fund, Donald W. Pritchard Fund, CERF Enhancement Fund and/or Scott W. Nixon Fund for the current membership year.

Thanks to all of you for your generosity. Your contributions of time, energy and support make the Federation great.

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Many thanks to the members who joined or renewed at the Sustaining Member level. Your extra efforts on behalf of CERF will ensure the future of the Federation.

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About CSCOR
NOAA’s Center for Sponsored Coastal Ocean Research (CSCOR) in the National Centers for Coastal Ocean Science (NCCOS) supports research programs providing the critical information and predictive capabilities required to manage the Nation’s coastal resources in a regional ecosystem context. CSCOR works with the management and scientific communities to identify national research priorities, oversees the execution of research with continued involvement of the user community, and facilitates the transition of knowledge and tools into applications for coastal policy and management. http://www.cop.noaa.gov/

Ocean Acidification: Consequences of Exposure to Hard Clam Larvae Revealed
NCCOS supported research led by Dr. Chris Gobler (Stony Brook University) looked at the days-to-months impacts of carbon dioxide (CO2) on the larvae of northern quahogs (Mercenaria mercenaria) and Atlantic bay scallops (Argopecten irradians). Early exposure of larvae (≤ 4 days old) to high CO2 killed more larvae than larvae first exposed at an older age. Exposure to elevated CO2 during the first four days of larval development caused lower shell calcification rates contributing to the higher mortality; larvae that survived the high CO2 exposure grew to smaller-size adults compared to larvae not exposed. This “legacy effect” emphasizes the central role CO2 can play in bivalve population dynamics. See: Gobler, C.J. and S. C. Talmage. 2013. Short- and long-term consequences of larval stage exposure to constantly and ephemerally elevated carbon dioxide for marine bivalve populations. Biogeoosciences 10:2241-2253.

Biggest Lake Erie HAB May Become Commonplace
The largest recorded harmful algal bloom (HAB) in Lake Erie’s history may help predict the future. A new multi-investigator study lead by Dr. Anna Michalak of the Carnegie Institution for Science, supported in part by NCCOS, concludes changing farming practices and weather conditions over the last 10 years likely caused the record-breaking 2011 HAB event; the study predicted the conditions under Great Lakes’ changing climate. Due to more intense weather and increased runof events, Lake Erie has received more phosphorus. After the bloom began to form, weak circulation and warm weather further promoted its growth. The authors predict continuing occurrence of these factors will increase the chances of HAB blooms. See: Michalak, A.M. et al. 2013. Record-setting algal bloom in Lake Erie caused by agricultural and meteorological trends consistent with expected future conditions. Proceedings of the National Academy of Sciences. doi: 10.1073/pnas.1216006110.

Funds Aiding Therapeutic Improvements for Manatees Afflicted by Red Tide
To develop better methods of treatment, Dr. Cathy Walsh of the Mote Marine Lab received NCCOS HAB Event Response Program funds to investigate the physiological effects of brevetoxin exposure on manatees. A persistent red tide caused a record number of manatee deaths this spring. Mote scientists now work with the USFWS Manatee Rescue, Rehabilitation and Release Program, tending to surviving animals in their care at Florida’s Lowry Park Zoo. With this funding they can collect blood samples at rescue, during recovery, and just prior to releasing treated manatees back to the wild. Mote scientists can analyze samples for plasma toxin levels and for indicators of immune function, such as inflammation and oxidative stress. Earlier research indicated sub-lethal exposure to brevetoxin compromises manatees’ immune systems. This study provides essential information to improve treatment methods and boost manatee chances of survival once returned to their natural habitat.

Spring Floods May Increase This Year’s Gulf of Mexico Dead Zone
NOAA’s National Weather Service and National Ocean Service developed an earlier prediction of Gulf of Mexico’s “dead zone" this summer. The agencies combined data from this year’s National Hydrologic Assessment U.S. Spring Flood Risk Outlook with knowledge of soil saturation and typical weather patterns throughout the Mississippi watershed. Based on estimates of flood risk, snow pack, predicted precipitation, and current above-average conditions in the basin, they expect an above normal dead zone in 2013. Updates will be periodic until the release of the official dead zone forecast in early June. This effort represents a growing collaboration between the two NOAA offices to forecast ecological phenomena and hypoxia. See: http://www.nws.noaa.gov/hi/c/no/

The ESP Joins New Technologies and Platforms Changing Oceanography
The growing array of lower-cost, high-tech instruments – satellites, robotic gliders, moored sensors, underwater observatories – is transforming the discipline of oceanography, possibly reducing the need for expensive research vessels. A prime example is the Environmental Sample Processor (ESP). The ESP collects discrete water samples and concentrated microorganisms and has molecular probes identifying microorganisms and their genetic signatures. It then transmits its results to scientists ashore. NOAA and partners continue to demonstrate new applications for detecting harmful algae, their toxins, and pathogens in the Gulf of Maine, California and Puget Sound. NCCOS-funded projects involving ESPs develop deployment and recovery strategies, design optimal sensor networks, increase the number of in-water tests available, and expand commercial availability.
2013 New England Seasonal ‘Red Tide’ Forecast: Moderate

New England coastal areas should prepare for a “moderate” red tide this spring and summer, according to NCCOS-sponsored scientists Drs. Dennis McGillicuddy and Donald Anderson from the Woods Hole Oceanographic Institution. They base this seasonal forecast model on samples of last year’s ocean floor algal cysts as indicators of this year’s bloom severity. The team used 34 years of historical data to refine their model. The forecast is used to inform shellfish management actions to mitigate incidence of paralytic shellfish poisoning that can occur through consumption of contaminated shellfish. This year’s outlook is similar to the 2012 red tide, also classified as “moderate.”


An apparent rise in jellyfish blooms aggravates residents of coastal areas around the world. A recent science article, based partially on research funded by NCCOS, proposes one possible cause for the blooms’ apparent increase. The major cause for these blooms, scientists theorize, is the proliferation of man-made structures such as sunken ship hulls, underwater aquaculture pens, and artificially hardened shorelines. Researchers saw jellyfish larvae settle in larger numbers on these structures than they would normally on natural substrate alone, leading to favorable conditions for dense local concentrations. Advice to officials managing coastal waters is 1) look into artificial structures designed to discourage polyp settling, 2) manage water quality to reduce favorable conditions, and 3) regulate garbage disposal to avoid introduction of additional jelly-friendly substrates. See: Duarte, C.M. et al. 2013. Is global ocean sprawl a cause of jellyfish blooms? Frontiers in Ecology and Environment 11(2):91-97.

Restoring Louisiana Wetlands Requires More Sediment, Say Scientists

Recently, NOAA posted the Report of an interagency workshop on the effects of freshwater diversions on Louisiana wetland soils, vegetation, and elevation. The Report, “Mississippi River Freshwater Diversions in Southern Louisiana: Effects on Wetland Vegetation, Soils, and Elevation,” was produced by a panel of experts attending the workshop convened by NOAA’s NCCOS and National Marine Fisheries Service, the U.S. Army Corps of Engineers, and the State of Louisiana in February 2011. The Report concludes that existing freshwater diversions have demonstrated both positive and negative impacts on wetlands, but that sediment delivery by existing projects is not sufficient to tackle the problem of coastal land loss facing Louisiana. It is also unclear whether sediment diversions can be successful in rebuilding wetlands, especially given current Mississippi River sediment loads are roughly 50% of historic high loads. See: http://sero.nmfs.noaa.gov/habitat_conservation/ncd_headlines/homenews_fodiversions.html

CERF to Host Congressional Briefing on Human and Coastal Health

Julie Palakovich Carr
American Institute of Biological Sciences

CERF will hold a science briefing in Washington, DC on June 3, 2013 for congressional and agency policymakers to help inform their understanding of the connections between human health and coastal and estuarine ecosystems. The event will feature a distinguished panel of experts who will provide the latest scientific information about harmful algal blooms, seafood safety, and emerging diseases—three topics that impact people and aquatic environments.

Presentations will be made by three researchers with years of expertise on these topics. Dr. Joann Burkholder, director of the Center for Applied Aquatic Ecology at North Carolina State University, will speak about her team’s 14-year ongoing research and monitoring program of harmful algal blooms on the Neuse Estuary. Dr. Pat Conrad of the University of California, Davis School of Veterinary Medicine researches the ecology of fecally transmitted waterborne pathogens between wildlife, humans, and domestic animals. Dr. Steve Otwell of the University of Florida has developed a nationally recognized program for applied research and extension services regarding seafood quality and safety. Dr. Walter Boynton, President of CERF, will moderate the discussion.

The briefing will be held on Monday, June 3, 2013 from 2:00 to 3:00 p.m. at the Capitol Visitors Center in Washington, DC. Members of CERF are welcome to attend. For those who are unable to attend in person, copies of the presentations, including audio recordings, will be posted on the CERF website.

For more information and to RSVP, visit www.aibs.org/public-policy/rsvp.html.
Estuarine Ecology, Second Edition

The second edition of the classic textbook *Estuarine Ecology* is now available in hardcover and e-book format. CERF members can take advantage of a special discount rate of 20% off the hardcover list price by visiting [www.wiley.com/buy/0471755672](http://www.wiley.com/buy/0471755672) and entering the code VBC37 at the Wiley.com checkout.

Authored by a team of world experts from the estuarine science community from eight countries, this full-color edition includes new chapters covering phytoplankton, microbial food webs, seagrasses, coastal marshes, mangroves, benthic algae, Integrated Coastal Zone Management techniques, and the effects of global climate change. It also features an entirely new section on estuarine ecosystem processes, trophic webs, ecosystem metabolism, and the interactions between estuaries and other ecosystems such as wetlands and marshes.

Completely revised and updated, *Estuarine Ecology, Second Edition*, is an invaluable resource for students, researchers and practitioners interested in the ecology, biochemistry, biodiversity, geography and management of coastal regions.

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CERF has reached an agreement with Wiley – the publisher of the newly released *Estuarine Ecology, Second Edition* – to offer Federation members a 20% discount on all Wiley books.

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It is reprinted here as a service to Newsletter readers and is also online at www.springer.com/CERF.
CERF Membership Form 2013

Membership forms received before September 1 are for the current year; those received on or after September 1 will be applied to the following year unless otherwise requested. Please note that the first issue of the journal is available in January.

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Note: All individual members subscribing to the society’s journal will automatically receive electronic access. To receive the printed journal ($20/year), check the box below.

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Abstract Deadline: Extended to 10 June 2013
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