



TCS/RAE Summit | November 1-6, 2014
Early Bird Registration ends on September 10, 2014
<http://www.estuaries.org/about-2014.html>

TCS Bulletin
Volume 36 (1) 2014

Inspiring Action, Creating Resilience: The Coastal Society and Restore America's Estuaries' National Summit to Address Coastal Restoration and Management

The Coastal Society and Restore America's Estuaries are proud to present the first ever Summit that will bring together the coastal restoration and management communities for an integrated discussion exploring issues, solutions and lessons learned. From November 1-6th, the 2014 National Summit on Coastal Restoration and Management will take place in Washington, DC. This multidisciplinary event will provide timely and much-needed attention to the challenges and opportunities for coastal and estuarine restoration and management and will bring together a unique blend of people who are involved in policy, science, strategy, business, and on-the-ground restoration and management. "This will be the largest national gathering of the coastal restoration and management community in more than ten years," said Restore America's Estuaries president, Jeff Benoit.

Coastal communities are increasingly faced with challenging decisions as a result of a host of factors including population changes, coastal development, pollution, climate change, invasive species, economic pressures, and many more. The conference theme, *Inspiring Action, Creating Resilience* highlights just how essential people and communities are in taking meaningful action in coastal restoration

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A Conversation with a Long-time TCS Member

Tom Bigford is not only a longstanding member of TCS, he's also a very active one, so we thought we'd take the opportunity of his retirement from a 38 year career in the federal government to get his insight into coastal management, the story behind the story of The Coastal Society, and other important issues, including the meaning of life, whether there really are multiple universes and why toast always falls butter side down.

Joining the Coastal Society soon after its inception, Tom was just finishing up graduate school in 1977 when he became a member, and he's been one ever since. Leaving the University of Rhode Island (URI) with both a Master's in Zoology and one in Marine Affairs, Tom moved to Washington, DC, where, in one of those interesting twists of fate, Jeff Zinn, son of the chairman of the URI Zoology department was a founding officer for TCS. Nonprofit organizations never lack for work that needs doing, so Tom began helping Jeff out with, among other TCS-related work, the Bulletin. Over the years, while continuing his work at NOAA, Tom has been both Executive Director of TCS (the first), Bulletin Editor, was elected Secretary in the past and is now a TCS Board member.

His many years of involvement give a long perspective on the organization. When asked to discuss what kind of changes he's seen in TCS over the years, Tom tells us that there has been surprisingly little—except of course that in the Internet age, we're certainly a lot less focused on snail mail. Through the decades,

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Dear TCS Members,

I hope you are having a productive summer! I'm excited to be leading TCS again through the end of this year and building upon the momentum from last year's successes. I want to thank everyone who participated in our member survey this past spring. The response rate was terrific and provided the Board of Directors with vital information to consider at our retreat. You responded, and we listened. We held our retreat June 28-29 in Raleigh, N.C. I look forward to sharing with you the outcomes of the retreat in the coming months. I think you'll be excited to know about our plans for the future. These plans will help meet your professional development needs and increase the value of your TCS membership. I extend my thanks to the Board of Directors for donating an entire weekend of their time to have these crucial conversations.

Coastal Management Connection Series Forum

I'm proud to share with you that TCS's partnership with the Coastal States Organization is flourishing. On June 9, TCS and CSO co-hosted a forum in Washington, D.C. called "Promoting and Improving Local Coastal Resilience." The purpose of this forum was to discuss how scientists and local, state, and federal partnerships are aiding local coastal resilience efforts and helping to mitigate impacts from climate change and coastal storm events.

Moderated by Joelle Gore, Acting Chief of the Stewardship Division of NOAA's Office for Coastal Management and a former TCS Board member, the forum featured four distinguished speakers:

- Dr. Holly Bamford, Assistant Administrator, National Ocean Service, NOAA
- Laura McKay, Program Manager, Virginia Coastal Zone Management Program
- Ben McFarlane, Regional Planner, Hampton Roads Planning District Commission
- Dr. Willy Reay, Director, Chesapeake Bay National Estuarine Research Reserve

Thank you to TCS past president Paul Ticco and our friends at CSO for planning this event!

2014 Summit on "Inspiring Action, Creating Resilience," November 1-6

As we all have discovered early in our careers or even while we were still students, partnerships are key for organizations in all sectors. TCS believes partnerships will continue to be vital to meeting the professional development needs of the coastal management profession and to students. That is why I'm excited about our partnership with Restore America's Estuaries (RAE) to host a joint conference. This will be a terrific opportunity for the coastal restoration and coastal management communities to network and learn from each other. It seems you all agree. The response to our call for abstracts was overwhelming, and I was pleased to see so many submissions from TCS members. The Summit is shaping up to be this year's go-to coastal conference. I owe a great many thanks to Kristen Fletcher (past president), Caitlyn McCrary (TCS Communication Committee Chair), and Julia Wyman (Program Co-Chair) for their leadership on the Summit planning team, as well as to other TCS members who are donating their time to help plan the Summit. RAE has been a terrific partner, and I hope the results of our efforts will be a week of learning and sharing that you can take home with you. Registration is open, so reserve your seat now at <http://www.estuaries.org>.

TCS Annual Meeting

Mark your calendars! The TCS annual members meeting will be held in conjunction with the Summit, on Tuesday, November 4 from 7:15-8:15 am at the Gaylord National Convention Center. When you register, there will be an option to RSVP. See you there!

Leadership Training for Coastal Professionals at the Summit

Thanks to the efforts of our energetic Education Committee, TCS and the Environmental Leadership Program are co-hosting a workshop at the Summit. "Weaving Your Coastal Network: Environmental Leadership Training for Coastal Professionals" continues TCS's long tradition of providing leadership workshops at our conferences. It will be held on Sunday, November 2 from 1:00-5:00 pm. For details, please visit <http://www.estuaries.org/special-offerings.html>. You may register for this workshop when you register for the Summit.

Thank you all for your continued support of TCS. It is a pleasure to lead an organization with such innovative thinkers and doers as members. Enjoy the rest of your summer, and I look forward to seeing you in November at the Summit!

Regards,
Lisa Schiavinato
TCS President



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Coastal Management

The Official Journal of The Coastal Society | Volume 42, Issue 4, 2014

Be Sure to Use Your Members' Link to Read the Articles in this Issue:

Special Issue: Social Sciences in Puget Sound Recovery

In Memoriam: Mark Plummer

By K. Wellman, K. Biedenweg, P. Christie CMJ Editors, L. Anderson, B. Bryant, A. Copping,
D. Fluharty & T. Stevenson

Social Sciences in Puget Sound Recovery

By Katharine F. Wellman, Kelly Biedenweg & Kathleen Wolf

A Complex Tool for a Complex Problem: Political Ecology in the Service of Ecosystem Recovery

By Sara Jo Breslow

Collaboration within the Puget Sound Marine and Nearshore Science Network

By Kristin Hoelting, Beth Moore, Richard Pollnac & Patrick Christie

Indigenous Community Health and Climate Change: Integrating Biophysical and Social Science Indicators

By Jamie Donatuto, Eric E. Grossman, John Konovsky, Sarah Grossman & Larry W. Campbell

Developing Human Wellbeing Indicators in the Puget Sound: Focusing on the Watershed Scale

By Kelly Biedenweg, Adi Hanein, Kara Nelson, Kari Stiles, Katharine Wellman, Julie Horowitz
& Stacy Vynne

The Sound Behavior Index: A Management Tool for Behavioral Aspects of Ecosystem Restoration

By Dave Ward, Randall Pozdena, Bruce Brown, Lynda Ransley, Debbie Ruggles & Emily Sanford



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Enjoying a reception along the Miami River at TCS 23 in 2012.

and management, and will showcase how sound science teamed with best practices create healthy and resilient coastal environments, which in turn create jobs and strong economies that support coastal communities. “We hope that you will share in our excitement as we embark on this new collaboration to lead the first national effort to bridge the restoration and coastal management communities. The Summit provides an opportunity to address many of the issues we have in common in a more holistic way and offers a more cost-effective way to convene discussion,” added Lisa Schiavinato, president of The Coastal Society.

“RAE’s National Conferences always provide for a dynamic networking experience, opportunities for sharing best practices, and learning from others. I’m particularly looking forward to the 2014 Summit with the synergy that RAE has created already, in collaborating with The Coastal Society. This is the premier national coastal restoration and management event happening this year, and it’s not to be missed,” noted ARCADIS’ John Balletto.

The six-day Summit will include a number of invaluable opportunities to be engaged beyond just the dynamic presentations, including an on-the-ground community service restoration project in the Anacostia Watershed’s Heritage Marsh, field sessions led around Chesapeake Bay, two plenaries and more than 80 program sessions, a

robust and leading exposition/poster hall, and numerous networking opportunities. (Note that the Summit will be the only national meeting for coastal managers now that the “Coastal Zone” conferences are on indefinite hiatus.)

Steven MacLeod, a volunteer serving on the Summit planning committee tells us that, “As a member of The Coastal Society since graduate school, I am honored to have been a part of several TCS conference planning committees. TCS is one of the few professional organizations that consider the coastal system as a whole, including the critical role of human development, commerce and lifestyles. To maintain the natural coastal resources that support so many of our industries and recreational pastimes, we must work together to improve our management, conservation and preservation strategies for the oceans, bays, estuaries and great lakes. The TCS biennial conference provides the ideal setting for interfacing with professionals from multiple sectors to discuss the complex coastal issues and inspire ideas that can lead to more effective solutions. The conference is the centerpiece of the TCS mission, and I expect this year’s joint summit with Restore America’s Estuaries will be the grandest in TCS history!”

“The RAE Summit is a must-attend venue for federal agencies like the Environmental Protection Agency, by providing invaluable interaction and collaboration oppor-

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tunities with other governmental agencies, environmental businesses, non-profit organizations, academics and many more partners. I am especially looking forward to hearing from the highest levels of leadership in the coastal conservation field and learning from experts in the field," pointed out U.S. Environmental Protection Agency's Dave Evans.

TCS is offering a special workshop on November 2, 2014 at 1-5pm at the Summit, called, "Weaving Your Coastal Network: Environmental Leadership Program Training for Coastal Professionals." The world has become increasingly interconnected, both socially and professionally, and our ability to understand our networks from a strength-based approach will significantly increase our effectiveness. See page 13 for more information about this intriguing workshop.

Join us at the Summit! To learn more and to register, visit: <http://www.estuaries.org/about-2014.html>. And there's still time to volunteer to help; you get at

least as much out of it as you put into it. Says Michael Flynn, a PhD student at East Carolina University, "I discovered The Coastal Society in 2010 after searching for conferences related to coastal zone management. When I attended TCS 22 I found that its members were not only interested in presenting their own research or restoration efforts, but shared a common interest in supporting young professionals in the field. Volunteering for the TCS 23 Conference Planning Committee proved to be an extremely valuable experience that allowed me to collaborate with established professionals from various sectors and regions. Not only did I develop a better understanding of what conference planning entails, but I was introduced to the current director of the doctoral program I enrolled in the following year. Volunteering for the 2014 Summit has proved quite worthwhile yet again, as it has expanded my professional network through collaboration with Restore America's Estuaries. I would encourage others to volunteer for this year's Summit as it would improve the experience for not only that individual, but for all attendees, as well."

"Heron on the Bay" was painted by nationally renowned plein air artist John Brandon Sills, who grew up around the Chesapeake Bay and still resides nearby today.





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TCS has remained about the same size, getting things done mostly by the Board, convening really good meetings, producing an informative Bulletin, creating the TCS Internship Program and focusing on the special needs and interests of students and young professionals. The shift toward innovative meetings—more dynamic and interactive than was common at that time—happened perhaps 20 years ago, as did the focus on students, including awards and travel.

As Tom told us, “Our lasting existence, creative conferences, long-running Bulletin and focus on students are all unique, as are our student chapters. No other coastal organization like us exists so we are distinctive in many ways. The challenge now is to prove that we are useful and relevant; being unique is immaterial if we can’t demonstrate that our function is meaningful.” Coastal issues are obviously what draws us together, but it’s the members—who become friends and colleagues—who really make the difference. He added, “Our shared interests often develop into lasting friendships. I would challenge our members to become more involved; people certainly get their information in different ways than when TCS was founded; social media provides greater access as well as electronic friendships, but meeting people, talking about the issues and attending meetings are vital to a strong



© Ellen Gordon

Tom Bigford, Fundraising for a Coastal Cause at TCS 20.

career. I want to encourage all TCS members to become more involved, volunteer in a capacity that suits your interests and availability and have fun!”

Coastal management by its nature is interdisciplinary. The coastal fringe is between land and water, is influenced in so many ways by so many people and is so important to our culture and future. Yet our field is encumbered by some of the same narrowness we see in many other fields of study or work. We have lessons to share and observations to make. “Of all our stakeholders, I think that other types of professionals with an interest in the coast are those we engage the least.” Tom meant that statement to encompass industries, environmental advocates, educators, and citizens who have some connection to the coast. Efforts like coastal and marine spatial planning (CMSP) are new attempts to address this problem—to use “old” CZM tools in a new context, to broaden the conversation. So CMSP is, in many ways, a second opportunity to address many of the enduring issues, plus the new ones—promising to keep us busy for decades.

“And while we are stretching to include new stakeholders, we need to address the striking lack of diversity in our field. I’ve given this thought and I do think we can make incremental progress by trying to attract talented individuals from underrepresented populations, but TCS and many others may need to focus more on younger people who have not yet chosen an academic pursuit or career path. Until there is a much more diverse pool of graduates, we in TCS and our employers will have a difficult time shifting the demographics of our society or profession,” Tom added.



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Tom Bigford, TCS Board of Directors.

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With a 2 week break after retiring from NOAA, he moved into a newly created position of Policy Director at the American Fisheries Society (AFS). Tom had been an AFS member since before even joining TCS—though not particularly active. But while he was Executive Director for TCS (a position he held while continuing to work at NOAA), both AFS and TCS were members of the Renewable Natural Resource Foundation—a group of natural resource-oriented nonprofit organizations in Bethesda, MD. Over time, he became more involved in AFS, chairing committees and sitting on the board. Reaching the point when he was ready to step away from the supervisory and budget responsibilities of his job at NOAA, yet desiring to remain involved in coastal and environmental issues made the move to AFS a natural fit. There, he focuses on policy issues related to fish and finds that this transition has brought him to another vibrant organization where he can use his coastal experience to help create new partnerships and advance both coastal and freshwater issues.



© Mary E. Allen

Green sea turtle in Florida Keys National Marine Sanctuary.

NOAA Reopens National Marine Sanctuary Nomination Process

On June 10th, during Capital Hills Ocean Week, John Podesta, counselor to President Obama, announced that NOAA has released the final rule reopening the Sanctuary Nomination and Evaluation Process, clearing the way for nominations of new significant marine and Great Lakes areas as potential new national marine sanctuaries. The community-based nomination process responds to numerous requests for new sanctuaries from interested communities and stakeholders around the country.

“Our national marine sanctuaries not only protect special places in America’s oceans and Great Lakes, but they promote responsible and sustainable ocean uses to protect the health of our oceans for future generations,” said Kathryn Sullivan, NOAA Administrator and Under Secretary of Commerce for Oceans and Atmosphere. “This new process increases the public’s involvement in the stewardship of our oceans, which is central to NOAA’s overall mission. We look forward to hearing from the public about places in the marine and Great Lakes environment they feel deserve special status and protection as national marine sanctuaries.”

This announcement does not result in the automatic designation of any new national marine sanctuaries. However, the nomination process will result in an inventory of areas NOAA will consider for national marine sanctuary designation, taking into account input and support from various local, regional and national interests and organizations. Consideration also will be based on a proposed area’s national significance and the feasibility of managing it.

NOAA may designate new sanctuaries and implement their associated regulations only after a nominated site has gone through a separate, highly public process that typically takes several years to complete.

For more information please visit:
<http://www.nominate.noaa.gov/>





Coastal Management Connection Series: Promoting and Improving Local Coastal Resilience

Strategies to mitigate coastal climate change impacts, and to improve coastal community resilience to sea level rise and storm events were the primary themes of a joint Coastal Society/Coastal States Organization forum held on June 9th at the Hall of States Building in Washington, DC. Moderated by Joelle Gore, Acting Chief of the Stewardship Division of NOAA's Office for Coastal Management and a former TCS Board Member, the forum featured four distinguished speakers:

- **Dr. Holly Bamford** - Assistant Administrator, National Ocean Service, NOAA
- **Laura McKay** - Program Manager, Virginia Coastal Zone Management Program
- **Ben McFarlane** - Regional Planner, Hampton Roads Planning District Commission
- **Dr. Willy Reay** - Director, Chesapeake Bay National Estuarine Research Reserve

Focusing on efforts by local communities to better manage their coastal resources through collaboration with state and federal partners and other key constituents, the speakers directed their remarks to three specific questions:

1. How does the CZMA aid states, local governments and coastal communities in improving their resilience to sea level rise, climate change and storm impacts?
2. What current programs, research, and outreach efforts are helping local communities strengthen their coastal resilience, and improve their economic circumstances?
3. What lessons can be learned today that will positively impact the future?

This forum, one of perhaps several being planned for various parts of the country was widely advertised, and included on the World Ocean Day event website calendar. Approximately 50 people including coastal managers and planners, TCS and CSO members, Capitol Hill staff, state



LEFT: Moderator Joelle Gore, Acting Chief of the Stewardship Division of NOAA's Office for Coastal Management and former TCS Board member.

BELOW: Forum speakers (left to right) Dr. Holly Bamford, Laura McKay, Ben McFarlane, Dr. Willy Reay.



and federal agency representatives, and other interested audience members joined another 40 others on a live conference call to listen, ask questions, and discuss the issues.

Detailed notes and Power Point slide presentations from the forum will be available soon. For further information, please contact **Paul Ticco** (paul.ticco@noaa.gov) or **Lindsey Kraatz** (lkraatz@coastalstates.org).



Nowhere Left Untouched

Litter is now found in even the most remote areas of the oceans, say scientists trying to understand how much rubbish is lying at the bottom of Europe's seas. The new study, published in Plos One, shows for the first time that there seems to be no area of the ocean left untouched by human litter. "We didn't focus on specific footage, it came from lots of different studies but we viewed it all. And the biggest surprise was that we found litter everywhere - everywhere we had footage from had been polluted," says Christopher Pham, a PhD student at the University of Azores in Portugal and lead researcher on the project. "The majority of what we found was plastic, specifically softer plastics like carrier bags, although we did find other things like pieces of buckets," he continued. "We found batteries, part of a plane, pieces of oil drum, shoes, chairs, plastic bottles, clothes, but mostly plastic." <http://planetearth.nerc.ac.uk/news/story.aspx?id=1719&cookieConsent=A>

200 Year Old Data is Not "Out of Date"

Vital data on the Arctic ice sheet before extensive fossil fuel use began to impact on climate has been gleaned from a new study analyzing the log books of British whaling ships' journeys more than 200 years ago. They give an account of the southern edge of the ice sheet, the prevailing weather, the spring and summer extremes, the storms, and the condition of the Arctic ice shelf. And the log books offer a snapshot of conditions in the century before the first systematic use of fossil fuels began subtly to alter the planetary climate. For Matthew Ayre, a PhD student at the University of Sunderland, UK, and Dennis Wheeler, the university's Emeritus Professor of Climatology, these log books and other records by merchant ships and Arctic explorers such as Sir John Franklin - who tried in 1845 to navigate the icy North-West Passage between the Atlantic and the Pacific - represent an extraordinary resource. <http://www.climatenewsnetwork.net/2014/07/whalers-tale-sheds-new-light-on-arctic-ice/>

Ocean Acidification Affects Fish Friends

New research on climate change and fish behavior out of James Cook University in Queensland, Australia demonstrates ocean acidification links to behavioral changes. A team led by Lauren Nadler wanted to know how fish will react to ocean acidification caused by more and more human-generated CO₂ in the atmosphere. So they created two experimental setups, one with regular ocean water

and the other enriched with CO₂, and into them dumped a bunch of tropical damselfish. Juvenile damselfish ordinarily take about three weeks to bond to the point that they'll recognize each other--which is indeed what happened with the control-environment fish, who later chose to school with their childhood buddies. But in the altered one, which had CO₂ levels comparable to what the IPCC estimates for 2100, the fish showed signs of developmental impairment. When put among schools of fish they grew up with and with ones they didn't, they displayed no preference for hobnobbing with their old tank mates. They'd just as soon swim with strangers. This odd behavior might be caused by higher concentrations of CO₂ altering fish-brain neuroreceptors. "This impairs basic senses, such as sight and smell, which are vital for recognition in fish," write the researchers. Whatever the cause, losing the ability to find friends spells possible trouble for damselfish, as well as other species more valuable to the international economy, according to the study. "Familiarity is an important trait for defense, particularly in a predator-rich environment like a coral reef," says Ms. Nadler. "Since half of all fish species in the world school at some point during their lives, including economically important species, these effects could be critical for species that rely on group living to avoid predators." <http://www.citylab.com/weather/2014/07/ocean-acidification-could-be-creating-friendless-fish/373733/>

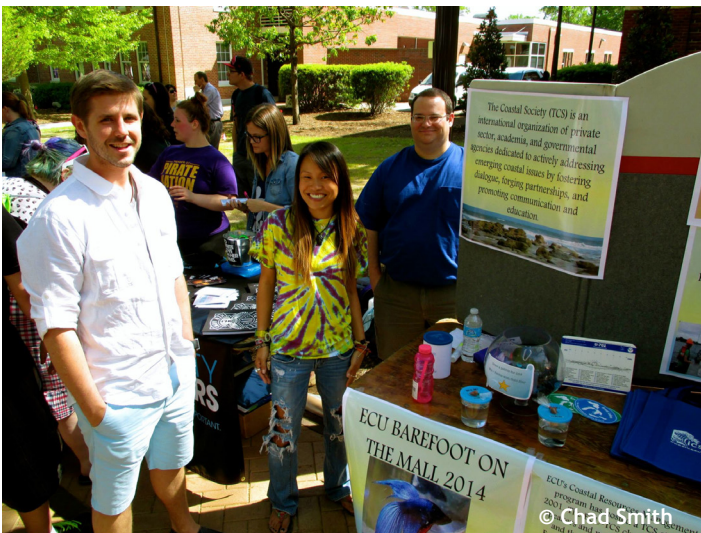
Blue Carbon; Big Bucks

Filling one of the gaps in knowledge--the role of the deep ocean in carbon cycling--identified by the last Intergovernmental Panel on Climate Change (IPCC), The High Seas And Us: Understanding The Value Of High Seas Ecosystems is the first study to assess the ecosystem services of the high seas and place an economic value on them. The study, commissioned by the Global Ocean Commission, identifies 15 ecosystem services of direct value to humans ranging from 'provisioning' services such as genetic resources and raw materials, 'regulating' such as air purification and biological control, to 'habitat' services such as life cycle maintenance and gene pool protection. This study revealed the extent to which life in the high seas is mitigating climate change, taking up a staggering 500 million tons of carbon per year by storing one-and-a-half billion tons of CO₂ away from the atmosphere. Describing the major ways in which the ocean stores and fixes carbon away from the atmosphere, the study calculated an economic value for the role of high seas carbon sequestration as between US\$74 and US\$222 billion annually. <http://bluecarbonportal.org/?p=11871>



Eckerd College

The student chapter spent the semester aiding in beach clean ups and beginning a community partnership with a local youth organization. For the 2014-2015 academic year we look forward to furthering the partnership, including hosting local environmental education events and coastal fundraisers. We were also able to bring Dr. Peter Rubec, a research scientist from Florida Fish and Wildlife to speak to not only the chapter, but opened it up as a campus wide event drawing in students from all areas.



ECU Chapter officers; TOP: Michael Flynn, Mary E. Allen, and Chris Bounassissi at Barefoot on the Mall; BOTTOM: Alyson Lewis and Hilde Zenil, interacting with middle school students at the Earth Day Expo.

East Carolina University

ECU had an exciting spring 2014 semester, providing for and participating in education and outreach through campus events, public films, social events, and conferences. Students traveled to present at the *Social Coast Forum* in Charleston, SC and the *North Carolina Sea Grant Symposium* in Raleigh. Students presented papers and posters on current research and collaborations, as well as gathered with former TCS members and ECU graduates.

Closer to home, TCS students participated in the ECU and North Carolina Science Festival sponsored *Earth Day Expo*, featuring hands-on activities like fishing, where elementary and middle school students engaged with TCS members to learn about different marine species and listen to fish acoustics underwater. TCS members also participated in ECU's annual *Barefoot on the Mall*, the largest spring gathering of student activities and organizations on campus. TCS engaged both undergraduate and graduate students with information about the organization, as well as raffled off beta fish to good homes! Further outreach occurred with the fourth annual TCS film event: acclaimed documentary *Shored Up*. This was followed by a panel of professionals in the field of coastal resource management, geology, and economics, as well as the director himself—Ben Kalina—who also met with students for lunch. (See page 12 for more about this event)

Additionally, two former TCS chapter officers, Michelle Covi and Devon Eulie are graduates from the CRM program this year! A social event, *Toast to the Coast*, rang in the spring semester, serving not only as a chance for students and faculty to unwind but also as a recruiting effort for the organization, which met with great success. We hope to continue a successful year into the fall semester with our new officers and an increased campus presence.

Duke University

In April, the Duke TCS chapter hosted a spring *Blue Drinks*. This event kick started the second annual *Ocean Symposium*, which focused on aquaculture and sustainable seafood. Speakers included the Ocean Foundation's president Mark J. Spalding, Ocean Conservancy Director George Leonard, Dr. Cathy Roheim of the University of Idaho, Dr. Marty Smith of Duke University, Suzuki Foundation director general Jay Ritchlin, and Scott Nichols, Director of Verlasso Salmon. The Symposium was an

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overwhelming success and the majority of speakers attended Blue Drinks with members of our Duke community. It was a great way for the speakers and students to discuss marine issues in a relaxed atmosphere. Collaborating with other Duke ocean groups—including DukeFish and the Ocean Policy Working Group—we helped turn the Ocean Symposium into a whole week of fun activities with speakers and lunches.

Our chapter is now preparing and planning for the **14th Annual Neuse Riverkeeper Sprint Triathlon** to be held in Beaufort, NC this upcoming September 13, 2014. The triathlon will kick off at 10 am at Duke Marine Lab in Beaufort, NC. All proceeds from the Triathlon support the Neuse Riverkeeper's efforts to protect and restore our local North Carolina watershed. Any questions should be directed to avery.siciliano@duke.edu.

University of North Carolina at Wilmington

On January 22nd, the UNCW chapter co-hosted a free viewing of *Shored Up*, a documentary on post-Hurricane Sandy coastal development in North Carolina and New Jersey, alongside the NC Coastal Federation at Lumina Theatre at UNCW. An interactive panel with the filmmaker, Ben Kalina, followed the film (See page 12 for more about this event).

The UNCW chapter president and two other members volunteered to participate in the **North Carolina Science Olympiad** which UNCW held on March 1st. The event hosted nearly 1,000 high school and middle school students, parents, local teachers, and administrators from the Wilmington area. Not only was it blast working with all of the students at the Experimental Design events--they let us join the fun with paper airplanes, baking soda and vinegar!

Before celebrating Earth Day at **The Earth Day Alliance's Festival** on April 26th, several chapter members volunteered to give back to the environment by assisting with a trail clean-up and plant long leaf pine trees at the Ev-Henwood Nature Preserve. On May 2nd, chapter members joined the community volunteer event at **Tidal Creek Co-op** to work on the rain garden that is a cooperative project between the Co-op and UNCW.

Over several weeks, chapter Vice-President, Jessie Scofield managed a table at the **Summer Orientation Fairs** to welcome incoming freshman class, providing them information about our TCS chapter and inviting them to sign-up for our e-mail list so that they can get involved once the fall semester kicks off. She also gave out really cool buttons created by UNCW chapter president Kristin Morris, and featuring various photos of the North Carolina coast.



© Devon Eulie



© Devon Eulie



© Jessie Scofield

LEFT, MIDDLE: UNCW Chapter students planting long-leaf pine trees and assisting with a trail clean-up at Ev-Henwood Nature Preserve; RIGHT: Buttons featuring coastal North Carolina photos, created by Kristin Morris.



TCS Chapters Get “Shored Up”

by Mary E. Allen

Director Ben Kalina wrote in his film’s synopsis that, “*Shored Up* is a look at what happens when we ignore the realities of geology in our drive to inhabit and profit from our coastlines. As the oceans rise and storms flood our towns and cities, we have a choice to make: do we continue to develop as we have in the past, ignoring clear risks and danger? Or, do we allow science to guide our policies for the future...before it’s too late?”

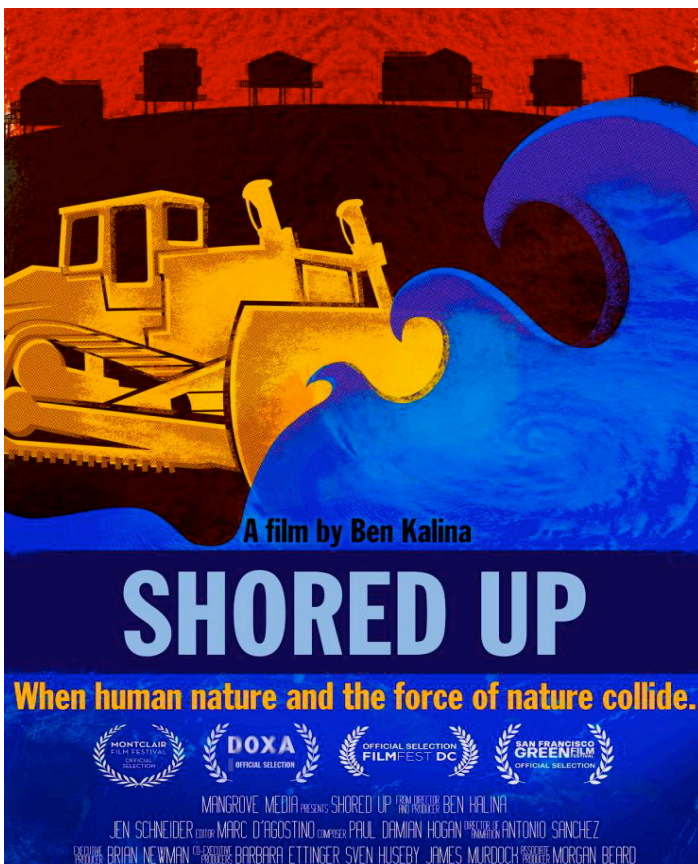
Filmed over the course of three years, before and after Superstorm Sandy, *Shored Up* focuses on New Jersey, New York, and the Outer Banks of North Carolina as residents struggle against coastal erosion and look to engineering projects like beach nourishment. Through interviews with scientists, politicians, surfers, environmental advocacy groups, seaside businesses, and residents, *Shored Up* communicates a strong message on the complexity of climate change and delivers a sobering examination of the threat

that sea level rise poses to coastal communities. *Shored Up* does not follow the trend of covering the environmental impacts, nor does the film take a political side. Rather, the film highlights the truthful realities that people face. “This film deals with adaptation to climate change as opposed to how we stop climate change. It lends itself to people talking about things that are local and regional; places where people can actually create change - in local land use decisions, development policies and environmental regulations,” says Kalina. Yet the environmental, social, cultural, economic, and political realities are entangled in a complicated web. To illustrate this complexity, the film highlights two different communities grappling with the issue: Long Beach Island, where ongoing replenishment projects have sparked controversy, and the Outer Banks of North Carolina, where state legislation continues to deny sea level rise in planning.

To help spread the film’s message, *Shored Up* has been screened at more than one hundred community events and film festivals to date, including public events held by several student chapters of The Coastal Society. The **East Carolina University Chapter** hosted a film screening of *Shored Up* on Earth Day (April 22) in ECU’s Wright Auditorium. The film screening was followed by a discussion panel moderated by Dr. D. Reide Corbett, which included Ben Kalina; Dr. Stan Riggs, ECU Distinguished Professor of Geology (featured in the film); Dr. Craig Landry, ECU Professor of Economics; Cliff Ogburn, City Manager of Nags Head; and Greg Rudolph, Carteret County Shore Protection Manager. Among an audience of about 300 people, from students to residents, the film generated rich dialogue and conversation on personal experiences and the future of our relationship with the coast.

The **University of North Carolina at Wilmington Chapter**, alongside the NC Coastal Federation, hosted a sold-out screening of 320 people at the Lumina Theater on January 22. NC Coastal Federation’s Tracy Skrabal is featured in the film. An interactive discussion panel following the film included Ben Kalina; Dr. Stan Riggs; Harry Simmons, the Mayor of Caswell Beach and President of the NC Beach, Inlet and Byways Commission; and Carolyn Justice, former State Representative.

The central message advocated by *Shored Up* is that coastal residents, managers, scientists, and politicians need to work together in seeking out alternative solutions to adapt to changing climate and shorelines. Despite rising seas, shifting shorelines, more intense storms, and more frequent floods, people continue to visit the



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Panel discussing *Shored Up* at ECU (left to right): D. Reide Corbett, Craig Landry, Ben Kalina, Stan Riggs, Greg Rudolph, and Cliff Ogburn.

beaches or to make their homes on the coast. In the words of Stan Riggs, “We try to engineer this barrier island into something that is like a status quo. We don’t want it to change. Well, it’s going to change. It always has changed.” Coastal communities are likely to experience similar events to Hurricane Sandy in the future, and practical policies are needed to deal with the impacts. As one Long Beach Island resident in the film describes it, beach replenishment is “just a bandaid on a hemorrhage,” that distracts us from dealing with reality. The web of sticky issues surrounding climate change are complicated by uncertainty about the long run, and may only begin to unravel when multiple sides are considered.

Mary E. Allen is a Ph.D. student in the Coastal Resources Management program at East Carolina University. She serves as Vice President of the ECU Student Chapter (2013-2015), and is a member of the TCS Communication Committee.

Weaving Your Coastal Network: Environmental Leadership Program Training for Coastal Professionals

by Tiffany Smythe, Ph.D. & TyAnn Lee

Are you new to the professional world of coastal management and restoration, or are you ready to reinvigorate your coastal network? Building and maintaining professional networks is vital to career development; the information shared and fresh perspectives gained through relationship building can enhance the success of coastal management efforts. However, the path to achieve an active coastal network can be daunting. Networking, often confused with selling yourself, is actually about building long-term relationships and a good reputation over time. But how do you foster an active network and

use it to raise your profile, gain access to new opportunities, and share advice and support in your area of expertise? With these questions in mind, The Coastal Society (TCS) is offering a special workshop on November 2, 2014 at 1-5pm at the TCS-RAE Summit, open to all Summit participants. Whether you are new to the field or an experienced practitioner seeking opportunities to build your network, this intensive leadership, community, and network-building training for coastal professionals will provide great opportunities.

TCS has a long tradition of offering coastal leadership development and mentoring programs to coastal professionals. This year’s workshop will be offered by the Environmental Leadership Program (ELP), a nationally recognized leadership and professional development training program for emerging environmental practitioners. ELP trainings have benefited many TCS members, including past presidents Kristen Fletcher and Kate Morrison. This workshop, titled “network weaving and the art of closing triangles,” is specially designed for the coastal management and restoration community, and will focus on network weaving. Participants will reflect on their coastal management and restoration professional networks and will gain skills in recognizing, building, and using their networks as they grow into coastal leaders. Participants will then have the opportunity to apply these skills through their participation in the TCS-RAE Summit. Errol Mazursky, ELP Executive Director and professional facilitator will lead this energizing training and community-building event.

The world has become increasingly interconnected, both socially and professionally. Our ability to understand our networks from a strength-based approach will significantly increase our effectiveness as leaders in carrying out the mission of our organizations, building high functioning teams, identifying new partnerships and enhancing collaboration. The goal of this training is to help participants gain a better understanding of their own professional networks and how to engage them more effectively. This will be a highly participatory workshop with participants learning the difference between networking and network building; the role of leaders in building networks; exploring their own networks; and learning strategies to close triangles, or the art of introductions.

Learning Sessions and Activities:

1. **Why are networks important and what is the role of a leader in the act of network weaving?** Interactive learning session, setting the stage and drawing wisdom and experiences from the room

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2. **Five Types of Networks:** Learning session about 5 different types of networks, setting the stage and drawing wisdom and experience from the room to reinforce ideas
3. **Weaving your Network:** Action item where participants will begin fleshing out the details of their own network
4. **Exploring Your Network:** Peer coaching session where participants will work with one another to identify strengths and weaknesses within their network
5. **Trust and the Art of Closing Triangles:** Learning session about the importance of trust when acting as a network weaver and the ways to go about closing triangles

TCS leadership and the TCS Education Committee hope that you'll join us for this special event. A \$70 registration fee is required. For more details and to register, please visit <http://www.estuaries.org/summit>. There is also an optional lunch from 12pm to 1pm for TCS members, which is not included in the registration fee but presents a great opportunity to socialize with fellow participants before the program. More information will be provided upon registration.

TCS leadership continues to believe that training and professional development opportunities are an essential benefit for emerging and seasoned coastal professionals. It is valuable for everyone to consider their network of social and professional contacts and how these networks can be used most effectively to achieve personal and career goals. The TCS Education Committee is working to provide more opportunities to sharpen your professional skills and expand your networks after the Summit; stay tuned!

Tiffany Smythe, Ph.D., recently completed a post-doctoral fellowship in Maritime Policy at the U.S. Coast Guard Academy Center for Maritime Policy and Strategy, and is currently planning her next career adventure. She is co-chair of the TCS Education Committee and has been a TCS member since 2004.

TyAnn Lee is a policy analyst with The Baldwin Group on contract with NOAA's Coastal Services Center/Office of Ocean and Coastal Resource Management. She is a member of the TCS Education Committee and has been a TCS member since 2009.

The goals of the TCS Education Committee are to facilitate the networking, mentoring and professional development of TCS members, promote awareness of existing and emerging coastal issues, and work to develop an environmentally literate citizenry.

Upcoming Conferences

Conference on Ecological and Ecosystem Restoration
 July 28-August 1, 2014, New Orleans, LA
<http://conference.ifas.ufl.edu/CEER2014/links.html>

StormCon: The North American Surface Water Quality Conference and Exposition
 August 3-7, 2014, Portland, Oregon.
<http://www.stormcon.com/>

10th Int'l Training Workshop on Integrated Coastal Management in the Mediterranean and the Black Sea
 August 26-September 2014, Dalyan, Turkey
http://www.pegasoproject.eu/index.php?option=com_content&view=article&id=126&fromhomenews

Oceans 2014-MTS/IEEE
 September 4-19, St. John's, Newfoundland, Canada
<http://www.oceans14mtsieestjohns.org/>

12th Coastal Conference, Littoral 2014: Facing Present and Future Coast Challenges
 September 22-26, 2014, Klaipeda, Lithuania
<http://balticlagoons.net/littoral2014/>

3rd Int'l Symposium on Integrated Coastal Zone Management
 October 14-17, 2014, Antalya, Turkey
<http://www.iczm2014.org/>

Summit 2014: Inspiring Action, Creating Resilience
 November 1-6, 2014, Washington, DC
<http://www.estuaries.org/summit>

2nd International Ocean Research Conference: One Planet, One Ocean
 November 17-21, 2014, Barcelona, Spain
<http://www.imber.info/index.php/Meetings/IMBER-Relevant-Meetings/meetings-2014/November-2014>

Coastal Management 2015: Changing Coast, Changing Climate, Changing Minds
 September 9-11, 2015, The Netherlands
 Deadline for submitting abstracts: June 30, 2015
<http://www.ice-conferences.com/coastal-management/>

Coastal Zone Canada 2014: Revitalizing ICOM in Canada - Sustaining Commitment and Momentum
 Jun 8-12, 2014 Halifax, Nova Scotia, Canada
<http://www.czca-azcc.org/html/conferences/main.html>



The Coastal Society

Tax ID Number: 52-1082650

www.thecoastalsociety.org

OFFICERS

Lisa C. Schiavinato (President)
N.C. Sea Grant
PH: (919) 515-1895
E-MAIL: lisa_schiavinato@ncsu.edu

Mo Lynch (Treasurer)
PH: (804) 642-4852
E-MAIL: mlynch@vims.edu

Susannah Sheldon (Secretary)
S.C. Sea Grant
PH: (843) 953-2078
E-MAIL: Susannah.sheldon@scseagrant.org

DIRECTORS

Tom Bigford
American Fisheries Society
PH: (301) 897-8616 X 207
E-MAIL: tbigford@fisheries.org

Chris Ellis, Ph.D.
NOAA Coastal Services Center
PH: (843) 740-1195
E-MAIL: chris.ellis@noaa.gov

Tony MacDonald
Urban Coast Institute at Monmouth
University
PH: (732) 263-5392
E-MAIL: amacdona@monmouth.edu

Matt Nixon
Maine Coastal Program, ME Dept. AGC
PH: (207) 287-1491
E-Mail: Matthew.E.Nixon@maine.gov

Andy Bohlander
University of Hawai'i Sea Grant
PH: (808) 587-0321
E-MAIL: andrewbo@hawaii.edu

Susan E. Farady
Roger Williams University School of Law
PH: (401) 254-4613
E-MAIL: sfarady@rwu.edu

Chad Nelson
Surfrider Foundation
PH: (949) 492-8170
E-MAIL: cnelson@surfrider.org

Brian Smith
Industry Engagement, NC State University
PH: (919) 513-1331
E-MAIL: bmsmith9@ncsu.edu

STUDENT CHAPTERS

Duke University University
President: Avery Siciliano
E-MAIL: avery.siciliano@duke.edu

Eckerd College
President: Ashley Chambers
E-MAIL: anchambe@eckerd.edu

University of Rhode Island
President: Alanna Casey
E-MAIL: alannacasey@my.uri.edu

University of Washington
President: Laura Nelson
E-MAIL: lnelson@uw.edu

East Carolina University
President: Michael Flynn
E-MAIL: flynnmi13@students.ecu.edu

**University of North Carolina
Wilmington**
President: Kristin Morris
E-MAIL: krm7164@uncw.edu

Stanford University
Presidents: Cassandra Brooks
E-MAIL: cassandrabrooks222@gmail.com

PROFESSIONAL SERVICES

TCS Executive Director
Judy Tucker, CAE
P.O. Box 3590
Williamsburg, VA 23187-3590
PH: (757) 565-0999
FAX: (757) 565-0922
E-MAIL: coastalsoc@aol.com

TCS Bulletin Editor
Ellen Gordon
PH: (301) 407-9155
E-MAIL: ellen@gordonballard.com

TCS Bulletin Designer and Publisher
David K. Loomis and Mary E. Allen
Institute for Coastal Science and Policy
East Carolina University
PH: (252) 737-4263
E-MAIL: Loomisd@ecu.edu
E-MAIL: allenmar12@students.ecu.edu

Tax Preparation
Shantel B. Eilenfield
Rollins & Associates/BHT Inc.
PH: (804) 642-9653
E-MAIL: Shantel@SBECpa.com



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Signature: _____ Today's Date: _____ Thank you!

Make check payable to The Coastal Society, and mail it with your application to: PO Box 3590, Williamsburg, VA 23185. To pay by credit card, please use the online application at: www.thecoastalsociety.org/membership2.html.