



The International Activities of the National Estuarine Research Reserve System: A Little Known and Generally Unplanned National Asset

by Maurice P. Lynch

In spring 1998, I saw a little note in one of the many emails I receive from different parts of the National Oceanic and Atmospheric Administration (NOAA), describing an upcoming ceremony in Silver Spring, MD. An agreement was to be signed between NOAA and the People's Republic of China, State Oceanic Administration (SOA), pairing the Chesapeake Bay National Estuarine Research Reserve with the Tianjin Paleocoastal and Wetland Nature Reserve in Tianjin Province.

Since I was managing the Chesapeake Bay Reserve in Virginia at the time and knew nothing about this, I contacted my counterpart in the Chesapeake Bay Reserve in Maryland, primarily to find out how she had managed to get involved in this international project. To my surprise I found out that she had never heard of it either. Calling my program officer in the Estuarine Reserve Division of NOAA, I discovered that she was equally unfamiliar with the agreement. I finally tracked down the responsible staff officer in NOAA's National Ocean Service (NOS) International Office and asked him. He hadn't realized there were two Chesapeake NERRs, so he opined that the agreement must mean both of them. Thus began a long relationship with the NOS International Office, which has included participation in the International Workshops related to marine

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Preparing for the Future: The Next Generation of Coastal Managers

Part 2 of a series of articles exploring leadership, succession planning, and opportunities for promoting coastal management

By Susan White

Do you remember sitting in the auditorium during freshman orientation (or Organic Chemistry lecture) waiting for the speaker behind the podium to boom out that fabled line, "Look to your left, look to your right---by the end of this semester only 1 in 3 people will be left standing?" While I never personally heard that statement from any of my instructors, it may have been closer to the truth than was comfortable in Organic Chemistry. Yet here I am, over a decade later, thinking of this same myth as my career evolves to include ever greater involvement with federal, state, and academic professionals working to address the complex multidisciplinary issues associated with the management of coastal resources. Only this time, the myth is uncomfortably closer to reality.

As of September 2006, 43% of the United States federal government workforce was over the age of 50, compared with only 7.3% of employees under the age of 30 (U.S. Office of Personnel Management, www.opm.gov/feddata/html.Age_Dist.asp). The National Oceanic and Atmospheric Administration (NOAA) reported that in 2005, the average age of a NOAA Federal employee was 45, with only 7% of the workforce under the age of 30. They estimate that by 2007, 50% of their workforce will be eligible to retire (NOAA Strategic Human Capi-

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Dear TCS Member,

When our *Bulletin* editor, Ellen Gordon sent me her friendly reminder email that the time for my President's letter was now upon us, I was in the midst of a multiple-destination trip that took me from the Northeast to the West coast to the Southeast and back to my house in Rhode Island. Leaving my carbon footprint aside for now (!!), my preference for window seats on airplanes always gives me ample opportunity to see natural features of the continent from a different vantage point. My favorite features, as is likely no surprise, are in the coastal areas, and I gaze down on them with music from my MP3 player filling my ears. Fortunately, on the longest leg, from Atlanta to Los Angeles, I managed to remove my earphones long enough to meet the soft-spoken gentleman beside me. A world traveler with significant knowledge of the rivers and geological features along the way, he explained the unique qualities of the historic flood plain around the Mississippi River, the Salton Sea, and Palm Springs. I was lucky to be assigned Seat 19A - many of us who travel know how this anonymous fellow traveler can make quite a difference in the quality of a trip!

The quality of our work in the coastal field also sometimes depends on removing our "disciplinary headphones" for a time and staying open to ideas, thoughts and models from disciplines other than our own. No one debates that this is challenging, time-consuming, and at times frustrating. Indeed, this trip included discussion with economists, biologists and ecologists about natural resource law issues that highlighted language differences, unsupported assumptions, and models of analysis. But, it was clear by the end of three days, we were able to leap over these hurdles and discuss potential solutions in a more creative and strategic way, complete with exclamations of "Oh . . . that's what you meant!"

The membership of the Coastal Society offers each of us the opportunity to take from and share with other disciplines. Even a cursory review of the membership reveals a wealth of disciplines and perspectives ripe for the crafting of creative solutions and strategies. Just within this issue, you'll note perspectives from experts in policy and science. We hope you will take advantage of your membership to share your disciplinary expertise with others through the *Bulletin* or the upcoming TCS conference next year. (Abstracts due October 23!) I look forward to learning from you, as well!

Sincerely,
Kristen M. Fletcher

The views expressed herein are those of the authors and do not necessarily represent TCS nor its Board.



Shipping Lanes Shifted to Protect Whales

by Paul C. Ticco

For the first time in U.S. history, a major shipping lane has been changed to protect wildlife. After decades of research and efforts by NOAA and the U.S. Coast Guard, ships (over 3,500 transits per year) traveling in and out of Boston Harbor now sail through a path rotated 12 degrees to the north and narrowed from 5 to 4 nautical miles. This will add 3.75 miles and 10 to 22 minutes per one-way trip, but provide greater protection to marine life, especially the populations of humpback, right, finback and minke whales that use the area within and adjacent to the 842-square-mile Stellwagen Bank National Marine Sanctuary (SBNMS) each spring and summer to feed.

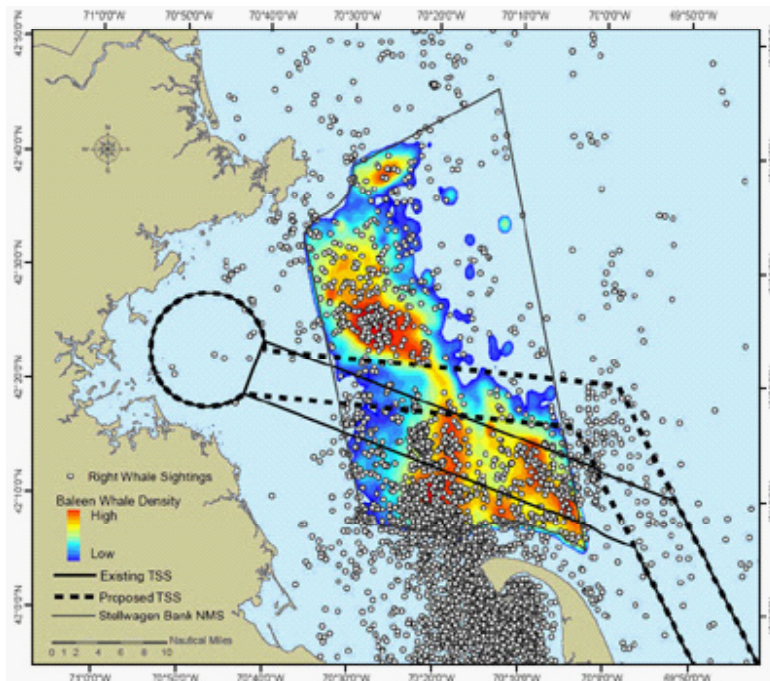
Scientists at the SBNMS used 25 years of extensive data from the Provincetown Center for Coastal Studies, the Whale Center of New England, and the North Atlantic Right Whale Consortium to determine that the heaviest concentrations of whales were located directly in the shipping lanes, and that the shift will reduce the potential for hitting any whale 81%, and the critically North Atlantic right whale 58%. With the entire North Atlantic right whale population estimated at just 350, this lowered risk is significant. Ship strikes and marine gear entanglements are the top human causes of right whale deaths. Twenty-eight deaths of the whales due to ship strikes have been documented since 1972, including eight since 2004.



NOAA

The International Maritime Organization which governs international ship channels and the U.S. Coast Guard approved the lane revision in December 2006. Since then, navigational charts have been updated with the revision. For further information please see the SBNMS website <http://stellwagen.noaa.gov>; or contact either Paul Ticco of the National Marine Sanctuary Program at (301) 713-7240 or the Sanctuary at (781) 545-8026.

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Boston Harbor, Massachusetts. The solid line is the original shipping lane. The dotted line is the alteration that increases protection to marine life.



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protected areas that NOS convened and sponsored in conjunction with the biennial Coastal Zone conferences in 1999, 2001, 2003 and 2005.

I have had many discussions with the non-U.S. participants in these conferences, including other visiting foreign Coastal Zone Management and/or Marine Protected Area (MPA) personnel, many of whom have been exposed to the NERR System through field trips. A strong thread running through many of these conversations was that the NERRs had a lot to offer to those interested in MPAs. During the 2005 Workshop, which focused on MPA networks, many of the examples of successful networking were drawn from the NERR system, particularly in areas of monitoring, education and technical training.

I have also come to realize that the NERR's Federal and state partners do not think of the NERRs as international "players." To the contrary, in the discussion that follows, I will outline the scope of the international efforts already underway. Perhaps other Reserves and potential partners will soon find more opportunities to get involved internationally. Carpe Diem!

Top-Down NOAA NOS International Office-Originated Programs

The Chesapeake Bay National Estuarine Research Reserve in Virginia and the Tianjin Paleocoastal and Wetland Nature Reserve in Tianjin, & The Rookery Bay National Estuarine Research Reserve in Florida and the Shankou Mangrove Ecosystem Nature Reserve in Guangxi Province

The history of cooperation between these reserves began in 1997 when a team from the NOS International Office set out to establish a joint endeavor in the field of Integrated Coastal Management (ICM) with the People's Republic of China, State Oceanic Administration (SOA). Agreements were formally signed in 1997 and 1998 which partnered the U.S. NERRs with the MPAs in China. Their projects include mangrove restoration, an ecotourism plan and an education plan.

Tianjin- Chesapeake Bay: Visits between Reserve staffs in 2000 culminated in the signing of an MOU in 2002. In 2003, a delegation from China visited the U.S. and in 2005, staff from the U.S. visited Tianjin to begin on-the-ground planning for future research activities. A team from Tianjin will visit the Virginia Reserve for training in water quality monitoring protocols used in the NERR System Wide Monitoring Program and in techniques to measure plant productivity and succession in wetlands.

Shankou-Rookery Bay: Rookery Bay staff has visited China, and many Chinese as well as other foreign coastal zone and MPA managers have visited the Rookery Bay Reserve, often as a brief stop on the way to Florida Keys National Marine Sanctuary. Unfortunately there have been few repeat visits from Shankou Reserve personnel but both Chesapeake Bay NERR in Virginia and Rookery Bay NERR in Florida have incorporated the sister Reserve projects into their management plans.

Bottom-Up, Reserve-Initiated International Programs

Great Bay NERR (NH) and Ireland's Marine Institute
In 1997, Peter Wellenberger, Manager of the Great Bay NERR attended the Coastal Zone conference in Boston, MA. At that meeting he met a staff member from the Republic of Ireland's Marine Institute, and initiated discussions about some cooperative programs between his Reserve and Estuary groups in Ireland.

In 1999, the Reserve (through the New Hampshire Fish and Game Department, its parent agency) entered into an international agreement with the Republic of Ireland's Marine Institute to establish a sister Reserve program. Taking advantage of the 1996 Peace Treaty that links NOAA to Ireland's Marine Institute (in Irish, Foras Na Mara); the partnership included Northern Ireland as well. As a result, the Reserve is developing cooperative agreements with Strangford Lough in Northern Ireland and the Shannon Estuary on the west coast of the Republic of Ireland. Both of these sites have been designated as MPAs through the European Commission. The goal is to share and exchange information and research. International visits back and forth have followed and the program has been incorporated as a project in the Reserve's Master Plan.

Old Woman Creek NERR (OWC) and the Belize Audubon Society

The OWC education coordinator, Linda Feix, attended the First International Congress on Tourism and the Environment held in Belize in 1992. During that meeting, she met staff members from Crooked Tree Wildlife Sanctuary, one of nine natural areas managed by the Belize Audubon Society for the government of Belize. The staff of the Reserve and the Sanctuary realized that despite being 1800 miles apart, they were home to many of the same migratory birds. After a number of years of maintaining informal contact, in 2000, the Friends of OWC, a nonprofit group, funded travel by OWC staff to Belize for detailed planning.

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The result was the project, “Birds with Two Homes,” focused on the migratory birds. The project quickly evolved beyond birds into a cultural exchange involving the two countries’ history and people. The realization that the Reserve and Sanctuary had many resource management issues in common resulted in expansion of the project to discuss those issues, as well. As part of the interaction between the Reserve and Sanctuary, teachers from Ohio and Belize have made exchange visits and shared classroom teaching. In addition, staff from Belize Audubon were brought to OWC for joint technical training in neotropical bird migration, data collection, monitoring techniques, nature based tourism and law enforcement. The funding for this exchange was provided by Ohio Audubon and the Firelands Audubon Society Chapter, as well as the Friends of OWC.

During the project, more than 400 students and teachers from communities in the vicinity of the Reserve and Sanctuary have communicated by mail and the Internet. The Friends of OWC have featured products from Belize in the gift shop at OWC that were purchased from Belize cooperatives. The most interesting part of this partnership is that it has accomplished so much with no formal agreements and, other than staff time, with no federal or state funding.

Other Migratory Bird Projects

Reserves have been active in developing and running migratory bird projects on both the Pacific and the Atlantic Coasts. On the Pacific Coast, this effort continues with the International Brant Monitoring Project, designed to monitor the migration of a small sea goose through three countries: the U.S., Canada and Mexico. On the East Coast, multiple NERRs were involved with the Western Atlantic Shorebird Association in establishing a multi-country project stretching from Canada to Argentina. This effort included developing a database and a website that allows for multiple education uses. In both of these projects, the education personnel at the NERRs were the principal drivers for the projects, along with active participation by staff from NOS Estuarine Reserves Division.

Tijuana River NERR (California)

The Tijuana River NERR is a special case of international activity within the Reserve System. About 75% of the Tijuana River watershed and 90% of the fresh water flow into the Tijuana Estuary comes from Mexico. A major portion of the Reserve’s management plan deals with problems on the Mexican side of the boundary. The Reserve works with Mexican officials and individual land owners on

a wide range of watershed issues, particularly erosion due to unplanned and poorly constructed development. One goal of the management plan indicates a need not faced by other Reserves: “Continue to work with Border Patrol and other interests north and south of the border on how best to avoid negative effects on natural resources associated with undocumented immigrants and Border Patrol activities.... Better coordination with Mexican agencies and the potential for cooperatively funded projects will enable the Reserve to take positive steps in this challenging area.”

Regional Alliances

The Gulf of Mexico Alliance (GOMA) is a state-driven initiative to better manage the natural resources of the Gulf of Mexico. The five involved U.S. states, Florida, Alabama, Mississippi, Louisiana, and Texas have developed an action plan for the Gulf of Mexico and are working with six Mexican states (Campeche, Quintana Roo, Tabasco, Tamaulipas, Veracruz and Yucatan) through the Accords of States of the Gulf of Mexico signed by the eleven states in 1995. Thirteen federal agencies under the coordination of the U.S. Environmental Protection Agency (EPA) and NOAA have committed to support GOMA.

All of the Gulf Coast NERRS are also included in the support infrastructure for GOMA. Rookery Bay NERR played a key role from the beginning by hosting the first in a series of 8 community workshops around the Gulf region in summer of 2005. Apalachicola NERR (Florida) and Grand Bay NERR (Mississippi) have also hosted these community workshops, while Weeks Bay NERR (Alabama) and representatives from five Mexican states have attended.

Gulf of Maine Council

In 1989, the governors of the three states (Maine, New Hampshire, and Massachusetts) and the premiers of the



Grand Bay NERR, Mississippi

P.R. Hoar - NOAA NERR

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two provinces (New Brunswick and Nova Scotia) bordering on the Gulf of Maine created the Gulf of Maine Council on the Marine Environment. A regional forum to exchange information and conduct long term planning, the Council's mission, "...is to maintain and enhance environmental quality in the Gulf of Maine to allow for sustainable resource use by existing and future generations. The Research coordinator of the Wells Bay NERR (Maine) serves as a member of the Habitat Conservation, Habitat Restoration, and Habitat Monitoring Committees of the Council.

Summary

International activities in the NERR system are sometimes the product of top-down directed programs (sometimes without the knowledge of those involved), but more often the result of individuals seizing the moment and making programs happen with little or no funding from their state or federal superiors. Many of these programs have now been incorporated into individual NERR management plans, and I fully expect that more of the NERRs will become involved in international activities, both because of interest within the individual NERRs and because the system represents a coastal resource management resource and MPA system model that is not duplicated in the U.S. or elsewhere, to my knowledge.

Acknowledgements

The following graciously allowed themselves to be interviewed for this article:

William Reay, Manager, Chesapeake Bay NERR, Virginia; Frank Lopez, Manager, Old Woman Creek NERR, Ohio; Beth Ebersole, Manager, Chesapeake Bay NERR, Maryland; Clayton Phillips, Manager, Tijuana River NERR, California; Gary Lytton, Manager, Rookery Bay NERR, Florida; Peter Wellenberger, Manager Great Bay NERR, New Hampshire; Carol Towle, Former Manager Chesapeake Bay NERR, Maryland; Gwynne Schultz, Director, Maryland Coastal Zone Management Division; and Nina Garfield, Program Specialist, Estuarine Reserve Division, NOS, NOAA. The interpretation of the material they provided me is my own, and any shortcomings in the paper, be they errors of omission or commission are mine and not that of any persons interviewed. I have also borrowed text very freely from a number of web sites that describe these programs.

Maurice "Mo" Lynch is a Professor Emeritus, Virginia Institute of Marine Science (VIMS), College of William & Mary. He retired in 2001 after 31 years with VIMS. Mo is a charter member of The Coastal Society and has served as President, and on the Board of Directors. He is presently completing his second term as Treasurer. He has edited or co-edited five of the Society's Conference Proceedings and organized two TCS conferences.

tal Management Plan, www.wfm.noaa.gov). NOAA also reports employment trends indicating that 50% of employees eligible for retirement do leave within three years. The Department of Commerce reported that in 2004, the average length of service of retiring individuals was almost 29.9 years (U.S. Office of Personnel Management, www.opm.gov). Even using a conservative estimate, it is therefore possible that by 2010 NOAA could lose more than 25% of its workforce---and that workforce will take with it an average of 30 years of institutional history per person.

According to the Government Performance Project Report of 2005, conducted by the Pew Center on the States (a non-partisan independent research entity), the number of South Carolina state government employees eligible for retirement in the next 5 years is 23% and in the next ten years it will be 39.8% (www.results.gpponline.org). A June 2007 publication from the California State Personnel Board (www.spb.ca.gov) reports that, of their approximately 235,000-strong state workforce, 35% (or 80,000 employees) will be eligible to retire by 2012. It's very likely that the majority of these retiring employees from both South Carolina and California will be those with long-term institutional knowledge and expertise.

The level of predicted retirement is certainly worrisome in terms of the collective "loss" of institutional history and intellectual capital; however, these departures across multiple levels of leadership within agencies do provide opportunities for young professionals with the interest and motivation to positively impact coastal resources through their efforts. Federal and state government agencies are proactively setting out strategies to address their upcoming workforce challenges through a variety of human resources plans. However, even with these new planning efforts, there continues to be concern that agencies may not have sufficiently considered the replacement of the retiring Baby-boomer managers (born ~ 1946-1964) within the context of the changing worker perspectives of the Generation-X'ers (born ~ 1964-1977) and Generation-Y'ers (born ~1977-1997) (Young 2005; Green 2000). In the last issue of this newsletter, TCS President Kristen Fletcher described a few excellent leadership training programs that can certainly provide the right suite of tools for professionals. In addition to these options, I would recommend that you take a look inside your own institution to see what offerings might be "closer to home." For example, NOAA offers a range of opportunities to expand one's experience both in programming and leadership including (but certainly not limited to) NOAA's

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Rotational Assignment Program, Leadership Competencies Development Program, and the Intergovernmental Personnel Agreement (which enables a temporary assignment of personnel between federal, state and local governments and academic communities). Now is an ideal time for young professionals in coastal zone research and management to take initiative in searching for the experiences and mentors that will enable successful transitions into new leadership positions.

Another approach to preparing for leadership positions is to become involved in group discussions and activities that include senior and junior level managers, as well as young professionals. Experiences with national, regional, and local professional societies, working groups, public outreach efforts and community environmental planning committees all provide new perspectives on a wide range of leadership opportunities. A recent Coastal Zone 07 panel, "Practicing Adaptive Management in the Workplace; Getting Prepared for the Next Generation of Coastal Management," hosted by Kathleen Leyden of the Maine Coastal Program, offered brainstorming with current leaders and interested young coastal professionals. Discussion included what characterizes a leader, steps to take as an individual interested in strengthening leadership capabilities, and the importance of finding a trusted mentor, both to glean institutional history and to provide feedback on new ideas. TCS is an additional resource for this type of open discussion and a strong option for gaining leadership experience and knowledge from a group that has fostered and supported coastal zone management initiatives for over thirty years. Undoubtedly, the upcoming TCS21 conference in June 2008 will continue to explore supporting the development of coastal leaders, succession planning, recruitment and retention of leaders in the field, as well as providing excellent networking opportunities with current leaders in the field. Keep an eye open for similar discussions during the November 2007 Estuarine Research Federation conference as well as the 2008 Restore America's Estuaries conference. Consider joining the Membership Committee by contacting either Tom Bigford (Chair; Tom.Bigford@noaa.gov) or me (Susan.White@noaa.gov). We're looking for more new energy to support TCS efforts on this issue.

Of course, future leaders in this area are not limited to the academic, policy and education communities; interdisciplinary teamwork continues to be promoted as the key to success. Keep an eye on this newsletter for upcoming discussions that I hope will be useful and thought-(and action-) provoking. Continuing the advancement of

coastal zone management calls for a team of leaders who bring energetic new skills to the table, but who also have had the opportunity to learn from the past.

(This information does not represent the opinions or policies of NOAA or the Department of Commerce.)

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Chris Hawkins



GAO Says U.S. Resource Managers Lack Direction on Global Warming

The Government Accountability Office (GAO) reported that agencies managing the nation's parks, forests, oceans and monuments are unprepared to deal with climate change. Currently, resource managers within the Agriculture, Interior and Commerce departments have "limited guidance about whether or how" to address climate change, GAO said in its report. "Without such guidance, their ability to address climate change and effectively manage resources is constrained." At the same time, there is increasing evidence of climate change in the 600 million acres of public lands and 150,000 square miles of waters managed by federal agencies, ranging from melting glaciers in Glacier National Park to rising sea levels in the Florida Keys. Excerpted from CSO Weekly <http://www.gao.gov/docsearch/abstract.php?rptno=GAO-07-863>

Water Quality at U.S. Beaches

The Natural Resources Defense Council (NRDC) recently released its 17th annual beach water quality report, a compilation of data on 3,500 U.S. beaches. In the report the NRDC identified the best ("Beach Buddies") and worst beaches ("Beach Bums") in terms of contaminated water. Pollution at the nation's 3,500 ocean, lake and bay beaches resulted in more than 25,000 closing or swimming advisory days last year, 28 percent more than in 2005, and the highest number in the 17 years that records have been kept, according to the report. Excerpted from CSO Weekly. <http://www.nrdc.org/water/oceans/ttw/ttw2007bb.pdf>

Understanding the Cause of Red Tides

Chemists at the Massachusetts Institute of Technology may have discovered the recipe for one major type of red tide. Their research opens the door to a better understanding of an affliction that costs coastal communities tens of millions of dollars in lost catches, human illness, and wildlife injuries, such as the manatees who died in a red tide outbreak near Florida last spring. By combining a chemical similar to an enzyme in the ocean with chemicals found in the algae, researchers set off a chain reaction that created abundant amounts of a type of brevetoxin that is common in Florida.

Red tide researchers praised the MIT results, saying the ability to create red tide toxins in the lab may help them better understand the conditions that foster outbreaks, which could lead them to an antidote to the poisons. Excerpted from the Boston Globe.

http://www.boston.com/news/nation/articles/2007/08/31/mit_researchers_achieve_breakthrough_on_red_tide_toxin/

Coral Worse Off Than Believed

The first large-scale analysis of the world's largest reef systems indicates that coral destruction is faster and more widespread than researchers previously thought. Over the past 2 decades, coral has disappeared at five times the rate of Earth's rainforests. The Indian and Pacific oceans are home to 75% of the world's coral reefs. Recently, John Bruno, a marine biologist at the University of North Carolina in Chapel Hill, and colleagues spent 3 years compiling over 6000 independent surveys. In all, the data spanned 4 decades and recorded the status of more than 2600 reefs. Over 3000 square kilometers of living coral reef are lost each year, the team found, and the speed of destruction is no less in protected habitats such as Australia's Great Barrier Reef. Conservationists had previously believed that accelerated declines started in the 1990s, but the researchers found reports of widespread loss dating back to the 1960s, when pollution, deforestation, and over-fishing trends began. Reefs vanished at an annual rate of 1% during the 1980s, with declines climbing through the 1990s to the current rate of 2%--nearly five times the pace of rainforest elimination, say the authors. Excerpted from an article by Amy Coombs, ScienceNOW. <http://sciencenow.sciencemag.org/cgi/content/full/2007/808/2?rss=1>. From an article by Bruno J.F., and Selig E.R (2007). Regional Decline of Coral Cover in the Indo-Pacific: Timing, Extent, and Subregional Comparisons. PLoS ONE 2(8): e711. doi:10.1371/journal.pone.0000711. <http://www.plosone.org/article/lookup?articleId=info:doi/10.1371/journal.pone.0000711>

Global Warming May be Harming Gray Whales

As many as 118,000 gray whales roamed the Pacific before humans decimated the population through hunting, and human-induced climate change may now be depriving those that remain of the food they need, according to a study released yesterday. Research, based on a detailed analysis of DNA taken from gray whales living in the eastern Pacific, highlights how human behavior has transformed the oceans.

Federal officials took eastern Pacific gray whales off the endangered species list in the mid-1990s, but a rise in sea temperatures appears to have limited the whales' available food. A recent spike in deaths among gray whales may suggest "this decline was due to shifting climatic conditions on Arctic feeding grounds," researchers wrote in a

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paper published online in the Proceedings of the National Academy of Sciences.

"One of the most exciting things" about DNA analysis, lead author Elizabeth Alter said, is that it gives us "the opportunity to look back in time and see what the ocean looked like before human impact." Said co-author Stephen R. Palumbi, a professor of marine sciences at Stanford, "...if humans are affecting the ocean's "capacity to support life, it's got to make you worry, it's got to make your wonder." Excerpted from the Washington Post. <http://www.washingtonpost.com/wp-dyn/content/article/2007/09/10/AR2007091002143.html>

U.S. Senator Feingold Calls for Hearings on Great Lakes Water Levels

A decline in water levels is an ongoing problem in the Great Lakes region, attributed in part to climate change, new rainfall patterns and even dredging activities. According to recent reports, Lake Superior is expected to reach a record low in 2007, while Lake Michigan and Lake Huron water levels have dropped 3 feet since 1999. The International Joint Commission (IJC), a bi-national group whose members are appointed by the U.S. and Canadian governments to monitor the water quality of the Great Lakes, launched a new study to evaluate water level changes and explore potential remediation options. The study is expected to take five years, which Senator Russ Feingold says is too long to wait. In letters to the Senate Environment and Public Works Committee and the IJC, Sen. Feingold has called for hearings and quicker action from the IJC study group. Excerpted from CSO Weekly <http://feingold.senate.gov/~feingold/releases/07/09/20070906.html>

Hatchery Salmon Excluded From ESA Endangerment Analysis

A federal judge in Oregon has upheld a decision by the National Marine Fisheries Service (NMFS) to exclude hatchery-spawned salmon when assessing species extinction risks in listing evaluations conducted under the Endangered Species Act (ESA). District Court Judge Michael R. Hogan also agreed with NMFS' decision to list 16 Pacific salmon populations as threatened or endangered under the ESA, *Alsea Valley Alliance v. Lautenbacher (Alsea II)*. The ruling clarifies a 2001 decision by the same judge and makes clear that NMFS need not count hatchery-spawned salmon when determining whether a salmon species is at risk. The fight over the role of hatchery-spawned salmon in ESA listings does not appear to be over and the Ninth Circuit will likely have the opportunity to weigh in on

the issue in the near future. Plaintiffs in *Alsea II* have indicated that they will appeal Judge Hogan's ruling. Excerpted from an article by Dustin Till in Marten Law Group Environmental News. [http://app.e2ma.net/app/view:CampaignPublic/id:3171.702428886/rid:a5e734512c559cdf86ebc8ecc6e2a0d6](http://app.e2ma.net/app/view/CampaignPublic/id:3171.702428886/rid:a5e734512c559cdf86ebc8ecc6e2a0d6)

On the Legislative Front: Oceans-21

Oceans-21 (H.R. 21) was introduced to the House of Representatives by Rep. Sam Farr (D-CA) at the beginning of this year, and has collected sixty-two co-sponsors. The bill was written to address and enact many of the recommendations put forward by the Joint Ocean Commission Initiative and its predecessors, the U.S. Commission on Oceans Policy and Pew Ocean Commission. The current Oceans-21 enjoys broader support in this Congress than a similar bill introduced in the previous Congress.

Key provisions include:

- The creation of a National Ocean Policy. To comport with National Standards, actions funded or carried out by Federal agencies with potential affect on U.S. waters, would have to be certified by NOAA to be "not likely to significantly the health of any marine ecosystem."
- A NOAA Organic Act, which would codify the agency and its mission in law. Currently, NOAA is authorized solely by executive order.
- The creation of a National Oceans Advisor and a permanent Committee on Oceans Policy in the Executive Office of the President. The bill would also establish a Council of Advisors on Oceans Policy, including representatives from state and local government, academia, industry, and NGOs.
- The establishment of nine Regional Ocean Partnerships to build on current state, multi-state, and regional efforts and develop non-binding Regional Ocean Strategic Plans within three years.
- An Ocean Trust Fund. Beginning in 2008, the Treasury would deposit \$1.3 billion into the Fund, which would be disbursed by NOAA to coastal states via a sharing formula. The funds would be used to implement the Regional Ocean Strategic Plans.

Excerpted from September 07 Fisheries Focus. <http://www.asafc.org/publications/fisheriesFocus/2007/sept07.pdf>



Simona Perry

Graduate Scholarships

By Ellen Gordon

In lieu of a student-written article this quarter, I thought I would instead discuss a topic near and dear to most every graduate student's heart: support money! The National Oceanic and Atmospheric Administration (NOAA) offers two competitive scholarship opportunities for graduate students in marine fields.

The first is the "Dr. Nancy Foster Scholarship Program," which recognizes outstanding scholarship and encourages independent graduate level research—particularly by female and minority students—in oceanography, maritime ecology and marine biology (the lattermost being defined to include resource management of ocean and coastal areas). Congress authorized the program soon after Dr. Foster's death in June 2000 as a means of honoring her life's work. Known for her science-based conservation of coastal aquatic life, Dr. Foster was well-respected for her personal support of mentoring as well as her championing of diversity.

The program is funded annually with one percent of the amount appropriated each fiscal year to carry out the National Marine Sanctuaries Act. The scholarships carry a 12 month stipend of \$20,000 and an annual cost-of-education allowance of up to \$12,000 and up to \$20,000 support for research collaboration at a NOAA facility. Master's degree students may be supported for up to two years and doctoral students for up to four years. About four scholarships are awarded each year. The 2008/2009 application process will open on December 1, 2007 and close on February 8, 2008. <http://fosterscholars.noaa.gov/aboutscholarship.html>

The Graduate Sciences Program (GSP), another NOAA scholarship offer, is aimed at increasing opportunities for students—particularly from underrepresented groups—in NOAA-related fields, including biology, engineering, law, social science, economics, geography, mathematics, chemistry, physics, physical science, computer science, geography and geology. Qualified candidates must have a 3.0 GPA minimum. The program provides for formal periods of work, study and classroom training. The GSP pays for tuition, books, lab fees, and a housing allowance at the selected university, travel expenses and salary during 16 weeks of NOAA work experience per year at a NOAA facility. A NOAA mentor is assigned to each student. The application process should be opening this year in October and closing in January of 2008. Specific dates will be posted on the website in the near future. http://epp.noaa.gov/grad_science/welcome.html

NOAA offers other student opportunities on occasion, at undergrad, graduate and post-grad levels. For additional information, periodically check NOAA's Office of Education, Student Opportunities website. http://www.oesd.noaa.gov/noaa_student_opps.html



Lynn Sutherland

Duke University triathlon

Duke University

Thanks to both volunteers and participants, the Seventh annual Neuse River Triathlon, held September 8, 2007 was a huge success! Sponsored by the Duke University student chapter of TCS, the event was held on Pivers Island, Beaufort, North Carolina. One hundred and twenty nine participants competed in the 800m swim, 6 mile bike ride, and 2.5 mile run. The winner in the men's individual competition was Chris Oishi (50 minutes 34 seconds), the winner of the women's individual competition was Laura Downey (54 minutes 39 seconds), and the winner of the mixed team competition was the team Rusty, Slow, and Slower (Eleanor Kim, Peter Maniloff and Rafe Sagarin; 44 minutes 4 seconds). Best costume was also awarded to Joel Sholtes for his creative lobster outfit.

Fortunately, tropical storm Gabriella held off a day, allowing for good weather on the day of the triathlon, despite being a bit warm. Following the competition, winners were announced at the BBQ picnic at Duke University's Marine Lab and a raffle was held with several great prizes. The triathlon raised an estimated \$600, to be donated to the Neuse River Foundation, which works to protect rivers and estuaries in eastern North Carolina that feed into the Mid-Atlantic.

East Carolina University

After the summer hiatus, the East Carolina University Student Chapter of The Coastal Society (TCS-ECU) is gearing

up for a full year. Our primary focus will be increasing the effectiveness of TCS-ECU by expanding our membership beyond the Coastal Resources Management Ph.D. program (CRM) to other students, faculty and members of the university community who are interested in coastal issues.

At the end of the last academic year, we were successful in securing funds from the ECU Graduate Student Council to enable us to help some of our members travel to professional conferences to present their work, and to bring speakers to campus. With the continued additional support of the Graduate School, the CRM program and research grants, we have set a goal of sending each TCS-ECU student member to at least one conference this year.

We recognize the importance of these opportunities to our professional development, and we are grateful for the support.

In May, we elected new officers for the 2007-08 academic year. They are: Kevin Miller as President; Greg Meyer, continuing to serve as Vice-president; past-president Val Grussing as Treasurer; and David VanDeVelde as Secretary.

In August, several members participated in CRM's 3rd Conversation on Society and the Environment. This is an annual gathering at which we informally discuss a book read over the summer. The books have all been of broad general interest while related to coastal issues. This year's choice was Paul Roberts' *The End of Oil*. TCS-ECU members were invited to serve as facilitators for small-group discussions. About 80 people signed up to read the book, and most joined in the afternoon's discussion. We took advantage of the opportunity to introduce people to TCS-ECU and encourage their membership and participation.

We are looking forward to a number of other activities in the coming year. In October, we will host a visit from TCS President Kristen Fletcher. We are excited to be able to have Kristen on campus, and for the opportunity she brings to help raise the coastal awareness of the university community. Working with the CRM Program, we hope to be able to bring other academics and coastal professionals to campus to continue to engage our community in

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learning about and discussion of important social, political and environmental issues that involve the coast. But it's not all work and no play—we are also planning an informal fall social gathering, a picnic at a member's farm.

Finally, as you have read elsewhere in this issue of the Bulletin, planning for TCS21 is underway. The call for abstracts is out, and this conference promises to continue the long tradition of interesting, engaging meetings. We are happy that several people involved in TCS-ECU are able to serve on the planning committee, including our faculty advisor and TCS past-president Lorry King, CRM graduate and former TCS-ECU member Chris Ellis (now at NOAA's Coastal Service Center in Charleston), and current president Kevin Miller. We look forward to seeing you in Redondo Beach next June!

University of Hawai'i

The Hawai'i chapter of The Coastal Society has been meeting over the summer to discuss how to conserve coastal environments and minimize vulnerability to coastal hazards, both pressing issues in our island state. Members from a diverse range of disciplines such as geology, geography, planning, engineering and law brought their expertise to think-tank style meetings which focused on a wide range of management, governance and technical issues. More than talk, the chapter decided to delve into studying a range of coastal land management strategies this coming year. The Hawai'i chapter also had a little fun this summer. Student members learned how ancient Hawaiians managed their coastal resources and partici-

pated in a fishpond restoration at Paepae o He'eia which is an ancient Hawaiian fishpond located on O'ahu. <http://www.paepaeoheeia.org/>

The Hawai'i chapter is gearing-up for the new academic year and has hired a new student organizer for 2007-2008 who will also be involved in a research project with the State Department of Land and Natural Resources, Office of Conservation and Coastal Lands (OCCL).

University of Rhode Island

Over the summer the officers of the URI student chapter of TCS met several times to plan for fall meetings, forums, and social activities. Planned social activities include monthly beach cleanups at Bass Rock, a public access point the chapter has recently adopted, and a getaway trip to Block Island. Forum speakers scheduled include representatives from the Census of Marine Life Project, Narragansett Bay's Save the Bay, the wind energy company Cape Wind, and a United Nations Fellow from Thailand.

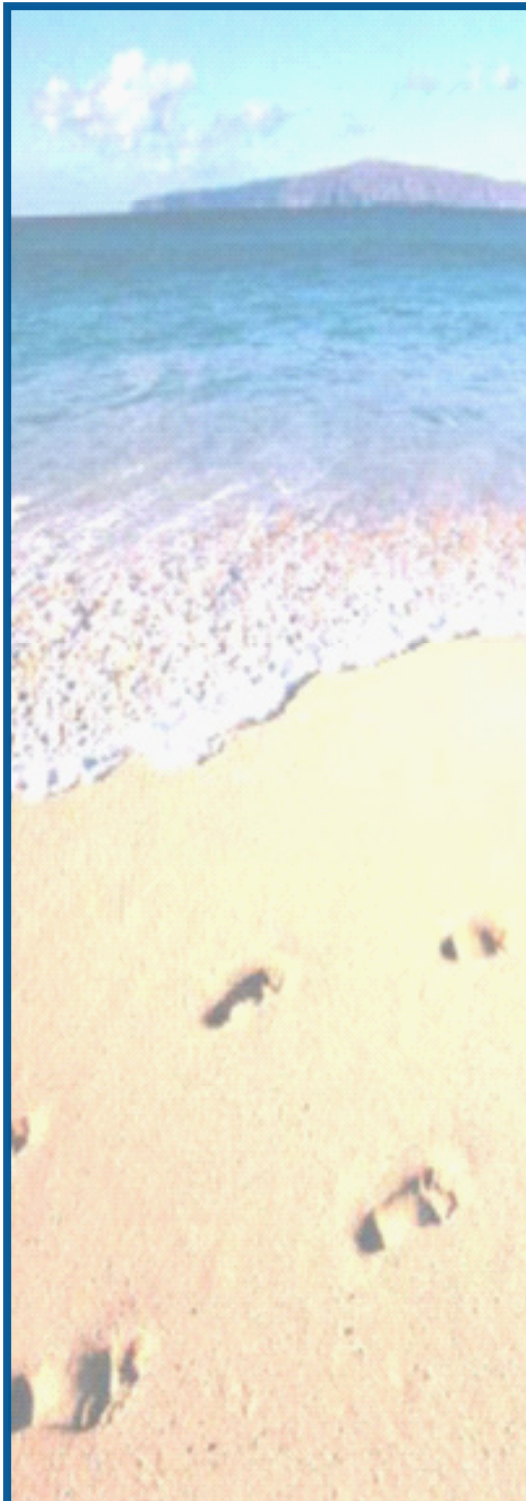
University of Washington

During the summer quarter at the University of Washington, our chapter has been pretty quiet. However, individually our members have been busy gaining work experience, doing research, interning, attending conferences, and traveling the world. We look forward to getting back together at the end of September to resume TCS projects like Blue Drinks and restoration projects. Stay tuned!



India Clark

TCS-Hawai'i student members volunteer at Paepae o He'eia fishpond restoration.



Please join us for The Coastal Society's 21st International Conference...

“Coastal Footprints: Minimizing Human Impacts, Maximizing Stewardship”

June 29 - July 2, 2008

Redondo Beach, Los Angeles, CA

Abstracts due October 23!

Abstracts for panel sessions and oral and poster presentations are invited. Submissions should provide case studies or offer innovative solutions to spark interactive discussion. Preference will be given to those that complement the conference's theme and fit within the conference [tracks](#):

Effective Integration of Coastal Science, Policy & Management

International Coastal Management Concepts and Practices

Coastal Energy Siting, Production and Consumption

Integrating Social Equity into Coastal Management

Working Waterfronts and Waterways

Coastal Land and Watershed Use

Climate Change Impacts

To submit an abstract or for more information, visit www.thecoastalsociety.org/conference/tcs21/



Scientific Workshop on the Impact of Global Climate Change on the Arctic Coastal Zones

October 1-3, 2007, Tromsø, Norway

Theme: Arctic Coastal Zones at Risk. Organized by LOICZ, AMAP and IASC.

<http://w3k.gkss.de/events/arctic07/>

International Conference on Management and Restoration of Coastal Dunes

October 3-5, 2007, Santander, Spain

<https://www/iccd07.com>

26th Annual International Submerged Lands Management Conference

October 29-November 2, 2007, Williamsburg, VA

<http://www.submergedlands2007.com>

International Conference on Coastal Management 2007

October 31-November 2, 2007, Cardiff, United Kingdom

The purpose of this conference, through nine key themes, is to highlight innovation and best practice in the field of coastal management.

<http://www.coastalmanagement2007.com/>

ERF 2007: Science and Management: Observations, Syntheses, Solutions

November 4-8, 2007, Providence, RI

<http://erf.org/erf2007/>

32nd Peace in the Oceans Conference: Waves of Change: Women, Youth and the Sea—Partnering for the Protection of the Marine Environment

November 5 - 8, 2007, Malta

This conference aims to build public awareness about the economic and social value of our oceans and establish new channels through which women and youth can engage in maritime and climate change affairs. In addition, the conference will showcase an underwater film festival and art exhibition. www.thewavesofchange.org

Living with Climate Change: Are There Limits to Adaptation?

February 7-8, 2008, London, UK

<http://www.tyndall.ac.uk/research/programme3/adaptation2008/index.html>

GIS and Water Resources IV, American Water Resources Association Spring Specialty Conference

March 17-19, 2008, San Mateo, CA

Geographic information systems have become a necessary component in the planning and management of water

resources. This conference continues the AWRA biennial tradition of surveying the state of knowledge in this field. http://www.awra.org/meetings/San_Mateo2008/index.html

4th Global Conference on Oceans, Coasts and Islands

April 7-11, 2008, Hanoi, Vietnam

Organized by the Global Forum on Oceans, Coasts, and Islands and hosted by the government of Vietnam

www.globaloceans.org/

Solutions to Coastal Disasters Conference 2008

April 13-16, 2008, Turtle Bay Resort, Oahu, Hawaii,

Conference topics will focus on science, management tools, management challenges and options, and coastal land use policy related to a range of coastal hazards.

<http://content.asce.org/conferences/cd2008/>

Coastal Footprints: Minimizing Human Impacts, Maximizing Stewardship

June 29-July 2, 2008, Redondo Beach, Los Angeles, CA

<http://thecoastalsociety.org/conference/tcs21/index.html>



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(Please print out and complete all blanks.)

Name: _____
Last First Middle Initial

Organization: _____

Street: _____

City/State/Zip: _____

Home Address (if preferred mailing address):

Day Phone: (____) _____ E-Mail: _____

Present Occupation: _____

Primary Interest: _____

Sponsored/Referred by: _____

Signature: _____ Today's Date: _____

Type of Membership:

Individual Regular: __ \$35 U.S. 1-year __ \$68 U.S. 2-year __ \$99 U.S. 3-year

Student: __ \$15 U.S.

U.S. Library: __ \$50 U.S.

Corporate/Agency: __ \$250 U.S.

Dues Payment:

Select membership category and number of years (discount for 2 or 3 years).

To pay by check: Make check payable to: The Coastal Society. Please mail check and application to: PO Box 3590, Williamsburg, VA 23187-3590.

To pay by credit card: We cannot accept credit card information other than through the PayPal option. Please go to the TCS online membership form if you wish to pay by credit card (<http://www.thecoastalsociety.org/membersub.html>).

Thank you for your support.

The Coastal Society is an organization of private sector, academic, and government professionals and students dedicated to actively addressing emerging coastal issues by fostering dialogue, forging partnerships, and promoting communication and education.