

LITTORALLY



SPEAKING News from the Mid Atlantic Chapter

Summer 2005

RALLY ROUND THE CRAB

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Multiple threats to the horseshoe crab call for immediate and multi-pronged response

From the State house to the coffee house, everyone is talking about the threatened horseshoe crab and its imperiled ecosystem partner, the red knot bird. Newspapers ranging from free local weeklies to the New York Times have explained the amazing relationship between the horseshoe crab's spawning cycle and the red knot's stopover on the Delaware Bay shore on its way from its winter home in Tierra del Fuego to its Arctic nesting grounds.

This summer, in spite of new scientific evidence documenting continuing declines in both populations and the combined advocacy efforts of ALS and a coalition of mid-Atlantic environmental groups, Governor Richard A. Codey and the New Jersey Department of Environmental Protection allowed seasonal restrictions on harvesting to expire without instituting a full moratorium. We are now working to ensure that the remaining harvest is properly monitored and that it does indeed close when the 150,000-crab NJ quota is reached. On the Delaware side of the bay, no moratorium was enacted. Crabbers there reached their 150,000-crab limit on June 23 and the state closed the harvest on June 24. As in New Jersey, Governor Ruth Ann Minner's administration did not take the action needed to protect the horseshoe crabs for the long term.

Most of the public discourse on this situation has been framed in the context of the red knot's plummeting population. This intrepid bird's situation is dire and warrants immediate action; however, we must not lose sight of the very real threat to the horseshoe crab itself. Because the crab is such an ubiquitous resident of the littoral zone, it is easy to overlook. Many who spent childhood summers on mid-Atlantic beaches have lost touch with the funny creatures from which we ran screaming as children and don't even realize that they are now on the wane.

The horseshoe crab has taught us many lessons and holds the promise of many more. No fewer than four Nobel prizes have been awarded to scientists whose research has focused all or in part on the horseshoe crab. Perhaps most notable is the work of Dr. H. Keffer Hartline, who

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TO TAKE ACTION TO SAVE THE HORSESHOE CRAB

In New Jersey

Governor Richard A. Codey
Phone: 609-292-6000
E-mail: www.state.nj.us/governor/govmail.html

Commissioner Bradley M. Campbell
Phone: 609-292-2885

In Delaware

Governor Ruth Ann Minner
Phone: 1-800-292-9570
E-mail: www.state.de.us/governor/comments.shtml

Secretary John A. Hughes
Phone: 302-739-9000

THE TROUBLE WITH OYSTERS

Oyster Recruitment Low for Unprecedented Fifth Straight Year in Delaware Bay

The oysters in Delaware Bay are in trouble, and that means the Bay is in trouble. According to the 2005 Stock Assessment Workshop Report for the New Jersey Delaware Bay Oyster Beds, issued by researchers at Rutgers University, for the fifth consecutive year, oysters are not "setting" or "recruiting"—that is, oyster larvae are not attaching themselves to the Bay bottom in numbers great enough to replace those lost to disease and predators. Based upon this report, the Delaware Bay section of the New Jersey Shell Fisheries Council has recommended that the following actions be taken:

- A 50 percent reduction in the harvest of oysters from the Bay in the 2005 season (April to November) and limited harvest from certain beds to protect brood stock
- Transplanting of mature oysters from some beds to others
- A multi-year "recruitment enhancement program," in which oyster shells would be planted at strategic locations to encourage future sets

The state and federal governments have each set aside \$300,000 in this year's budgets for shell planting, and Eric Powell, Professor of Marine Sciences and Director of Rutgers' Haskin Shellfish Research Laboratory in Port Norris, New Jersey, says that although the shell planting program is an important start, much more needs to be done.

"Delaware, New Jersey, and the federal government need to invest in environmental monitoring of the conditions in Delaware Bay," Powell says. "That's a long-term commitment, but it's necessary. We don't know why the oyster set is so low for the past five years, because we don't really know what's going on out there in the Bay."

A disease called Dermo, which can kill oysters but does not affect humans, decimated the oyster population in the 1990s. New Jersey has been carefully managing the fishing. Due to recent population decline, this year's recommended harvest of less than 35,000 bushels would be the lowest since New Jersey started managing the fishery.

The recent problems do not appear to be a result of Dermo. Oysters are spawning well, but the tiny, free-floating larvae are not setting—that is, affixing themselves to a hard underwater surface where they can grow. Experts do not understand why. Powell says it could be changes in water temperature or water clarity, variations in the makeup of the tiny organisms that serve as the larvae's food, pollution levels or a host of other factors.

Powell stated that the inability of oysters to reproduce is not a good sign, because oysters are at the center of life in the Bay throughout their lives. Oysters filter the water. They serve as food for many other species, including humans. Their shells form a substrate onto which a wide

variety of Bay life attaches, helping the Bay's biodiversity.

"If you don't have oysters, you have real problems in the Bay," Powell says. "And right now, we're close to the lowest abundance ever recorded in the Bay."

People who make their living from the Bay are aware of the problem, as are the federal and state officials responsible for the Bay, Powell says. "We've had lots of support from Congressman

LoBiondo, and from Senators Corzine and Lautenberg, and the Delaware congressional delegation have been advocates, too," he says. "But low setting is continuing, and the oyster population is expected to continue to decline this year. We're losing ground and we can't really afford to lose any more ground."

The 2005 Stock Assessment Workshop Report for the New Jersey Delaware Bay Oyster Beds is available upon request from the Haskin Shellfish Research Laboratory by calling (856) 785-0074. Information on the shell planting program can be obtained from the agencies coordinating this effort: Rutgers University, the New Jersey Department of Environmental Protection, the Delaware River Basin Commission, the Delaware River and Bay Authority, or the Delaware Department of Natural Resources and Environmental Control.

This article was reprinted with the permission of the Partnership for the Delaware Estuary, from the Spring 2005 Issue of Estuary News. Visit their web site at www.DelawareEstuary.org.



Oyster larvae successfully set on hard shell.

Photo credit: Bayshore Discovery Project

IN THE RANKS

Members in Action

Fishing, Tagging and Sharing

Dorothy Obropta came up from the beach out of the fog and into our Sandy Hook headquarters one windy, rainy day in 1988. She introduced herself, asked how she could join the American Littoral Society and what she could do to help. In the ensuing 18 years, she's tagged countless fish and has spent thousands of hours assembling the fish tagging kits on which our program depends. As Dorothy explained it, "Some women



Dorothy Obropta and a Good Day's Catch
Photo Credit: ALS File Photo

knit or crochet to relax—I put together fish tagging kits to support an important cause." What better pastime for an avid fish tagger?

Her meticulous work has helped us achieve a level of quality control needed to make our program a success.

Her many years of fishing and tagging with ALS have left Dorothy with a profound respect for the fish. "People would be absolutely amazed to know how far the fish actually travel and how fast they get there." She continued, "They never cease to amaze me—and I've been doing this for a very long time."

A resident of Metuchen, New Jersey, Dorothy surf fishes for striped bass from the Raritan Bay shore, Sandy Hook and Island Beach State Park and

is a member of the Berkeley Striper Club. She shares her experience and skill by giving surf-fishing workshops through the New Jersey Outdoor Women's League, a non-profit organization that specializes in teaching outdoor skills to women. To learn more about this group, visit their web site at www.njowl.org.

About her long-term relationship with ALS, Dorothy said, "I've developed a deep appreciation for all that ALS does to protect the coast. I'd hate to think of what the state of the coast would be without their work." ALS holds our dedicated members in equal esteem. We'd hate to imagine what the state of our organization and the coast would be without members like Dorothy Obropta.

TAGGERS' TALES

April on the Rivers

Rivers are great places to tag stripers in the month of April. Each year, ALS attends the Hudson River Fishermen's Association Striper Derby at Tarrytown, New York. This very active club participates in and vigorously promotes our tagging program. In this tournament, each fish brought in to be weighed receives an extra pound added to its score if it is tagged and released alive. Four stripers caught and tagged during the 2004 Derby on were recaptured in four different states. These fish made their way from the Hudson to Long Beach, NY, in June; Wellefleet, MA, in September; Cape May, NJ and Guilford, CT in November.

April on the Delaware River also brought returns from multiple states. Stripers tagged by Stan McGuigan, at Burlington on

April 20 were later returned from North Eastham, MA in July and Greenwich, CT in August.

To learn more about our fish tagging program and how you can participate, visit our website at www.littoralsociety.org/tag.htm.

Thanks Taggers!

Our thanks go to all taggers who answered our call to submit material to our special, 40th anniversary tagging issue of Underwater Naturalist. We had an excellent response, have enjoyed reading your submissions and know our members will, too.

Members We Want To Hear from you

Members: We want to hear from you. To share your efforts to advocate for, educate about, restore, conserve, or explore the coast with other ALS members in this newsletter, please write or e-mail details to eileen@littoralsociety.org. Be sure to include your daytime phone or e-mail address. We can't promise to cover every story, but will try to present a comprehensive picture of the impact our members make on our coast.

NewsShorts

Summer I.C.E.

The Institute for Coastal Education is in full summer swing. Tony Totah, our marine educator is delivering on-the-beach coastal education programs through the recreation and education commissions in Marlton and Lower Township. He's covering a range of topics including sessions about whales, shells of the Jersey shore, and career encounters that will introduce young people to the many career opportunities in the littoral zone.

When not working on the beach, Tony is preparing to launch an after-school program in marine science at the Uptown School in Atlantic City in September. This program targets middle school children who don't always have access to the beach or a marine science program in their school. Funds were awarded to ALS by PNC Bank. We look forward to this new partnership with them.

Join Tony as he delivers a Sunset Series talk on horseshoe crabs at 7 PM on August 23rd at the Bayside Center in Ocean City (no charge). Join him for a Coast Walk on August 25th from 5:00 to 6:30 PM along the causeway between Longport and Somers Point. (\$5 for individuals and \$10 for families.)

To reserve a space in a program, contact Tony Totah at 609-729-9262 or aatotah@aol.com.

Graham Macmillan Award Reestablished

For a number of years in the past, the Society presented its annual Graham Macmillan Award for services in the marine sciences and environment. The award was established to honor the accomplishments of Graham Macmillan, a founding member of the Society who, in 1965, organized the Society's volunteer tag-and-release fishing program. Among early winners of the award were Phillip Cousteau, Eugenie Clark, Bill Gordon (then head of the National Marine Fisheries Service) and Stan Waterman. We have reestablished this award and will announce a new winner at this year's annual meeting.

2005 Annual Meeting Set in Urban Oasis

This year's annual meeting will be held at the New Jersey Meadowlands Environment Center in Lyndhurst, New Jersey on Saturday, Sept. 24 and Sunday, September 25th. All will have the opportunity to learn about the amazing urban wilderness that is the New Jersey Meadowlands. Directed by ALS trustee, Dr. Angela Cristini, the center is a collaboration of the New Jersey Meadowlands Commission and Ramapo College of New Jersey. It offers an interactive environmental learning center for adults and children, a butterfly garden, and easy access to extensive waterways and trails teeming with life, all within view of the New York City Skyline. The keynote speaker will be Richard Ellis, noted marine artist and author.

We encourage you to bring your children and grandchildren—in addition to planned excursions, the

learning center will be open for all to enjoy. To reserve your place, contact Pat Coren (pat@littoralsociety.org or 732-291-0055). Additional details will be provided in a separate mailing.

Calling All Divers

Divers have always been important Littoral Society members and doers. Our first campaign was diver-driven: to save the San Diego, a naval ship sunk off the coast of Fire



Island, New York, when it was being threatened by a commercial salvage operation. We followed this success with Labor Day weekend fish counts, the compilation of data on coastal NJ waters after the 1976 fish kill in the New York Bight, an underwater survey of St. Croix, and an underwater reconnaissance of near-shore Bermuda waters for a pipeline location.

To get back to these roots, we're planning a day-long symposium for divers. We'll cover what divers can expect to see under the water line and, even more important, what it means. This will include time in the bio lab and exchanges with experienced divers, naturalists and marine biologists. We'll provide more details when plans are solidified. In the meantime, if you are a diver or a snorkeler, we welcome your ideas about programs and/or activities you'd like to see in the future. Contact eileen@littoralsociety.org or phone her at 732-291-0055.

RALLY ROUND THE CRAB

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studied the unique physiology of its vision to unlock many secrets of human sight. This species, *Limulus polyphemus*, has been on earth for more than 300 million years. Fossil evidence shows us that it remains virtually unchanged in that time. What can it tell us about evolution, survival, and adaptability? How has it lasted so long and why hasn't it changed? If human behavior doesn't change, we may never know.

There is no single reason for the decline of the horseshoe crab; however, it is clear that over-harvesting them for bait may be the final – and biggest - nail in a coffin that has been slowly built by years of habitat destruction and pollution. Habitat has disappeared gradually through a combination of natural beach erosion and inappropriate on-shore development.

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REGARDING NATURE

1.5 CHEERS FOR DELAWARE BAY

New York Harbor and Chesapeake Bay get the glory. One has the Statue of Liberty; the latter has been called a mighty protein factory, famous for its crabs, oysters, and rockfish (stripers to almost everyone else). Both are important, productive estuaries where freshwater meets salt and lots of biology happens.

In between the two is Delaware Bay, which quietly goes about its business of providing at least its mid-Atlantic share of habitat for wildlife, despite the cruel hand of upstream "progress." The bay's bottom, its edges, and its water deserve plenty of care and feeding.

The lower end of Delaware Bay starts at a line drawn from Cape May to Cape Henlopen. The upper end is harder to delineate; it becomes the Delaware River about 50 miles upstream, stays somewhat salty until just below Philadelphia, tidal as far up as Trenton, NJ, and then after winding about 200 miles north it branches east and west at Hancock, NY. It is the only major undammed east coast river in the US. In many respects, the water quality in the bay has improved, primarily because of better sewage treatment in Wilmington and Philadelphia. Oxygen and bacteria levels are more healthful, but an over supply of nutrients (phosphorous and nitrogen) from non-point source pollution and atmospheric deposition is still a serious problem, over-fertilizing bay waters and throwing the system out of whack. Then, there are those mixed chemical discharges and oil



Short-nosed Sturgeon

spills from Wilmington, Deepwater, Marcus Hook, and Philadelphia and from the ships that navigate the bay and river.

Despite all this, the bay is alive. It is a sport fishing bonanza – weakfish, striped bass, black drum, and bluefish. It is pupping ground for sharks, habitat for the NJ endangered short nose sturgeon, and home of a vibrant blue claw crab fishery, plus many smaller crowd pleasers – spot, croaker, porgies, black sea bass, and tautog.

There are good numbers of diamondback terrapins, rafts of waterfowl during the winter, and breeding gulls, egrets, and herons. Expansive salt marshes fringe both sides of the bay, home to fiddler crabs and juvenile and forage fish. Delaware Bay hosts the largest population of horseshoe crabs in the world and the largest concentrations of red knots, shorebirds that feast on horseshoe crab eggs laid on bay beaches (see related story on Page 1). And the Bay is entrance to a major freeway for migrating shad heading upstream to spawn in freshwater, and American eels going the other way to spawn in the Sargasso Sea. Twice each day, the tide sloshes in, bringing its nutritious mix of food.

And the embattled oyster industry in the bay still fights back. From a million bushels a year 30 years ago,

the catch is down to a limit of 25,000 bushels in 2005, as oysters and scientists try to overcome the multiple threats of unfavorable temperature, salinity, and river flow, at least two relatively new diseases, and habitat modifications.

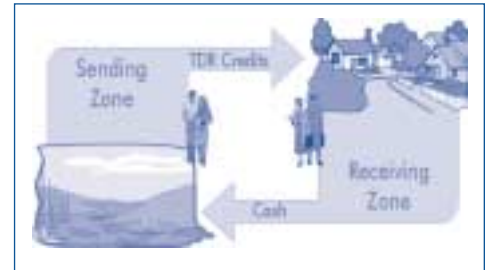
Bay and river, the Delaware system's value is immense, whether it is measured as an economic engine or a biological treasure. Its salty water and edges are of special concern.

Should we cheer because Delaware Bay still lives, or bemoan (and repair) the damage it has suffered? Both.

Submission Guidelines

We welcome articles, field notes and photos. See www.littoralsociety.org for submission guidelines to Littorally Speaking, Coastal Reporter, and Underwater Naturalist or send a SASE with your written request.

TDR-Rx for the Coast



Passage of the Transfer of Development Rights Act (TDR) has been the dream of New Jersey environmentalists for more than 20 years. We worked long and hard to make it happen. From ALS' perspective, anything that promises to put the brakes on sprawl is good news for the coast. The dream became law in 2004 and we have set to work to convert the paper promise to reality on the ground. Matt Blake, our Tuckerton-based conservation coordinator has hit the ground running to ensure that potential users understand this innovative program well enough to give it a try. Armed with visuals, fact sheets and white papers, Matt is making his way across south Jersey, speaking at municipal planning meetings, information sessions, and public events.

TDR sets up an approach to land use in which growth and open space preservation mutually support each other. It offers municipalities with limited resources a way to fund open space and to manage growth. In a TDR program, a municipality identifies land that should be preserved (Sending Zones) and land that is appropriate to be developed (Receiving Zones). Developers provide capital to purchase the development rights from landowners in Sending Zones, who then bind the property into a conservation agreement that prohibits future development. Landowners retain the right to use, occupy, and sell the property. In exchange for their capital investment, developers receive TDR credits, which give them the right to develop in a Receiving Zone at a higher rate of density or different use than normally allowed, but consistent with an overall plan for growth.

Although TDR at the municipal level is new in New Jersey, TDR has been around the mid-Atlantic region for more than 20 years in a variety of forms. The state implemented a regional TDR program in 1981, the Pinelands Development Credit Program, through which 36,750 acres have been protected. The largest program in the US is in Montgomery County Maryland where preservation of 50,000 acres of open space has been funded since its inception in 1980. Pennsylvania has legislation in place and, although Delaware has implemented sporadic programs at the local level, a state law has yet to pass; however, TDR is on Governor Minner's 2005 Liveable Delaware legislative agenda.

TDR makes the most sense for areas that still have open space to preserve and are under growth pressure; thus, our focus on South Jersey. As we continue to promote this process and towns begin implementation, we will work to help them through the process and to ensure that TDR is used as intended. At present, we are working with a planning consultant with TDR experience to better understand what criteria should be used for designating sending and receiving zones.

TDR is a viable way to control sprawl and manage growth. It makes environmentally sensitive land use more attractive for municipalities who might otherwise feel compelled to join the rampant rateables chase that threatens our quality of life and our coast throughout the mid-Atlantic region.

To learn more, download our fact sheet and white paper from www.littoralsociety.org/resources.

RALLY ROUND THE CRAB

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Problems with multiple causes demand multiple cures and we are approaching the dilemma of the horseshoe crab from many angles. We have advocated for the protection of the horseshoe crab through a total ban on harvest until populations of both crabs and red knots are secure and sustainable. We have made the horseshoe crab a focus of our educational and outreach programs to familiarize the public with its past and current contributions to biomedical research and the biodiversity of the littoral zone.

In addition to this very public effort, we have launched a program to identify, protect, and restore critical horseshoe crab spawning habitat on the Delaware Bay shore. The identification phase was executed in collaboration with the Rutgers Center for Remote Sensing & Spatial Analysis. Headed by the center director and ALS trustee, Dr. Richard Lathrop, the project was funded by the Mushett Family Foundation and the Regina Frankenberg Fund. Using high resolution, infrared, aerial photography and remote sensing techniques, Dr. Lathrop and his team have mapped the entire Delaware Bay shore, categorized its beaches for viability as horseshoe crab spawning habitat, and placed the data into a GIS (Geographic Information System) database.

Into this foundation, the team will integrate other available geographic information, identify and prioritize stretches of shoreline habitat in need of restoration, and develop an interactive web site to communicate the results. The data will be made available to the coastal management community and to the interested public. ALS will use the data as the basis for the restoration phase of our program. When that begins, we will turn to our members and the general public for help in executing community-based restoration efforts.

In the meantime, we encourage our readers to urge Governors Minner and Codey, Commissioner Campbell, Delaware Secretary of Natural Resources John Hughes, and other elected officials to enact an immediate and ongoing moratorium on the harvest of horseshoe crabs until the populations are secure and sustainable. Remind them that extinction is forever.

ADVOCACY UPDATE



Welcome to the Jersey Shore Credit: ALS File Photo

Coastal Centers

As anticipated, our successful bid to convince NJ Governor Richard A. Codey to let the "Coastal Center" designations expire and replace them with the state's Plan Endorsement Process elicited rapid retaliation by the building lobby and rateable chasers. This came in the form of State Assemblymen Jeff Van Drew's (D-Cape May) proposed legislation to resurrect them.

While his bill passed in committee, before it could come up for a vote, a regulatory compromise was proposed and will most likely be enacted in the near future. This rule will extend the coastal center designation for a small number of municipalities who had already begun the Plan Endorsement Process. Also, the new rule removes environmentally sensitive lands from the coastal center boundaries, a major problem with the older approach.

Fast-track Slows Down

Former Governor McGreevy's moratorium on implementation of the "Fast-track" law was scheduled to expire on July 15. Fortunately, the six-month moratorium gave the public and lawmakers time to understand the many implications of this law, both intended and unintended. This familiarity bred enough contempt to divide decision makers into two camps—those favoring repeal and those favoring amendment. At this time, 52 lawmakers have signed on to sponsor a bill to repeal Fast Track. Governor Codey, Senator Stephen Sweeney (D-Gloucester and chief sponsor of original Fast-track law) and others believe Fast-track should be implemented with certain amendments. The issue became moot on July 12 when Governor Codey issued an order postponing implementation indefinitely, citing the need for three state agencies to ensure that the law adheres to federal standards. If you have not done so already, please add your voice to those urging the Governor and other decision makers to repeal this law.

Off-shore Wind

The Blue Ribbon Panel on Offshore Wind Turbine Facilities created by New Jersey Governor Richard A. Codey held a series of hearings this spring to hear from the public about whether the state should promote or allow industrial-scale wind farms off our coast. A wide range of residents, commercial and recreational fishermen, and elected officials offered the Panel their thoughts. While recognizing the value of renewable energy, most cautioned that it should not come at any cost – concerns about impacts to

marine habitats, access to open ocean space, interfering with commercial fishing operations and marring ocean vistas were all expressed. Many of the comments reflected concerns raised by ALS in advocating for the creation of the Panel's process. The Panel is now working to combine background research and the public comment into a draft report, which will be released for further public debate in the fall.

Wreck Pond Restoration Project

DEP Commissioner Brad Campbell hosted public meetings in Spring Lake and Sea Girt in July to enable public discourse about the most recent updates to this multi-phase project slated to begin in the fall. The first two phases, the sand dredge/beach disposal and outfall pipe extension, have been revised in response to many of ALS' concerns about adverse impact of proposed work on fish, wildlife and plant species found in the Wreck Pond watershed. Dredging locations have also been revised to avoid the island, protect shallow areas and preserve the migratory shorebird and plover foraging habitat in the island vicinity. The DEP also included seasonal work limits, accommodations for outwardly migrating herring in the fall, and surveying and buffer requirements for the federally-listed seabeach amaranth as permit conditions. There are also plans to enhance the existing plover and least tern habitat, which will require re-routing of public access from these areas. We will continue to advocate for better strategies for species and habitat protection for anadromous herring, the plovers, least terns, sea beach amaranth, and mugwort, at risk in the project.

Beach Access

The New Jersey Supreme Court has not yet handed down its decision in the landmark Atlantis Beach Club case reported in our last issue. Responding to increasing public interest in this area, the NJ DEP held a series of workshops in coastal towns around the state to discuss the many and sometimes complex requirements of public access. The free workshops targeted government officials, land use professionals, and advocates and were designed to educate participants about the Public Trust Doctrine and how it is implemented in NJ. The DEP invited ALS to share our knowledge and experience in this issue and we participated in 4 of the 5 workshops along with members of DEP staff. The workshops were well attended and productive. Most important, they revealed to us that many towns are interested in improving access but often lack local expertise as to exactly what their legal obligations are and how to achieve them.

Breaking News – on 7/26/05, the NJ Supreme Court decided 5-2 in favor of public access. Check www.littoralsociety.org for details.



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SAVE THE Date

FIELD TRIPS AND EVENTS

For complete details, check our web site, your local field trip guide (the one with footprints on it) or call the office.

**Sept. 20:
 Fall Equinox Shorewalk
 Guardian Park 7pm - Free.**

**Sept. 24-25:
 Annual Meeting (See page 4).**

**October 22:
 Manasquan Reservoir Hike -
 4 hour hike free.**

**November 19:
 Tundra Swans and
 Cranberry Bogs - 2 hour
 hike in Pine Barrens -
 \$6 or 2 for \$10.**

American Littoral Society

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- Marine Educator
Tony Totah

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Become a member of the American Littoral Society and receive Underwater Naturalist, Coastal Reporter, Littorally Speaking, special publications, and a membership card. Complete this form and mail with your check or credit card details to: American Littoral Society, Sandy Hook, Highlands, NJ 07732. Payment is accepted in US funds only. Make check payable to American Littoral Society. Contributions are tax deductible.

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