



The Barnegat Bay Beat

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A Trip to See Scientists At Work

"I had no idea there was so much life in these waters, so close to the shore," said Bill McKanic, one of about 17 passengers aboard the Bay Cruiser pontoon boat for a trip to see Rutgers marine scientists conducting research in the Barnegat Bay.

Seats for the trip, co-sponsored by the Barnegat Bay National Estuary Program and the Jacques Cousteau National Estuarine Research Reserve, were raffled off at the 9th Annual Barnegat Bay Festival in June. Winners met on a hot July morning aboard the Bay Cruiser for a two and a half hour tour of the bay, boarding at the Ocean County Parks Administration Building in Dover Township.

Passengers of all ages learned about the abundance of life that exists in the shallow waters of the Barnegat Bay by seining along the shores of Cattus Island Park. Some of the many things caught in the seining net were a blow fish, pipe fish, bay anchovies, blue crabs, bay anemones, and a hog chocker.

The tour was guided by Cattus Island Naturalist, Pat Korotky, and Rutgers Marine Scientists, Dr. Mike Kennish, Greg Sakowicz, and Scott Haag. In addition to seining in the Bay, passengers got an up-close view of an Osprey nest with mother and young, as well as a lesson on the importance of healthy "sea grass" beds or submerged aquatic vegetation and how their health is a key indicator of the overall health of the Barnegat Bay Estuary.

"This trip is part of our on-going efforts to educate the general public about the estuary, the life which it sustains, and how important it is to protect it by altering our own actions on a daily basis," said Dr. Bob Scro, Director of the Barnegat Bay National Estuary Program and a passenger on the trip. Indeed, the passengers now have an increased awareness of both the estuary's fragile and important environment and what they can do to keep it healthy.



Participants began their trip by seining the waters of the bay to see what they could net.

Photo by: Rich King

Get Involved - Volunteer for the Barnegat Bay National Estuary Program!

Everyone's concerned about the environment, but often don't know what they can do to help. Join the BBNEP's e-mail notification list for great opportunities to participate in a variety of projects. These can range from administrative work to public speaking and everything in between. If you would like to hear about opportunities to learn more about what's going on in the Barnegat Bay and its watershed and to actively participate in its stewardship, e-mail Mary Judge at mjudge@ocean.edu to get your address on the list.

I n t h e C l a s s r o o m

Additions to Your Educational Book Lists

Take a Walk® books, by author Jane Kirkland, are award-winning nature discovery books that lead readers in outdoor explorations and assist educators in teaching state and federal Environmental Education Standards. Written at a fifth grade reading level, the books are recommended for readers age 8 and up. Check out *Take a Backyard Bird Walk*, *Take a Walk with Butterflies and Dragonflies*, *Take a Tree Walk*, and *Take a City Nature Walk*.

The BBNEP will be partnering with Ms. Kirkland on her next book, tentatively entitled, *Take a Walk at the Beach*. The Barnegat Bay National Estuary Program and Take a Walk® books are co-sponsoring an art contest for children aged 7 to 12, the winner of which will have their artwork published in the book (for an application, please call Mary Judge at 732-255-0472, e-mail her at mjudge@ocean.edu), or download the application form from www.takeawalk.com).

Fall Environmental Educator's Roundtable

Another project-in-the-works of Ms. Kirkland's is creation of a school-wide manual to creating a field guide in your schoolyard. With her permission, a truncated version of her workshop (see www.takeawalk.com for information on scheduling a teacher's workshop) will be presented at this fall's all-day Environmental Educator's Roundtable, scheduled for Wednesday, October 5, 2005 at the Lighthouse Center for Natural Resource Education in Waretown. Visit the Ocean County Soil Conservation website at www.ocscd.org for more information on registering for this great day of resource sharing and field study. Ms. Kirkland is also available for school presentations and her contact information can be found at the www.takeawalk.com site.

EstuaryLive

Join the staff of the Jacques Cousteau National Estuarine Research Reserve (JCNERR) and the Barnegat Bay National Estuary Program (BBNEP) as they invite you to take a virtual tour of the Great Bay/Little Egg Harbor estuary as part of "EstuaryLive".

EstuaryLive will bring live broadcasts from 5 unique estuaries around the country (Oregon, New York, New Jersey, Alabama/Mississippi, and California) into your home, office, or classroom via the Internet. These broadcasts will occur on September 22-23, 2005 in celebration of the 17th annual National Estuaries Day. Follow along with staff from the National Estuarine Research Reserve System (NERRS) and the National Estuary Program (NEP) to explore the plant and animal life found in salt marshes, tidal creeks, bays and beaches. Viewers can submit questions to be answered live during the broadcasts.

Using wireless video transmission and Internet technology, *EstuaryLive* enables thousands of K-16 students, and anyone with a computer, to visit Reserve sites around the country. The field trips are webcast – real time, live streaming video – from the field directly to your computer. There is no cost to participate in this interactive webcast – you simply need to download the proper software prior to the broadcast – it's easy!

EstuaryLive is an excellent opportunity for educators to engage their students in an interactive field trip to the coast without worrying about travel considerations and costs.

Visit www.estuaries.gov to find out more and to register for the broadcast. Please be sure to download and test the appropriate software well before the broadcast date. Please contact Eric Simms at 732/932-6555 x505 or email him at simms@imcs.rutgers.edu with any questions about the JCNERR/BBNEP broadcast. We look forward to having you join us in the field!

Getting to Know Our Neighbors

Jeanine Cava, BBNEP Associate

Though they often go unnoticed, the semi-terrestrial **fiddler crab** exists by the thousands in the Barnegat Bay Estuary. Fiddler crabs spend their time on land in



Photo by: Rich King

the tidal marshes; they don't like to be underwater all of the time, but they need to be some of the time. For example, when fiddler crabs mate, and their larvae hatch, this is called a zoea. Zoea is a swimming larva that needs open ocean conditions to survive.

Fiddler crabs dig burrows (crabby homes) in the sand or mud close to the shore line. Their burrows are about ½ inch wide and can be up to a foot deep! The crabs use their burrows for protection from their predators, such as raccoons, seagulls and other shore birds. Burrows also keep them cool in the hot weather and give them a place to chill during high tide. When the tide is high, they'll often roll up a ball of mud and use it to plug the hole of their burrow. When the water covers their burrow, a tiny pocket of air is trapped inside for them to breathe. They breathe air with their gills, but their gills must stay wet to work, so they have to stay near water at all times.

When it's low tide though, it is feeding time for the fiddler crab!! The fiddlers are SUCH an important part of the food web of the estuary because they eat detritus. What's detritus you might ask? Detritus is part of the foundation of practically all life in the estuary. It is decaying plant matter, specifically decaying eel grass and cord grass from the estuary. From the detritus, the fiddlers get the nutrients they need. In turn, creatures like the Yellow-Crowned Night Heron, eat the fiddler crab, yummy!

How do they grow? Good question. Because there's no space to grow inside a hard shell, fiddler crabs "grow" by molting. The fiddler molts (sheds) its old shell after it grows a new larger one. Most of these so-called "soft-shelled" crabs stay hidden inside their burrows because they are weak and have no shell at all. Adult fiddlers will molt one or two times a year.

So, right about now you might be thinking, "Wow, fiddler crabs sound really cool! I think I want one as a pet." Bad idea. It is very difficult to keep a fiddler crab happy and healthy in captivity. For one, it is almost impossible to simulate the natural conditions it has in the wild: a close-by shoreline with a unique blend of salt and fresh water and a tide level that is constantly changing. Take some good advice and leave the crabs on the beach! If they could, they would thank you themselves.

Don't Forget to Check the Barnegat Bay Website (www.bbep.org) for the following additions:

State of the Bay Technical Report

To gauge its relative health and the progress of efforts to protect and restore estuarine resources, the Barnegat Bay National Estuary Program has been tracking key environmental indicators and evaluating their status and trends. This report communicates the status and trends of six of these indicators.

Interactive Poster

The new Barnegat Bay Poster goes high-tech. Learn more about the diversity of life found in the Barnegat Bay estuary.

Local Flavors

Barnegat Basil Clams

submitted by

Mel ~ Nick's Organix
Herbs & More

Email us at:

melnicks_organix@yahoo.com

Ingredients:

- 1 cup finely chopped fresh basil
- 2 dozen clams
- 2 cloves fresh garlic, finely chopped
- 1 tbsp. olive oil
- 1/4 tsp. crushed red pepper – more or less to taste
- 1-2 cups white wine
- Pinch black pepper to taste

Directions:

Sauté garlic in olive oil in large pot. Then add 1 cup of wine, basil, pepper and clams. Cover and simmer until all clams are open, tossing and stirring occasionally. If more liquid is needed, add wine. Makes 2-3 servings.

Cleanup at Riverwood Park

Jeanine Cava, BBNEP Associate

On July 30, the Barnegat Bay Watershed and Estuary Foundation (BBWEF) held a cleanup at Riverwood Park on the Toms River in Dover Township. The cleanup was funded with a grant from the Watershed Institute.

Nineteen people turned out to scour the park for litter. Among the more exotic items retrieved were a broken kayak that was sitting in the river, and a picnic table hidden in briars. Volunteers went home with the scratches to prove they were there.

BBWEF Vice Chairman, Dave Pollison said "We want to thank all the people who came out for the cleanup, in spite of all the other things there are to do in the summertime. We were also very pleased with the cooperation we received from Dover Township, Ocean County, and the Ocean County Landfill. The township provided maintenance workers, trucks, and a roll-off bin; and the Landfill waived tipping fees and provided gloves and trash bags. Ocean County donated see-through trash bags, which made it easy for us to separate recyclables into clear bags and trash into black bags."

Helping to co-sponsor and lend support to the event was the Ocean County College Chapter of New Jersey Community Water Watch, a group which has organized dozens of successful clean-ups of local waterways over their brief six year history in Ocean County.

In addition to the cleanup, the grant from the Watershed Institute is allowing the BBWEF to evaluate the condition of the sub-watersheds draining into the Barnegat Bay. The information will be used in planning future BBWEF work in the watershed.

If you are interested in getting involved with the BBWEF, it is actively seeking new board members. Experience and knowledge about the Barnegat Bay Estuary and/or watershed is a plus but not a requirement to become a member of the board. Please contact Ed Harrison at ed@baywoodmarina.com for more information.

MAILING LIST:

- Please add my name to your mailing list for my free subscription to *The Barnegat Bay Beat*.
- Please remove my name from your mailing list. There's no more room in my mailbox, but I will be sure to check your website at www.bbep.org.

Mail this coupon to: Barnegat Bay National Estuary Program, at Ocean County College, PO Box 2001, Toms River, NJ 08754-2001, OR email us at: sshinault@ocean.edu

Don't Miss Out On These Upcoming Events!

Beach Plum Festival

September 11, Island Beach State Park
www.friendsofislandbeach.com

International Coastal Cleanup

September 17, Southern Ocean County
www.livingocean.org

EstuaryLive

September 22 and 23
www.estuaries.gov

Fall Forestry Festival

October 1, Jackson, NJ
Forest Resource Education Center
http://www.nj.gov/dep/parksandforests/forest/njfs_frep.html

Rutgers University Marine Field Station Open House

October 1, Tuckerton, NJ
www.jcnerr.org/family&public/family&public.htm

Cattus Island Nature Festival

October 2, Toms River, NJ
Cattus Island County Park
www.oceancountyparks.org

Environmental Educator's Roundtable

October 5, Waretown, NJ
Lighthouse Center for Natural Resource Education
<http://www.ocscd.org/>

Pine Barrens Jamboree

October 8, Waretown, NJ
Wells Mills County Park
www.oceancountyparks.org

Coast Day NJ

October 8, Barnegat Light, NJ
October 9, Cape May, NJ
<http://www.njmsc.org/coastday2005.html>

Forsythe Wild Things Festival

October 22, Edwin. B. Forsythe National Wildlife Refuge
<http://www.fws.gov/northeast/forsythe/>

2005 Reedy Creek Fall Cleanup

November 4, Brick, NJ
www.savebarnegatbay.org

“Take Care of Your Share”

Mary Judge, BBNEP Program Assistant

It takes everyone's participation to help ensure that New Jersey has a clean, plentiful water supply. Be aware of your own water use and see how you and your family can help conserve water this summer and throughout the year. (Children can also be taught to develop these good habits.)

In the Bathroom

- Don't let water run while brushing your teeth and shaving.
- Never use your toilet as a wastebasket.
- Take short showers instead of tub baths.

In the Laundry

- Use the right water level or load size selection on your washer.
- Only wash full loads.
- Don't wash clean clothes! Children love to take this little short cut in cleaning their rooms by tossing their clothing in the hamper rather than putting them away.

In the Kitchen

- Wash dishes in a dishpan, not under running water. While waiting for the water to heat up, let it run into a container for use in watering your potted plants and kitchen garden (this will save about 250 gallons of water a month).
- Add food waste to your compost pile instead of the garbage disposal.
- Only run a full dishwasher.
- Wash fruits and vegetables in a basin and then use this water for plants.

Outdoors and in the Garden

- Sweep driveways and sidewalks rather than hosing them off (which will save 150 gallons of water).
- Wash your car at a car wash that recycles water, or pull your car onto a lawn or other surface that will absorb the runoff. (And be sure to use biodegradable soap, readily available at automobile parts stores)
- Use mulch on your plantings to avoid evaporation and reduce their need for water by 40 percent. (Don't let mulch touch the trunk of your trees - this encourages insect damage.)
- **Automatic landscape irrigation is the biggest water user (and waster) of all.** "Think Drink, Not Drown." Avoid over-watering by adjusting your irrigation controller at least once a month to account for changes in the weather and install a rain shutoff device, soil moisture sensor or humidity sensor to better control irrigation.
- Hook up a rain barrel to your downspout and use this water for gardening.

How Much Water Does It Take?

To produce **one gallon of milk**, a dairy cow must drink **four gallons of water**. It takes eight gallons of water to grow a tomato.

A typical U.S. toilet uses between **3.5 and 7 gallons per flush**; low-flow toilets use 1.6 gallons or even less.

300 million gallons of water are needed to produce a **single day's supply** of U.S. newsprint.

4,000 gallons of water produces one kilowatt-hour of hydro-electric power – enough to light a **100-watt bulb for ten hours**.

The average African Masai **family** uses just over 1 gallon of water per day. The average **person** in the United States uses approximately 75 gallons of water per day.

READ MORE ABOUT IT!

Log on to www.rce.rutgers.edu/pubs, which will bring you to a full list of Rutgers University publications on many topics of interest to those people committed to being good stewards of the Barnegat Bay and its watershed.

Learn more about this critical resource throughout the world. *Water, the Drop of Life* by Peter Swanson, forward by Mikhail Gorbachev, is a fascinating work with beautiful photography. It is the companion volume to a Public TV series and both are readily available at the Ocean County Library.

Kudos and Thanks

- A huge thank you to the sponsors of the 9th Annual Barnegat Bay Festival for making the day such a success: **Ocean County Board of Chosen Freeholders, Barnegat Bay Watershed and Estuary Foundation, Gangi Graphics, Ocean County Utilities Authority** and **Shop Rite**.
- A generous thank you to the co-sponsor of the 9th Annual Barnegat Bay Festival, **Ocean County College and all involved staff**, for providing support and hard work before, during, and after the festival.
- Congratulations to the recipients of the first annual *Guardians of Barnegat Bay Awards*: **Paul D. “Pete” McLain** – Lifetime Achievement Award, **Janet Larson** – Community Caretaker Award, and **Congressman Jim Saxton** – Government Leading By Example Award.
- Thank you to **John Wnek** and **Katie Riley** for presenting at Ocean County College summer camp.
- Kudos to **Berkeley Township** for installing an environmentally friendly truck wash system that recycles the water after it removes contaminants from the wash water. Berkeley Township is the first municipality in Ocean County to install such a system.
- Thank you to **Bea Judge** for supplying pine cones for summer campers to make birdfeeders.
- Thank you to **Michael J. Cava** for repairing the BBNEP stormwater display board.
- Kudos to municipalities who participated in the Barnegat Bay Festival and helped with stormwater education, fulfilling the requirement of an annual stormwater educational outreach event: **Berkeley Township, Little Egg Harbor Township, Borough of Mantoloking, Borough of Ocean Gate, Seaside Park, and Wall Township**.
- Thank you to the many volunteers for the Barnegat Bay Festival: **Dave Roberts, Philomena Roselli, Dianne Gavin, Fernanda Arantes, Barbara Coll, Chris Kitchin, Charlie Kitchin, Calvin Cheung, Jennette Cheung, Janice Fischer, Pat Mayo, Rich King, and Don Engle**.
- Congratulations to **Paul D. “Pete” McLain** for receiving an Environmental Hero award from the National Oceanic and Atmospheric Administration. Pete was also recently joined by numerous colleagues, friends, and family at a celebration organized by the state Division of Fish and Wildlife to honor Pete with a dedication of the Sedge Island Natural Resource Education Center.
- Kudos to marinas within the Barnegat Bay Watershed who have signed pledges to identify opportunities and implement practices to control pollution associated with activities occurring at the marinas, enhance the surrounding environment, and encourage responsible boating practices as recommended in the New Jersey Clean Marina Guidebook. They also pledge to pursue certification as a New Jersey Clean Marina: **Green Cove Marina** – Brick, **Baywood Marina** – Brick, **Dillon's Creek Marina** – Island Heights, **Riverbank Marina** – Bayville, **Silver Cloud Harbor Marina** – Forked River, **Forked River State Marina** – Forked River, **Leamings Marina** – Waretown, and **Spencer's Bayside Marina** – Waretown.

Where's Barney?

A big congratulations goes to Pat Hanlon, the first person to respond with the correct answer to the last edition's location (which was: Riverfront Landing Park in Toms River).

Barney keeps exploring. Think you have the answer to this month's location? Be the first to email the correct answer to sshinault@ocean.edu to receive your Barnegat Bay tote bag.



Life Skills Students Get An Up-Close Look At the Bay

Mary Judge, BBNEP Program Assistant

On a sunny Saturday morning in June, the Barnegat Bay National Estuary Program hosted an ecotour of Silver Bay for 14 of the Ocean County College "Life Skills" students on the Bay Cruiser pontoon boat. The Cruiser left from the Ocean County Parks Administration Building for a three hour tour led by naturalist Sara Smith from Cattus Island County Park, and Mary Judge, Program Assistant for the BBNEP. The students had many questions about the birds they were seeing, as well as the unique land formations they passed along the way. The boat pulled up on the beach to allow the students to try their hand at seining and identifying what appeared in the seine nets, including Silver Sides (aka Spearing), a juvenile flounder, shrimp, and a blue crabs. The trip concluded with a short classroom presentation by Shannon Shinault where the students could ask all their follow-up questions and get more information about how they could contribute to the protection of Barnegat Bay by continuing to learn more about it and by being careful not to contribute to non-point source pollution.



Because You've Got
Better Things to do than
Maintain your Yard!

Low Maintenance Landscaping for the Barnegat Bay Watershed is a guidebook developed specifically for residents of the Barnegat Bay watershed and Ocean County's environment and conditions. Sandy and porous soils, salty air, and variable weather conditions all play an important role in determining the make-up and maintenance needs of the home yard and landscape. This comprehensive guidebook follows 8 simple and effective horticultural techniques and methods which will help you establish your own low - maintenance landscape.

This publication is now available
online at <http://www.ocscd.org>

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Fishin' for Ideas

We welcome all contributions and story ideas for inclusion into *The Barnegat Bay Beat*. Please contact Shannon Shinault via email at sshinault@ocean.edu for more information.

The Barnegat Bay Beat is a quarterly newsletter produced by the Barnegat Bay National Estuary Program. The Barnegat Bay National Estuary Program is a partnership of federal, state and local interests. Our office is located on campus at Ocean County College, College Drive, Toms River, New Jersey.

The Barnegat Bay Beat

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**The Ocean County Board of
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