



Barnegat Bay National Estuary Program  
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 Toms River, NJ



# The Barnegat Bay Beat

Summer 2003  
 A Quarterly Publication of the Barnegat Bay National Estuary Program

## Spirit of the Barnegat Bay Festival Not Dampened by Torrential Downpour

Another rainy Saturday did not keep hundreds of Barnegat Bay supporters from flocking to the 7th Annual Barnegat Bay Festival. The event was sponsored by the Barnegat Bay National Estuary Program, the Barnegat Bay Watershed and Estuary Foundation, and the Ocean County Board of Chosen Freeholders.

There was something for everyone along the beautiful waterfront of Cedar Creek. Many festival-goers enjoyed the free scenic cross-bay boat trip while others joined tour guide Jan Larson on a close-up view of the environmentally sensitive and historically significant Cedar Creek Watershed. Many non-profit groups also volunteered time to display information and answer questions regarding the protection of our natural resources.

Bluegrass and acoustic country music band, *Home Cookin'* started the day with festive music and *The Incinerators* (pictured right) washed away the "blues." Children were entertained and enhanced their knowledge of the bay with scavenger hunts, fish printing, face painting, seedling planting, and much more.

Despite the rain, spirits were not dampened as individuals scurried from one tent to another to remain dry. We would like to thank all of the supporters for sporting their rain gear and taking time to celebrate our beautiful treasure, Barnegat Bay.



## Barnegat Bay Receives No Discharge Zone Designation

On June 6, 2003, U.S. Environmental Protection Agency (EPA) Administrator Christie Whitman and New Jersey Department of Environmental Protection (NJDEP) Commissioner Bradley M. Campbell announced the establishment of a "No Discharge Zone" in Barnegat Bay. This designation prohibits boats from releasing treated or untreated sewage into the bay.

Administrator Whitman,

Commissioner Campbell, EPA Deputy Regional Administrator William J. Muszynski, Ocean County Freeholder Director John Bartlett, Berkeley Township Mayor Jason Varano, and Barnegat Bay Watershed and Estuary Foundation Chairman Herbert B. Bennett gathered at Berkeley Island County Park to sign a resolution recognizing the Bay's environmental, recreational, and economic value to New

Jersey. Many partners worked together to make this very important No Discharge Zone designation a reality.



## The Barnegat Bay Beat

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### Fishin' for Ideas

We hooked one -- see page 5

We welcome all contributions and story ideas for inclusion into *The Barnegat Bay Beat*. Please contact Shannon Shinault via email at [sshinault@co.ocean.nj.us](mailto:sshinault@co.ocean.nj.us) 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 in the Ocean County Planning Department at 129 Hooper Avenue, Toms River, New Jersey.

## I N T H E C L A S S R O O M

### **The Ring-Leader Recycling Program**

**T**EACHERS: How visible is environmental information in your school? Here's a simple, free program you can get started to educate your students about the importance of recycling. The Ring-Leader Recycling Program sponsored by ITW Hi-Cone. Schools can contact this company and obtain a free kit containing a teacher's guide for environmental lessons, a video, stickers, a poster, and a tree made from recycled plastic lumber. The students bring six-pack rings to class and hang them on the tree. After the tree is filled several times, the rings are packed in cartons and returned to the manufacturer. ITW Hi-Cone pays the postage and recycles the rings. This program is geared towards elementary students, but schools through college level have participated. Hi-Cone has received and recycled 2,223,000 pounds of rings (approximately 280 million six-pack rings), which might otherwise have fouled beaches and harmed wildlife. ITW Hi-Cone will track your participation and be able to tell you how many pounds of rings your school has kept out of our landfills and waterways. See [www.ringleader.com](http://www.ringleader.com) (click on "Go to the menu"); or e-mail [itw@ringleader.com](mailto:itw@ringleader.com); or write to ITW Hi-Cone, 1140 West Bryn Mawr Ave., Itasca, IL 60143.

### **Getting to Know Our Neighbors**

By Jim Lynch, Jr., Ocean County Planner Trainee

If you enjoyed the beach in late May, you most likely witnessed hundreds of horseshoe crabs emerging onto the sands. Don't be alarmed; they are just laying their protein-rich eggs in time for shore birds to refuel during their migration home from South America.



Horseshoe crabs (*Limulus polyphemus*) are hard-shelled invertebrates that live in the warm, shallow coastal waters. They have been around for about 500 million years and are actually more closely related to spiders and scorpions than crabs. These animals have numerous beneficial uses, one of which is the production of Lysate, an extract from their blue, copper-based blood, used to test the purity of medicines.

Despite popular belief, horseshoe crabs are not dangerous to humans in any way. Their long tail (or telson), is often mistaken for a weapon, but is actually used as a rudder for steering. This telson is held on by small

amounts of cartilage, so please do not think you are doing them a favor by picking them up by it and putting them back into the water. It would be like someone picking you up by your ear and could be very damaging to them since they use their telson to flip themselves right-side up when turned over.

**Ancient relatives of the horseshoe crab were present 520 million years ago.**

### **Interested in becoming an Ocean County Master Composter?**



The Ocean County Master Composter Training Program will be offered through the Ocean County Department of Solid Waste Management, subject to demand, September 30, October 2, and October 4, 2003 at the Ocean County Recycling Education Center at the County's Northern Recycling Center, New Hampshire Avenue, Lakewood Township. This year, the classes will be day sessions. For an application and more information, please contact Kathleen Avery, Assistant District Recycling Coordinator, at 732-506-5047.

### **'Tis the Season for Farm Fresh Fruits and Vegetables**

**A**re you looking for fresh fruits and vegetables? Look no further, Ocean County has several farms with farm markets, as well as pick-your-own opportunities. Visit one of your local farms today and support NJ Agriculture.

#### **DeWolf's Farm**

10 West Colliers Mill Rd.  
New Egypt  
Off Route 539  
Call Ahead: 609-758-2424



**Strawberries, Raspberries, Blackberries, Tomatoes, Beans (fava, snap, long Asias), Peas, Field Peas, Melons, Callillo, Hot Peppers (all types), Bitter Balls, Bitter Cilantro, Potatoes (white, sweet), Cranbury Beans, Pumpkins**

#### **Emery's Berry Farm**

NOFA Certified Organic  
346 Long Swamp Road, New Egypt  
Off Route 539  
609-758-8514  
[www.netpie.com](http://www.netpie.com)



**Strawberries, Heritage Blueberries, Raspberries, Pumpkins, Farm Market, Real Homemade Ice Cream**

#### **Hallock's U-Pick Farm**

38 Fischer Road, New Egypt  
Off Route 528  
609-758-8847  
[www.hallocksupick.com](http://www.hallocksupick.com)



**Strawberries, Tomatoes, Peas (black-eyed, field), Beans (green, flat, wax, butter, lima), Peas, Potatoes (white, sweet), Okra, Onions, Cabbage, Broccoli, Collards, Peppers, Greens (mustard, turnip), Bitter Balls, Jute Leaves, sweet Potato Leaves, Other Vegetables**

#### **Silverton Farm**

Organic Produce  
1520 Silverton Road, Toms River  
732-244-2621



**Strawberries, Raspberries, Pumpkins, Green Beans, Cherry Tomatoes, Flowers**

#### **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](http://www.bbep.org).

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### **Freeholder James F. Lacey Receives Distinguished Achievement Award**

**F**reeholder James F. Lacey was the 2003 award recipient for the Public Sector Award presented by the Southern New Jersey Development Council. Freeholder Lacey was recognized for championing numerous programs that provide benefits to a cross section of the county's population.

As our liaison to the Barnegat Bay National Estuary Program, Freeholder Lacey works for the protection of the bay and its 640 square mile watershed. He understands that coastal water quality is of the highest importance to the tourism and fishing industry of Ocean County. Through the Freeholder's support of the Clean Vessel Act Program, over 65 pumpout stations have been installed at marinas throughout Ocean County.

One of the most innovative initiatives championed by Freeholder Lacey has been the establishment of three mobile pumpout boats in Ocean County. These boats target summer mooring areas, lagoon developments and other areas not adequately addressed by marina-based pumpout facilities. The service is provided free of charge to boaters. The newest boat was launched in 2003 and is operated by the Township of Brick under a lease agreement with the County. The other two boats are operated by the Borough of Seaside Park and the Tuckerton Seaport. Over 22,000 gallons of vessel wastewater was removed last boating season by the pumpout boats.

**Congratulations, Freeholder Lacey!**

## Children's Garden Groundbreaking

The new Island Heights Children's Garden had its official groundbreaking during May, 2003 when Mr. Bradley's 5th Grade Class from the Island Heights Elementary School planted sunflowers, tree seedlings, flowers, and herbs to start the garden, located in the Municipal Field, adjacent to the Wes Wilbur Memorial Playground.

The Children's Garden is a joint project of the Barnegat Bay National Estuary Program and the Island Heights Library and is intended to promote the library's "Grow With the Library" summer program. Mary Judge, project coordinator, explained that the goal of the project is to foster good ecological habits by teaching children with a fun, hands-on approach about different types of plants, composting, the importance of healthy soil, beneficial insects, and water conservation. A resource table at the Island Heights Library has books available for them to "read more about it."

A special thank you to the many individuals and organizations that have generously contributed to the garden.



## "What a Difference a Year Makes"

By Herbert B. Bennett, Chairman, Barnegat Bay Watershed and Estuary Foundation

Last year we faced severe water shortages and restrictions on water use due to the drought. This year, as we long to see the sun and experience warm(er) weather, we deal with flooding problems and increased storm water pollution.

The ability of the watershed to catch and retain the limited rainfall of last year was critical to maintaining surface water quality and groundwater supplies in our region. This year, the ability of the watershed to catch and retain the excess rainfall has minimized runoff and flooding in our region and has enabled our groundwater resources to be replenished.

Protecting our watershed is of vital importance, not only for reasons of environmental quality, but also for our economic vitality. Every year thousands of visitors flock to the New Jersey shore for all of its benefits. The tourism "industry" is repre-

sented by many sectors of our economy: food services, boating, recreational, hotel and motel, etc. The quality of our coastal environment is measured not only by our beaches and ocean resources, but also by our bay, rivers, streams, and estuaries. Whether you live here or are a welcomed visitor, the quality of life in our region is measured in large part by our natural environment. The centerpiece of our environment is Barnegat Bay and its watershed.

The recent designation of Barnegat Bay as a No Discharge Zone for treated or untreated sewage wastes from boats represents another important step for all of us, not only for protecting the Bay, but raising public awareness of the Bay's important environmental role in our region, as well as its sensitivity to pollution and inappro-

priate use.

With all of this in mind, the Barnegat Bay Watershed and Estuary Foundation will be embarking on a membership drive this year to encourage private citizens and the business community to establish a working partnership to participate in the protection and preservation of our watershed and its estuaries. The Foundation will also continue to sponsor educational forums so that our residents can learn how best to live and work in our watershed and continue to protect it. We welcome ideas and recommendations on how best to serve and respect the watershed resources upon which we all rely. Your ideas, recommendations and comments can be sent to the Barnegat Bay Watershed and Estuary Foundation at P.O. Box 364, Island Heights, New Jersey, 08732.

## American Beach Grass Restoration

By Jim Lynch, Jr., Ocean County Planner Trainee

The Barnegat Bay National Estuary Program (BBNEP) in cooperation with the Ocean County Planning Department worked together to fund the purchase of dune grass for a habitat restoration project at Island Beach State Park (IBSP). The BBNEP contributed 15,000 plants, enough to cover one acre of dune restoration -- a small amount for the benefit expected. The BBNEP worked with Pete McLain IBSP personnel and citizen volunteers to restore shoreline habitat in the park, located in Seaside Park.



American Beach Grass is one of the most important species found in Island Beach State Park because it stabilizes the dunes. This native plant has a FRAGILE root system that makes up a connecting network, which holds and anchors the sand. Without dune grass, the dunes would erode and fade away.

### Why is this a problem?

The dunes protect not only what's directly behind them, but also the mainland. They are crucial to the survival of the area around them by providing protection from wind, surf, and erosion. Without them vegetation and houses would not be able to survive close to the shore. They are the first line of defense against the effects of storms, hurricanes and winds. Planting dune grass allows for larger and stronger dunes, increasing protection from the elements.



### STAY OFF THE DUNES

Dune grass can tolerate high salinity, low-nutrient soil, and lack of water, but NOT human feet.

### Local Flavors

#### Barnegat Bay Crab Cakes, submitted by John Haas, Seaside Park

##### Ingredients:

1 lb. fresh backfin lump crab meat	1 tbsp. Worcestershire sauce	1 tbsp. lemon juice
1/4 c. Italian seasoned bread crumbs	1/2 tbsp. dry mustard	1/4 tsp. salt
1 large egg, beaten	1/4 tsp. cayenne pepper	3 tbsp. freshly chopped parsley
2 tbsp. mayonnaise	1/2 tsp. Old Bay seasoning	(or parsley flakes)

In a bowl thoroughly mix all ingredients, except crab meat. Add crab meat to mixture and mix with hands. Shape into four crab cakes. (If mixture is dry, add mayo.) Roll cakes in bread crumbs and lightly coat the outside of the cakes. Refrigerate for two hours. Saute cakes in pan using olive oil and three pats of butter. Use high heat and brown on both sides. Reduce heat to medium and cook 3-4 minutes per side depending on thickness.

*This is a fantastic meal served with fresh Jersey sweet corn, fresh sliced Jersey tomatoes, and potato salad with blueberry pie for dessert.*

## How Much Lawn Is Too Much?

Mary Judge, BBEP Program Assistant

There's nothing like a nice green lawn to walk barefoot on during the hot summer months. However, misuse and overuse of lawn fertilizers are causing big problems for Barnegat Bay in the form of algae blooms (brown tide) and destruction of eel grass (which provides a natural nursery for marine life). If you apply more fertilizer than the lawn can absorb, or spill some on the sidewalk or over the curb line during application, these undiluted chemicals will be washed directly into the bay by stormwater the next time it rains, thus contributing to brown tides and destruction of marine life.

**Take a Walk on the Wild Side**  
Let a corner of your garden remain in its natural state to provide habitat for some wildlife. We're landscaping ourselves right out of some valuable bird and animal species by over-grooming our yards and neighborhoods. Habitat destruction is responsible for a 67% decline of the 9,600 bird species in existence (11% of which are facing extinction). Everything needs somewhere to live. P.S. You might as well plant a berry-producing shrub in there for bird-snacking purposes before you let it go. In return the birds will snack on your mosquitoes.

**Fertilizing:** Lawns should only be fertilized in the spring and early fall. (Longwood Gardens only fertilizes in the fall.) An organic, slow-release fertilizer like "Oceangro" produced by the Ocean County Utilities Authority is ideal for this area where we all have to be especially careful about protecting our water quality. (See their website at [www.ocua.com/oceangro](http://www.ocua.com/oceangro) for a list of retailers who sell Oceangro.) Fertilizing in summer encourages growth of warm-season weeds like crabgrass and plantain.

**Mowing:** Most experts recommend leaving grass clippings on the lawn. If you mow regularly, the clippings will decompose quickly and act as a natural source of nitrogen. However, if you miss a mowing and the lawn grows an inch or more above its normal mowing height, leaving clippings may smother parts of the lawn. In this case, collect the clippings after mowing and add them to your compost pile, NOT into the nearest body of water!

**Watering:** If you must water your lawn, do so once a week, early in the morning to avoid wasting water through evaporation and to allow the grass time to dry out during the day, avoiding various fungal diseases that can afflict lawns. Lawns generally need 1" of water a week to stay green and if you're using a sprinkler system, that would take roughly 40 minutes of watering. You can check to make sure you are getting 1" by placing an old coffee can by your sprinkler. Remember, rainfall will reduce the amount of supplemental water required. A rain gauge is a plastic calibrated tube that measures rainfall and will help you avoid overwatering your lawn.

**Pesticides & Herbicides:** Don't use them. They're bad for you, they're bad for your kids, they're bad for the environment, they're bad for your pets, they're bad for the water. Contact Rutgers Agricultural Extension Service (732-349-1246) for organic alternatives. Another option is to keep your lawn small enough to allow for manual weeding, use a grass mixture appropriate to your soil, or try alternatives to a lawn.

**Reducing lawn size:** If you find you're spending too much time working on your lawn and not enough time at the beach, figure out where the most difficult and annoying parts of your lawn are and get rid of the grass by laying down a few layers of newspaper, wet the newspaper with a hose, pile on the free bark mulch available at your local recycling center, and by next spring you'll be ready to plant some great groundcovers without having to break your back removing sod.

PLEASE do not dump grass clippings (or weeds) in the bay or lagoons. This is NOT an organic solution to disposing of your grass. It's a nitrogen load that the bay cannot absorb.

## Brown Tides in Barnegat Bay: Are They a Threat to New Jersey Coastal Waters?

Mary Downes Gastrich, Ph.D., Research Scientist  
NJ DEP, Division of Science, Research and Technology

When the waters of Barnegat Bay turn from green to brown in the summer, it may be a brown tide bloom. Brown tides are caused by the rapid growth of a very small alga (ca. 3 mm) *Aureococcus anophagefferens*. While not reported to be harmful to human health, these blooms may have significant negative ecological impacts on shellfish and seagrasses by causing mortality and/or reduction in growth. The NJDEP's Division of Science, Research, and Technology established the Brown Tide Assessment Project in partnership with the NJ Marine Sciences Consortium/NJ Sea Grant, U.S. Environmental Protection Agency, Rutgers University, and the University of Southern California with the goal of systematically monitoring the spatial/temporal occurrence of brown tides. In 2000-2002, water samples were collected at stations in coastal bays including Raritan Bay, Barnegat Bay, Little Egg Harbor, Great Bay, and Great Egg Harbor. Data on brown tide concentrations were analyzed using a newly developed Brown Tide Bloom Index (Gastrich & Wazniak, 2002) that provides a metric (based on available

There is no reported danger to human health either from swimming in waters containing a brown tide bloom or in eating fish or shellfish taken from affected waters.

scientific studies), which can be used by environmental managers to communicate the magnitude of brown tide blooms and impacts to natural resources. Preliminary results and conclusions from the three-year NJDEP study indicate that:

\* *Aureococcus* concentrations were detected at every coastal station monitored over the last three years.

\* Spatial patterns of brown tide blooms indicate that Category 3 blooms (severe impacts on shellfish and negative impacts to eelgrasses) occurred every year for three years, mainly in June, and sometimes in May, in stations in Little Egg Harbor and southern Barnegat Bay. Category 2 blooms (moderate impacts on shellfish) occurred in Little Egg Harbor and throughout Barnegat Bay and other coastal bays including Raritan Bay and to the south in Great Egg Inlet.

\* Temporal patterns of *Aureococcus* concentrations appear to show an increase from background levels in April to Category 2 blooms in May increasing to Category 3 blooms in June followed by decreases in July and August; in some cases, secondary blooms, including Category 3 blooms, may occur in some stations in September and Category 2 blooms may occur for longer periods than Category 3 blooms.

\* Elevated levels of brown tide occurred in May and June when juvenile hard clam growth and new growth of seagrasses occur. These blooms may cause potentially harmful impacts to these natural resources that are already impacted by multiple stressors.

\* Both additional monitoring of brown tide blooms and water quality parameters are needed (especially nutrients, such as dissolved organic nitrogen). Assessments should be conducted to document potential negative impacts of brown tides on natural resources (e.g., hard clams, seagrasses) to identify areas at risk, and to better understand the causes and controls of brown tides.

For more information or to report a brown tide bloom, contact Dr. Mary Downes Gastrich, Brown Tide Assessment Project Manager, in the Division of Science, Research and Technology at (609) 292-1895 or email [Mary.Downes-Gastrich@dep.state.nj.us](mailto:Mary.Downes-Gastrich@dep.state.nj.us) or go to the DSRT website to get an updated "Brown Tide Newsletter" at <http://www.state.nj.us/dep/dsr/brown-tide/bt.htm>.

Reference: Gastrich, M. D. and C. E. Wazniak. 2002. "A Brown Tide Bloom Index based on the potential harmful effects of the brown tide alga, *Aureococcus anophagefferens*." *Aquatic Ecosystem Health and Management*. Vol. 33, No. 2, pp. 175-190.