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# BAYWATCH

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Volume 9 Issue 2

June 2006

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## CITIZENS FOR THE PROTECTION OF WAQUOIT BAY CPWB

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### **Annual Meeting**

**Please join us at Waquoit Bay National Estuarine Research Reserve:**

**Monday, July 10<sup>th</sup> at 7:00pm in the boathouse.**

Brendan Annett will talk to us about how Waquoit Bay fits into the National Estuarine Research Reserve System and the importance of the relationship between the Reserve and CPWB.

Brendan Annett has been named Acting Director of the Waquoit Bay Research Reserve, where he has worked as the Stewardship Coordinator since 2002. Brendan spent summers growing up on Cape Cod and is passionate about enjoying and protecting the Cape's waters. He has worked at several research stations around the country and has been involved with various natural resource management and habitat restoration projects. Brendan has a master's degree in Marine Biology from Boston University and did his thesis research in Waquoit Bay and nearby estuaries.

The CPWB steering committee would like to update you on our activities and hear your questions. Refreshments will be served as we all enjoy the view of Waquoit Bay at sunset.

### **Coastal Critters Theme for East Falmouth and Mashpee 3<sup>rd</sup> Graders**

*By Molly Kitchel, AmeriCorps Cape Cod member and WBNERR intern*

Horseshoe crabs and mummichogs took center stage in the 3<sup>rd</sup> grade estuary presentations for CPWB's annual poster contest, the theme "Coastal Critters". Classes in East Falmouth and Mashpee participated in lessons focused on introducing the students to different creatures inhabiting Cape Cod's bays and estuaries.

The 3<sup>rd</sup> graders examined spider crab, horseshoe crab, scallop, mussel, and quahog shells, and viewed live

eels, mummichogs, periwinkles and her crabs in an aquarium brought from the WBNERR classroom. The students also worked in teams to assemble puzzles describing what different estuarine animals need to survive, including clean water, mates, and healthy habitats. At the end of the presentations, the students were led in discussions on how humans are currently affecting the lives of these creatures. The 3<sup>rd</sup> graders quickly grasped the importance of reducing their impact on the estuaries, while at the same time being able to enjoy the activities they had grown up with. Every class ended with a pledge from each student, telling what they were going to do to keep our bays and marshes clean. Some promised to never litter, while others made the more drastic pledge never to eat shellfish again! After reassuring the chowder lovers, the students were invited to create posters for the June 8<sup>th</sup> poster contest and reception. The posters will depict the importance of healthy practices needed to preserve the habitats of the creatures living in the estuary.

In all, 10 classes of 3<sup>rd</sup> graders were taught at two different schools, East Falmouth Elementary and the Quashnet School in Mashpee. The students were engaging as well as engaged, and seemed to have a good grasp of the material being presented to them. They responded wonderfully to the discussion about stewardship and were mesmerized by the seemingly aimless scuttling of the hermit crab.

2006 Third Grade Poster Contest

Poster Contest Winners

**East Falmouth Elementary School**

Lauren Duffany

Derek Seychao

Beatrice Zaw

Taylor

Joel Hitchens

Kira Archambault

### Mashpee Elementary School

Katherine Wheelden  
Cameron Ferola  
Stephen Ross  
Alyson Strawn  
Galeuime Donald  
Ashley Welch  
Jessica Tosches  
Kelci Brouwer  
Jessica Chadwick  
Alyssa Romkey  
Jayden Westland  
Evin Riley

A reception at WBNERR on June 8<sup>th</sup> was held at 4:00pm had many of the poster contest 3<sup>rd</sup> graders and friends attending. Jackson Gilman entertained everyone in songs about amphibians, food chains on land and in the sea, jellyfish, sharks, an earth pledge and all attending sang Save Some Trees by Dave Orleans. Jackson truly brought to life in song the concepts displayed in the 3<sup>rd</sup> graders posters.

All participants received a gift for their efforts as all are winners.

### It's under way the Annual Raffle 2006

*By Toni Grady*

May brings flowers, lots of rain this year but most importantly to continue our support for educational programs the CPWB sale of raffle tickets begins. You should see members at Mahoney's Garden Center and Kenyon's Market. Please take the time to purchase your tickets to win a gift certificate or prize donated by many of our local merchants.

CPWB members could show support by donating a few hours to sell raffle tickets in July, donate a prize and most importantly purchase a ticket. Win a gift certificate to dinner, or perhaps to the Tea Room or breakfast at Moonakis Café, binoculars, a round of golf, many more prizes have been contributed. You can win!

Contact Toni Grady at 508-548-9457 to support the CPWB raffle and most of all volunteer for an hour or two.

Tickets are also available from CPWB steering committee directors: Tom and Jayne Abbott, Hank Bode, Jeanne Concannon, Nancy Gwynne, Chelsea Harnish, Maureen Jankauskas, Mark Kennedy, Don Lunn, Robert MacFadyen, Mike O'Leary, Matt Patrick, Diane Rieger, Vida Wagner

## For your summer CALENDAR

July 10, Monday at 7:00pm in the boathouse  
CPWB Annual Meeting  
Meet Brendan Annett, Acting Director of WBNERR.

July 11, Tuesday at 6:30pm on the bluff  
Mime Theater  
Robert Rivest's – comedy and science

July 18, Tuesday at 6:30 on the bluff  
Sharing the Land: Animal Adventures  
Animals on Cape Cod and choosing a family pet

July 19, Wednesday  
Waquoit Bay Yacht Club Reserve Cup Regata  
Sponsored by WBYC, CPWB and WBNERR for Green Fleet sailors  
Contact WBYC for information

July 25, Tuesday at 6:30pm on the bluff  
Hot Enough for You?  
Imagine yourself a Science Detective, join us on a journey.

August 1, Tuesday at 6:30pm  
Wind over Wings – Birds of Prey  
Birds, the natural world and humans

August 8, Tuesday from 3:00 – 7:00pm  
Block Party  
Meet watershed neighbors, join in an afternoon of activities

Visit [waquoitbayreserve.org](http://waquoitbayreserve.org) for other events.

### Renew your membership CPWB Dues Notice is attached for your convenience.

Our membership year runs from July 1<sup>st</sup> through June 30<sup>th</sup>. Please check to see if your membership is current. CPWB dues notice is included to assist members.

Your \$10.00 membership fee supports educational programs. Is your neighbor a member? We are working to grow our membership, the CPWB brochure with application is available at WBNERR.

## **NITROGEN FROM THE AIR – UNDERSTANDING THE IMPORTANCE OF THIS SOURCE TO COASTAL POLLUTION ON CAPE COD**

*Tonna-Marie Rogers*

It is well known that the waters of Waquoit Bay and other embayments on Cape Cod are being severely impacted by excess inputs of nitrogen causing degradation of coastal water quality and habitat. For many years the Waquoit Bay Reserve has both facilitated research on this important issue and done many outreach activities to educate the public on the problem and potential solutions.

The nitrogen that ends up in coastal waters comes from different sources including septic systems (wastewater), fertilizer, agriculture and atmospheric deposition of nitrogen due to the burning of fossil fuels. Because of the prevalence of septic system use on Cape Cod, the nitrogen contribution from wastewater is major and as such improving wastewater treatment is the main management concern for towns across the region.

While a lot of focus has been placed on wastewater and fertilizer use, to date not much attention has been paid to the nitrogen that is coming from atmospheric sources. Recent research has demonstrated that nitrogen deposited from the atmosphere is also a significant source and does impact coastal water quality. Nitrogen in the atmosphere can either be dissolved in precipitation, e.g. acid rain (referred to as *wet deposition*) or as small particles that fall directly onto the Earth's surface (i.e. *dry deposition*). It has been reported that the rate of atmospheric nitrogen deposition in southeastern New England is among the highest found in North America averaging approximately 10 pounds of nitrogen per acre per year. Nitrogen compounds that end up in the atmosphere and eventually cycle back to the Earth's surface come primarily from the exhaust generated from power plants and engines. The movement of air allows nitrogen compounds generated from nearby or as far away as the Mid-West to eventually be deposited here.

Curbing nitrogen loading on Cape Cod continues to be an issue of critical importance because the health of our coastal resources is intimately intertwined with the economic vitality and the social and cultural identity of the region as a whole. Thus, there is the need to look at the nitrogen loading problem in a comprehensive way and address all sources of nitrogen while maintaining a priority emphasis on wastewater.

In April, the Reserve, through its Coastal Training Program (CTP), convened a workshop to bring attention to atmospheric deposition of nitrogen issue and expose coastal decision-makers to what is currently known about this aspect of the nitrogen loading problem. Expert presenters and panelists were brought in to discuss the science using examples from Chesapeake and Tampa Bays and to look at relevance for Cape Cod.

The workshop presentations and discussions revealed that atmospheric deposition of nitrogen to coastal waters is important for Cape Cod and requires further attention. Because of the complexity of the science additional research and monitoring is needed to fully understand and determine the exact contribution of this source to individual embayments on Cape Cod. Research is currently being conducted in Waquoit Bay and other areas on the Cape by researchers from Cornell University, the Woods Hole Oceanographic Institution and the Woods Hole Research Center to determine how much nitrogen is being deposited from local traffic. The CTP plans to hold a follow-up workshop once the research has been completed. The CTP seeks to equip coastal decision-makers with the latest available science to make the best possible decisions about managing coastal resources.

As research continues, the question arises as to whether there are ready actions that can be taken to reduce atmospheric inputs of nitrogen. For a long time it was thought that the region was very limited in what could be done to address this aspect as it was accepted that most of this nitrogen came from far way places. However, this thinking is changing. There are meaningful actions that individuals and communities can take and most of these are linked to reducing energy consumption and reliance on fossil fuels and encouraging use of renewable energy. Some of these include:

- acquiring more fuel efficient cars
- encouraging the use of hybrids
- driving less where possible
- avoid idling of cars, trucks and buses
- lobby for regulations for all vehicles, including SUVs and trucks, to reduce nitrogen emissions
- lobby for power plants to use nitrogen removing scrubbers year-round
- lobby for preservation of open space

The Reserve continues to maintain an emphasis in its programs on the impact of nitrogen loading to coastal waters. As more becomes known on the atmospheric component, we will continue to incorporate this information in or training and outreach activities.

# **BAYWATCH**

**CITIZENS FOR THE PROTECTION OF WAQUOIT BAY CPWB**

**JUNE 2006 NEWSLETTER**

Coastal Critters . . . . Horseshoe crabs and mummichogs

Annual Meeting

Calendar of Events:  
July and August

**NITROGEN FROM THE AIR – UNDERSTANDING THE IMPORTANCE OF THIS SOURCE  
TO COASTAL POLLUTION ON CAPE COD**

*Are you a member? For \$10.00 you can be a member and receive our newsletters.*

**Citizens for the Protection of Waquoit Bay CPWB  
P.O. BOX 3021  
WAQUOIT, MA 02536**

2006 CPWB Steering Committee Directors

Tom and Jayne Abbott, Hank Bode, Jeanne Concannon, Toni Grady, Nancy Gwynne, Chelsea Harnish, Maureen Jankauskas, Mark Kennedy, Don Lunn, Robert MacFadyen, Mike O’Leary, Matt Patrick, Diane Rieger, Vida Wagner

CPWB is a non-profit organization concerned with the health of the area’s waters. CPWB serves as the Friends Group for the Waquoit Bay National Estuarine Research Reserve, supporting their educational programs and seminars. We are committed to providing critical support through our membership base to support WBNERR.

**CPWB Membership Annual Dues and Contribution**

I want to be a member of Citizens for the Protection of Waquoit Bay CPWB, to protect our Coastal Ponds.

*Please make checks payable to CPWB*

Enclosed is my contribution:

- \$ 10.00 Membership
- \$ \_\_\_\_\_ Contribution

Name: \_\_\_\_\_

Summer Address: \_\_\_\_\_

Summer Phone: \_\_\_\_\_

Winter Address: \_\_\_\_\_

Winter Phone: \_\_\_\_\_

Email Address: \_\_\_\_\_

**I would like to volunteer:**

- Washburn Island clean-up  *June*  *September*
- Poster Contest for 3<sup>rd</sup> Grade  *Spring project!*
- Summer Raffle  *A few hours of your time*
- Steering Committee  *The committee meets every other month at WBNERR.*

*Your contribution to “Citizens for the Protection of Waquoit Bay” CPWB is Tax Deductible.*

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