



# Scotch Bonnet

*What we are hearing from the sea.*

North Carolina Sea Grant

[www.ncseagrant.org](http://www.ncseagrant.org)

Spring 2007

## Happy Spring To You All!

With the coming of warmer weather, the idea of water — fresh or salt, shallow or deep, whatever — and what it has to offer us comes to mind. Most of us take for granted that we will always have access to the water that we use for a variety of reasons.

What if you can't get to that water? A few relevant examples: A commercial fisherman is unable to unload his catch because the seafood house is gone. A vacationing family finds that their favorite fishing pier has been sold, destroyed, and replaced by a new condominium unit. A young couple wants to kayak, but the public boat ramp that they have used for years is closed.

These situations and more are popping up all along North Carolina's coast.

Coastal waterfront access is a hot topic with strong feelings on all sides. To learn more about this problem and possible solutions, visit the N.C. Waterfront Access Study Committee's web site at [www.ncseagrant.org/waterfronts](http://www.ncseagrant.org/waterfronts). This subject could inspire great discussion in environmental science and social studies classes!

## Another Phytoplankton Bloom in NC

[www.chbr.noaa.gov/PMN/](http://www.chbr.noaa.gov/PMN/)

The Southeast Phytoplankton Monitoring Network (SEPMN) recently reported that volunteer student monitors discovered a toxic diatom bloom off the northeastern coast of North Carolina.

In early November 2006, the PhytoFinders from First Flight High School in Kill Devil Hills collected their weekly sample from the U.S. Army Corps of Engineers Field Research Facility in Duck.

When examining the sample the next day, the students noticed their second bloom since they began monitoring almost two years earlier. Five days later, a



Mike Halminski

### Lauren Nelson of First Flight

volunteer from the Dare County campus of College of the Albemarle noticed the same diatom bloom in her Oregon Inlet sample collected roughly 30 miles south of Duck.

When scientists with NOAA's Marine Biotoxins Program examined the samples, they confirmed the presence of three different species of the diatom *Pseudo-nitzschia*. They also detected a very low level of the toxin domoic acid — the first time this toxin has been found in southeastern waters. Domoic acid can contribute to the human health problem known as Amnesic Shellfish Poisoning.

Congratulations to Katie Neller, Danielle James, and the PhytoFinders of First Flight High School and to Marcella Turnois of College of the Albemarle. Keep up the great work!

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Read more about the monitoring network in the Early Summer 2007 issue of *Coastwatch*.

### Teacher Training at Fort Fisher

[www.ncaquariums.com/](http://www.ncaquariums.com/)

Educators can enjoy a week's worth of training July 16-20 at the North Carolina Aquarium at Fort Fisher (NCAFF).

Attend one or more workshops — you choose what interests you!

- Mon., July 16: Join Terri Kirby Hathaway, North Carolina Sea Grant's marine education specialist, for a six-hour workshop featuring oceanography activities from the *Maury Project*, an initiative of the American Meteorological Society and the U.S. Naval Academy.

- Tues., July 17: Become familiar with on-site activities and resources as NCAFF educators conduct a series of discovery experiences. The *Aquarium's Teacher Workshop* introduces K-12 teachers to pre- and post-visit activities designed to enhance an aquarium field trip, as well as to integrate ocean awareness across disciplines.

- Wed., July 18: Peggy Sloan, NCAFF education curator, will provide in-depth water education for K-12 teachers with *Project WET*. Through hands-on activities, participants can acquire tools for fun and effective water education applicable across different disciplines.

- Thurs., July 19: Experience *Aquatic WILD* with Mike Campbell, education specialist with the N.C. Wildlife Resources Commission. This popular curriculum introduces educators to innovative and interactive methods to integrate aquatic environmental education into any formal or nonformal setting.

- Fri., July 20: Learn about colonial nesting water birds during *Land of a Thousand Nests* at the Fort Fisher State Recreation. This Environmental Education Learning Experience includes identification techniques, nesting habitat requirements and threats and issues related to nesting water birds. Targeted for the 5<sup>th</sup> and 6<sup>th</sup> grades, this material can be easily adapted for different grade levels.

CEU credit and EE certification credit are available for each workshop.

For more information, or to register for any of these workshops, please contact NCAFF registrar Danielle Wallace, [Danielle.Wallace@ncmail.net](mailto:Danielle.Wallace@ncmail.net).

### NMEA 2007

[gommea.org/downeast2007](http://gommea.org/downeast2007)

The 2007 National Marine Educators Association Conference (NMEA), to be hosted by the Gulf of Maine Marine Education Association (GOMMEA), will be held in Portland, Maine, from July 23-27. Accommodations at the Eastland Park Hotel in the center of Portland are just minutes away from the main conference venue at the Abromson Center of the University of Southern Maine.

Keynote speakers include: lobster scientist Bob Steneck of the University of Maine; author and swordfish boat captain Linda Greenlaw; Clean Ocean activist and Olympic Gold medallist Joan Benoit-Samuelsen; and Casco Baykeeper Joe Payne.

The entertainment also is expected to be stimulating. The Schooner Fare band will reprise their performance from the 1983 NMEA conference. Award-winning National Geographic underwater photographer Bill Curtsinger headlines a night at the Portland Museum of Art. Noted actor Kaiulani Lee will bring her one-woman tribute of Rachel Carson. The entertainment will conclude with a good dose of Downeast "humah" by Tim Sample.

Keep an eye on the web site for registration information and updates.

### Flowing Ocean Poster

[www.seacoos.org](http://www.seacoos.org)

The third in a series of educational posters is now available. Don't miss your opportunity for a FREE "Flowing Ocean: Understanding the Gulf Stream" poster and access to curricular materials to assist your instruction about this important feature in the earth system.

This 36-by-32-inch poster brings a current of excitement to your classroom. Learn what causes ocean motion and how and why scientists study ocean currents. Look specifically at the Gulf Stream System, which dramatically affects the climate and biology of the southeastern shores of the United States and coastal ocean.

Help your students learn to define, describe and analyze the nature of the Gulf Stream, as well as its significance in the Atlantic. These materials are made available by the SouthEast Atlantic Coastal Ocean Observation System (SEACOOS), the Center for

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Ocean Sciences Education Excellence - SouthEast (COSEE-SE), and North Carolina Sea Grant.

This poster supports the SEACOOS Virtual Currents Classroom that can be found on the SEACOOS web site: [www.seacoos.org](http://www.seacoos.org). On this site, you will find instructions for classroom activities, satellite images, bathymetric maps, a glossary, and background information — everything you need to conduct the activities. To locate these resources, just go to the site and click on “Community and Classroom.”

The posters will be mailed in quantities of three to five to N.C. schools, as long as the supply lasts. No single copy requests please. E-mail your request for FREE posters to: Terri Kirby Hathaway, NC Sea Grant Marine Education Specialist, [terrikh@csi.northcarolina.edu](mailto:terrikh@csi.northcarolina.edu). Be sure to include the name and shipping address of your school.

### Advanced ROV Building Workshop

[www.marinetech.org/education/institutes.php](http://www.marinetech.org/education/institutes.php)

The Marine Advanced Technology Education (MATE) Center is announcing its 2007 summer institute: Advanced Remotely Operated Vehicle (ROV) Building for classroom projects that will be held July 23-30 in Monterey, Calif. Teams of educators will design and build their own ROVs to complete a set of predetermined tasks. The participants will test their ROVs in a mini-competition with an International Polar Year focus at the end of the week.

Participants can interact with undersea engineers, ROV pilots and marine technicians to understand the technology and the work of these marine professionals. In addition to classroom and hands-on learning experiences, field trips around the Monterey Bay area, including the Monterey Bay Aquarium, are planned.

If you are an educator with an interest in marine technology, please apply and join MATE for a week-long hands-on workshop! There is no fee for participating in this institute. Lunches and some dinners will be provided by the MATE Center, as well as hotel accommodations for participants living more than 50 miles from Monterey.

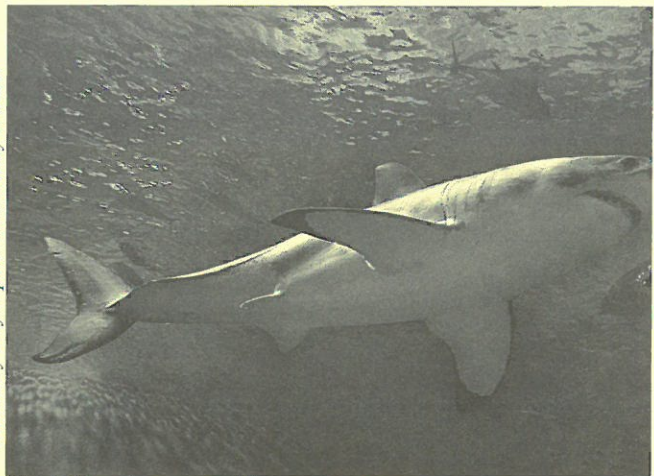
For more information, contact Lani Clough, MATE Faculty Development Coordinator at [clough@marinetech.org](mailto:clough@marinetech.org) or 831/646-4011. Watch for an upcoming *Coastwatch* story on North Carolina's

entries into the MATE ROV regional competition.

### White Shark Released

[www.montereybayaquarium.org/whiteshark/](http://www.montereybayaquarium.org/whiteshark/)

You might recall reading about the young female white shark that was on display at the Monterey Bay Aquarium during the fall and winter of 2004-05. Well, Monterey has done it again! A second white shark, a male this time, was just released in mid-January after 137 days on display in the Outer Bay exhibit. Scientists are hoping to gain important knowledge when the shark's tracking tag pops up in mid-April.



Monterey Bay Aquarium/Randy Wilder

### White shark

This is only the second time a white shark has been kept anywhere successfully for more than 16 days. More than 600,000 visitors saw the shark during its stay at the Aquarium. The shark grew roughly eight inches and gained 42 pounds during its indoor “vacation.”

Aquarium officials are hoping that the white shark was a valuable emissary of ocean conservation during its time in the public eye.

### Underwater Concert Sets Record

[www.katiemelua.com](http://www.katiemelua.com)

On Oct. 2, 2006, singer Katie Melua set a Guinness World Record for the world's deepest underwater concert performed in front of an audience by performing a 35-minute concert 303 meters (almost 1,000 feet) below the ocean's surface, at the bottom of one of the concrete shafts of Statoil's Troll A gas rig platform.

This concert helped to celebrate 10 years of production from the Troll A platform in the North Sea

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off the coast of Norway. The Troll A platform is the largest structure ever moved by humans, and at 472 meters or 1,549 feet is taller than the Eiffel Tower.

Before accepting the concert invitation, the artist took a close look at Statoil's environmental profile and record. She liked what she found and agreed to the unusual request. Melua and her five band members were required to submit to a medical exam and to undergo intensive emergency and safety training before flying out to the platform.

A crew transported more than 22 tons of lighting and sound equipment to the bottom of the shaft before the concert.

There were 20 people in the audience at the underwater concert, including the editor-in-chief of the *Guinness Book of World Records*. Others watched the performance on a big screen in the platform's mess hall.

A DVD of the concert and its extraordinary preparation is scheduled to be released May 7.

### To Contact Me

My mailing address is: North Carolina Sea Grant, PO Box 699, Manteo, NC 27954. To reach me by phone, call: 252/475-3663; fax: 252/475-3545; e-mail: [terrikh@csi.northcarolina.edu](mailto:terrikh@csi.northcarolina.edu).

Please check you mailing label — if we need to make changes to your address, or if you're getting more than one copy of *Scotch Bonnet*, let me know! Don't forget to recyle this newsletter after sharing it with friends and colleagues.

Best Fishes!

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