



# THE PLANKTON NEWS



THE NEWSLETTER OF THE SOUTH CAROLINA PHYTOPLANKTON MONITORING NETWORK

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## 2<sup>nd</sup> Annual Refresher Course Evaluation Results

A new evaluation form was created for SCPMN volunteers on the refresher course and other aspects of the monitoring network. Over 70 % of current volunteers attended one of the four sessions available for this year's course. Everyone who attended both the 2002 and 2003 refresher courses felt that this year's courses were equal if not better than the first.

Over 84% of the course participants (21 teachers, 16 citizens, 2 parks representatives, and 5 educators/scientists) reported that their knowledge of HABs, NOAA, importance of phytoplankton, microscope skills, and identification skills increased as a result of their involvement with SCPMN.

Phytoplankton Jeopardy was a great hands-on activity added to this year's refresher course. First place winners included Merrie Southgate (Mason Prep), Kathryn Feldmann (Ashley Hall), Mary Pringle (Isle of Palms),

## SC Algal Ecology Team

The South Carolina Algal Ecology Laboratory (AEL) was created through a partnership between the University of South Carolina's Baruch Institute, and the Marine Resources Division of the South Carolina Department of Natural Resources (SCDNR). Under the leadership of Dr. Alan J. Lewitus, this laboratory is devoted to understanding the ecology of Harmful Algal Blooms (HABs). AEL personnel include 17 full-time staff and additional summer interns.

The mission of AEL is to answer questions and generate insight about the causes of HABs in natural and manmade waters. AEL personnel use cutting-edge technologies to identify, measure, and predict HABs. Along with AEL collaborators, this group seeks to establish baseline information, generate testable hypotheses, and communicate findings to the government agencies, the scientific community and the public-at-large.



The three main components of research currently underway at AEL are monitoring, event response, and basic research. AEL is currently monitoring South Carolina waters for HAB species to be used in conjunction with SCPMN volunteer results to create a species list for the state of South Carolina. Scientists sample a variety of "hot spots" for HAB species as well as focus on tidal creeks and open estuaries for statewide sampling. AEL responds to any sudden HAB outbreaks observed by volunteer citizens in estuaries, tidal creeks, or manmade ponds to record necessary data to characterize the species in bloom and if it is a toxic event. In addition, AEL

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## Algae in the News

### Red Tide Kills 60 Manatees In Florida

The Florida Marine Research Institute said 60 manatee deaths between February 27, 2003 and April 15, 2003 were caused by red tide. The animals were all found along the southwest Florida coast. The one-celled organism that causes red tide contains a brevetoxin that is released into the water when the algae dies.

“They ( the manatees) can ingest the toxins when they eat, or they can inhale the toxins when they come to the surface to breathe,” said Tom Pitchford, a wildlife biologist with the Florida Fish and Wildlife Conservation Commission. “Once the toxin is in the animal, it affects their coordination and causes a paralysis.” Six manatees that scientists know of survived the red tide. Two were helped by people who held their heads above water as they recovered from the effects of paralysis. Four others were being treated at marine sanctuaries.

For full article, go to:

[http://www.enn.com/news/2003-04-18/s\\_3889.asp](http://www.enn.com/news/2003-04-18/s_3889.asp)

### NCCOS/CCEHBR Researchers Find Evidence of Domoic Acid Poisoning in Georges Bank Whale Deaths

Recent whale deaths that occurred in June 2003 on Georges Bank off Massachusetts may be linked to the presence of saxitoxin and domoic acid, according to researchers at NCCOS/CCEHBR’s Biotoxins Analytical Response Team. The team studied tissue and fluid samples collected from the whales by the National Marine Fisheries Service, Marine Mammal Stranding Network. Previously, domoic acid had been associated with scallops in the area, prompting the fishery to close in the mid-1990s. But this is the first time that the diatom has been associated with a marine mammal mortality event in the Georges Bank area.

Domoic acid is a neurotoxin that can cause seizures and permanent brain damage in the affected animal. Saxitoxin is known to occur in these waters as well, and low concentrations of it was found in the stomach contents and feces of one of the dead humpback whales. Saxitoxin can cause paralytic shellfish poisoning in humans and may be associated with 1988 humpback whale deaths in Cape Cod bay. These findings indicate that the impact of harmful algal blooms may be greater than is currently estimated.

For more information, contact Fran Van Dolah  
Fran.VanDolah@noaa.gov

## National Marine Educators Association 2003 Conference



In July 2003, Kate Schaefer and Heather Blankenstein attended the 2003 National Marine Educators Conference (NMEA) in Wilmington, North Carolina. There were over 400 attendees present at the conference. New contacts were made with a variety of educators from Monterey Bay Aquarium, NOAA, University of Georgia, and University of North Carolina Wilmington. In addition, several current SCPMN volunteers were present including Julie Cliff at Wando High School, Shannon Stone at Socastee High School, and Arla Jessen from Dewees Island.

Besides participating in conference sessions and activities, Kate and Heather were involved in several other events at this national conference. Outreach materials for SCPMN (Plankton News, brochures, etc.) were available for conference participants at a NOAA exhibit. A presentation on SCPMN and a demonstration of the new digital educational microscope was given on Tuesday, July 22<sup>nd</sup>. Finally, educational materials were exchanged in the Sea Faire, an event for marine educators to exchange ideas and materials on their programs.

A hand-out was created on the NMEA conference information relevant to teachers and educators and placed in their binders at this year’s SCPMN Annual Refresher Course. If you need additional copies or have questions regarding the NMEA conference, please do not hesitate to contact Heather.

For more information on how to become a member of NMEA or the local chapter, SCMEA, or to attend future conferences from these organizations, please visit the following web sites:

<http://www.marine-ed.org/>

<http://www.coastal.edu/science/scmea/>



## BEST WISHES KATE!

NOAA staff and SCPMN volunteers bid farewell and best wishes to Kate Schaefer as she begins her new position as a GIS Technician at the NOAA Coastal Services Center in Charleston, South Carolina. During her three years as coordinator Kate helped develop SCPMN from a monitoring network of five sites into the successful program it is today with over 50 sites.

Heather Blankenstein will now serve as Coordinator for SCPMN. Please send any data sheets, training requests, or other questions to Heather at Heather.Blankenstein@noaa.gov or (843)762-8832.

Lisa Norman, a former teacher and volunteer at Ashley Hall, will continue to work with SCPMN as Community Outreach Oceanographer during our time of transition. Many thanks to Lisa for her continued support and dedication to the success of SCPMN.

## CALENDAR OF EVENTS

### OCEAN AWARENESS DAY

PLACE: SKIDAWAY, GEORGIA

TIME: OCTOBER 25<sup>TH</sup> 2003

SCPMN will be expanding its borders when Heather and Lisa present SCPMN to a group of Georgia teachers interested in becoming volunteers. Look for more information on SCPMN's expansion in the next issue of the Plankton News.

### SOUTH CAROLINA SCIENCE COUNCIL (SC<sup>2</sup>) CONFERENCE

PLACE: NORTH CHARLESTON, SC

TIME: NOVEMBER 12<sup>TH</sup> – 14<sup>TH</sup>, 2003

Heather and Lisa will present SCPMN to South Carolina teachers and host a field trip at the Hollings Marine Laboratory.

### SECOND SYMPOSIUM ON HARMFUL MARINE ALGAE IN THE U.S.

PLACE: WOODS HOLE, MA

TIME: DECEMBER 9<sup>TH</sup> – 13<sup>TH</sup>, 2003

Poster presentation on SCPMN and volunteer observations will be accessible at this national meeting.

is constantly working to strengthen their understanding of HAB formation and distribution to assist with future decisions for HAB related events.

The South Carolina AEL and SCPMN are currently collaborating to increase the general understanding of HABs for both groups and throughout the general scientific community. Researchers from both groups have attended similar conferences and meetings to present results to date. Through this collaboration any reported blooms discovered by SCPMN volunteers will be responded to by AEL personnel. In addition, AEL will notify SCPMN of any blooms found in South Carolina waters to alert volunteer monitors of specific HAB species. Dr. Lewitus was able to attend one of the refresher course dates to meet SCPMN volunteers.



To learn more about the South Carolina AEL, check out their web site at:

<http://www.dnr.state.sc.us/marine/scael/>

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*Look for an exciting "Teaching Materials" Section in the next issue of the Plankton News!*

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#### THE PLANKTON NEWS

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## NOAA

Visit the National Oceanic and Atmospheric Administration's (NOAA) web site to learn more about NOAA:

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

NOAA's mission is to describe and predict changes in the Earth's environment, and conserve and wisely manage the Nation's coastal and marine resources. NOAA's strategy consists of seven interrelated Strategic Goals for environmental assessment, prediction and stewardship.

On the main page, browsers can explore the News Story Archive, NOAA Magazine, and AccessNOAA to find out information about NOAA employees and activities. The local forecast can be determined from this site as well as general information on climate, satellites, coast, research, weather, ocean, fisheries, and charting and navigation. In addition, interested users can access information about the NOAA Administrator, NOAA library, other educational resources, or even find what NOAA is responsible for in their state.

Check out this great site and send in any questions about NOAA on the web site.

## Species Spotlight

### *Dinophysis*



### Species Introduction

The dinoflagellate, *Dinophysis*, was one of the original organisms on the SCPMN species list. *Dinophysis* is one of the causative organisms responsible for Diarrhetic Shellfish Poisoning (DSP). DSP symptoms include nausea, vomiting, and diarrhea.

### Who found *Dinophysis*?

Early sightings of *Dinophysis* were reported in several Mt. Pleasant locations by Wando High School groups and by Socastee High School off Springmaid Pier, Myrtle Beach. *Dinophysis* has been reported on just over 100 data sheets from 23 sampling sites along the coast. The highest recorded abundance ratio for *Dinophysis* is common reported by the South Carolina Aquarium in April - May 2003 and at Fort Johnson in May 2003.

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*Be sure to check the next issue of THE PLANKTON NEWS for another new "Species Spotlight"!*

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