

INSIDE SEA GRANT

VOLUME 8, NUMBER 2

WINTER 2004

Thousands turn out to clean S.C. coast

Hurricane Ivan came through South Carolina the day before Beach Sweep/River Sweep, but by Saturday morning it was gone, leaving clear blue skies and nice temps—perfect weather for a cleanup!

An estimated 4,600 volunteers on the coast—a near-record turnout—cleared trash from beaches, marshes, and waterways. Over 100 site captains and their volunteers covered about 75 cleanup sites, from Little River to Daufuskie

Island. Community involvement during the event was fantastic, with support from Girl and Boy Scouts, K-12 schools and colleges, environmental and civic groups, museums,

aquaria, municipalities, state and federal agencies, resorts, and businesses. Due to high river stages and flooding, the inland portion of the Sweep was rescheduled for October 16.

Beach Sweep/River Sweep, part of The Ocean Conservancy's International Coastal Cleanup, is organized by the S.C. Sea Grant Consortium and S.C. Department of Natural Resources. Major sponsors for 2004 included BP Cooper

River Plant, Ben & Jerry's of Charleston, Carolina Ice Palace, Cisco's Café, Coastal Expeditions, Drayton Hall, Duke Power,

see "Beach Sweep" on page 2



Volunteers collect trash at the 2004 Sweep.

Building a new tool to monitor marine health

Sophisticated new tools could soon help resource managers assess of the impacts of chemical contaminants on the marine environment.

Chemical contaminants threaten species survival and are powerful forces in species' genetic selection. One way to document these impacts is to examine the life cycles of small, benthic creatures called meiofauna. Living in sediments, these species come in close contact with high levels of toxicants. Sea Grant researchers are studying how toxic compounds affect these estuarine animals in sublethal ways.

The newly approved and highly toxic pesticide fipronil is being used on golf courses and other areas adjacent to estuarine systems in South Carolina. Sea Grant researcher Thomas Chandler, an ecotoxicologist at the University of South Carolina Arnold School of Public Health and his team of USC researchers—John Ferry, Bruce C. Coull, Joseph Quattro and Joseph Staton—are studying fipronil-induced dysfunction in the marine copepod *Amphiascus tenuiremis*, and carrying out breeding experiments to test for heritability of pesticide resistance.

see "Building Tools" on page 2

Inside Sea Grant is published two times a year to inform interested constituents about opportunities, activities, goals, and accomplishments of the S.C. Sea Grant Consortium.

S.C. Sea Grant Consortium is a university-based network supporting research, education, and outreach to conserve coastal resources and enhance economic opportunity for the people of South Carolina.

Editors
Linda Blackwell
John H. Tibbetts

Art Director
Patty Snow

Contributing Writers
Rick DeVoe
Susan Ferris

Direct correspondence to:
Inside Sea Grant Editor
S.C. Sea Grant Consortium
287 Meeting Street
Charleston, SC 29401
phone (843) 727-2078
fax (843) 727-2080

Visit our Web site
www.scseagrant.org


S.C. Sea Grant Consortium
Science Serving
South Carolina's Coast

S.C. SEA GRANT STAFF

287 Meeting Street
Charleston, SC 29401
phone (843) 727-2078
fax (843) 727-2080
www.scseagrant.org

Rick DeVoe
Executive Director
Rick.Devoe@scseagrant.org

Elaine Knight
Assistant Director
elaine.knight@scseagrant.org

John Dwyer
Assistant to the Director
for Program Management
john.dwyer@scseagrant.org

COMMUNICATIONS STAFF
Linda Blackwell
Communications Director
linda.blackwell@scseagrant.org

Susan Ferris
Public Information
Specialist
susan.ferris@scseagrant.org

Patty Snow
Art Director
patty.snow@scseagrant.org

John H. Tibbetts
Writer
john.tibbetts@scseagrant.org

ADMINISTRATIVE STAFF
Alex Batson
Administrative Specialist II
alex.batson@scseagrant.org

Annette Dunmeyer
Administrative Specialist II
annette.dunmeyer@scseagrant.org

Romeka Washington
Accountant/Fiscal Analyst III
romeka.washington@scseagrant.org

INSIDE SEA GRANT

“Beach Sweep” continued from page 1

Hilex Poly Co., Magnolia Plantation and Gardens, Marine Terminals of S.C., Middleton Place Plantation, Piggly Wiggly Carolina Company, S.C. State Ports Authority, Santee Cooper, Sunfire Grill & Bistro, The Ocean Conservancy, and Universal Data Solutions.

The next Sweep is scheduled for Saturday, September 17, 2005. Detailed coastal results and photos can be found at <http://www.scseagrant.org> under the Education section.

“Building Tools” continued from page 1

A. tenuiremis is unusual in that it is the only sexually-reproducing marine animal that can be completely cultured in the laboratory in only 200 microliters of seawater over numerous generations, and serves as an excellent model to study effects of toxins on their reproduction. Toxicity can also be studied during each life stage: egg production, hatching, larval growth and survival, and adult reproductive success.

The international Organization for Economic Cooperation and Development (OECD) Environment, Health, and Safety Division (effectively the global EPA for industrialized countries) and the European Union have shown interest in using this cultured species as an estuarine “canary” to assess the health of estuarine systems.

In the United States, the American Society for Testing and Materials (ASTM) has just approved this copepod for testing in support of environmental regulation. The next step could be adoption by EPA.

“Since ASTM conducts the most rigorous reviews of test methods in the United States,” says Chandler, “these methods hold up very well in court, which is useful to EPA and industry. The usual process for EPA adoption of a new environmental test is to wait for ASTM approval first. Then, if EPA decides the method is useful within its regulatory mission for risk assessment of chemicals in the environment, it often follows with an adoption of the method.”

Accomplishments at

Coastal Heritage wins awards

Coastal Heritage, the quarterly magazine published by the S.C. Sea Grant Consortium, won two awards in 2004.

The magazine retained an Apex Award of Excellence in the Technical Writing category. The Apex Awards are sponsored by Communications Concepts, Inc.

Coastal Heritage also won an Award of Special Merit in Other Magazines category in the CASE (Council for the Advancement and Support of Education) District III competition.

The magazine is edited by John Tibbetts and art directed by Patty Snow, covering issues of coastal and marine-resource policy, science, and history. For a free subscription, contact the Consortium office at (843) 727-2078.

Restoring sweetgrass to the South Carolina Lowcountry

Sprawling development has sharply limited access to native sweetgrass, which has hindered basket making by the Gullah community around the Charleston area.

In 2002, the USDA Forest Service Southern Research Station and the College of Charleston, with funding from the S.C. Sea Grant Consortium, began studying how to help basket makers find solutions for the scarcity of the native coastal plant. Their findings are covered in a recent article in the journal *Economic Botany*.

Marianne Burke, a Forest Service ecologist, Angela Halfacre, a political scientist at the College of Charleston, and Zachary Hart, then a graduate student at the college, interviewed 23 Gullah basket makers between June 2002 and January 2003. Tapes of the interviews were transcribed and then analyzed to identify common views and practices to inform a long-term management plan for sweetgrass.

Gullah people have made sweetgrass baskets for almost three centuries in the lowcountry. Men originally practiced this kind of basket making, but women took over the craft in the 1920s, when many of the men left the area to

at a glance

serve in the military or look for jobs.

In recent years, the growth of gated communities and other developments along the coast has limited basketmakers' access to sweetgrass.

Basketmakers, researchers learned, support several different alternatives for managing sweetgrass. One proposed solution was to set aside land dedicated specifically to growing sweetgrass. The ownership of the land was less important than access to property where sweetgrass grows. Basketmakers suggestions for cultivation alternatives ranged from a "farm" that grows it to individual home cultivation. Basketmakers also expressed a need for public education about cultivating and maintaining sweetgrass.

"Doin' the Dunes!" repairs valuable sand barriers

On Sept. 11, a volunteer project called "Doin' the Dunes!" enhanced 1,000 linear feet of existing dunes on the Isle of Palms.

The one-day pilot project was organized by Dunes Properties, staffed by a corps of volunteers, and partially funded by the S.C. Sea Grant Consortium, with additional support from a number of sponsors.

The day began with a volunteer training session and an informative discussion on the importance of conservation efforts. Volunteers constructed dune fences and planted vegetation.

Project organizers used a combination of turtle-friendly fencing designs, including traditional 20-foot V-shaped sections, 10-foot straight sections angled towards prevailing winds, and the planting of dune vegetation in lieu of fencing in certain areas.

"We plan to make "Doin' the Dunes!" a model project for other communities interested in becoming involved in dune restoration and enhancement programs along the South Carolina coast," says April Turner, coastal communities specialist with the S.C. Sea Grant Consortium.

Oyster restoration program "scores" national awards

The South Carolina Oyster Restoration and Enhancement program (SCORE) recently received two prestigious national awards for 2004: the Coastal America Partnership Award and the Theodore M. Sperry Award. SCORE, a volunteer-driven oyster habitat restoration program, is directed by Loren Coen and managed by Nancy Hadley, both of the S.C. Department of Natural Resources (SCDNR) Marine Resources Research Institute.

The Coastal America Partnership Award recognizes the SCORE program's efforts to leverage skills and resources of federal, state, and local partners to restore critical oyster habitat.

The Theodore M. Sperry Award, sponsored by the Society for Ecological Restoration International, acknowledges the SCORE program's innovative approaches to oyster habitat restoration.

The SCORE program has built 98 new oyster reefs at 28 sites along the South Carolina coast since its inception in 2000. SCORE staff and volunteers also assess reef development, research and develop new approaches to reef construction, and monitor water quality at restored sites. A complementary SCDNR Oyster Shell Recycling Program encourages the public to contribute to oyster habitat restoration by dropping off oyster shells at any of 12 sites on the coast.

In addition to the S.C. Sea Grant Consortium, SCORE funding partners include the NOAA Community-based Restoration Program, U.S. Environmental Protection Agency, U.S. Fish & Wildlife Service, S.C. Chapter of the Coastal Conservation Association, and the Hilton Head Island Foundation. The program also collaborates with nearly 50 community partners and schools.

To learn more about SCORE, visit the Web site <http://www3.csc.noaa.gov/scoysters>.

S.C. SEA GRANT EXTENSION PROGRAM

S.C. Sea Grant Extension Program is a joint outreach program of Clemson University's Cooperative Extension Service and the S.C. Sea Grant Consortium.

Bob Bacon

Program Leader
S.C. Sea Grant Consortium
287 Meeting Street
Charleston, SC 29401
phone (843) 727-2075
fax (843) 727-2080
robert.bacon@scseagrant.org

Sandy Bernard

Coastal Hazards Specialist
SECOORA Coordinator
113 Calhoun St.: A Center for Sustainable Living
113 Calhoun Street
Charleston, SC 29401
phone (843) 727-6497
fax (843) 727-2080
sandy.bernard@scseagrant.org

Dan Hitchcock, Ph.D.

Coastal Environmental Quality Specialist
Clemson Extension Office
259 Meeting Street
Charleston, SC 29401
phone (843) 722-5940
fax (843) 722-5944
dhitchc@clemson.edu

April Turner

Community Development Specialist
S.C. Sea Grant Consortium
287 Meeting Street
Charleston, SC 29401
phone (843) 727-2075
fax (843) 727-2080
april.turner@scseagrant.org

Amber Von Harten

Fishery Specialist
102 Beaufort Industry Village, Suite 101
Beaufort, SC 29902
phone (843) 470-3655
fax (843) 470-3650
ambervh@clemson.edu

Jack Whetstone

Aquaculture Specialist
Clemson Extension Office
PO Drawer 1100
Georgetown, SC 29442
phone (843) 546-4481
fax (843) 546-2852
jwhstn@clemson.edu

BOARD OF DIRECTORS

The Consortium's Board of Directors is composed of the chief executive officers of its member institutions.

Dr. Andrew A. Sorensen
Board Chair,
University of South Carolina

James F. Barker
Clemson University

John E. Frampton
S.C. Department of
Natural Resources

Dr. Raymond S. Greenberg
Medical University
of South Carolina

**Major General
John S. Grinalds**
The Citadel

Leo I. Higdon, Jr.
College of Charleston

Dr. Andrew H. Hugine, Jr.
S.C. State University

Dr. Ronald R. Ingle
Coastal Carolina
University

INSIDE SEA GRANT

Message from the Executive Director:

S.C. Sea Grant Consortium evaluated by national program assessment team

The S.C. Sea Grant Consortium was evaluated by a National Sea Grant Program Assessment Team (PAT) during the week of June 14, 2004. The NOAA National Sea Grant College Program, from which we receive our core funding support, oversees this review process for each of the nation's 30 Sea Grant College Programs. The PAT review focuses on four major areas: (1) planning and implementation; (2) organization and management; (3) user interactions; and (4) producing significant results. The program assessment process aims to foster continuous program improvements; thus PAT reviews identify areas of program strengths and offer recommendations for program improvement. The PAT results are used to also determine the amount of Sea Grant funding the Consortium receives over the next four years.

We received the Program Assessment Report in August 2004, and I am pleased to say that the Consortium fared very well. The PAT was complimentary of the Consortium's



Rick DeVoe

"high quality" programs, particularly of the agency's strong linkages among our research, extension, communications, and educational efforts. The PAT praised the Consortium for its "exceptional array of partnerships" that results in "major benefits" to user communities from the Consortium's activities and end-user products.

The PAT offered recommendations to strengthen the Consortium, including suggesting that "strong program-wide policy and scientific guidance" would benefit the agency. Therefore, I am in the process of creating a standing Program Advisory Council to provide the Consortium with a broad perspective on South Carolina's coastal and marine resource issues and needs. Council input will complement that received from our stakeholders, and will be used to revise our strategic plan and develop and implement future programs and projects.

I will announce the members of our Program Advisory Council in the next issue of *Inside Sea Grant*. If you wish to review the Consortium's Program Assessment Briefing Book that documents the Consortium's activities and accomplishments since 2000, visit http://www.scseagrant.org/pdf_files/SCSGC_1999-2004.pdf.

4


Sea Grant
S.C. Sea Grant Consortium
Science Serving
South Carolina's Coast

287 Meeting Street
Charleston, SC 29401

