



WAVELENGTHS

*The Newsletter of the Southern
Association of Marine Educators
in Alabama, Louisiana, and Mississippi*
April 21, 2005

Making known the world of water, both salt & fresh

Letter from the President

Sonya Wood Mahler, SAME President 2004-2005

Hello SAME members!

I hope that things are going well for you, and that you are taking the time to do something outdoors in this gorgeous Spring weather. I wanted to bring you up to date on some of the things that are going on in your regional association.

At SAME's annual meeting held at LUMCON in Louisiana last November, we recognized two of our members who have contributed greatly to the chapter. Angela Capello, who works for Fowler Fish Hatchery in Louisiana and served as the Secretary/Treasurer for SAME for several years, received the 2004 SAME award for Outstanding Educator. Denise Keaton, who works at Dauphin Island Sea Lab in Alabama and edits the SAME newsletter *Wavelengths*, received the 2004 SAME award for Outstanding Resource. Congratulations to both of these dedicated SAME members!

SAME helped to sponsor the 2005 Central Gulf Coast Regional Ocean Sciences Bowl, the *Hurricane Bowl*, held at the J.L. Scott Marine Education Center and Aquarium on February 12th. Many SAME members were also involved in coordinating the *Hurricane Bowl* and helped to make it a Category 5 (huge) success! Rebecca Espey coordinated the event. J.L. Scott Marine Education Center and Aquarium was also the host for the National Ocean Sciences Bowl this year.

During the last week of March, SAME joined many other NMEA chapters in offering a Whale of a Sharathon at the National Science Teachers Association conference in Dallas, Texas. We set up an exhibit and gave away lots of publications and classroom activities to the hundreds of teachers who

walked through the great hall of the conference center. We also offered sessions throughout the day on salty topics like phytoplankton, sharks, dolphins, fish dissection, measuring tidepools, and mapping watersheds.

SAME will be very involved at the NMEA annual conference July 12th through 16th. The conference will be held in Kahului, Maui, Hawaii. This year's theme is Nana I Ke Kumu, Nana I Ke Kai, Hawaiian for "Look to the Source, Look to the Sea". Concurrent sessions will be held at Maui Community College. The Maui Arts & Cultural Center will host marine science symposia on technology, biodiversity, conservation, culture, and the arts. The conference will offer field trips to every corner of Maui for those who like to hike, kayak, snorkel, and SCUBA dive. We will tour the Maui Ocean Center and the Ocean Sciences Discovery Center. There is still time to register. Look for more information on the conference website: www.hawaii.edu/maui/oceania/NMEA05.html. Future NMEA conferences will be held in New York, New York in 2006, in Brunswick, Maine in 2007, and in Savannah, Georgia in 2008.

Our next newsletter will be mailed out in August. If you would like to submit an article, book review, or upcoming event for that issue, please send it to: Dr. John Dindo, jdindo@disl.org or FAX to 251-861-7421. If you have any questions about SAME or NMEA, or if there is any way that SAME can help you, feel free to contact me at smahler@aces.edu or 251-937-7176. You can reach Johnette Bosarge, NMEA's administrative assistant, at johnettebosarge@usm.edu or 228-374-7557.

No matter how brilliant our attempts to inform, it is our ability to inspire that will turn the tides.
--Syracuse Cultural Workers

SAME Sends Two Teachers to NMEA in Maui

This year SAME members voted to use the proceeds of our annual "not-so-silent" auction to offer two scholarships to the NMEA conference in July. The Maui conference will be especially costly, and we wanted to assist SAME members as much as possible in attending. Each \$400.00 scholarship covers the cost of conference registration and one field trip.

Participants will be responsible for their own transportation, lodging, and meals. Scholarship awards were based on financial need and involvement in SAME. Applicants had to be a current member of SAME and a current member of NMEA at the time of application.

We are most appreciative to the board of directors of the Environmental Education Association of Alabama (EEAA) for reviewing the scholarship applications. The two SAME scholarships were awarded to Stephany Hannon and Beth Biegler Hines.

Stephany Hannon teaches Marine Science and Biology for 10th through 12th graders at Fairhope High School in Baldwin County, Alabama. She has been a SAME and NMEA member for over three years. She has stayed current by taking several on-line courses in Marine Science and Oceanography. Stephany particularly wants to attend the Biofilm/Biodiversity Workshop being offered by University of Maryland at the NMEA conference. She would like to set up a Biofilm site on the eastern shore of Mobile Bay, and have her students identify organisms during different seasons of the year.

Beth Biegler Hines developed a Marine Biology course for Mountain Brook High School in Birmingham, Alabama. She has taught this course for the past two years. She has been a SAME and NMEA member for two years. Beth tries to increase her content knowledge and bring ocean studies alive for her students. She looks forward to learning new activities from experienced marine educators that will help tie concepts together in her classroom. She hopes to make contacts with marine researchers at the NMEA conference who can help bring the real process of scientific discovery to her students.

Stephany and Beth will each be submitting an article about their conference experience to the SAME newsletter, *Wavelengths*, and to the SAME web site in August. Be sure to look for their Maui stories.



NMEA 2005
Kahului, Maui, Hawai'i

Call for Nominations for SAME Officer Elections

This summer SAME will hold elections for new officers. Each office is a two-year term. Sheila Brown who is now the President-elect of SAME will begin serving as President in November. Sonya Wood Mahler, the current President, will pass the official rain stick to Sheila at SAME's annual business meeting November 20th. Sonya will begin serving a two-year term as Past-President. Rachel Somers has agreed to serve as SAME's Secretary/Treasurer for another two years. We will hold elections for the office of President-Elect. This vital positions a six year commitment to SAME: two years as President-Elect, two years as President, and two years as Past President. This person also serves as SAME's chapter rep at the NMEA Board Meetings. It is a wonderful opportunity to get more involved at the regional level and with the other chapters of NMEA. If you would like to nominate yourself, or someone else, with their permission, email Sonya Wood Mahler smahler@aces.edu or call (251) 937-7176. Deadline for nominations: May 21st, 2005

SAME

2005 Fall Conference

Submitted by: Dr. Sheila Brown

Mark your calendars now! The 2005 Fall Conference of SAME will be held Friday, November 18 through Sunday, November 20, 2005. The location will be J.L. Scott Marine Education Center and Aquarium of the Gulf Coast Research Laboratory, a part of The University of Southern Mississippi. Arrangements are being made to provide all members with a wonderful and educational visit to Biloxi, Mississippi. The theme of this year's conference is *Marine Biotechnology and Invasive Species-The Good, The Bad, The Ugly.... The Intrusive!* Speakers, hands-on workshop activities, field trips, an auction, share-a-thon, and outstanding networking with peers are all planned for the workshop.

The 2005 Conference will be sponsored by the National Sea Grant Office, Mississippi-Alabama Sea Grant Consortium, Scott Aquarium, the Gulf Coast Research Laboratory, and The University of Southern Mississippi. A minimal fee of \$15 will provide you with meals from Friday night through lunch on Sunday, dorm room accommodations Friday and Saturday night, field trips and membership for one year to both SAME and NMEA. This will be a fabulous weekend!

The auction is expected to be bigger and better than last year. Field trips will include the following;

- Interpretive pontoon boat ride through the salt marshes of the Grand Bay National Estuarine Research Reserve (NERR),
- Canoe trip through a bayou at the Grand Bay NERR,
- Exploration of Deer Island,
- Seafood Industry Museum tour,
- Trawling trip and exploration of Horn Island, and
- Touring of some of the research facilities at the Gulf Coast Research laboratory.

Specifics and registration information for the fall meeting will be available in the August newsletter.

The History Corner

SAME members met for the first time as an association in 1993. A close network of marine and aquatic educators came together at the home of Margaret Howell in Diamond Head, Mississippi.

In January 1999, the members of SAME voted to revise the constitution and by-laws of the association. These included our three objectives: 1) To represent all marine educators in Alabama, Mississippi, Louisiana, and northwest Florida, to promote the highest of professional practices, to encourage active participation, to promote education, to encourage a spirit of ethics and cooperation. 2) To encourage marine and aquatic topics in curriculum, to offer colleagues a way to obtain information and training, to provide a network for members. 3) To encourage participation in NMEA and attendance at the national conference.

In January 2001, SAME combined its annual meeting with a Manatee Dive Trip for SAME members in Crystal River, Florida. In addition to snorkeling with very friendly manatees, participants went on a moonlight boat ride, did a drift dive down Rainbow River, toured Homosassa Springs State Wildlife Park, toured Crystal River State Archeological Site, and went kayaking.

In recent years, SAME has rotated its annual meeting between the north Gulf Coast's three keystone marine labs: Dauphin Island Sea Lab in Alabama, J.L. Scott Marine Education Center & Aquarium in Mississippi, and Louisiana Marine Universities Consortium (LUMCON) in Louisiana.

Kayak & Snorkel Field Trip

for members of the Southern Association of Marine Educators & the Environmental Education Association of Alabama



Join us for three days of fun and exploration in the creeks and springs of northwest Florida! We have put together a kayak trip just for SAME & EEAA members. It will be held Friday, June 10th through Sunday, June 12th and will be lead by Sonya Wood Mahler.

On Friday, beginning at noon, we will paddle along Econfina Creek, the drinking water supply for the city of Panama City. We will tuck into several gorgeous springs where you can swim, snorkel, or just play with the tadpoles. On Saturday morning, we will launch at the boat ramp in Florida Caverns State Park near Marianna. We'll paddle up the Chipola River and explore cypress-lined inlets. Saturday afternoon, participants can go on a 45-minute tour of the caves and hike the nature trail that takes you up the rocky bluffs towering over the river. On Sunday morning, we will paddle up Holmes Creek just south of Chipley, Florida to Cypress Springs, another great place for snorkeling. On the drive back, for those who haven't gotten enough of crystal-clear water, we will stop and paddle for a couple of hours on Seven Runs Creek, located just south of I-10 near Ponce de Leon Springs.

The size of the group will be limited to 18 people to insure that we have a good experience and have the opportunity to see some wildlife. For those who do not have their own kayak, we will rent single sea kayaks from Gulf & Delta Canoe & Kayak Company in Whitehouse Fork, Alabama. Sonya will lead a session for beginners on how to paddle and how to get in and out of the boats. The minimum age for participants is 12. We will spend Friday and Saturday nights in a motel in Chipley, Florida, just off I-10.

The registration cost of the field trip is \$25.00 per person. This fee covers guide service, insurance, bottled water and fruit juices, and first aid supplies. Add \$30.00 if you would like to rent a kayak. Add \$10.00 if you would like Sonya to transport the kayak that you rent or your own kayak from Baldwin County, Alabama. Each person will be asked to make their own motel reservations (Super 8: \$64.99 plus tax per night or Holiday Inn Express: \$79.95 plus tax per night). For details, contact Sonya at 251-937-7176 or smahler@aces.edu. For registration information and a paddling packet, please contact Rhonda Bryars at 251-937-7176 or bryarrm@aces.edu. The deadline for registration is May 20th.



Louisiana Youth Environmental Summit

Audubon Louisiana Nature Center

July 25-28, 2005

Chicot State Park, Ville Platte, LA

For students entering 8th through 11th grades

Submitted by: Amy LeGaux

Experience an intensive, free three-day summit of select middle and high school students and their adult sponsors. Students and sponsors join educators, scientists, policy makers, regulators, dynamic speakers and special guests to discuss environmental issues and actions. Afterwards students are encouraged to work on environmental-based, community projects with the assistance of their adult sponsors. Students can apply for grants to assist their projects financially. And those students completing their projects are eligible to apply for the Louisiana YES student mentor program. Louisiana YES sponsors, Cleco Corporation and Audubon Louisiana Nature Center, believe today's students will become tomorrow's environmental leaders. We can work together to shape Louisiana's environmental future—one project at a time.

All summit costs including meals, lodging, educational materials and supplies, field trips, entertainment, recreation and transportation are provided. The only cost not covered is transportation to and from the summit. Base camp is beautiful Chicot State Park in Ville Platte, but we'll also take field trips to study environmental issues in surrounding areas. For more information contact Kathleen Welch at (504) 378-4149, or e-mail kwelch@auduboninstitute.org. To download a student application go to <http://www.auduboninstitute.org/lnc>. A limited number of stipends are available to help defray these costs.

Baldwin County Grasses in Classes Program Description

Submitted by: Margaret Sedlecky



Margaret Sedlecky, Judy Reeves and Jeanne Fox divide Saltmarsh Cordgrass plugs during a session at the National Marine Educators Association Conference in St. Petersburg FL, July 2004.

The Baldwin County Grasses in Classes (BCGIC) program will facilitate the establishment and maintenance of nurseries by Baldwin County school students. These nurseries will provide an inexpensive source of native plants to be used in the many federal, state, county and city habitat restoration projects in the Baldwin County area. With many restoration projects being planned, native plants are in constant demand. By raising the plants to maturity in our own nurseries, many expenses will be curtailed and the cost of the planting project to government agencies will be lowered significantly.

The BCGIC program will also provide a volunteer base for implementation of restoration projects and will promote student involvement in community-based restoration activities. With guidance from local scientists, the students will maintain the nursery and monitor their plants by performing salinity tests, recording growth rates, conducting routine maintenance and documenting other pertinent information.

Through BCGIC, students will learn the value of maintaining a healthy environment while participating in hands-on habitat restoration activities. The nurseries will also provide an excellent educational resource for applying student learning to real world ecological and agricultural practices. The students will become

familiar with the life cycle of the plants they are growing and the importance of coastal ecosystems. This hands-on approach will enhance education in schools as well as the health of Alabama's coastal environments.

The 2005 - 2006 school year will be an inaugural year in which we will focus on developing the infrastructure (operating procedures, growing methods, materials list, budgets, etc...) for the BCGIC Program. We are currently seeking funding to pilot the program. If all goes well this first year, and we can acquire the necessary funding, we will expand the program to other middle and high schools in Baldwin County who wish to participate.

Margaret H. Sedlecky, Education Coordinator at *Weeks Bay Reserve* will coordinate the Grasses in Classes Program for Baldwin County Board of Education. Margaret will work with the schools to grow plants that will be needed for the restoration projects and with the agencies that are doing restoration to involve the students in all aspects of the process.

Establishing a "Grasses in Classes Program" in Baldwin County will require a lot of cooperation, coordination and dedication from all parties involved. We are excited about the Program and look forward to working with you to accomplish our goal of helping to restore Baldwin County's coastal habitats.

BCGIC is patterned after Tampa Bay Watch: Grasses in Classes as well as Maryland's "Bay Grasses in Classes" and "Wetland Nursery" programs. These organizations have been a tremendous help in sharing their knowledge and expertise.

Lisa Allen at *Gulf Shores High School* began growing the freshwater submerged aquatic grass *Vallisneria americana* (Tapegrass) this past fall (2004) and will be ready to plant some of the grasses this spring. *Baldwin County High School* teachers, Judy Reeves and Jeanine Fox have agreed to grow emergent Saltmarsh Cordgrass *Spartina alterniflora* and Megan Anderton at *Fairhope High School* will be growing dune restoration grasses (exact species yet to be determined). *Weeks Bay Reserve* will be testing methods for growing emergent plants (brackish water; Black Needle Rush *Juncus roemerianus*), (freshwater; Arrowhead *Sagittaria lancifolia*, and Giant Bulrush *Scirpus californicus*).

BCGIC partners involved in restoration projects in coastal Baldwin Co. include (but are not limited to):

Weeks Bay National Estuarine Research Reserve
Natural Resource Conservation Service
Mississippi - Alabama Sea Grant
US Fish and Wildlife
City of Gulf Shores

Gulf State Park
Mobile Bay National Estuary Program
ADCNR, Division of Wildlife & Freshwater Fisheries
Alabama Cooperative Extension System - Baldwin County
Alabama Conservation and Natural Resources (ADCNR), State Lands Division



LSU's Scope-On-A-Rope Program

Submitted by: Adrienne Lopez

The **Scope-On-A-Rope (SOAR)** is a hand-held microscope that allows you to see focused, magnified images on an ordinary television. It is guaranteed to capture your students' interest and it promotes learning at all levels. It's ease of use and durability makes it an invaluable educational tool! The SOAR program at **Louisiana State University** lends these instruments out to any interested educator free of charge! Other partners operating SOAR lending programs are the **Audubon Aquarium of the Americas** in New Orleans, **Louisiana Tech University** in Ruston, the **Sci-Port Discovery Center** in Shreveport, and the **Louisiana Resource Center for Educators (LRCE)** in Baton Rouge. Training, workshops, and lesson plans are also available. Please check out our website for more information: <http://www.scopeonarope.lsu.edu> or contact the SOAR Program Coordinator, Adrienne Lopez, at 225-578-7780, alopez@lsu.edu.

Free Scope-On-A-Rope Training Institute: Elementary (1st-5th grade)

When: Monday-Wednesday, **June 6-8th, 9am-12pm**

Where: Louisiana Resource Center for Educators (LRCE) in Baton Rouge, LA

Registration: On-line at <http://www.lrce.org> or call 800-49-1908

This intense 3-day institute will give you experience using SOAR in a wide variety of ways. From science to math to social studies, you will learn the many uses of SOAR in a hands-on, minds-on format. You will leave with ready-made activities and lesson plans, tons of ideas of how to implement this into your curriculum, and the know-how to fully utilize this instrument in your classroom. Participants will receive 9 CLU's, and all activities are tied to the LA GLE's.

Tentative agenda:

Day 1: General introduction of SOAR

Day 2: Aquatic viewing and math activities

Day 3: Lesson plans and other cross-curricular applications

Free Scope-On-A-Rope Training Institute: Middle/High (6-12th grade)

When: Monday-Wednesday, **June 6-8th, 1-4pm**

Where: Louisiana Resource Center for Educators (LRCE) in Baton Rouge, LA

Registration: On-line at <http://www.lrce.org> or call 800-449-1908

This intense 3-day institute will give you experience using SOAR in a wide variety of ways. From ecosystem studies to animal and plant anatomy, you will learn the many uses of SOAR in a hands-on, minds-on format. You will leave with ready-made activities and lesson plans, tons of ideas of how to implement this into your curriculum, and the know-how to fully utilize this instrument in your classroom. Participants will receive 9 CLU's, and all activities are tied to the LA GLE's. Tentative agenda:

Day 1: General introduction of SOAR

Day 2: Aquatic viewing, math, and other cross-curricular applications

Day 3: Lesson plans, digitizing images, video projects for students

SCOPE-ON-A-ROPE
at
Louisiana State University



**Spring & Summer Programs
In Coastal Mississippi
Sea Scholars Voyage - Summer 2005**

The COSEE: Central Gulf of Mexico – Sea Scholars Program is a nationally recognized effort funded by the U.S. Navy, the National Science Foundation, and the National Oceanic and Atmospheric Administration in cooperation with The University of Southern Mississippi. The overarching goal of the Sea Scholars component of the COSEE: Central Gulf of Mexico is to promote oceanography, coastal processes, and related math, social studies, and technology. The participants will be taught by Navy survey personnel on how survey data are collected and the naval applications of the data. There is a Sea Scholars voyage scheduled for the summer of 2005. Expenses for the voyage (lodging and meals) from the official start date to end date are covered by the COSEE: Central Gulf of Mexico – Sea Scholars program. Participants pay for their travel to and from the port/ports. All participants must be U.S. Citizens. For an application and complete information, go to the COSEE:CGOM web site www.cosee-central-gom.org or email Shelia Brown at shelia.brown@usm.edu.

**Scott Aquarium, The University of Southern Mississippi
Teacher Workshop Opportunities**

Beach and Barrier Islands Teacher Mini Camps (June 29-30 & July 6-7, 2005)

The Scott Aquarium will provide **Beach and Barrier Islands Teacher Mini Camps** for interested teachers. During the Mini Camps participants will examine the physical and biological composition of the barrier islands, and study their origin, community structure, ecological succession, and effects of man (pollution, development and restoration). These are field trip/activity based Mini Camps with lectures in the classroom, on the boat, on the beaches and in the waters of Mississippi Sound and the Gulf of Mexico. There is a \$25 non-refundable registration fee that applies to the workshop cost of \$80. The fee includes two field trips to barrier islands and a box lunch each day. Participants may earn 1.3 CEUs. Teachers must pay their own CEU fee of \$26. Participation is limited to 24 teachers. Activities will begin at 8:00 a.m. and conclude between 4:00 -4:30 p.m. each day.

Marine Biotechnology: The Wave of the Future (April 27-29 & May 25-27, 2005)

Sponsored by the MS-AL Sea Grant Consortium (MASGC) and NOAA National Sea Grant College. These workshops will focus on new products and techniques being developed from marine organisms. Lectures and hands-on, inquiry-based laboratory activities associated with biotechnology will be presented. There is a \$25 non-refundable registration fee. Participants may earn 1.5 CEUs. Teachers must pay their own CEU fee of \$30. Participation is limited to 18 Mississippi and Alabama teachers. Activities begin at 5:00 p.m. on Wednesday and conclude at 4:30 p.m. on Friday.

For more information, a schedule of activities in each workshop, and/or to enroll, please call the Scott Aquarium at 228-374-5550 or e-mail Shelia A. Brown at shelia.brown@usm.edu.



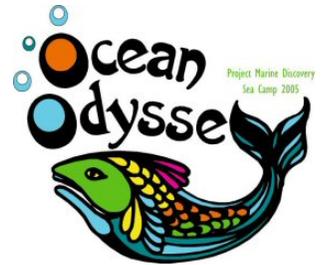
**SCIENTIST/TEACHER SUMMER INSTITUTE
2005**

The COSEE: Central Gulf of Mexico Scientist/Teacher Institutes are funded by the National Science Foundation, the National Oceanic and Atmospheric Administration/National Sea Grant College Program, and the National Oceanographic Partnership Program/Office of Naval Research, in cooperation with The University of Southern Mississippi's College of Science and Technology (USM-CoST), Dauphin Island Sea Lab, Louisiana Universities Marine Consortium, The University of Florida/Florida Sea Grant, and The University of Texas Marine Science Institute. The program invites twelve teams of teachers/scientists from Alabama, Florida, Louisiana, Mississippi and Texas to participate in a three-week (five days in residence for field activities and 10 days involved in distance learning spread over a six week time frame), three-semester hour graduate course in coastal processes, habitats and organisms, and marine technology. The course may also be taken for continuing education units. The 2005 dates for the resident/field component are June 5-10 for Alabama, June 12-17 for Louisiana, and June 19-24 for Florida, Mississippi, and Texas. The online component is scheduled to start in July. [Note: The COSEE: CGOM staff will pair school teachers with scientists to form cooperative educational teams]. For more information and application forms, please go to www.cosee-central-gom.org. Click on Applications in the menu and download the forms. All forms should be mailed to the appropriate Summer Institute state's director. For more information, call or e-mail Shelia A. Brown at 228-374-5550 or shelia.brown@usm.edu.

Mississippi

Project Marine Discovery: Sea Camp-Summer 2005

We are celebrating an Ocean Odyssey at Scott Aquarium this summer. Learn about the sea and the animals and plants that live in the ocean during a fun filled week of field trips, new art, computer, and hands-on activities. Then join the staff on Friday for an Ocean Odyssey celebration with cake, space walks, a dunking booth, popcorn, face painting and many more surprises. Camp is scheduled weekly from June 6 until July 29, Monday through Friday. Campers ages 6-16 attend from 8:00 a.m.– 4:00 p.m. and 5 year olds attend 8:00 – 11:00 a.m. Information, including tuition, schedules, and registration forms may be found online at www.usm.edu/aquarium/pmdsecmp.htm.



Undergraduate and graduate summer field courses offered at The University of Southern Mississippi GULF COAST RESEARCH LABORATORY OCEAN SPRINGS, MISSISSIPPI

Gulf Coast Research Laboratory, a part of The University of Southern Mississippi, is offering a slate of marine science courses in summer 2005. During the three summer sessions a student can earn up to 13 credit hours college credit—most courses are offered for undergraduate and graduate credit. One week mini-courses are also offered for science teachers who need course work as part of “No Child Left Behind.” Links below are to course descriptions, prerequisites and instructor contact information The GCRL Summer Field Program homepage provides information about housing, fees, scholarships and more. Home Page: http://www.usm.edu/gcrl/summer_field/index.php;
Contact: Dawne Hard: dawne.hard@usm.edu (228)872-4223.



MAY MESTER (TWO WEEK TERM) MAY 16—MAY 27

COASTAL ORNITHOLOGY

http://www.usm.edu/gcrl/summer_field/coastal_ornithology.php#Content

3 sem. hrs. undergraduate and graduate credit. Instructor: Dr. Mark S. Woodrey of NOAA, Grand Bay National Estuarine Research Reserve, Moss Point, MS.

BARRIER ISLAND ECOLOGY

http://www.usm.edu/gcrl/summer_field/barrier_ecology.php#Content

3 sem. hrs. undergraduate credit only. Instructor: Jerry A. McLelland of Southern MS, Department of Coastal Sciences, Ocean Springs, MS.

FIELD AND LAB TECHNIQUES IN MARINE FISHERIES SCIENCE

http://www.usm.edu/gcrl/summer_field/marine_fish_study_techniques.php#Content

2 sem. hrs. undergraduate credit only. Instructor: Jim Franks of Southern MS, Center for Fisheries Research and Development, Ocean Springs, MS.

FIRST TERM (MAY 31 – JUNE 28)

MARINE SCIENCE I: OCEANOGRAPHY

http://www.usm.edu/gcrl/summer_field/marine_science_i.php#Content

5 sem. hrs. undergraduate credit only. (3 lecture/2 lab). Instructor: Dr. Don Johnson of Southern MS, Center for Fisheries Research and Development, Ocean Springs, MS.

MARINE SCIENCE II: MARINE BIOLOGY

http://www.usm.edu/gcrl/summer_field/marine_science_ii.php#Content

5 sem. hrs. undergraduate credit only (3 lecture/2 lab). Instructor: Dr. Walter Conley of SUNY, Potsdam, New York.

MARINE INVERTEBRATE ZOOLOGY

http://www.usm.edu/gcrl/summer_field/marine_invertebrate.php#Content

6 sem. hrs. undergraduate and graduate credit (3 lecture/3 lab). Instructor: Dr. Patricia Biesiot of Southern MS, Department of Biology, Hattiesburg, MS.

MARINE ICHTHYOLOGY

http://www.usm.edu/gcrl/summer_field/marine_ichthyology.php#Content

6 sem. hrs. undergraduate and graduate credit (3 lecture/3 lab). Instructor: Dr. Jack Gartner of St. Petersburg Junior College, Department of Natural Sciences, St. Petersburg, Fla.

COASTAL MARINE GEOLOGY (MAY 31 – JUNE 17)

http://www.usm.edu/gcrl/summer_field/coastal_marine_geology.php#Content

3 sem. hrs. undergraduate and graduate credit. Instructor: Dr. Ervin Otvos of Southern MS, Department of Coastal Sciences, Hattiesburg, MS.

SECOND TERM (JUNE 29 – JULY 29)

MARINE SCIENCE II: MARINE BIOLOGY http://www.usm.edu/gcrl/summer_field/marine_science_ii_2.php#Content

5 sem. hrs. undergraduate credit only (3 lecture/2 lab). Instructor: TBA.

MARINE ECOLOGY

http://www.usm.edu/gcrl/summer_field/marine_ecology.php#Content

5 sem. hrs. undergraduate and graduate credit (3 lecture/2 lab). Instructor: Dr. Chet Rakocinski of Southern MS, Department of Coastal Sciences, Ocean Springs, MS.

MARINE MAMMALS

http://www.usm.edu/gcrl/summer_field/marine_mammals.php#Content

5 sem. hrs. undergraduate and graduate credit (3 lecture/2 lab). Instructor: Dr. Keith Mullin of NOAA, National Marine Fisheries Service, Pascagoula, MS.

ELASMOBRANCH BIOLOGY

http://www.usm.edu/gcrl/summer_field/elasmobranch.php#Content

5 sem. hrs. undergraduate and graduate credit (3 lecture/2lab). Instructor: Dr. Eric Hoffmayer of Southern MS, Center for Fisheries Research & Development, Ocean Springs, Ms.

SAND BEACH ECOLOGY

http://www.usm.edu/gcrl/summer_field/sand_beach_ecology.php#Content

5 sem. hrs. undergraduate and graduate credit (2 lecture/3 lab). Instructor: Dr. Richard Heard of Southern MS, Department of Coastal Sciences, Ocean Springs, MS.

COASTAL ZONE MANAGEMENT

http://www.usm.edu/gcrl/summer_field/coastal_zone_management.php#Content

3 sem. hrs. undergraduate and graduate credit. Instructor: Dr. Edward Pinero of Southern MS, Gulf Coast Geospatial Center, Ocean Springs, MS.

CETACEAN BEHAVIOR AND COGNITION (JULY 17 – JULY 29)

http://www.usm.edu/gcrl/summer_field/cetacean_behavior.php#Content

3 sem. hrs. undergraduate and graduate credit. Instructor: Dr. Stan Kuczaj of Southern MS, Department of Psychology, Hattiesburg, MS.

COASTAL ECOLOGY FOR TEACHERS (Dates to be announced)

http://www.usm.edu/gcrl/summer_field/coastal_ecology.php#Content

4 sem. hrs. undergraduate and graduate credit (3 lecture/1 lab). Instructors: Drs. Sharon Walker and Shelia Brown of Southern MS, Department of Coastal Sciences, J.L. Scott Marine Education Center & Aquarium, Biloxi, MS.

TEACHER MINI-COURSES

SPECIAL ONE-WEEK, TWO SEMESTER HOUR COURSES

Four special topics courses for teachers have been developed by the faculty of The University of Southern Mississippi's Gulf Coast Research Laboratory. These courses are designed for K-12 teachers and will be offered for the first time during the 2005 Summer School sessions. Each requires only a week of time (36 hours) and provides two semester hours of credit. These courses are well suited to fulfill "No Child Left Behind" or other professional development requirements.

SPECIAL TOPICS FOR TEACHERS IN PHYSICAL OCEANOGRAPHY: COMMOTION IN THE OCEAN!

(JUNE 6 – JUNE 10) http://www.usm.edu/gcrl/summer_field/teacher_courses.php#1

2 sem. hrs. undergraduate and graduate credit. Instructors: Dr. Bruce Comyns of Southern MS, Department of Coastal Sciences, Ocean Springs, MS., and Drs. Sharon Walker, Shelia Brown, and/or Susan Ross of Southern MS, J.L. Scott Marine Education Center & Aquarium, Biloxi, MS.

SPECIAL TOPICS IN COASTAL ECOLOGY: WALK ON THE WET SIDE (JUNE 13 – JUNE 17)

http://www.usm.edu/gcrl/summer_field/teacher_courses.php#1

2 sem. hrs. undergraduate and graduate credit. Instructors: Dr. Mark Peterson of Southern MS, Department of Coastal Sciences, Ocean Springs, MS. and Drs. Sharon Walker, Shelia Brown, and/or Susan Ross of Southern MS, J.L. Scott Marine Education Center & Aquarium, Biloxi, MS

SPECIAL TOPICS FOR TEACHERS IN AQUACULTURE: HOW TO KEEP SEAFOOD ON THE TABLE (JULY 18 –

JULY 22) http://www.usm.edu/gcrl/summer_field/teacher_courses.php#1

2 sem. hrs. undergraduate and graduate credit. Instructors: Dr. Jeff Lotz of Southern MS, Department of Coastal Sciences, Ocean Springs, MS., and Drs. Sharon Walker, Shelia Brown, and/or Susan Ross of Southern MS, J.L. Scott Marine Education Center & Aquarium, Biloxi, MS.

SPECIAL TOPICS FOR TEACHERS IN COASTAL ENVIRONMENTS THROUGH GIS APPLICATIONS: BE TECH SAVY IN 36 HOURS! (JULY 25 – JULY 29)

http://www.usm.edu/gcrl/summer_field/teacher_courses.php#1

2 sem. hrs. undergraduate and graduate credit. Instructors: Dr. Edward Pinero of Southern MS, Gulf Coast Geospatial Center, Ocean Springs, MS., and Drs. Sharon Walker, Shelia Brown, and/or Susan Ross of Southern MS, J.L. Scott Marine Education Center & Aquarium, Biloxi, MS.

DAUPHIN ISLAND SEA LAB'S SUMMER OPPORTUNITIES FOR TEACHERS



TEACHER WORKSHOPS: For more information on teacher workshops at the Dauphin Island Sea Lab contact Ms. Denise Keaton at (251) 861-7515 or email dkeaton@disl.org. Send a request to receive more information to: DHP Registrar, Dauphin Island Sea Lab, 101 Bienville Blvd, Dauphin Island AL 36528.

Marine Application of Science and Technology – Alabama Teachers Only The Dauphin Island Sea Lab is introducing an exciting teacher workshop titled "MAST" (Marine Applications of Science and Technology). Funded by the No Child Left Behind Act, this workshop introduces the educator to hands-on application of math, technology, and science using coastal Alabama resources. Alabama math & science teachers of 6th – 12th grades will explore disciplines as varied as oceanography, salt marsh ecology, climatology and fisheries management. Upon completion of this course, each teacher will receive a hand-held Garmin GPS for use in the classroom and \$100 stipend. MAST allows teachers to have first-hand experience with modern equipment and databases and learn to use such tools in the classroom. Dates: June 12 – 17; June 19 – 24; and June 26 – July 1, 2005. CEUs are available. Graduate credit available through UWA for a fee.

CENTERS FOR OCEAN SCIENCE EXCELLENCE IN EDUCATION (C.O.S.E.E.) WORKSHOP

Alabama Teachers Only Establishes a partnership between marine research scientists and middle school teachers, giving each the opportunity to share information and ideas about scientific research and science education at the middle school level. Funding is provided by a grant from the National Science Foundation so the workshop is FREE to Alabama teachers of students in 5th – 9th grade! Upon completion of all assignments, teachers & scientist will receive a \$300 stipend for participating in this workshop. Dates: June 5 – 10, 2005. Graduate credit available through UWA for an additional fee.

BEACHES, BIRDS & BARRIER ISLAND Join us for a "three island tour" of the Gulf Coast's most beautiful barrier islands. Enjoy the pristine environment of Petit Bois Island, bird watching on Sand Island, beachcombing on Dauphin Island, and many other exciting activities. Classroom application and curriculum materials will be provided for all grade levels. Cost: \$410/20 Slots. Dates: July 3 - 6, 2005 Graduate credit available through UWA for an additional fee.

COASTAL CONNECTIONS - LINKING WATERSHEDS TO THE GULF OF MEXICO Do you want to have a fun workshop in the sun and sand? How about taking home a 300 page curriculum guide filled with multi-grade level class-room activities? Take a ride into the Gulf of Mexico on a research vessel collecting animals for your classroom. Visit a near-by uninhabited barrier island. Cost: \$393/35 Slots Dates: July 18 – 22, 2005 Graduate credit available through UWA for an additional fee. (This workshop will begin on Monday.)

EXPLORING THE EMERALD COAST This workshop compares the diverse habitats from Dauphin Island, Alabama to the submerged grassbeds of Port St. Joe Bay, Florida. The workshop will travel to Panama City and Port St. Joe, Florida. Snorkeling within these habitats will allow us to compare the diversity of plants and animals along the coast of the Northern Gulf of Mexico. Cost: \$395/18 Slots Dates: July 25 - 29, 2005 Graduate credit available through UWA for an additional fee. (This workshop will begin on Monday.)

The Estuarium is an exciting educational facility highlighting the four key habitats of coastal Alabama: the Delta, Mobile Bay, the Barrier Islands and the Northern Gulf of Mexico. It includes the 10,000 square foot Exhibit Hall and Living Marsh Boardwalk. A full curriculum with Alabama Course of Study objectives for this facility is available at 4 different grade levels (K-2, 3-5, 6-8 & 9-12). Through beautiful exhibits and engaging interactive exhibits, the Estuarium will leave you with a broader understanding of the interactions that take place in Mobile Bay, the fourth largest estuary system in the United States. For reservations contact Denise Keaton at (251) 861-7515 or email: dkeaton@disl.org.

DAUPHIN ISLAND SEA LAB'S SUMMER OPPORTUNITIES FOR STUDENTS



For more information on the Dauphin Island Sea Lab and the Discovery Hall Programs browse our web site at <http://www.disl.org> or contact Denise Keaton at (251) 861-7515 or email: dkeaton@disl.org.

OCEANS ALIVE! One Day Beach Camp at The Dauphin Island Sea Lab for children ages 5-8 Explore the beach with your children and learn too! Make a shell collection and learn about the animals living on our beaches and in our oceans! Classes are held from 1:00 pm until 4:30 pm and will be limited to 20 students, admissions are taken on a first come first serve basis. Age limit: 5-8 years. Parents/guardians are required to attend, must be 18 years of age and may bring no more than 3 children. Dates: June 2, July 7, & 29. Class held 1:00pm to 4:30pm. Reservation required. First-come, first-serve admission. Space is limited.

TREASURE ISLAND High-tech meets history at the Dauphin Island Sea Lab! Kids ages 9-11 are invited to join us for a treasure hunt on the sandy beaches of Dauphin Island. We'll use Global Positioning System technology to hunt for buried treasure while learning about the history and ecology of the Island. This half-day adventure will take place on your choice of May 31 or June 3, from 1:00 to 4:30pm. Cost is \$35 per student - they'll join in the adventure, receive a t-shirt, Estuarium pass, buried treasure, snacks and a certificate of participation.

GULF ISLAND JOURNEY Fun, Sun, and Marine Science for Middle School Students Located on a barrier island off the coast of Alabama, the Dauphin Island Sea Lab offers a unique setting for a summer camp in marine science. Join the Sea Lab team for beach scavenger hunts, marsh mushing and collection trips aboard our research vessel A.E. Verrill and watch bottlenosed dolphins swim by. The group will visit a historic civil war fort and travel to another small island off the coast of Dauphin Island to see nesting sea birds and collect shells. This fun program instills a basic understanding of marine science with lots of hands-on activities. There are only 30 slots for each one-week program so sign up early. Designed for rising 7th, 8th & 9th grade students.

DISCOVERY HALL - SUMMER HIGH SCHOOL COURSE During the summer months, the Discovery Hall Program offers a course in marine science to high school students. The length of the course is four weeks, during which time the students live on campus and participate in over 170 hours of supervised academic activities. Classes are taught in an academic setting and are designed to give the student a better understanding and appreciation of the various fields in marine science. The Alabama State Department of Education approves the Discovery Hall Summer Program and recommends that local systems grant participating students credit toward either an Advanced or Standard High School Diploma. The high school summer course is an intense, academic program, introducing the student to the marine environment through classroom lecture, laboratory and field activities.

Recommended Reading:

The Nature of Floridas Beaches Including Sea Beans, Laughing Gulls And Mermaids' Purses

Written And Illustrated By Cathie Katz (The Sea Bean Lady)

ISBN# 1-888025-07-7 Cost: \$8.95 64 pages

Cathie Katz's amusing drawings and text should inspire every beach lover to hit the beach. How many of us wander the beaches, picking up this and that, wondering just what the heck it is. This book will tell you...and a lot more. A small collection of sea beans and mermaid's purses has already amassed on my porch; as for the laughing gulls, I'll admire them in their natural habitat.

Protecting our Night Skies from Light Pollution

by Sonya Wood Mahler

Regional Extension Agent in Forestry, Wildlife, & Natural Resources for Southwest Alabama



For most people on earth, the nighttime sky that our grandparents viewed, dark velvet with thousands of twinkling stars, has disappeared. Many of us do not even know that we miss this sky. We spend our entire lives indoors or under artificial lights. In the days after Hurricane Ivan, before the power was restored in Baldwin County, many people commented on how gorgeous the sky was at night, how many stars they could see, how peaceful it was in their neighborhoods. Today as few as one in ten Americans live in areas where they can see the 2,500 or so stars that should be visible under normal nighttime conditions. People in America's big cities see the night sky only in photographs or at planetariums. We humans lose something of ourselves when we can no longer look up and see our place in the universe.

The first people to complain about the lighting of the night sky were astronomers. Thirty years ago, they became frustrated as ideal night observation sites were more and more difficult to find. At Mount Wilson, an older observatory near Los Angeles, light pollution makes it impossible for scientists to continue to work there. Astronomers observe faint objects that can be seen only with large telescopes in areas free of air pollution and urban sky glow. They study the light of galaxies and quasars that give us valuable information about our universe and the Earth. Yet, after traveling countless light years, the light from these objects is often lost at the end of its journey in the glare of our own sky.

The loss of the night sky might be accepted as the inevitable price of progress. Satellite photos of the Earth at night show the constant glow of artificial lights. Some people find this a beautiful sight. If you're admiring the spectacle, I hope you appreciate the costs involved in staging it. In the United States alone, one billion dollars is wasted every year just to light up the night sky. You can trace the outlines of continents by their lights. The brightest lights are along the eastern seaboard of the United States, along the coasts of Europe, and in Japan. Is this a sign of progress? Do the darker areas of South America, Africa, Asia, the northern territories of Canada, and Australia envy us? When my husband and I are doing mission work in Mexico and Guatemala, the people there sometimes ask us about our country's need for constant light. They ask us, "What are we afraid of?"

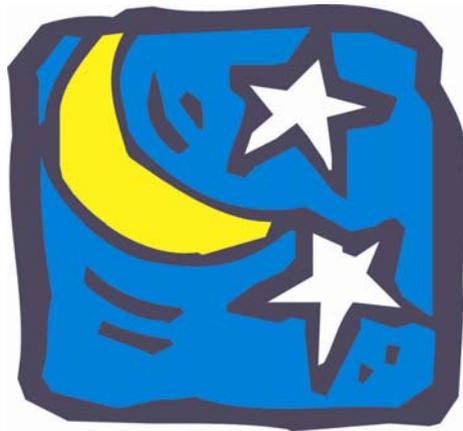
Light pollution is not a matter of life and death like water pollution or air pollution. Or is it? Darkness is our oldest environmental resource. We need it to survive. We need a certain amount of darkness each day in which to rest and refresh ourselves. Researchers at the University of Pennsylvania and at the Children's Hospital of Philadelphia recently released a joint study that found that children younger than two years old who slept with a night light on were more likely to develop nearsightedness during childhood and teenage years. Exposure to bright light at night can disrupt the internal clocks that make our circadian cycles tick. Such cycles affect behavioral rhythms, daily changes in blood and urine chemistry, and the production of melatonin, a hormone involved in wake/sleep cycles and body temperature. In the short term, messing with the biological rhythms can produce grogginess, depression, and impaired thinking. Robert Hahn of the Centers for Disease Control and Prevention in Atlanta and Richard Stevens of the Energy Department's Pacific Northwest National Laboratory believe that chronic disruption in melatonin production, like sleeping in a room bathed in the glow of a streetlight, might contribute to some hormone-related cancers like breast cancer.

We all know about the problems that lights cause sea turtles along our Gulf coast. When hatchlings come out of their nests below the sand, they rely on an instinctive attraction to light to guide them to the water. The brightest light in the night sky should be the moon reflecting on the Gulf. But lights on the beach and as far away as a mile from the beach cause the turtles to head the wrong way. We have watched hatchlings head toward condominiums, swimming pools, tennis courts, parking facilities, and billboards, transfixed by the shining lights. Disoriented hatchlings usually die from exhaustion or dehydration, or they become snacks for predators like foxes, raccoons, and feral cats.

Navigating primarily by the stars, night-migrating birds become disoriented by city lights. Many song birds and shorebirds evolved migrating at night when predators retire and the winds die down. They confuse the billions of lights in tall city buildings with starlight, especially in foggy or rainy weather. Once disoriented, many birds collide with the buildings. An artist in Toronto named Michael Measure founded an organization called FLAP (Fatal Light Awareness Project) in 1993. FLAP asks cities to turn off all interior building lights and non-essential outdoor lights, and to shield essential lighting. During migrations, teams of FLAP volunteers, equipped with bags and nets, rescue birds on the sidewalks that are still alive. They protect the birds until they recover, then send them on their way. Volunteer patrols regularly begin at 4:00am. They must rescue the birds before the gulls, cats, and other predators arrive for an easy breakfast.

The International Dark-Sky Association, incorporated in 1988, educates the public about the effectiveness of quality nighttime lighting. At least five states now have statewide light-restriction programs. These are Arizona, Connecticut, Maine, New Mexico, and Texas. These states, and more and more cities and counties each year, are realizing that it is not necessary or economical to light up the night sky. The International Dark-Sky Association (IDA) has a website (www.darksky.org), a regular newsletter, information sheets, examples of good lighting design, sample lighting ordinances for municipalities, and annual Good Lighting Awards. You can purchase a license plate frame for your car that reads Stars Up, Lights Down for \$9.95 from the International Dark-Sky Association.

I thoroughly enjoyed the book entitled *There Was Once A Sky Full Of Stars*. This is a unique children's bedtime story with an astronomical theme. It is beautifully illustrated and helps children discover the magic of the night sky, the growing problem of light pollution, and what can be done to save the vanishing stars. *There Was Once A Sky Full Of Stars* is written by Bob Crelin, illustrated by Amie Ziner, and costs \$12.95. Many of us believe that our children, and their children's children, should be able to look up at night and see that the Milky Way is more than just a candy bar. Carpe noctem...Seize the night!



UNO's Pontchartrain Institute for Environmental Sciences Summer Wetland Exploration Program Prepares to Hit the Road Again This Summer

Submitted By Dinah Maygarden and Heather Gordon

The Summer Wetland Exploration program for junior high and high school students is entering its 8th season. Through this program, students have the opportunity to travel and see first hand the coastal wetlands of our region. The emphasis is on gaining an understanding of the environmental issues affecting our coastal wetlands, as well as collecting and analyzing data in the field. In the past, a full two-week session has taken high school students to diverse wetland and coastal habitats in Southeast Louisiana. These include sites around the Lake Pontchartrain Basin and beyond, to areas such as the Lafourche deltaic headland, barrier islands and remote swamps such as Maurepas. Due to great interest, this year a restructured program will accommodate both junior high and high school students. This year we plan to reach younger students, and provide them a base for advanced environmental studies during their high school years.

Session 1, June 27-July 1, will take high school students to the Louisiana Universities Marine Consortium (LUMCON) facility at Fourchon, Louisiana. Students will learn advanced concepts about our deteriorating coastline and the various restoration projects designed to curtail it. Students will collect data in varying habitats via techniques such as water quality testing, biological sampling, and beach profiling, just to name a few. Students are also introduced to cultural concepts such as man vs. nature in southeastern Louisiana through time.

During our second session, July 6-15, junior high students will tour several sites within the Lake Pontchartrain basin, learning basic concepts about wetlands near their home. Day trips will highlight topics such as water quality, habitat change and social concepts. An overnight at Turtle Cove Environmental Research Station will introduce fresh swamp/marsh habitat, and changes in that area over time.

Some of the activities of the program are:

- Wetland field trips, including canoe trips
- Overnight trips to LUMCON field camp facilities at Fourchon and Cocodrie
- Measuring a beach profile
- Collecting water quality data
- Map study
- Journal writing and photographic documentation
- Video documentation
- Completing an individual or group project on a chosen topic
- A wetland service project such as marsh grass planting

Our program also focuses on teamwork and fosters the development of leadership experience. Teams gather and present data together, while our senior students are invited to return as mentors to younger students. Mentors help with the organization of activities and trips, and impart their past experiences.

This program is funded by the National Science Foundation through UNO's department of Geology and is part of this department's Minority Awareness Summer Program for High School Students. We strive to gather a group of students that are mature, interested in the topics listed and ethnically diverse.

This year promises to be one of the most exciting years yet, as the program will reach a record number of junior high students. This allows younger students an introduction while high school students will be free to investigate more in-depth research questions faced by coastal managers and scientists.

Applications are now being accepted. Interested students should contact Dinah Maygarden or Heather Gordon at the Pontchartrain Institute for Environmental Sciences (504)280-6718 or email dmaygard@uno.edu for the necessary forms and additional information.

A Closer Look at our SAMEies



Joan Turner with Chewey

SAME Member Profile by Sonya Wood Mahler

Joan Turner is a phenomenal marine educator with the Discovery Hall program at Dauphin Island Sea Lab. Between leading beach walks and plankton labs, she pulls seine nets in the marsh, investigates invasive plant species, and leads tours of Fort Gaines. Joan has worked at Dauphin Island Sea Lab for almost three years. Currently, she is preparing for summer by planning activities for the

week-long residential camp for middle school students called Gulf Island Journey. She is also working with John Dindo to coordinate a COSEE workshop this summer that will pair middle school teachers with scientists. In the evenings, Joan does math tutoring for local students who live on the island.

The island is Dauphin Island, and it is definitely home for Joan. She went to college at the University of Alabama-Huntsville for her elementary education degree, and lived in Kansas as a child, but now Joan lives in an apartment behind the towering dunes on Dauphin Island. She lives with her beagle named Chewy, whose favorite part of the day is their runs on the beach. Joan and Chewy also enjoy kayaking, especially between Sand Island and Dauphin Island. Chewy has his own L.L. Bean life vest.

Joan joined SAME in the Fall of 2002, and immediately helped with the SAME annual conference held in Biloxi. Joan is also a very flexible and agile person. She was part of SAME's four-person team that won the NMEA Chapter Twister Challenge at last year's conference in St. Petersburg. Joan keeps the foot-shaped trophy in a place of honor at Dauphin Island Sea Lab and will fly with it to Hawaii in July. She will again be part of the team that will try to defend our title against the other NMEA chapters in the Twister competition.



Deadline for submissions to the Spring SAME Bi-Annual Newsletter is September 15, 2005. Activities, events, websites and book reviews should be directed to: Dr. John Dindo, Dauphin Island Sea Lab, 101 Bienville Blvd, Dauphin Island, AL 36528. Fax number: (251) 861-7421 E-mail: jdindo@disl.org

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