



# The MES News

The Newsletter of the Master of Environmental Studies Program  
The College of Charleston, South Carolina  
Spring 2006

## MES NEWS EDITOR

Adam Sine  
Second Year Student

## MES PROGRAM

Contact Information:  
66 George Street  
Charleston, SC 29424  
Phone: (843) 953-2000  
Fax: (843) 953-2001  
www.cofc.edu/~environ

Program Director  
Dr. Michael Katuna  
katunam@cofc.edu

Program Coordinator  
Mark McConnell  
mcconnelm@cofc.edu

Visit Our Office At:  
284 King Street  
Room 206

## Rethinking Floodplain Management After Katrina



David Conrad, Senior Water Resources Specialist for the **National Wildlife Federation**, presented the inaugural lecture for the MES Environmental Speaker Program on Thursday, March 30<sup>th</sup>. This annual lecture series is sponsored by the Office of Academic Affairs, the Graduate School Office, the School of Humanities and Social Sciences, and the School of Sciences and Mathematics. The presentation, **"Rethinking Floodplain Management in the Wake of Hurricane Katrina"** coincided well with the approach of the 2006 Atlantic hurricane season. This public lecture examined the role of the **Federal Emergency Management Agency (FEMA)** and the effects of Hurricane Katrina on the Gulf region.

David Conrad has been a water resources policy analyst and conservation advocate in the nation's capitol for more than a quarter century. Under Conrad's leadership, in July of 1998, the Federation published an award-winning report on the nation's repetitive flood loss problems and the potential for greater use of non-structural approaches to reducing flood risk: **"Higher Ground - A Report on Voluntary Buyouts in the Nation's Floodplains - A Common Ground Solu-**

**tion Serving People at Risk, Taxpayers, and the Environment."** This report focused on the great flood of the Mississippi river valley in 1993. This event highlighted major concerns about the safety of relying on structures for flood prevention. During the 1993 flood, over 4000 levees were broken. "Higher Ground" proposed major recommendations for improving floodplain programs. The report showed that the Flood Insurance Reforms Act of 1994 was ineffective and repetitive. Less than 2% of all the federally insured properties were generating 40% of the National Flood Insurance Policy's financial losses. In addition, it was found that 10% of single-family homes have had repetitive losses exceeding their value. It was decided that instead of re-building "safer," FEMA would help with buyouts and relocation.

Conrad also served on a panel formed by the **H. John Heinz Center for Science, Economics, and the Environment** that issued a report on the **"Hidden Costs of Coastal Hazards."** This report used South Carolina's Hurricane Hugo as a case study to identify many of the economic and environmental impacts of coastal storms that are seldom chronicled in basic reporting on such events. This study found that there are many impacts of large hurricanes that are not considered by standard measures. Essentially, the risks

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## MESSA 8K for H<sub>2</sub>O

Grey skies and a 100% chance of rain didn't stop 133 participants from meeting on Folly Beach, South Carolina to register for the **Fourth Annual Master of Environmental Studies Student Association (MESSA) 8K for H<sub>2</sub>O Run and 5K Family Fun Walk** on Saturday, February 25th, 2006. Participants ranged



Turnout was fantastic (all race photos courtesy of Daan Muller, Charleston Picture Company)

from the youngest, 14 year old **Leslie Semken** from Columbia, SC to Charleston's own **William Boulter**,

age 76. Participants from as far away as North Carolina and Georgia made the trip to Folly Beach to come and compete. Still, the majority of this year's runners were from the Lowcountry.

MESSA is a student organization promoting environmental awareness on the College of Charleston campus and in the local



Race Supervisor **Jenn Beck** had the honor of passing out the many awards

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## *From the Director*



April 2006

It is hard to believe that I have completed my two years of service as Director of the Masters of Environmental Studies program. However, I am not ready to say farewell just yet, since I have asked to stay on for one additional year or until a suitable replacement can be found. I can honestly say that I have thoroughly enjoyed working with the faculty, students, staff and community representatives. It has been a very gratifying experience that I hope will continue for the upcoming 2006-2007 academic year.

I believe that we have made some significant changes to improve the quality of the program over the past two years, but there is still work to be done. One of my personal goals as director was to reduce the size of the required core courses by offering multiple sections whenever possible. For the first time next fall, we will be offering a section of EVSS 601 (Economic Theory for Policy Analysis) during both the fall and spring semesters. We also hope to be able to offer two sections of EVSS 659 (Environmental Statistics) in the near future.

This year we were also able to offer a greater diversity of graduate course offerings. We offered a Special Topics course in Environmental Soil Science during the fall semester, and three Special Topics courses (Political Ecology, Advanced GIS, and Natural Resource Law and Policy) during the spring semester. This summer, in addition to EVSS 635 - Land Use Law offered by Professor Lindeke Mills during Maymester, Dr. Patrick Hurley is offering a travel course entitled Environmental Management in the American West. I am always interested in expanding our curriculum if at all possible, and encourage students and faculty to bring their ideas, needs and desires for future course consideration and adoption to my attention.

We also were able to kick-off our Annual Speaker Series. This year we were fortunate to be able to bring David Conrad, Senior Water Resources Specialist for the National Wildlife Federation on campus to discuss floodplain management in the wake of recent hurricanes (see the newsletter cover story for further details). We will be sponsoring at least one nationally prominent guest speaker each year. Nominations of individuals for next year's program are always welcomed, and I look forward to seeing all of you at next year's event.

We should all be proud of the many accomplishments of our students this past year. In addition to their academic accomplishments, the MES student association (MESSA) as usual has been involved in a number of community outreach programs, including; Adopt-a-Highway, Beach, River and Reef Sweep, SCORE, and Earth Day just to name a few. They also sponsored the annual Oyster Roast in the fall at Dixie Plantation, and more recently Spring Fling at the James Island County Park. These events are meant to provide a time for interaction between students, faculty and community members. To be honest, I was rather disappointed with the faculty turnout to these events. Please support the program and the wonderful events organized by the students. I hope to see more of you in attendance at next year's events.

Again, I would like to thank all of you for the support that you have provided me over the last two years. I would also like to wish the very best of luck to all of our graduates, and I look forward to another successful year working with all of you.

Best—

Michael Katuna, MES Director

## Renourishing Kiawah Island

The Town of Kiawah Island, South Carolina, along with the Homeowner's Association and the owners of the Kiawah Island Resort, intend to undertake a beach renourishment program. The project is designed to stop the erosion on the east end of the island, which is threatening not only the beachfront but also part of the Kiawah Island Golf Course. Any potential project such as this must include consideration of both environmental and economic factors. Science, policy, and economics must influence whether the program is approved and how it is implemented.

Kiawah is a good example of how barrier islands form and migrate. Like other barrier islands, it moves landward as sea level rises. In his 1990 article, "Barrier Islands: Formed by Fury, They Roam and Fade," Orrin Pilkey, a professor of Geology at Duke University, points out that island migration occurs naturally. As the shoreline on the ocean side erodes, the land side accretes sand, and vegetation begins to grow. Storms and tides overwhelm the island, sand is pushed across the island, and the island expands on the landward side. At the same time, the ocean erodes the shore on the seaward side.

Some sand is pushed over the island, while some is sucked back out to sea. Rising sea levels also work to narrow barrier islands.

Kiawah Island is a "drumstick" barrier island, wider at one end. Because of a process called shoal bypassing, sand accretes and a shoal attaches to the island. The shoal bypassing is a natural process; large sandbars break free and waves push them toward shore. The shoal bypassing at Kiawah has happened quickly.

In this particular case, economic concerns have driven the town and homeowners to consider the erosion an emergency. While scientific and engineering concerns remain about how the renourishment program will proceed, the fear of economic loss is clearly driving the project. It is interesting to note that the 18<sup>th</sup> green on the Ocean Course was moved closer to the ocean as part of a 2.5 million dollar project completed in 2002. If erosion continues, the 18<sup>th</sup> green, the driving range, and 16<sup>th</sup> fairway will be lost. The resort and island community are focused on preserving the Ocean Course. Tourism is a major part of the tax base for the island. The Senior PGA tournament is scheduled for the Kiawah Course in 2007, and a major PGA Championship will

be held there in 2012.

It is easy to understand that property owners fear loss of income if the golf course is compromised and thus want to pursue beach renourishment. Economically, this is a reasonable choice for the people involved. Unfortunately, long-term success is not likely.

In North Carolina, beachfront renourishment over a five-year period has only been successful in about 20% of the projects. Kiawah residents may decide to spend large sums of money to fund this project, but they renourishment projects are only temporary. Proponents of the renourishment plan assure that the plan will be effective in slowing erosion with sand replenishment. Yet similar projects in other areas have had limited success.

Ocean City, Maryland had most of a \$51.2 million dollar project of sand renourishment washed away in a major storm in



1992. In 1993, a twelve million dollar project at nearby Folly Beach lost most of its sand within two years. Coastal engineers assert that the renourishment will simply mimic a process that would eventually take place naturally on the island. However, there are too many variables to be sure how the barrier island would eventually migrate and change. As Orrin Pilkey concludes, "[w]hen it comes to barrier islands, nature always bats last."

The picture above from the March 2006 *Kiawah Town Notes* shows the revised vision for the renourishment. The project itself is relatively simple – take sand from the bulge at the end of the island and spread it along a two-mile stretch of beach. The original proposal involved excavating up to 1,000,000 cubic yards of sand at the ebb tide delta and moving it west of the excavation area. The plan has been abbreviated to involve only about 450,000 cubic yards of sand to spare an area where piping plover feed. In addition, the channel that currently connects the lagoon with the ocean near the golf course and funnels water toward the course – called a flush canal – will be closed. Another flush canal will be opened further down the beach. There may be un-

(Continued on page 4)

(MESSA 8K for H<sub>2</sub>O continued from page 1)



MES students and MESSA members all came to work for the race

community, as well as encouraging professional growth among its membership. This year the 8K for H<sub>2</sub>O raised over **\$3000**. The proceeds are being donated to a local non profit organization, **LEEP - Lowcountry Environmental Education Program**. LEEP'S mission is to ensure that all students in and around Charleston County have opportunities for hands-on, environmental education, regardless of ethnic and socioeconomic backgrounds. LEEP provides school programs on a donation basis. The community donations enable LEEP to continue its mission of ensuring hands-on environmental education opportunities to students throughout the Lowcountry. Studies have shown that test results and retention rates dramatically improve when there's a connection to real world examples. LEEP's field classes are designed to maximize the learning potential by incorporating hands on activities and participation. For more information about LEEP and how you can help contact them at: [www.sleep.org](http://www.sleep.org)

The men's overall winner of the Fourth Annual MESSA 8K for H<sub>2</sub>O was **Karl Walsh**, 30, of Mount Pleasant, with a time of 27 minutes and 21 seconds. The overall women's win-

ner was **Dana Hayden**, 29, of Mount Pleasant, with a time of 34 minutes and 41 seconds. Stats on winners can be found at [www.geocities.com/actioncarolina/ms06res.html](http://www.geocities.com/actioncarolina/ms06res.html)



MESSA volunteers Jenny Wiedower and Erin Driscoll set up the silent auction.

MESSA would like to thank all of the sponsors of this event: **Kiawah Island Golf Resort, Sandlapper Tours, Coastal Expeditions, Clif Bar, Monster Music, Smith Sunglasses, Lost Dog Cafe, Snapper Jack's Restaurant, Papa Zuzu's, Noisette, Whole Foods, Blue Cross Blue Shield, Ac-**

**tion Carolina, and Mike's Bikes and Backwoods.**

Also, MESSA would like to give thanks to **Daan Muller**, of the **Charleston Picture Company**, who provided more than 600 pictures of the event.



Everyone walked away a winner with a new **MESSA/LEEP** T-Shirt

## Spring 2006 Highlights

### January

January 11th 12:00 p.m.  
MES Orientation

### February

February 25th 7:00 a.m.  
MESSA 8K for H<sub>2</sub>O

### March

March 30th 5:30 p.m.  
Rethinking Floodplain Management in the Wake of Hurricane Katrina

### April

April 15th 1:00 p.m.  
MESSA Spring Fling

### May

May 5th 5:30 p.m.  
Graduation Ceremonies

(Renourishing Kiawah Island continued from page 3)

intended consequences of the renourishment. What looks good on paper does not always work well in nature. No one knows for sure the effect of the renourishment on the ecology of the island or the effect on local wildlife. People are much better at predicting the economic effects than the ecological effects.

The town is reaching the end of the permitting process as it awaits the Biological Opinion from the Fish and Wildlife Service. A compromise has been reached on the feeding grounds for the piping plover. The Fish and Wildlife Service will likely require additional monitoring of the endangered loggerheads and piping plovers as a condition of the permit. There is every reason to believe this project will proceed in some version. The short-term effect will slow the erosion on the part of the beach next to the shoal bulge and protect the Ocean Course. There may, however, be unknown consequences for the ecosystem. Also, people investing the money are potentially spending enormous sums for a temporary solution. The dynamic nature of the barrier islands will not permanently be shaped by pumping sand on a beach.

Thomas Schoenbaum, who co-wrote the North Carolina Coastal Management Act, clarifies that beach renourishment is trying to reverse a natural process when he writes that "[f]ew terrestrial environments are as unstable and dynamic as the barrier islands. We know these islands survive and cope with these forces by moving and changing shape in a process we have already identified as islands migration. It becomes erosion only when man-made structures get in the way. In the end, nature prevails."

(Floodplain Management After Katrina continued from page 1)

of developing along coastal areas should consider the long-term ramifications of public safety and future financial losses. In 2004, Conrad was a principal author of another report produced with the organization Taxpayers for Common Sense called "**Crossroads: Congress, the Corps of Engineers and the Future of America's Water Resources.**" The report identifies policy concerns and major reforms needed in managing the nation's largest water resource development agency.

The cost of mitigating the effects of catastrophic events continues to increase along with the population of coastal areas. Population increases also lead to impervious surfaces; this increases watershed and flood damage. The cost of failed levees alone averages 6 billion dollars annually. Furthermore, storm rates have been steadily increasing each year since the FEMA program began. Without a federal bailout, FEMA will be bankrupt.

Louisiana and the Mississippi River Valley face enormous challenges. How can the 350 miles of levees in Louisiana be made stronger? Should they be rebuilt? Also, Louisiana has been losing wetlands through navigation projects, massive canalization projects by oil and gas companies wishing to dredge and navigate the areas, and general sea level rise. These wetlands are the primary flood control and storm buffers.

However, intense oil extraction over many years has caused them to subsidize. The poor coastal management throughout the gulf coast has also facilitated the erosion process of barrier islands. Therefore, Louisiana is currently left unprotected. This fact has led much of the scientific community to believe that rebuilding the levees will be an exercise in futility. While this may be an unpopular belief, it is logical considering the financial state of FEMA. Also, it has been shown that levees promote incorrect or careless development.

David Conrad asserts that FEMA, in its current state, can only offer a false sense of security. The future only has more hurricanes and a rising sea level to offer.

Katrina was a catastrophe believed only likely to occur every 500 years, and David Conrad asserts that any insurance program must be prepared to insure for these events. He suggests that rates must be raised in hazardous sites and that there should be no insurance given to areas considered very high risk. There should also be a requirement that areas behind levees must be insured. Furthermore, subsidies that encourage the purchase of flood insurance in areas that are known to be experiencing temporary conditions of heightened flood risk must be eliminated. Finally, the rules that define substantial damage must be strictly followed. It will be impossible to reverse the negative trends of coastal management by removing subsidies alone. There must be a complete paradigm shift in the way that flood hazards are viewed. Hazard mapping with GIS Technology will help facilitate this change.

Conrad states that the federal government must buy out high risk sites while revising land use and building practices. Congress is responding by raising the amount that can be borrowed from the Treasury and offering more supplemental appropriations for national flood insurance reforms. If there is any chance for preparing for future disasters, there must be a program set up for independent review that will mitigate to the levels set for the Army Corps of Engineers Regulation's program. These changes will be difficult in such a short legislative year, but the debate has started. There is a strong need for administrative leadership.

Conrad's lecture explained the complex problems facing areas that are already developed on floodplains. His presentation offered questions and solutions to the science and policy decisions that the nation must face in evaluating the risks of building and rebuilding in flood zones.

## MESSA Spring Fling

It was a beautiful day at James Island County Park for the annual MESSA Spring Fling. This year's event was a potluck cookout with hamburgers (and veggie burgers!). Students, faculty, and friends (kids and dogs included) gathered to celebrate our new graduates and the end of the semester. **Jenn Beck** received the **2006 Dana Beach Award**, given each year by MESSA in honor of local resident **Dana Beach**, the Director of the **Coastal Conservation League**. Jenn received a Jim Booth print donated by the **Jim Booth Art Gallery** in her honor.



While in the MES Program, Jenn served as MESSA's Public Liaison, securing a Honda Hybrid Accord from a local dealership to display at the Earth Day 2005 festival. She was involved with the 8K for H<sub>2</sub>O as Race Manager in 2005 and as Race Director in 2006. Jenn coordinated all aspects of the race as Director, including organizing the first MESSA Silent Auction (raising nearly \$500), recruiting 40+ volunteers at both Save the Light and the 8K race, and creating a new system for selecting a proceeds recipient.

We also would like to congratulate Jenn for receiving the "**Best Graduate Student Poster Presentation**" award at the **South-eastern Estuarine Research Society Semiannual Meeting** for her poster "**Plant Source Influence on Survivorship and Vegetative Reproduction of *Spartina alterniflora* in South Carolina Marshes.**" Congratulations, Jenn!



Reggie Reeves takes on the grill



## Community Service

MESSA encourages its members to participate in service activities as a way to promote public service throughout the community. By doing so MESSA hopes to serve as a role model for the College of Charleston as well as citizens and organizations around the, city, county, and state. MESSA is building a foundation of community service by setting a positive example and raising community awareness about environmental issues through direct action.

**Adopt-A-Highway** MESSA members have diligently cleared immeasurable amounts of trash along a stretch of Highway 61 from where it leaves Highway 17 after crossing the Ashley River, to its intersection with Wesley Drive. MESSA collects trash three times a year.

### Beach Sweep, River Sweep, and Reef Sweep

Beach Sweep is a national campaign to clean up waterfront areas. MESSA has been involved with this program since 2004., and has been able to coordinate their efforts with other organizations such as CofC's **Marine Biology Masters Program**, the **Masters of Public Administration** program, and local high school students. In the Fall Semester of 2005, MESSA helped clean the marsh in front of DNR's offices at Fort Johnson. See the **SCDNR Beach Sweep** site ([www.dnr.sc.gov/water/envaff/river/BeachSweep/](http://www.dnr.sc.gov/water/envaff/river/BeachSweep/)) or **SC SeaGrant's Beach/River Sweep** site ([www.scseagrant.org/education/education\\_bsrs.htm](http://www.scseagrant.org/education/education_bsrs.htm)) to learn more.

### SCORE

The **SC Oyster Restoration and Enhancement program (SCORE)** is managed by the **SC Department of Natural Resources**. This program recycles shucked oyster shells and bags them in wire mesh containers for distribution to various creeks and estuaries along the state's coast. These 'artificial reefs' provide substrate for oyster larvae to attach and grow building new living reefs of oysters. MESSA participates in this program by monitoring the water quality at one of the 100 constructed reef sites. Volunteers from MESSA visit the Bowen's Island reef each week to measure such variables as water and air temperature, pH, salinity, turbidity and dissolved oxygen. This data is entered and submitted to SCDNR online so they can track these variables throughout the year and evaluate the health of the reefs. MESSA is responsible for weekly water quality monitoring at Bowen's Island. MESSA's participation has been recognized by the Office of the President of the United States. A representative of President Bush presented MESSA with an award on November 19th, 2004.



Josh Young and Carrie Dixon check water quality for the SCORE Project

### Move Out - Help Out / Earth Day

2003 was the inaugural year for the **MESSA Clothing/Book Drive**. Kicking off during Earth Day, MESSA members collected clothing and books from students on campus. Each year since clothing is donated to **Goodwill Industries**. By donating clothing instead of simply throwing it in the garbage, MESSA is hoping to reduce the amount of material heading towards landfills. Books are donated to underprivileged schools to help bolster their educational resources. In 2005 MESSA helped out again with end-of-year collection, with items being sold in a "trash to treasure" rummage sale, with proceeds going to the alternative spring break club ([www.cofc.edu/studentaffairs/service\\_learning/asb/](http://www.cofc.edu/studentaffairs/service_learning/asb/)) and remaining items donated to Goodwill. During the Earth Day Fair held on campus Friday April 21st from 9:00 am till 2:00 pm, MESSA staffed a booth in concert with the **Sustainable Campus Initiative**. The booth included Free Lemonade to anyone who provides their own reusable cup (to encourage Lug-a-Mug), and crafts made out of common reusable goods. On Saturday April 22<sup>nd</sup> from 11:00 am to 3:00 pm, an event was held in Park Circle for children. MESSA created a Recyclables Toss Game to encourage children to be concerned with recycling.

## MES Spring Internship and Thesis Presentations

Congratulations to the MES students who completed their defenses this Spring

**Athan Barkouis:** (Thesis) "A Temporal and Spatial Analysis of Fish Trap Catches at Gray's Reef National Marine Sanctuary, 1993-2005"

**Jeremy Conkle:** (Internship) "Remediation of Hog Island Inlet: Site Overview and Assessment of Factors Influencing Site Cleanup"

**Gabriella Kirby:** (Thesis) "Ecological Restoration of South Carolina Piedmont Plant Communities: A Soil Seed Bank Assessment"

**Brooke Pehr:** (Internship) "Evaluation of a Field and Lab-Based Research Experience for Undergraduates: The Transects Program"

**Lana Piñera-Pasquino:** (Internship) "Patterns of Antibiotic Resistance in Bacteria Isolated from Marine Turtles"

## College of Charleston Sustainable Campus Initiative

MES Students **Dave Lansbury**, **Tim Willard** and **Jess Barton** recently put together an on-campus seminar "Environment 101," on March 22nd and 29th. The first night of the seminar reviewed current consumption habits and how they impact the environment, while the second night focused on establishing and organizing a campus wide Sustainability Initiative. The progress of the sustainable initiatives will be posted on the website ([www.coastalconservationleague.org](http://www.coastalconservationleague.org)), of the **Coastal Conservation League** Student Chapter. Students are encouraged to sign up for action alerts in order to get updates concerning initiatives and opportunities to help. The team first plans to implement a Lug-a-Mug program, a paper waste reduction initiative, and a push for green buildings.

The **Lug-a-Mug** program promotes the replacement of disposable containers with reusable mugs, effectively reducing the amount of waste generated at the College of Charleston. According to the CCL Student Chapter, the average college student uses approximately 500 disposable cups a year. This is not only a waste of trees, but also generates harmful chemicals during the manufacturing process. The cups offered at most coffee houses are wax-coated, significantly reducing their biodegradability and sending them to landfills instead of recycling plants. Reusable coffee mugs and water bottles reduce both paper and chemical wastes, and benefit the CofC by reducing waste management. Finally, it should be noted that students who bring their own cups into a campus coffee shop are only charged 54 cents for a refill. Rarely advertised, but true!

The **on-campus paper waste reduction** is a simple initiative, requiring only conscientious consideration and thought. Students must be aware of what they print, how they print, and what they throw away. The BROWN and SILVER printers offer double sided printing. Prompting professors to allow double sided assignments or electronic assignment submission is another effective method for reducing waste. Another often overlooked opportunity lies within the recycle bin. Printing mistakes often get thrown away although

they may be blank on one side. This is a great source of scrap paper to take home and use as a personal supply.



Jess Barton



Dave Lansbury



Tim Willard

**Brian Cordell**, Project Manager of the **Sustainability Institute** in North Charleston, was a guest speaker at the seminar. This grassroots organization began in 1999 with the goal of achieving a sustainable South Carolina, and started education and outreach programs in 2003 to reduce indoor water use and energy consumption, to improve indoor air quality, and to help initiate organic gardening programs. One of Brian's major talking points was **Leadership Energy Environmental Design (LEED)** certified green buildings. LEED certification is a voluntary national standard which helps define green buildings while promoting green competition. This involves: site planning, energy use, water consumption, and indoor environment.

In order to institutionalize sustainable initiatives at CofC, Dave, Tim and Jess plan to create a Sustainable Campus Initiative committee made up of a core group of dedicated and interested students. A Sustainability Coordinator (a new MESSA officer position) will lead the committee and help direct the student led initiatives. The committee hopes to gather student support on a large scale and to help lead the college and the surrounding community to a sustainable future. The committee will be actively involved in identifying partnerships between faculty and administrative staff, seeking funding and support from like minded organizations and individuals, and setting clear goals and objectives to be met.

Dave Lansbury points out that "as graduate Environmental Studies students, and members of our campus community, we should be the loudest proponents of such a movement. This is a great opportunity for MESSA to collaborate with this type of initiative to help drive it forward and fuel it in the long run." However, all of the students involved with the seminar made it clear that to survive in the long run, the program must seek interest from all CofC students while forming alliances from other organizations and faculty throughout the campus.

### (Internship and Thesis Presentations Continued)

**Laura Seraydarian:** (Internship) "Bridging the Gap between Formal and Informal Education: An Earth System Science Curriculum Prepared for Ecotourism"

**Adam Sine:** (Internship) "Effect of an Independent Grassroots Non-Profit Organization on Urban Development through the Attainment of Private Lands to be Used as Public Greenspace in Mt. Pleasant, SC"

**Bob Swarthout:** (Thesis) "Organohalogen Contaminants in Blood of Kemp's Ridley Sea Turtles (*Lepidochelys kempii*) from the Gulf of Mexico"

**Jenny Wiedower:** (Internship) "Cultivating a Statewide Network of Land Use Planning Leaders: Coordination of a South Carolina District Council of the Urban Land Institute"



## SCFWA 2006 Best Student Paper Award

Congratulations to MES student **Sarah Goldman!** Sarah was recently awarded the **2006 Best Student Paper** of the annual joint meeting of the **South Carolina Fishery Worker's Association** and the **South Carolina Chapter of the American Fisheries Society**. Sarah presented her thesis work entitled "**Feeding Habits of Several Deep Water Reef Fish on the Continental Slope off the Southeastern United States: Preliminary Analysis.**" Sarah's presentation was selected by a 4-person professional panel as the most outstanding of a total of eight student presentations. This award has been given annually since 1990 by the South Carolina Fishery Worker's Association to honor distinctive work by a student enrolled in a South Carolina college or university focused on an aquatic curriculum. The winner is awarded a plaque recognizing the achievement and a check from SCFWA for \$100.00.

This year marked the 30<sup>th</sup> anniversary of the SCFWA conference. Over 100 biologists, fishermen, and graduate students were in attendance for this two day meeting on February 16<sup>th</sup> and 17<sup>th</sup>. Sarah, along with seven other graduate students, presented on the first day of the conference. The presentations focused on both saltwater and freshwater environments. Sarah says that while most people had done projects with inshore fish, her research focused on the stomach content analysis of deep sea fish. "I really think this is an exciting topic that hasn't been tackled by DNR for a while." On the night of the 16<sup>th</sup> Sarah was presented with the award during an oyster roast at James Island County Park. "I was completely surprised. Last year, when I attended the conference at Clemson, this award was won by a PhD student. I didn't even think I was in the running." Sarah would like to thank her co-author and primary advisor at SCDNR, **Dr. George Sedberry.**

**We're on the Web**  
[www.cofc.edu/~environ](http://www.cofc.edu/~environ)

### MES PROGRAM

College of Charleston  
66 George Street  
Charleston, SC 29424

Phone: (843) 953-2000  
Fax: (843) 953-2001

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