

## Staff



### Kristen Mattson Joins Staff

We are delighted to welcome Kristen Marshall Mattson to the LowCountry Institute team as our new Environmental Educator. She has a real passion for conservation, the environment, and ecology, but what she enjoys most is teaching others how amazing nature is.

Kristen received bachelor's degrees in Environmental Science and Spanish from Stetson University in 2005 and went on to study at the University of Florida where she received a master's degree in Interdisciplinary Ecology in 2006. She has spent the last 2 years teaching biology at Coastal Carolina Community College in Jacksonville, North Carolina.

Her main teaching and research interests include plant ecology, "green living," and environmental conservation. She is thrilled to be here at beautiful Spring Island and looks forward to sharing her enthusiasm with each of you!

*LCI's new environmental educator Kristen Mattson's (above) duties include taking care of the exhibits at the Mobley Nature Center, working with the Master Naturalist Program, and community outreach.*



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# The LowCountry Institute

## Fall 2008 Newsletter



### LCI and Spring Island: A Regional Model for Conserving Natural Resources

In 1998 the leadership of Spring Island created the LowCountry Institute (LCI) as a way of taking care of the region they loved. Now, 10 years later, LCI is a recognized leader of environmental protection and education in Beaufort County.

LCI's success is the direct result of its close working relationship with Spring Island and the Spring Island Trust. Local officials and community leaders are receptive to LCI staff recommendations because they know they are based on lessons learned at Spring Island, a community recognized as a model of environmentally sensitive development. For example, Beaufort County Planning Department staff are using LCI recommendations to restructure the county's tree protection ordinances so they are more effective and more easily enforced.

In addition to "lessons learned," Spring Island provides LCI with a venue to showcase effective habitat management practices. LCI owns 425 acres on Spring Island which it uses to demonstrate how to convert old fields into high quality early successional habitat through a combination of selective herbicides, rotational disking and prescribed burns.

LCI created the Gillespie Nature Trail on Spring Island to show community members what local sea islands, such as Hilton Head, looked like prior to development.



*Dr. David Bishop in one of LCI's Spring Island fields.*

This interpretive trail provides on site education about how nature handles storm water, native plants suitable for landscaping and the value of protecting biodiversity.

LCI's activities directly benefit the Spring Island community,



*Spring Island is surrounded by marshes that are part of Beaufort County's 335 square miles of high salinity marshes and rivers.*

as well as all other residential communities in the region, because they help protect the productive salt marshes and expansive vistas that dominate the local landscape. For example, Beaufort County Council is using LCI's recommendations for water quality guidelines to help determine requirements for new developments being built in close proximity to a body of water, such as the Okatie River. Director Chris Marsh met with the developers and explained why each of these guidelines was important. As a result, they have included these recommendations in their development plans.

Water quality in southern Beaufort County is directly affected by the kind of development that occurs next door in Jasper County. Dr. David Bishop, whose position is funded jointly by LCI and the Spring Island Trust, has begun working with Jasper County contacts to determine how to create more effective partnerships that would work together to protect habitat and water quality in Jasper County and Port Royal Sound.

By financially supporting LCI, donors continue to help protect the region's natural resources while also protecting their own investment in the Low Country. The value of living in a place where high water quality supports premiere sports fishing, crabbing and shrimping will only appreciate in the future.



### Conservation and Culture: Educating a Regional Community

A strong sense of community is a powerful force if members of the community hold a shared set of values. Early on, the Institute recognized that many Beaufort County residents were deeply concerned about protecting the region's water quality and natural resources, but they had different views about what should be protected and how to do it.

Seeing an opportunity to play an important role, LCI took a first step toward helping county residents understand the importance of protecting local water quality by supporting others who were working toward this goal.

Nancy Schilling, a local resident and businesswoman, requested help providing programs about protecting water quality to public audiences. A partnership was formed in 2001 and LCI became the initial financial supporter of Nancy's efforts to create a grassroots non-profit called Friends of the Rivers. In 2008 Friends of the Rivers received its own 501 (c)(3) status and now independently funds its own work.

A shared goal of LCI and Friends of the Rivers has been to help local residents understand that we all share responsibility for protecting the Port Royal Sound system, our common watershed. Beginning in 2001 LCI suggested that state and federal officials had misclassified the region's local tidal rivers when they grouped them with the freshwater Salkahatchie-Combahee River system, which locals consider part of the ACE Basin. LCI prepared literature that described why the waterways of Beaufort County should be part of the Port Royal Sound system and distributed this information to agency staff and community groups. Port Royal Sound is different from the ACE Basin because it does not receive freshwater inputs from inland rivers. The high salinity of the Sound supports the greatest expanses of salt marsh in the region. Today, references in the media to protecting Port Royal Sound are commonplace, and EPA officials are now discussing protection of Port Royal Sound with South Carolina DHEC staff.

LCI saw the need to create a local culture that appreciated Port Royal Sound and the habitats that surround it and posed this question: "What should citizens of the Lowcountry know about the local environment in order to make informed decisions?" LCI looked to another partnership to tackle the creation of this kind of local culture.

In 2000, Clemson Extension staff member Jack

Keener included LCI staff as part of the planning team that started the local Master Naturalist program. After Jack retired in 2003 LCI became the primary local sponsor of this program. LCI staff produced a formal curriculum for the Master Naturalist program that strives to answer its original question. This curriculum effectively represents the region's institutional memory about what is required to protect local natural resources.

Participants in the class include residents who serve on community association boards, county and state agency staff, local landscapers and retirees who are looking for ways to become involved in the community. To date more than 200 people have completed the Master Naturalist program. There is a waiting list for every class!

***"What should citizens of the Lowcountry know about the local environment in order to make informed decisions?"***



Teachers from four local schools participate in a Saturday Master Naturalist class specifically designed for teachers, which was held at Spring Island's Mobley Nature Center on September 20th.

To have a significant impact on the regional community, the graduates of the Master Naturalist program must also share the knowledge they've learned with others. To make this happen, LCI helped graduates of the Master Naturalist program form a local chapter for graduates of the Master Naturalist program. The newly formed **Low-Country Master Naturalist Association** has already begun hosting work projects, continuing education workshops for new residents and field trips for its members.

In 2007 LCI extended its Master Naturalist program to include local teachers for two reasons. First, teach-

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Island.

All of the interns made major contributions by supporting researchers and working in the Nature Center creating new exhibits, reorganizing existing ones, and helping in the cleaning and feeding of the many inhabitants of the Nature Center.

As the interns prepared to leave the Island, they expressed gratitude for their good fortune in being able to work with, in their words, the "top notch" scientists from LCI.

### Spring Island Episodes Air on SC ETV

Thanks to LCI funding in 2007 and 2008, two episodes of the nature series Expeditions with host Dr. Patrick McMillan were filmed on Spring Island and included work being done by LCI. These two 30-minute programs first aired on SC ETV on June 7th and 14th, respectively.

LCI is the corporate sponsor for the Episodes series during the 2008 season. This program should continue to give excellent exposure to LCI's work and Spring Island because each episode is shown approximately 10 times during the season. In addition, UNC-TV has acquired distribution rights of Expeditions and marketing it nationally to other PBS stations.



Clemson grad student Ali Rodrian completed a two year study on limiting factors of Spring Island's bluebird population. This included weighing fledglings (left) and retrieving a bluebird radio telemetry unit from a Cooper's hawk nest (above).

### Funding Research and Internships

Since 1999 the LowCountry Institute has brought eight university funded projects to Spring Island and the surrounding area, which included \$350,000 of research funding from outside sources. Not a bad return for the \$65,000 that LCI contributed to attract these 8 research projects!

### Thank You to Our Donors!

Your past support has made the wonderful work of the LCI possible. In early November you will receive a request for continued support in 2008. There is still much work to be done. We hope you will give as generously as you can.

### CORRECTION:

The following were inadvertently left off of our 2007 LCI Annual Report:

Leadership Circle (≥ \$5,000) : Bill and Karen Allin

Gifts-in-Kind Donors: Dick and Lora Childs

Emmett Davis



## Interns and Research

### “Summer of the Interns”

by Lark Smith, Spring Islander

This has been the summer of interns for the LowCountry Institute! We have been fortunate to have six bright and enthusiastic young scientists working on various projects on the Island. They enjoyed being here and the staff and members had fun sharing the Island with them.

For the second year, Ali Rodrian made Spring Island her temporary home as she studied our bluebird population. Ali is working toward a Masters in Wildlife and Fisheries Conservation Biology from Clemson University. Her research, which will be the basis for her Master’s thesis, focused on determining if a supplemental food source increased reproductive rates and affected the movement of fledgling bluebirds.

Michele Evans, who attends Coastal Carolina University, is working on her Masters degree in Coastal and Marine Wetlands Study. Most of her time this summer was spent on the local waters fishing for sharks and rays (tag and release, of course). She wanted to determine if the “catch rate” for these species varied depending on the distance from the mouth of Port Royal Sound. This preliminary study will provide baseline data for further research to determine if Port Royal Sound is an “essential fish habitat.”

Jessica Gorzo, a student at Virginia Tech, is studying Biology with minors in Physics and Astronomy. Her career focus is conservation ecology with an avian concentration. Her goal while here was to study the painted bunting population and how golf courses can be managed to enhance the nesting/breeding habits of the painted buntings. She spent time on both Old Tabby Links and at Chechessee Creek Club.

Assisting the researchers were several hard-working interns. Madison Hohman, from the College of Charleston, came with her father to Spring Island to visit Tony Mills soon after Tony arrived on the Island. (Tony and Mr. Hohman, who is a well-known herpetologist, have been friends for years.) While visiting, Maddy met Chris Marsh and learned about interning opportunities. This chance meeting led to Madison and a classmate, Val Upham, coming to the Island. Madison is studying Biochemistry with a Neuroscience minor and Val is working towards a degree in Marine Biology with a Chemistry minor.

Haynes Werner, a Beaufort resident whose parents

are members of Spring Island, also worked as an intern this summer. He primarily helped Jessica locate and monitor painted bunting nests – he found five of them! Haynes also worked with Ali on her bluebird project and did falconry demonstrations for Camp Spring Island. Haynes is a junior at Beaufort High School.

Finally, Robert Montgomery worked in the Nature Center early in the summer taking care of the saltwater aquaria. Robert is a sophomore at Beaufort High School and this was his third summer of working here on Spring

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LCI Education Director Tony Mills helps Coastal Carolina student Amanda Brown release a blacktip shark (above). A fin tag on a blacknose shark (insert above).

Undergraduate interns Val Upham, Madison Hohman and Jessica Gorzo help catch and tag sharks in Chechessee Creek (below).



## Education and Outreach

A letter from the Director  
of Academic Initiatives,  
Beaufort County School District

September 17, 2008

Dear Chris,

I just wanted to take the opportunity to tell you thank you for working with Joseph Shanklin Elementary School last year. My teachers truly enjoyed every minute. I also would like to share with you that JSES was recognized by the district for improving in Science on the PACT. JSES improved their proficient/advanced scores by 12% points and Basic and Above by 15% points. We had some the highest gains in science in the district. I attribute the success to you and the LowCountry Institute. After the first meeting with my teachers last year, I noticed that they were excited about SCIENCE. Everyday, teachers talked about science and planned ways that they could integrate science in other subjects. With the help of Martha McIlveene, we were able reach many of our students who had a dislike for science. ... Our schools are evidence that it takes a community to educate a child. Again, thanks for your hard work and expertise.

Sincerely,

N'kia J. Campbell



(above) A Master Naturalist class checks the circumference of a state record bald cypress in Congaree National Park. From left to right: Cheryl Janecka, Pete Richards and Ann Kennedy.

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ing youth is a critical step in creating a culture with a shared base of knowledge. Second, the Master Naturalist program is based on experiential learning, which is a highly effective teaching style for any age. LCI worked with the Beaufort County school district to target its efforts on teams of teachers because this increased the likelihood that there would be a change in the way that science was being taught at a school. The program has successfully enriched science education in local schools.



Members of the LowCountry Master Naturalist Association take a fieldtrip through Ebenezer Creek.