

## Friends of Coastal South Carolina Supporting our National Forest and Wildlife Refuges

Education Updates... This is no ordinary science class!

Summer 2015

#### It's all about attitude...

Dear Friends,

As you will see in these pages, through the school year we strive to give the students in our programs a chance not only to see science and math at work in the real world, but also the chance to experience and appreciate nature. It's all about attitude and we hope kids leave our programs with the attitude that the natural world is an amazing place to explore. We also hope they begin to understand how important nature and natural places are to our well-being.

With summer in full swing we thought this would be the perfect time to think about what our wild places mean to us and to our children. In a world of digital devices, and constant connectivity to the internet, nature and time outdoors play a smaller and smaller part in many peoples lives. My memories of summer as a child include an unprecedented sense of freedom with some of my fondest memories being of time spent with my cousins on the beaches of Cape Cod. A friend recently shared with me memories of childhood summers spent exploring 50 acres of pine forest behind his house (those acres are all now developed.). I am sad to think so few of today's children will have those kind of memories.

I encourage you to make the time to do some outdoor exploring with the children in your life before summer is over. Our coastal national forest and wildlife refuges offer almost 380,000 pristine acres to discover. Check out our website to learn more: www.sccoastalfriends.org. We also have a great summer reading suggestion: "Last Child in the Woods" by Richard Louv (see page 4). We would love to hear about your favorite outdoor childhood memories. Share your story with us at Facebook.com/ sccoastalfriends org. or Twitter @FrndsofCoastISC. Or even mail us a letter!

Grace Gasper Executive Director





Students explore freshwater wetlands on Waccamaw National Wildlife Refuge.

#### Changing attitudes about snakes.

These kindergartners thought our corn snake was pretty cool! The sad truth is that snakes are some of the most misunderstood animals in our world. Our environmental education programs give students like these the chance to learn hands-on about the reptiles and amphibians in our Lowcountry ecosystems. Our goal is to leave our kids respecting and appreciating, rather than fearing, animals like this corn snake. We have 38 different species of snakes in South Carolina (and of those only six are venomous). Did you know that garter snakes eat mosquito larvae? Anything that helps control our Lowcountry mosquito population is pretty important. Don't you think so? Our thanks to Tony Mills at Spring Island for this very gentle and tolerant corn snake!



### Getting the big picture...

Although technology keeps us connected in so many ways, it also makes it easy to lose sight of how we are really connected to everything else in the world. We aim to give our students a ground-up learning experience when it comes to ecosystems. From the smallest invertebrates to the top predators in an ecosystem, it's a story of how all living things are related to, and depend on, each other. We grab our dip nets and start with the small stuff, like invertebrates (did you know that 90 percent of all life on earth is invertebrates?), and work our way up to top predators. As always it's a combination of in-class learning and field experience. One of the most important lessons is how humans impact our ecosystems. On Bulls Island students see first hand the impacts of climate change and rising seas. We want our students to come away from their field experiences with not only a better understanding of how important the ecosystems they explored are to wildlife, but also how important these ecosystems are to people.



For the third year our partnership with Coastal Expeditions allowed us to offer a field studies trip to Bulls Island as part of our Earth Stewards program. To learn more about how a barrier island forms and changes, and the different ecosystems found on Bulls Island, students from Kensington Elementary in Georgetown modeled their own barrier islands in the sand, including the maritime forest! Erosion, accretion and how barrier islands buffer our communities against storms were all topics of the day.



Cape Romain Environmental Education Charter School (CREECS) fifth graders collected macro-invertebrates from freshwater wetlands on the Francis Marion National Forest. They learned how important these organisms are in the food web, and how changes in water quality can impact the entire ecosystem. They also learned about how important our wetlands are in filtering and retaining the water supply people depend on.



Pinckney Elementary students explored the world of marine invertebrates in their classroom lesson and learned about the importance of seven groups of invertebrates in the food web. Did you know the ocean is becoming more acidic because of increasing levels of carbon dioxide in the atmosphere? Increased acidity impacts the ability of some invertebrates to form their skeletons. Scientists are working hard to understand how ocean acidification will impact food web dynamics (including food we depend on!) and other ecosystem processes.

Classroom lessons like these are also a great opportunity to introduce scientific concepts like taxonomy, which are the foundation of future science learning. Did you know horseshoe crabs, which are found all over the beaches of South Carolina, aren't actually true crabs? They are instead part of the group Meristomata, which roughly translated from its Greek roots means "legs attached to the mouth."

# Giving back: Students put knowledge to work to make a difference.

#### Creating wildlife habitat:

Encouraging stewardship is one of our core values. We are all about giving students a chance to use their knowledge to make a difference in the environment. Students from Coastal Montessori Charter School on Pawley's Island built bluebird boxes during their weeklong summer camp. They spent all week bird watching, taking notes in bird journals, painting, and building the boxes. They learned how important nest boxes are to the bluebird population. Then, students joined us on Waccamaw National Wildlife Refuge to install their boxes. Youth Conservation Corps students and Park Ranger Jason Hunnicutt helped with the installation. The eastern bluebird population declined drastically in the early 1900s primarily because aggressive introduced species, like the European starling and house sparrow, made available nest holes increasingly difficult for bluebirds to hold on to. Beginning in the 1960s and 1970s widespread placement of nest boxes alleviated much of this competition, especially after people began using nest boxes designed to keep out the larger European starling. The Eastern bluebird population has been increasing at about two percent a year ever since.

#### Battling invasive species:

As part of their Earth Stewards program, Sullivan's Island Elementary students became citizen scientists. In collaboration with Clemson's Department of Plant Industry, students became junior invasive species investigators, and conducted a survey for invasive insects affecting trees on the Francis Marion National Forest. Students learned that without the pests and predators of their natural environment, invasive insects, plants and animals are able to rapidly invade new areas and out-compete native species for resources. Invasive species are a growing problem in South Carolina and the United States. Invasive species reduce biodiversity and severely threaten the balance of ecosystems. Estimates indicate that 42% of the nation's endangered and threatened species have declined as a result of encroaching invasive species. It is estimated invasive species cost our economy \$138 billion per year.

We are looking forward to incorporating this service project into our Forest Ecology program next year, and plan to expand the lesson to include invasive plants and animals. Along with learning about the impacts of invasive species, students learn about the role people play in introducing invasives, and what an important contribution citizens can make to conservation efforts. Students also have the opportunity to learn about GPS mapping and can enter their data into a central database.





#### More kids in the woods!



Through all the science learning we never underestimate the importance of simply getting our kids outside and exploring. The sad fact is that today's generation spends half as much time outside as compared to kids of 20 years ago. In a typical week, only 6% of children ages 9-13 play outside on their own. Today, kids 8-18 years old devote an average of 7 hours and 38 minutes to using entertainment media in a typical day (more than 53 hours a week!).

This is a crisis that has implications on many levels. These trends impact our children's health and learning, and leave us with little chance of a next generation that will value and protect our natural resources. There are many reasons for this trend and for a really great read on this issue we recommend Richard Louv's "Last Child in the Woods". This book has been out for some time but it is still a great discussion of this critical issue.

For our part we continue working to get as many kids outside and exploring as we can. Your support of our programs is crucial to this effort. We also need your help in keeping this important discussion going in the community. We hope you will share your strategy for getting the kids in your life outside with us. We would also love to hear your favorite outdoors childhood memories, and your thoughts about "Last Child in the Woods" and the crisis of "inside kids". Share with us on Facebook at Facebook.com/sccoastalfriends and Twitter @FrndsofCoastISC or email us at info@sccoastalfriends.org with "inside kids" in the subject line. Or even mail us a letter!







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Dedicated to preserving the ecosystems and wildlife of the South Carolina coast for future generations; we support our national forest and wildlife refuges through our education programs, advocacy work and by engaging citizens in stewardship of these critical resources.

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Friends of Coastal South Carolina was founded in 1996 as the SEWEE Association.

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