



Jocassee Journal

Information and News about the Jocassee Gorges



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The new Jocassee Gorges Map and Driving Tour was funded by the Harry Hampton Memorial Wildlife Fund, a nonprofit conservation organization that supports many education and outreach programs. (Photo by Dave Fletcher)

Jocassee Gorges map, driving tour published by DNR, Harry Hampton

Publication features sections on numerous recreational activities

A long-awaited map and driving tour of Jocassee Gorges has been published by the S.C. Department of Natural Resources, with funding provided by the Harry Hampton Memorial Wildlife Fund.

The 38-inch-by-27-inch map is the most comprehensive map available for the 33,500-acre Jim Timmerman Natural Resources Area at Jocassee Gorges in northern Pickens and Oconee counties. The map also shows portions or all of Table Rock, Devils Fork and Keowee-Toxaway state parks in South Carolina, and game lands and Gorges State Park in North Carolina.

On the flip side of the map is “Driving the Jocassee Gorges,” an 18-stop driving tour beginning at the Jocassee Gorges Visitor Center at Keowee-Toxaway State Natural Area on SC 11 in Pickens County. Also featured in the publication are sections on fishing, hunting, hiking, bird-watching, wildlife, camping,

botanical areas, access and overlooks, educational opportunities and resource management.

Funding for publication of the map and driving tour was provided by the Harry Hampton Memorial Wildlife Fund, a private, non-profit corporation that partners with the S.C. Department of Natural Resources for the promotion of education, research, management and the administration of game and fish laws, to benefit conservation of wildlife, marine and other natural resources in South Carolina. Funding for exhibits at the Jocassee Gorges Visitor Center at Keowee-Toxaway State Natural Area was provided by the Hampton Fund, as well as publication and mailing of the Jocassee Journal newsletter for the last 11 years. For more information on the Hampton Fund, visit www.hamptonfund.org.

Copies of the new Jocassee Gorges map and driving tour are available at the Clemson DNR office, Jocassee Gorges Visitor Center, Table Rock State Park, Devils Fork State Park, at DNR’s Columbia headquarters at the Rembert Dennis Building, 1000 Assembly St., and at Gorges State Park in Sapphire, N.C. 



Living fossil located in Jocassee Gorges:

Rare harvestman last collected in 1967 on Sassafras Mountain rediscovered by Harvard scientists

By Dennis Chastain

Just when it seemed that all the rare natural and cultural treasures of the Jocassee Gorges property had been identified, along came a spider—an itty-bitsy spider, so rare that it has been collected at only three locations in North America, a spider whose ancestors have been living in these Southern Appalachian woods since the Jurassic Period, a spider so small that it is not easily seen with the naked eye, but one that has a big, big story to tell.

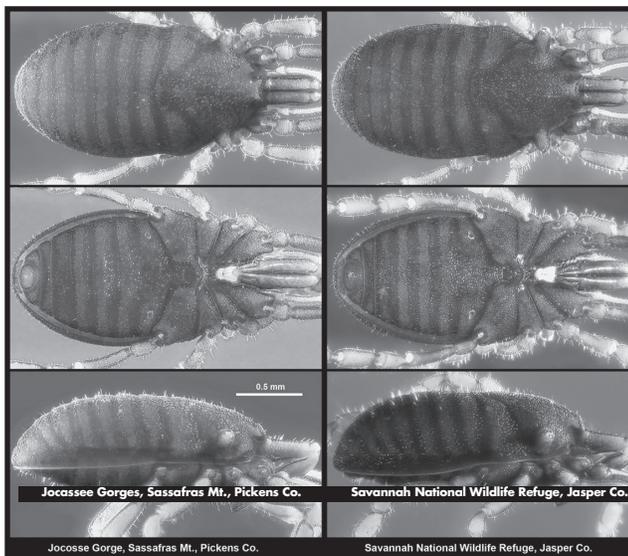
Back in the late winter of 2009, I received a phone call from Ron Clouse, a doctoral candidate at Harvard University's Giribet Laboratory. Clouse said he was looking for a little creature known as a mite harvestman that had been collected in 1967 at a site on Sassafras Mountain, the state's highest peak. He explained that while the tiny mite harvestman was related to the familiar daddy longlegs "spider," (also known as harvestman), they are actually not spiders at all. In fact, harvestmen have their own taxonomic classification, the order Opiliones. This species of mite harvestman, he explained, was only about the size of a flea and only lives in deep, moist, undisturbed leaf litter. Locating the rare insect, he said, was important to his department's worldwide search for populations of this and other relict species of mite harvestman, and he only had three days during his spring break to find this biological needle in the proverbial haystack. He wanted to know if I could help locate the site of the original collection, or perhaps find another likely spot to check. I replied that while it would be a challenge to find a spot anywhere in the Jocassee Gorges property that had not been disturbed in modern times, I would give it the old college try.

This particular species of mite harvestman (*Metasiro americanus*) is thought to have originally evolved in the eastern United States at a time in prehistory when the mega-continent, Pangea,

included what is now North America and the African continent. When (over millions of years) the continental plates drifted apart, it separated the animals into widely disjunct populations, thousands of miles and an ocean apart. A sister species in West Africa is nearly identical to the one last seen here in the Jocassee Gorges in 1967. Since the mite harvestman is pretty much a homebody (home range is typically about 50 miles) and is not capable of crossing large bodies of water, the two species must have originally occurred as one population on Pangea. The big question, the reason Ron Clouse needed to collect living specimens, was to find through morphologic and DNA analysis whether the North American populations had evolved into separate species, or had retained enough diversity in their genetic toolkit to survive as a single species in profoundly diverse habitats. The other two known locations for the species are the Savannah River Wildlife Refuge in the lowcountry of South Carolina and the panhandle region of Florida.

Showers of big fluffy snowflakes were drifting around on the top of Sassafras when I arrived several weeks later to meet Clouse and Prashant Sharma, a fellow Harvard graduate student in the Giribet Lab. The pair had already found a likely looking site along the Foothills Trail and were sifting through the leaf litter when I found them. After several quick attempts to find the tiny insect had turned up nothing, I remembered that Clouse had said in our original conversation that the 1967 collection had been at or near the 2,500 foot elevation. That would be somewhere down around Chimneytop Gap where the Foothills Trail crosses F. Van Clayton road. We packed up and headed down the mountain.

Our initial survey of the woods around Chimneytop Gap was not promising. There were monocultural stands of yellow poplar everywhere we looked, and large even-aged stands of yellow poplar mean that the area has been logged. As luck would



These photos compare the mite harvestmen collected near Sassafras Mountain in Jocassee Gorges and the ones collected from Savannah River National Wildlife Refuge in Jasper County.

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An intriguing tale of scientific discovery

Continued from page 2

have it, I recalled that the year before, (while trailing a wounded deer), I had run across an extremely steep slope nearby that was dominated by older age-class oaks and appeared relatively undisturbed. The pair settled on a likely site, but after nearly a half-hour of carefully sifting through the leaf litter, they came up empty handed. So I left them to their work.

The next day I returned to Chimneytop Gap with Greg Lucas of the S.C. Department of Natural Resources and *Jocassee Journal* editor. We found that the intrepid graduate students had moved to another location on the other side of the steep ridge. It was here that they found the mother-lode. There in the deep leaf litter on the upslope side of an old rotting log, they collected more than enough of the rare mite harvestman for both their morphologic analyses and their DNA studies (16 specimens to be exact). Clouse recently reported that the preliminary gene sequencing data indicate that all three populations in the Southeast are nearly identical and almost certainly the same species.

So, where does all this fit into the large scheme of things? Let me see if I can put it into perspective. Without getting too heavy into plate tectonics, continental drift and the whole subject of biogeography, suffice it to say that there was a time in the big blue planet's history when all the world's land mass was located in one super-continent—Pangea. For millions of years, all the world's plants and animals were found either in the ocean or on this gigantic land mass. The mite harvestman is in the suborder Cyphophthalmi, and creatures in that class are thought to have been among the very earliest living organisms to crawl out of the ocean depths and learn to make a living on dry land.

And by the way, it was Dr. Gonzolo Giribet, a colleague of Clouse and Sharma at Harvard, who first recognized that since the various species of harvestmen are located on every continent, except

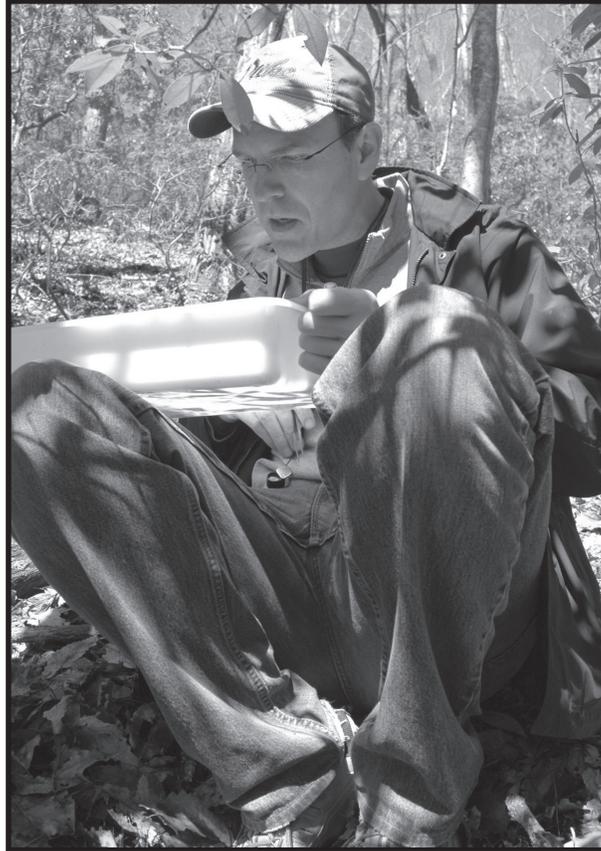
Antartica, don't disperse very well, and date back to the earliest beginnings of terrestrial life, they would be ideal organisms by which to study how animals have become dispersed and evolved in response to the changing conditions brought about by the drifting continents. Professor Giribet's quest is to eventually construct an evolutionary tree of life dating back 450 million years, a taxonomic tool that would help scientists literally trace the history of life on the planet.

The theory is that when Pangea began to break apart and form the various continents around the world, the plants and animals had to evolve to meet the changing conditions, and that phenomenon accounts for much of the incredible diversity we see today all across the spectrum of living organisms. It also accounts for the fact that we have plants here in South Carolina—plants such as Oconee bells, native azaleas, hemlocks, poplars and a grand total of 60 genera of other plants that all have their near relative counterparts in Asia. For example, we have one species of *Shortia* (*S. galactifolia*, Oconee bells) here in North America, while eight species of *Shortia* are found in Asia.

Granted this whole concept of continent drift seems a bit surreal. Nevertheless, the evidence is mounting. It is one thing to watch a show on the History Channel that features

computer graphics of the proto-continent drifting around the globe like globs of goo in a lava lamp. It is another thing altogether to find a living breathing organism right here in the Jocassee Gorges that you can actually hold in your hands that was living here when the earth was young, and whose nearly identical sister species is a world away in West Africa. And it is very gratifying to think that this little harvestman's genetic blueprint may one day help scientists construct the ultimate tree of life. Somewhere Charles Darwin is smiling. 🌿

(Dennis Chastain is a Pickens County naturalist and outdoors writer who has been hunting, hiking and fishing in Jocassee Gorges for more than 30 years.)



Ron Clouse of Harvard University sifts through forest duff near Chimneytop Gap and Sassafras Mountain looking for the rare mite harvestman spider. (DNR photo by Greg Lucas)

State's highest peak is protected from development

North Carolina side of Sassafras Mountain part of 8,000-acre tract known as 'Land of the Waterfalls'

All of South Carolina's highest peak, Sassafras Mountain, will now be protected from development, thanks to the planned sale of an 8,000-acre tract known as the "Land of the Waterfalls" to a North Carolina conservancy group.

Former U.S. Rep. Charleston Taylor is selling the land, which runs along the South Carolina border, in a \$33 million deal with the Carolina Mountain Conservancy and The Conservation Fund.

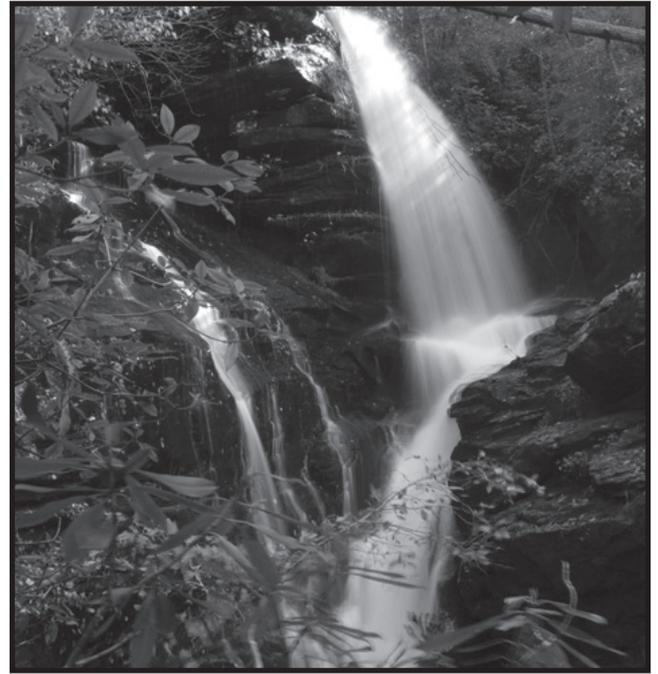
Announcement of the sale marks the group's acquisition of the largest privately-owned block of land remaining in the southern Blue Ridge Mountains.

While the South Carolina side of Sassafras Mountain was already protected, there were concerns that Taylor's portion could be developed and obstruct the view from the peak, which reaches 3,560 feet, the highest point in South Carolina.

"The Taylor family has offered the opportunity to add another jewel to the crown of conserved land in western North Carolina," said Kieran Roe, executive director of CMLC. "The conservation of the East Fork Headwaters tract will yield many public benefits: permanent protection of a clean water supply, extensive hunting and fishing opportunities, a new driver for the local recreation and tourism economy, and the preservation of habitat for some of North Carolina's rarest plant and animal species."

Conservation of the East Fork Headwaters tract will have a regional impact. The tract is bounded by the North Carolina/South Carolina state line for over eight miles. Nine miles of the Foothills Trail, a major east-west hiking path, winds through the tract creating a link between Caesars Head State Park in South Carolina and North Carolina's Gorges State Park. The Foothills Trail Conference, which maintains the trail, has operated under a year-to-year lease on the Taylor property, but public ownership would allow this section of the Foothills Trail network to remain permanently intact. The acquisition will also protect the North Carolina section of the top of Sassafras Mountain, the highest peak in South Carolina.

The East Fork is classified as "Outstanding Resource Waters" by the N.C. Division of Water Quality, a designation reserved for rivers and streams of the highest quality and ecological significance. The East Fork flows to the French Broad River, which serves as a back-up drinking water source for the Asheville Regional Water Authority and is expected to increase



Protection of the 8,000-acre tract in North Carolina known as "Land of the Waterfalls" will also protect a spur of the Foothills Trail that runs between Sassafras Mountain and Caesars Head State Park.

in importance as a public water supply as regional population grows in coming decades.

The acquisition project will open up over 50 miles of streams teeming with rainbow, brown and the elusive Southern Appalachian-strain of brook trout, the region's only native trout. Coldwater sport fishing is a key driver in western North Carolina's tourism industry. The NC Wildlife Resources Commission calculates that trout fishing generated \$147 million in revenue for the area in 2008. The conservationists are seeking to open the land for public game hunting as well. Because East Fork Headwaters sits squarely in the middle of existing vast acreages of publicly conserved land, the forested slopes and drainages provide a critical wildlife migration corridor.

For decades, Champion Cattle and Tree Farms and preceding landowners have managed the land for multiple uses, including forestry, hunting, fishing, hiking and wildlife habitat. The tract is home to rare plant communities, including pockets of Southern Appalachian bog. The project lies atop the Blue Ridge escarpment, one of the most important biodiversity hotspots in world. This transition zone between the piedmont and the Blue Ridge Mountains is rife with micro-climates and micro-habitats such as spray cliffs near waterfalls and deep gorges. ❁

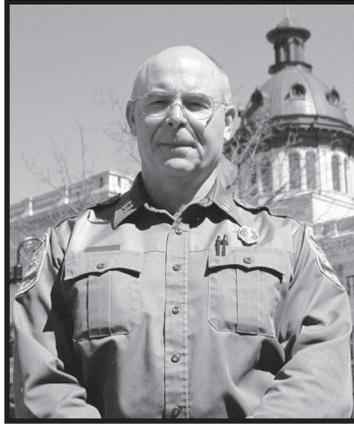
Ultimate DNR 'team player' retires

Holbrooks had coordinated youth fishing rodeo for two decades

Captain Larry Holbrooks, a 36-year veteran with the S.C. Department of Natural Resources (DNR) and the law enforcement captain over 12 Upstate counties, recently retired from the state agency. Colleagues referred to Holbrooks as the ultimate "team player."

Holbrooks, of Westminster, started his career with the DNR in 1974. "Larry Holbrooks is first and foremost a team player," said Dan Rankin, DNR Upstate regional fisheries biologist. "He has a great appreciation for all of our natural resources, and always made a point to work in partnership with DNR staff from all divisions to protect and promote our natural resources. Larry's efficient approach, unending dedication, professional demeanor and staunch moral character define the qualities of a perfect law enforcement captain. Larry is a very personable and likeable person who genuinely cares about others on both a professional and personal basis. Despite his tremendous responsibility, and I'm sure high stress position, Larry always took time to smile, laugh and share a kind word with co-workers."

Responsible for Abbeville, Anderson,



Capt. Larry Holbrooks

Cherokee, Edgefield, Greenville, Greenwood, Laurens, McCormick, Oconee, Pickens, Spartanburg and Union counties, Holbrooks was coordinator of the Oconee County Fishing Rodeo for almost 20 years, an event attended by about 15,000 children. He forged partnerships with many groups to make the rodeo a success. Holbrooks is an active member of many conservation organizations, including the Whitewater River Corridor Committee, Upstate Environmental Enforcement Group and Keep Oconee County Beautiful Association. He was also the DNR representative on WGOG radio in Walhalla and WRIX in Anderson, answering questions about laws and ethics on a call-in show.

Holbrooks was promoted to first sergeant in 1994, and was then promoted to captain in 2002. Holbrooks was Officer of the Year for DNR's District One in 1977 and in 1992. He received the Communications Conservation Award from the S.C. Wildlife Federation in 2002 and was the Outstanding State Employee for the Oconee State Employees Association in 1999.

Holbrooks is married to Wanda W. Holbrooks, and they have two daughters and six grandchildren. He is a member and deacon at First Baptist Church of Westminster. ❁

Key milestone reached for recreational improvements at Keowee, Jocassee

As part of the Keowee-Toxaway relicensing, numerous projects scheduled to be completed by Duke Energy

The Federal Energy Regulatory Commission approved Duke Energy's Keowee-Toxaway Recreation Management Plan on July 19. This allows Duke Energy and its partners to begin the process for improving public recreation areas on lakes Jocassee and Keowee. The improvements will be developed between now and August 2016.

"These lakes are terrific amenities for Upstate residents and visitors," said Scott Jolley, Duke Energy recreation planning project manager. "With this approval in hand, we can begin the final detailed planning for improvements such as walking trails, restrooms, picnic areas, fishing piers and parking lot lighting. These improvements will enhance the

access area users' experiences at the lakes whether they are in a boat or on the shore."

The plan was developed based on results from Duke Energy's Recreation Use Needs Study with input from many agencies and recreation users. The plan prioritizes facility improvements based on the most immediate needs. Detailed site planning and permitting for specific projects will begin soon.

Among the planned improvements by Duke Energy at Devils Fork State Park include additional restrooms and ramp extensions. At Keowee-Toxaway State Natural Area, scheduled improvements include a canoe/kayak access area at the old boat ramp, with parking and shoreline stabilization for the access area, and additional parking at the park's Jocassee Gorges Visitor Center. Other improvements scheduled are at Cane Creek Access Area, Fall Creek Access Area, South Cove County Park and several other access areas and parks. ❁

'Expeditions with Patrick McMillan'

Telegenic Clemson University naturalist explores hidden side of Table Rock

"Expeditions with Patrick McMillan," a public-television nature series produced by Clemson University video productions that has built a national following, recently featured an episode that explored some of the Jim Timmerman Natural Resources Area at Jocassee Gorges.

The episode, from the show's fourth season, is called "Table Rock: The Hidden Side." For more information on the show, or to purchase DVDs of episodes from any of the show's four seasons, visit www.clemson.edu/public/expeditions.

"Table Rock is one of the most popular state parks in South Carolina," said McMillan, a Clemson University professor and naturalist. "The rugged cliffs would seem to expose most of the nature of the place, but if you're willing to venture a little farther afield, out on the trails that are less traveled, really, just slow down and take the time to look around, you'll find out there's a lot more there than initially meets the eye. Even this place, a place we think we know, has a hidden side."

The half-hour show visited several sites on Pinnacle Mountain, including a petroglyph (rock carving) site and a mafic Southern Appalachian cataract fen, where high magnesium and calcium levels and high pH contribute to plant communities that are found nowhere else in South Carolina.

McMillan said that his favorite gateway to "this enchanting landscape" is the Foothills Trail, which extends 77 miles between Table Rock and Oconee state parks.

Among the many plants featured by McMillan during the show are Vasey's trillium, Blue Ridge bindweed, Indian paintbrush, grass of Parnassus, ninebark, smooth indigobush, racemed milkwort, bog oatgrass, grass pink orchid, round leaf sundew, divided-



Clemson naturalist Patrick McMillan takes a look at a milkweed. "Expeditions with Patrick McMillan" in Jocassee Gorges.

leaf groundsel, tall meadow rue, Indian pink, white milkweed, four-leaf milkweed, red Canada lily, Biltmore sedge and shortleaf sneezeweed.

"No matter the season and no matter where you venture in this landscape, there are amazing natural treasures under every stone and around every corner," McMillan said. "This place has been drawing humans to its majesty for thousands of years, and if you get a chance to visit, I hope you'll take the time to stroll, to slow down and reflect, and leave with a sense of the sacredness of this incredible place."

Expeditions
with Patrick McMillan

"Expeditions with Patrick McMillan" debuted in 2006 on South Carolina ETV. In 2009, the weekly series expanded to PBS stations that reach more than 54 million television households coast-to-coast, including seven of the nation's top 10 markets.

"Our goal in producing 'Expeditions' is to increase awareness of the critical importance of environmental issues, their global interconnections



"Expeditions with Patrick McMillan" debuted in 2006 on South Carolina ETV and it now reaches more than 54 million television households coast-to-coast, including seven of the nation's top 10 markets.

McMillan' explores Jocassee Gorges



Patrick McMillan traces a petroglyph along the Foothills Trail during filming of "Expeditions." (DNR photo by Greg Lucas)

and the need to develop a sustainable balance between nature and mankind," McMillan said. "There's a growing disconnect with the natural world in this age of video games and cell phones. The intricacy and interactions of the tremendous and valuable biodiversity that exist in South Carolina and the Southeast are often underappreciated and misunderstood."

Expeditions

with Patrick McMillan

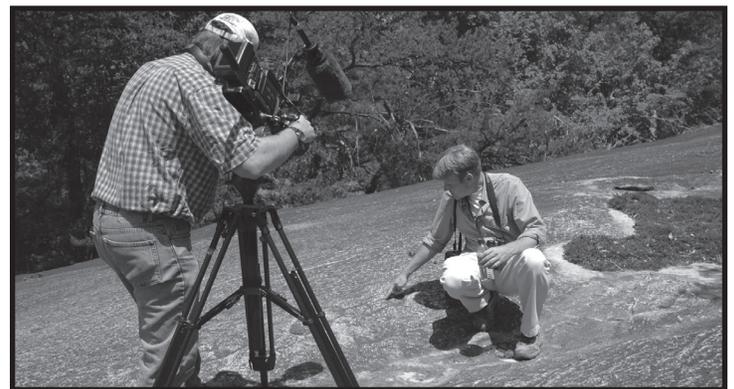
McMillan is the host, co-creator and writer of the popular and award-winning nature program. Over the past 15 years, McMillan has worked as a professional naturalist, biologist and educator. His range of experience has concentrated on botany, though he is also well-respected through his work in ichthyology, herpetology and mammalogy. McMillan is a professional naturalist, lecturer and served as curator of the Campbell Museum of Natural History at Clemson University from 2006 until August 2009, when he became director of natural resources programs for Clemson University's Youth Learning Institute.

He received his bachelor of science degree in

biology from the University of North Carolina, Chapel Hill, and his doctorate degree in biological sciences from Clemson University. McMillan's research has been featured in both *National Wildlife* and *South Carolina Wildlife* magazines, as well as in numerous articles in *The State*, *Greenville News* and other local and regional newspapers.

In addition to hosting Expeditions, McMillan spends his time at Clemson University fulfilling teaching and outreach duties. He is also a frequent guest on "Your Day" and the ETV Roadshow on SCETV radio. He is in high demand as a speaker and has given hundreds of public presentations, including the prestigious Calhoun Lecture in January 2009, the first Clemson faculty member invited to present this address. He has also given dozens of departmental seminars at universities throughout the region. McMillan is active member of several organizations including the South Carolina Association of Naturalists, the Southern Appalachian Botanical Society, the South Carolina Native Plant Society and the South Carolina Entomological Society. He is a member of the board of trustees of Upstate Forever and the South Carolina Chapter of The Nature Conservancy, and is on the S.C. Department of Natural Resources Heritage Trust Advisory Board Natural Areas Committee and the Craigs Pond Eco-education Committee.

During and after college McMillan worked as an environmental consultant and field ecologist for UNC-Chapel Hill, Fairchild Tropical Gardens, KCI Technologies and R.J. Goldstein & Associates, curator at the North Carolina State Museum of Natural Sciences and eighth grade math and science teacher. He moved to and joined the faculty of Clemson University in 2000. His research has taken him around the world in pursuit of new species of plants, and his areas of expertise are in sedge and Begonia taxonomy, natural community ecology and conservation biology. 🌿



Clemson naturalist Patrick McMillan traces a petroglyph on the Long Ridge of Pinnacle Mountain during filming for "Expeditions." (DNR photo by Greg Lucas)

Visitor center planned at Gorges in N.C.

Building at Grassy Ridge access area may be completed in 2013

Plans are underway for a new visitor center at Gorges State Park that will be beautiful, environmentally responsible, and full of fun and educational exhibits. Located atop Grassy Ridge, the building will feature lots of windows and outdoor decking to allow visitors to feast their eyes on views of the park and—on clear days—see all the way to Lake Jocassee and South Carolina. The Gorges State Park visitor center will be bid for construction later this year, with completion estimated around spring 2013.

The visitor center is being made possible by the North Carolina Parks and Recreation Trust Fund, funded from a partition of an excise tax on real estate sales in North Carolina. Funds are used for major state park capital improvements, land acquisition and a matching grant program for local parks and recreation departments.

The visitor center and its exhibits are intended to be accessible to all. Visitors will be able to learn about the park and have a great experience even on days when weather or other circumstances prevent an on-foot exploration of the park. A comfortable fireside seating area amongst the exhibits will make a cozy place for people to relax or wait for other members of their group. The building will also include a classroom and an auditorium for group programs.

Outside exhibits will include a sculptural depiction of the Blue Ridge Escarpment, a manmade waterfall, a rain gauge, a rain garden and general park information and maps. On nice days, a portable cart will allow children to experiment with rocks and running water to create mini-waterfalls.

Inside, visitors will be able to explore exhibits to learn all about the park and its waterfalls. The park contains a multitude of waterfalls because of its wet climate and steep slopes. About 90 inches of rain fall in Gorges State Park each year—almost twice as much as in Greenville, S.C.! The steepness is due to the fact that the park is located on the Blue Ridge escarpment, an area between the piedmont and the Blue Ridge where elevations abruptly rise 1,000-2,000 feet.

Because of the rugged nature of the park, not

all of its approximately 20 waterfalls are accessible to visitors, but everyone will be able to see all the waterfalls in a photo gallery in the visitor center. In addition, a floor-to-ceiling model of a waterfall will bring a little bit of waterfall magic indoors.

Visitors to the center will also learn about the park's flora and fauna, including rare ferns and mosses that thrive in the wet and humid conditions around waterfalls. Some of the plant species in the park, including Oconee bells (*Shortia galacifolia*), have extremely limited ranges and are vulnerable to disturbance. Visitors will learn tips for protecting plants

and animals both in the park and at home, including keeping natural waters clean and protecting habitats from invasive plant and animals species.

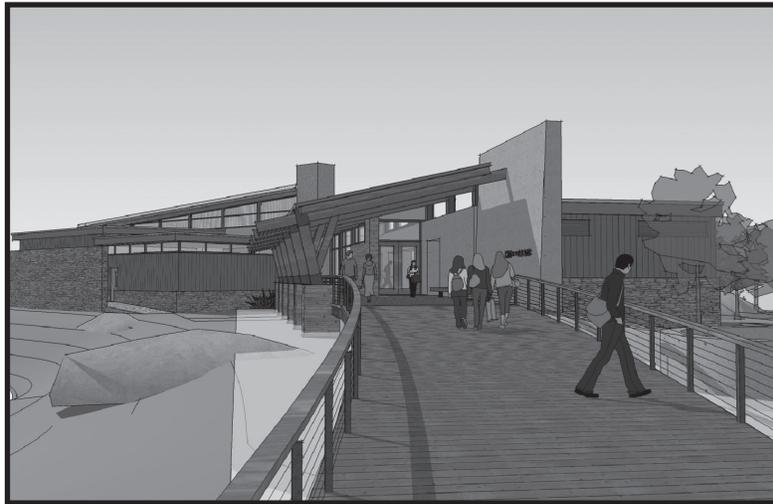
The area's rich cultural history is also covered in the exhibits, which focus on ways people used the resources of the land, from plants and animals to the beauty of the scenery itself.

Early Native Americans, and later the Cherokee, lived lightly on the land,

leaving few traces besides stone tools, arrowheads and foot paths. In the late 1700s, European immigrants and their descendents farmed, hunted and harvested timber. Around the turn of the last century, the area was a popular vacation destination, offering both rustic summer camps and luxurious accommodations. The ritzy Toxaway Inn drew guests from New York City, Philadelphia and other cities until the flood of 1916 burst the Toxaway dam, drained the lake and left the Inn high and dry.

As the park and the visitor center itself illustrate, the area is still a popular tourist attraction, and, to emphasize that point, visitors will be able to make and send their own postcards.

The building will be built to the LEED standards of the U.S. Green Building Council, meaning that various aspects of its design and use will save energy and be environmentally friendly. For example, the building will be heated and cooled with an energy efficient geothermal heat pump. A solar water heater will heat water for the bathrooms. Extra insulation will keep the inside of the building comfortable with less energy. Rain cisterns will capture water for reuse, and rain gardens will prevent stormwater runoff. 



Architect's rendering shows planned visitor center at Gorges State Park in North Carolina.

Jocassee writers celebrated

Dot Jackson and Ron Rash inducted into Academy of Authors

The South Carolina Academy of Authors celebrated writers Dot Jackson, Ron Rash, William Price Fox and George Singleton during a ceremony in Spartanburg, inducting the four into the state's literary hall of fame.

Dot Jackson and Ron Rash have close connections with the Jocassee Gorges region. The induction ceremony was held April 17 in the Campus Life Center Ballroom at the University of South Carolina Upstate.

• Dorothea "Dot" Jackson, born in 1932, published *Refuge*, her first novel, in 2006 through the Novello Festival Press of Charlotte. (*Refuge* is set in the Southern Appalachians.) She is the co-author of *Keowee* with Michael Hembree. A career journalist, Jackson wrote for *The Charlotte Observer*, *The*

Greenville News, the *North Carolina Independent* and was a stringer for *The New York Times*. She also edited or co-edited regional weekly newspapers. Her stories and articles have appeared in magazines, journals and anthologies. Jackson is the co-founder and site manager of the Birchwood Center for Arts and Folklife in northern Pickens County.

• Ron Rash, born in 1953, is the author of four novels: *One Foot in Eden* (set in the Jocassee Gorges region), *Saints at the River*, *The World Made Straight*, and *Serena*, a best seller named to many best-books lists and a Pen-Faulkner Award finalist. Rash, who teaches at Western Carolina University and lives in Clemson, is also author of four collections of short stories and three collections of poems.

Founded at Anderson College in 1986, the South Carolina Academy of Authors identifies and recognizes the state's distinguished writers, living and deceased. ❁



Writers Ron Rash (left) and Dot Jackson (seated, right) share a light-hearted moment with fellow author Debbie Fletcher (center).

Lake Jocassee paddling trip makes for memorable day

Palmetto Conservation Foundation group finds great way to cool down

By Dan Whitten

On a July morning, the Senior Explorers of the Palmetto Conservation Foundation assembled at the remote boat ramp ready for a Jocassee paddling trip. Twenty-one boats launched with the destination of Wright Creek Falls. By the time Double Springs campground was reached, lunch was in order. After munching down and a quick dip in the lake, it was back in the boats and up the north shore of Whitewater Bay. We had our eyes on the sky. Not only was a dark cloud coming over the mountains, but we hoped to spot a bald eagle I had seen on my last trip.

Fifteen minutes of rain made us remember the last month of scorching days and grateful for the cool-down. Then a large bird appeared overhead with wings bent at the wrist. Not a bald eagle this time, but rather a "grand ole osprey"!

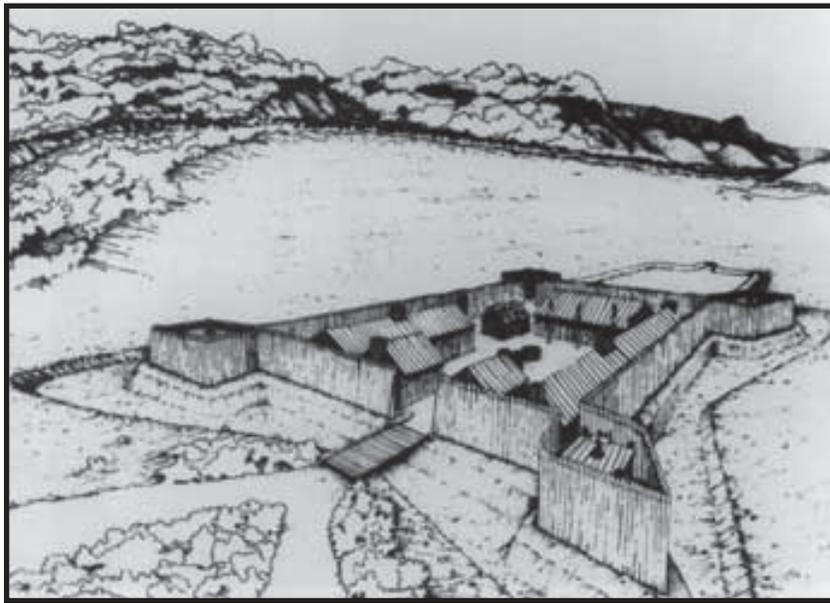
After turning up Thompson fork and taking another swim, we soon entered Wright Creek cove. The falls could only be heard. But after another sharp turn the triple waterfall was right there bouncing from rock to rock to lake. Activities included paddling behind the



Waterfall jumping is a sure-fire summer cool-me-down during a paddling trip on Lake Jocassee. (Photo by Dan Whitten)

falls, rock jumping, waterfall shoulder massages and just taking it all in. After a rewarding renewal experience, we turned around and took the shortest return route to complete what is normally a four-hour paddle.

(Dan Whitten is a graduate of the Upstate and Catawba Master Naturalist programs who lives in Spartanburg County.) ❁



Drawing of Fort Prince George

Fort Prince George could be resurrected

Pickens County Historical Society looks into reconstruction of fort that could provide a major tourist attraction

A group led by the Pickens County Historical Society hopes to bring back to life one of the great landmarks of the mountain region's history—Fort Prince George.

A renewed effort to rebuild historic Fort Prince George is now underway, and the hope is that once completed, the fort will serve as a tourist attraction for the area.

Royal Governor James Glen constructed the fort in the Keowee Valley in 1753 in what is now northern Pickens County. He built the fort at the request of members of the Cherokee Nation, who were trading partners with South Carolina colonists.

The fort, named for the Prince of Wales, played an important role in the state's trading history, and it was a key military site during the French and Indian War. During the fort's 15-year existence, it served as a vital link between Charleston, Ninety Six and the Upper Cherokee lands, and during the French and Indian War, it was a staging point for assaults.

The "Big Four" Revolutionary War generals of South Carolina—Andrew Pickens, Thomas Sumter, Francis Marion and William Moultrie—all spent time at Fort Prince George as young soldiers.

Fort Prince George was abandoned in 1768, 100 years before the present-day town of Pickens was established. American botanist William Bartram traveled to the area around Fort Prince George in 1775, and he described it this way: "The vestiges of the ancient Indian dwellings are yet visible on the feet of the hills

bordering and fronting on the vale...There are several Indian mounds or tumuli and terraces, monuments of the ancients, at the old site of Keowee, near Fort Prince George, but no Indian habitations are present...the old Fort Prince George now bears no marks of a fortress but serves for a trading house."

The reconstruction effort would be a living history project that will be educational from start to finish and is expected to be a major tourism draw for Pickens County and the Upcountry region. The Pickens County Historical Society is partnering with individuals and other interested groups in the region to make the construction project a reality. The plan is to rebuild the fort in its entirety based on period drawings and the documented archaeological footprint, and, true to the original, it would include a Cherokee village outside the walls.

The group is scouting for potential locations for the fort and hopes to find one close to the original site, which was flooded when the Keowee River was dammed to create Lake Keowee. Prior to the flooding in 1971, the fort site was excavated and many relics were found, including three presumed Cherokee skeletons and musket and cannon balls.

The same colonists who built Fort Prince George also built its sister, Fort Loudoun, three years later in what is now Tennessee, and that fort met a similar fate when the Tennessee Valley Authority flooded the Little Tennessee River basin. But in 1980, Fort Loudoun was reconstructed on the banks of the TVA's Tellico Reservoir for about \$140,000. That fort is maintained by a private foundation and the State of Tennessee. And the Ninety Six Historic Site, location of a second sister fort, is a property of the National Park Service. ❁

Bear tags debut in South Carolina mountains

All hunters harvesting a bear must now possess a bear tag

The South Carolina General Assembly recently passed a new law that affects bear hunting in the Upstate, and the law brings some changes that hunters will need to know before the bear season begins in October.

A two-week black bear season is held only in Game Zone 1, which consists of the northern sections of Greenville, Oconee, and Pickens counties. Still hunt season for bear is Oct. 17-23, and party dog season is Oct. 24-30.

One of the main changes in the bear hunting law is the requirement that all persons harvesting bears in South Carolina during both the still and party dog seasons must possess a bear tag and must tag the animal before moving it from the point of kill, according to Richard Morton, S.C. Department of Natural Resources (DNR) wildlife biologist based in Clemson.

This tag will cost \$25 for residents and \$100 for non-residents and will be issued in the name of the individual hunter. Youth under the age of 16 can obtain tags at no charge. Bear tags will be available online, by mail and at DNR regional offices. The revenue generated from these bear tags will go to bear research and management and to administer the tag system.

Purchase a bear tag online at www.dnr.sc.gov/purchase.html.

Another change brought about by the new law is that during the party dog hunt, the limit was raised to five bears per party per season. All persons wishing to register for the party hunt must register by Sept. 1 each year and must provide a valid hunting license number. "It will be more important than ever that hunters get their application in on time and that they be accurate," Morton said. "The DNR will not substitute members of a party after Sept. 1."



Hunters are required to report a bear harvest within 24 hours, and DNR biologists say this information should include a tooth from each bear, along with an accurate weight, county of kill, sex of animal and the hunter's bear permit number.

The application for party dog hunts is available online at www.dnr.sc.gov/bearhunting/Bearpartyhunt.pdf.

Additional changes in the new law include:

- * Archery hunting for deer will be allowed during the bear season.
- * DNR will be allowed to set bear hunting seasons in other game zones as bear populations increase.
- * The harvest of an undersized bear is now a magistrate court case, which means DNR officers can issue a courtesy summons for this violation. Previously, an undersized bear charge resulted in the violator being taken to jail.

Other bear law violations will remain circuit court cases.

Hunters who have additional questions about the new bear law are urged to contact their nearest DNR enforcement officer or wildlife biologist. The new bear hunting law can be viewed at www.scstatehouse.gov/sess118_2009-2010/bills/3541.htm.

More information on black bears in South Carolina can be found at www.dnr.sc.gov/wildlife/bear/index.html. ❁



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Jocassee Hydro Station adds 50 megawatts with turbine upgrades

Duke Energy's Jocassee Pumped-Storage Hydroelectric Station will install two new turbines for units 1 and 2 this fall, upgrading the station and increasing capacity by 50 megawatts.

The turbines, manufactured by Voith Hydro in York, Pa., represent state-of-the-art design for greater efficiency. The turbines—about 24.5 feet in diameter and weighing nearly 150 tons each—are being transported via interstate highways on trailers about 250 feet long.

Following a seven-day trek, the first turbine arrived near Salem in early August. The second turbine is expected to arrive at this location in early September. Once the second turbine arrives, both will make the slow and winding seven-mile journey to the facility on a hydraulic platform trailer.

"Essentially, we're improving the output of the facility and making it more efficient with state-of-the-art design technology," said Greg Lewis, Duke Energy technical manager-Hydro Fleet. "This extends

the life of the station and helps our system respond to peak customer demands with a fast, flexible, clean and efficient energy resource."

These will be the first upgrades to Jocassee units 1 and 2 since they began commercial operation in 1973. Replacing the turbines will enhance hydro generation for units 1 and 2 at the Jocassee station from the current maximum capacity of 170 megawatts per unit to a maximum capacity of 195 megawatts per unit. Each turbine also will increase pumping capacity by 37 megawatts. Units

3 and 4 were upgraded in 2006 and 2007.

When generating electricity, the Jocassee pumped-storage facility works as a conventional hydroelectric station. However, the facility also can reverse its turbines and pump back previously used water from Lake Keowee into Lake Jocassee. This allows Duke Energy to reuse the water to generate electricity for customers during periods of highest demand. ❁

'Essentially, we're improving the output of the facility and making it more efficient with state-of-the-art design technology. This extends the life of the station and helps our system respond to peak customer demands with a fast, flexible, clean and efficient energy resource.'

—Greg Lewis, Duke Energy