



# Jocassee Journal

Information and News about the Jocassee Gorges



DNR

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Showing off the new monument honoring Dr. James A. Timmerman Jr. at the Jumping-Off Rock Overlook are (from left) Michael McShane, chairman of the S.C. Natural Resources Board; Tommy Miller, former board member; and DNR Director John Frampton. (DNR photo by Greg Lucas)

## Monument dedicated to Dr. Timmerman unveiled at Jocassee Gorges overlook

DNR director was fond of saying, 'God visits the beaches, but He lives in the mountains'

A monument honoring Dr. James A. Timmerman Jr., who helped protect thousands of acres of mountain lands, was dedicated Sept. 13, 2010, at Jumping-Off Rock Overlook, the hallmark vista of the Jocassee Gorges.

"I honestly believe this view here is the most spectacular in the state of South Carolina," said John Frampton, director of the S.C. Department of Natural Resources (DNR), "and it absolutely would not have been possible without the vision of Jim Timmerman."

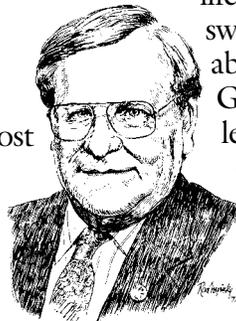
A large contingent of family and friends made the long trek down the Horsepasture Road in northern Pickens County to Jumping-Off Rock Overlook to see the unveiling of the monument. The monument reads:

Dr. James A. Timmerman Jr. was director of the S.C. Department of Natural Resources from 1974 to 1997. Known as "Doc" by friends and colleagues, he was

instrumental in South Carolina's purchase and protection of more than 50 square miles of land surrounded by Lake Jocassee. By resolution of the South Carolina Senate, the area was named "The Jim Timmerman Natural Resources Area at Jocassee Gorges" on Dec. 7, 2000. Doc's

lifelong devotion to conservation is remembered with swift mountain streams, rare plant habitats and the abundance of wildlife that combine to give Jocassee Gorges its unique character and scenic beauty. His legacy for future generations is the preservation and enhanced appreciation of our natural heritage. Doc often remarked, "God visits the beaches, but He lives in the mountains."

Timmerman, who died in 2005, protected thousands of acres of land for conservation during his tenure as director of the S.C. Department of Natural Resources (DNR) and was one of the key figures in the state's acquisition of Jocassee Gorges. During Timmerman's tenure, the DNR acquired thousands of acres in heritage preserves, protecting many rare and endangered species. The ACE Basin Project also became one of the nation's premiere land protection efforts during Timmerman's tenure.



Timmerman



The view from the western side of Sassafras Mountain at the new overlook provides a gorgeous view of the surrounding mountains of South Carolina, North Carolina and Georgia. (Photo by Heyward Douglass)

## New overlook at Sassafras Mountain gives view from the top of South Carolina

Group would like to see highest point in state become Pickens County tourist attraction

A partnership of state and county groups has resulted in an overlook on Sassafras Mountain, with a beautiful view of the surrounding South Carolina mountains along with the mountains of neighboring North Carolina and Georgia.

Sassafras Mountain is South Carolina's highest point at an elevation of 3,560 feet, and members of several groups met at the overlook recently to admire it, including the S.C. Department of Natural Resources (DNR), which constructed it. The groups included Pickens County, The Highpointers Club (a group

that promotes visitation of the summits in all 50 states, [www.highpointers.org](http://www.highpointers.org)), Easley Chamber of Commerce, Foothills Trail Conference and Duke Energy.

"When our school children visit the highest peak in our state, the new overlook now gives them a view of which they can be proud," said Mark Hall, DNR wildlife biologist and Jocassee Gorges manager. "The long-term goal is to have an impressive structure atop the mountain, similar to Mount Mitchell in North Carolina or Clingman's Dome in the Great Smoky Mountains National Park, which will permit long-range views in all directions from the top of Sassafras." DNR, Pickens County and interested groups will continue to work toward improving the state's highest peak as a tourist destination.

## Master Naturalists focus on Jocassee Gorges

In late November 2010, Certified Wildlife Biologist and Forester Mark Hall of the S.C. Department of Natural Resources provided an in-depth presentation of the Jocassee Gorges to the Upstate Chapter of Master Naturalists.

Well attended, the morning session began at the Laurel Valley Lodge off US Highway 178 where Hall, a 10-year veteran working in Jocassee Gorges, presented a comprehensive look at the history, acquisition, management, and the environmental and political impacts this special mountainous area has had in the past and is experiencing today. Afterwards, Hall led the group on a short drive to the top of Sassafras Mountain where lunch and the last business meeting of 2010 were held at the newly constructed overlook.

The Upstate Chapter of Master Naturalists Association is comprised of graduates who complete

The new overlook at Sassafras Mountain, with an awesome view of nearby ridges and distant lakes, provided a great place recently for an Upstate Master Naturalist field trip, hosted by Mark Hall, DNR Jocassee Gorges land manager. (Photo by Steve Marlow)



the Clemson University-sponsored Master Naturalist program and who elect to join the association. For more information, visit [www.clemson.edu/public/naturalist/](http://www.clemson.edu/public/naturalist/).

# Lady Luck flies with Alabama man

Young soldier was scheduled to be on plane that crashed in Jocassee Gorges but had gotten off when aircraft made unscheduled fuel stop

By Jimmy C. Jones

Until recently I had never heard of Jocassee Gorges, but I now feel somehow linked to the location because of an event that dates back some six decades. I barely missed being in a fatal airplane crash there back in November 1950. And all this time I never knew the details of the accident; the media only revealed that the plane crashed into "a mountain," giving no further details.

During a recent Google search of the Internet, I came upon the Spring/Summer 2004 edition of the *Jocassee Journal* newsletter, and was elated to finally read the exact location and the details of the tragedy including photos of parts of the wreckage after all these years. Please accept my gratitude for publishing the article and my hope that the lives of these men may be memorialized by some sort of shrine on the location. Some 60 years ago, I was at the kitchen table in my home in Clanton, Ala., an 18-year-old fledgling member of the Air Force on leave from McCord Air Force Base in Washington State. My dad had just brought in the afternoon newspaper containing an article describing the fatal crash of an Air Force C-82 headed to Greenville from Maxwell Air Force Base in Montgomery. I was stunned. It was the plane I had just disembarked from the night before.

Just the day before, I had gotten a hop on the same aircraft which had undergone a major renovation at McCord and was being transferred to Greenville. The crew was made up of three members of the Pennsylvania National Guard just called back into regular duty because of international conflicts. I talked to them at length during the flight and the pilot made an unscheduled fuel stop at Maxwell, just 50 miles from my home. They were all great guys. The pilot and co-pilot told me that they were jewelers back in Pittsburgh, Pa. When I disembarked,



**Jimmy C. Jones of Clanton, Ala., was a passenger on the ill-fated C-82 "Flying Boxcar" that crashed into Bully Mountain in northern Pickens County in November 1950, but by a strange twist of fate, Jones got off the plane during an unscheduled fuel stop in Alabama, not too far from his hometown.**



**This photo of Jimmy C. Jones and a fellow soldier and friend known as "Chief" was taken in 1952 when Jones was stationed at Lajes Field on Terceira Island in the Azores, where Jones was crew chief on a C-47 Gooney Bird. (Photos courtesy of Jimmy C. Jones)**

a Sgt. Walter Lott from Florida took my place as a passenger and was killed with the others in the crash. After returning to McCord, I had to sign off on a parachute left on the airplane and I still have a copy of the affidavit. At that time my first name was spelled with an "ie" instead of "y." The affidavit reads as follows: I, Jimmie C. Jones, AF 14 318 763, hereby swear and affirm that while flying aboard C-82 #7739 from McCord AFB to Maxwell AFB talked to the pilot, Lt. Schmitt, about a parachute belonging to McCord AFB.

He said that apparently one of the McCord personnel who flew the test flight at McCord must have left it aboard and that he would see that it would be shipped back to McCord from Greenville.

*(Jimmy C. Jones is a retired pharmacist who lives in Birmingham, Ala.)*



Jumping-Off Rock Overlook is now the subject of an Earthcache, which is similar to a Geocache, except that the designation is virtual, as there is no physical "cache" on the site. The Earthcache website gives potential visitors natural history information about the northern Pickens County beauty spot. (DNR photo by Greg Lucas)

# Earthcaching arrives at Jumping-Off Rock Overlook

GPS units used to find beauty spots in South Carolina mountains

By Tony McDade

“Nothing could be finer than Earthcaching in South Carolina!” With these words as a guide and inspiration, one can embark on journeys to the some of the most stunning natural sites in the mountain wilderness areas of our state.

Geocaching is a sport/hobby in which adventurous souls use handheld Global Positioning Satellite (GPS) devices to search for containers (caches) that have been secreted away by fun-loving and sometimes devious explorers called Geocachers. It’s like a high-tech treasure hunt! More than 1.3 million Geocaches festoon the Earth’s surface, with challenges ranging from the obvious to the beguiling to the ridiculous. Just log-on to the *www.Geocaching.com* website, download some geographical coordinates, and let the odyssey begin!

An Earthcache is a special type of Geocache, one which focuses on natural features that have geologic significance. Earthcaches are often allowed in areas where traditional Geocaches are prohibited (such as Wildlife Management Areas, heritage preserves and other biologically sensitive places) because no actual cache container is involved. Rather, as the name implies, a distinctive aspect of the Earth itself is the object of the search. The fun is in the hunt—to discover a new vista, to investigate a fascinating rock formation and to ponder the tectonic forces that have shaped landscapes like the precipitous Jocassee Gorges.

Your quest for superb Earthcaches in northwestern South Carolina will take you from breathtaking Jumping-Off Rock Overlook and dazzling Reedy Cove Falls to the heights of Sassafras Mountain in Jocassee Gorges.

Majestic Table Rock Mountain awaits the hale and hearty in its nearby namesake state park. Venture farther into the Mountain Bridge Wilderness Area to the brow of an Emperor (Caesars Head) and to a Place called Pretty (Cleveland Cliffs). Raven Cliff Falls beckons with thunderous cascades, and you can even stand astride the crest of the continent at the Eastern Continental Divide. Each site, and the drives and hikes required to reach them, offers a glimpse into the geologic history of what is known as the Appalachian Inner Piedmont. As you explore unique geologic formations galore, from exfoliation domes to klippen (cliffs), you trek across substrata with intriguingly familiar names like the Chauga Belt, the Seneca Fault, the Walhalla Nappe and the Six Mile Thrust Sheet.

Every Earthcache’s online page includes questions that must be answered, both to “log” (verify) your visit to the site and to better understand the dynamic forces of nature. Don’t know your nappes from your gneisses, or your bornhardts from your biotites? Wondering what the heck a monadnock is anyway? Try Earthcaching to decode the answers to these and other geologic puzzles, and have a blast along the way. And don’t forget to CITO! (Cache In-Trash Out).

To locate your first Geocache is truly an exhilarating experience. To find an Earthcache in the incomparable Jocassee Gorges/Mountain Bridge Wilderness Area is to be inspired by the incredible natural beauty that makes this part of our state so special—even without a palmetto tree in sight!

*(The Rev. Tony McDade is executive director of the Greenville Area Interfaith Hospitality Network (GAIHN) and an enthusiastic Geocacher. The website for the Jumping-Off Rock Overlook Earthcache is [http://www.geocaching.com/seek/cache\\_details.aspx?wp=GC2NWW8](http://www.geocaching.com/seek/cache_details.aspx?wp=GC2NWW8))*

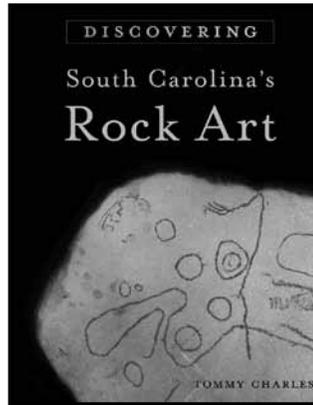
# Archaeologist writes tale of discovery, preservation in South Carolina upcountry

USC Press publishes book that includes story of Jocassee Gorges petroglyphs

For years Tommy Charles scoured South Carolina's upcountry for examples of ancient rock art carvings and paintings, efforts conducted on behalf of the South Carolina Institute of Archaeology and Anthropology. As the Institute's collections coordinator, Charles amassed considerable field experience in both prehistoric and historic archaeology and had firsthand involvement in cataloging 64 sites of South Carolina rock art. Charles chronicles his adventures in exploration and preservation in "Discovering South Carolina's Rock Art," published in 2010 by University of South Carolina Press.

Survey efforts led to the discovery of rock art created by Native Americans and Europeans. Of particular interest are the many circle-and-line petroglyphs the survey found in South

Carolina. Seeking a reason for this repetitive symbol, Charles's investigation into these finds led to the discovery that similar motifs had been identified along the Appalachian Mountains from Alabama to New York, as well as in the American Southwest and Western Europe.



This engrossing account of the search for South Carolina's rock art brings awareness to the precarious state of these artifacts, threatened not only by natural attrition but also by human activities. Charles argues that, if left unprotected, rock art is ultimately doomed to exist only in our historical records.

"Discovering South Carolina's Rock Art" is available for sale through all major independent and chain booksellers, or it can be ordered directly from the

University of South Carolina Press by calling toll-free at 800-768-2500.

## Foothills Trail accomplishments, challenges discussed at meeting

Trails group launched new website, sponsored more hikes and erected better signs

After five years at the helm, Robert Stephenson of Greenville recently handed over the chairmanship of the Foothills Trail Conference to John Park, also of Greenville.

During Stephenson's address to the membership during the Foothills Trail Conference annual meeting at Table Rock State Park Nov. 6, 2010, he outlined the accomplishments of the board and upcoming challenges. Among the accomplishments:

- \* Achieved administrative stability and increased professionalism and enthusiasm;
- \* Designed and launched new website, increasing visibility, recognition and product sales;
- \* Improved newsletter;
- \* Sponsored more outings, including a section hike of the entire Foothills Trail;
- \* Wrote and enacted new by-laws;
- \* Designed and implemented new signage project, increasing recognition for the trail;
- \* Increased member participation in annual meeting and spring picnic;

- \* Increased outreach to stakeholders and like-minded organizations, voiced support for conservation of Taylor property, inclusion in Keowee-Toxaway Jocassee Gorges Visitor Center, Sassafras Mountain Improvement Committee, cooperation with Carolina Mountain Land Conservancy and The Nature Conservancy;
- \* Continued maintenance activities;
- \* Attracted financial support from patrons: Hilliard Family Foundation, Duke Energy, Johnson Controls and generous individuals;
- \* Earned recognition from *Backpacker Magazine*, *Blue Ridge Country* magazine, and local newspapers;

Challenges for the future for the Foothills Trail Conference, according to Stephenson, include:

- \* Increase membership and recognition in order to build and maintain a constituency for the trail;
- \* Insure financial stability through fundraising, membership and merchandising;
- \* Deal effectively with changing circumstances in region, including development and changing land uses;
- \* Cooperate where possible with competing trail-building organizations, while maintaining the integrity of the Foothills Trail.

# Deep-water dive brings back memories

Two Jocassee girls share magical experience of reaching back into the past

By Debbie Fletcher

I've spilled many words—and tears—about Jocassee, the quaint, unspoiled mountain valley that was sacrificed in 1971 to satisfy the growing demands for electric power. Every time I write something about Jocassee, I think to myself, "That's it. There's nothing left for me to say." And then I am graced with another opportunity reminding me that my childhood summer home is not as far away as I might think.

Lake Jocassee, known as South Carolina's Crown Jewel, was full pond by 1973. Beneath its deep, cold waters, which reach depths of well over 350 feet, lie beautiful childhood memories that sometimes surface as if the water has been parted. It was the most perfect day in August 2010, when she welcomed us back. This time something was different. I was not alone in my memories.

A highly skilled team of deep divers once again toiled to load the boat with a myriad of scuba gear: tanks, dry suits, sophisticated wrist-mounted computers—so much gear that you might think they were going to the moon. I guess in a way they were. I would imagine that 318 feet of water is as alien to the human body as going into space. Our destination on this summer morning was Camp Jocassee for Girls, a magical place that had delighted young girls from all over the country. A steel bridge crossed the Whitewater River, marking the entrance into the



The gang that dove on the Camp Jocassee for Girls at Lake Jocassee, including (front left) former camper Anna Simon and former Jocassee Valley resident Debbie Fletcher (center).



The gate at Camp Jocassee for Girls is shown in this postcard (left) and a recent photo of the gate at right, taken recently by divers in Lake Jocassee (right). (Debbie Fletcher)

valley. Nestled at the foot of the bridge, the camp's stone pillars and white picket gates had greeted happy girls since 1922. The main house at the future girls camp was built by my Great-Grandfather, W.M. Brown, as the home in which he and his bride would start their family. As the children grew older, they built a Walhalla home that later became the Davenport Funeral Home. It still stands on Main Street and has gone through several metamorphoses over the years. Their Jocassee property remained in the family, and the house was later named the Whitewater Inn, a lovely seasonal hotel prior to becoming Camp Jocassee for Girls.

There had been other dives on the girls' camp since its location was discovered in the early 1990s. Bill Routh of Lake Jocassee Dive Shop and other divers, with the assistance of a side-scan sonar, had located the steel bridge. Jackie Smith and Charles Johnson were the first to dive the bridge and affixed a permanent downline, attached to a hidden buoy below the surface, for future divers to follow.

On this dive, though, two little Jocassee girls would share an almost sacred experience together. Their paths had crossed decades before, and their common love of that place drew them together.

One of my earliest Jocassee memories was listening for the sound of the horses coming down the dirt road from the girls' camp. Late every afternoon, a group of girls would ride past Attakulla Lodge, my family homestead that has also been located in 300 feet of water and regularly greets daring divers who come to visit. I was so enamored with the

# Memories of Camp Jocassee for Girls



t photo), probably taken in the 1950s. Compare that to the  
ee at a depth of more than 300 feet. (Photos courtesy of

idea of horseback riding. I'd scamper to the bank that overlooked the road and joyfully wave at them. They always waved back. Little did I know that decades later I would be swimming on top of the girls' camp with one of the horsewomen I had waved at many times before. Her name is Anna Simon, a reporter with *The Greenville News*. Anna and I connected through a picture she provided for the book *Keowee*. I wrote a random letter to her at the newspaper, and the connection began.

Anna had joined us on the boat the previous day as we dove on Attakulla Lodge, but her heart was full of anticipation as she thought of the girls' camp dive the next day. Anna spent five summers at the camp, and those memories are still as precious to her as the day they were made.

A deep dive requires a lot of preparation. It takes about an hour for the divers to don their gear, check instruments and gas levels (they breathe Tri-Mix, a combination of oxygen, nitrogen and helium), enter the water, pair up with a buddy and begin their five-minute descent to the bottom. After only 15 minutes of bottom time, they begin their typical two-hour ascent to the surface.

With two hours before the guys would return, Anna and I decided to take advantage of the cool water. The lake was perfect that day. It was warm, the sun was shining, the sky was a brilliant blue, the water was as smooth as glass, and the lake was practically deserted. I motioned to Anna to swim out to "the bubbles." As the divers exhale, their bubbles bring up 40-degree water. It's like swimming in a giant champagne glass. The feeling is exhilarating! A

temporary, fluorescent red buoy had been attached to the downline for this dive. Soon, it occurred to Anna to swim out and touch the buoy, so she dove down about 5 feet and held on jubilantly. She surfaced with a huge smile on her face, knowing that she had been touching the buoy that was attached to the line secured to the steel bridge, reconnecting her with her past. To have lost something very special in your life, then suddenly have a reconnection produces unspeakable, joyous emotions. I delighted in laughing with her, completely understanding how she felt. I feel the same way when we dive on Attakulla Lodge. I learned to scuba dive in 2005, and sometimes I follow the line down about 80 feet and wait for the guys to return. Holding the line and knowing I'm connected to my family home—although still 220 feet away—makes me happy. I feel like I'm home again.

Anna expressed in a simple paragraph her feelings about Jocassee: "The most amazing thing that impresses me is that Jocassee still weaves its spell...little girl campers and grown men divers, it doesn't matter. Jocassee is still a magical place. It warms my heart to know how much Jocassee means to so many of us...grown women now, with little-girl Jocassee hearts still filled with the wonder. We are so blessed. We ARE so blessed."

Anna still rides horses. I still just watch. (Debbie Fletcher is the author of *Whippoorwill Farewell: Jocassee Remembered*. For more information about the book, or to order a copy, visit [www.jocasseeremembered.com](http://www.jocasseeremembered.com).)



Campers from the Camp Jocassee for Girls wave from the steel bridge on the Whitewater River, a popular gathering place at the camp. This site is now underneath 300 feet of water in Lake Jocassee, but a recent dive at the lake found that the bridge is still in place.

# Predicting future impacts may help protect brookies

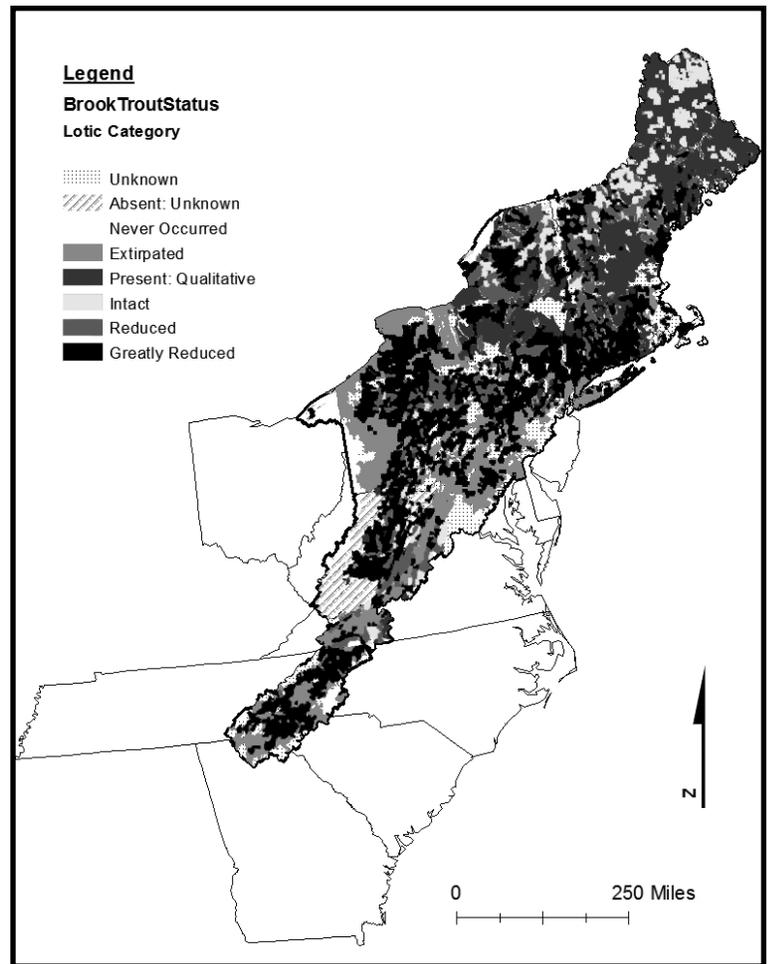
Research looks at effect that future climate and land use changes may have on brook trout and stream habitat

By J.T. Deweber

The feeling of catching a brookie while fishing in the Appalachians is hard to describe. Perhaps the best part is the knowledge that brook trout belong to these gurgling streams and the streams belong to the brook trout. The fish is a part of the landscape and the culture.

Unfortunately, many of streams that were once home to brook trout no longer support them, as shown by the widespread grey and red regions in accompanying map (Eastern Brook Trout Joint Venture 2005). I am sure that those familiar with the Jocassee Gorges area are aware that brookies are no longer as widespread as they once were. These losses are due to human land use practices, acid rain and the spread of non-native trout. In order to protect and manage brook trout populations, it is important to understand where impacts are likely to occur in the future. This is where my study comes in.

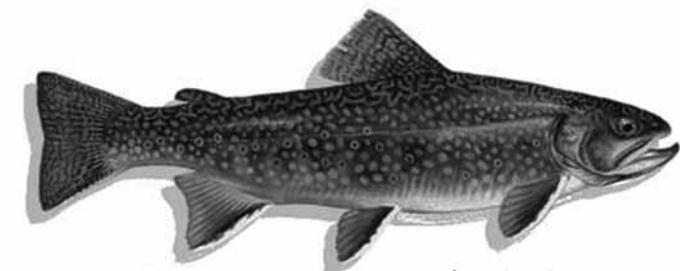
My Ph.D. project aims to predict the impacts that future climate and land use changes are likely to have on stream habitat and brook trout in its native range in the eastern U.S. Many brook trout streams already have temperatures that are nearly too warm for this species during the summer months. Since climate models predict warmer temperatures, it seems likely that many streams may become too warm due to climate change. Further, brook trout do not generally persist in streams when the surrounding land is converted from forest to other land uses. Land use changes and associated impacts on streams are likely to occur in the future and offer further challenges for the preservation of brook trout.



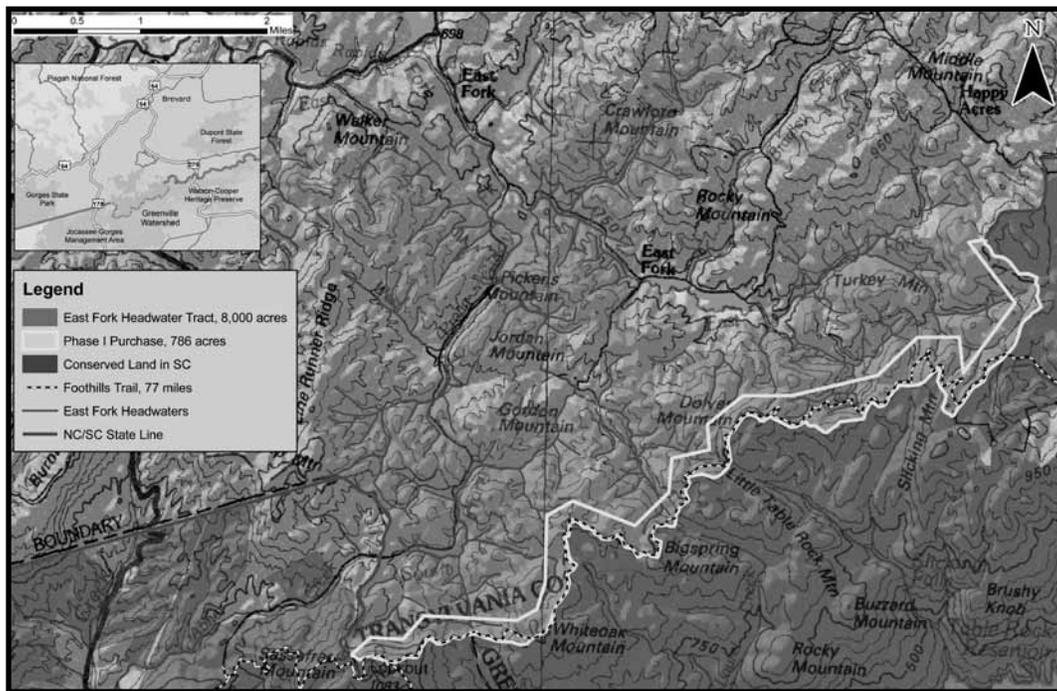
This map shows the status of the Eastern brook trout.

I will use climate and land use change models to predict where stream habitat is likely to become unsuitable for brook trout at multiple time steps between now and 2100. These predictions will be in the form of maps that can be used to help guide the management of brook trout throughout the region in the future. This study is funded by the U.S. Geological Survey and is part of a larger effort to understand what impacts climate and land use changes might have on stream and river habitat throughout the contiguous U.S. More information is available at <http://fishhabclimate.org/>.

(J. T. Deweber is a Ph.D. student at Pennsylvania State University in the Pennsylvania Co-op Fish and Wildlife Research Unit. He can be reached at [jtdeweber@gmail.com](mailto:jtdeweber@gmail.com).)



**Eastern Brook Trout**  
**JOINT VENTURE**  
A Fish Habitat Partnership



This map shows the protection of the last, unprotected portion of the Foothills Trail, which is also the first phase of efforts to conserve the entire 8,000-acre East Fork Headwaters Tract. (Map by Carolina Mountain Land Conservancy)

## Foothills Trail fully protected

Acquisition is first step toward possible protection of 8,000 acres in western North Carolina

The Conservation Fund recently announced the \$5.5 million purchase of a privately-owned 786-acre tract that represents the last, unprotected section of the storied Foothills Trail, which winds along the border between North and South Carolina. The support of Carolina Mountain Land Conservancy, a generous donation from Fred and Alice Stanback of Salisbury, N.C., and a \$1 million grant from the North Carolina Clean Water Management Trust Fund helped make this project possible.

By protecting this land for the State of North Carolina to ultimately purchase and manage, a corridor of conserved land will be established stretching more than nine miles along the crest of the Blue Ridge Mountains, including key headwaters of the French Broad River. The property sits adjacent to the 33,000-acre Jim Timmerman Natural Resources Area at Jocassee Gorges, acquired in 1998 with help from The Conservation Fund by the S.C. Department of Natural Resources.

Preserving this property is the first phase of a potential multi-year, multi-phase effort that is contingent upon support from state and federal conservation funding programs to protect a magnificent 8,000-acre property known as the East Fork Headwaters Tract.

The tract features diverse forests, waterfalls and bogs long prized by conservationists and currently owned by former Congressman Charles Taylor and his family. Protecting this entire expanse would ensure the land is publicly available for hunting, hiking and other outdoor pursuits accessible through the property's 100 miles of trails. The Headwaters Hunting and Fishing Club currently leases the property and manages it for hunting.

“By protecting a key nine-mile stretch of Blue Ridge crest followed by the longest yet to be protected stretch of the 77-mile Foothills Trail, The Conservation Fund has focused this first phase where the general public will get the most immediate use and good,” said R. Michael Leonard, vice chairman of The Conservation Fund board of directors. “Hikers will be out there enjoying the magnificent views along this ridge crest, and I wish that I could join them. We will also be protecting headwaters and rare plants and animals, but I am glad that this first step will provide immediate enjoyment to the people of North and South Carolina.”

“The completion of this initial Headwater acquisition is an exciting first step that conserves some of the most significant features of the larger tract,” said Kieran Roe, executive director of the Carolina Mountain Land Conservancy. “Due to the cooperation of the Taylor family and the generosity of public and private funders, a key link in the corridor of conservation along the Blue Ridge Escarpment is now permanently protected for the benefit of North and South Carolina.”



Eastern hemlock trees along the Whitewater River in the Coon Branch Natural Area have been protected by a re-treatment of insecticide made possible by a \$6,000 grant from the Duke Energy Foundation. The insecticide will help the hemlocks battle hemlock woolly adelgids, which, if left unchecked, will kill the tree. (DNR photo by Greg Lucas)

## Arborist enthusiastic about trees treated by Duke Energy grant

Coon Branch Natural Area trees were re-treated with insecticide to kill hemlock woolly adelgids

A North Carolina arborist who recently re-treated hemlocks for adelgids along the Whitewater River in Oconee County thanks to a Duke Energy Foundation grant of \$6,000 said most of the trees treated originally in 2008 look exceptionally healthy.

Of the 269 trees treated at Coon Branch Natural Area in 2008, only 18 had died, according to Will Blozan of Appalachian Arborists in Asheville, N.C., whose company completed both the 2008 and 2010 hemlock woolly adelgid treatments. The hemlocks were treated by soil injection with insecticides that will be taken up by the trees' vascular systems, hopefully killing the adelgids. Without the treatments, the hemlocks would likely die within the next two to four years.

The 2008 original treatment of the hemlocks was funded by a \$10,000 grant from the Duke Energy Foundation. It was the first-ever forest application of the fast-acting Safari insecticide, which had just been approved for use in South Carolina under a special local needs label. Blozan said based on the number of hemlocks that have survived and the lush new growth,

it appears that the Safari application was an unqualified success.

The Coon Branch Natural Area Trail is a spur trail of the Foothills Trail, a 77-mile trail between Oconee State Park and Table Rock State Park. Coon Branch Natural Area, accessed through Duke Energy's Bad Creek Hydro Project, is owned by Duke Energy and is part of the Jocassee Gorges lands that Duke placed under conservation easement.

The Duke Energy Foundation is the entity that distributes Duke Energy's charitable contributions. Through the Duke Energy Foundation, the company is able to exemplify its commitment to the communities it serves by providing funding to eligible organizations with programs that

support education, community vitality and a competitive work force.

The Harry Hampton Memorial Wildlife Fund facilitated management and disbursement of funds from the grant given by the Duke Energy Foundation for the hemlock treatment. The Hampton Fund, headquartered in Columbia, receives private funds to assist in educational and other endeavors designed to contribute to the conservation and protection of the wildlife, marine and other natural resources of the State of South Carolina.

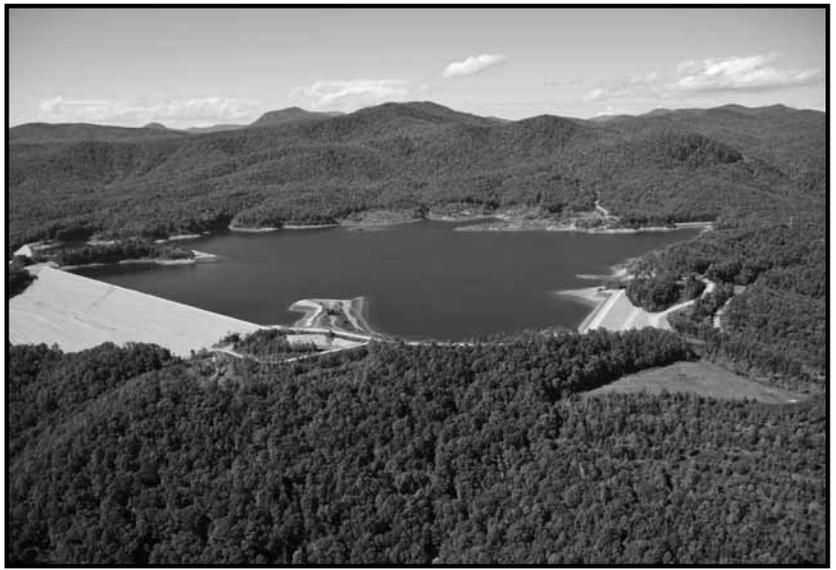


# Bad Creek celebrates 20 years of operation

It's hard to believe, but Duke Energy's Bad Creek Hydroelectric Station is celebrating 20 years of operation this year.

Bad Creek is a 1,065-megawatt pumped storage facility located eight miles north of Salem in Oconee County. Construction of the facility began in 1981 and electricity generation began in 1991. Duke Energy uses Bad Creek primarily during peak electricity demand times, typically on cold winter mornings or hot summer days. When demand is not as high, usually during nights and weekends, the water is pumped back from Lake Jocassee, the station's lower reservoir, into the upper reservoir. This pumping uses the water over and over again, basically acting like a rechargeable battery.

Bad Creek is large enough to power up to



**Aerial photo of Bad Creek Pumped-Storage Hydro Station in northern Oconee County. This year marks the 20th year of operation for Bad Creek. (Duke Energy photo)**

350,000 average-sized homes for about 24 hours and plays a tremendous role in providing safe, reliable electricity to Duke Energy's customers.

## Jocassee Hydro upgrade going well

The upgrade at Duke Energy's Jocassee Pumped-Storage Hydro Station is progressing on time and on budget. Unit 1 and 2 turbines are being upgraded, which will improve efficiency and increase each unit's capacity by 25 megawatts. The project recently reached an important milestone—the installation of Unit 1's runner, the component of the turbine that is turned by water's powerful force. Now Unit 1 is being reassembled, and Unit 2 will follow in the coming weeks.

More than 32,828 work hours and 55 construction personnel contributed to this project through the end of 2010. Duke Energy expects the upgrade to conclude in late May, with testing to begin in early June.

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.



**Jocassee Hydro Station Unit 1 runner being installed. (Duke Energy photo)**

## Keowee-Toxaway relicensing underway

Duke Energy formally initiated the relicensing of the Keowee-Toxaway Hydroelectric Project in March with its filing of the Pre-Application Document and Notice of Intent to relicense with the Federal Energy Regulatory Commission. The submittal of these two documents starts a relicensing process that will extend more than three years until Duke Energy submits the license application in August 2014.

The Keowee-Toxaway Project includes Jocassee Pumped Storage Station and Keowee

Hydro Station. The Keowee-Toxaway Project was originally licensed in 1996 and its current license expires in 2016. Duke Energy began working with the community on the relicensing effort in 2009. There are currently eight different teams of scientists, engineers and community stakeholders working with Duke Energy on the relicensing effort.

For more information about Keowee-Toxaway relicensing, visit the relicensing website at [www.duke-energy.com/lakes/keowee-toxaway-relicensing.asp](http://www.duke-energy.com/lakes/keowee-toxaway-relicensing.asp) or email [ktrelicensing@duke-energy.com](mailto:ktrelicensing@duke-energy.com).



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John E. Frampton, Director

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For information on subscribing to the Jocassee Journal contact:

Greg Lucas, DNR

311 Natural Resources Drive  
Clemson, SC 29631-3253

Phone: (864) 654-1671, ext. 22

Fax: (864) 654-9168

e-mail: [lucasg@dnr.sc.gov](mailto:lucasg@dnr.sc.gov)

website:

[www.dnr.sc.gov/managed/wild/jocassee/index.htm](http://www.dnr.sc.gov/managed/wild/jocassee/index.htm)

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# New wildflower book takes ecological approach

Clemson University botany professor's book, a habitat approach to identifying plants and interpreting nature in the Carolinas, Virginia, Tennessee and Georgia, to be published by UNC Press in May

This richly illustrated field guide serves as an introduction to the wildflowers and plant communities of the southern Appalachians and the rolling hills of the adjoining piedmont. Rather than organizing plants, including trees, shrubs, and herbaceous plants, by flower color or family characteristics, as is done in most guidebooks, Clemson University botany professor Tim Spira takes a holistic, ecological approach that enables the reader to identify and learn about plants in their natural communities.

This approach, says Spira, better reflects the natural world, as

plants, like other organisms, don't live in isolation; they coexist and interact in myriad ways. Full-color photo keys allow the reader to rapidly preview plants found within each of the 21 major plant communities described, and the illustrated species description for each of the 340 featured plants includes fascinating information about the ecology and natural history of each plant in its larger environment.

With this new format, readers can see how the mountain and piedmont landscapes form a mosaic of plant communities that harbor particular groups of plants. The volume also includes a glossary, illustrations of plant structures, and descriptions of sites to visit. Whether you're a beginning naturalist or an expert botanist, this guidebook is a useful companion on field excursions and wildflower walks, as well as a valuable reference.

For more information about the book and how to order, visit [www.uncpress.unc.edu](http://www.uncpress.unc.edu) or call 800-848-6224.

