



Friends of Steele Creek Nature Center and Park

Knobs and Knolls

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Meet Our Naturalists, Part 2: Behind the Scenes with Don Holt

Steele Creek Nature Center Part-time Naturalist

By Michele Sparks

(This is the second of three articles featuring the Naturalists that work at The Nature Center. The series will continue in the next issue of Knobs and Knolls.)

If you've had the chance to take a leisurely nature hike with Park Naturalist Don Holt, you already know that he takes his time to share a broad, expert knowledge of many facets of nature with a few historical anecdotes thrown into the mix. But when he's not leading nature walks to find butterflies, dragonflies, birds, or damselflies, you'll find Don "behind the scenes" at the Nature Center keeping the aquatic animals happy and healthy in their new tanks.

MS: You certainly have a well-rounded education. Did you have some early influences to get you so interested in so many areas of nature?

I'd have to thank some of my early professors of the late 70's and early 80's at ETSU for their valuable input. That would include Dr. Fred Alsop and Dr. Jerry Nagel, both of the Biological Sciences. Dr. John Nagel began butterflying in the late 80's and started the Roan Mountain Butterfly counts. He turned that over to me around 2000. Also, Dr. John Warden, the botanist (for whom the John C. Warden Herbarium at ETSU was named) was an excellent teacher.

I had many mentors. First would have to include Freddie Behrend who started the Roan Mountain Naturalist Rallies. We met accidentally when I saw him taking pictures of wildflowers with one of those vintage Rolleiflex cameras that you'd have to look down into. I was about 13 years old and I stopped and talked to him because I was interested in both wildflowers and



Don Holt talks with Michele Sparks

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Don Holt (continued)

photography. He was very helpful and told me about the Naturalists' Rallies on Roan Mountain and how I should attend. I got my Dad to take me there and it turned out that my Dad actually knew Freddie and he would drop me off and I would spend the whole day with him for the many years that I attended those rallies. Freddie was also one of the founding members of the Elizabethton Bird Club along with Lee Herndon. He really opened my eyes and told me, "You know, you can learn anything that you want to if you just read about what you are interested in." So, with Freddie, I realized there's a whole culture of folks doing the very things that I was interested in and that I could get support from them.

Another big influence for me was Wallace Coffey. Wallace was my introduction to the greater bird-watching community. Wallace was a great storyteller and I learned through him that the inquiring spirit of the naturalist was the way to go. He had so many local stories of important naturalists who made big impacts on the environment and such. The biology that Wallace spoke of was just as important as the stories of the people who impacted wildlife, studied plants, understood the geology, and all other aspects of the natural history of our area. For example, Wallace told me about the importance of that Peregrine Falcon over there. [As you walk in the front door of the NC, there is a taxidermied Peregrine Falcon on the wall]. It's an extinct juvenile, eastern subspecies from the 1920's before DDT was introduced to the environment. The eastern breeding population was wiped out by the early 1960's primarily due to DDT.



Peregrine Falcon at the Nature Center

Wallace told me the story about a local egg collector who had in his collection egg shells that existed "before" DDT was introduced as a pesticide. Scientists were able to use those shells and compare it to egg shells "after" DDT to help prove the estrogen-mimic problem affecting the eggshell thinning. It helped confirm the theory that DDT was hurting the raptor population and if it could do that to birds, it might also do that to humans. The human breast milk that was tested at the time was higher than the amount allowed for human conception in cows' milk. The local egg collector played an important role in the understanding of the harmful effects DDT had on the global environment. So, as is true of most of us, I can always think of an interesting plant or bird with an interesting person. Former teachers and mentors can extend your knowledge by sharing interesting stories and important discoveries.

MS: Where was your first naturalist job?

DH: *That would be the Cedar Creek Learning Center in Greenville in the late 80's and 90's. My brother Jim worked there. CCLC was looking to replace someone who was leaving. He convinced me to do a few science experiments with their summer campers so, between the experiments, caving, hiking, and canoeing, I decided to stay on with the school-year program. After that job, I came to Steele Creek Park the first time from 2000-2002 when Kevin Hamed was manager. I learned a lot from Kevin, especially about the extraordinary local diversity of this area. Then I took a job at the 4-H Camp in Greenville for about 12 years before coming back to Steele Creek Park again.*

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Don Holt (continued)

MS: What were your favorite books growing up?

DH: I loved the adventure books of Earnest Thompson Seton. He wrote "The Birch Bark Roll" and was one of the founding pioneers of Boy Scouts of America. He was from a time and culture of long ago. "My Side of the Mountain" was also one of my favorites since it was about a young boy's survival in the natural world who finds a baby falcon and had survive and make his way in the wilderness of the mountains. I liked any books that had to do with interacting with animals.

MS: What steps do you have to take to maintain Snappy's 300 gallon tank and the other eight tanks comprising the live aquatic species here at the Nature Center?

DH: The hardest part about cleaning the tanks is maintaining a steady focus all the time you are working on them. First, each tank gets drained, then you have to vacuum all the stuff off the bottom because some of it stays very low, then scoop all the stuff off the very top that floats up high and then, scrape the inside of the glass. The filters catch most the stuff in the middle, but they too need to be cleaned every month. So, one job rotation involves vacuuming the gravel, scooping the top, scraping the glass, and refilling the tank and being extra attentive to not walk off and do something else while it's filling up. Do that and it's very easy to have an overflow. A whole other day involves just cleaning the filters. Cleaning the filters takes about an hour and a half. The big tank alone takes a couple of hours, so I'll try to get a few others done all within a 6 hour day. It's a job you can't stop in the middle of easily.



Don cheerfully cleaning Snappy's tank

Since I just finished vacuuming all the tanks 2-3 weeks ago, it's now time to clean all the filters. Then, you start all over again on the rotation. It may take 6 hours just for Snappy's big tank with a second person needed to distract him (so I don't lose a finger). It takes just about as much time for the rest of the tanks. Our facility is rather unique in that it allows you to get up close and personal with the aquatic animals and that's a good thing. It's fun work nevertheless and I enjoy the technical challenges. But, up the road I hope we can make some real improvements on how we filter the water and clean the tanks. I've had a lot of experience along the way and done a lot of research taking care of turtles and tanks and learning how to keep turtles healthy. I don't know of any place you can just "go and learn" how to do it, so training someone to help who is technical minded and pays attention to detail would be ideal. More manpower would be a great help in maintaining a monthly routine. I'm always playing catch-up since I only work 25 hours a week and I'm the only one who does this.

MS: Where would you like to see the future educational programming of the Nature Center going?

DH: My main goal for kids would be to influence the adults they become. Get them started on a path to get them to make reasonable decisions about the real world. Finances; scary stories in the news; violence; that's not the real world. The real world is what's here before WE were here. It's connecting to what we were always a part of, the DNA of all things. Some people say what's the use of this thing or another? What developed them is what developed us and it's all one thing.

And a couple more things that you may not know about Don

Lately, he's been watching bird cams from all over the world on YouTube, so he can see birds in Japan over a cup of coffee. He is also getting interested in learning more about *Photuris lucicrescens* (Fireflies) There are more than 2,000 species of them. And that's just what he likes: always learning something new.

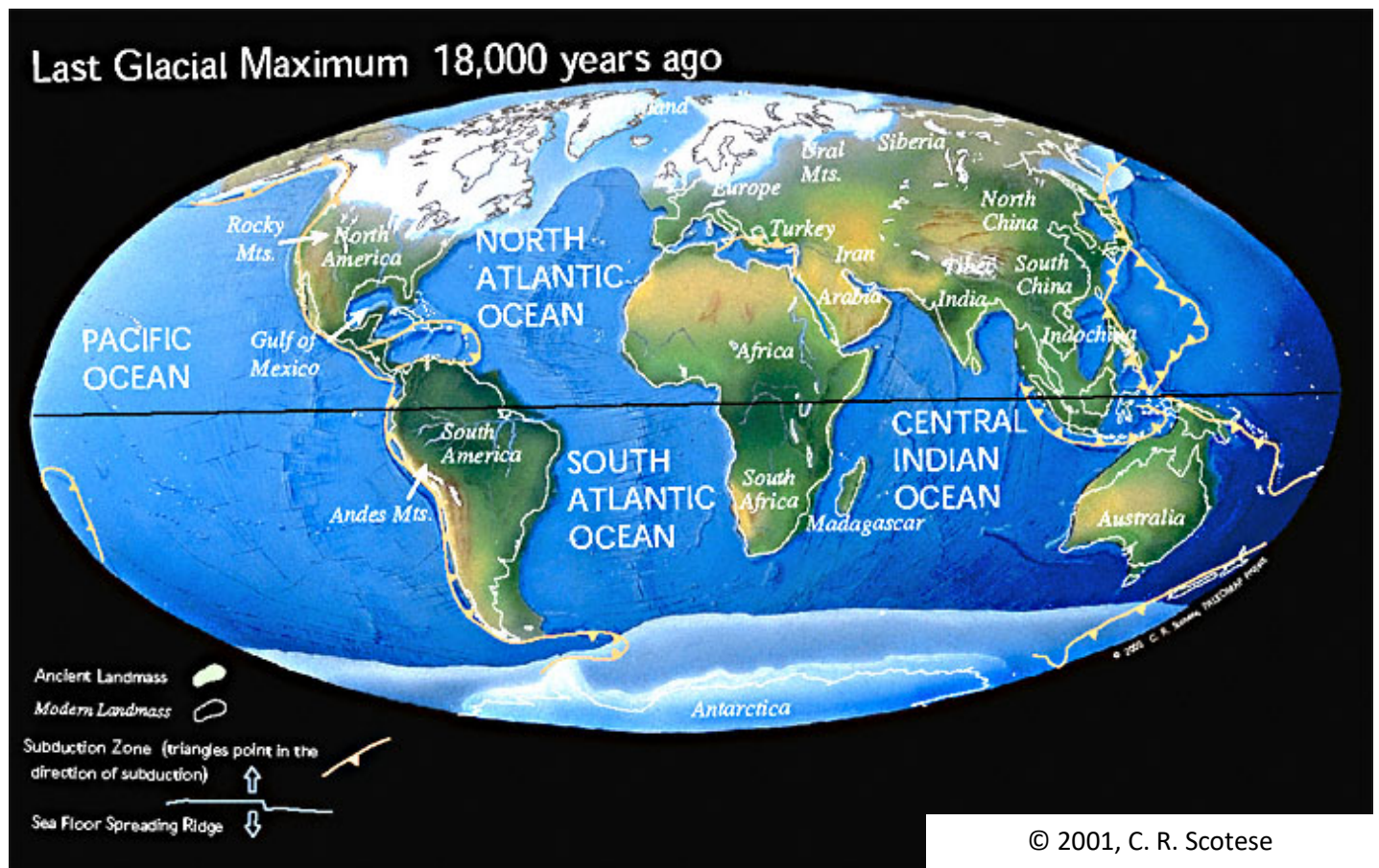
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The Ice Age in Steele Creek Park

By Jeremy Stout

There seems to be a lot of confusion in the popular media about what and when the “Ice Age” was. No, the Ice Age didn’t kill off the dinosaurs. The Earth wasn’t a giant snowball spinning through space. And the Equator was still tropical.

What we call the Ice Age is actually a geologic time unit known as the Pleistocene Epoch, which began approximately 1.8 million years before present and ended about 10,000 years ago. Temperatures during this time fluctuated but at its coldest (during the Last Glacial Maximum), the global average was probably only 5° to 7° Celsius colder than today.



Paleomap provided by: Scotese, C. R., 2001. Atlas of Earth History, Volume 1, Paleogeography, PALEOMAP Project, Arlington, Texas, 52 pp.

But even a few degrees make a big difference. The glaciation and permafrost in North America extended south to what is now Iowa and Pennsylvania, which in turn, pushed the boreal forest ecosystem (also known as Taiga) farther south into our region. The topography of Steele Creek Park would look much the same, but the forests would look more like those found on Mount Rogers or Roan Mountain today!

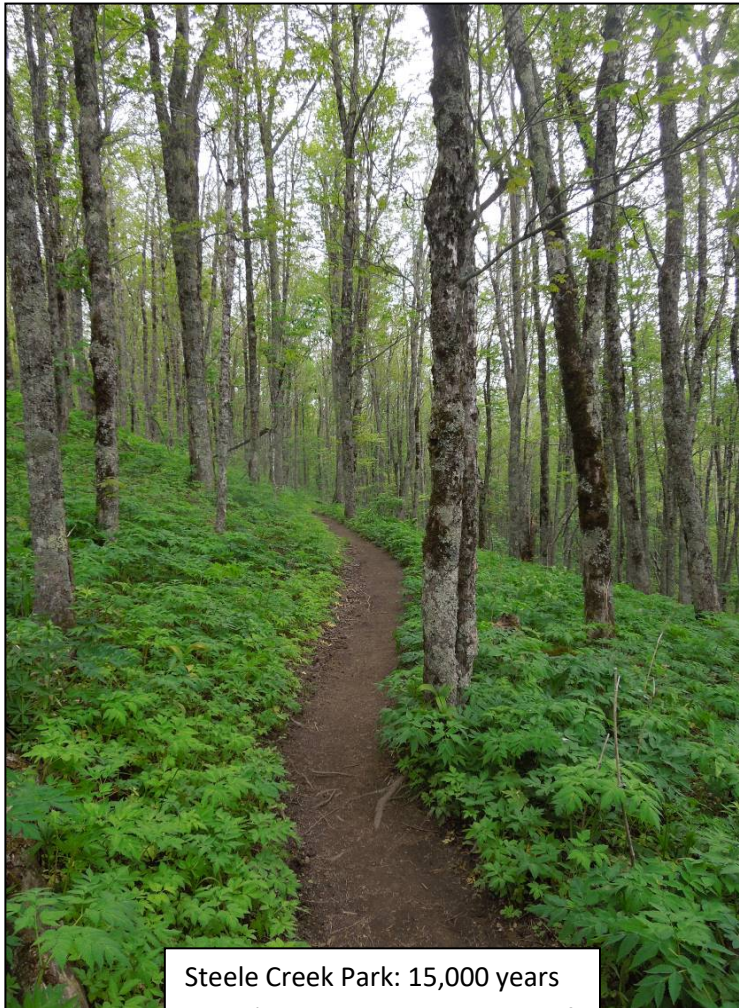
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The Ice Age in Steele Creek Park (Continued)

And the animals were even stranger! Hiking in Ice Age Steele Creek Park, signs of raccoons, bobcats and grouse would be common (just like today), but so would jaguars, caribou, and elephants!

In Bristol and Blountville, remains of mammoth, mastodon, dire wolf, giant beaver, tapir, extinct armadillo and giant peccaries have all been found! In Steele Creek Park, several locations have yielded fossil and subfossil remains and are currently being studied by Nature Center staff.

But perhaps the most intriguing part of the story is set in the modern-day, specifically, the role of past environs on today's landscape. Though the megafauna have mostly gone, Steele Creek Park still occupies a liminal space in the Southern Appalachians where both northern and southern plants and animals occupy the same space. Some surviving organisms from the last Ice Age can still be found thriving in the Park and ghosts of species-past still haunt the Steele Creek forests (if you know where to look for them)!



Steele Creek Park: 15,000 years ago! (Or, Roan Mountain Massif today). Photo by J. Stout.

Much more on this topic will be explored with upcoming exhibits making their way soon to the Nature Center! Thanks go to Friends and the many donors who have made the expanded Nature Center possible and continue to bring new educational displays to Steele Creek Park!

Upcoming Nature Center and Park Events

Saturday, April 21, 9:00 am - Noon -- Earth Day Lake Cleanup!

Join park staff and the Friends of Steele Creek Nature Center and Park at the Nature Center for a clean-up of our park! Bags, gloves, and refreshments will be provided.

Saturday, May 5, 5:00 pm -- Mammals and Animal Tracking

Meet Lance and guest naturalist Ron Peery at the Nature Center classroom for a short talk on our region's furry friends; then take an easy walk looking for the signs they leave behind.

Friday, May 25, 4:00 pm -- Spring Butterfly Foray

Meet Don at the Nature Center for an easy hike looking for these warm-weather gems of the skies. Bring a camera if you have one!

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Friends Annual Membership Meeting – Saturday, May 12

Friends of Steele Creek Nature Center and Park will hold its annual membership meeting on Saturday, May 12th at 1:00 pm in DeFriece-Wilson Classroom located on the lower floor of the new addition of the Nature Center. The meeting is open to the public and all members are encouraged to attend. Light refreshments and tours of the new building will be available beginning at 12:30 pm.

Our program this year will be a special presentation on honeybees and our plans to establish an educational apiary at Steele Creek Park.

Official business to be conducted at the meeting includes the following:

Determination of Board size for 2017-18 and election of new Board members with terms to begin 7/1/18.

Additional agenda items include a review of the past year at the Park, and an update on the Nature Center Expansion Project and fundraising efforts.

Attendees will have an opportunity to tour the new addition at the Nature Center, and to hear about additional exhibits that will be installed in the future. Please plan to join us for this exciting and informative event!

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2018 Summer Nature Camps

All camps operate from 8:30 am until noon, Monday – Friday. The registration fee is \$60 (\$50 if paid before May 25th) and includes a T-shirt and all materials for the camp. Partial camp scholarships are available upon need-based request. Space is limited so register today!

Register and pay online at bristoltn.recdesk.com

Paleontology Camp - Rocks, fossils, dinosaurs, and the processes that preserve them will be the focus of this camp. Children will be introduced to Earth history through a variety of programs, hikes and field work. Participants will also get to take part in an actual fossil dig!

Ages 7 - 9 June 4th - 8th

Aquatic Ecology Camp - Streams, creeks, wetlands and the lake at Steele Creek Park offer unique habitats to explore, and unique creatures that thrive there. This camp explores all of the freshwater habitats the park contains!

Ages 10 - 12 June 11th - 15th

Nature Photography Camp – This camp offers kids the skills and opportunities to capture astounding images from Steele Creek Park. Each day will be a new technique and new opportunities for great shots! No camera? No problem - we have cameras to loan to all participants during this camp!

Ages 10 - 12 June 18th - 22nd

Web of Life Camp – This camp allows children to experience the diversity of nature through immersion and fun. The camp focuses on the different habitats of Steele Creek Park and the plants and animals found in each. Campers will travel to distant reaches of the park and make new discoveries all along the way!

Ages 7 - 9 June 25th - 29th

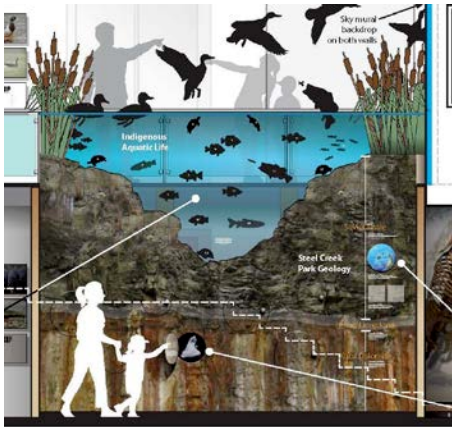
Insects and Creepy Crawlies Camp – From the beautiful, to the weird, to just plain gross, this camp will explore the invertebrate world in Steele Creek Park! Stream sampling, butterfly watching, forest walks, and log rolling are just a few of the activities campers will participate in. We will also learn what important jobs these creatures do in Nature while also learning proper field guide and binocular techniques!

Ages 7 - 9 AND 10 - 12 July 16th – 20th

For more information, call the Nature Center at 423-989-5616, or email jstout@bristoltn.org

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Status of Nature Center Exhibits Yet To Come

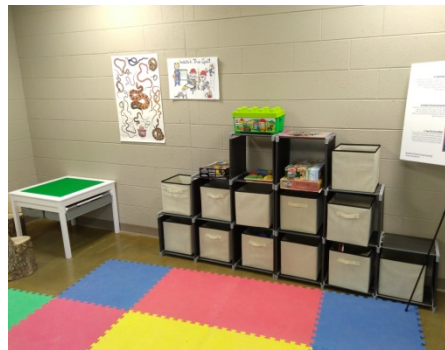


Geology Wall Design Graphic

Work has begun on the Interactive Geology Wall Exhibit to be located directly across from the Crawl Through Cave on the lower floor of the new Nature Center. This display, made possible through a generous donation from the Blue Stocking Club, will connect with the Waterfowl/Lake Exhibit above. It will provide a unique, hands-on demonstration of the geology of Steele Creek Park and the surrounding region. We anticipate that it will be completed by early June.



We continue to expand activities available for young children in the Kid's Zone, located on the upper floor between the main exhibit gallery and the Waterfowl Exhibit. We hope to add an interactive wetlands ecosystem wall in the near future.



The current Kid Zone. Imagine this space with an additional interactive wetlands ecosystem on the main wall!

Major exhibits still on the drawing board that await funding include the Crawl-in Beaver Lodge, Giant Sloth Skeleton, Park After Dark Exhibit, and Native Plants Display.

This summer, we anticipate that work will begin on renovation of the original Nature Center building. Once this work is complete, we will have two new multipurpose galleries to be used for seasonally rotating and travelling exhibits. In addition we will have a small library and lots of room for Nature Center staff and researchers.

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You can keep up with what's going on at the Park and with *Friends* by liking us on Facebook (Friends of Steele Creek Nature Center and Park) or by following our webpage at <https://www.friendsofstelecreek.org>.

We appreciate feedback about our communication. Let us know if you find these newsletters interesting and/or useful. If you have suggestions for topics to be covered, or other formats that we could use, let us know by e-mail at mail@friendsofstelecreek.org.

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