



By Mike Stine

Discovering The World Around You

If you are like me, you often go to a park for a specific reason and miss out on other things the park has to offer. If you go to Wes Skiles Peacock Springs State Park only to dive, you won't fully appreciate the diversity of habitats and plants found there. Walking the interpretive trail will give you a greater understanding of ecosystems both above and below the ground.

One of the things I like about diving in a cave on a regular basis is seeing how the cave changes over time. Walking the trail during different seasons offers the same experience. In the winter you'll notice that the forest seems a lot more open because the deciduous trees and shrubs have shed their leaves. If you look into the tops of trees it is now very easy to spot mistletoe. It appears as green balls of foliage on otherwise naked branches. Mistletoe has long been associated with winter holidays and the Christmas season, but if using it for decorations remember that all parts are poisonous and should be kept out of the reach of small children.

I like to tell visitors to the park that there is a lot of topography; it's just very subtle. While you will find only 30 feet of elevation difference within the park, it makes a big difference. Like the cave below, the land is also shaped by water. The trail starts near Peacock I and this bottomland forest is subject to frequent flooding. There you will find laurel oak, live oak and loblolly pine.

If you venture down Peacock Slough, you would find many species of plants classified as obligate wetlands, meaning they are only found in wet areas. Baldcypress, buttonbush and swamp privet are common there. Plants in this part of the park can tolerate frequent flooding, often for extended periods of time, even during the growing season. Flooding is important because it feeds the soil with many nutrients transported and deposited by floodwaters, and removes species that have established themselves during dry periods but are intolerant of standing water.

As you walk along the trail you will enter an upland forest, and in this part of the park you'll see an impressive number of Florida maples. The area around Orange Grove has some exceptionally large examples, and protection of this stand of trees is one of the reasons the park was established. During major floods this part of the park may be inundated, but if this was a frequent occurrence, many of the plants there could not survive. In future columns I'll be pointing out what's flowering, and other happenings along the trail.

Interpretive Trail Update

The state has provided us with the first editorial feedback for the Cultural/Historical kiosk – the first step in getting final approval. This is good news! Four new sponsorship plaques will be added soon to the trail, affixed to directional "line arrow" posts. These are dedicated to "Bill Rennaker," "Cathy Lesh," "In memory of Bonnie Cotier" and "In honor of our Veterans." We would like to invite you to walk the trail and see these new additions coming soon!

ECO-DAY At Madison Blue

By Sandy Robinson

Join us for the 3rd Annual Eco-Day at Madison Blue Springs State Park on March 9th. Plan to meet between 8:30 and 9:00 AM for a half day of work. There will be jobs large and small, so there is something for everyone to do! Afterwards there will be burgers and dogs on the grill. If you can, stay a little longer to relax or make a dive and win a few door prizes!



Over the past two years, volunteers ranging in age from preteen to 80 have helped the NESA and the National Association for Cave Diving clean up and maintain many of our favorite parks. Repairs and improvements have included painting the restrooms, installing tank benches, picnic tables, grills, and trash cans, filling potholes, pressure cleaning steps and general cleanup.

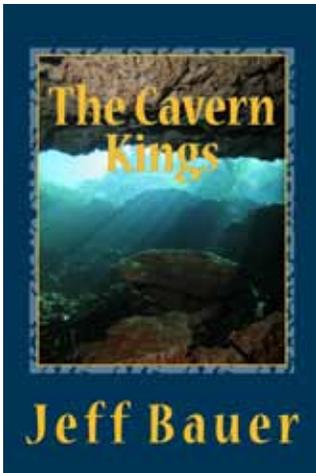
During the current economic environment, our parks have seen a reduction in funding so this is a great way to keep the parks clean and maintained. Park management is most appreciative of our ongoing efforts.

How Do Florida's Water-Filled Caves Grow?

By John Enzell

Many divers have probably noticed the instruments and small limestone blocks hanging in Madison Blue and Peacock Springs. These objects are part of an effort by a University of Florida team to better understand cave expansion when rising river levels force river water into the spring system. As divers know, river water intruding into caves has much higher levels of organic matter than the cave water, hence its dark color. As a result, this water is more acidic than normal cave water, which leads to dissolution of the limestone that makes up the walls of the caves. Fortunately for the cave diving public, these spring reversals occur infrequently, perhaps once or twice a year, but they appear to be the major process leading to expansion of the caves. Our preliminary results suggest that the rates that limestone dissolves during floods may be as much as 10,000 times faster than during normal flow periods.

These estimates are based on data collected by the instruments installed in the caves. These instruments continuously measure the characteristics of the water including its temperature, specific conductivity, pH, dissolved oxygen, and more. We also collect samples from karst windows, springs, and the river to determine the chemical composition of the water (major ions, alkalinity, dissolved organic and inorganic carbon, etc.) both during reversals as well as during normal flow conditions. These data sets are combined with geochemical models to estimate how fast the cave is expanding and amount of dissolved solutes that enter and leave the spring system during and after the reversals. In an effort to check the model estimates, we have suspended limestone blocks, with precisely known weights, in the cave systems for varying lengths of time. Once these blocks are removed, they will be reweighed to determine how much of each block dissolved. If the model calculations are correct, the blocks should dissolve at the same rate as the cave walls. Although the project is not yet complete, these data should help us better understand changes in local hydrology, local landscape evolution, and estimate how long it took the caves to form.



The Cavern Kings

By Jeff Bauer

"The Cavern Kings" is piece of fiction written by NFSA member Jeff Bauer.

Q: Can you tell us about the book you have written?

A: The book is a fictional account of a team of young open water divers, lead by a divemaster named Josh, who poke their heads into a cavern one day without proper training and barely make it out before running out of air. They decide to take a cavern class against the desires of Josh's girlfriend and dive shop owner boss. The rest of the plot centers around the trials and tribulations of the class and how Josh navigates his personal and professional life while learning how to navigate in a cavern.

I've noticed that there's plenty of non-fiction books about technical and cave diving but not that much fiction and very little, if any, that accurately describes our beloved environment and the nuances of diving in them.

The strongest theme of the book is the need for proper training to dive in the overhead environment. I was careful to not make the class portion of the book too preachy and think I have a nice blend of story telling and details about our world of cavern/cave diving. So far the book seems well liked by the cave divers that have already read it. Of course there is drama and bad things happen but my hope is that I can reach out to a larger community of people who aren't divers that could learn about our environment in a way that educates and doesn't sensationalize or demean our sport.

Q: Our members are partial to the springs we support, how does the book center around these places?

A: A tip you often hear for new authors is to "write what you know." Many of the locations, especially the dive sites, are actual places in north Florida that we all know and love like our back yards. The locations include Jackson Blue in Marianna, the Ginnie Ballroom and Orange Grove Sink at Wes Skiles Peacock Springs State Park and a lot of time is spent describing these places both above and below the waterline.

I was careful to capture the environment and feel of these locations, especially the solitude and peace at Orange Grove as contrasted with the more commercial busy feel of Ginnie. I really, though, tried to focus on describing the sights, sounds and sensations of actually diving in the beautiful underwater caverns through the senses of divers who are new to this world.

Q: How can someone buy a book?

A: The book is available via hard copy and Kindle edition at Amazon.com. It's also available for the Nook at barnesandnoble.com and in iTunes for the iPad. Just search for "The Cavern Kings."