



Citizen Support Organization
Protecting And Improving North Florida
State Parks Since 2001.

*If you would like to contribute
to the quarterly newsletter,
please send submissions to:
editor@northfloridaspringsalliance.org*

NFSA WEBSITE

Follow what's happening with
current projects, get contact
information to help participate in
upcoming work days and mark
your calendar for our annual
workshop!

NorthFloridaSpringsAlliance.org

NFSA Parks:

Wes Skiles Peacock Springs State Park
Troy Spring State Park
Madison Blue Springs State Park
Lafayette Blue Springs State Park
Suwannee River State Park

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Be sure to check out our new
website for donation opportuni-
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and to keep up with how we are
supporting your favorite Florida
state parks!

NorthFloridaSpringsAlliance.org

JOIN TODAY or
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Please go to:
northfloridaspringsalliance.org/



Peacock I circa 1985 - before the
steps.
Photo by Pete Nawrocky

1st Quarter 2017



Alliance News



Photo by Alan Lupsha

Work Has Begun At Peacock I Many Thanks To Our Awesome Volunteers!

The NFSA is rebuilding the steps and changing rooms at Peacock I spring in Wes Skiles Peacock Springs State Park.

See page 6 for the full story.

President's Corner

By **Mike Stine**

Greetings!

The NFSA is off to a great start for 2017. The development of signs for the interpretive trail at Lafayette Blue Springs State Park is well underway and it should be completed by early summer. Eco-Day at Madison Blue Springs State Park was a tremendous success this year with an excellent turnout and the completion of multiple projects. Our Fauna Count Committee has completed several counts in the first quarter, despite some late winter flooding, and work has begun on construction projects at Wes Skiles Peacock Springs State Park. All of these accomplishments are only possible through the donation of time and money from our members and friends of the North Florida Springs Alliance - thank you!

If you are interested in joining the NFSA or donating to any one of our projects, please go to our website at www.NorthFloridaSpringsAlliance.org.

Featured Contributors



Mike Stine
The Nature of Things

With degrees in Forestry and Genetics, Mike spent most of his career teaching forestry and wildlife classes at Louisiana State University and conducting research on longleaf pine and applications of genetics to resource management. The combination of a love of longleaf pine ecosystems and cave diving make living in North Florida a natural fit and Mike and his wife Bonnie to have been residents of Monticello, Florida since 2008.



Dr. Thomas R. Sawicki
Amphipods

Dr. Thomas R. Sawicki is an Assistant Professor of Biology at Florida A&M University. His research focuses on the ecology of anchialine and freshwater caves and the systematics of macrocrustaceans that live in these environments, particularly amphipod crustaceans.



Jacqui Sulek
Winging It

Jacqui has been with Audubon, Florida Audubon for 11 years. As Chapter Conservation Manager for Florida she coordinates the 45 Florida Audubon Chapters from the Panhandle to Key West. At the same time, Jacqui volunteers as the Conservation Chair of her local Audubon Chapter. Degreed in fine arts and landscape design, Jacqui is well traveled and has had a variety of careers including Park Ranger, Executive Chef, and Yacht Captain.



Kelly Jessop
Counting Critters

Kelly has a deep appreciation for the Florida parks' system and was a founding member of the Peacock Springs Committee, now the NFSA. As an avid cave diver, he came to appreciate the cave ecosystem and developed a method for doing fauna counts. His team has been collecting and analyzing data from numerous springs for 12 years. Cave exploration doesn't end with discovering passages, but starts with understanding these poorly understood ecosystems.

Fauna Count Update

By Kelly Jessop

We have been performing fauna counts during the 1st quarter of 2017, which has been challenging due to some flooding early in the year caused by heavy rains in South Georgia. Regardless, we were successful in completing the counts. Our most exciting news is that, in conjunction with Adam Hughes' resurvey of the Green Sink Cave System at Lafayette Blue Springs State Park, we have resumed fauna counts there and added water quality surveys.

This system experienced a protracted period of visibility of less than 10 feet, which is less than optimal for doing fauna counts. But due to a dry period, data collection is now possible. We found a good diversity of species, and water quality was found to have pH 7.52, dissolved oxygen 2-3%, conductivity 450 uS. Interestingly, we checked out a couple of water source tunnels that feed the system and found a dissolved oxygen of .4% in one tunnel. In this area in the past we have seen large populations of crayfish, which suggests this may be a safe haven from predators that can't tolerate such low dissolved oxygen content. We wish to thank Nestlé Waters North America for a recent donation to our fauna count/water quality survey program. The equipment we use is costly due to the need for calibration chemicals and other routine maintenance.



Blind cave crayfish - *Procambarus pallidus*.

Photo by Tom Morris.

NFSA Swag!

Be sure to pick up a copy of our coffee table book of photography, *A Watery Wilderness*, or grab one of our great tee shirts for the gifts that keep on giving!



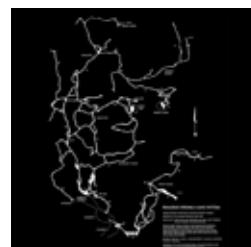
WSPSSP, A Watery Wilderness



Duckweed Tee S-XXL



Grim Reaper Tee S-XXL



Peacock Map S-XXL

Shop online at our NFSA store: www.northfloridaspringsalliance.org/shop.html



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Kelly Jessop
Director At Large
Fauna Count Committee

Vacant
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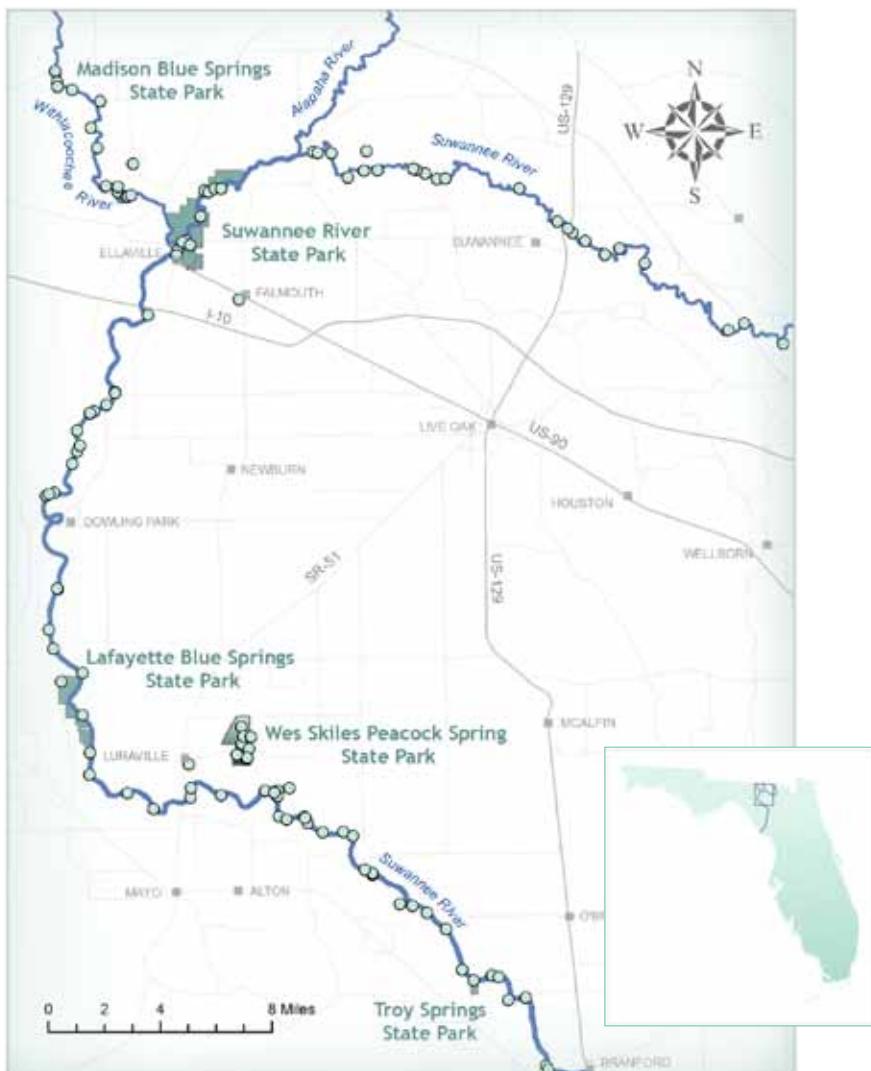
SHOW YOUR PRIDE!
Wear your support for
the NFSA by purchasing
one of our tees at our
ONLINE STORE:

northfloridaspringsalliance.org

Board Vacancy

We have one vacant Director At Large position that we are looking to fill. If you love the five parks we serve, and are looking to become more involved in the North Florida Springs Alliance, serving as a Director would be a great way to show your support. The ideal candidate is a frequent visitor to one or more of our parks, has the time and interest to help organize and participate in our activities, and brings fresh ideas and energy to help the NFSA improve the visitor experience in these parks. If you are interested, contact any of the current board members by clicking on their name above to get more information, and submit a personal statement of interest by April 30, 2017.

Parks of the NFSA



Amphipods Serve as “Dye Trace” in the Floridan Aquifer

By Dr. Thomas R. Sawicki

Crangonyx hobbsi and *Crangonyx grandimanus* are amphipod crustaceans that are endemic to the Floridan aquifer. These two species are widely distributed, and often live sympatrically in cave systems from Tallahassee to Miami.

Very little is known about the degree of gene flow between populations of these stygobitic (obligate water filled cave dwelling) amphipods. This fact means it is possible that there are genetically isolated populations, which may be due to physical or ecological barriers. This isolation may be sufficient to allow the evolution of cryptic species (a population that is morphologically similar to a species, although it is genetically distinct). If this is true, the morphological similarities between at least some populations of these two species may be due to strong selection pressure related to their cave habitat.

Because of their broad distribution, small size, and sympatry, *Crangonyx hobbsi* and *C. grandimanus* should provide excellent data relative to the degree of gene flow between cave systems. These data will allow us to better determine if actual physical or ecological barriers to gene flow exist between given cave systems, and to determine the geographic extent of these isolated habits if they occur. Importantly, these data can be used as a proxy for the degree of continuity between karstic regions within the Floridan aquifer. In effect, the DNA of these animals can be thought of as a whole aquifer “dye trace” to determine the connectivity of cave systems.



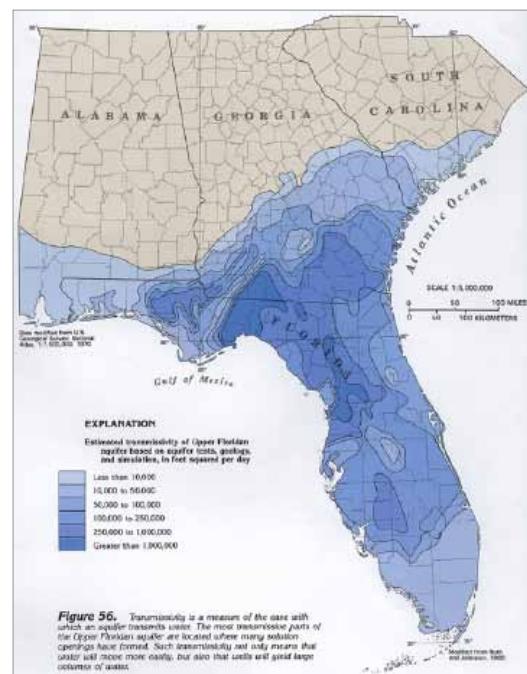
Crangonyx hobbsi.



Crangonyx grandimanus.

Photos by Dr. Tom Sawicki

Floridan Aquifer



www.pubs.usgs.gov

NFSA Projects at WSPSSP Construction is Underway!

By Mike Stine

By the time you read this newsletter work should be underway at Wes Skiles Peacock Springs State Park on several projects. While from a distance the stairs leading to the water at Peacock 1 look fine, closer inspections shows they are in desperate need of repair. The NFSA will be replacing the stairs from the deck to the water, and if all goes according to our plans, we should be able to do one side at a time, and access should be maintained for divers and swimmers. If we do need to block access during the construction project, divers can enter at Peacock II. Hopefully work will be completed by the end of April.

When inspecting the changing room at Peacock 1 considerable amounts of decay were found and we decided it would be easier to rebuild than repair the existing structure. While we are at it we will be adding a roof to keep you dry in wet weather.

Up at Orange Grove, once the park has replaced some stair treads and repaired the handrails, the NFSA will be installing handtreads from the lower deck to the water.

If you have some time available on weekends that we are working, we would greatly appreciate your help. Even if you can only help for a couple of hours one time, we can put you to work. The NFSA will be contributing approximately \$6,000 in materials towards these projects and donations would be appreciated. You can find project specific donate buttons on the home page of our website <http://www.northfloridaspringsalliance.org/>.

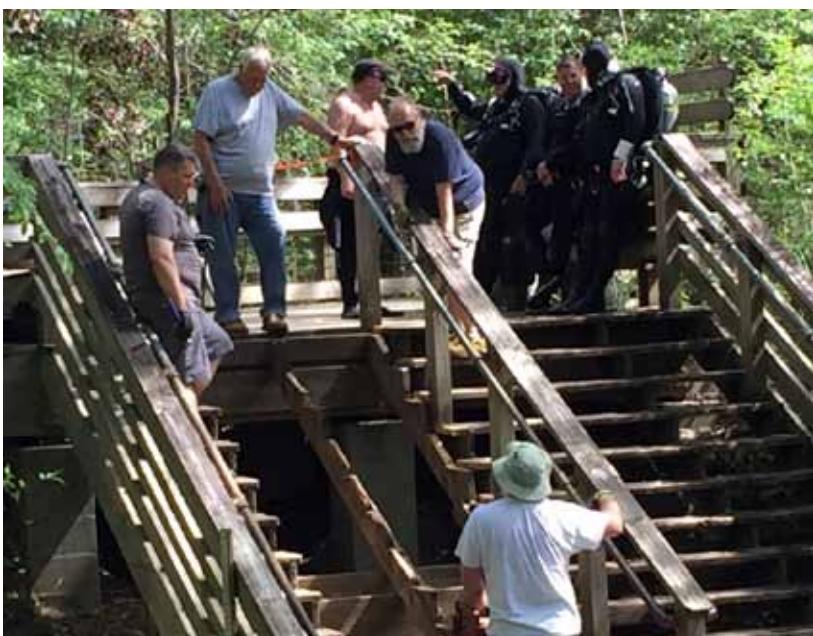
For more information or to volunteer, call or text **850-728-0098** or email nfsa.cso.fl@gmail.com



Rotting supports on the steps leading down to the spring basin.



Mark Rogers and R. B. Havens deconstructing the old steps leading to the Peacock I basin.



Mark Rogers, Steve Boyer,
Mike Stine and R. B. Havens
consult on deconstruction of
the steps while cave divers
look on.



ECO-DAY 2017

Madison Blue Springs State Park was the site for ECO-Day 2017 on March 18th. We greatly appreciate the 19 volunteers who attended and provided much needed support for the park. One of the nice things we have noted at ECO-Day over the years has been the diversity of volunteers. This year, we had divers, non-divers and all ages represented including two high school students - all who just wanted to make a difference. Additionally, four volunteers from another CSO were there to install a new entrance gate, and four park rangers were on hand to provide assistance. On behalf of the NFSA, we thank all of you.

Much of the work done centered around Martz Sink. Steve Boyer, our go-to guy for getting things built, helped volunteers install the final rail on the bottom steps and a bench on the landing. Afterwards, they installed a tank bench just before the Martz walkway.

Jerry Murphy, our resident geologist, helped volunteers place five yards of limestone under the deck and stairs at Martz. Because the trailer with the limestone would not fit on the path, all limestone was loaded onto a gator, transported to Martz and then unloaded before placing them individually under and around the deck and steps. The limestone will help prevent erosion and keep sediment from entering the basin.

In addition to Steve and Jerry, many thanks to Sandy Robinson for organizing the event, Mike Stine who cooked lunch for everyone, Forrest Wilson, Lowell Rinehart, Rick Robinson, Ben Mabry, Will Hunter, Jeff Hawes, Jesse Martinez, Jeff Reeves, Atticus Molnar and Brad Touchton for their work at Martz Sink.

Recently, the park installed new doors in the ladies bathhouse. Many thanks go to Bonnie Stine and Meg Robinson for painting the new doors and repainting the walls. Marilyn Boyer and Cindy Mabry cut down bamboo, which is taking over a few areas of the park. On your next visit you will note a cleaner area to the right of the ranger station.

After a half-day of work, volunteers were treated to lunch. Door prizes were provided by Cave Country Dive Shop, Extreme Exposure, Amigos Dive Center, the NSS-CDS and the NFSA. Also, Nestlé Waters North America provided water, and Cave Excursions is providing a free nitrox fill for all volunteers. Be sure to check our website and Facebook page for notification of next year's Eco-Day and we hope to see you in 2018!



SAVE THE DATE!

The 2017 NFSA Annual Meeting and Workshop is scheduled for **Saturday, September 30, 2017** in conjunction with National Public Lands Day.



Jeff Hawes, Ben Mabry, Lowell Rinehart and Will Hunter unload limestone from the trailer to a gator to transport down to Martz.



Jerry Murphy taking limestone rocks from Jesse Martinez at Martz Sink.



Meg Robinson and Bonnie Sine painting the women's bathroom at Madison.



Marilyn Boyer getting ready to take down some invasive bamboo in the park.



Birds of Our North
Florida Parks

By Jacqui Sulek
Audubon Florida



Swallow-tailed Kite
Elanoides forficatus

Photos by John Middleton
www.FrogmoreFocus.com

CLICK HERE
to hear the sweet
calls of the
Swallow-tail Kite!

Swallow-tailed Kite

Unmistakable - Unforgettable!

Elanoides forficatus

In early March Swallow-tailed Kites will begin arriving from South America. Sudden, silent, graceful, they appear, soaring above the horizon or high overhead, maneuvering with intent. You are challenged to see a flap of the wings. Instead, riding the winds, a twitch of the tail gently maintains or alters course. The Swallow-tailed Kite is striking in its snow white and black plumage. Its long pointed wings and a severely forked tail create a distinctive silhouette that is **unmistakable**.

A far cry from their wintering home in the heart of South America they will nest high above the forested areas near swamps and rivers of Florida. The task at hand is to raise their brood in the few short summer months that follow. Close to an Osprey in size yet designed to glide ghostlike above the trees the Swallow-tailed Kite feeds primarily on insects, favoring dragonflies and cicadas. They eat many stinging insects including wasps and have been known to carry a whole nest back home where they will eat the larvae. Like acrobats they can catch their prey on the wing or snatch a nestling or lizard from the treetops to provide the required protein for their young.

Swallow-tailed Kites historically nested in much of the eastern United States. Habitat loss and other unknowns have extirpated them from most areas limiting the estimated 1000 remaining pairs to Florida and a few sections of the Gulf Coast. Organizations such as the Avian Research Conservation Institute <http://arcinst.org/> are attaching radio transmitters to follow the birds to their wintering grounds to better understand the reasons for the continued decline.

Come spring in Florida many birds leave for nesting grounds to the north, hence the term snowbirds? Fortunately the Swallow-tailed Kite arrives about the same time from South America to fill that void. Joining the Mississippi Kite, the Great-Crested Flycatcher, the Yellow-billed Cuckoo and others these birds will complete our landscapes during the hot summer months. Enjoy them while they are here for all too soon they will gather in anticipation of their return to their wintering grounds. While "birders" often remember exactly where and when they first spotted a favorite or special bird you will likely recall the first time you caught a glimpse of your first Swallow-tailed Kite. It's **unforgettable**!



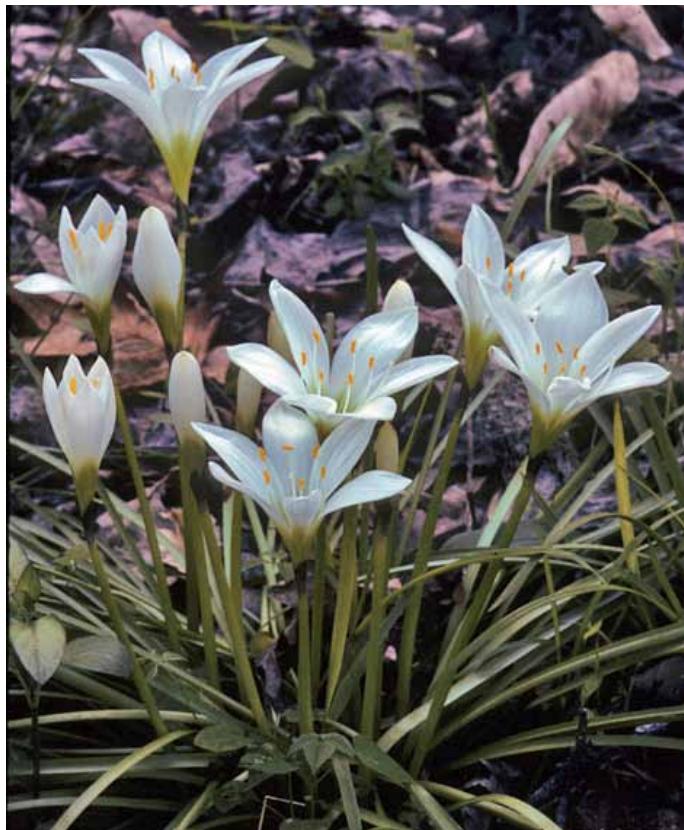
Springtime In Our Parks

There are an abundance of spring flowers in our parks, and depending on which park and habitat you are in, you are likely to see some of these beauties. Innocence (*Hedyotis procumbens*) is commonly found on moist sandy soils, especially in disturbed areas. This low growing plant's flowers have four white petals which are borne singularly on the stem. Innocence can be confused with partridgeberry, another common ground-cover, but partridgeberry's flowers appear in pairs.

By Mike Stine

This spring has also seen an abundance of Atamasco lilies (*Zephyranthes atamasco*) in low areas. They will frequently bloom following a rain and are commonly called rain lilies.

On the edge of many forests you will find variety of different plums (*Prunus spp.*). Plums like sun, so you will most likely see them along roads driving to your favorite park. There are a wide variety of plums found the southeast, with hog plum and Chickasaw plum being common and a good source of food to a variety of wildlife in late spring and early summer.



Atamasco lilies, *Zephyranthes atamasco*.

Photo by Georgia Shemitz.

About the only time I notice how abundant red buckeyes (*Aesculus pavia*) are in the spring when their terminal clusters of red tubular flowers stand out against the lush green background. The fact that buckeyes flower in the early spring makes them an important source of nectar for ruby-throated hummingbirds.

In some of our parks you will find wild azaleas. One of the more common species found in Florida is *Rhododendron canescens*. These relatives of the Asian azaleas, which are commonly used as landscape plants, are most commonly found on moist to wet sites along rivers and bogs. Compared to the Asian varieties, wild azaleas produce fewer flowers that are more delicate, and are out for a brief period in the spring.

Innocence
Hedyotis procumbens

Photo by Bonnie Stine



Wild Plums
Prunus spp.

Photo by Jerry Murphy



Red Buckeye
Aesculus pavia

Photo by Georgia Shemitz



Wild Azalea
Rhododendron canescens

Photo by Karen Nelson

