



Citizen Support
Organization Focused
On Protecting And
Improving North
Florida Springs

UPCOMING EVENTS

Featured Photographer Submissions Deadline

February 26, 2013

Show off your images of our
beautiful parks!

Submit your images to Kelly Jessop
at: kjessop@bellsouth.net

MADISON ECO-DAY

March 9, 2013

8:30 til Noon

Burgers and dogs on the grill
to follow the workday and,
yes, there will be RAFFLE
PRIZES!

Annual Membership Meeting

April 27, 2013

Check website for information
about this year's meeting.

NorthFloridaSpringsAlliance.org

3rd Annual Advanced Skills Workshop

August 29, 2013

You don't want to miss it this
year! Put it on your calendar
today!!

Check website for updates and in-
formation about this year's event.



Photo by this month's featured
photographer Jeffrey Rose. The
diver is James Kleinheinz, and the
image was taken in the Peanut
Tunnel in Peacock I.

ALLIANCE NEWS

February 2013

Vol. 2, No. 2

From The NFSA Board

The NFSA board convened on January 19th. We would like to welcome Jon Bernot who has filled the vacant board seat, and thank him for coming up to speed so quickly. The new bylaws have been completed and reviewed by the board. Tentatively, we have the annual membership meeting planned for April 27th (time and location TBD), and at that time we will ask for membership approval of the bylaws and election of board seats that are expiring. We are continuing to work on developing the 2013 goals that we want to accomplish and are eager to hear what you want to see done this year. Please email your suggestions to information@northfloridaspringsalliance.org.



Mike Stine, Jim Womble (kneeling) and Jon Bernot install sponsorship plaques on the trail after the January board meeting.

2013 Line Committee

Chairman

Jim Wyatt

Voting Members:

Dan Patterson, Mark Messersmith, Rick Crawford, Kelly Jessop, Lamar Hires and Marc Bryan.

Alternates:

John Jones, Jim Womble, Georges Gawinowski, and Jean Nelson

Along with the help of diligent cave divers reporting problems to us, the line committee has been able to keep the lines and signs in good shape at the parks we represent. Line work at Orange Grove Sink, Challenge Sink, Madison Blue and Little River have had minor line repairs done to them recently. If you see any sections of line in the Peacock, LaFayette or Madison Blue Springs Cave system that are in need of repair, please contact the chairman of the line committee as soon as possible.

If you're interested in learning more about the responsibilities of the line committee, please check the NFSA web page for more details:

<http://northfloridaspringsalliance.org/lines.htm>



By Mike Stine

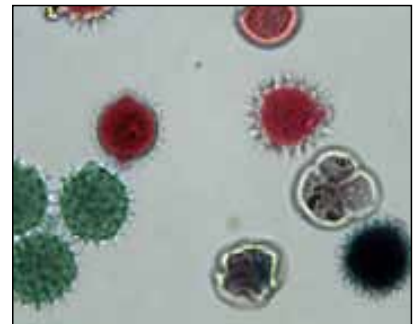
A Change Of Seasons

In January and February there is a lot of activity in WSPSSP if you know where to look. Red maples were some of the first plants to flower this year, and they are in a hurry to produce their seeds. You will find red maples growing along rivers and in swamps and they are adapted to reproduce and thrive in these ecosystems. By flowering in late December and early January their fruit, called samaras, are now nearly mature and will be dropping from the trees soon. You may remember playing with these helicopters when you were a kid. If all goes well, red maple seeds will be landing on fresh soil deposited by winter and spring floods, and will sprout almost immediately. Most maple seeds however, will be eaten by squirrels which greatly appreciate the fresh meal.



Red maple fruit are called samaras

You may also notice your cars turning shades of yellow and green this time of the year and you can thank primarily the oak and pine trees. These species rely on wind to spread their pollen, so they have to produce a lot of it, and most pollen winds up on anything other than a flower (in the case of the oak tree) or strobilus (pine tree), and some makes its way into your sinuses. Plants that rely on pollinators like bees, moths, and hummingbirds produce showy flowers to advertise a free lunch in exchange for carrying some pollen to the next flower. Since oaks are wind pollinated, their flowers are small, and barely noticeable and appear with the new leaves in the spring.



Pollen under a microscope.

The spring is when oak trees are often their most colorful. In the fall and winter most oak leaves will fall off without ever changing color. Many people think live oaks are evergreen, but they are deciduous and drop all of their leaves immediately prior to putting out new leaves in the spring. Sometime in February or early March you might notice live oaks looking rather bare. If you look carefully at the twigs you'll see the male flowers, called aments. They are clusters of small pollen producing flowers along a drooping stem at the base of the emerging leaves. The beautiful new leaves and aments will range from bright green to bronze to red in color and the live oaks will put on an impressive display.

Interpretive Trail Update

We wish to thank park staff for clearing a fallen tree near the Nicholson kiosk. It was completely blocking the path, and when we arrived armed with chainsaws to clear the debris, we were pleasantly surprised to see it was already done. We recently purchased a walk behind string trimmer in order to remove occasional brush that grows on the trail. This is a welcome addition, which will greatly speed up this task. We also installed sponsorship plaques on the navigation markers so be sure to look for those next time you walk the trail!

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 NFSA 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.

3rd Annual Advanced Skills Workshop

We are already in the planning stages for this year's workshop, planned for August 24th. We will be adding new workshops, in addition to the many popular workshops we've offered in the past so watch the newsletter and website for updates. We know you won't be disappointed!

Calling All Web Designers!

We are in need of help in the web design and site maintenance department. If you are interested in lending a hand, please contact Jim Wyatt at: jim@cavediveflorida.com



Jeffrey Rose is this month's featured photographer. If you would like to have your images included in our monthly newsletter, please submit them to: kjessop@bellsouth.com.



Dyadic Adjustment & Personality Traits in Male Cave Divers

An Exploratory Study - Doctoral Online Research Study

Would you like to participate in a FREE research study investigating the relationship between personality traits and relationship satisfaction in male cave divers?

A doctoral research study is being conducted by WILLIAM B. OIGARDEN, MA, LMHC, NCC a doctoral candidate at Barry University in the Adrian Dominican School of Education, investigating the relationship between dyadic adjustment, personality traits, and alexithymia in male cave divers.

To participate go to: <https://www.surveymonkey.com/s/5YPNLKZ>

Study Requirements - Complete a demographic survey (5 minutes) and three scales that measure dyadic adjustment (10 minutes), personality traits (15 minutes), and alexithymia (5 minutes). You would need to allow approximately 35 minutes to complete the entire survey.

Eligibility Requirements – You must be a male cave diver 18 years of age or older and married or in a committed relationship. There is also a category for those who consider themselves in a separated relationship status.

After thoroughly reviewing and reading the Informed Consent screen, you will have two options. Should you choose to participate or choose not to participate in this voluntary study, your anonymity will be secure at all times. You also have the option to discontinue the study at any time. Once you have selected the “I agree” then the next button: you will be presented with a demographics questionnaire. Once this is completed, you will move into the rest of the online anonymous questionnaire.

This survey is completely anonymous and no IP addresses are collected by this researcher.

This is a research study and is not considered a therapeutic session. This study is free to all participants. Participation is entirely voluntary and can be withdrawn at any time. Since this is an exploratory study and gender differences in activities similar to cave diving were found during the literature review this study will be limited to male cave divers. Future studies planned will include female cave divers.

If you should have any questions or need more information please contact me, William B. Oigarden at (386) 984-9348 or by email bill@oigarden.com or william.oigarden@mymail.barry.edu, my supervisor, Dr. Catharina Eeltink at (321) 235-8401, or by email at keeltink@mail.barry.edu, or the Institutional Review Board point of contact, Barbara Cook at (305) 899-3020, or by email at bcook@mail.barry.edu.

Thank you for your time and interest in this study, which is partial fulfillment of a Ph.D. degree in Counseling I am pursuing. Bill Oigarden

Morphological and molecular analysis of *Crangonyx grandimanus* and *C. hobbsi* (Amphipoda) as factors for the study of the biological interconnectedness of caves within the Floridan aquifer

By Dr Thomas Sawicki

INTRODUCTION

The water filled caves of Florida have resulted in a complex, interconnected habitat within which numerous species have invaded and evolved. At least 27 invertebrate and one vertebrate species have been described from these systems (Franz et al., 1994; Walsh, 2001). To date, out of this rich biodiversity only two species of stygobitic amphipods (i.e., species found exclusively in subterranean groundwater habitats) have been formally described (*Crangonyx hobbsi* and *C. grandimanus*).

The relative lack of amphipod diversity within these cave systems has been somewhat of an enigma. Worldwide approximately 740 species of stygobitic amphipods have been described—approximately 80% of these from freshwater—making the crustacean order Amphipoda perhaps the most taxonomically diverse invertebrate group in subterranean aquatic habitats (Holsinger, 1994). Additionally, other crustacean groups exhibit remarkable diversity within these cave systems; for example, there are 18 species and subspecies of crayfishes (Franz et al., 1994).

The two *Crangonyx* species endemic to these cave systems are widely distributed, and often live sympatrically (Franz et al., 1994; Zhang and Holsinger, 2003). Figures 1 and 2 below show the known distribution of these two species from across Florida. Amphipods brood their young which hatch from eggs as an immature form, eventually reaching the adult form through a series of molts—thus they do not have a planktonic larval stage that can result in the distribution of their larvae over a wide area. The two *Crangonyx* species found in these cave systems reach an adult size of approximately 10-17 mm and thus have a very limited ability to disperse widely from their home range.

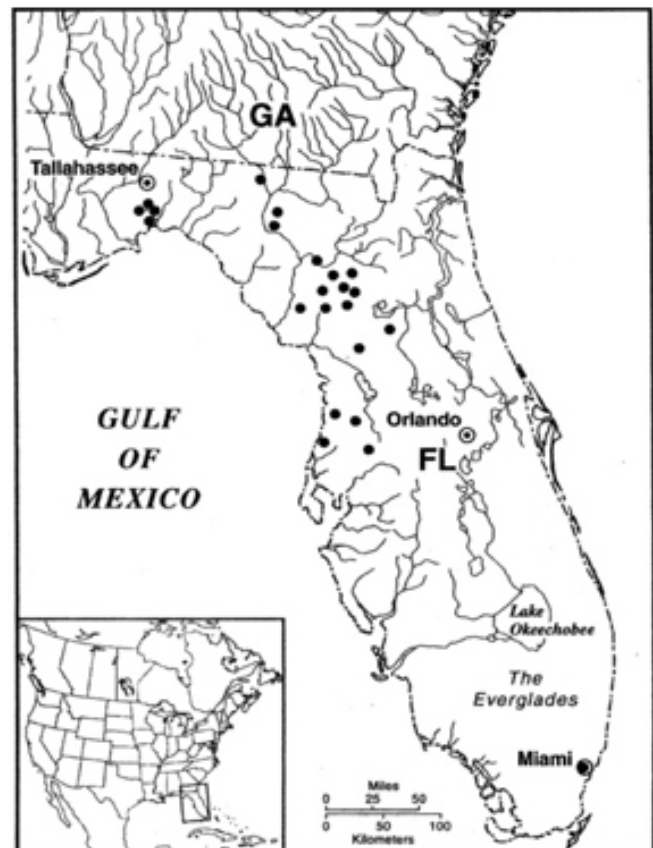


Figure 1. Distribution of *Crangonyx grandimanus* in Florida. Each solid circle represents up to five localities. As modified from Zhang and Holsinger, (2003).

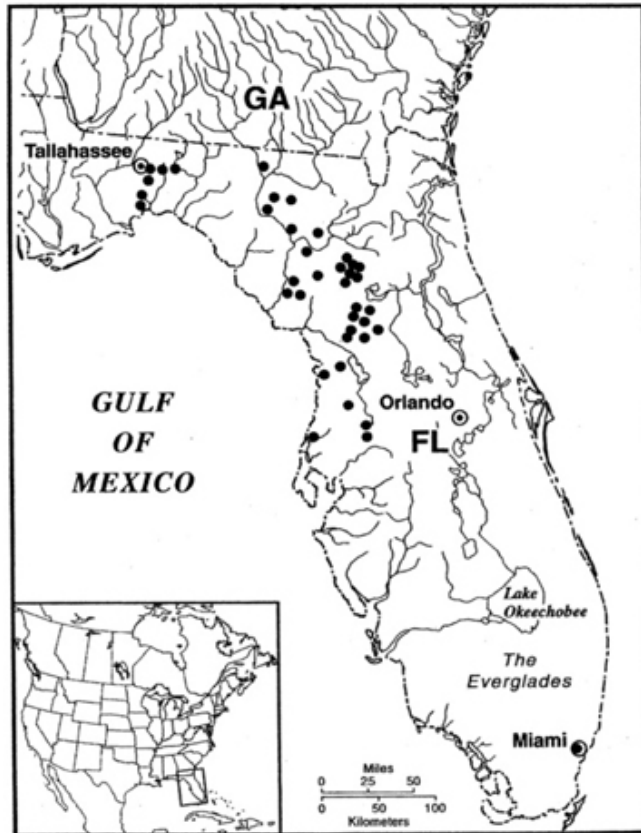


Figure 2. Distribution of *Crangonyx hobbsi* in Florida. Each solid circle represents up to five localities. As modified from Zhang and Holsinger, (2003).

These facts suggest the obvious question of why such broadly distributed populations, physically isolated by habitat and biology, have not speciated. Because of their broad distribution and sympatry, *Crangonyx hobbsi* and *C. grandimanus* should act as a good proxy to the understanding of gene flow and thus biological interconnectedness of this incredibly large and diverse habitat. A thorough examination of these hypogean ecosystems requires that data be collected at multiple levels of biological inquiry. A detailed morphological analysis of *C. hobbsi* and *C. grandimanus* from various systems across their range is currently being conducted. Concomitant to this morphological study, a genetic analysis of these same populations is underway.

Populations of stygobitic organisms that are genetically isolated or which represent new and endemic species are extremely vulnerable because of their isolation within and dependence upon specific cave systems. Destruction of such systems means destruction of the habitat and, by definition, extirpation of the population or species living within that habitat.

Understanding the biological connections between ground water habitats is fundamental to making good policy choices about the use and conservation of these resources. The intrinsic value of increasing our basic scientific knowledge of these systems and the potential discovery of new and cryptic species is exciting. However, the full benefits of this study will redound not just to scientists, but to communities, public servants charged with protecting our vital water resources, and students that are involved with this research.

Literature Cited

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