



For updates on the Fakahatchee Strand Preserve State Park, please visit the [website](https://www.floridastateparks.org/parks-and-trails/fakahatchee-strand-preserve-state-park) at <https://www.floridastateparks.org/parks-and-trails/fakahatchee-strand-preserve-state-park>

President and Executive Director's Letter

We start our letter by sending a special thank you to 88 members who renewed their memberships and the five new members who have joined since our last newsletter was published at the end of March. We send a very heartfelt thank you to Carolyn Ginther of Pennsylvania who transitioned to a \$1,000 Lifetime membership and to new member Mark Perro who joined as a Lifetime member. Both actions are timely generosity that is very much appreciated. We are very grateful and encouraged by our members' support, given how increasingly difficult everyone's life has become due the Coronavirus global pandemic. Let's not forget to also thank our Membership Secretary Marya Repko, who devotes hours of her time to the membership.



We are also grateful that none of the Fakahatchee Park staff were furloughed, along with more good news. \$460,000 was allocated to control exotic invasive species in the Preserve. Two pre-bid meetings have already taken place to get this project underway. The culvert pipes replacement project is completed. 57 were replaced, greatly improving the water flow just in time for our rainy season. Gates have been installed at all entry points of the Preserve, opened and closed daily. And so Park staff is "plugging along" and constantly adjusting their sails as their instructions trickle down from the Tallahassee office in respect to the Center for Disease Control and Prevention (CDC) guidelines.

The Dept. of Environment Protection re-opened 88 parks on May 4th, and Fakahatchee was one of those parks. Canoe and kayak areas are open, as are nature trails. The Boardwalk remains closed but is expected to re-open. The Visitor Center is closed to protect both park staff and the public. On May 21st parks that offer camping re-opened their camp grounds, but their cabins remain closed.

Guided tours in Fakahatchee will resume, contingent to DEP's approval of each tour operator's Safety Plan to cover CDC guidelines. This also includes the FOF guided tours. Guided tours were stopped by DEP on March 14 – a rule not unique to the Fakahatchee – inevitably impacting the livelihoods of our permitted tour operators who were doing so well with their tours in the Preserve.

Volunteers missed being in the Fakahatchee as they were asked to temporarily cease volunteering. Volunteers were welcomed back at the end of April under the direction of Park Service Specialist Mike Duey. Mike can be reached 239-682-6978 if you are interested in volunteering.



Self-assigned Chief of the Fearless FAKA-hackers Dino Barone wrote, "I do miss the park and seeing everyone. This is the time of year, while dry, that I like to get across the dry ditches to cut/spray Brazilian pepper, spend some time in the prairies, and get up to the NW corner and open trails. Also maybe do some additional barbed wire removal in Dan House Prairie. I am looking forward to seeing Jones Grade and West Main after the culvert replacement project."

Read more about Dino, who is featured on the Florida State Parks' Fakahatchee Volunteer Spotlight website. <https://www.floridastateparks.org/volunteer-spotlight-dino-barone>

President and Executive Director's letter continued....

Social distancing did not prevent the Board of Directors from taking care of business. The Board had established a conference line years ago to facilitate meeting attendance, especially for our snowbirds who reside up north in the summer. The difference is now the entire Board is on conference call and it is going well. Since our last newsletter FOF has funded:

- a super nice ten-drawer Husky tool chest for Ray Crow, the new highly skilled Park shop mechanic,
 - \$1,000 worth of surveillance camera upgrade,
 - \$1,000 worth of supplies to repair & maintain park equipment, and
 - a total of \$1,400 for permit fees to Collier County to move ahead with the installation of four new Wayfinding kiosks in the Preserve.
- There is nothing that can replace sitting together around a table to discuss business, but the Board takes pride in its determination to continue supporting the park.

Since there is more time to read these days, we close this letter by providing a link to the FOF website's Armchair Interpretative Walks, a series of informative articles that can transport you to the Fakahatchee Strand from the air-conditioned comfort of your home. Visit <https://orchidswamp.org/category/armchair-interpretive-walks/>

Should you decide to escape the comfort of your home for the comfort of immersion in nature at the Fak, here are two useful pdf maps for your visit in the Preserve. Both of these maps – and others as well – may be viewed and/or downloaded at our Trails and Trams website. <https://orchidswamp.org/plan-your-visit/trails-trams/>

Trails Map – <https://orchidswamp.org/wp-content/uploads/2018/06/TrailMap-rev-6-6-18.pdf>

East River Paddle Trail Map – <https://orchidswamp.org/wp-content/uploads/2018/06/EASTRIVERPADDLETRAIL-rev6-6-18-1.pdf>

Glen Stacell and Francine Stevens

Picayune Strand Restoration Project



The Fakahatchee's western neighbor, the Picayune Strand State Forest (<https://www.fdacs.gov/Divisions-Offices/Florida-Forest-Service/Our-Forests/State-Forests/Picayune-Strand-State-Forest>), has been in the process of restoration for several decades. The Picayune Strand Restoration Project (PSRP) is now about 80% complete. As a result of the Conservancy of Southwest Florida's long-term commitment and that of other stakeholders, alarms raised regarding water quality as part of the final steps in completing the PSRP were heard. The South Florida Water Management District approved taking action to specifically address the outstanding water quality concerns. Read more about the next steps: <https://medium.com/the-policy-team-conservancy-of-southwest-florida/picayune-strand-restoration-project-poised-to-enter-home-stretch-65987bbd147>.

Milky Way from the Big Cypress National Preserve



FOF Treasurer Phil McGuire was surprised to see cloudless skies on the night of May 20th. He made the last minute decision to go out for dinnertime star photos. From the hunting check-in station at Big Cypress National Preserve, the Fak's eastern neighbor, he snapped these shots of the Milky Way. Thank you for sharing with us, Phil!



This composite image is a Lightroom panorama of 15 individual shots by Phil McGuire.

News from the Strand

Visitor Center gets a new rock border



Park Service Specialist Steven Bass and Ranger Ray Crow improved the entrance and perimeter of the Visitor Center and with a rock border.

Culvert pipes replacement project completed



This project replaced a little over 2 miles of culverts on West Main tram. 57 culverts were replaced, greatly improving the water flow just in time for the rainy season. Old cable was found, most likely left over from logging in the mid-1940's to mid-1950's.



Thanks to volunteers Nate and Marti Anderson for the photos

Volunteer your time and talents!
Visit <https://orchidswamp.org/support/how-to-volunteer/>

Seen in the Strand

Views from the Boardwalk *Hair Today, Gone Tomorrow* *- A Big Cypress Bend Boardwalk Story*

By Dave Boesche

Hi everyone, just like I often say, "You never know what you might find at the Boardwalk in Fakahatchee Strand."

This story starts way back in early winter, another beautiful day for me to be out and about the boardwalk. As I walked along the gravel walk I couldn't help but admire all the natural beauty of this place. The Cypress were dropping their leaves – bald cypress must do that, otherwise Mother Nature will give them a lecture. (I wonder why they call them bald?) The oaks were still in leaf, just enjoying an occasional visit by an aninga or black vulture.

As I approached the Chickee shelter I see that Dick and Edite Hughes were parked and already at work. Just a reminder, they are the wonderful couple that drive down from Canada every winter to repair our boardwalk and make additions as needed. Great couple, if you happen to see them, Edite is the one doing most of the work!



Continued >>

A little past the bald eagle nest I came across the Hughes replacing more boards. We had the usual pre-COVID-19 hugs and smiles all around. What great folks! Dick said he had something to share with me. Since they are always working on the boardwalk, he had removed a major splinter from a side railing, thinking it a hazard to a child walking along. But wait, there's more!

Wedge in the splinter was a wad of coarse, black hair, around 1 1/2 inches or so in length! Dick asked me what I thought. Upon looking and even smelling and gently feeling I wasn't sure. A couple ideas were a black bear or the end of a panther's tail. How about a raccoon or even a bobcat? Dick had thought of those as well and even threw in a dog that was on a leash with a human guest. Well, an idea hit me. My son-in-law is the former Science Department Head at Indiana U, Southeast Campus and he may have the answer.

After a little discussion, Dick handed me the sample, trusting me to keep it from harms way and get an honest answer. After a check with my son-in-law, he suggested I send the sample to the attention of Dr. S. Mukhopadhyay, Lecturer of Biology as well as Curator of the Zoological Collection at IUSE. Upon receiving this sample it was discussed and assigned to K. Ranney, a Master Student and Researcher working with the Dr. in Zoology. What a ball of fire she is! Even with a closed campus, dark laboratories and shelter at home COVID-19 rules, she was diligent in her work.

Please enjoy the poster Kaycee has produced for a science competition – which she won by the way! Heck no, I didn't tell you the results. Guess you will need to read the poster! See the full size poster (pdf) here: https://orchidswamp.org/wp-content/uploads/2020/05/POSTER-Hair_Sample.2020.pdf.

Since I am a retired teacher you know what is said: Teachers never retire, they just lose their CLASS!

Dave B.

Identification of hair sample of an unknown mammal species using Electron microscopy and DNA sequencing

Kaycee Ranney¹ and Dr Suparna Mukhopadhyay¹
¹Department of Biology; Indiana University Southeast; New Albany, IN

ABSTRACT

We received a sample of a tuft of animal hair trapped in the wooden plank of the boardwalk from Fakahatchee Strand Preserve State Park Naples, Florida. This poses a threat to pedestrians who use the boardwalk everyday. Based on the claw marks and the hair sample color and size we confirmed the animal to be a mammal. We will analyze the hair sample using electron microscopy and DNA sequencing. By comparing the microscopy and DNA sequencing data with all possible mammals present in the State Park area we will be able to identify this animal species.

INTRODUCTION

Fakahatchee Strand Preserve State Park is one of the largest state parks located in Naples, Florida with a variety of unique plant and animal species. This park is divided into four main areas one of which is the Big Cypress Bend boardwalk which is 2,500 ft long and encompasses a part of the Fakahatchee strand swamp leading to the alligator pond. This is a great place for visitors to have access to this natural preserve and is considered as one of the National Natural Landmarks. We have recently received a sample of a tuft of animal hair stuck in the wooden planks of the boardwalk from Fakahatchee Strand Preserve State Park Naples, Florida. This park covers approximately 85,000 acres of wilderness and swamp. Visitors can hike on trails, drive or bike 11 miles on the park roads, go paddling in the east river and stroll along the boardwalk. The hair sample was recovered from a partially damaged wooden rail with claw marks from the boardwalk. Recently panther markings were also discovered in this area. The boardwalk gets a lot of traffic each year, for example 73,665 people visited the boardwalk in 2018, with 12,198 visitors in December alone. With the abundance of Florida's wildlife there a few can pose a threat to humans that would be enjoying a harmless walk through the swamp boardwalk. Alligators, black bears, panthers, bobcats and wild hogs are a few of the most dangerous animal species present in this area.




Figure 1: Damage on the boardwalk and trapped animal hair




Figure 2: Unknown hair sample at 10x magnification




Figure 3: 40x magnification dissection microscope

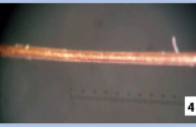


Figure 4: 200x magnification SEM




Figure 5: Black bear hair at 400x magnification (SEM)

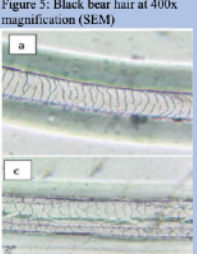


Figure 6: Puma hair at 400x magnification (SEM)

METHODS

We have used an Olympus SLZ dissecting microscope to study the scales of the hair sample at 10x, 40x and 200 x magnification. We have also studied the behavioral evidence (the damage done to the wooden plank and claw marks) from the scene to help identify the animal species. We are going to use the Amray 1810 Scanning Electron Microscope (SEM) to study the gross and molecular structure of the scale pattern for identification of the species. We will further confirm our findings by DNA sequencing of the hair sample and comparing the data with known sequences of other animal species hair DNA to confirm what animal did the damage to the boardwalk.

RESULTS

From the preliminary image data from the dissection microscope we can see a block pattern on the scale similar to the Black bear hair (Fig. 5). The image of the damage on the boardwalk (Fig. 1) also gives some insight. We can see that the animal has claws and was able to remove chunks of the wood. From this information we can presume that the animal is a black bear. A large cat would not have used the horizontal post but would prefer a vertical plank to scratch on. Also by studying the color of the hair we see that it is black; while the puma and lynx usually have very little black hair. So the preliminary data indicates that the animal could be a black bear. Once we can use the Scanning Electron Microscope (SEM) to study the hair sample; we will be able to conclude the species identity of the animal and then further confirm the results using DNA sequencing.

CONCLUSION

From our preliminary studies we are predicting this animal to be a Black Bear. Though we can't rule out all the other possible animals found in that area we are able to put them in a list of most to least likely.

Once we confirm the identity of this species this information will be useful to the people who visit the boardwalk for recreation as well as for those work in the park. The animal can be dangerous to people and may cause major and life-threatening injury. With this information officials can take action to try to relocate the animal or at least deter it from visiting the boardwalk area. We want to prevent the option to terminate any animal after it causes injury to human as most of these animals are endangered and this will have significant impact in the ecosystem.

ACKNOWLEDGEMENT:

We thank Dave Boesche (Fakahatchee State Park, FL) for the hair sample and pictures of the scene; Dr. David Taylor for providing us with his valuable technical expertise using Dissection and SEM microscopes.

Hungry Gator at the Fak Hilton



Dino Barone was lucky to capture this shot with his little point-and-shoot camera. This lucky gator got a catfish lunch. How many gators can you see?

The changes in the Fakahatchee from dry to wet seasons are difficult to imagine - unless you are fortunate enough to have visited during these very different times of the year. Our intrepid photojournalist Dino Barone has recorded these images of Gator Island to try to show us what a difference 5-6 months can make. Photos by Dino Barone.



May, 2020 - dry season at Gator Island. During wet season, where Dino stood to take this picture would be 6 feet underwater.

October, 2014 - wet season at Gator Island.

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Membership News

Does your employer have a “Matching Gift” program?

Several of our members have taken advantage of their employer’s matching program (General Electric, Exxon Mobil) for donations to not-for-profit organizations by sending us the “matching” form. We do the rest – it’s that easy! We have revised our Membership Form with a reminder.



If you haven’t yet opened your free AmazonSmile account, please take a few minutes to do so. Go to smile.amazon.com, then choose the Friends of Fakahatchee as your charity to receive the donations from your purchases. This works for your shopping all year round, and when more FOF members join in the donation parade, we’ll see more money for our Park. Thank you!



You can now donate to FOF via your Fidelity Investment account with a Charitable program called the Fidelity Giving Marketplace, the following link will provide you with more information.

https://www.fidelitycharitable.org/?immid=EML_427_1

Stay up to date with what’s seen in the Strand on our FOF Facebook page at <https://www.facebook.com/orchidswamp>



The Friends of Fakahatchee, Inc, a 501(c)(3) not-for-profit corporation Citizen Support Organization, provides financial and volunteer support to preserve the unique ecology and cultural heritage of Fakahatchee Strand Preserve State Park and to educate the public about its importance. The Fakahatchee is the largest cypress strand in the world and the deepest slough in the greater Everglades.

The Ghost Writer, named after the endangered Ghost Orchid which blooms in the Preserve, is currently edited by Next Steps Collective, LLC, which also manages the [Orchidswamp.org](https://orchidswamp.org)

website. Contributions to Ghost Writer that relate directly to the business and purpose of the Friends of Fakahatchee, Inc. are welcome. Please write news@orchidswamp.org, subject line: Ghostwriter.

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Miss an issue of the Ghostwriter? Visit the archives at <http://orchidswamp.org/about-fof/the-ghost-writer-archives/>.

Our mailing address is:

Friends of Fakahatchee, Inc. PO Box 35
Everglades City, FL 34139

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Become a Friend of the Fakahatchee
Visit <http://orchidswamp.org/support/memberships/>

Members make a difference.

Welcome to new members:

John Boardman, St Cloud FL; Larry Morris, Boxford MA; Anthony Rigio, Ponce Inlet FL; Gordon Saager, Inverness FL. Membership now totals 332.

A special welcome to new Lifetime Member Mark Perro, Ridgewood NY. Also, heartfelt thanks to member Carolyn Ginther of Pennsylvania who transitioned to a \$1,000 Lifetime Membership.

Thanks to our Lifetime members:

Lifetime Preservers

Bruce & Janet Bunch

Lifetime Protectors

Kit & La Raw Maran

Lifetime Family Members

John and Pauly Kaiser

Tom & Judy Maish

Noel Nation

Van & Jane Saylor

Glen & Laura Stacell

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