



Nature's Night-Lights: Florida's Bioluminescence

by Natalie Al-Shibabi
MIWA Intern

Bioluminescence is an incredible phenomenon that produces beautiful views of light within our natural world. Many people never get the chance to see it in real life, or don't even realize how to see it. For people living on or near the Space Coast they can experience this occurrence as one of the most reliable areas to see bioluminescence in the United States is located within Brevard County in the Indian River Lagoon at the Merritt Island National Wildlife Refuge.

Bioluminescence is defined as the production of light through the release of energy from a chemical reaction in or ejected out of an organism. For bioluminescence to work there needs to be a light-producing chemical called luciferin or a photoprotein present. It is only when that molecule has an oxygen molecule bonded to it that the reaction will occur. Luciferase is an enzyme that may also be present and after interacting with luciferin it can help speed up the reaction.

People may be familiar with bioluminescence in the water through some marine creatures exhibiting light-emitting qualities, such as an anglerfish, or through a sheen of green-blue light rippling across the water on a dark night. There are some creatures that utilize a symbiotic relationship with light-emitting bacteria, such as the Hawaiian Bobtail Squid, and some that are able to synthesize luciferin by themselves, such as dinoflagellates.

(continued on page 3)



Photo courtesy of BK Adventure

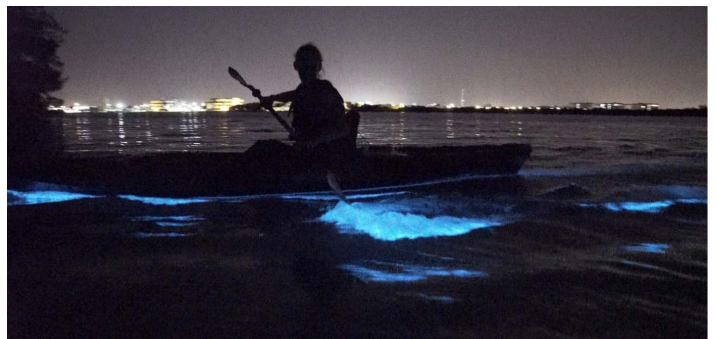


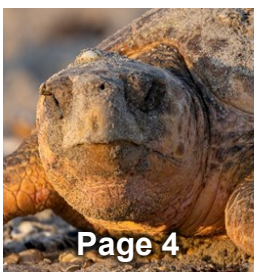
Photo courtesy of A Day Away Kayak Tours

SEA TURTLE WALKS & PROGRAM

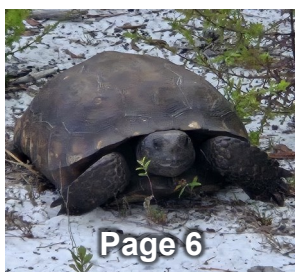
July Sea Turtle Walks Still Available
7:30 - 11:00 pm • Playalinda Beach

Tickets: <https://bit.ly/2025turtlewalks>

Join us on a USFWS-guided sea turtle walk. Learn about nesting habitat while enjoying a chance to watch a loggerhead turtle lay her eggs!



Page 4



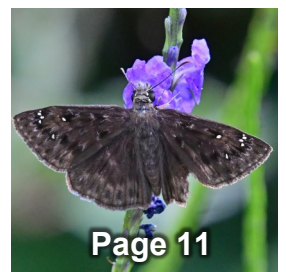
Page 6



Page 9



Page 10



Page 11

MIWA President's Message



Nancy Bray

Merritt Island National Wildlife Refuge, the staff has been reduced through layoffs, early resignation incentives, and retirements. The prospect of backfilling those positions is slim to none in the near term.

While the remaining staff are doing everything they can to keep programs and access available to all citizens, it is a challenging endeavor. As a supporter of the Refuge System, your help is needed now, more than ever. Be a voice for those who cannot speak -- wildlife and government employees. You can write letters to the editor of your local media outlets, call and write your elected representatives, post and share compelling stories via your social media accounts.

These lands belong to all of us. They were set aside to conserve wildlife, protect biodiversity, and

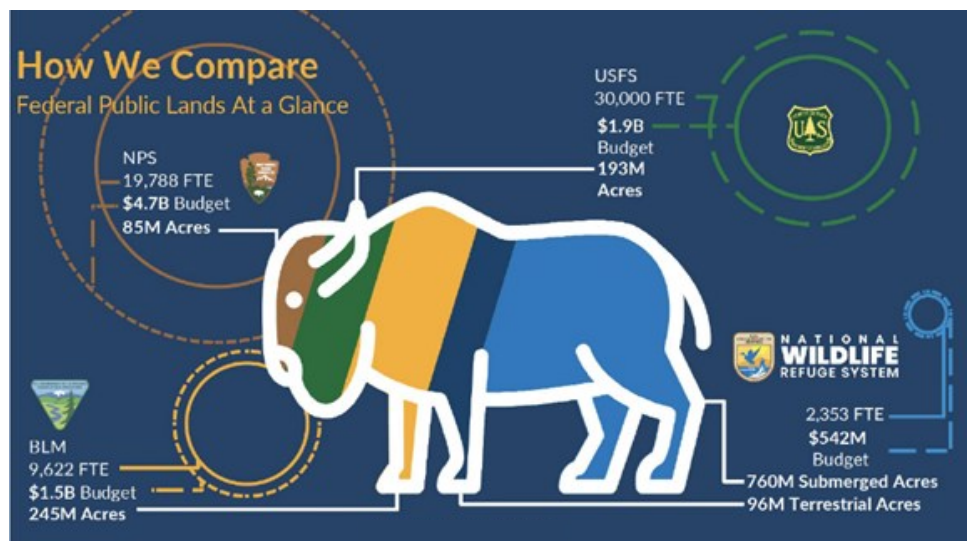
Did you know the National Wildlife Refuge System manages more public lands, with fewer resources than the U.S. Forest Service, National Park Service and the Bureau of Land Management? And those resources are shrinking under the current Administration. Just this year at

connect people to nature--now and for generations to come. If we don't speak up and act, we could see existing public lands sold off for development projects that will threaten the wildlife and habitat, and your access.

This link provides a list of members of Congress with responsibilities for the National Wildlife System:

<https://coalitionofrefugefriends.com/resource-center/119th-congress-members-with-responsibility-for-nwr/>

Within Florida, both Darren Soto and Daniel Webster sit on several of the committees. They need to hear from you, the taxpayers who fund their salaries and fund the wild spaces.



Numbers above are from FY2024 Congressional reports and Agency budget justification documents.

You can also help by volunteering with both the Refuge and with the Merritt Island Wildlife Association (MIWA). Each year volunteers provide the equivalent support of 10-15 staff members, and more will be needed with the reduced staffing of 2025. As a Friends group, MIWA can and does advocate for the benefit of the Refuge. By supporting MIWA through membership, volunteering and engaging in outreach and community science, you are contributing to the future of the Merritt Island National Wildlife Complex.

The Refuge System remains the only public land network in the country where wildlife conservation is the primary purpose. If that mission collapses under budget cuts and attrition, we risk losing not just species—but the very foundation of conservation. Thank you for all that you do to support your Refuges. Every action and every dollar helps.

Donor Recognition

Special thanks to the following for their generous donations in support of the Merritt Island National Wildlife Refuge for the 2nd Quarter of 2025:

Manatee (\$5,000) Laurilee Thompson

Sea Turtle (\$500) Rochelle Hood

Bobcat (\$250) Rebecca Chapman
Walter Guptill

Gopher Tortoise (\$100)

Janet and Ralph Saczawa, John Tank Sherman,
Deborah Smith, Suzanne Taylor

Site Preparations Continue At Refuge Visitor Center

Site preparations for the new Community Conservation Education Center (CCEC) started in January. The contractor has built a new entrance road, new parking lot, and new septic system as well as clearing the space for the new building. Work is expected to be finished by the end of August. The current Merritt Island NWR Visitor Center will re-open to the public sometime in September.



Photo courtesy of FWS

Bioluminescence

(continued from page 1)

The latter of the two examples is what usually produces the green-blue light when disturbed on the surface of the water, and what is seen here on the Space Coast. Dinoflagellates are small, single-celled, planktonic organisms that utilize these luciferin-luciferase reactions to produce bioluminescent light. In the correct conditions it is possible to view this green-blue light shimmering with any movement across a body of water.

What are the best conditions to see this phenomenon in the Indian River Lagoon? The bioluminescent dinoflagellates are normally found on the surface and in warm bodies of water with small openings into the ocean. It is best to view this phenomenon on a dark,

moonless night and during the summer. Since this particular strain of dinoflagellates, *pyrodinium*, prefers warm temperatures, it is best to go in the summer months.

To experience this natural marvel, reserve a spot on a guided eco-kayak adventure with one of the Merritt Island National Wildlife Refuge-permitted tour companies. A list of the approved eco-tour kayak guides can be found at

<https://www.fws.gov/media/merritt-island-nwr-approved-kayak-guides>.



A comb jellyfish, glows with bioluminescence.

Temporary Visitor Contact Station Hours

8:00 am to 3:30 pm
Tuesday through Saturday

(west entrance to Refuge on SR 402, at end of the
A. Max Brewer Memorial Parkway bridge)



Call (321) 861-0669 for Refuge maps,
passes and other information

Nature's Treasures Gift Shop has moved temporarily...

Tuesday-Saturday • 9:00 am-4:00 pm

Cold Drinks
& Snacks
For Sale Here!



Reminder: Our
gift shop has
moved to the
Visitor Contact
Station (trailer) at the
west entrance to the Refuge.

Come in and visit us!





SEA TURTLE SHELLABRATION!

Saturday, July 26th, 2025 • 10:00 am - 12:00 pm

Sand Point Park

101 N. Washington Ave, Titusville

Register Here: <https://bit.ly/seaturtleeducation>



Join us for a free, family-friendly event celebrating the incredible sea turtles that nest on the Merritt Island National Wildlife Refuge. Learn how to identify Green, Loggerhead, and Leatherback sea turtles by their size, nesting tracks, and unique features. Enjoy interactive activities that explore sea turtle biology—from hatchling to adult!

Perfect for all ages, this hands-on experience will deepen your appreciation for these ancient mariners and the role we play in their conservation. The refuge program includes refreshments and a

free raffle for a chance to win a copy of the *Our Sea Turtles* book by Blair and Dawn Witherington.

Kids and adults alike can enjoy hands-on activities such as turtle diet matching card games, a sea turtle beach obstacle course, turtle track identification, and a coastal habitat scavenger hunt—all designed to spark curiosity and teach how we can help protect these amazing animals.

This event is made possible thanks to the generous sponsorship of the Canaveral Port Authority.

Eco-Buggy Tour of Lake Woodruff NWR



On the morning of June 5th, Merritt Island Wildlife Association (MIWA) members and guests went on an Eco-Buggy tour of Lake Woodruff National Wildlife Refuge. Naturalist and MIWA volunteer Joan Tague narrated the tour sharing her stories from more than 30 years of hiking Lake Woodruff NWR. The group was able to see a vast variety of plants and wildlife at the refuge, including over 30 species of birds. Some notable observations include a river otter, Swallow-tailed and Mississippi Kites, Saltmarsh Mallow in bloom, Gulf Fritillary butterflies, and banana spiders. Participants also learned more about the Duck Stamp history of the refuge. The buggy passed by the marsh area that was burned two months ago to observe firsthand the benefits of fire ecology.

Canaveral National Seashore: Celebrating 50 Years

by Rochelle Hood, Susen Wilcox, and Jack Windle

Canaveral National Seashore, nestled between Daytona Beach and Kennedy Space Center, is the longest stretch of undeveloped Atlantic coastline in Florida. Originally acquired by NASA for safety and expansion during the early days of the space industry, the land was later designated a National Seashore in 1975. This March, MIWA visited three historic sites within the park to celebrate its 50th anniversary.

Our first stop was Seminole Rest in Oak Hill. Preserved by the Snyder family and later donated to the National Park Service, this site includes a historic home and what remains of a shell mound built by the Timucua people. The mound, once much larger, was reduced over time as shells were harvested for railroad construction. Today, about 13 feet remains, offering insight into the Timucua's daily life through pottery and shell artifacts.

Next, we visited Turtle Mound, one of the area's prominent oyster shell mounds. Though diminished by use in road building, it remains one of the tallest middens in the region. These mounds reveal the diets and seasonal habits of the Timucuan and other Indigenous tribes. The Timucua were skilled hunters—so much so that their deer-hide disguises occasionally fooled fellow hunters! At the Visitor Center, we enjoyed a short historical film, shared stories with park rangers, and celebrated the anniversary with cake.

Our final stop was Eldora House, once part of a citrus-farming community that later became a resort destination after harsh freezes and changing trade routes. Eldora House is now a museum showcasing life in early 20th-century Central Florida. We also learned about Doris Leeper, an artist and conservationist instrumental in preserving Eldora. Today, her former home is visited by local art coalition students to learn about her legacy.

Special thanks to Rangers Jabez, Ashley, and Laura for their time and knowledge. Many thanks to the Friends of Canaveral for supporting the Seashore's preservation.

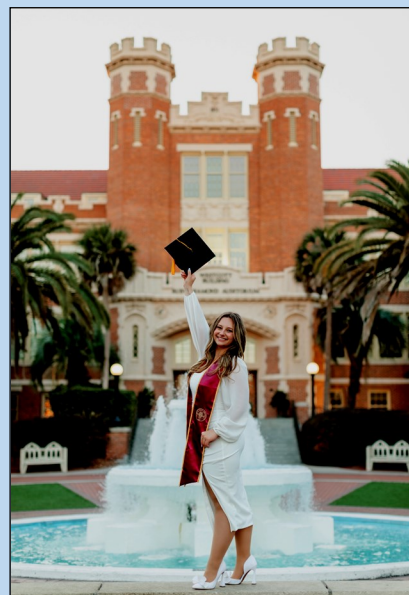
Here's to 50 years of history, nature, and community—and many more to come!



Photos by Rochelle Hood and Jack Windle
MIWA members enjoy a field trip to Canaveral National Seashore which is managed by the National Park Service.

Meet Sea Turtle Education Intern Remi Siegel-Ventura

Hi! I'm Remi Siegel-Ventura, originally from Fanwood, New Jersey. I recently graduated from Florida State University where I studied Environmental Science and Classical Civilizations with a minor in Earth Science. At FSU, I conducted marine biology research, taught a research course, performed with the Flying High Circus, and served as President of the Jewish Student Union. This year, I'm working with FSU Student Affairs in their Sustainability and DEI Offices and am thrilled to be interning with the Merritt Island National Wildlife Refuge!



MIWA Members Visit: Gopher Tortoise Recipient Site

by Rochelle Hood and Natalie Al-Shihabi

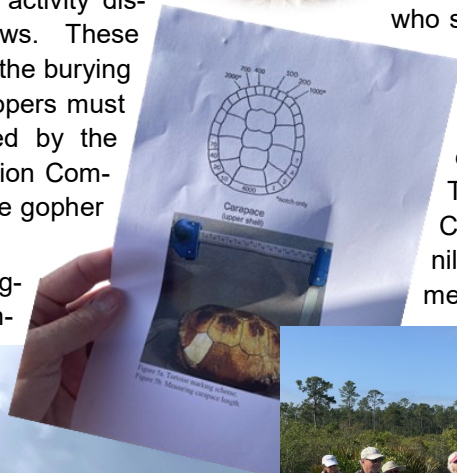
On April 10th MIWA members celebrated National Gopher Tortoise Day by visiting Longleaf Pine Preserve in Volusia County. Members were able to view a recipient site for gopher tortoises never before seen by the public. Attendees learned about the relocation process of these imperiled species and the recipient site habitat.

Gopher tortoises are seen all across Florida and are a state listed threatened species. Florida law includes stringent requirements related to construction activity disturbing tortoises or their burrows. These measures were put in place to stop the burying of tortoises at building sites. Developers must hire an authorized agent permitted by the Florida Fish and Wildlife Conservation Commission (FWC) to move and relocate gopher tortoises.

Longleaf Pine Preserve is a designated recipient site for Volusia Coun-

ty construction projects. After being brought to the preserve and marked for identification the gopher tortoises go through a soft release into an enclosed area with suitable habitat to monitor their progress. Members enjoyed a journey around the preserve aboard an eco-buggy while learning about the land management plan incorporating use of prescribed burns.

The excursion included short hikes to provide attendees with a chance to see gopher tortoise burrows up close, observe a variety of native plants, participate in a bit of a scat scavenger hunt, and discover wildlife who share the burrows. Some of the special sightings included fresh bear scat, viewing of a federally endangered plant - endemic to Volusia County (Rugel's pawpaw), and the discovery of a juvenile gopher tortoise. Thanks to a grant from the Gopher Tortoise Council guests received artist-designed juvenile and adult gopher tortoise stickers to commemorate their visit.



Clockwise from the top: A juvenile gopher tortoise; tortoise marking scheme and measuring carapace (upper shell) length; the group learned about tortoises, their habitat and prescribed fire; MIWA members enjoyed a tour aboard an eco-buggy during a tour of Longleaf Pine Preserve in Volusia County to celebrate National Gopher Tortoise Day in April. Gopher tortoises are found all over Florida.

Hiking Refuge Trails

(continued from the Spring 2025 Habi-Chat)

If you are hiking on the Refuge in the summer, remember to hydrate, protect yourself from sunburn, and use mosquito repellent. Here are three more walking trails on the Merritt Island NWR:

Scrub Ridge Trail (moderate) – 1-mile loop – 30-40 minutes – This easy trail leads visitors through some of the most unique habitats in Florida. Starting on a solid sandy limestone trail, visitors will stroll between a freshwater impoundment and scrub habitat.

Cruickshank Trail and Tower (moderate) – 5-mile loop – 2 hours – Allan Cruickshank Memorial Trail honors Cruickshank who advocated for the protection of sweeping wet landscapes when NASA began plans for the Kennedy Space Center. This open sunny trail offers wide vistas from atop dike roads with views out over the marshes. Good birding opportunities.

Wild Bird Trail (easy) – ¼-mile round trip – 30 minutes – Along Black Point Wildlife Drive, Wild Bird Trail is a short flat trail connecting two great bird observation platforms overlooking the marshes.

The Spring 2025 Habi-Chat featured information on the Oak and Palm Hammock Trails, and the Pine Flatwoods Trail. See the Front Desk at the temporary Visitor Contact Station for maps or call (321) 861-0069.



Above and Below: Scrub Ridge Trail



Cruickshank Trail and Tower

Meet Sea Turtle Education Intern Cataleya Vince

My name is Cataleya Vince—a first-generation college student from Palm Beach Gardens, Florida, studying Marine Science with a minor in Climate Change at Florida Gulf Coast University. I've always been passionate about the ocean and finding ways to protect the ecosystems that depend on it. I'm incredibly grateful to the Merritt Island Wildlife Association for funding my internship and to Merritt Island National Wildlife Refuge for welcoming me onto their team. This experience is not only helping me grow and learn, but I am also gaining the field experience I need for a future in marine and environmental conservation.



Surveying The Past To Inform The Present

by Tim Kozusko, Kennedy Space Center Ecologist

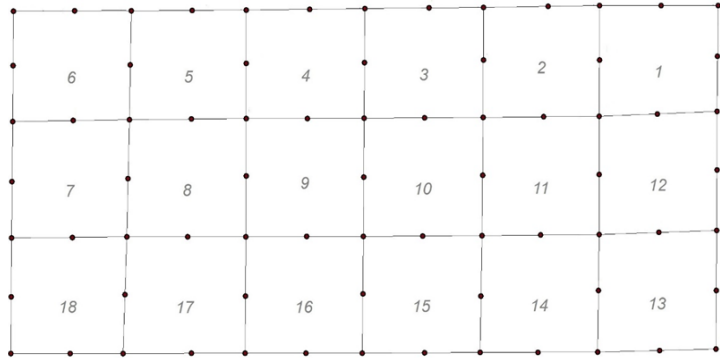
One of the more vexing questions facing ecologists involved in restoration is how to define success. What is the desired end state of a piece of land? One tool we can use is the early (ca. 1943-1958) aerial imagery, available from labins.org. By 1943 there were already close to 2 million people living in Florida, creating new impacts to the environment, including land clearing for agriculture and suppression of the natural fire regime that is so important to the ecology of Florida. It would be helpful to be able to go further back in time, to before our area was settled. For this we need to turn to an unsavory aspect of our history.

The U.S. gained possession of Florida in 1821 following Andrew Jackson's prosecution of the First Seminole War across the border when Florida was a possession of Spain. Between 1835 and 1842 the Second Seminole war was fought, although peace between the wars was uneasy. By 1842 Congress passed the Armed Occupation Act, ostensibly to lure white males to settle the peninsula and force the Seminoles south. By building a house and clearing/cultivating five acres in the first year, a man could be granted 160 acres (a quarter section). Before this could happen the land needed to be surveyed.

The surveys were based on a township, a block of land six miles by six miles in area. Each square mile is called a section. To delineate quarter sections the surveyor walked lines in the cardinal directions setting a post every half mile using a compass and a Gunter's Chain that was 66 ft long. An example of the northern half of a township is shown at upper right. The sections are numbered in a pattern that makes sense for the survey, and each dot represents a corner post.

So, what has this got to do with ecology? Well, as the surveyor walked the lines he kept track of the habitat type as a description of the land to identify its value to a settler. Additionally, to "witness" each corner he took a bearing and a distance to a nearby tree to help identify the location of the corner. This information is of use to us.

I'm a fan of Impressionist art and way back in humanities class, a teacher told us the way to understand Impressionist art is to sort of squint your eyes as you look at it. Well, this approach is analogous for ecological uses of survey data. So let's squint our



An example of a northern half of a township in the mid-1800s in Florida. A township was six miles by six miles in area. The dots represent corner posts. Habitat types were noted at each corner post.

eyes a bit at the area of Black Point known to us as the T-10J and T-10K impoundments. An aerial image of this area from 2021 is shown below (source: labins.org).



Above: The light brown colors are grassy marshes, and the dark green is mangrove. T-10J, on the left side, is mostly open water now. We can see the same area below in an image from 1943 (source: labins.org). Notice the light red lines that represent section lines. Using the survey we can determine what the vegetation was like prior to settlement in the mid-1800s.

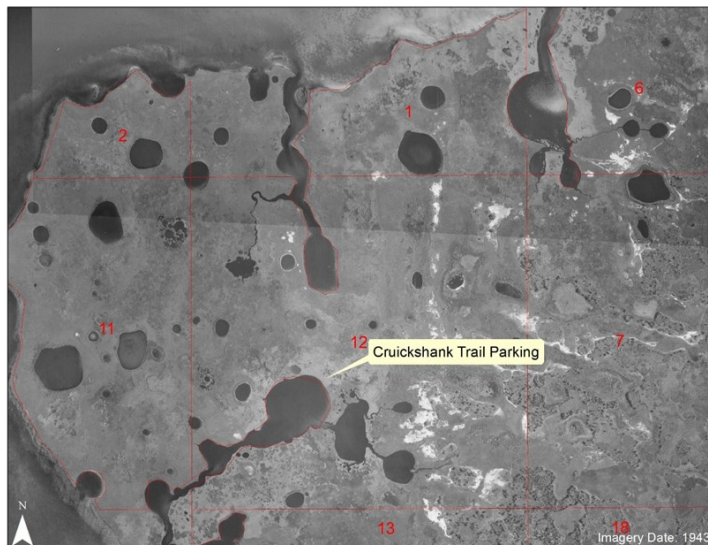


Space Coast Birding and Wildlife Festival

January 21-25, 2026
Radisson at the Port • <https://scbwa.net/>

Surveying The Past

(continued from previous page)



Above: The first thing to notice is that there are few mangroves and the marshes – then home to the dusky seaside sparrow – were open, grassy marsh maintained by natural hydrology and frequent fire. In the lower right-hand side of the image we can see the dark speckles that are the shadows of cabbage palms.

The image at right is a scan of the field notes from July 1844, by Henry Washington. It takes a lot of work to decipher the handwriting: T 21E-R35S (from the corner) east, North Boundary of section 12 (the red line across the middle upper third of the image above).

At one chain (66 ft) he left the pond that you see at the NW corner of section 12 above. Just less than a half mile he encounters the lagoon that you see

above, then crosses it. At 72 chains he writes salt pond, nearly dry, near North margin (probably 1) chain across. At the mid-point he only found a mangrove 20 ft. away on one side of the line and no trees available on the other. He ends with last mile open dry [third rate] salt marsh. No mention of trees. A general description of the township refers to the area as salt marsh and prairie with cabbage palm hammocks.

What does this tell us? Prior to impoundment for mosquito control in the late 1950s (before the existence of the refuge), sea level rise, and fire suppression, frequent fire and naturally variable hydroperiod (the timing and duration of water-logged/flooded soils) led to conditions that favored low and open grassy vegetation. This was, in turn, habitat for the dusky seaside sparrow. A return to this habitat type is not practical with today's conditions, but if you want a glimpse of what the area was like before settlement, go to the overlook just north of the Cruickshank Trail parking and take in the view to the NE.

14
T21E-R35S-E. 1/4 Sec.
North Boundary of Section 12
Beginning at NW corner of Sec. 12
1. 00 x Pond
32. 00 x Lagoon 40' deep, 170' x North.
72. 00 x Salt Pond, nearly dry, near North margin of 1/4
80. 08- Schacht 32 Links North of Post. Cor. back
1/4 Sec. 12. Mangrove 20' x 30' x 10' deep
Mangrove 20' x 30' x 10' deep
No other bearing found.
Last mile open dry 3. Salt marsh

Field notes from Henry Washington in the area of Black Point Wildlife Drive in July 1844.

Otterly Amazing – The Otters of Lake Woodruff National Wildlife Refuge

Community members of all ages gathered at Lake Woodruff to celebrate World Otter Day on May 28th. Megan Stolen, Senior Scientist at Blue World Research Institute, enchanted the group with a program about North America's playful and elusive river otters. The 'show and tell' part of the program included pelts, bones, and photos of poo. Younger participants joined volunteer Jan Saczawa for an otter-themed arts and crafts session. We closed the program with captivating video footage featuring the playful and vocal otters of Lake Woodruff National Wildlife Refuge. See photo on page 11.



The Splendid and Unique Roseate Spoonbill

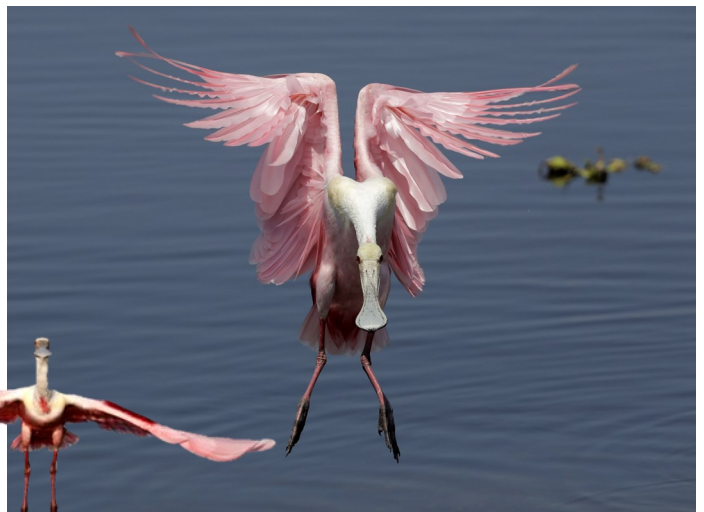
Text and photos by Paul Leader

One of the most sought after species at the Merritt Island National Wildlife Refuge is the Roseate Spoonbill (*Platalea ajaja*). A large wading bird 32" tall with a wingspan of 50", they sport bright pink plumage with scarlet wing coverts and yellow tail feathers. Young ones are paler pink and their heads are fully feathered. They lose their head feathers as they mature until at approximately three years of age when they acquire the full adult breeding plumage, including the distinctive yellowish-green bald head and bright red eyes.

The spoonbill is unique because of the spatulate bill and its specialized feeding method which consists of walking slowly through shallow fresh or saltwater while swinging its bill from side to side in order to grab crustaceans and small fish. They get their pink coloration from the foods they eat. They are year round residents in Florida and around the gulf coast to Texas and south to South America.

They nest in mangroves and other trees by or in water in colonies, often with herons and other water birds. The male brings sticks and twigs and the female usually builds. Breeding season usually begins in November in Florida. Two to four eggs are laid and incubation is by both parents for a period of about 24 days. The little ones stay in the nest until they get older and start to "branch out" to nearby perches and then return to the nest to be fed by both parents. They fledge at about eight weeks when they begin to fly.

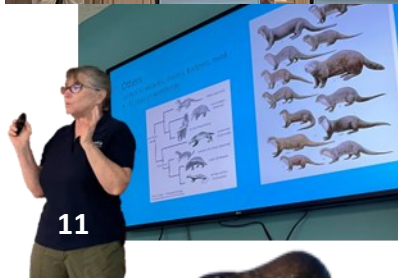
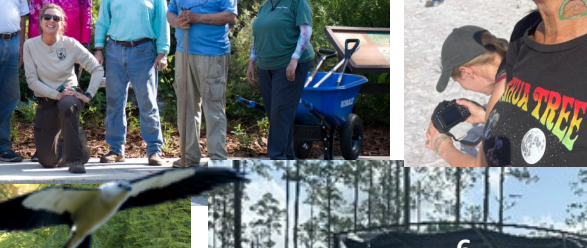
Black Point Wildlife Drive, Biolab Road and Gator Creek Road on the Refuge are good places to find spoonbills. Come and have a look at these entertaining colorful birds, especially in November through April.



Out & About With MIWA

MIWA stays busy with community outreach and education events, fundraisers and members-only field trips. We need you to help us help the Merritt Island NWR Complex. **Consider joining our family!**

- 1) Earth Day at the KSC Visitor Complex, 2) & 3) Warbler ID Workshop at Sams House Nature Center, 4) & 10) Florida native garden planting¹, 5) Gopher Tortoise field trip to Longleaf Pine Preserve, 6) Eco-Buggy field trip¹, 7) Swallow-tailed Kite program¹, 8) & 14) Gopher Tortoise and Horace's Duskywing at Brevard Museum of History and Natural Science Butterfly Walk, 9) Canaveral National Seashore field trip, 11) Otterly Amazing program¹, 12) Prehistoric Animals program¹, 13) Who Were the Mayaca program¹, 15) Holly Giles sporting a gopher tortoise cap, 16) Earth Day at the KSC Visitor Complex¹ at Lake Woodruff NWR





www.miwarefuge.org • (321) 861-2377



Directors & Officers

President Nancy Bray
Vice President Laurilee Thompson
Treasurer Cheryl Ford
Secretary Diane Stees

MIWA Board Members

Thad Altman Tim Kosuzko
Jim Benedict Paul Leader
Becky Bolt Bob Musser
Kathleen Burson Shawn Quinn
Steve Dunn Jim Stahl
Sue Gosselin Lori Weller
David Hartgrove Charlie Venuto

Liaisons

MINWR Manager Keith Ramos
MINWR Visitor Kim King-Wrenn
Services Manager

Lake Woodruff NWR Manager Sterling Valentine

NASA Liaison James Brooks

MIWA Staff

Executive Director Rochelle Hood
Nature's Treasures Malinda Sherman
Gift Shop Staff Jack Windle

Habi-Chat Editor Diane Stees

Calendar of Events



06/14 (Sat) Family Fishing Day*

Merritt Island NWR

* FWC Freshwater Fishing License Free Weekend

06/14 (Sat) Try Fishing*

Lake Woodruff NWR

06/24 (Tues) Butterfly Walk at Pritchard House

Titusville

06/25 (Wed) Native Bee Education Day and mini Bio-Blitz

Lake Woodruff NWR



06/28 (Sat) Mango Harvest Festival

10:00 am - 2:00 pm • Sams House, Merritt Island

07/26 (Sat) Sea Turtle Shellabration!

10:00 am - 12:00 pm • Sand Point Park, Titusville

08/15 (Fri) Gillespie Museum & Sandhills Restoration

Stetson University, Deland

08/16 (Sat) Orianna Center for Indigo Snake Conservation**

Central Florida Zoo, Eustis **MIWA Members-only Field Trip

09/13 (Sat) Clam Restoration pgm/lab tour/service project**

St. Augustine

09/20 (Sat) Insects and IPA at Playalinda Brewery

Titusville



Village Inn Dine To Donate:

6/10 (Tues) , July & Aug - Titusville (4-9 pm)



*Special thanks to Florida's Space Coast Office of Tourism.
 Printed copies of the Habi-Chat were made possible through their
 Marketing Support Program grant.*

MIWA MEMBERSHIP

The Merritt Island Wildlife Association (MIWA) depends on membership support to assist us in providing the much needed additional funding for Merritt Island NWR programs. Joining is simple, just fill out this form and mail it to: MIWA P.O. Box 2683, Titusville, FL 32781. You may also join online at www.miwarefuge.org. Thank you for supporting the Refuge and MIWA!

Name (s): _____

Address: _____

City: _____ **State:** _____ **Zip:** _____

Phone: _____ **E-mail:** _____

I want to pay my membership via:

___ Check ___ Money Order ___ Visa ___ MC ___ Discover ___ AMX

Please make checks and money orders payable to "MIWA"

CC #: _____

Exp. Date: ____/____/____ **CVV:** _____ **Billing Zip:** _____

Signature: _____ ☐

___ New ___ Renewal

___ Student \$10

___ Senior \$20

___ Individual \$25

___ Family \$50

___ Tortoise \$100

___ Bobcat \$250

~ Patron Levels Below ~

___ Sea Turtle \$500

___ Otter \$1,000

___ Alligator \$2,500

___ Manatee \$5,000

\$ _____ Donation

\$ _____ Total