

Voices for Nature

News from the Friends of the Florida Keys National Wildlife Refuges



Fall-Winter 2024-25 • vol 5 • issue 2

Crocodile Lake • National Key Deer • Great White Heron • Key West

WE ARE ALSO ANCESTORS: FINDING JOYFUL INTERACTIONS IN THIS WEB OF LIFE

Amidst politics, world violence, and the death of a friend, this year had been weighing on me.

But then I saw a bird.

A fledgling sparrow, to be precise, whose family had nested in our birdhouse for the summer. Each day, while his siblings pecked around the wildflowers for seeds and bugs, this particular sparrow mostly just played in a tiny puddle on the walkway. He enjoyed it so much, his mom usually ended up delivering food to him, even though she often looked a little irked over the task.

Then one day a young bunny came, and chased the fledglings. Her gait was filled with goofy exuberance. I wondered what the birds thought of this

giant furry beast running at them. Did they know she was just playing?

As the days passed and the plants grew into late-summer blooms, I noticed the spiders, the native bees, and beetles so tiny I could barely see them. All of these dramas unfolding around me — a yard full of creatures living out their lives, regardless of whether I catch a glimpse of them or not.

What a freeing thought, knowing the world doesn't revolve around me. I may be the main character in my own story, but in the eyes of a sparrow, I am a humble speck on a giant planet.

That doesn't mean I'm insignificant. Every life on Earth revolves around interactions, and it's in those that I'd like to think our legacies reside, because each one changes something that extends beyond our lifetimes.

That tree over there is giving us shade because some person, or bird, or the tides, planted it long before we

IN THIS ISSUE

Refuge events not to miss
Voting for nature
New Keys wildflowers
Hermit crab housing
Christmas bird count
The wonders of native plants
What's new at the Nature Store

Cover photo: hermit crab in Key West NWR, by Karuna Eberl

See *Joyful Interactions*, Page 5

A WORD FROM THE BIG BIRD

Hello Nature Lovers,

If you haven't noticed, the elections are fast approaching. This is your opportunity to stand up for wildlife and natural habitats. I urge you to register to vote, research candidates, and vote as if your wildlife depended on it; it does.

Our expanding societal demands are placing an ever-increasing burden on wildlife and their habitats. We continue to move into once pristine areas, and industry continues to remove and extract resources from fragile environments. Yet our wildlife provides all Americans with numerous benefits including the resiliency that comes with biodiversity, mitigation of damage from storm surge and wind, clean water and air, and the removal of carbon dioxide from the atmosphere. Since these lands, and in particular their wildlife,

cannot vote for their own protection, we have to be their voice.

In every election across the country the National Wild Refuges are on the ballot. From establishing appropriate budgets to securing environmental protections, our collective power to elect representatives who will support our irreplaceable National Wildlife Refuge System is critically important.

You can help spread awareness by sharing your personal stories and photos with the hashtag #vote4wildlife.

Ask yourself: Why do I #vote4wildlife? Your voice can inspire others to make the environment a priority at the polls.

— Kathy Rhodes,
Florida Keys Wildlife Society Chair



FLORIDA KEYS WILDLIFE SOCIETY

We are the official friends group of the Florida Keys National Wildlife Refuges, a non-profit 501(c)(3) organization whose mission is to support the Keys' four NWRs — Crocodile Lake, National Key Deer, Great White Heron, and Key West — through education, non-adversarial advocacy, volunteerism, and fundraising.

The National Wildlife Refuge System, within the U.S. Fish and Wildlife Service, protects wildlife and habitat on more than 150 million acres of land and water from the Caribbean to the Pacific, Maine to Alaska. Refuges improve human health, provide outdoor recreation, and support local economies. For more on NWRs, see www.fws.gov/refuges.

The mission of the USFWS is working with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people. They are known for scientific excellence and stewardship of lands. For more, see www.fws.gov.

Florida Keys Wildlife Society:

Nature Store: 30587 Overseas Hwy, Big Pine Key, FL 33043. Mailing: P.O. Box 431840, Big Pine Key, 33043; 305-872-0645; www.FloridaKeysWildlifeSociety.org; info@FloridaKeysWildlifeSociety.org

Nature Center:

30587 Overseas Hwy, Big Pine Key, FL 33043

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Newsletter: Karuna Eberl



We encourage all nature lovers to get involved with Team Wildlife. Your help goes a long way. For volunteering and membership, see page 16. © October 2024, Florida Keys Wildlife Society.

REFUGE EVENTS

NATIONAL WILDLIFE REFUGE WEEK: OCT 13 TO 19

Join us as we celebrate the flora, fauna, and wildlife of the four Florida Keys National Wildlife Refuges. All events are free. To learn more about the marvel that is the US National Wildlife Refuge system, see Ranger Katy's column on page 4 of this newsletter.

OCTOBER 17: BIRD & NATURE TOUR

Take a morning walk in the Lower Keys with Ranger Katy. Meet at 8 a.m. at the Jack C. Watson Wildlife Trail on Big Pine Key to explore the National Key Deer Refuge. Likely locals include white-crowned pigeons, migrating raptors, Key deer, and many more. Wear comfy, close-toed shoes that can get muddy, and don't forget your binocs and water.

OCTOBER 19: NATIVE PLANT GIVEAWAY/OPEN HOUSE

From 10 a.m. to noon, it's time to collect your free native plants, play plant and wildlife trivia, and mingle with fellow nature nerds. Ranger Katy gives her presentation at 10:30 on native plants. Master gardeners will be available to answer your growing questions; and members of the Florida Keys Wildlife Society can tell you more about what the society

does, plus share volunteer opportunities. Don't forget to stop at the Nature Store for local gifts, books, and more, then grab some complimentary refreshments sponsored by our kind friends at First Horizon Bank. All of this fun takes place at the Nature Center on Big Pine Key, 30587 Overseas Highway.

AND BEYOND!

Throughout this week — and the other 51 weeks of the year — we wholeheartedly encourage you to take a walk or bicycle ride, kayak, picnic, and otherwise get outdoors and enjoy your Refuges.



FULL MOON KAYAK EXCURSIONS: THE WAIT IS OVER!

Paddle the waters surrounding the National Key Deer Refuge at Big Pine and No Name Keys, and become immersed in the world of great white herons, spotted eagle rays, mangrove trails, and legendary Keys sunsets.

Register in advance at <https://FloridaKeysWildlifeSociety.org/Full-Moon-Kayak-Excursions> (\$30 donation, which supports the Florida Keys Wildlife Society). Please text or call event sponsor and renowned naturalist guide Captain Bill Keogh of Big Pine Kayak Adventures, to discuss your preferences on kayaks (single or tandem) and equipment needs: 305-872-7474.

No experience necessary. Please arrive about 30 minutes early at the Old Wooden Bridge Marina, 1791 Bogie Road, Big Pine Key. Bring a flashlight and water.

- Wednesday, October 16: 5:15 to 7:15 p.m.
- Thursday November 14, 2024: 4 to 6 p.m.
- Saturday December 14, 2024: 4 to 6 p.m.
- Sunday January 12, 2025: 4:15 to 6:15 p.m.
- Tuesday February 11, 2025: 4:45 to 6:45 p.m.
- Thursday March 13, 2025: 6 to 8 p.m.
- Friday April 11, 2025: 6:00 to 8:00 p.m.
- Sunday May 11, 2025: 6:15 to 8:15 p.m.



NATURE LECTURE SERIES

Our third annual nature-focused lecture series kicks off in December. A list of speakers will soon be posted on the events page at www.FloridaKeysWildlifeSociety.org. One of our presenters will be retired Keys Ranger Kristie Killam, sharing her experiences while working with the creatures of the Keys Refuges, plus her new book, *Stories of Nature from the Florida Keys: A Park Ranger's Adventures in Paradise Behind the Lens and Through the Seasons*.



RUN WITH DEER 5K: FEBRUARY 15, 2025



Our annual foot race and walk promises to be a day full of entertainment, costumes, laughter, and camaraderie. This is also a fast, fun volunteer opportunity!

The race starts at 8 a.m., then weaves around Big Pine Key, along Refuge lands, and through our community. To volunteer, email FloridaKeysWildlifeSociety@gmail.com and put "Run With Deer" in the subject line. To register, visit the Run With Deer page at FloridaKeysWildlifeSociety.org.

For more information on all events, contact info@FloridaKeysWildlifeSociety.org or Keydeer@fws.gov.

RANGER KATY: CELEBRATE NATIONAL WILDLIFE REFUGE WEEK!

HELLO FRIENDS!



Each October, we come together to celebrate National Wildlife Refuge Week, honoring the incredible network of public lands and waters managed by the U.S. Fish and Wildlife Service—the National Wildlife Refuge System.

From October 12 to 19, we invite everyone to walk, roll, or stroll for the wild in the wild! The festivities will kick off on October 12 with Urban

Wildlife Conservation Day, featuring free entrance to any National Wildlife Refuge that usually charges an entrance fee. What a fantastic opportunity to explore the beauty of our natural world.

Here in the Florida Keys, we're soaking up the sun like alligators, enjoying the gentle transition into fall. Thanks to the Florida Keys Wildlife Society, IFAS Monroe County Master Gardeners, Dagny Johnson State Park, and Key West Botanical Garden, we're excited to give away more native plants this October 19th!

As someone who deeply loves the National Wildlife Refuge System, I'm thrilled to dedicate this corner of the newsletter to share my passion for the Service. Let's take a moment to appreciate the System, the Service, and the Department that make it all possible.

THE DEPARTMENT

Our national parks are truly America's crown jewels, inspiring awe and wonder. While iconic locations like Yosemite and Yellowstone draw visitors from all over, our public lands encompass so much more—scenic rivers, national marine monuments, battlefields, and wilderness areas. At the Department of the Interior, we work tirelessly to protect these special places, ensuring that future generations can enjoy our natural and cultural treasures. With over 400 national parks, 560 national wildlife refuges, and nearly 250 million acres of public lands, there's a wealth of beauty all around us!

THE SERVICE

The U.S. Fish and Wildlife Service is the only federal agency dedicated to managing fish and wildlife resources in the public trust for today and future generations. Our journey began in 1871 with the creation of the United States Commission of Fish and Fisheries. Over

Great White Heron NWR. Photo: Karuna Eberl.

the years, while our name has changed, our commitment to conservation through science-based management has remained steadfast.

THE SYSTEM

The Florida Keys National Wildlife Refuges are part of an extraordinary network known as the National Wildlife Refuge System (NWRS). Did you know there are hundreds of National Wildlife Refuges across the U.S. and its territories? There's a refuge within an hour's drive of almost every major city—making it easier than ever to connect with nature!

We are passionate people doing amazing things in beautiful places. From scientists to rangers, we collaborate to manage these lands and waters for the benefit of people, plants, and wildlife. Our refuges not only provide enjoyment and beauty but also embody shared American values that support the protection of living things.

Since 1903, when President Theodore Roosevelt designated Pelican Island as the first wildlife refuge, we've grown to over 570 national wildlife refuges and 38 wetland management districts, covering a staggering 95 million acres of land and 740 million acres of submerged lands and waters.

Refuges protect diverse habitats—from the prairies of the heartland to the hardwood forests of the Southeast, and the unique landscapes of the desert Southwest. They provide essential homes for countless species and offer world-class outdoor adventures, including fishing, hunting, hiking, and nature watching.

Visiting your nearest national wildlife refuge is easier than you think, and appreciating these precious spaces is something we can all do.

Let's celebrate National Wildlife Refuge Week together and cherish the wild spaces that enrich our lives!

Happy exploring!



A BIG WELCOME TO OUR NEW REFUGES BIOLOGIST & OFFICE STAFF

Dr. Heather Stewart recently joined the Refuges team as a resident biologist. She has an impressive background in mangroves, corals, fish, and more, including studying the impacts of hurricanes Irma and Maria on coral reef and mangrove forests, and working in the Bocas del Toro archipelago on the Caribbean coast of Panama, researching aquatic communities and biodiversity of mangrove islands. In the next newsletter, we'll get to know her better and learn about what she'll be focusing on in the Keys.

Haley Piekenbrock is the new administrative assistant at the headquarters on Big Pine Key. She's an experienced social media manager, with a background in nonprofits, conservation, and outdoor recreation. She has worked with Protect Our Reefs at Mote Marine, the Keys chapter of the Surfrider Foundation, and Big Pine Athletic Association. She earned a graduate certificate from the University of Florida in Nonprofit Leadership and holds a B.S. in Marine Biology and Biological Oceanography from Old Dominion University.

JOYFUL INTERACTIONS: FROM PAGE 1

were born. That thought I just had, it was shaped by interactions with my parents, my friends, and that little sparrow; just as their thoughts and actions were shaped by forces trickling down through countless generations before them.

Simultaneously, through our actions, each one of us is shaping the future for other beings. We, too, are tree planters, whether literal or metaphorical, and our legacy resides in the positive interactions we give to the world around us.

In this web of life, we are all descendants, and we are all ancestors. Or, in other words, our biological interactions are the very fabric of nature.

As the tides roll on, new generations hatch, and old ones recycle their carbon back into the land and sea, may we notice the wonders all around us, try to exist peacefully, and take time to watch the sparrows.



NEWSFLASH

Between now and Election Day, November 5, perhaps the most important interaction you can have with fellow humans is to inspire them to #vote4wildlife. We are at a critical juncture for stemming climate change and species extinctions. We've already lost the Key Largo tree cactus to rising seas (see page 11). What's on the line now is the future of our Key deer, sea turtles, crocodiles, Key Largo woodrats, Lower Keys marsh rabbits, and so many of our other wild neighbors and their habitats.

Make nature a priority at the polls. Be an ancestor whom future generations can celebrate.

— By Karuna Eberl, newsletter editor

CALL FOR BOARD MEMBERS: HERE'S YOUR CHANCE, BE A SUPER-VOICE FOR KEYS NATURE

Feeling like you want to help but don't know how to make the biggest impact? Consider becoming a member of the Florida Keys Wildlife Society Board of Directors!

The Florida Keys Wildlife Society, friends group for the four Florida Keys National Wildlife Refuges, is seeking nominations for qualified Board members. The all-volunteer Board works on behalf of the whole Friends organization to set strategy and accomplish key tasks. You don't have to be located in the Keys full time, but you should be able to participate in monthly meetings, either in person or via Zoom.

Helpful skills and characteristics:

- A love of Keys creatures, plants and habitats!
- Good relationship-building and outreach skills
- Fundraising experience
- Writing, messaging, and marketing skills
- Technical skills in IT
- Social media skills
- Understanding of financial decision making

Key tasks include:

- Building relationships with donors and organizations
- Serving as an ambassador at Refuge events

- Actively serving on one committee
- Brainstorming community outreach ideas
- Advocating for the Keys NWRs with legislators

Please send an email sharing why you want to serve on the FKWS Board, and your description of qualifications (resume, bio, etc) to info@FloridaKeysWildlifeSociety.org. We can't wait to hear what you'll bring to the team!



NEW KEYS WILDFLOWERS ADDED TO GUIDEBOOK THERE ARE NEW SPECIES FOR THE BUCKET LIST!

In his new edition of *Wildflowers of the Florida Keys* (formerly *Florida Keys Wildflowers*), author Roger Hammer has included a number of new species. That brings the total of native and naturalized wildflower species to 320.

The majority of the new additions are due to an increase in naturalized exotics, plus simply adding in some that had been left out of the original edition for whatever reasons. But there are a few interesting exceptions.

Tiny purslane (*Portulaca minuta*) was thought to be endemic to the Bahamas until it was discovered on Big Pine Key. Similarly, a population of the Bahama blackbead (*Pithecellobium bahamense*) was also found on Big Pine.

Another new species of note is the endemic Ogden's sandmat (*Euphorbia ogdenii*). The critically endangered plant was named to honor Hammer's next-door neighbor, famed ornithologist John Ogden, who worked as a senior research biologist for National Audubon Society and helped save California condors from extinction through a captive breeding program. Look for it on the Watson Trail in the National Key Deer Refuge, near the interpretive sign for the silver palm.

Though not new to the book, Hammer is particularly fond of another Keys' wildflower, the Big Pine partridge pea (*Chamaecrista keyensis*). "It is endemic to Big Pine Key and a few nearby keys, and that's the only place it occurs in the world," he said. "It's a small, shrubby species with very attractive yellow flowers."

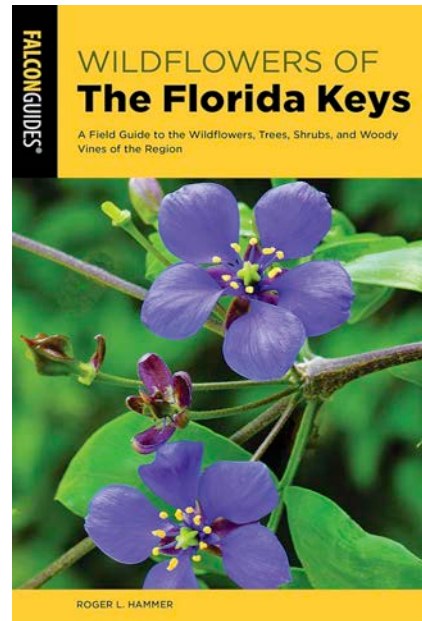
Hammer is also a fan of Keys trees. "The tree flora in the Florida Keys is unlike any other part of Florida because all of the trees that make up the forests in the Keys are of tropical origin," he said. They arrive here through natural range expansion, by riding favorable ocean currents, tropical storms and wind (especially for orchids



Chamaecrista keyensis (above) is endemic to the Keys, found on Big Pine and a few nearby keys. *Euphorbia hammeri* (top left, facing page) is not found in the Keys, but was first identified last year in Everglades National Park and Big Cypress National Preserve, and the biologists who found it named it in honor of Hammer. *Euphorbia ogdenii* (top right, facing page) is endemic to the Keys. It can be found growing around the base of the silver palm interpretive sign at the Blue Hole on Big Pine Key. Photos courtesy Roger Hammer.

and ferns), "and most particularly by migratory birds that fly from the tropical islands to South Florida in the spring each year with seeds of plants in their bellies," he said. "The majority of the tropical trees and shrubs in the flora of the Florida Keys bear small, fleshy fruits that are eaten by birds. Therefore, the forests in the Florida Keys resemble the forests in the Bahamas and the Greater Antilles, not mainland Florida."

Not surprisingly, Hammer has concerns for the future of Keys flora. "Sea level rise due to climate change could



very well cause the extinction of endemic species," he said. "It is the single-most urgent threat that could be catastrophic for the flora of the Florida Keys. There is also now talk among politicians to weaken the restrictions on new development in the Florida Keys, which will open the flood gates for developers to clear unprotected native habitats."

As for his advice for finding the species in his book, he said "A key to finding specific wildflowers is to learn in what type of habitat they occur, and their flowering season, and then go explore that habitat when there is the best chance to find them flowering." And all of that information is, of course, included in *Wildflowers of the Florida Keys*.

Hammer has another new book for Florida foraging enthusiasts: *Foraging Florida*, "for all the folks who like to eat wild foods and pretend they taste good," he said.

For more information on Hammer and his publications, see www.rogerlhammer.com



CREATURE SPOTLIGHT

HERMIT CRABS NEED AFFORDABLE HOUSING, TOO HELP 'EM OUT BY #LEAVE THE SHELL, TAKE THE MEMORY

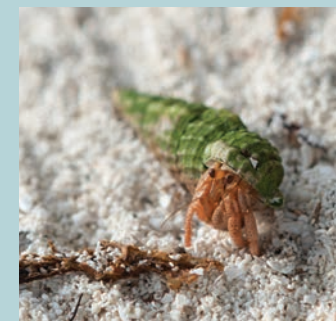
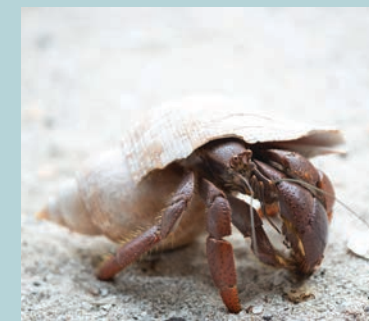
One day I was sitting on a friend's porch on Little Torch Key, when I saw a large conch shell lumbering toward the bottom of the steps. Its resident nestled up to an even larger conch shell, which my friend had proudly displayed there. Before I could refill my coffee, the hermit crab had slipped inside her new home and headed off down the road.

Her new shell was a prize, even by human standards. But to get to that age and size, she probably went through dozens, maybe hundreds of shells, starting with one that was quite tiny.

Just like humans, Florida Keys hermit crabs are feeling a real estate squeeze, partly because we love shells, too. We can't help but pocket these alluring natural wonders — but by doing so we are making life harder for our crabby cousins.

So, when you see a shell that could make a hermit crab home, try to leave it be. Instead, take a photo and, if social media is your thing, #leavetheshelltakethememory. And if you have some old shells kicking around your house, consider returning them to a beach with a hermit crab population.

Note: Thanks to the folks at Crustacean Plantation in Tavernier for suggesting this article. They have been raising hermit crab shell and habitat preservation awareness, and so far have received more than 2,000 shells to place out for native hermit crabs. They're also tagging shells to track their reuse, so if you find a hermit crab walking around with numbers on its shell, let them know! (<https://www.crustaceanplantation.org/> or <https://www.facebook.com/CrustaceanPlantation>)



The Keys are home to land and marine hermit crabs. According to the University of the West Indies, some species can live for 30 to 40 years, though 12 years is more typical. Photos: Karuna Eberl.

CHRISTMAS BIRD COUNT: YOU — YES YOU — COME JOIN US!

HERE'S WHO WE SAW LAST YEAR, AND WHAT'S IN STORE FOR 2024

Every December, if you know just when and where to look, you can spot a gaggle of goofy humans tromping through the hardwood hammocks at Crocodile Lake NWR and elsewhere in the Keys. They're part of the annual Christmas Bird Count (CBC), the nation's longest-running community science bird project.

Nationally, Audubon's CBC runs from mid-December to early January. December 2024 marks the 125th year of the event, and the sixth year since Croc Lake became an official Count Circle.

The CBC is a tradition that unites thousands of volunteers across the Americas, on a quest to identify what fliers are around us, so scientists can use that data to assess bird populations and guide conservation action. The event dates back to 1900, when ornithologist Frank Chapman decided counting birds would be better than killing them. At that time, the popular Christmas tradition was called the "Side Hunt," where people would come together in competition to see who could kill the most birds. Yikes and ick! Thankfully, we've progressed a bit since then.

Today, many of those volunteering in the CBC endure snow and freezing temperatures. But in the Keys, of course, we have it a bit easier — though rain sometimes adds to the excitement, as was the case for last year's event.

"Our most recent count was held December 17, 2023, on a day with a bit of unsettled weather," said Suzy Roebing, who coordinates the event in Key Largo. "From midnight until midday it was raining and blowing just short of a gale. We did not perform any counts by vessels as we usually do, so wading, shore, and sea bird numbers were low, and stormy weather made for difficult conditions for participants and the birds. With that said, our participants were troopers and endeavored to persevere!"

From roughly 7 a.m. to 5 p.m., 13 volunteers covered a 15-mile diameter count survey. Despite the squalls, they

spotted 55 avian species with a total of 1,341 individuals. There were good numbers of raptors out hunting for food, including red-shouldered and short-tailed hawks, American kestrels, merlin, and an eastern screech-owl. Among the



wading birds were wood storks, great blue herons, great egrets, a yellow-crowned night-heron, tricolored heron, and snowy egrets. Other highlights: northern cardinals, white-crowned pigeons, ruby-throated hummingbirds, white-eyed vireos, blue-gray gnatcatchers, laughing gulls, royal and sandwich terns, and tiny warblers including black-and-white, Cape May, and palm.

The date for this year's Croc Lake and other Keys CBCs will be announced soon. There are also events in Long Key/Lignumvitae and Plantation Key. Check here for updates: [https://](https://tropicalaudubon.org/christmas-bird-counts)

tropicalaudubon.org/christmas-bird-counts.

To participate, you don't have to know anything more about birds than that they tend to have feathers, since there will also be experienced bird nerds there who are happy to share their knowledge. Besides learning about our feathered friends, it's a good excuse to get outside, meet people, and be part of a culturally rich and scientifically important volunteer citizen science event.



If you can't join the event, consider collecting data on your own, even if that's just taking notes about who's in your backyard. It helps you keep track of who's around you, and when to look forward to their arrival every year. Bonus points for entering your observations into an app like eBird, which helps illuminate the larger story, enabling scientists to see

trends over time, which allows them to study the long-term health of bird populations and their movements.

BIRD WATCHING: DON'T JUST WING IT! TIPS FOR BEST BIRDING PRACTICES

When you're out sharing space with birds, it's important to be a good neighbor. That starts with respecting their space. A basic rule is if a bird looks like it might be thinking about flying away, you're too close.

This is especially vital with nesting birds, who may abandon their post, leaving their eggs or chicks vulnerable to predators. But it's also important for other birds, including those congregating on sandbars, who are there for a needed rest, and birds wading in salt ponds, who are there because they're hungry. It may not seem like a big deal for them to be disturbed once, but chances are humans are encroaching on them many times a day, and that takes a combined toll, wearing them out and keeping them in a stressed state.

To avoid being a birdie downer, get a good set of binoculars or a telephoto lens, and then:

- Be chill. Minimize your presence, and don't come off as a threat. Be quiet, wear muted colors, and move calmly.
- Let birds come to you. Find a good vantage point and wait patiently.
- Be polite. Leave before you've worn out your welcome, and let them get back to their business.
- Don't offer bribes. It's okay to feed birds in your backyard, because they are choosing to visit. But when you're in their territory, feeding them habituates them to humans, plus it can make them sick.
- Minimize recorded bird calls. Let them save their energy.

FINDING YOUR FAVORITE SPECIES

When it comes to successful birdwatching, keep in mind that many birds are most active during the early morning, and then again in the evening. And if you're hoping to find a certain species, it helps to think a bit like that bird. For example, flamingos tend to enjoy salt ponds, whereas great white herons frequent tidal sandbars.

IDENTIFYING BIRDS

Many people find it fulfilling to match birds with their scientific or common names. But that's optional. They're still easy to appreciate and observe even when you don't know their human-given names.



If you do want to be able to ID species, a great place to start is the Merlin app by the Cornell Lab of Ornithology, which includes sound ID (like a Shazam for bird calls). You can also pick up a tried-and-true paper field guide from the Nature Store operated by FKWS on Big Pine Key, and join community science and conservation programs, documenting your findings on Feederwatch, eBird and iNaturalist.

OTHER BIRD EVENTS

Beyond the CBC, there are loads of other birding events throughout the year. A few highlights include World Migratory Bird Day (second Saturday in May and October), The Big Sit (mid October) and World Shorebirds Day (early September). When you participate in any birding event, Ranger Katy encourages you to submit your list to eBird.

"Citizen science is huge in the bird world," she said. "We all gotta work together in conservation because there's so much to look at, so much to study, and only so many eyes. This real-time data is so helpful, plus it's fun to feel connected to a community that's brought together by a common interest."

It also makes science more accessible. Even if you're not a serious birder, you might just go out in your backyard and see some cardinals, and that's science anyone can do.

If you are interested in getting involved in birding events at the Refuges, email Ranger Katy at keydeer@fws.gov.



KEY DEER: WHICH HANDSOME FELLOW WILL WIN THIS YEAR'S RUT?

A lot of them! You'll likely notice Key deer bucks feeling rambunctious this time of year, scraping the velvet from their antlers and sharpening them on shrubs and trees as they get ready to challenge other males. It's all part of the natural process, wooing females by proving to them who is the fittest, and therefore the most qualified to pass on their genes to the next generations.

"They'll look exhausted after a big battle, and possibly be sporting some nasty scrapes and puncture wounds," said former Refuge Ranger Kristie Killam. "Enjoy the show, but please don't get too close, as that could interfere with their natural process, plus be dangerous to you."

Also, drive with extra care this time of year, as they'll be chasing each other and darting across the road.

Key deer photos: Colleen Fuller.



EXPLORING FLORIDA KEYS NATIVE PLANTS

UNDERSTANDING THE SIGNIFICANCE OF INDIGENOUS FLORA



By Marina Quirico, former UF/IFAS Monroe County Extension Environmental Horticulture Agent; This is an excerpt from Quirico's lecture at last year's Florida Keys Wildlife Society Nature Lecture Series.

The Florida Keys boast many native plants, each vital to the region's unique ecosystem. Let's uncover the importance of these indigenous species, emphasizing their adaptability to the Keys' environment and role in supporting local wildlife.

Many native plant species in the Florida Keys have adapted to the diverse habitats found within the archipelago, encompassing coastal dunes, hammocks, pinelands, mangrove forests, and freshwater wetlands. These species originate from various regions, including North America, the Caribbean, and Central and South America. They play a crucial role in providing habitat and refuge to wildlife, such as the Key deer, Lower Keys marsh rabbit, and silver rice rat.

What makes these native species remarkable beyond their aesthetic appeal is their adaptability and resilience. They have naturally evolved to withstand the challenges of the Keys' climate, including hurricanes, salt spray, and alkaline soil. As a result, they require less maintenance, water, and fertilizer than non-native species, making them a cost-effective and environmentally friendly choice for landscaping and conservation efforts.

Many native species in the Florida Keys captivate us with their striking beauty. From the delicate elegance of the Bahama senna and Florida Keys blackbead to the showy

flowers and attractive foliage of the black torch, these plants display a wide range of forms and colors that enchant observers. Additionally, species such as the coontie, crabwood, silver palm, blue porterweed, blolly, and Jamaica caper add further charm to the landscape of the Keys.

Despite their beauty and utility, native plants face the challenges of habitat destruction and invasive species. As stewards of this unique ecosystem, we must protect and preserve these botanical treasures for future generations. By supporting local nurseries that propagate native species and advocating for their conservation, we can ensure the continued health and vitality of the Florida Keys' natural environment.

In conclusion, the native flora of the Florida Keys represents not only the region's ecological heritage but also its cultural and aesthetic identity. By recognizing the importance of these indigenous plants and embracing their beauty and resilience, we can forge a deeper connection with the land and promote sustainable practices that benefit both people and nature. Let us celebrate and protect the botanical wonders of the Florida Keys, ensuring their legacy endures for generations to come.



Florida Keys Blackbead, by Maria Quirico.

Meet a Volunteer

SUSIE SHIMAMOTO AND SCOTT BOGGS

Earlier this year, we nominated Susie Shimamoto and Scott Boggs for Refuge Volunteers of the Year. They didn't win, but here's why we thought they should.

Over three years, they have dedicated more than nine months of their lives to stewarding Ballast Key, a small island within the Key West National Wildlife Refuge. Without their help, this important research station would have fallen ruin.

After hurricanes damaged the infrastructure, Susie and Scott began diligently repairing leaks in the two houses, rebuilding the dock, and getting essential systems back online, including solar and water. Their ongoing efforts extended to coordinating derelict and migrant vessel removal, coordinating smalltooth sawfish sightings with researchers, water break and seawall construction, trail upkeep, removing debris from the mangroves, propagating native plants, and eradicating invasive species. They've also taken on leadership roles, supervising volunteer teams and prioritizing those workers' comfort within the living quarters.

"Susie and Scott have exhibited extraordinary resilience and achieved remarkable feats in the face of adversity, including relentless mosquito and no-see-um populations [and no air conditioning]," said Kathy Rhodes, Florida Keys Wildlife Society Chair. "Their living conditions are



reliant on solar and generator power and catchment water, necessitating careful rationing of resources, food, and water, and require an occasional harrowing ride in a small boat. Yet, they approach each day with enthusiasm and determination."

This couple's dedication transcends mere duty; it's a labor of love. Susie's commitment even extends to her participation on the FKWS Board of Directors.

Susie Shimamoto and Scott Boggs embody the spirit of volunteerism and conservationism, enriching the Florida Keys community and greatly assisting the Refuge Complex with their selfless contributions. Thank you, both, for your steadfast devotion and exemplary service. We couldn't do it without you!

SEA LEVEL RISE: KEYS' CACTUS BECOMES FIRST EXTINCTION

This year, the Key Largo tree cactus received the dubious distinction of becoming the first U.S. species declared extinct from rising sea levels. A study published in the Journal of the Botanical Research Institute of Texas cited saltwater intrusion as the primary issue, a result of rising sea levels, soil depletion in the mangroves, severe hurricanes, and king tide flooding.

Another Keys' species, the Florida semaphore cactus was listed as endangered in 2013 after being severely poached through the 1970s. Today, factors related to climate change are its biggest challenges as well. Over recent years, the U.S. Fish and Wildlife Service has been trying to save them by planting 300 on high ground in the Crocodile Lake and Key Deer Refuges. So far, those efforts look promising, with cacti surviving at both sites.

In a future issue, we'll dive into a sea level rise update, and how that's impacting other species in the Keys Refuges.



Florida semaphore cactus (left), Dan Chapman/USFWS. Key Largo tree cactus, courtesy Fairchild Tropical Botanic Garden.

Refuges Artists — Photo Challenge



The Florida Keys Wildlife Society Photo Club meets monthly at the Nature Center on Big Pine Key. Join us in person, or email for more info: info@FloridaKeysWildlifeSociety.org. Please put "photo club" in the subject line. If you would like to submit images for consideration for elsewhere in this newsletter, email newsletter editor Karuna Eberl, karuna@WanderingDogCreations.com.

Wading Key deer, Doug Mader; Rainy season on the Key Deer Refuge, Joe Natale; non-native black spiny-tailed iguana, Susan Natale.



© A Keys State Of Mind



Green heron, Ann Haack; sunrise sail, Kristie Killam; a mother's love, Key deer, Colleen Fuller; bald eagle, Ann Haack; swimming Key deer, Colleen Fuller; Namaste out on a limb, green heron, Chloe Bartels.



Nature Store Highlights

DISCOVER THE PERFECT HOLIDAY GIFTS AT THE NATURE STORE SUPPORT WILDLIFE & LOCAL ARTISTS, GET COOL ECO-GEAR, AND COME HANG OUT

Whether you're shopping for unique and thoughtful presents for your loved ones, or treating yourself, we have something special for nature lovers of all ages. We even have locally made wooden Christmas ornaments!

Some highlights include SPF 50 shirts, so you can stay sun-safe while exploring the great outdoors. These lightweight, moisture-wicking duds provide superior sun protection, making them an ideal gift for boaters, gardeners, or anyone who loves spending time outside.

We're also proud to offer a wonderful selection of local books for every reader, which focus on nature, conservation, the environment, and the history of the Florida Keys. In anticipation of Native Plant Day, we've

stocked extra guides to the local flora. Whether you're looking for a field guide, a children's book about wildlife, or a deep dive into regional ecology, our local book section has you covered. These make perfect gifts for curious minds and passionate readers. And don't forget to check out retired Ranger Kristie Killam's new book, *Stories of Nature from the Florida Keys: A Park Ranger's Adventures in Paradise Behind the Lens and Through the Seasons*.

Visit the Nature Store today to browse our holiday collection, stock up on local books, and learn how you can support native plants. We're excited to help you find the perfect gifts and get involved with our volunteer opportunities this season!

WE NEED VOLUNTEERS!

We're always looking for passionate nature enthusiasts to join our team of volunteers. If you love the idea of supporting your local National Wildlife Refuge and meeting people from all over the world, consider volunteering with us. Whether it's helping out at events like Native Plant Day or assisting in our store, there are plenty of ways to get involved.

For more information, stop by the Nature Store or message: info@FloridaKeysWildlifeSociety.org



FLORIDA KEYS NATIONAL WILDLIFE REFUGES

Crocodile Lake National Wildlife Refuge on Key Largo protects the habitat of the American crocodile. It is also home to the endangered Key Largo woodrat and hundreds of other species. The butterfly garden is open to the public. The rest of the refuge is closed to the public, but there are volunteer opportunities and special events for those wanting to experience it. 10750 County Road 905, Key Largo, FL 33037.

Great White Heron and Key West National Wildlife Refuges are accessed only by boat, and encompass the shallow-water habitats of the Keys backcountry. Kayak past mangrove islands, tidal sandbars, and of course great white herons, found only in south Florida. For information, visit the Nature Center on Big Pine, 30587 Overseas Highway.

THE NATURE STORE

30587 OVERSEAS HIGHWAY
BIG PINE KEY, FL 33043

OPEN WEDNESDAY-SATURDAY
10:00 AM TO 3:00 PM.

STOP IN TO SAY HELLO
AND SUPPORT YOUR LOCAL
WILDLIFE REFUGE.



Follow us on Facebook & Instagram.
Tag your Florida Keys National Wildlife Refuges photos
@FloridaKeysWildlifeSociety



MEMBER UP: WILDLIFE NEEDS YOUR VOICE, WE NEED YOUR \$\$

SOMETIMES WE JUST HAVE TO BE BLUNT ABOUT IT. THESE ARE UNUSUAL TIMES. PLEASE, BECOME A MEMBER. THERE IS SO MUCH TO DO TO HELP PROTECT THE KEYS WILDLIFE AND ECOLOGY.

These are uncertain times, in which we could certainly use your help. This would be a great time to become a member, renew, or make a contribution to our endowment. There is mounting work to be done in the four Florida Keys National Wildlife Refuges. There are invasive species to chase down, habitats to restore, and woods and beaches to clean up. There are scientists trying to understand how to protect our iconic Keys' species, visitors and locals to educate, and kids whom we can help fall in love with nature. Much of this work is only possible because of the financial contributions of our community.

We are a 501(c)(3) charitable organization, so donations are tax deductible. The Florida Keys Wildlife Society works as a "friends" group to the refuges, which means all of our fundraising goes directly to supporting the work being done there. And we mean all of it, since we are volunteers.

You can participate by becoming an individual member, or a business sponsor. Donations can be made at www.FloridaKeysWildlifeSociety.org (there's a button on the homepage). The FKWS (formerly known as FAVOR) has been supporting the refuges through education, non-adversarial advocacy, volunteerism, and direct funding of various refuge projects since 1997.

Chances are if you are taking a hike, or boating in the backcountry, you are enjoying the natural marvels of the Keys that the Refuges are helping to protect.

Join Team Wildlife.
Be our change.
Thanks!



WILDLIFE SOCIETY ENDOWMENT FUND

The Florida Keys Wildlife Society opened an endowment with the Community Foundation of the Florida Keys. The permanent fund will help ensure support to the four Keys' National Wildlife Refuges for decades to come. If you would like to be a supporter and make a tax-deductible donation to the fund, mail checks to CFFK, 300 Southard Street, Suite. 201, Key West, FL 33040, with "Florida Keys Wildlife Society" in the memo or attachment. Gifts of stock, real

estate and retirement accounts are also welcome. For more information, contact Elizabeth Brown at 305-809-4995 or Elizabeth@cffk.org.



The National Key Deer Refuge protects many endangered species of both plant and animal, such as the iconic Key deer and the Lower Keys marsh rabbit. It also protects endangered pine rocklands habitat. Many hiking and kayaking opportunities are found in the Refuge, including the shortest nature walk of all, about 20 feet to the Blue Hole, a unique naturalized freshwater quarry with nesting birds and alligators. Visit the Nature Center for interpretive learning and advice on bird and deer watching, and check out the adjacent Nature Store for gifts and books. 30587 Overseas Highway, Big Pine Key, FL 33043.

DID YOU KNOW THAT THERE ARE COYOTES IN THE KEYS?

Coyotes were first detected in the early 2010s and started as lone males, but more recently we have seen pairs and an increasing prevalence of coyotes on the long-term camera trapping study in Key Largo. Croc Lake Refuge Manager Jeremy Dixon and researcher Dr. Michael Cove have started a new project to collect scats for DNA extraction, to estimate how many coyotes there are and assess what they are eating. We'll have more details in the next newsletter.

2024 camera trap image of a coyote in Crocodile Lake National Wildlife Refuge on Key Largo.



BE A VOICE FOR NATURE & TEAM WILDLIFE

MEMBERSHIPS TO THE FLORIDA KEYS WILDLIFE SOCIETY

Not a card-carrying Friends member? Join or renew today.

Annual memberships are available for Individuals (\$25), Family (\$50), Corporate (\$100), Patron (\$1000+). Fill out the form online at FloridaKeysWildlifeSociety.org, or just mail us with your name, email, phone, address, and check to Florida Keys Wildlife Society, P.O. Box 431840, Big Pine Key, FL 33043, or stop by the Nature Store, at 30587 Overseas Highway on Big Pine Key.

Your membership benefits include: discounts at the Nature Store, advance registration for events held by FKWS, newsletters, and a warm fuzzy feeling. To contribute to our endowment, contact Elizabeth Brown at 305-809-4995 or Elizabeth@cffk.org.

YOUR MEMBERSHIP SUPPORTS

- Scientific projects
- Citizen science
- Educational programs
- Research activities
- Community outreach
- Intern study programs
- Nature center exhibits
- Healthy wildlife and ecosystems



Volunteer, Please!

SUPPORT WILDLIFE

Volunteers are the lifeblood of the four Florida Keys National Wildlife Refuges and the Florida Keys Wildlife Society, contributing over 7,000 hours per year, and ensuring the protection of many native and endangered species, such as Key deer, Key Largo woodrats, and Schaus' swallowtail butterflies, and their habitats. Our activities are split between running the organization behind the scenes and being in the public eye, so there's an opening for just about every taste, skill, and schedule. You can help:

- In the Nature Center, store, or Blue Hole on Big Pine Key.
- With native plants.
- On a clean-up, outdoor festival, or other event.
- Plan events for public outreach and education.

- Get the word out on our social media sites.
- Write articles about nature and the Refuges.
- Increase membership and pledge campaigns.
- Maintain our member database and emails.
- Plan fundraising events and PR efforts.
- Help find and write grants.
- Join a committee, like Nature Store, fundraising, or communication.
- Or make up your own job.

For info on how to be part of Team Wildlife, email or visit:
INFO@FLORIDAKEYSWILDLIFESOCIETY.ORG
FloridaKeysWildlifeSociety.org/Get-Involved/Volunteer/.