

Hammock Happenings

Gumbo Limbo Nature Center's Program Guide & Newsletter

May - June 2021

Caution, Turtles Nest Here

Not only is it nesting season for sea turtles, but for most species of turtles! Turtles around the world typically lay their nests during the local summer months. As you approach the equator where there is no distinct summer heat, you may even see turtles nesting year-round. As sea turtles can migrate long distances in search of the best beach to lay their nests, freshwater turtles do the same on land. In the spring and summer months, freshwater turtles move around in search of the best lakes, ponds, and riverbanks to lay their nests near. Even land turtles and tortoises are more likely to be found wandering farther distances in search for mates and their perfect nesting spots during this time of year.



Photo by James Wainscoat on Unsplash

Our sea turtle team has recently received many concerned calls on our sea turtle hotline about turtles that have been injured crossing the roads. If you find a turtle that has been injured by a vehicle, call the Florida Fish and Wildlife Hotline (FWC) at 1-888-404-FWCC or a local wildlife organization for help such as the South Florida Wildlife Center at 1-954-524-4302, or visit their 24-hour animal drop-off location. If you feel unsure or have a hard time connecting with help, you can always call Gumbo's 24-hour sea turtle stranding line at 1-561-212-8691 and we will gladly guide you to the correct next steps.

Some callers have also been concerned for freshwater and land turtles laying nests in their own backyards! If you are lucky enough to have a freshwater or land turtle lay a nest in your yard, here are a few tips to keep them safe.

1. Never cover it with anything as the eggs need sunlight, fresh air, and even rain to hatch.
2. Never dig up a turtle's nest.
3. Look before you mow.
4. Skip the harmful pesticides.
5. Enjoy the hatch out and let nature take its course!

The best rule of thumb is to let nature be and if you are unsure, give us a call!

Until next time, safe and happy turtling!

By Whitney Crowder, Sea Turtle Rehabilitation Coordinator

Manager's Corner



Photo by Ben Hicks.

Remember that old childhood rhyme... April Showers bring May flowers? It's never been more true than right now. Spring is in full force and it seems like everywhere I look around me, the flowers are bursting with color and the pollinators are happily zipping from bloom to bloom. I have bid farewell to the last winter birds as they continued their migration to their summer breeding grounds with one last stopover at the bird feeders in my backyard. Nesting sea turtles have started to arrive on our beaches, and the high pitched cries of baby birds are evident in nearly every tree. Spring is nature's renewal.

Hopefully you had a chance to participate in some of the activities and exhibits we had for Sea Turtle Awareness Month in March and Boca

Earth Month in April. We had a great time creating them and staying connected with you all. Friends of Gumbo Limbo also launched their Coastal Stewards Program in March. Visit [our website](#) to see how to be a part of this exciting membership program

I mentioned before, we have used our time of being closed to the public to make some big physical changes to our nature center. We have also been working to update our programs and exhibits to freshen them up and make sure we are keeping all our participants safe when we do return to in-person programs. Our team has been using this time to stay inspired with virtual conferences and meetings – working with other nature center professionals from around the Country. While I can't say exactly when we will be able to open our gates at Gumbo Limbo, we will be ready for you when the time comes.

*Until Next Time,
Leanne Welch, Manager*

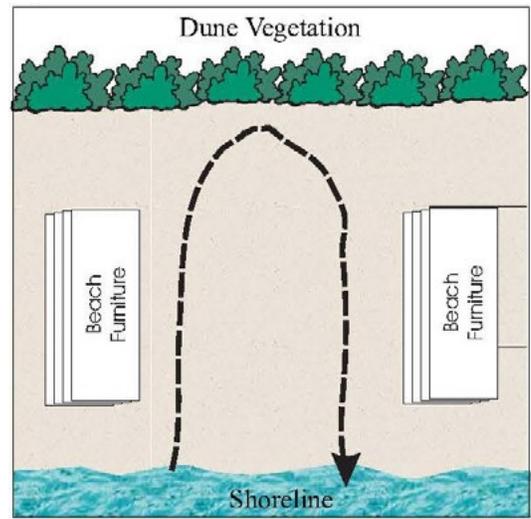
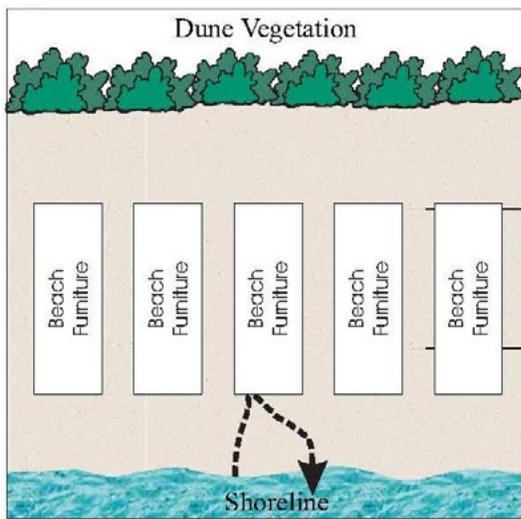
Share the Beach

Every summer people from all corners of the world come to enjoy South Florida's beaches. People, however, are not the only ones to make long journeys to the sandy shores of places like Boca Raton. Sea turtles have been doing it long before people were around and continue to do so to this day. In any given year, over a thousand nests are deposited in the sand along Boca Raton's five miles of shoreline alone. Because of that, there are a few things we can do to help share the beach and ensure these amazing animals have a safe place to nest and hatch.



A loggerhead turtle stuck under beach furniture.

Beach furniture can be a deterrent to a nesting female turtle and can even be a hazard. We sometimes see nesting females make a beeline towards furniture, as if they are attracted to it. It is possible the turtle feels safe to be nestled next to, or even under furniture since it is a dark inanimate and motionless object like a tree or rock, feeling safe from predators or disturbance. The truth is, they can end up entangled or trapped under furniture. Every nesting season, we record dozens of obstructed nesting attempts, many of those with beach furniture as the culprit. Each night during nesting season, furniture should be completely removed from the beach and stored behind the dune. If that is not possible, it should at least be stacked and arranged in a manner that allows passage for nesting females and minimizes interference with sea turtle hatchlings emerging from the nests.



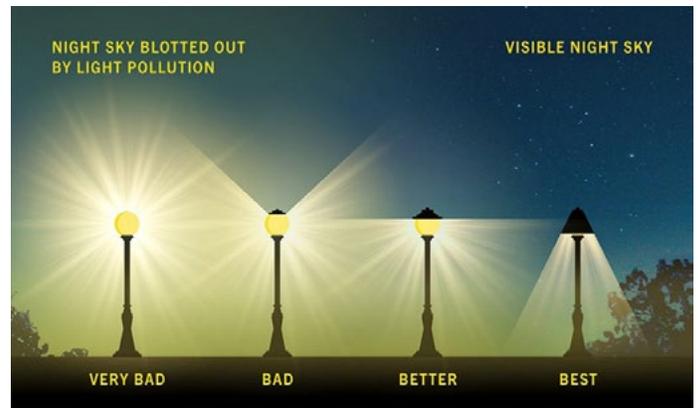
The graphic on the left shows how furniture left across the beach can impede a sea turtle's ability to nest. On the right, it is demonstrated how stacked furniture can allow nesting. Graphics by Florida Fish and Wildlife Conservation Commission.

Nesting sea turtles are easily disturbed by light and movement, so it is best to avoid going to the beach at night during nesting season. If you find yourself out there, do not use a flashlight. Even the bright screen of a cellphone can spook a turtle and cause her to return to the ocean without nesting. Instead, invest in a red flashlight or red head lamp. Both can be found in sporting goods and camping stores. Even if you don't live near or visit the beach at night, we can all pitch in to help darken the night sky and decrease the amount of light pollution known as sky glow. Use outdoor lighting only where it is needed and when it is needed and use timers and motion sensors when possible. Shield lights so no light is emitted into the sky and use a sea turtle friendly color such as amber or red. Darker skies will help hatchlings find their way to the ocean as they instinctively crawl towards the brightest horizon.

Finally, help keep our beaches clean and free of trash. When you visit the beach, make sure you leave nothing



A hatchling loggerhead turtle stuck in a plastic tab.



Various light fixtures that emit different levels of light pollution. Graphic by International Dark Sky Association.

behind. Take everything you brought with you. You can also participate in beach cleanups or take a bucket or a garbage bag with you during your next beach stroll. You will be surprised how much litter you find! Although people sometimes leave trash on the beach, the majority of what washes up is land-based trash that found its way to the ocean via rivers and streams, and in our case, storm drains to canals, canals to the Intracoastal waterway, and out the inlet. Neighborhood trash clean ups are just as important as beach clean ups!

With your help, sea turtles can have a healthy and productive nesting season. Thank you for sharing the beach with sea turtles!

By David Anderson, Sea Turtle Conservation Coordinator

Bike to Work Day: Have Fun Reducing Carbon Emissions!



When looking for a fun activity in suburban South Florida, many Floridians turn to cycling! It is a comfortable form of cardio and leg exercise that is easy on your joints. But why am I talking about exercise and transportation?

Bicycle commuting is the most environmentally friendly form of local transportation! Studies looking at carbon dioxide emissions have revealed that cars emit nearly 11 times as much as bicycling. What about walking you ask? Walking is also a low-carbon form of getting around, and manufacturing a bicycle creates some emissions, right? When considering the carbon emissions that goes into each calorie we eat, bicycles are still more efficient by distance per calorie than walking.

Most trips we take are within just a few miles, an easy bicycling distance. With great weather and infrastructure recognized by [The League of American Bicyclists](#), much of [Boca Raton](#) and the surrounding area is also a great place to commute as well!

Commuting by bicycle may not give you Tour-de-France thighs, unless you are in a hurry everywhere, but it is still an easy way to sneak exercise into your day and reduce carbon emissions (It's also a fun excuse to wear bright, wacky clothing before changing into your work uniform)!

When studies in urban centers consider safety, the added exercise, and reduced pollution, they have found out that bicycling saves lives! Since bicycle routes and “bike boulevards” are often separated from major roads, bicyclists are overall exposed to less air pollution than even motorists with their vehicle’s air filters! They are also creating less air pollution for the rest of us!

At Gumbo Limbo Nature Center, we have several members of our staff (including myself) who commute along A1A to our beautiful Nature Center between 1-5 days per workweek. Together we have chosen bicycling over driving for nearly 1,200 miles in the past year, and we aim to improve that next year!

Friday May 21st, 2021 is Bike-to-Work Day, so join us in reducing carbon emissions in the most fun and healthy way possible! Strap on your helmet, wear bright/reflective clothing, and commute to work! Even replacing trips to your local grocery store will add up!

I'll see you on the road!

By Frankie Gorora, Environmental Educator

How Do We Know Who's Here?



With hundreds of fish in one aquarium, how in the world do we know how many of each species we have, and how do we keep track of them? Well, I am glad you asked!

Our aquariums host 1007 individuals representing 97 species. But how do we know that? We maintain an inventory of all our fish. Sometimes we may miss recording a fish loss or forget to transfer a fish we move from one aquarium to another, in the inventory, so the actual number may not always match what is in our records. To account for these discrepancies and keep our inventory as up to date as possible, we do a census every six months. This helps us to keep track of every fish we have. The first thing we do is print out a list of how many individuals of each species are supposed to be in each aquarium. Then we head out to the aquariums to count them.

Since the fish in our large aquariums swim towards the water flow in the same pattern throughout the day, we can use this to our advantage. One aquarist will sit at one window and count all the fish of one species that move past him. The other aquarist will walk around the entire aquarium, counting each fish of that same species. We then compare the numbers to come with up with a count for that fish species. We compare that count with the number in our recorded inventory, and adjust the inventory as needed. This works well when there are fewer than ten of a given species in an aquarium, but what happens when there are hundreds? Well, for species like our mojarra in our Mangrove Aquarium, or silversides in our Coral Reef Aquarium, it works best to count in groups of ten. We estimate the area that ten fish take up, then see how many groups of ten there are. Since this does not really provide us with an accurate count, we do it three or four times and then take the average.

Keeping inventory in our smaller aquariums is a bit easier. It only takes one aquarist to count the number of each species and record those numbers on our inventory sheet.

Once we have counted all the fish, it's back to the office to update our inventory databases. Occasionally we may miss a fish or two (we are only human!). If we get a higher count at the next census, we will just make that adjustment in the database, so our records are accurate.

I hope you enjoyed an inside peak at what Aquarists really do! Keeping track of all the fish in our aquariums is just one small part of our how we maintain a happy and healthy environment for all our fish. Until next time, keep your friends close and anemones closer.

By Bryan Danson, Aquarist

Getting Some Sun is Important for Sea Turtles, Too!

Did you ever walk through our rehabilitation facility (before we closed for the pandemic) and see these long PVC pipes (pictured below) sitting across the tanks located in the sun and wonder what they were? Well, these pipes were part of my master's research project. I studied how exposure to sunlight, or ultraviolet (UV) light, affects vitamin D levels in green sea turtles, especially those with the disease Fibropapillomatosis (FP). Green sea turtles with FP are characterized by the growth of large tumors usually found along their flippers and on their eyes. Many of the turtles with this disease have a weakened immune system, which is potentially associated with them living in polluted environments. This disease has also been associated with a virus called Chelonian herpes virus 5. Unfortunately, the recovery of turtles with this disease is not as successful compared to those with other injuries or ailments. Since there are many factors involved in this disease, I wanted to see if we could help improve the outcome of turtles with FP.



Many of us know that vitamin D is important for our bones and keeping calcium at ideal levels, but it also plays a very important role when it comes to the immune system. Vitamin D has been shown to reduce the amount of a virus present in individuals, and it has the potential to help those with autoimmune diseases or cancer. Since it has so many benefits, I wanted to see how it would help green sea turtles with FP. For my study, I analyzed the blood chemistry values found in green sea turtles undergoing rehabilitation throughout their recovery process, with my greatest focus on variations in plasma vitamin D. One of the first things I noticed was when green sea turtles came into our rehabilitation facility, turtles with FP were deficient in vitamin D compared to those who did not have FP. From there, I also wanted to see how their plasma vitamin D levels changed over time depending on if they were housed in tanks kept in the sun or tanks kept under the building with limited exposure to sunlight.



When sea turtles come into our rehabilitation facility, they always undergo a standard treatment of antibiotics, vitamins, and fluids. We also feed them a diet of fish, squid, and shrimp, which is supplemented with oral vitamin D capsules weekly. Even though I expected to see an increase in vitamin D levels, since they received an oral supplementation, I found that green sea turtles housed in the sun experienced a much greater increase in their plasma vitamin D levels compared to those housed in tanks kept under the building. Also, sea turtles admitted with the disease FP had a greater increase of plasma vitamin D when offered sunlight and vitamin D supplementation than those of the turtles without the disease FP.

The improvements we saw in my study have made us more conscious of the importance of sunlight during the recovery process of sea turtles brought into our facility. So, getting some sun is not just important for our health and mood, but it is vital for sea turtles as well!

By Victoria Garefino, Friends of Gumbo Limbo Sea Turtle Rehabilitation Intern

Virtual Programs

Appreciation Days at Gumbo Limbo - World Bee Day

Join us on Facebook as we celebrate well-known and not-so-well-known World and National Appreciation Days! May 20 is the day to celebrate Bees! Love them or hate them, bees are vital to the environment and to humans! Do you know why? Bees are well worth celebrating so join Gumbo Limbo for some buzz-worthy facts and fun ways to celebrate World Bee Day! Recommended for all ages. Free.

- Thursday, May 20, 6:00 pm

Beachcombing Gumbo Limbo Style!

This self-guided adventure will give you both the knowledge and incentive to get out, enjoy the beach, find cool natural treasures, and help wildlife all at the same time. Available anytime on our [website](#).

Little Wonders and Nature Detectives

Join us, at your convenience, for a virtual nature exploration. This prerecorded monthly program includes a nature lesson, story-time videos, and a free craft kit. New topics are released monthly (previous topics available anytime). Call 561-544-8612 to reserve your free craft kit. Visit our [website](#) on (or after) May 15 and June 19 for the program links to our new lessons, craft demonstrations, and read-aloud story time videos! Ages 3-4 and 5-6. Free.

The Science of Nature

Join us monthly on [Facebook Live](#) for a naturalist guided lesson on coastal ecology topics. Recordings available of previous lessons. Recommended for ages 10-adult.

- Sundays, May 16 and June 13, 10:00 am

Support Gumbo Limbo

Adopt A Turtle

It can be tough to find the perfect gift... but look no further! Consider giving the gift of charity to those you care about. Hatchling or resident sea turtle "adoptions" available at GumboLimbo.org/Adopt.

Pave the Way

An engraved paver at Gumbo Limbo is a personalized way to show your support for our mission. Find out how you can help pave the way at GumboLimbo.org/Pave-The-Way.

The Gumbo Limbo Gift Shop

Friends of Gumbo Limbo has worked hard at a complete overhaul of our store, with a strong focus on sustainable and recycled products. We're thrilled to announce our new online store, where you can shop from the safety of your own home while still supporting Gumbo Limbo! ShopGumboLimbo.org. Once we are able to open again, you'll be welcome in a store that will allow appropriate social distancing measures to ensure your safety.

Get Social With Us!



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Gumbo Limbo Nature Center

Hours & Information

We remain closed due to the COVID-19 pandemic. The Boardwalk is open 7:30 am - sunset with access from Red Reef Park West parking lot. Check gumbolimbo.org for updates.

General Information (561) 544-8605 · Volunteer (561) 544-8538
Friends of Gumbo Limbo (561) 544-8608 · Gift Shop (561) 544-8610
1801 North Ocean Boulevard, Boca Raton, Florida 33431
gumbolimbo.org

Suggested donation of \$5 per person.

Your donations go to Gumbo Limbo Nature Center, Inc. to support Gumbo Limbo Nature Center, including, but not limited to, feeding the animals, purchasing supplies and services for the Sea Turtle Rehabilitation Program, and creating exhibits.

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Deputy Recreation Services Director - Michelle Zimmer, CPRP
Manager - Leanne Welch
Volunteer Coordinator - Rebecca Germany
Secretary - Kristin Child
Community Events Assistant - Kayla Caldwell

Aquarium

Senior Aquarist - Keith Herman
Aquarist - Bryan Danson

Education

Environmental Program Coordinator - Susan Elliott
Science Educator - Christie Collins
Science Educator - Alyssa Saldarriaga
Environmental Educator - Frankie Gorora

Exhibits

Exhibits Coordinator - Cory Keester-O'Mills
Exhibits Intern - Winston Miller

Facilities Maintenance

Maintenance Supervisor III - Reed Benardo
Custodian - Kevin Addison
Groundskeeper - Cary Boudreau

Sea Turtle Conservation

Sea Turtle Conservation Coordinator - David Anderson
Marine Turtle Specialists - Lisa Esposito, Angela Field, Kylea Perrin, Lexie Peterson, Heather Seaman

Sea Turtle Rehabilitation

Sea Turtle Rehabilitation Coordinator - Whitney Crowder
Sea Turtle Rehabilitation Assistant - Caitlin Boverly
Sea Turtle Rehabilitation Assistant - Emily Mirowski
Sea Turtle Rehabilitation Technician - Andrea Jelaska

Gumbo Limbo Nature Center, Inc.

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Operations Coordinator - Lara Howrey
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