Welcome to another “virtual” edition of Hammock Happenings. Gumbo Limbo Nature Center remains closed, but as you can see if you have checked our website or any of our social media accounts – we are still busy!

Our amazing education team has been hard at work filming videos and writing content for Gumbo Limbo’s first ever Virtual Environmental Camp. It starts on July 6th and will take your kids (grades 1-9) on an adventure exploring and learning about the amazing ecosystems that surround us in South Florida! Camp will be a combination of pre-recorded and interactive programming and will come with plenty of opportunities for your budding environmentalist to get outside and explore! We will even have Family Fridays, so the entire family can join in! Check out the article inside for more details.

If you live in Boca Raton and visit our beautiful beaches in the early morning, you have probably seen our sea turtle conservation team hard at work monitoring the beaches for sea turtle nesting activity. These hardy and amazing people wake up super early every day to be at work and ready to go before sunrise. They survey the five miles of Boca’s beaches to count every new sea turtle crawl on the beach. I have to give a long overdue shout out to the five Marine Turtle Specialists at Gumbo Limbo: Ali, Taylor, Carlee, Rachel, and Lisa. After working the beach every morning, they come back to the nature center and help care for and feed all of our nature center animals. This includes our box turtles, snake, anole, gopher tortoises, the sea turtles in our rehabilitation facility and the 1000 fish that live in our aquariums. I don’t know what we would do without their help during this time!

I do have one bit of exciting news… our boardwalk through the coastal hammock forest opened on June 12 for your enjoyment. Access to the boardwalk is only through Red Reef park, on the West side of A1A. Enjoy a beautiful and shady walk through this rare ecosystem. The boardwalk is a ½ mile loop that goes past ancient middens, through the maritime coastal hammock, and mangroves, and past the intracoastal waterway.

If you follow us on social media (and if you don’t, you should!), I hope you have been enjoying our posts and videos while we are #Closedbutstillcaring. We have added new animal videos, information about our tracked sea turtles, and even shared a story about a 5-year-old fan in California who raised over $800 for our sea turtle program with her birthday fundraiser! Be sure to Like and/or Follow us so you don’t miss a thing.
Volunteer of the Month - January 2020

Unfortunately, since Gumbo Limbo has been closed due to the pandemic, our wonderful volunteers have not been coming in and they have all been greatly missed. Gumbo Limbo is not the same without their smiling faces, and we can’t wait to reopen and have everyone back together again. In the meantime, we are happy to announce our January Volunteer of the Month!

**Angelo Difede**

Angelo Difede joined our volunteer team in April 2019. Angelo works as a Green Thumb volunteer, helping take care of our butterfly garden and keeping the Gumbo Limbo grounds looking beautiful! He has also helped with many special projects and events, and does an amazing job training new volunteers.

**What is your favorite part of volunteering at Gumbo Limbo?**  “The butterfly garden. It has inspired me to start my own garden at home. Also, educating our visitors of the different types of butterfly species that live in the garden.”

**What is the most interesting thing that you’ve learned since starting at Gumbo Limbo?**  “There are four generations of monarch butterflies. The fourth generation travels more than 3,000 miles to Mexico and lives up to eight months!”

**What is one example of something you do/ someone can do to conserve the environment?**  “An example of something someone can do to conserve the environment would be to be educated about it. With continuing our education of the environment, we can learn the importance and values of our earth.

We are not accepting new volunteer applications until after we reopen, but if you are interested in joining our volunteer team in the future, you can find more information about our volunteer program on our [website](#).

*By Rebecca Mannen, Volunteer Coordinator*
People know me as an avid nature lover and outdoorsman. I look the part, too: beard, flannel, and nature stickers covering my Nalgene bottle and laptop. My countless outdoor adventure stories further cement my status as the tree hugging nature dude. Here’s the kicker: I went on my first camping trip when I was eighteen. My friends are stunned about this, as they assumed I was a Boy Scout when I was a kid. I laugh it off, but it has made me wonder what is the spark that leads people to care for the environment.

After being an outdoor trip leader for two years, I have seen people come in on trips with a wide range of outdoor experience. What is fascinating to see is that everyone is there to grow and learn. I do not think age or gender matter when stepping onto the outdoor scene. I believe the thing that matters is that people acknowledge that they have a curiosity to learn and understand the ecosystems that surround them. What resources are available to help you nurture your nature curiosity?

For starters, it is important to remind everyone that nature surrounds us. You do not need to travel far to learn more about that oak tree in your front yard or seeing the benefits of grasses in stopping beach dune erosion. With the pandemic still prevalent I know it has been hard for people to get outdoors. For health and safety concerns our facility is still closed but that does not mean learning needs to stop!

We have put more time and energy into building our virtual presence so our knowledge can continue to reach you. I have talked to the herbs in the container garden and the flowers in the butterfly garden and they are excited to get a space on our virtual platforms. PlantsMap has become the virtual platform of choice to showcase our plants. It is an exciting time to expand our plant knowledge to the digital landscape.

What is fascinating about this online database is that it allows us to connect the physical plant to their virtual profile. In time, QR code tags will be placed along the boardwalk and trails which will bridge the two worlds together! But in the meantime, you can still continue learning about our plants from the comfort of your home. Go ahead and check out our PlantsMap page to learn and identify what plants live around you. Share your new knowledge of plants with people. Be proud when you help spark their nature heart!

By Winston Miller, Exhibits Intern
Register Your Child For Virtual Environmental Camp!

Worried about your camper sitting in front of a computer screen all summer long? Don’t be! Gumbo Limbo camp staff have planned an adventure filled interactive experience. We have created interactive sessions with activities designed to get your child outdoors. With access to a mobile device many activities will take place outside in your own yard! Campers will be learning about conservation, cool science facts, and the amazing ecosystem of South Florida.  Meet Your Camp Counselors!

**Dates and Ages**

Campers will attend five sessions, once a week, from 10:00 am – 1:00 pm. Dates are based on the grade level your child will be entering in Fall 2020.

- 1st-2nd grade: Every Monday, July 6 - August 3
- 3rd-4th grade: Every Tuesday, July 7 - August 4
- 5th-6th grade: Every Wednesday, July 8 - August 5
- 7th-9th grade: Every Thursday, July 9 - August 6

**Fridays are Family Camp for ALL registered campers!**

Family camp aims to get your entire family outdoors in coordination with virtual platforms, crafts, and activities pre-arranged by the camp staff and supplied in your camp pack. Family camp is open only to those who are registered for Virtual camp. Family camp sessions are optional.

- Every Friday - July 10 - August 7, Time TBD

**Registration and Fees**

Cost for 5 grade level and 5 Family Camp sessions:
- Members/Residents $62.50 per child
- Non-members/Non-residents $78 per child.

Please call Christie at 561-544-8611 to register your camper. Each registrant will receive an email packet of policies and requirements.

For more information regarding content and requirements contact Christie Collins.
Gumbo Limbo staff are not the only ones around the Center who have been working hard during this time of being ‘closed but still caring’. Our butterfly garden is a home to many important pollinators that help to keep our beautiful garden vibrant and thriving! Throughout the long Florida summer, the dreadful heat really gets to most of us humans. But for pollinators like the butterfly, summer is their time to shine.

Butterflies and all insects are cold-blooded creatures, which means their bodies cannot generate heat. A butterfly’s need for heat begins from the moment it emerges from the chrysalis. As fluids begin to pump through newly unfurled wings, the wings open to the sun’s warmth, becoming firm and dry, and ready to fly! Even before a butterfly can take off after a night of rest under a cool leaf, it must wait for the sun’s energy to warm its body to flying temperature. You will often see butterflies with wings outstretched in a patch of sunlight absorbing the sun’s life-giving heat.

Butterflies have adaptations that allow them to absorb and store heat from the sun, even in cooler climates. Have you noticed that your car is usually hotter inside than the temperature is outside, especially if the car is a dark color? Butterflies are the same. Because dark colors absorb more heat than light colors do, butterflies typically have dark colored bodies. Their heavy bodies capture and store the heat, maintaining internal temperatures higher than the air around them. It is clear to see that butterflies have what it takes to survive. And that is not only important for the butterfly, but for all of us!

Butterflies are one of the earth’s important pollinators. On a beautiful hot and sunny day, you will see busy butterflies traveling from flower to flower, gathering food and spreading pollen as they go. The transfer of pollen is essential for plants to become fertilized and produce fruit, seeds, and young plants. The critical plants that produce seeds and fruits consumed by humans and other animals rely on pollinators, which means WE rely on pollinators! Butterflies pollinate accidentally as they feed, drinking nectar from flowers with a long, straw-like tongue, called a proboscis. As they travel from flower to flower, their bodies pick up pollen and move it to another plant! Plants are the foundation to terrestrial food chains, and over 80% of plants found in natural habitats require the help of pollinators!

So how can we support these hard workers and ultimately our natural habitats? We can plant native flowering plants in our gardens, with brightly colored flowers and good sources of nectar (nectar plants) and plants that butterflies lay their eggs on which feed the growing caterpillars (host plants). Check with your local chapter of NABA (North American Butterfly Association) for a list of native nectar and host plants for your part of the country. Additionally, we can practice saying no to insecticides. Insecticides not only kill butterflies and other important pollinators, but when ingested by the caterpillars, the butterflies usually die in the chrysalis or shortly after they emerge.

If you wish to start a butterfly garden in your backyard, make sure that there is a place for the butterflies to rest (like a flat stone), and give them a place for puddling (drinking water). Next time you spot a butterfly on a hot and sunny day, remember to thank these amazing creatures for all that they do!

by Alyssa Saldarriaga, Science Educator
Everyone enjoys a nighttime walk on the beach from time-to-time. With Florida hosting 90% of the sea turtle nesting in the United States, the chances of encountering a sea turtle during your walk are high. Strictly speaking, it is illegal to look for nesting sea turtles and mark their crawls unless you are listed on a State Marine Turtle permit. If you do not know what to do when you see a sea turtle trying to lay eggs you could scare her back into the ocean. Sometimes this may cause the turtle to drop her eggs in the ocean rather than the beach which is fatal to the hundred or so eggs that are in a typical clutch. Should you encounter a turtle, stop and stand still. I have watched nesting sea turtles pass groups of up to 50 people who were asked to stand still and be quiet. Often, these turtles ended up nesting!

If you need a flashlight, use one with a red light as sea turtles and their hatchlings are less sensitive to this light color. Many local codes prohibit the use of white flashlights on the beach at night. The newer LED flashlights are highly disruptive to sea turtles and they ruin your night vision so you can only see a short distance in the dark; red flashlights do not ruin your night vision.

If you see hatchlings heading to the ocean just stop and enjoy the sight; it is rare for casual walkers to see a natural hatchout. If the hatchlings are heading away from the ocean, pick them up and place them near the water or even in the water. This is the only time you can handle a hatchling.

A sea turtle does not lay eggs every time she comes onto the beach. Generally, for every nest deposited, she makes one non-nesting emergence (false crawl). She may dig, but that does not mean she laid eggs! Sea turtle biologists are trained to evaluate the crawl in its’ undisturbed state to make a reliable determination if the crawl is a nest or false crawl. If you watch a turtle come out and dig in the sand then return to the water, DO NOT try to mark the nest; you may erase some of the marks in the sand we depend on to correctly mark the nest and identify the species. Any disturbance on the tracks or nest site makes that determination very difficult, if not impossible. We recently had someone surround a nest site with lumber and PVC pipes; this erased enough of our cues that we could not determine the location of the eggs. Please, if you have watched a turtle, walk away with good memories, and leave nothing else behind!

By Kirt Rusenko, Marine Conservationist
Research Spotlight: Tracking Troublemakers

Many sea turtles are admitted to Gumbo Limbo’s Sea Turtle Rehabilitation Facility due to human impacts such as boating activities, recreational and commercial fishing, and pollution. Over the last few years, we have recorded an increase in the number of juvenile green sea turtles caught accidentally on local piers in Southeast Florida, specifically the Deerfield Beach International Fishing Pier (Deerfield Pier). One possible explanation for the recent increase in captures of juvenile green sea turtles is the implementation of the Responsible Pier Initiative (RPI) at the Deerfield Pier in partnership with Gumbo Limbo Nature Center (GLNC) and Loggerhead Marinelife Center in 2015. The RPI called for educational signage and a sea turtle rescue net to help anglers retrieve and report sea turtles caught on the Deerfield Pier. Since the start of this community outreach program in 2015, Gumbo Limbo has seen an 850% increase in live sea turtle strandings at the Deerfield Pier due to interactions with recreational fishing gear.

Increasing numbers of accidental sea turtle captures on recreational fishing piers presents a unique opportunity for researchers to learn more about how sea turtles use these important nearshore waters. Nearby seagrass beds and reef ecosystems provide vital food sources and developmental habitat for juvenile green sea turtles living in southeast Florida. In collaboration with the Inwater Research Group, GLNC implemented an acoustic telemetry study in 2018 to explore the movements of the local population of juvenile green sea turtles incidentally captured on Deerfield Beach Pier and wild caught turtles captured from adjacent nearshore habitats. The goal of this project is to better understand how our local population of juvenile green sea turtles interact with the nearby fishing piers using acoustic telemetry. An acoustic telemetry system works like sonar and contains two components: transmitters and receivers. Transmitters are tags attached to the animal that broadcast a series of sound pulses or “pings” into the surrounding water. If an animal passes nearby a receiver, then the receiver hears the transmitter and collects the tag’s unique ID, data, and time stamp. Receivers can detect any animal with an acoustic tag, and we have collected pings from other types of marine life, like sharks and tarpon, which have been tagged by other research groups.

Not every hooked or entanglement injury is severe, but it is important that these sea turtles receive treatment at GLNC’s rehabilitation facility because many of them have injuries from the fishing line or have swallowed hooks that can only be detected with x-rays. Some turtles are even “repeat offenders” that we have admitted multiple times - like Jak who was captured four times and released last year or our newest patient “Wormhole” who was hooked three times just last year!

As the number of repeat offenders continues, we designed a troublemaker strategy plan in 2019 to discourage these “habitual hookers” from interacting with the piers. The Florida Fish and Wildlife Conservation Commission granted Gumbo Limbo Nature Center’s Rehabilitation Facility permission to release turtles that have been incidentally caught four times on the pier, 100 miles north of the study site, in the lagoon system north of our facility. Our hope is to change the behavior of the recaptured turtles who have gained an unhealthy appetite of bait by releasing them away.
from pier activity. With the use of acoustic telemetry and ARGOS satellite technology, GLNC will be able to follow the tracks of these “habitual hookers” to determine if they return to the nearshore reef habitats surrounding the fishing pier or take up residence in the intracoastal waters and establish a new home range in a more suitable habitat. Initial results from a recent case study indicate that these turtles may indeed establish a new residency, suggesting possible management strategies for the release of these troublemakers.

*By Whitney Crowder, Sea Turtle Rehabilitation Coordinator*

**Visit our Satellite Tracking page to Track Turtles!**

GUMBOLIMBO.ORG/SATELLITE-TRACKING

Whitney Crowder holding Jak, a juvenile green sea turtle that was captured 4 times on the Deerfield Pier last year! Note the satellite tag on Jak’s shell.

Map showing Jak’s satellite tracks staying in the northern intracoastal permitted release “troublemaker” site.
Friends of Gumbo Limbo News

GRADUATE & HIGH SCHOOL SCHOLARSHIPS

The Gumbo Limbo Nature Center is committed to supporting education and research on coastal and marine ecosystems, particularly those unique to our own South Florida region.

Each year, Friends of Gumbo Limbo is pleased to provide scholarships and research grants to high school students and graduate students at Florida universities to further that goal. Our high school recipients receive $2,500 per year for four consecutive years through the George Snow Scholarship Fund. Our graduate recipients receive a one-time $2,500 grant.

We’re excited to congratulate this year’s recipients:

HIGH SCHOOL

Sebastian Wojtowicz
Attending: University of Southern California

Makayla Magielnicki
Attending: Nova Southeastern University

GRADUATE & RESEARCH SUBJECTS

Morgan Short
Nova Southeastern University
Reproductive and Nutritional Analysis of Coral Resilience

Martina Plafcan
University of South Florida
Assessing Coral Response to Thermal Stress Post-Microplastic Ingestion

Serena Hackerott
Florida International University
Understand Factors Influencing Coral Stress Tolerance

Aaron Ridall
Florida State University
An Analysis of Microplastics in the Northeastern Gulf of Mexico

THANKFUL FOR OUR SUPPORTERS

How lucky we are to have such wonderful supporters and stewards for coastal and marine conservation! It truly warms our heart to hear your stories of how a visit to Gumbo Limbo Nature Center inspired you to make a positive impact. The following story is one that was shared with us while we are #ClosedButStillCaring, and we couldn’t help but share it here with all of you:

“I grew up in Boca Raton and have very fond memories of Gumbo Limbo Nature Center. In 2018, our family flew out from San Diego to Florida to see my family, and I wanted to make sure we visited Gumbo Limbo. My daughters were absolutely fascinated with all the exhibits, especially the sea turtle rehabilitation facility. We had learned that the staff uses honey on the turtles’ wounds as an antibacterial agent to help heal them. My oldest had just finished her Seva project—a selfless act of service project—which was to help save the bees, so we thought that was a beautiful connection. It was clear, and Raya chose to help save the sea turtles for her Seva project.

Raya (age 5) worked very hard and beaded all the bracelets, made a sign, and kept track of the donations. She also shared her project on a Zoom call with her preschool class. Due to COVID-19, we decided to make it an online fundraiser and ended up raising $806! We all had a wonderful time contributing to Raya’s project. Thank you Gumbo Limbo in all that you do!”

Thank you so much to Raya and her family for their continued support from afar!”
HOW YOU CAN HELP GUMBO LIMBO NATURE CENTER

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

MEMBERSHIP
Become a Friends of Gumbo Limbo member today! Be kept in the loop about upcoming virtual programs, and enjoy exclusive discounts and early access. Find the full list of member benefits at GumboLimbo.org/Membership

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
During this unforeseen time of closures, Friends of Gumbo Limbo has worked hard at a complete overhaul of our store, with a strong focus on sustainable and recycled products. Once we are able to open again, you’ll be welcome in a new store that will allow appropriate social distancing measures to ensure your safety.

As well, we’re thrilled to announce that a new online store is coming soon to allow you to shop from the safety of your own home while still supporting Gumbo Limbo!
Gumbo Limbo Nature Center

**Hours & Information**

We remain closed due to the COVID-19 pandemic. The Boardwalk is open 7:30 am - sunset. Check [gumbolimbo.org](http://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](http://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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**City of Boca Raton Recreation Services Staff**

**Administration & Operations**
- Recreation Services Director - Michael Kalvort, CPRE
- Deputy Recreation Services Director - Michelle Zimmer, CPRP
- Manager - Leanne Welch
- Secretary - Darlene Rosa
- Volunteer Coordinator - Rebecca Mannen
- Visitor Hospitality Representative - Debra Wilson
- Environmental Program Coordinator - Kristin Child
- Community Events Assistant - Kayla Caldwell

**Aquarium**
- Senior Aquarist - Keith Herman
- Aquarist - Bryan Danson

**Education**
- Environmental Program Coordinator - Susan Elliott
- Science Educators - Christie Collins, Alyssa Saldarriaga
- Environmental Educator - Frankie Gorora
- Environmental Camp Counselors - Cori Scanlon, Kassie Rodriguez

**Exhibits**
- Exhibits Coordinator - Cory Keester-O’Mills
- Exhibits Assistant - Megan Barry
- Exhibits Intern - Winston Miller

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

**Sea Turtle Conservation**
- Marine Conservationist - Kirt Rusenko, PhD
- Sea Turtle Conservation Coordinator - David Anderson
- Marine Turtle Specialists - Rachel Brown, Ali Courtemanche, Lisa Espositio, Carlee Jackson, Taylor Roe

**Sea Turtle Rehabilitation**
- Sea Turtle Rehabilitation Coordinator - Whitney Crowder
- Sea Turtle Rehabilitation Assistants - Caitlin Bovery, Emily Mirowski

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**Gumbo Limbo Nature Center, Inc.**

**Staff**
- Executive Director - John Holloway
- Administrative Assistant - Andrea Atkins
- Business Manager - Pam Mulcahy
- Gift Shop Sales Associates - Emily Cohen, Brittnie Funez, Morgan Isabella, Nicole Lantzy, Justine Masluk, Jordan Rossi, Amy Sarnow, Lisa Stampp, Briseida Villa

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