Florida Fish and Wildlife Conservation Commission

Living on the Edge: CWCI Newsletter - Summer 2019

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Living on the Edge

The Coastal Wildlife Conservation Initiative newsletter

Florida Fish and Wildlife Conservation Commission

MyFWC.com

Summer 2019

Welcome to the summer 2019 edition of *Living on the Edge*, the newsletter of the Coastal Wildlife Conservation Initiative! This is a quarterly newsletter to update Florida Fish and Wildlife Conservation Commission (FWC) staff, partners and members of the public about Florida's coastal issues, including current projects and other points of interest. Regular highlights will include featured projects related to coastal wildlife, interviews with our staff or partners, special seasonal considerations, news and events, volunteer opportunities and current funding opportunities. If you are interested in spreading the word about your project or someone doing a fantastic job in coastal conservation, please contact CWCI Coordinator Fara Ilami at fara.ilami@myfwc.com.

The Coastal Wildlife Conservation Initiative is an FWC-led multi-agency strategy to address threats to coastal wildlife and habitats, while also considering human interests and uses of Florida's coastal areas. The goal is a statewide cooperative process to protect coastal wildlife populations, conserve and manage coastal ecosystems, while achieving balance between conservation and opportunities for recreation, commercial activities and responsible development.

Table of contents

Hot Topic: Hurricane Michael's Impacts on Coastal Wildlife

Figure 1: Frontal dune escarpment. Photo courtesy of U.S. Fish and Wildlife Service

Huricane Michael struck the Florida Panhandle as a Category 5 storm causing catastrophic damage along its 90-mile path into Southwest Georgia. The storm caused significant erosion and overwash on coastal dunes, particularly from Cape San Blas to St. Andrews State Park, and pummeled homes and buildings from Panama City to Carrabelle and northward. It took several months for FWC staff and partners to gain access to coastal areas affected by the storm, and we are only now beginning to analyze some of the data associated with imperiled species impacts from the hurricane.

High winds and 8.5-15.5 feet of storm surge removed approximately 80-330 feet of dunes from Cape San Blas (Gulf County) to Shell Island (Bay County). Immediate post-storm assessments showed areas completely devoid of vegetation on the primary dunes, while intact vegetation remained behind the surviving dunes. Hardest-hit areas such as Tyndall Air Force Base had damage to the secondary and scrub dunes from salt spray and overwash. As of June 2019, FWC has observed grasses, herbaceous plants, and shrubs slowly recovering on impacted dunes. Additionally, biologists are reporting sand accretion and dune growth.

Florida's fish and wildlife have always experienced natural weather events such as hurricanes and tropical storms and generally are well adapted for survival. Wildlife have species-specific behaviors to survive severe weather without the assistance of people. The FWC monitors the well-being of fish and wildlife populations and evaluates the need to take management actions on a case-by-case basis after hurricanes and tropical storms. Post-storm recovery can also impact wildlife, and while safety and well-being of people within the impacted areas are the first concern, FWC staff can provide technical assistance on how to best restore coastal habitats and protect wildlife.

Although the sum of impacts to coastal wildlife may not be evident until the next breeding/nesting season and after completion of human recovery efforts, below is some preliminary information on how wildlife has been affected or how they may be affected in the future because of the altered habitat.

Marine Turtles

Because Hurricane Michael occurred late in the marine turtle nesting season, direct loss of marine turtle nests was limited to the relatively small number of nests still on the beach. Longer-term storm impacts could affect nesting during the 2019 nesting season, including:

- Entrapment due to storm debris remaining on the beaches and in the nearshore. Some debris was cleaned up by local governments and volunteers, but remains of houses and other structures create a risk for nesting and hatchling marine turtles.
- Loss of the primary dune in many areas opened the nesting beach to

Figure 2: Debris in dunes. Photo courtesy of U.S. Fish and Wildlife Service.

landward lights. The dune also provided an important cue for nesting and hatchling marine turtles to orient toward the water. Some areas have already started beach nourishment projects in response to dune loss, and others are in planning. Nourishment projects are permitted by FDEP with conditions to protect sea turtles, including using established monitoring protocols to avoid any injury or take.

- As storm-damaged structures and infrastructures are being rebuilt, it is important for communities to choose marine turtle-friendly lighting. FWC staff are available to assist with this process. https://myfwc.com/media/18511/updated-2018-fwc-sea-turtle-lighting-guidelinesdoc.pdf
- Many of the researchers and volunteers who work with marine turtles in this portion of the panhandle have also suffered damage to their homes and work places

Shorebirds and Seabirds

As of June 2019, shorebird nesting season is still underway, so FWC has not analyzed the shorebird nesting data to understand the impacts the storm had on nesting shorebirds. Observers have noted that several banded adult snowy plovers have not been observed since the hurricane. However, Tyndall Air Force Base has seen in an increase in snowy plover and Wilson's plover productivity. This is likely because they are attracted to areas where habitat disturbance events such as major storms and overwash create open, unvegetated stretches of beach. Mexico Beach is another site where least tern activity and productivity has increased. Least terns are highly opportunistic and adept at finding "new sand" that has seen its vegetation scoured away by storms or other disturbances.

Bay county is an important area for roof top nesting of least terns. With the large number of damaged buildings, FWC is still working to understand how roof top nesting may change post-storm.

Biologists are continuing to monitor shorebirds in the panhandle and will use the data collected over the breeding and overwintering periods to determine the impacts to these populations.

Beach Mice

The hurricane directly impacted both Choctawhatchee and St. Andrew beach mouse populations. Approximately two weeks following the storm, biologists were able to access several impacted areas to determine the loss of beach mouse habitat and search for evidence of mice. While impacts to the habitat varied across sites, beach mouse tracks were observed in several places, indicating that some individuals survived the storm.

Figure 3: Deployed tracking tube. Photo courtesy of U.S. Fish and Wildlife Service

Track tubes have been used for many years to detect beach mice in coastal areas, including Rish Park, St. Joe Peninsula State Park, Tyndall Air Force Base, and St. Andrews State Park. Unfortunately, the hurricane destroyed many of the track tubes at these severely impacted areas and it was several months before the passive track monitoring stations could be re-established. Prior to the storm, detection rates were high, ranging from 85%-92%, which indicated that beach mice were present and distributed widely across parks. But after track tubes were re-established in early 2019, detection rates were low in Rish Park (43%), St. Joe Peninsula (64%), and East Crooked Island on Tyndall AFB (49%). Fortunately, detection rates have been steadily increasing each month on all sites that were impacted. In heavily impacted areas such as St. Joe Peninsula and East Crooked Island, detection rates have increased to 89% and 61%, respectively.

During recent live-trapping at Rish Park, biologists captured nine mice in one night. However, similar trapping efforts on Tyndall Air Force Base resulted in much lower capture success, with only four mice captured over a total of four nights. While the use of track tubes and live-trapping help to elucidate the status of these populations, continued monitoring is important for understanding population resiliency and identifying potential management needs for ensuring beach mouse persistence and recovery.

Although the impacted beach mouse populations will likely continue to grow and expand as the dune habitat recovers, it may take several years and close monitoring to detect any unexpected declines.

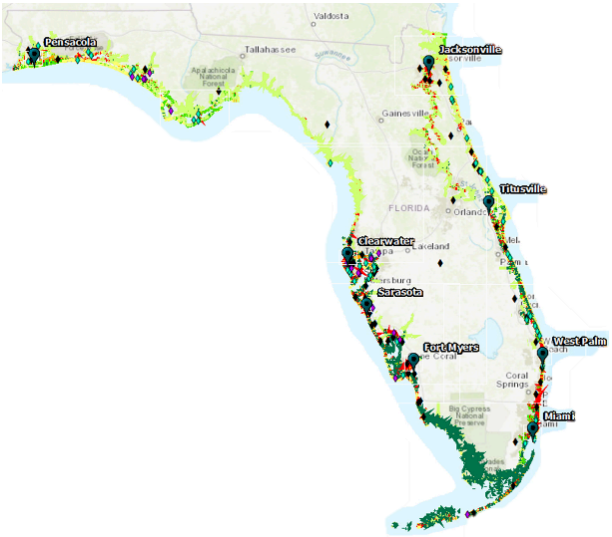
While there is no perfect solution to avoiding or mitigating the impacts from hurricanes on local wildlife, the FWC and partners take every measure possible to alleviate the impacts from storms to ensure Florida's native wildlife continue to thrive.

If you encounter wildlife that appears to be injured, sick or entangled, call the FWC's 24-hour Wildlife Alert Hotline at 888-404-FWCC (#FWC or *FWC on a cell phone) or send a text/email to Tip@MyFWC.com. Additionally, you can report injured, sick or entangled wildlife to local licensed wildlife rehabilitators, listed at http://myfwc.com/conservation/you-conserve/assistnuisance-wildlife/wildlife-rehabbers/

Featured Project: Living Shorelines Training Course

In recent years, much work has been done to make living shorelines a feasible and attractive option for more people living along Florida's estuaries. Living shorelines protect, restore or enhance natural shoreline habitat and maintain coastal processes through the strategic placement of plants, oyster shell, and other natural structural materials rather than an artificial seawall or bulkhead. As more property owners in Florida have learned about living shorelines, the demand has grown for professionals capable of designing and installing them. Although there are a few related courses available, no training currently exists specifically for marine contractors in Florida that includes a focus on local aspects of living shorelines. A multi-partner effort spearheaded by the FWC is underway to provide marine contractors with the information they need to add planning, design and installation of living shorelines to their repertoire. The overall project goal is to increase the number of marine contractors who can assess dynamic eroding shorelines and provide solutions featuring living shorelines where feasible.

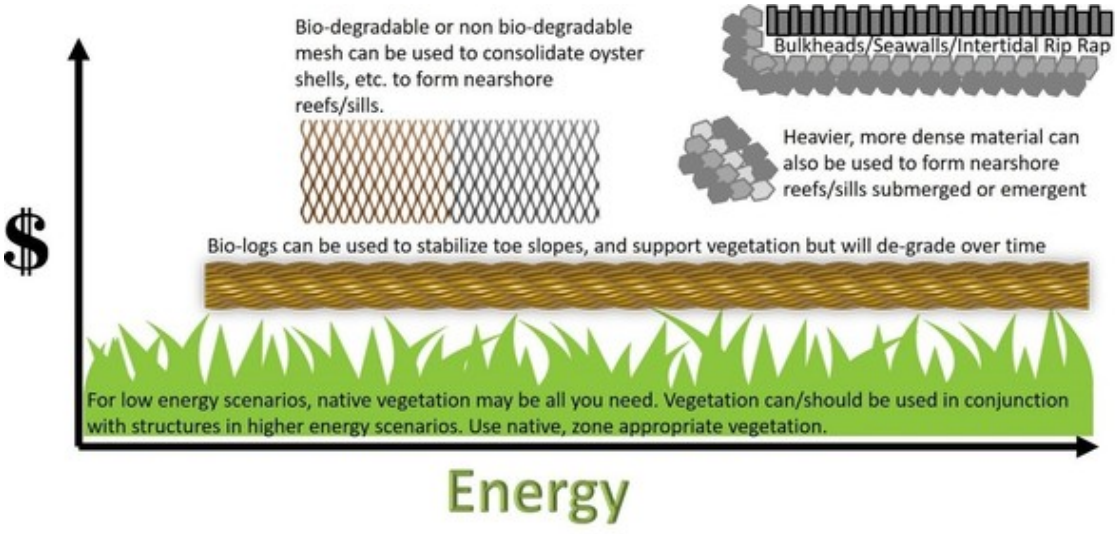
A needs assessment was conducted at the Florida Marine Contractors Association 2017 Annual Expo to determine the interest level in a living shorelines training course and to pinpoint existing knowledge gaps. The needs assessment indicated a general lack of familiarity with the following aspects of living shorelines: cost benefits, site assessment, the regulatory and permitting process, and acquiring materials and equipment. Based on these results, project partners presented a course preview at the 2018 FMCA Expo and received feedback from the contractors to further guide course development.



Progress to date has included assembly of a working group representing multiple organizations, development of the course outline and training manual, determination of regional target areas to offer the course, compilation of an instructor roster, obtaining authorization to offer 6 hours of continuing education credit with the Construction Industry Licensing Board, delivery of a course preview, and scheduling of the pilot. **The pilot will be offered in the Tampa Bay area on October 21 and 22 of this year at no cost to the participants.** Project staff and partners will then continue hosting courses throughout Florida in locations with the greatest interest and suitability.

The course will include lecture material, a workbook, videos, group exercises, field trips, and a test. An example of one of the course materials is a cost versus energy diagram, which indicates the types of living shoreline components that are best in different wave energy environments and cost brackets. After the course, participants will be able to:

- Communicate to homeowners the benefits and relative costs of shoreline stabilization options;
- Confidently perform a site assessment, evaluate design options, and navigate the permitting process;
- Implement a living shoreline project with vegetation and/or breakwater materials; and
- Follow up and provide homeowners with maintenance information.

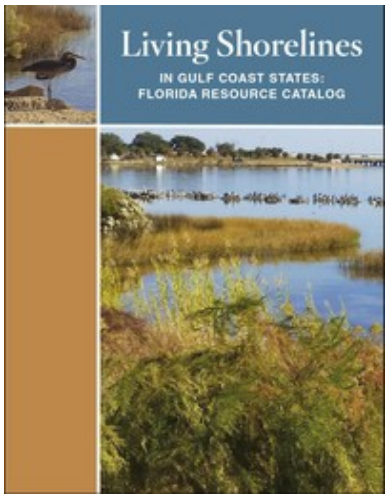


Future plans include development of a mentorship program for continued learning and support, securing funding for a coordinator/instructor and other course costs, and providing a list of trained contractors to interested property owners.

Some of the major partners on this project are the New Smyrna Beach Marine Discovery Center, Florida Sea Grant, Tampa Bay Estuary Program, Tampa Bay Watch, Florida's National Estuarine Research Reserves, Florida Department of Environmental Protection, U.S. Fish and Wildlife Service,

The Nature Conservancy, and Ecosphere Restoration Institute. For additional information on the pilot course or any other aspects of the training, please contact Fara Ilami, fara.ilami@myfwc.com.

A related effort is described below:



The Green Infrastructure Work Group of the Climate and Resilience Community of Practice has recently published **living shoreline resource catalogs for each of the five Gulf Coast states**. The purpose of the catalogs is to point different audiences to available living shoreline resources related to design and construction, permitting, and cost. Target audiences include environmental consultants, engineers, and landscape architects; installation contractors and suppliers; realtors and property developers; researchers; resource managers and local land use planners; and property owners.

In addition to the state resource catalogs, **audience-specific two-pagers** are available to help answer questions different audiences may have about living shorelines. Short public service announcement videos with key audience perspectives have also been recently released. All materials may be found at GulfLivingShorelines.com.

Summer Wildlife Tips: Leave No Trace

Figure 1: *Before and after implementing "Leave Only Footprints". Photo courtesy of City of Orange Beach Coastal Resources Department.*

"Leave No Trace", “Stash Your Trash”, “Leave Only Footprints”, “Pack It In, Pack It Out”, “Don’t Trash Where You Splash”. You’ve likely seen or heard one or more variations of this saying, but what does it mean? All these sayings generally target visitors to natural areas such as beaches, forest trails and lagoons to encourage people to leave an area as they found it, if not better.

Each year, millions of visitors come to Florida, many of them focusing their visits around Florida’s world-renowned beaches. In 2018 alone, a record 126.1 million visitors traveled to Florida (Source: Visit Florida). Additionally, there are 21.3 million people living in Florida (as of 2018), many of whom also frequent the beaches. There is a lot of love for Florida’s beaches, and everyone is responsible for protecting and preserving them.

In an effort to maintain safe, clean, family-friendly beaches while also ensuring the sustainability of their natural resources, many cities and counties have adopted “Leave No Trace” Ordinances. Not only can items and trash left unattended overnight on the beach be unsightly and potentially dangerous for beachgoers, but this type of beach debris can also pose a serious risk to wildlife. From March to October, sea turtles can be found on Florida’s beaches. Items such as tents, chairs, umbrellas, coolers, floats and other unattended overnight debris not only have the risk of washing into the ocean, but they also pose an entanglement hazard to these nighttime nesting females and emerging hatchlings. “Leave No Trace” ordinances authorize the removal and disposal of any personal beach furniture or other items left on the beach after sunset each night.

Figure 2: Photo courtesy of Mote Marine Laboratory

While these ordinances have been effective in reducing beach debris and hazards for both humans and wildlife such as nesting sea turtles, currently these ordinances are not in place on all Florida beaches. Moreover, these ordinances are not meant to serve in lieu of beach visitors taking responsibility for personal belongings they bring with them (including beach furniture, floats, cans, bottles and food containers). Wind, tides and other factors can affect debris fate and transport, and debris can easily end up in the ocean before an ordinance goes into effect each night. It is up to all of us to be responsible beachgoers. If you bring it, take it with you when you leave.

https://cleanisland.org/

https://www.visitpanamacitybeach.com/things-to-do/beaches/leave-only-footprints/

https://www.visitsouthwalton.com/vsw-resource-center/beach-operations/leave-no-trace/

https://www.visitgulf.com/protect-our-shores/

https://www.ameliaisland.com/Blog/June-2016-(1)/Leave-No-Trace

https://www.volusia.org/core/fileparse.php/4145/urlt/N-Beach-broch-2014c.pdf

https://www.visitfloridabeaches.com/travel-guide/leave-no-trace-gulf-county/

https://www.volusia.org/services/public-protection/beach-safety/safe-and-clean.stml

https://www.townofsurfsidefl.gov/docs/default-source/default-document-library/town-clerk-documents/town-ordinances/2016/16-1658-beach-furniture.pdf?sfvrsn=afc54494_2

Staff/Partner Spotlight: Phil Horning

1. **What is your title?**

FWC Derelict Vessel Program Administrator

2. **What organization do you work for?**

I work for the Florida Fish and Wildlife Conservation Commission's Division of Law Enforcement, Boating and Waterways section.

3. **What type of work do you do?**

I manage the FWC's derelict vessel program that investigates derelict vessels on the public waters of the state, assist in creating derelict vessel law, train officers and local officials in derelict vessel

investigative work and use of the Statewide Derelict Vessel Database and manage the FWC Derelict Vessel Removal Grant Program.

4. **What project(s) have you recently been working on?**

Changing the Derelict Vessel Removal Grant Guidelines to make it easier and less expensive for local governments to remove derelict vessels from waters of the state, presently creating an upgraded Derelict Vessel Database for FWC, county and local law enforcement officers to use in the official investigations of derelict vessels throughout the state, Conducting public meetings for Rule Development to enhance the State of Florida At-Risk vessel laws and working with officers and local officials around the state promoting effective investigation and removal operations of derelict vessels.

5. **What impacts does your work have in coastal and marine areas?**

The removal of derelict vessels assists in reducing the destruction to benthic sea life, including corals, sea grasses and aquatically sensitive areas. These derelict vessels can also be problematic to sea turtles during egg laying periods acquiring access to beaches for nesting. The overall quality of the water is important as well in reducing fuels, oils and other contaminants from accumulating due to derelict vessels.

6. **How long have you been working in the coastal environment, and what are some lessons you have learned?**

I have been with the Derelict Vessel Program for 11 years and see that even though there is an overall great respect for our natural resources, there are those who choose to look the other way when faced with the economic challenges of doing the right thing to preserve our natural environment. Our officers spend countless hours to assist in preserving these natural resources by investigating derelict vessel cases and prosecuting those responsible parties for their actions, as well as other violations that threaten our environment. This effort by our officers and many partners makes me very proud to be part of the overall protection of our environment.

7. **What is the biggest problem you have dealt with, and how did you address it?**

The biggest problem I have had to deal with is educating vessel owners on properly transferring title to the vessel they sell. Many vessel owners are unaware that they are responsible for notifying the Department of Highway Safety and Motor Vehicles that they have sold their vessels. In many cases, the purchasers fail to title and register the vessels in their names after purchasing it. This causes issues when trying to determine who owns the vessel if it becomes abandoned or derelict on the water. Some derelict vessel investigations can be lengthy without this critical information available to law enforcement. Once a vessel has been submerged or partially submerged for months and sometimes years, the vessel begins to deteriorate, making the removal process harder and certainly more expensive. It may also become a navigation hazard, potentially threatening the safety of the boating public. Getting it out as soon as possible is a key element to a successful investigation and removal project. The ability to be able to quickly and accurately identify and locate the owner is essential to removing the vessel faster. Vessel sellers should know that failure to notify DHSMV of the transfer of their vessels is a crime, as well as the new owner failing to title and register it in their own name after the sale. Also, I have been involved with the Florida Marine Debris Reduction Planning for the state. My conclusion is that more outreach is needed to convince people that preservation of our environment through planned prevention actions is essential to keeping our natural resources vibrant for many years to come.

8. **What is your favorite part of the coast, and why?**

I would have to say that it’s all my favorite. Whether on the Atlantic coast or on the Gulf side, being near the water with all the coastal resources available is exciting. I love to visit St. George Island for its

beauty and culture. Many times, it is the perfect place to relax and enjoy what Mother Nature has given us to enjoy.

9. **Do you have a message you would like to share with readers of this newsletter?**

I would like to thank the countless number of volunteers who spend their own time and funding on assisting in the preservation of our natural resources. Litter cleanups, beach nourishment and many other activities would not happen without their dedication and hard work. I also want to thank those who are willing to come forward with information about those who endanger the environment. Without their attention and willingness to help in the overall cause, our job in law enforcement would be much more difficult. Finally, I would like the law enforcement officers throughout the state to know that their hard work and dedication to this issue is appreciated and critical. Without their engagement and dedication, many more derelict vessel cases would occur. This is a huge team effort and the beauty and enjoyment of Florida's natural resources is worth it!

Critter of the Quarter: Upside-Down Jellyfish

Figure 1: Image from https://www.deviantart.com/lauren-lee/

This issue's Critter of the Quarter is the upside-down jellyfish (*Cassiopea* spp.). These jellies are unique because, although capable of swimming, they prefer to rest with their bell on the seafloor and their arms extended up into the water column. By resting upside-down, these jellies maximize the exposure of sunlight on their arms, which host symbiotic dinoflagellate algae. The arms of the jellyfish provide the algae with a protected environment and nutrients they need for photosynthesis. In return, the algae provide the jellyfish with glucose, which is a product of photosynthesis.

In addition to feeding off the glucose sugar produced by symbiotic algae, upside-down jellyfish also feed on zooplankton. These jellyfish have neither a central mouth, nor tentacles. Instead, they have eight arms with elaborate appendages and frills that form a canal-like system containing hundreds of tiny suctioning mouths. Upside-down jellies pulsate their bell to push water through their arms where stinging cells in their mouths capture zooplankton.

Upside-down jellyfish are found in shallow, tropical waters in Florida, the Bahamas, Central America, the Indo-Pacific, the Red Sea and the Hawaiian Islands. Locally, they can be found throughout the Florida Keys and as far north as Ft. Pierce in the Indian River Lagoon on the east coast of Florida, and Bradenton, just south of Tampa Bay on the west coast. These jellies prefer habitats with extremely calm, shallow water including lagoons, mangrove forests, seagrass beds, and mudflats. Reaching up to 30 cm (about 1 foot), these jellyfish often occur in close proximity to one another and can carpet the ocean floor in favorable conditions.

In Florida, upside-down jellyfish abundance varies seasonally with higher densities often observed in spring and early summer. Researchers have also documented a relationship between upside-down jellyfish abundance and human population. These jellies have been found in greater abundance, and attained larger sizes, in coastal habitats adjacent to higher human population densities.

Earlier this spring, in April 2019, large numbers of these upside-down jellyfish were observed in Sarasota, Florida off of St. Armands Key, Coon Key and Otter Key. Jellyfish density reached 121 individuals per square meter, and ranged between 2.8 cm and 18.6 cm. Although upside-down jellyfish have been documented before in Sarasota, it is unusual to see such high densities this far north (almost at the extent of their norther range). Dr. Elizabeth Stoner, a professor at Bentley University and an expert on *Cassiopea* ecology says, their range may be expanding "due to increased ocean temperatures, nutrient input from local urbanization, or a combination of environmental factors, making Sarasota Bay a favorable location for *Cassiopea*".

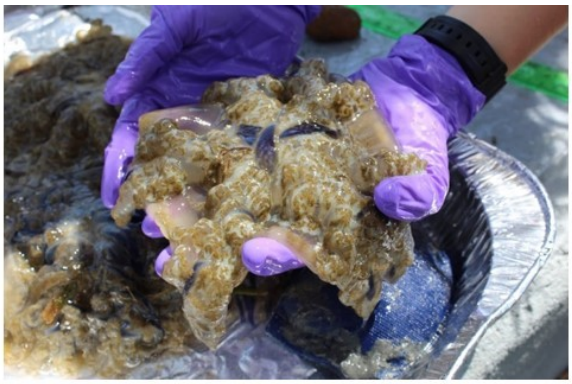


Figure 2: Measuring bell diameters of jellyfish in Sarasota, FL. April 14th, 2019. Photo courtesy of Cassandra Leeman.

Although it is still unclear how these jellyfish blooms affect local ecosystems, they are harmless to humans. If disturbed, they defend themselves by producing a slime filled with stinging cells that can cause a mild stinging rash. If you see upside-down jellyfish, we recommend you do not disturb them and report the sighting, so we can continue to track their range and any occurrence of blooms.

Volunteer Opportunities

Get Involved @ FWC – Explore the Florida Fish and Wildlife Conservation Commission's volunteer opportunities in your area!

Scallop Rodeo - St. Andrews Bay – Help Biologists with FWC by collecting up to 100 scallops on July 20th and delivering them ALIVE the same day to help restore scallop populations in St. Andrews Bay!

Scallop Rodeo - St. Joseph Bay – Help Biologists with FWC by collecting up to 100 scallops on August 4th and delivering them ALIVE the same day to help restore scallop populations in St. Joseph Bay!

The FWC needs YOU to improve recreational fisheries data collection – Participation from recreational anglers can help scientists and managers keep Florida's fisheries sustainable and productive! Mail surveys, dockside interviews and even a phone app are available.

Florida Monarch Research and Educational Project – Volunteer to participate in the research of the rapid decline of Florida's resident monarch. Activities may include netting, testing, and tagging monarchs. For more information on how you can help, contact florida.monarchreproject@gmail.com.

Nurdle Patrol – Volunteer to collect data on plastic pellets (nurdles) on any beach around the Gulf of Mexico. For more information, contact Jace.Tunnell@austin.utexas.edu.

Oyster Reef Restoration– Volunteer to help with various surveys to assess the progress of the artificial oyster reefs, from August through October. For more information, contact emily.hardin@myfwc.com

Diamondback Terrapin Monitoring – Volunteer to help with spotting terrapins in the wild on your own time using the iNaturalist App to send photos and notes to FWC biologists. For more information, contact emily.hardin@myfwc.com

Reporting – Report a fish kill, dead or injured manatee, dead or injured sea turtle, observations of horseshoe crab mating, mink sightings, right whale sightings, and smalltooth sawfish sightings.

Funding Opportunities

Florida's State Wildlife Grants Program – Interested in mangrove restoration? Up to $200,000 is available to create or restore a minimum of 0.1 acres of mangrove habitat for the purpose of estuarine habitat enhancement to benefit Species of Greatest Conservation Need. The deadline to apply is noon on July 12, 2019.

2019 NextGen Climate Change Grant – Call for new or existing programs that will help to reduce global warming, whether through direct carbon avoidance, climate communication, climate education, industry engagement, or otherwise. Grant application deadline: July 12, 2019.

Southeast Aquatics Fund 2019 Request for Proposals – To help protect and enhance habitats for a wide range of aquatic species, the National Fish and Wildlife Foundation (NFWF) is soliciting proposals to restore habitats and improve water quality in targeted river basins and watersheds of the Southeast. Proposals are due by August 1, 2019.

Mohamed bin Zayed Species Conservation Fund – Targeted grants of up to $25,000 are available to individual species conservation initiatives. The next submission deadline: October 31, 2019.

IDEA WILD Small Equipment Grants for Protected Areas Management – Empowering people on the front lines of conservation by awarding small equipment grants to conservation professional in an effort to minimize loss of biodiversity. Applications are accepted year-round and are reviewed/approved monthly.

Alcoa Foundation Grant Program – Sustainability is a major focus promoting 1) the prevention of and resilience to climate change and 2) the restoration and preservation of biodiversity. Grants are awarded on a rolling basis.

BoatUS Foundation Grassroots Grants Program – Provides grants up to $10,000 to nonprofit organizations, boating clubs and student groups for projects that promote safe and/or clean boating. Applications are accepted year-round.

David & Lucile Packard Foundation – Grants are made for charitable, educational or scientific purposes, primarily from tax-exempt charitable organizations. Grants fall under several categories including climate, ocean, land, science, and conservation.

DOI FWS 2019 National Fish Habitat Action Plan — Funding available for projects that include minimizing the establishment, spread, and impact of aquatic invasive species. Specifically, aquatic habitat conservation projects under this program must protect, restore, and enhance fish and aquatic habitats. No posted deadline.

George & Miriam Martin Foundation Grants – The focus of the foundation is river and watershed conservation. Grants range from $1,000 - $200,000. There are no deadlines.

Natural Hazards Center Quick Response Grant Program — This program provides small grants to help eligible researchers travel to disaster-stricken areas and document disaster before memories fade and physical evidence is erased. Submit a complete proposal as soon as possible after a disaster occurs. Grant proposals are evaluated and awarded on an on-going basis.

Rockefeller Family Fund – Grant-making currently has an environment program focus on the challenges of climate change with an emphasis on public education. Letters of inquiry may be submitted at any time.

Surdna Foundation Grantmaking – Grant-making to nonprofit organizations in the priority areas of Sustainable Environments, Strong Local Economies and Thriving Cultures. Letters of inquiry may be submitted at any time.

Waitt Foundation Rapid Ocean Conservation (ROC) Grants – This opportunity provides small grants with a quick turnaround time for solutions to emerging conservation issues. The funding cycle is open to new applications. Proposals are reviewed monthly on a rolling basis, although some applications take additional time to evaluate.

Wells Fargo Environmental Grant Program – Environmental grant program focuses on addressing local environmental priorities in communities and providing support that fosters innovation to help accelerate a "green" economy. One letter of inquiry per year per organization is accepted.

Calendar: Upcoming Meetings, Webinars and Events

Sea Turtle Adopt-a-Nest, multiple dates, Apalachicola National Estuarine Research Reserve

9th Annual Southeast Florida Reef Clean-ups!, June & July, Miami-Dade, Broward, Palm Beach & Martin counties

SEAFAN Bleach Watch Citizen Science Training, June 18-August 27, various locations

Shorebird Walk at Matanzas Inlet, July 11 and August 8, 2019, St. Augustine

Florida Master Naturalist Program: Coastal Systems, July 15-August 2, 2019, Sarasota County

Shore-Based Beach Cleanups, through July, Miami-Dade, Broward, Palm Beach & Martin counties

Mapping the Effects of Long-term Hydrologic Stress, Sea-level Rise, and Hurricane Irma on Coastal Habitats in Southwest Florida webinar, July 18

Breakfast with Birds at the Rookery Bay Environmental Learning Center, July 23, 2019, Naples

Coastal Inundation Mapping Workshop, July 23-24, 2019, Fort Myers, FL

Adaptation Planning for Coastal Communities, July 30-31, 2019, Apalachicola National Estuarine Research Reserve

Embrace the Gulf 2020 Webinar, July 31, 2019

Aquatic WILD Educator Workshop, August 2, 2019, Manatee County

Resilient Florida: Planning, Policy and Practice workshop, August 8-9, USF Patel Center, Tampa

Florida Master Naturalist Program: Coastal Systems, August 21 – September 6,2019, Collier County

New technologies to revolutionize sustainable fishing in the digital age: EDF's Smart Boat Initiative webinar, August 22, 2019

Sargassum Watch System warns of incoming seaweed webinar, August 27, 2019

Open Science Workshop, September 5-6, St. Petersburg College STEM Center

Florida Association of Environmental Professionals Annual Conference, September 19-20, 2019, Tampa

Project WILD/Aquatic Combo Educator Workshop, September 21, 2019, Pinellas County

Project WILD/Aquatic Combo Educator Workshop, September 28, 2019, Volusia County

Project WILD/Aquatic Combo Educator Workshop, October 5, 2019, Pasco County

Living Shorelines Tech Transfer Workshop, October 8-9, Beaufort, NC

EcoCast webinar: A dynamic ocean management tool to reduce bycatch and support sustainable fisheries, October 31, 2019

CERF 25th Biennial Conference, November 3-7, Mobile, AL

10th US Symposium on Harmful Algae, November 3-7, Orange Beach, AL

Coastal News Snippets

'Protectors of the coast' — what the northward march of mangroves means for fishing, flooding and carbon, March 21, 2019

FWC's Gulf Reef Fish Survey methods receive national certification, April 11, 2019

The fate of horseshoe crabs in Florida is unknown. Here's why it should matter to you, April 12, 2019

Turn out the lights, it's nesting season for Florida sea turtles, April 26, 2019

Sponges and corals: Seafloor assessments to help protect against climate change, April 29, 2019

Coral Reef Barriers Provide Flood Protection for More Than 18,000 People and $1.8 Billion Worth of Coastal Infrastructure and Economic Activity Annually, April 30, 2019

FWC extends red tide fisheries conservation measures in SW Florida, May 1, 2019

A 'Noah's Ark' project for corals: Scientists race to save Florida Reef from killer disease, May 28, 2019

Why you want oysters and a salt marsh between you and a hurricane, June 3, 2019

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