Florida Fish and Wildlife Conservation Commission

Living on the Edge: CWCI Newsletter - Spring 2018

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Welcome to the spring 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.

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Hot topic: Dogs on the beach

As the weather starts to warm up for spring, many people begin visiting the beach, and some bring their dogs with them. Although dogs are allowed on some beaches, it is important to be aware that many beaches do not allow dogs, such as those at State Parks or within designated Critical Wildlife Areas. It is also important to consider the wildlife that live and raise their young on Florida beaches—wildlife that may not be compatible with the presence of dogs. Shorebird and sea turtle nests and young can be impacted by dogs on the beach – even leashed dogs can affect wildlife simply by their presence. The best way to protect wildlife is to leave your dog at home when you go to the beach. If pet owners do bring dogs to beaches where that is allowed, they should still be mindful of wildlife and follow all rules about leashing their dogs and picking up waste.

The CWCI recently completed a new *Dogs on the Beach* brochure in response to an expressed need from partners to have outreach materials to share when they talk to people about dogs on beaches. The CWCI is excited about the roll-out of this new brochure and hopes that it will be a useful tool to help prevent wildlife disturbance by dogs. For more information or to request brochures, please contact the CWCI Coordinator, Fara Ilami, at fara.ilami@myfwc.com. If you see dogs disturbing sensitive wildlife, report it to the FWC's Wildlife Alert Hotline: 888-404-FWCC (3922), #FWC or *FWC on a cell phone, or by texting Tip@MyFWC.com.

Featured project: Oyster reef habitat restoration in St. Andrew Bay

St. Andrew Bay is exceptional among Gulf Coast estuaries for its biological diversity and clear, high-salinity waters in which seagrasses flourish. Over 200 acres of seagrass habitat were lost during the 1970s, reducing the ability of the system to support productive fisheries and wildlife species. The recent elimination of several adverse practices created conditions more favorable for estuarine habitat enhancement efforts. With funding from the National Fish and Wildlife Foundation-Gulf Environmental Benefit Fund and the FWC-Marine Resources Trust Fund, the FWC's Aquatic Habitat Conservation and Restoration Program (Marine/Estuarine Subsection) has set out to restore and enhance important seagrass and oyster habitat in St. Andrew Bay.

Project Objectives:

Enhance St. Andrew Bay's oyster populations and reefs to:

- Enhance fisheries and wildlife habitat
- Absorb wave energy and provide shoreline protection
- Improve water quality
- Create conditions more suitable for seagrass recruitment
- Test new oyster restoration techniques that could be used in other similar efforts

The FWC and partners have installed over four acres of oyster reef habitat along the western shoreline of West Bay (one of four hydrologically connected bays in the St. Andrew Bay estuary) in two phases over a two-year period. Many volunteers also helped. Sixty-seven individual oyster reefs now stretch over two miles from north to south in about five feet of water. Most reefs consist of an outer wall of biodegradable coconut fiber oyster shell bags and a center filled with roughly one to two feet of clean, recycled oyster shell. Reefs were constructed during the fall, when oyster abundance in the plankton was high and oysters were likely to settle on shell material. Settled oysters grew rapidly and “glued” the loose shell together to make solid reef structures. The restored oyster reefs mimic natural reef shapes, with gaps between reefs allowing for natural water flow.

Adult oysters filter approximately 50 gallons of water a day, and there are an estimated 20 million oysters currently growing on these reefs. That oyster population filters a total of one billion gallons of water every day, helping to improve the clarity and quality of West Bay waters. A total of 31 different species of fish and invertebrates, including pinfish and gray snapper, and blue and stone crabs, have been recorded on the reefs. Oyster reefs are the “condominiums of the sea” providing nursery habitat for dozens of estuarine species. One acre of oyster reef has been shown to increase fisheries catch values by over $4,000 annually. These reef structures also help to break up wave energies, reducing sediment movement and providing shoreline protection during storm events.

The FWC plans to continue this project with two additional phases. Phase III will consist of twelve more oyster reefs expected to be deployed during the fall of 2018. The design of Phase III reefs differs slightly from those constructed during Phases I and II, based on lessons learned during project implementation. Each reef will have a base and perimeter wall of lime rock boulders, and the center will be capped off with loose shell material. Phase IV consists of transplanting seagrass to the project site in 2019. Project monitoring data shows that seagrass currently present at the site has grown and expanded since the start of the project. Phase IV seagrass transplants are expected to accelerate the process of seagrass recovery to historic levels. FWC staff has also determined that water quality and light conditions in West Bay are now able to support seagrass growth up to one meter of water depth.

This project could not have been completed without the support of the following project partners as well as hundreds of valued volunteers:

- St. Andrew Bay Watch
- UF-IFAS Sea Grant
- US Fish and Wildlife Service

- Florida Department of Agriculture and Consumer Services
- Panama City Marine Institute

For more information about this project, please contact Jacob.Berninger@MyFWC.com or Katie.Konchar@MyFWC.com.

Seasonal wildlife tips: Sea turtle friendly lighting

Sea turtle season for leatherbacks has started in many areas of the state (Broward through Brevard Counties), and nesting season for loggerhead turtles will be starting in May for the rest of the sandy beaches of the state. If you visit or live near the beach, make sure your lights are not causing nesting turtles and their hatchlings to become disoriented. This can cause them to expend too much energy wandering to find the ocean, risking exhaustion, dehydration and death.

What you can do:

- **Outside your home:** Turn off, reposition or shield lights to make sure that no light is visible from any part of the beach. Replace incandescent, fluorescent and high intensity lighting with the lowest wattage lights that emit light with a wavelength greater than 560 nm. The best technology available for sea turtle friendly lighting is a red or amber LED. Use shielded motion detector lights and set them on the shortest time setting. Plant or improve vegetation buffers (such as sea grapes and other native beach vegetation) between any light source and the beach.
- **Inside your home:** Move light fixtures away from windows, apply window tint to your windows that meets the 45% inside to outside transmittance standards for tinted glass (you'll save on air conditioning costs too!), or use window treatments (blinds, curtains) to shield interior lights from the beach.
- **Walking on the beach:** Do not use flashlights, cell phones, flash photography or other devices that emit light on the beach at night. It is better to stay off the beach at night to avoid disrupting nesting, unless you are on a public sea turtle walk permitted by FWC. If you must go to the beach at night, use only red long wavelength light to access the beach safely, then enjoy the night sky without artificial light. If you happen to see a nesting turtle, stay at a distance where she cannot see you.

For more information on sea turtles and lighting please visit the FWC website: http://myfwc.com/wildlifehabitats/managed/sea-turtles/lighting/

Staff/partner spotlight: Lauren Jonaitis

What is your title? I'm a Fisheries and Wildlife Biological Scientist III with the Florida Fish and Wildlife Conservation Commission (FWC). Specifically, I work in the marine turtle program of the Imperiled Species Management section.

What type of work do you do? I review lighting plans for Costal Construction Control Line (CCCL) and Environmental Resource Permits (ERP) issued by the Florida Department of Environmental Protection (FDEP). I provide comments and recommendations to FDEP to ensure that construction and buildings along Florida beaches have sea turtle friendly lighting to reduce disorientation of nesting females and hatchlings during the sea turtle nesting season. I also perform lighting workshops where I educate the public on what it means to have sea turtle friendly lighting. And I provide technical assistance for those who may live on the coast and want to add light fixtures to their homes. Lastly, I am on call to rescue sea turtles during cold stun events, which is when the waters get too cold for sea turtles to swim and they float listlessly in the water. When this happens, they could potentially drown or fall victim to predators.

What project(s) have you recently been working on? I've been reviewing many different permit applications for FDEP. However, what I'm most excited about is attending a lighting workshop on March 21 in Fort Walton. My coworker will be leading this workshop, but soon I will oversee lighting workshops in the panhandle, which I'm very excited to be a part of! Also, I'm planning to attend the 11th Annual FWC Outdoor Experience at Beau Turner Youth Conservation Center on April 28. I will be organizing a table where I will educate the public about sea turtle biology, ecology and sea turtle friendly lighting. Come meet me there!

How does your work relate to the CWCI? My work relates to CWCI because I work to conserve coastal areas and endangered and threatened turtles by reducing artificial light pollution. Artificial light pollution is a risk to both nesting females and hatchlings because it can cause disorientation in which they are unable to find their way to the ocean. When this occurs, hatchlings expend too much energy wandering to find the ocean, risking exhaustion, dehydration and death. When nesting females become disoriented, they too can risk exhaustion and dehydration. Sadly, it has been documented that nesting females have been known to cross roads in times of disorientation and have been hit by oncoming vehicles. When I review lighting plans, I encourage properties to have turtle friendly lighting, which is to have low mounted, downward directed, long-wavelength lighting (true amber/red light), which is less of a disorienting attractant to sea turtles than white light.

How long have you been working in the coastal environment, and what are some lessons you have learned? I've only been working in coastal environments since October 2017 when I became employed by the FWC. However, I've grew up on the beaches of Long Island, N.Y. and have always had a passion for the complexity of coastal systems and the wildlife that live there. Coastal systems are so critically important for not only the animals that live there, but for the social, economic and biological values they provide to humans! It is essential we work to protect these environments. I think the main lesson that I have learned is to never give up and always count your little successes. Any progress to protect these environments, even slow, is still progress and steps in the right direction!

What do you think is the greatest threat to coastal ecosystems, and what action(s) should be undertaken to address it? I think the greatest threat to coastal ecosystems is loss of habitat. According to IUCN's Red List, habitat loss is the main threat to 85 percent of all endangered and threatened species. Therefore, habitat loss is a threat to biodiversity. Humans are deeply dependent on other species, and if species continue to go extinct due to habitat loss, this will only be detrimental to us.

What is your favorite coastal animal, and why? My favorite coastal animal would be great white sharks. Great white sharks utilize both coastal systems and deep oceans. They amaze me with their power, size and intelligence!

Do you have a message you would like to share with readers of this newsletter? It can be overwhelming when thinking about all the threats that wildlife and our planet face, which make it difficult to know where to start. However, my answer is, start small! Start with the little, simple things you can change in your daily life. Maybe walk to work a couple of times a week, start to recycle, eat less meat or use less plastic items. These little changes, over time, can make a big difference! When making small amendments in our own lives and encouraging others to do the same, a snowball effect occurs that can bring change to neighborhoods, cities and even countries! Any contribution, no matter how small, can help protect our planet!

Critter of the quarter: Coastal dune snakes

What could be more relaxing than a day at the beach? Sun, sand, surf, and … snakes! Yes, there are several species of serpents that utilize coastal habitats associated with Florida's beaches. Most of these snakes are harmless and are seldom observed by beach goers. However, two species are venomous and should be given a wide berth if observed.

The coastal dunes crowned snake is a small, secretive animal, usually no longer than 7 to 8 inches. This species can be found in coastal strand and scrub habitats from Cape Canaveral in Brevard County southward to Palm Beach County. A whitish band separates its dark head from its reddish-brown body. Another diagnostic character is the lower jaw counter sunk into the upper jaw. This is an adaptation to a burrowing life style.

The black racer is one of the more common snakes in Florida and can be found in many coastal habitats. These large (36-60 inches long), shiny black snakes are often seen actively foraging for their prey, which includes frogs, toads, lizards, small snakes, birds and their eggs, and rodents.

Eastern coachwhips are large (50-72 inches long), active snakes often seen foraging with their heads elevated above the ground. This snake feeds on a wide variety of prey items, including small mammals, birds and their eggs, lizards, and other snakes. Coachwhips have also been observed on the beach eating sea turtle hatchlings (see photo), and they also eat hatchling gopher tortoises. Coastal dunes, strand and scrub are primary coastal habitats used by this species. This snake gets its name from its similarity to riding whips from the past, a long slender body with a dark fore region grading to lighter shades of tan coloration.

The Florida cottonmouth is a ubiquitous denizen of freshwater bodies throughout the state. The small interdunal wetland swales are no exception, where cottonmouths can be found in high densities. Cottonmouths are large-bodied snakes commonly reaching three to four feet long. Florida folklore depicts the cottonmouth as an extremely aggressive snake that will chase the person unfortunate enough to stumble across it. This belief may have its genesis in the fact that cottonmouths will often stand their ground while vibrating their tail and gaping widely, exhibiting the cottony white interior of the mouth. This behavior has led to the snake's common name. Cottonmouths are reluctant to bite, unless provoked.

The eastern diamondback rattlesnake is the largest venomous snake in North America. Anyone who has heard the warning rattle of an adult eastern diamondback will not soon forget the encounter. This awe-inspiring snake can be found in many coastal habitats in Florida. This large snake, which has a characteristic diamond pattern along its back, is a good swimmer and is frequently found on coastal barrier islands. Diamondbacks feed primarily on mammals but have also been observed preying on

bird species. Biologists have observed diamondbacks preying on migratory song birds on barrier islands in the Florida panhandle.

Each year millions of visitors and state residents recreate in Florida' diverse ecosystems. Even with the huge number of hours spent outside, very few snake bites occur annually in Florida. When visiting habitats that may contain snakes, it is important to be alert to your surroundings and be mindful of where you place your hands and feet. If you see a snake, just walk around it. By following these simple rules, you can remain safe and—who knows—maybe have the opportunity to observe a snake being a snake in the wild!

Volunteer opportunities

Coastal Wildlife Conservation Initiative Internship Program – Volunteer for a position potentially qualifying for college course credit, based in Lake City. Opportunities will include assisting the CWCI Coordinator with projects that conserve coastal wildlife, contributing to outreach and gaining field experience. Due date for applications is **April 13, 2018**. For more information, contact Fara.Ilami@MyFWC.com.

UF-IFAS Extension Diamondback Terrapin Monitoring – Volunteer to survey for diamondback terrapins and their nesting beaches in northwest Florida during May and June. Training dates are **April 4, 6, and 9, 2018**. For more information, contact Rick O'Connor at roc1@ufl.edu.

FWC Shorebird Posting – Volunteer to help with the installation of posting materials for shorebird protection on Little Estero Critical Wildlife Area, Fort Myers Beach. Posting date is **April 10, 2018**. For more information, contact Brendan.Oconnor@MyFWC.com.

FWC Oyster Reef Restoration – Volunteer to help with oyster reef restoration research in northwest Florida. Deployment dates are **April 11 and 12, 2018**. For more information, contact Katie.Konchar@MyFWC.com.

Nature Coast Biological Station **Marsh Planting** – Volunteer to help install starter plants that will form the basis for a donor marsh, which will provide free marsh plants to restoration and living shorelines projects in Florida's Big Bend. Planting date is **April 13, 2018**. For more information, contact savanna.barry@ufl.edu.

Naples Bay Oyster Restoration – Volunteer to protect the Naples Bay shoreline and restore oyster reef habitat by helping bag oysters for future deployment. Bagging date is **April 14, 2018**. For more information, contact chrismceachern@hotmail.com or klaakkonen@naplesgov.com.

Keep Collier Beautiful – Volunteer to help clean up beach locations in Collier County on **April 14, 2018**, 8:00 – 11:00 a.m. For more information, contact jzimmerman1@embarqmail.com.

Earth Day Litter Cleanup – Volunteer to help remove litter at Escribano Point Wildlife Management Area on **April 22, 2018**. For more information, contact Emily.Hardin@MyFWC.com.

FWC Scallop Restoration – Volunteer to help FWC's Research Institute distribute materials and live scallops to volunteers who are participating in a scallop restoration project in St. Andrew's Bay. Distribution dates are **April 25, 28, and 29, 2018**. For more information, contact Emily.Hardin@MyFWC.com.

FWC Kids' Fishing Clinics – Volunteer to help teach kids about saltwater fishing and create responsible marine resource stewards. Clinics are held throughout Florida during the spring and summer. For more information, contact Marine@MyFWC.com.

Beach Cleanup Events – Volunteer to help clean up beaches throughout Florida. For more information, contact Marine@MyFWC.com.

Funding opportunities

Florida's Wildlife Legacy Initiative State Wildlife Grants – The updated draft Implementation Goals determine eligibility and are anticipated to be in effect for the 2018 grant cycle. The updated draft Marine Implementation Goal will now fund projects "creating or restoring habitat in … oyster reef, mangrove, salt marsh, and upland buffer." To be notified when the 2018 grants announcement is made in late May, please visit http://myfwc.com/conservation/special-initiatives/fwli/sign-up/. Direct inquiries about funding opportunities may be made to Dan.OMalley@MyFWC.com.

Wildlife Conservation Society Climate Adaptation Fund — Open for applications that support projects that implement effective interventions for wildlife adaptations to climate change. The deadline to apply is **April 6, 2018**.

EPA Environmental Education Grants -- EPA seeks grant proposals from eligible applicants to support environmental education projects that promote environmental awareness and stewardship and help provide people with the skills to take responsible actions to protect the environment. Each award will be between $50,000 and $100,000. Proposal deadline is **April 11, 2018**.

Ben and Jerry's Grassroots Organizing for Social Change Program — Offers general or project support to non-profit organizations throughout the United States. They make one-year grants for up to $25,000 to organizations with budgets under $500,000. Broad goals are to further social and environmental justice and support sustainable and just food systems. Pre-application deadline is **April 18, 2018**.

The Lawrence Foundation Grants — This private family foundation is focused on making grants to non-profit organizations to support environmental, education, human services and other causes. Median funding amount is $5,000. The proposal deadlines are twice a year, **April 30** and November 1, 2017.

The Conservation Alliance Grants — Program seeks to protect threatened wild places throughout North America for their habitat and recreational values. Before applying for funding, an organization must first be nominated by one of their member companies. They accept grant requests up to $50,000. The deadline for nomination is **May 1, 2018** and November 1, 2018.

The Max and Victoria Dreyfus Foundation Grants — The Foundation will consider requests to support museums, cultural and performing arts programs; schools, hospitals, educational and skills training programs, programs for youth, seniors and the handicapped; environmental and wildlife protection activities; and other community-based organizations and their programs. Funding amounts typically range from $1,000 to $20,000. A letter of inquiry is required. The deadline is November 10th and **May 10th** of each year.

Clif Bar Family Foundation Small Grants — Funding priorities include: Protect Earth's beauty and bounty; Create a robust, healthy food system; Increase opportunities for outdoor activity; Reduce environmental health hazards; and Build stronger communities. Funding amounts are approximately $7,000 each. Application deadlines are three times a year: February 1st, **June 1st**, and October 1st.

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.

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.

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

OneNOAA Science Seminars, various dates and locations

National Environmental Justice Conference and Training Program, April 25-27, 2018, Washington, D.C.

Climate and Resilience Community of Practice Meeting, April 30 – May 1, 2018, Port Aransas, TX

Florida Marine Science Educators Association Conference, May 3-6, 2018, Fort Lauderdale, FL

Society of Wetland Scientists Annual Meeting, May 29 – June 1, 2018, Denver, Colorado

Capitol Hill Ocean Week, June 5-7, 2018, Washington, D.C.

Gulf of Mexico Alliance All Hands Meeting, June 11-14, 2018, St. Petersburg

National Marine Educators Association Annual Conference, July 15-20, 2018, Long Beach, CA

Coastal news snippets

Report horseshoe crab spawning sightings with new FWC app, February 27, 2018

Help nesting sea turtles by keeping beaches dark and free of obstacles at night, March 1, 2018

Saltwater fishing clinics are for everyone, March 7, 2018

‘Spring Aboard’ with FWC and take a boater education class, March 12, 2018

Look out for manatees when boating, March 15, 2018

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