Florida Fish and Wildlife Conservation Commission

Living on the Edge: CWCI Newsletter - Winter 2019

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Living on the Edge

The Coastal Wildlife Conservation Initiative newsletter

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Winter 2019

Welcome to the winter 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 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 and conserve and manage coastal ecosystems, while achieving balance between conservation and opportunities for recreation, commercial activities and responsible development.

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Featured Project: Documenting Presence of the Coastal Dunes Crowned Snake

The coastal dunes crowned snake (*Tantilla relicta pamlica*) is a subspecies of the Florida crowned snake that resides in loose, sandy soil on the Atlantic coastal ridge of Florida. Due in part to its nature as a small, burrowing species, there is very little information available on this snake. Only a limited number of historical records of the snake have been documented, all of which have been found on the Atlantic coastal ridge (Volusia to Palm Beach County). Very few comprehensive studies have been done on Florida crowned snakes, none of which focused on this subspecies. Because of its small range and limited data, the coastal dunes crowned snake has been categorized as a species of greatest conservation need by the FWC.

The FWC's Wildlife Legacy Initiative and Regional Operations Subsection are collaborating with partners who manage public lands in the agency's Northeast region within the species' habitat (Volusia, Brevard, and Indian River Counties) to identify the basic distribution of this snake and document the habitats it is using. FWC staff also are collecting genetic samples to contribute to an ongoing genetic assessment of Florida crowned snakes at the University of Florida to identify its relationship to the other two subspecies of Florida crowned snakes. Filling this gap in distribution and taxonomic knowledge for the coastal dunes crowned snake (CDCS) will help inform decision-making as to whether the snake meets criteria to be listed as a state-threatened species or subspecies. It will also provide preliminary information on areas potentially critical to CDCS conservation. With funding from a Conserve Wildlife Tag Grant provided by The Fish and Wildlife Foundation of Florida, the objectives of this study are to:

- Determine the effectiveness of carpet tile cover objects (see photo) as a methodology for surveying CDCS.
- Conduct presence surveys of CDCS on public lands in Volusia, Brevard and Indian River Counties.
- Collect genetic samples to assess the taxonomy of this subspecies in relation to the other Florida crowned snake subspecies.

This study began in July 2018 and will continue through April 2019. Using 24" x 24" carpet tiles as cover objects, sites are set up in scrub, sandhill, coastal strand and xeric hammock habitat along the Atlantic coastal ridge and checked weekly. Carpet was suggested as the preferred cover object material because it easily conforms to the sand and provides cover for these snakes. A field technician was hired to check cover objects daily, identify new sites to sample and process snakes for the project's duration. To date, this study has resulted in the capture and sampling (size and shape measurements, photographs, habitat assessment, and genetic sampling) of two CDCS. Additionally, two new CDCS records have been acquired from Brevard County employees based on GPS locations, dates and photo documentation to add to historic records.

Major partners for this project include: FWC's Wildlife and Habitat Management Section, Brevard County's Environmentally Endangered Lands Program, U.S. Fish and Wildlife Service, U.S. Air Force, and Florida Department of Environmental Protection. Genetic assessments for this project are being conducted by Dr. Coleman Sheehy with the University of Florida. For more information about this project, please contact Anna Deyle, NE Wildlife Legacy Biologist (Anna.Deyle@MyFWC.com) or Tyler Turner, NE Assistant Regional Biologist (Tyler.Turner@MyFWC.com).

Winter Wildlife Tips: Manatee Manners

In the colder months, Florida manatees can be found aggregating in both natural (springs) and artificial (power plants) warm-water refuges. Unlike other marine mammals and despite their size, manatees do not have a true blubber layer and need to seek out warmer waters when Gulf and oceanic water temperatures drop. Springs in Florida remain a constant 72°F year-round, offering respite from colder winter waters. Manatees can be observed in aggregations in these areas with increased presence in adjacent waterways as the manatees move in and out of the springs during the day in search of food before returning to the springs for the night. If manatees remain in cold waters too long, they become susceptible to cold stress syndrome, a condition similar to frost bite or hypothermia. To ensure that these warm-water refuges are protected and that the manatees remain undisturbed, some springs and powerplants are designated as No Entry zones in the winter months. Several of these warm-water refuges also offer the opportunity to view the manatees from elevated viewing platforms or boardwalks without disturbance. While a recent manatee population estimate is larger than previously reported and adult survival rates are high, threats such as boat strikes, harmful algal blooms, marine debris entanglement and ingestion, and cold stress syndrome persist. To help reduce human-related impacts of Florida manatees, there are numerous ways you can help.

- Respect posted/no entry zones.
- Keep a lookout for manatees while boating, adhere to all posted slow speed zones and wear polarized glasses to help you spot manatees better.
- Keep your distance. Do not pursue or harass manatees.
- When kayaking or paddle boarding, do not paddle over manatees. They can often be found in shallow warmer waters in the winter where the presence of paddlers can cause them to become startled. Their sudden movement can overturn paddlers.
- Keep the waterways clean and debris free. Reduce and/or eliminate use of fertilizers.
- Never feed or provide water (such as hoses) to manatees. It changes their behavior by habituating them to people and boats/marinas which can be harmful or even deadly.
- Always practice passive observation of manatees should you find yourself in the water with them.
- If you should find a sick, injured or stranded manatee, do NOT try to push it back into the water. Call FWC's Wildlife Alert Toll-Free Number 1-888-404-FWCC (3922) or *FWC from your cell phone immediately.

Manatees are a listed and protected species, and we want to see the Florida population continue to thrive.

Some manatee viewing areas:

https://www.tampaelectric.com/company/mvc/

http://www.visitmanateelagoon.com/

http://www.threesisterssprings visitor.org/page/By%20Boardwalk

Partner Spotlight: Jessy Wayles

1. **What is your title?** Conservation Science Coordinator
2. **What organization do you work for?** Marine Discovery Center, a small nonprofit in New Smyrna Beach that focuses on environmental education and outreach
3. **What type of work do you do?** Community-based shoreline restoration and citizen science projects.
4. **What project(s) have you recently been working on?** Phew, a variety of things! I run our organization's citizen science programs. We partner with ongoing research projects around the state and get our community members involved in real scientific research programs. Right now, we're focusing our efforts on nesting horseshoe crabs, water quality, seagrass health and density and microplastics. I run our organization's oyster recycling program called Shuck & Share. We have been working to grow Shuck & Share and have expanded the program into six counties in Florida. Collectively, all counties and organizations in Florida have recycled 4.1 million pounds of oyster shells since 2014. I also coordinate Project H2O, a collaborative effort to get local government, NGOs, universities and community members in the same room to discuss problems and solutions to water quality issues in Volusia County. Lastly, I have been assisting the FWC with the creation of living shoreline workshops aimed at professionals in the area. The goal of this program is to get professionals comfortable enough to create living shorelines on private properties. Sometimes I also get to moonlight as Oakie the Oyster or a real-life mermaid during outreach events.
5. **How long have you been working in the coastal environment, and what are some lessons you have learned?** I grew up along the coast of South Carolina, and I have had the privilege to get involved with volunteer work along our coasts early in life. Professionally, I have been working in this field for four years and have learned many things. First, volunteers are the biggest asset to any community-based project. Finding and hanging on to hardworking, trained volunteers makes the work so much easier, it makes it more fun, and it helps the volunteers feel connected to what is happening in their community. Secondly, working out in the field a lot has taught me to always bring a change of clothes! I cannot tell you how many times I have left a fieldwork day soaking wet without another pair of shoes or T-shirt. It is always better to be over prepared than under prepared. Lastly, I have learned that everyone receives information in a different way. Since taking over citizen science programs, I have gotten the opportunity to tweak the way our volunteers learn about various protocols. Not everyone is a visual learner, so we have incorporated hands-on training into our workshops in addition to videos and PowerPoint presentations. It has helped our volunteers learn better and feel more confident when working their programs.
6. **What do you think is the greatest threat to coastal ecosystems, and what action(s) should be undertaken to address it?** There is no one answer for what is the greatest threat to coastal ecosystems, I think everything is connected and there isn't one way to protect our coastal environments. I think reducing our carbon footprint, reducing our single-use plastics and reducing our use of lawn chemicals can have a positive influence, but the only way to do all of that is to educate your friends and neighbors on the problems and solutions.
7. **What is your favorite coastal animal, and why?** The oyster! These little guys are not cute, but they are salty and delicious, a keystone species in Florida and a great component to shoreline health! I love watching and listening to their shells "snap" closed in low tide.
8. **Do you have a message you would like to share with readers of this newsletter?** Saving our coastal ecosystems is a daunting task, and sometimes at this job I feel tired and

defeated. However, with the power of positive thinking, strong partnerships and many, MANY volunteers we can make a difference in our small coastal communities.

Critter of the Quarter: Sunray Venus Clam

This issue's Critter of the Quarter is the sunray venus clam (*Macrocallista nimbosa*), a large, attractive, native bivalve distributed in waters from North Carolina to Texas. Oblong in shape, sunray venus clams can attain a length of 7.6 cm in in a year.

The shells of sunray venus clams, commonly found on Florida beaches, are hinged and have interlocking grooves, or cardinal teeth, that help them fit tightly together with the help of a ligament and two adductor muscles. A soft membrane, or mantle, lines the shell and secretes calcium carbonate and proteins that form the hard shell. Clams have no eyes, but they respond to touch, vibrations and chemical cues in their environment. They have two tubes, or siphons, that extend or retract in response to predators or fluctuations in water quality. Water flows in though one siphon, carrying oxygen and food particles over the gills and mantle. Millions of tiny hairs, or cilia, work together to push water from the other siphon, expelling the filtered water and waste. Because clams are filter feeders, they absorb whatever pollutants are present, making them good indicators of the overall health of a water body.

Clams begin life as males but often change to females. Approximately half of the population will undergo this sex change, which usually occurs by the end of the first year. In Florida, spawning occurs in spring and fall when water temperatures reach ~73°F. The release of sperm into the water by males stimulates females to expel eggs. A female may spawn several times each year, producing millions of eggs. Within 12-14 hours, the fertilized egg hatches into a microscopic creature called a trochophore, which is fringed with cilia to help it move. In less than a day, it transforms into a veliger, a free-swimming animal with tiny wing-like lobes that propel it through the water. The foot, shell and body organs begin to form during this stage which lasts 6-10 days. As the tiny shell develops, the veliger drops to the sea floor and sends out thin filaments to hold it in place. As the clam matures, a muscular foot will replace these filaments, allowing the clam to bury itself in the sediments with only its siphons protruding.

The sunray venus clam was commercially harvested along the northwest coast of Florida in the 1960-70s. However, attempts at locating additional populations were not successful and the fishery became inactive. Due to its high growth rate, this species was identified as a candidate for the shellfish aquaculture industry. To provide the impetus needed to advance production and distribution of this species, the University of Florida's Institute of Food and Agricultural Sciences launched Project VENUS in 2014. This project provides the necessary infrastructure via a public-private partnership to advance the production and distribution of the clam through demonstration, education and technology transfer to seed suppliers, growers, and wholesalers.

Volunteer Opportunities

Shelters for Shorebird Chicks – Volunteer to assist in constructing shelters to be placed on beaches during nesting seasons. The event will take place on January 23, 9am-1pm at the Lakeland FWC Regional Office. For more information, contact brendan.oconnor@myfwc.com

Florida Shorebird Alliance – Volunteer to assist with shorebird monitoring, stewarding, posting sites, and helping rooftop nests in St. Johns, Volusia, and Brevard Counties. The monitoring portion occurs

from March until August. For more information, contact logan.mcdonald@myfwc.com or andrea.pereyra@myfwc.com

Smalltooth Sawfish – From March to September, volunteer to assist in deploying gill nets and random sampling from small boats in Port Charlotte. Opportunity is physically demanding and requires ability to lift over 50 lbs. For more information, contact brendan.oconnor@myfwc.com

Marine Stock Enhancement Research – Volunteer to help with outreach and education events at the Stock Enhancement Research Facility, located at Port Manatee. For more information, contact gina.russo@myfwc.com

Marine Mammal Pathobiology Lab – Volunteer to help with routine cleaning, data entry, observing marine mammal necropsies, field response and assisting with educational materials in St. Petersburg. Volunteers should note that work may involve dealing with animals in various states of decomposition. For more information, contact brendan.oconnor@myfwc.com

Red Tide Offshore Monitoring Program – Volunteer to collect offshore water samples from coastal Florida counties, especially in the southwest and along the east coast, to help FWRI scientists monitor Florida red tide. For more information, contact RTOMP_coordinator@MyFWC.com

Scallop Sitter Program – Beginning in April, volunteer in St. Joseph and St. Andrews Bays to care for a cage of scallops by checking on them and cleaning them once a month until January. For more information or to sign up, visit https://myfwc.com/research/saltwater/mollusc/bay-scallops/restoration/sign-up/

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

Captain Planet Foundation EcoSolution and EcoTech Grants – Support for youth-led environmental solution-oriented projects or youth-led projects that leverage technology to achieve greater or innovative environmental outcomes. Award amounts are from $500 to $2,500. Applications due **January 15, 2019**.

NOAA Ecological Effects of Sea Level Rise Program – The purpose is to address regional and local effects of sea level rise and coastal inundation through targeted research on key technologies, natural and nature-based infrastructure, physical and biological processes, and model evaluation. The deadline is **January 16, 2018**.

Gulf of Mexico Climate and Resilience Community of Practice Climate Adaptation Projects — The purpose of the available funds is to assist a community in its effort to plan for climate change and natural hazards. Letters of Intent due **January 15, 2019**.

DHS FEMA FY18 Flood Mitigation Assistance — Funds are available to State, Local and Tribal Governments to reduce or eliminate the risk of repetitive flood damage to buildings and structures insured under the National Flood Insurance Program. The deadline is **January 31, 2019**.

DHS FEMA FY18 Pre-Disaster Mitigation — Funds are available to State, Local and Tribal Governments to implement and sustain cost-effective measures designed to reduce the risk to individuals and property from natural hazards, while also reducing reliance on Federal funding from future disasters. The deadline is **January 31, 2019**.

NOAA NOS National Competitive Harmful Algal Blooms Programs – Funding is available for proposals to the Monitoring and Event Response for Harmful Algal Blooms and The Ecology and Oceanography of Harmful Algal Blooms Research programs. The deadline is **February 4, 2019.**

DEP Adaptation Action Initiative and Resilient Program Grant – Funds are available to innovative coastal programs in Florida. The deadline is **noon, ET, February 4, 2019.**

Florida RESTORE Act Centers of Excellent Program – Funds are available to Florida-based, non-governmental public or private institutions or not-for-profit institutions in three topics: marine wildlife, Florida Panhandle estuary system assessment, and West Florida benthic mapping. Pre-proposals are due **February 8, 2019** and full proposals and due **April 8, 2019**.

Mohamed bin Zayed Species Conservation Fund – Funds are available to programs devoted to an individual species conservation, flora or fauna, that is endangered. The grant requires *in situ* conservation methods. The deadline for applications is at three times a year: **February 28,** June 30, and October 31, 2019.

Sarasota Bay Estuary Program – Funds are available to any project that will benefit the restoration of the Sarasota Bay watershed. Both wildlife conservation and local education projects are eligible. The deadline is **March 1, 2019.**

The Conservation Alliance Grants – Funds are available to any project devoted to lasting wild land or waterway protection with grassroots community involvement and recreational benefit. The deadline for nominations is **May 1, 2019** and for proposals is **June 1, 2019**.

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.

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

Gulf of Mexico Oil Spill and Ecosystem Science Conference, Feb. 4-7, New Orleans, LA

Living Shoreline Reference Guide Evaluation Workshop, Feb. 25, Sarasota, FL

World Ocean Summit, March 5-7, Abu Dhabi, UAE

American Shore and Beach Preservation Association Coastal Summit, March 12-14, Washington, DC

National Monitoring Conference: Working Together for Clean Water, March 25-29, Denver, CO

OceanVisions2019 - Climate Summit, April 1-4, Atlanta, GA

5th International Conference on Marine Mammal Protected Areas, April 8-12, Messinia, Greece

GODAE OceanView Symposium: OceanPredict '19, May 6-10, Halifax, Canada

Coastal Sediments Conference, May 27-31, Tampa, FL

Coastal News Snippets

Ocean Warming Is Accelerating Faster Than Thought, New Research Finds, Jan. 10, 2019

Governor Ron DeSantis Announces Major Water Policy Reforms, Jan. 10, 2019

Winter is a perfect time for the beach and for collecting seashells, Jan. 3, 2019

Updated statewide abundance estimate for the Florida manatee, Dec. 18, 2018

Media statement: FWC Commission Blue Heron Bridge dive site update, Dec. 13, 2018

FWC seeks input on bay scallop long-term management solutions and announces 2019 regional season dates in most areas, Dec. 13, 2018

FWC installs signs around Port Orange Critical Wildlife Area in Volusia County, Dec. 4, 2018

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