Florida Fish and Wildlife Conservation Commission

Living on the Edge: CWCI Newsletter - Summer 2018

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Living on the Edge

The Coastal Wildlife Conservation Initiative newsletter

Florida Fish and Wildlife Conservation Commission

MyFWC.com

Summer 2018

Welcome to the summer 2018 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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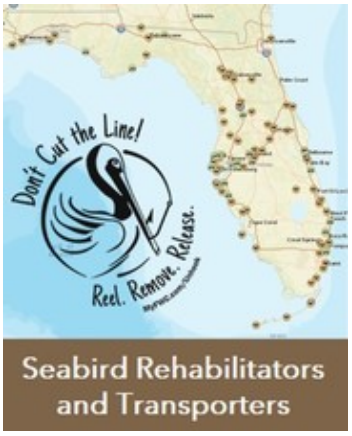
Hot Topic: New Tool to Locate Seabird Rehabilitators and Transporters

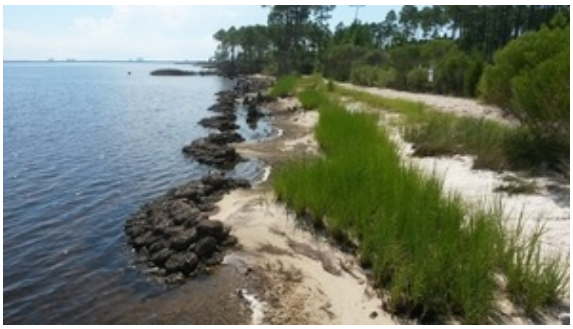


The FWC's Coastal Wildlife Conservation Initiative has recently launched a new tool to help someone with an injured pelican or other seabird quickly find a rehabilitator or transporter close to their location. It may be used by anglers who have hooked a bird with their fishing line or anyone who is seeking help for an injured seabird. The new web-based application, located at https://ocean.floridamarine.org/SeabirdRehabilitators, is optimized for smartphones and tablets. Users can either allow the application to access their location or pinpoint a location on the map and select the radius (0-50 miles) they would like to search. Then they can call the nearest rehabber or get directions with a single click.

The tool was developed based on a need to quickly locate help for injured seabirds. Some of the providers on the FWC's main wildlife rehabilitator list specialize in mammals or other species besides seabirds, but all the providers in this new application have been confirmed to accept seabirds. It will be updated on a regular basis to include new seabird rehabilitators and transporters and delete those no longer providing service.

This tool is part of the FWC's "Don't Cut the Line" campaign, which provides instructions on how to rescue a hooked pelican or other seabird. More information about the campaign can be accessed at myfwc.com/unhook or by contacting the CWCI coordinator, Fara Ilami, at fara.ilami@myfwc.com.

Featured Project: Living Shoreline Suitability Model for Tampa Bay



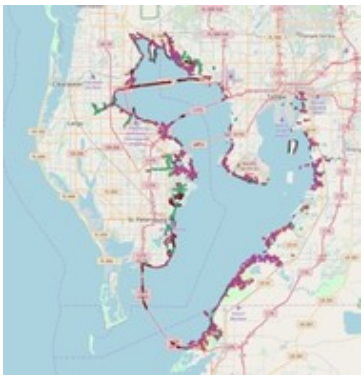
Because of the threats of shoreline erosion from strong storm action and sea level rise and their effect on waterfront property values, more attention is being focused on shoreline protection.

In the recent past, shorelines generally were stabilized with hardened structures, such as bulkheads, revetments and concrete seawalls. Ironically, these structures often increase the rate of coastal erosion, remove the ability of the shoreline to carry out natural processes and provide little habitat for estuarine species.

Alternatively, government agencies responsible for resource protection have proposed more natural bank stabilization and erosion controls called "living shorelines." These solutions incorporate vegetation or other native elements (such as oyster shell) to maintain continuity of the natural land-water interface and reduce erosion while providing wildlife habitat and enhancing coastal resilience.

The FWC's Fish and Wildlife Research Institute's Center for Spatial Analysis has taken an interest in living shorelines in the Tampa Bay region. As a state partner in the Gulf of Mexico Alliance, the CSA became aware of the Virginia Institute of Marine Science's Living Shoreline Suitability Model and its application in Mobile Bay, Alabama. VIMS developed the LSSM in ESRI's ArcGIS Model Builder based on a decision tree that can assist in identifying appropriate living shoreline treatments to an area. Because of the LSSM's success in identifying locations where a living shoreline restoration

project may be effective, CSA's Kathleen O'Keife and Chris Boland received grant funding from GOMA's Habitat Resources Team to apply the LSSM to the Tampa Bay region.



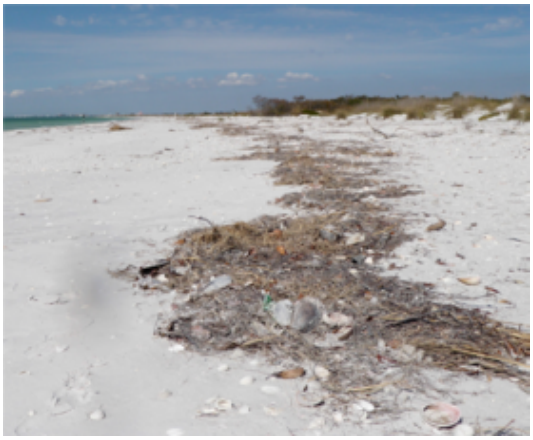
The LSSM requires information about existing environmental conditions to correctly apply the decision tree, such as existing habitat, slope of coastal waters, environmental conditions and potential construction barriers. The recently updated environmental sensitivity index dataset, originally collected for oil spill response purposes, answered many of these required criteria, and so became CSA's base input dataset to the model. CSA staff spent approximately four months of full-time work manually reviewing each of the 5,162 shoreline segments, which ranged from about 100 feet to about 500 feet in length, and classifying the remaining required data fields appropriately.

Overall, the modified LSSM recommended the installation of a living shoreline to approximately 33% of the shoreline, protection from a "harder" landscape protection method to about 11% of the shoreline, and was unable to recommend a BMP to the rest (56%) of Tampa Bay area's shoreline, typically because the installation of a living shoreline would be obstructed by an existing shoreline condition. The model outputs resulted in additional fields that provide property owners and management entities with suggested Upland Best Management Practices and Shoreline BMPs.

The model results can be reviewed in CSA's educational materials that were developed as grant deliverables. The ArcGIS Online story map (http://arcg.is/0CPKD9) was developed to inform the general public of the use of living shorelines as a shoreline protection alternative, and the Web Mapping Application (http://arcg.is/2gr3Fca) was intended to assist managers in identifying potential preservation and mitigation areas.

For more information about this project, please contact Chris.Boland@MyFWC.com or Kathleen.OKeife@MyFWC.com. For more information about living shorelines projects and resources in Florida, visit http://floridalivingshorelines.com/.

Summer Wildlife Tips: Explore the Wrack



Piles of washed-up seaweed, seagrasses and animal debris on the beach are called wrack. Wrack helps the beach community thrive by providing food for birds and other wildlife. When wrack is left on the beach – rather than mechanically cleared – fungi and other organisms begin to grow, providing food for small animals, such as beetles, beach-hoppers and ghost crabs. These smaller animals provide important fuel for shorebirds, sustaining them on their long migrations. They also provide another exciting way to enjoy your day at the beach!

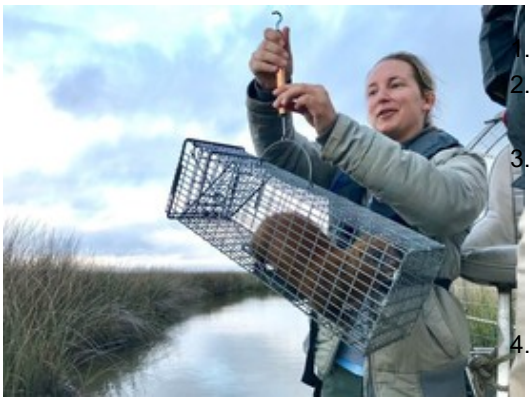
What you can do:

- **Go on a scavenger hunt!** When you need a break from the waves and want to spare your wrinkled toes, a fun activity is searching through the wrack for all the interesting treasures typically intertwined with the washed-up seaweed. The CWCI has developed a handy resource

to aid in your scavenger hunt. The Beach Wrack ID Guide includes pictures, identifying characteristics and fun facts for many of the plants and animals you can “hunt” for in the wrack.

- **Know what you can and cannot touch.** Some things that you may find in the wrack are harmless, such as sea beans, mollusk shells, barnacles, colorful bits of coral and sea glass. Others can be more dangerous, such as some types of crabs and jellyfish. It is also important not to touch any protected species that may be in the wrack, such as sea turtle or shorebird hatchlings.
- **Avoid destroying the wrack or digging holes nearby.** Since many animals use the wrack as protection, moving or destroying it can compromise their safety. In addition, holes dug near the wrack line can pose threats to coastal wildlife.
- **Advocate for leaving wrack in place.** Many coastal communities mechanically remove wrack, especially during the summer. You can be a voice for wrack and wildlife by reaching out to your community leaders to discourage this activity. For a more in-depth look at the FWC's position on this topic, please read our position paper, "Maintaining wildlife value of beaches: the importance of wrack and compatible beach cleaning."

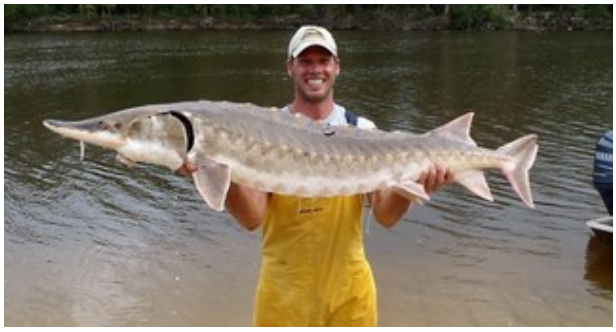
Staff Spotlight: Lisa Smith



1. **What is your title?** Wildlife Biologist II
2. **What organization do you work for?** Florida Fish and Wildlife Research Institute.
3. **What type of work do you do?** I study rare and imperiled mammal species. I spend about half my time in the field conducting research and half my time in the office doing the less exciting side of things.
4. **What project(s) have you recently been working on?** Currently most of my time is spent studying cave-roosting bat species and two subspecies of salt marsh mink. With mink, I have been working to help determine the distribution of the Atlantic salt marsh mink and the Gulf salt marsh mink, their habitat selection and dietary preferences, and verify their subspecies designation. We conducted camera surveys in northeast Florida as well as most of the Big Bend region on the Gulf coast. We have also been live trapping mink to obtain hair samples for genetic analysis to verify subspecies designation.
5. **How does your work relate to the CWCI?** Both subspecies of mink I study reside exclusively in coastal ecosystems. Without protected healthy salt marsh ecosystems, these two subspecies would likely be lost forever.
6. **How long have you been working in the coastal environment, and what are some lessons you have learned?** Six years. Before moving to Florida and starting work on salt marsh mink, I studied terrapins in the Chesapeake Bay and sea turtles along the coast of North Carolina. Some lessons I’ve learned are to watch out for oyster bars and limestone and obsessively check the tide charts and weather! Working in a coastal environment can be tricky! Also, what works in one coastal area doesn’t always work in another—be adaptable!
7. **What do you think is the greatest threat to coastal ecosystems, and what action(s) should be undertaken to address it?** Climate change. Climate change has the potential to greatly impact the environment that mink and other salt marsh specialists rely on exclusively. With dramatic changes and loss of this environment, many of the salt marsh specialist species will be unable to continue to persist. The actions that should be taken are far too many and too complicated to address here, but in short, be proactive! Take measures to protect habitat and allow the coastline space to adapt.

8. **What is your favorite coastal animal, and why?** The mink, of course! They are Florida's best kept secret, as most people don't even know there are mink in the state. Mink are inquisitive, adorable and voracious predators. Plus, we both love to eat crabs!
9. **Do you have a message you would like to share with readers of this newsletter?** A lot of people get out to the coast to enjoy the beaches, but get out there and appreciate our beautiful salt marshes! There are a lot of great protected areas, especially in the Big Bend region, where you can go birding or kayaking and pretend you're in Old Florida. And I'm not just trying to get you to help me track down my mink…. But if you see one please report it to our public sighting webpage: https://public.myfwc.com/hsc/mink/getlatlong.aspx. And if you find a road-killed mink, please contact me ASAP!

Critter of the Quarter: Gulf Sturgeon



This summer's Critter of the Quarter is the Gulf sturgeon (*Acipenser oxyrinchus desotoi*), which has been swimming in the major river drainages of the Gulf of Mexico since the time of the dinosaurs. Its current range extends from the Pearl River, on the Mississippi/Louisiana border to the Suwannee River in Florida. Most of its habitat is in Florida, where it has been documented reproducing, or "spawning," in the Escambia, Yellow, Choctawhatchee, Apalachicola and Suwannee rivers. These rivers are protected as critical habitat for this federally threatened species. During the summer months (May-September), this species has also been observed in the Blackwater and Ochlocknee rivers.

This prehistoric fish is commonly confused with sharks, and shares many characteristics with them, such as a cartilaginous skeleton, a spiral valve in its digestive tract and a spiracle to aide in respiration. However, it is a "bony fish," with its only bones in the form of bony plates called scutes. They run the length of the fish's body along each of five ridges defining the shape of this fish (a pentagon). These scutes function as armor and protect this docile species from predators. Lacking teeth, this species uses its specialized tubular lips to create a powerful vacuum and suction its invertebrate prey from the bottom of the Gulf of Mexico. At least once a day, they must jump, with the impact forcing air out of the swim bladder in a burp. Release of excess gas allows this fish to maintain its buoyancy and hold its position easily on the bottom of the river. Some sturgeons have been seen jumping as high as seven feet in the air. Gulf sturgeon can live about 25 years, with males reaching maturity at 5-7 years and females at 9-12 years. Historically, they were known to exceed 8 feet and 350 pounds; however, in modern times, they have only been documented at a maximum length of 6.5 feet and 250 pounds. These once plentiful fish were driven almost to extinction due to the high demand for the ripe eggs in the females, which are harvested for the caviar trade.

The life history of the Gulf sturgeon is complex, since they are an anadromous species (spawning in freshwater and feeding in saltwater). In late winter/early spring (Feb-April), mature sturgeon migrate to their natal rivers, traveling hundreds of miles inland to reach rocky outcroppings where the females lay sticky eggs that attach to the bottom, which the males then fertilize. After spawning, they move to the middle reaches, meeting up with juveniles and non-spawners to spend the summer months holding. Holding is the term used to describe the gathering of large numbers of Gulf sturgeon in discrete, deeper river reaches. Areas where they gather are termed holding areas, and in drought years, when the rivers are at their lowest, there are fewer deeper areas available, forcing them into dense concentrations. Researchers have recorded over 1,200 sturgeons in a 1-mile stretch of holding area within the Suwannee River. Sturgeon will remain in these holding areas until the fall

migration (October-November), when they move to coastal marine waters to feed throughout the winter.

These beautiful, unique animals are quite docile, but collisions between boaters and airborne sturgeon can result in serious, life-threatening injuries to both people and fish. In Florida, the Choctawhatchee and Suwannee Rivers have the largest populations of Gulf sturgeon. Along the Suwannee River, the FWC has posted signs notifying boaters they are entering holding areas. To stay safe in such reaches, boaters are asked to go slow, stay alert, wear life jackets and stay away from the edge of boats. There is no warning that lets people know that a sturgeon will jump, but using the above precautions provides boaters with the best chance to safely travel through areas with high concentrations of sturgeon and have time to react, if a sturgeon were to jump in their vicinity. This also allows everyone on board more opportunity to see a jumping sturgeon and snap a few pictures of their aerial acrobatics.

Volunteer Opportunities

Crayfish Habitat Restoration Work Day – Help FWC biologists restore habitat for the Panama City Crayfish by hand-clearing overstory growth and vegetation from a Panama City bog on **July 14, 2018**. For more information, contact Emily.Hardin@MyFWC.com.

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 **July 20, 2018**. For more information, contact Fara.Ilami@MyFWC.com.

Scallop Rodeo – Volunteer to assist FWC Biologists at check-in locations for the 2018 Scallop Rodeo in Port St. Joe. Help with checking in scallopers and receiving scallops upon their return to shore. Date is **August 4, 2018**. For more information, contact Emily.Hardin@MyFWC.com.

Bay Scallop Web Survey – Help biologists determine how plentiful bay scallops are along Florida's Gulf coast by submitting your bay scallop catch data throughout this harvest season. For more information, contact BayScallops@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.

Marine Stock Enhancement Research – Volunteers are needed 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.

Smalltooth Sawfish Project – FWC's Charlotte Harbor field lab based in Port Charlotte is looking for volunteers to assist in smalltooth sawfish research. Volunteers need to be comfortable working on small boats and be a team player. This volunteer opportunity is physically demanding and volunteers need to be able to lift 50 lbs. 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.

Funding Opportunities

Florida's Wildlife Legacy Initiative State Wildlife Grants – FWLI is seeking applications for estuarine habitat enhancement ($190,000 available). This project is being developed to address the Marine & Estuarine Enhancement Implementation Goal of FWLI. Applications are asked to submit project proposals that detail the approach best suited to meet the stated objective. Due date is **July 13, 2018**.

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 **July 15, 2018**.

NOAA NMFS Saltonstall-Kennedy Grant Competition – Funds projects that address the needs of fishing communities, optimize economic benefits by building and maintaining sustainable fisheries, and increase other opportunities to keep working waterfronts viable. Pre-proposals are due **July 23, 2018**.

NOAA RESTORE Science Program – Supports long-term projects to investigate trends in the Gulf of Mexico's living coastal and marine resources and the processes driving them. Required pre-proposals are due **July 30, 2018** and full proposals are due October 29, 2018.

EPA Gulf of Mexico Program Cooperative Agreements – Funds projects that address water quality improvement; coastal habitat and ecosystems enhancement, restoration and/or protection; environmental education and outreach; and community resilience in the Gulf of Mexico region and its watersheds. Proposals due **July 31, 2018**.

NFWF/NOAA National Coastal Resilience Fund – Funding of up to $30 million for the restoration or expansion of natural features such as coastal marshes and wetlands, dune and beach systems, oyster and coral reefs, mangroves, forests, coastal rivers, and barrier islands that help minimize the impacts of storms, rising sea levels and other extreme events on nearby communities and infrastructure. Proposals are due **August 7, 2018**.

NSF Biological Oceanography – Funding supports research in marine ecology broadly defined: relationships among aquatic organisms and their interactions with the environments of the oceans or Great Lakes. The deadline for full proposals is **August 15, 2018**.

NAS Thriving Communities Grants 5 – The Gulf Research Program seeks to help bridge the gap between the knowledge and practice of community resilience. They seek approaches that will advance information exchange between resilience researchers and those that seek to implement policies and practices to enhance the resilience and well-being of their communities. Letters of Intent due **Sept (date TBD), 2018**.

Honda Marine Science Foundation – Funds projects by 501(c)(3) public charities that advance the understanding and/or implementation of living shorelines. HMSF will select an estimated 2-3 grantees per year. Grant amounts may range from $25,000-$75,000. Letters of Intent due **October 1, 2018**.

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. Applications due **October 1, 2018**.

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

Gulf of Mexico Alliance Wednesday Webinar Series: Microplastics, July 25, 2018, 2:00 – 3:00 p.m. (EDT)

North American Association for Environmental Education Conference, October 9-13, Spokane, WA

American Shore & Beach Preservation Association National Coastal Conference, October 30 – November 2, Galveston, TX

National Summit on Coastal and Estuarine Restoration and Management, December 8-13, Long Beach, CA

Coastal News Snippets

Give nesting waterbirds space to help keep them safe, April 19, 2018

Sturgeon returning to the Suwannee River, May 3, 2018

Sea turtle nesting begins in May on many beaches, May 9, 2018

Critical Wildlife Area signs go up in Brevard County, May 15, 2018

Critical Wildlife Area signs go up in southwest Florida, May 15, 2018

2017 boating accident statistics provide an opportunity for boating safety reminders, May 16, 2018

Bay scallop season opens July 1 in Franklin-NW Taylor and Levy-Hernando counties, June 26, 2018

New Report Identifies Three Critical Areas of Research to Fill Gaps in Scientific Knowledge of the Gulf Coast's Interconnected Natural and Human System, June 27, 2018

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