

EP. 7: ESTUARINE CREATURE FEATURE

TRANSCRIPT

Kaitlyn Dirr 0:19

Hey there, my name is Kaitlyn Dirr and this is the NERR or Far podcast. Today's episode is an "Estuarine Creature Feature" as well as an introduction to birding.

Our first estuarine creature is a hermit crab. Hermit crabs are Lori Davis's favorite animal at the North Carolina NERR. Let's hear from Lori, the reserve's education coordinator about what makes these crabs so great

Lori Davis 0:53

My favorite animal, people probably think that this is kind of silly, but I love hermit crabs and the reason hermit crabs are my absolute favorite is because...multiple reasons... they get to change homes. Kids love that. I talk about if it's your birthday you get new clothes, you might not want new clothes, but you have to have them. Hermit crabs have to get a new shell every time it's their birthday. I love how hermit crabs can do that. I also love that we have teeny tiny ones on the Rachel Carson reserve, that the littlest kid can just pick up and put in their hand and not be scared of being pinched. I like other crabs too, fiddler crabs ghost crabs, blue crabs, but those'll pinch you. Hermit crabs, the little ones won't. And so I like hermit crabs because they're usually the first thing we encounter on a field trip. And that's the first thing they put in their hands, I make them do it like, "it's not gonna hurt you, it won't pinch you, it's not gonna bite you, just put it in your hand". So I like hermit crabs for multiple reasons because they're just cool animals. And plus it gets the conversation started about estuaries with kids.

Kaitlyn Dirr 2:07

Another important crab you might see in the southeastern estuaries is the fiddler crab. Fiddler crabs can be seen commonly in slightly salty or brackish intertidal mudflats in salt marshes, as well as various other types of brackish or saltwater wetlands. They're called fiddler crabs because the male crabs have one claw much larger than the other that they hold somewhat like a violin. This is a sexually dimorphic trait. Sexual dimorphism is a difference in appearance between males and females of the same species, whether it's color, shape, size, or a unique structure. My favorite example is lions. Males have manes while females do not. In fiddler crabs, the males have a major claw that is much larger than their minor claw and females have claws of equal size. Males will wave this big claw in a display as a form of female courtship. Females choose mates not only based on claw size, they also note the quality of the waving display. Research suggests that claw size is correlated with burrow width, which influences incubation temperature. This means that females will choose a male mate whose claw size will provide the best environment for her eggs, and the vigorous waving display will show that he is a strong, healthy crab. Males also fight with this large claw. If they lose it, the lost claw will become the new small claw and his

minor claw will grow bigger. Fiddler crabs are detritivores, which means that they obtain nutrition by feeding on organic matter made up of dead plant and animal material or detritus. They obtain this by using their mouth to sift through chunks of sand. Anything they can't use, they roll up into a little ball and replace what they took from the ground. This feeding habit plays a very important role in preserving coastal wetlands like salt marshes. By sifting through the sand, fiddler crabs aerate the substrate and prevent anaerobic conditions. It's kind of like how worms help plants grow by aerating and breaking up the soil. Fiddler crabs have a pretty cool name that they earn for the way they look and how they move. Some other creatures in the estuary are named for how they sound. Adam Mackinnon, the Education Coordinator for the Sapelo Island NERR, has recently been listening to the estuary using a hydrophone. A hydrophone is a type of microphone that detects sound waves underwater. So Adam, have you heard anything cool on it so far?

Adam Mackinnon 4:41

Oh, god. Yeah. Yeah. So, you know, fish make some really awesome sounds. Course you know, if you get a manatee, manatees make cool little sounds, little squeaks and whistles. So...dolphins of course, we don't hear any right whales, they're too far offshore, but it's cool because you know, no one really realizes these things when you can have that... I've said that looking-glass moment, you see, and I love technology when it's used appropriately. I love using those little Dynalite microscopes in the field so you can see a little Palmetto Tortoise Beetle on your iPad. But that hydrophone is just you know... you take something, like you look at water and that's okay. But when you can actually essentially take them underwater through this hydrophone, it's something- it's a pretty cool experience. And you realize that all fish are named after- by their sound, like a toadfish, croaker, drums, ya know? Not very original in some common names but makes sense after you listen to them.

Kaitlyn Dirr 5:37

Adam mentioned dolphins. Did you know that there are dolphins in estuaries? Estuaries are great nursing habitats for dolphins and they are also a great source of food. Some of these dolphins actually have a really unique way of catching this food. Here to tell us more about this method, one of her favorite things to spot in the South Carolina estuaries, is Julie Binz, manager of the ACE Basin Reserve

Julie Binz 6:03

It's still, even though I have seen it a lot of times, it still is pretty exciting during low tide on a mud flat to see dolphin strand feeding. That is a pretty unique thing to see. Dolphins throwing themselves up on the mud after fish to try to eat them and it's cool where they work together and have learned this behavior through generations that some people think they are intentionally beaching themselves but it is a really cool thing to see them do this, so.

Kaitlyn Dirr 6:36

During strand feeding dolphins herd and trap fish by forcing them up onto mud banks, shorelines or sandbars. It's called "strand" feeding because of the way dolphins beach themselves momentarily, pushing prey ashore before sliding back into the water. Strand feeding is a learned behavior passed down from mother to calf, which means that not all dolphins are able to perform this behavior. Learning strand feeding typically occurs in the calf stage, so many dolphins learn somewhere between six to eight years old. Watching strand feeding is a favorite pastime of another reserve manager: Erik Smith from the North Inlet - Winyah Bay Reserve in South Carolina.

Erik Smith 7:20

I never get tired of seeing the dolphins strand feed, I never get tired of seeing the black skimmers skim the creeks, I- you know, I never get tired of the the annual migrations of the shorebirds that come through and depend on these marshes, the oystercatchers raising young out at the mouth of the estuary, you know, they're all special.

Kaitlyn Dirr 7:45

Erik is giving us a perfect segue into our next portion of our episode: birding. So what is birding? Birding is a hobby in which you observe birds in their natural habitat. Someone who birds is called a birder, and guess what? Anyone can be one. You can bird anytime, anywhere, whether it's in your backyard, at a reserve, or out in the street. There's no right or wrong way to observe birds, and getting started is easy and low cost. Binoculars and a bird ID guide are helpful, but not required. There are lots of ways to learn more about our feathered friends. You can join a club or attend a program at a local park or reserve, you can download mobile apps like iNaturalist or eBird to help with identification, you can learn more about your local birds from sites and organizations like the National Audubon Society, or you can simply sit in nature and familiarize yourself with the calls and behaviors of different local species. Keith Laakkonen, the director of the Rookery Bay Reserve in Florida is another avid birder. So Keith, how did you become interested in birding?

Keith Laakkonen 8:53

So as a biologist, I think I've always been interested in birds and I just considered myself sort of a general biologist. But birders have what we call a spark bird, and mine of all things was a snow bunting in Florida. We were on vacation on the East Coast and I heard a snow bunting at Cape Canaveral National Seashore, and went to a couple places, and after looking up and down, I found hopping through a parking lot. And I got- and I got hooked on it, this beautiful snow bunting, it's still the only one I've seen. And this was back in the mid 2010s. And ever since then I've just been hooked on birding it's a- it's a lifelong treasure hunt.

Kaitlyn Dirr 9:36

Do you have any favorite Florida bird species to spot within the Rookery Bay NERR?

Keith Laakkonen 9:40

Oh, that's always asking a mother- like asking a mother which kid is their favorite. I have lots of... lots of favorite birds. But you know I really do have a place in my heart for the beach-nesting birds, for the least terns and for the black skimmers, these species that come here to nest on our beaches and really, their survival depends on being able to have, you know, a relatively short amount of time in the summer where they can lay their eggs they can rear their chicks and move on. And it's important that we are able to provide that habitat at Rookery Bay. So really great spots to see these things include Second Chance, but you have to do it from a distance in the summertime because it is close protect the species, but also the northern end of Tiger Tail Beach, it's actually in reserve and a phenomenal opportunity to see really wonderful behavior from nesting black skimmers every summer.

Kaitlyn Dirr 10:38

Both Keith and Erik mentioned black skimmers. Let's talk about this incredible seabird! Black skimmers are a medium-sized seabird with long wings and a unique bill that is longer on the bottom half than the upper half. If you've ever seen a gull on your trip to the beach, they're slightly larger than gulls. Black skimmers earn their name for the way that they feed. Skimmers use their unique bill to skim the water for food as they fly over, dropping the long, narrow bottom beak to help them feel for fish as they go along. Because they feed mostly by touch, they can even forage at night. These birds are black on top and white underneath, with a reddish-orange and black beak and red-orange legs. I think they look like the lovechild of a penguin and a toucan. If I haven't sold you yet on why these things are super cool, just listen to their little yips.

Black skimmers lay their eggs directly in the sand and shells of beaches and the higher parts of some salt marshes in what are called scrapes. They make these cone-like depressions themselves using their beaks and feet to carve away at the sand. Do you like sandy beaches? Me too. I mean, who doesn't? Sadly though, because of the popularity of suitable seabird nesting habitat, skimmers are threatened by development and can experience a lot of human disturbance. Skimmer nests can be hard to spot by beachgoers and can be destroyed by anything from roaming dogs to vehicles driving on the beach. Storms and sea level rise also threaten black skimmer nests as high waters can swamp and wash out eggs and hatchlings. Because of these factors and the declining skimmer population, black skimmers are listed as a species of high concern. You can help do your part by keeping your distance around seabird nesting colonies, obeying shorebird signs and refraining from flushing or scaring off birds that you see in coastal areas. Together we can help conserve black skimmers and other bird species on our southeastern coast. If you want to get out and see some cool coastal birds and learn more, there are lots of places to go birding at the reserves. St. George Island is a site at the Apalachicola NERR that sits along the Great Florida Birding and Wildlife Trail. Here to tell us more about this trail and its importance to environmental education is Anita Grove, the Coastal Training Program Coordinator at the reserve.

Anita Grove 13:15

The Florida Birding Trail is managed by the Florida Fish and Wildlife Commission and it is a statewide trail highlighting places where people who were traveling around the state could pull off and actually would be a good birding site. And we have several locations within our reserve footprint. One is on St. George Island, and it's an undeveloped part of that barrier island on the bay side where migrating species can land, get some food because they're coming from thousands of miles away, and St. George Island is one of the first places and- well coastal, the coastal US in many cases are the first place they land so they are exhausted, they're needing water, they're needing food, and we've actually had studies done where they weigh them so that- it's an important stop and also for butterflies. They land... the migrating species are beautiful to see too, they're, some are quite, quite colorful. And so those stops we have two here in town, and one on St. George Island, one in Apalachicola that's under our management. And both of those are great areas to see any birds but especially when the migrating birds come through.

Kaitlyn Dirr 14:33

In addition to self-guided opportunities like the Great Florida Birding and Wildlife Trail, many National Estuarine Research Reserves also offer kayak and boat tours. Regardless of method, there's some pretty cool and unexpected animals that you can spot in estuarine habitats here in the southeast.

Anita Grove 14:52

Well, we see all sorts of things. I think things that interest people that are from not from here are bears. We have a lot of bears, and you know, East Coast and southern bears are not nearly as big as Western bears, but we have, we have a lot of bears. We have otters, and we have wading birds.... we have, of course, all sorts of sea creatures, hermit crabs and fish, you know, sheepshead, and redfish. Just all types of fish. And we have alligators and deer. I actually saw a deer when I was headed out of town the other day and it'd come down to the bay, which is unusual, but I guess it needed some of the saltwater for for some reason, maybe it was rinsing off, and it was quite wonderful to see it there.

Kaitlyn Dirr 15:42

Josephine Spearman, Education Coordinator for the GTM NERR in Florida, also has a favorite creature to spot that you might find rather unexpected.

Josephine Spearman 15:52

The wild turkeys! Like when I get to see the wild turkeys on the trails, it's just like these majestic... you wouldn't think that they're like super majestic, but they're like, you know, iridescent and walking through so silently and just with this whole troop of them and they're just so beautiful. And you know, when I get a chance to see them, it's like wow, this is this is a beautiful piece of nature.

Kaitlyn Dirr 16:13

There are a multitude of unique and interesting creatures in our estuaries, from crabs, to dolphins, to seabirds and beyond. The National Estuarine Research Reserves are working to better understand and protect these species through research, stewardship, coastal training and education. You too can learn more about these species by visiting a reserve near you. You never know what you might find and experience in one of the world's most productive ecosystems. Until next time, I'm Kaitlyn and this is NERR or Far: The Reserves Are Where You Are.