

# Georgia WILD Newsletter: February 2009

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## Oohopee Dunes: A study in nature, sand

By Mincy Moffett

Oohopee Dunes Natural Area is one of Georgia's most significant natural communities and floristic areas. The natural area comprises three tracts in southwestern Emanuel County. The Georgia Department of Natural Resources also cooperates in managing an adjacent tract owned by The Nature Conservancy and another nearby tract owned by the U.S. Fish and Wildlife Service. Together, these five conservation lands, arranged in an archipelago-like fashion along the eastern boundary of the upper Little Oohopee River, encompass nearly 3,000 acres. The central topographic feature of all the tracts is a spine or ridge of Kershaw sand dunes. In Georgia, sand dunes or sandhills can be found at the seashore, the fall line and along the eastern banks of Coastal Plain rivers and streams. The dunes along riverbanks and streams are also known as riverine sandhills.

The sandhills along the seashore mark current coastlines, while those found along the fall line show where ancient coastlines were. Unlike coastal areas and the fall line, riverine sandhills were created over time as strong westerly winds deposited exposed river bottom sand along the eastern shore of certain rivers. The most extensive riverine sandhill formation in Georgia is the Oohopee River dunes system. It includes more than 65 linear miles of oval-shaped dunes along the Little Oohopee and Oohopee rivers, extending from just northwest of Swainsboro to the junction with the Altamaha River and encompassing approximately 22,000 acres.

Oohopee Dunes Natural Area has several natural communities, ranging from dry (xeric) dunes and longleaf pine forests to moist hardwood hammocks and river floodplains. The visually dominant natural community is the xeric dune system dominated by longleaf pine (*Pinus palustris*), wiregrass (*Aristida beyrichiana*) and turkey oak (*Quercus laevis*). Turkey oak, the signature plant species of the dunes, is a sandy soil generalist adapted to a variety of dry sandy habitats. The rare few-flower gayfeather (*Liatris pauciflora*) found at Oohopee Dunes is also a generalist.

Some species found at this natural area are sandhill specialists and are, therefore, found only on dunes and sandhills. Such is the case with the sandhill milk-vetch (*Astragalus michauxii*), state-listed as threatened. Perhaps the most interesting plants are those species found at Oohopee Dunes and on the coasts of other southern states, but which are absent from the coast of Georgia. This group includes scarlet sage (*Calamintha coccinea*), woody goldenrod (*Chrysoma pauciflosculosa*) and the sandhill rosemary (*Ceratiola ericoides*), state-listed as threatened.

The sandhill rosemary is a fragrant wood shrub that is highly flammable and depends on fire for successful reproduction. Fire plays an important role in the health of sandhill communities. Burns are typically patchy, because fuels on the ground (leaves, litter and branches) are sparse and fire does not carry across bare sand. Fire leaves a patchy appearance, with many islands of vegetation remaining unburned.

Many of the unique and rare species on sandhills and in the ecotones, or habitat transition zones, need fire to live. The Indian olive (*Nestronia umbellula*), state-listed as rare, is found in the ecotones between sandhill and hammock forests, and may benefit from periodic fire. The green-fly orchid (*Epidendrum conopseum*), state-listed as unusual, is likely unaffected by most fires as it inhabits the shaded branches of trees in moist forest hammocks.

Sandhills are also home to many highly specialized animals, including the eastern indigo snake (*Drymarchon corais couperi*), federally-listed as threatened; the gopher tortoise (*Gopherus polyphemus*), state-listed as threatened; and an insect endemic to this area, the Oohoopee Dunes moth (*Narraga georgiana*).

Rare and interesting animal species are also associated with wetland and aquatic habitats at Oohoopee Dunes Natural Area, including the striped newt (*Notophthalmus perstriatus*), state-listed as threatened, and the ironcolor shiner (*Notropis chalybaeus*).

This area has been the subject of scholarly research by the Canadian Museum of Nature (Ottawa), the Florida Department of Agriculture, Georgia Southern University, Mississippi State University and the University of Georgia.

The primary management objective for this property is the protection of rare species populations and natural communities of plants and animals. Public access is also provided for hunting, fishing, hiking, wildlife observation, scientific research and environmental education.

### **Getting there**

From Swainsboro (intersection of U.S. 80/U.S.1 Swainsboro Bypass):

\*\* McLeod Bridge Tract: Travel 1.5 miles west on U.S. 80. Turn right onto county road (CR) 456 and travel northwest for 2.1 miles (this will become McLeod Bridge Road). Travel another 0.9 miles to the McLeod Bridge crossing. Parking is available on either side of the road or in one of several turnoffs to the south. The tract is located both to the north and south of the road and is bordered by the Little Oohoopee River on the west.

\*\* U.S. 80 Tract (kiosk): Travel 4.1 miles west along U.S. 80. A small unpaved parking area and kiosk is north of the road. The entire tract is located to the north of the road.

\*\* Halls Bridge Tract: Take U.S. 80 west for 0.7 miles and take a left onto CR 160 (Halls Bridge Road). Travel 5.8 miles on CR 160 to the Halls Bridge crossing (note: it will become an unpaved road at mile 3). Limited parking and a rudimentary canoe launch are available on the south side of the road by the bridge. The tract is located both to the north and south of the road and is bordered by the Little Oohoopee River to the west.

**Caution:** The trail system, consisting of un-maintained primitive roads, provides a limited hiking network. If hiking off-trail, please take a map and compass. It is easy to lose your bearings in the thick bottomlands and stunted turkey-oak forests.

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## Adventures in disentangling a whale

The Nongame Conservation Section of the Georgia DNR's Wildlife Resources Division is part of a special team trained to locate, track and attempt to free north Atlantic right whales entangled in commercial fishing gear. The job is dangerous and requires intense coordination and teamwork.

North Atlantic right whales give birth during the winter months in the ocean waters along the Georgia and north Florida coasts, the only calving ground for this imperiled species. Along with the soon-to-be mothers, sub-adult whales and some adult males make the trip south out of New England and the Canadian Maritime provinces during November and December to calving areas in the Southeast.

The disentanglement duties have been an unusually frequent job during this whale calving season. Since December, five entangled right whales have been spotted off the Georgia and Florida coasts. For most years, the average is one. At least four of the whales have been wrapped in hundreds of feet of rope, apparently from lobster pots. Biologists suspect the whales became entangled in the Bay of Fundy, which is a well-known right whale foraging area between New Brunswick and Nova Scotia, Canada.

One young whale was freed in late December in Georgia waters after becoming entangled in lobster pot gear approximately 12 days earlier off Canada. Nongame Conservation Section staff was in the point boat, and senior wildlife biologist Mark Dodd cut the ropes from the 30-ton animal. Another right whale that had been entangled was recently seen gear-free, a month after Nongame employees removed 100 yards of rope trailing behind the whale's flukes. Unfortunately, not all entangled whales are so fortunate. The success rate for right whale disentanglement is only about 50 percent. Many entangled right whales carry the entwining ropes for months or years until they die from infection, starvation or other factors related to the entanglement.

The following are firsthand accounts from Nongame Conservation Section staff involving attempts to free this calving season's third entangled whale, a 6-year-old nicknamed Bridle. The attempts were made Jan. 14, Jan. 23-24 and Feb. 1 in extensive efforts involving the Florida Fish and Wildlife Conservation Commission, the National Oceanic and Atmospheric Administration (NOAA), New England Aquarium, The Provincetown Center for Coastal Studies, Wildlife Trust and Coastwise Consulting.

Once a crew engages the whale, the process is complex and fast paced. Disentanglement begins by getting close to the animal in a small boat, throwing a grappling hook over the ropes trailing behind the whale, and being towed by the whale while a satellite-tracking buoy is attached to the ropes. Then, when the time is right, the team makes another approach to try to cut away the fishing gear using specialized cutting blades on very long, extendable poles. Large buoys are often added to slow the whale and keep it near the surface, a process known as keggings. Observers in a plane help by describing the behavior and location of the whale, as well relaying details on the orientation of the trailing lines. The satellite buoy is critical for tracking the whale remotely at night and during periods of inclement weather between disentanglement attempts. This juvenile whale was trailing 200 feet of line and had an orange buoy wrapped near its mouth. The team sliced away nearly 175 feet of synthetic rope on Jan. 14. As of early February, subsequent tries have been less successful.

The Nongame crew included Brad Winn, program manager for the section's coastal office, senior wildlife biologist Mark Dodd, wildlife biologist Clay George and technician Kate Sparks.

### **Brad Winn on the first day**

"Clay got the call around 3:30 p.m. (Jan. 14). We grabbed our gear and launched the inflatable Zodiac. We approached the area indicated by the last known coordinates, about 10 miles off of Brunswick.

"The NOAA aircraft, with Wildlife Trust observers aboard, was circling the animal. The spotter plane carrying the skilled Wildlife Trust observation team is key to finding the stressed whales and directing our approach from the water. When we began to approach the area under the plane, we saw spouting at the surface.

"On our first approach to the whale, we saw the line. It was a small right whale, maybe approximately 35 feet. Mark took the grappling hook, launched it across the three ropes coming from the whale, and was able to retrieve the first line.

"We pulled the line into the boat -- Clay was driving. We continued to follow the whale, working up the line at whale speed, about 4 knots, until we were within about two whale-lengths of the animal. Kate secured the first flotation buoy and then got the satellite-tracking buoy attached just behind the flotation buoy on the ropes still attached to the whale.

"Almost immediately after, Mark threw the grappling hook again about 50 feet and was able to snag a second line trailing the whale. That line was cut as close to the whale as the boat could approach, just behind the massive tail of the animal.

"The third line was cut off close to the whale in the same manner, and we backed off, with almost 200 feet of what appeared to be lobster pot rope coiled in the boat.

"There were a few more close approaches, mainly to try to get a biopsy sample for genetics analysis. While Kate steered, Clay shot a dart from the bow and got a small skin and blubber sample. The plane stayed until we were done. They relayed location information and were very important because it was so difficult to approach the whale. She became very evasive, turning on her dives and ending up well behind our boat."

### **Mark Dodd on disentanglement attempts Jan. 23**

"Because this was a difficult disentanglement, with several lines all around the head, we had to give it careful thought, review the photos carefully and come up with a plan. We had experts come in from all over the country including veterinarians and experienced disentangles that are experts at this type of operation.

"We were all working together, kind of like a traveling circus. There were four boats and lots of equipment. All the gear and boats are on trailers so we can be mobile and get to the whale when we have a good weather window.

"A projected track from data collected by the tracking buoy suggested the whale would be off St. Augustine the following morning ... so we all assembled there.

"At first the plan was just observe the whale's behavior, then move in with the boat. You've got a driver and a person in the bow with a pole, about 15 feet long with a cutting knife attached. The on-water operations often require aerial support. The plane monitors the whale's position and when the whale is about to surface, they say something like, "Whale surfacing at 2 o'clock,

60 feet." At that point, the driver tries to position the boat near the animal's head, and you hope that the bowman can get the knife onto the ropes to cut them.

"This particular whale was very evasive and after several hours of approaches, we could tell we weren't going to be successful. On one approach, I look over the side and I can see her -- the callosities are white so I can see her 3-4 feet below the surface on her way up -- and I think, 'OK, here we go.' And then next thing you know I look over the side and I see this huge fluke disappearing toward the bottom. She just did this massive nosedive as she was about to surface! Crazy.

"There was one attempt where it was all timed properly, we got right to the head as she surfaced and I thought, 'This is it.' Unfortunately, she exhaled strongly, and the spray (whale breath) temporarily blinded the driver. When our vision cleared, her head was already below the surface.

"At the end of the day, it is interesting to talk with all the cooperators to get their perspectives on the day's events. Katie Jackson, who provided the aerial support for the operation, described the whole thing as a ballet. From her vantage point, it appeared that we would approach the whale, and it would gracefully turn away from us and dive, to avoid letting us approach. For us on the water, there are waves splashing over the bow, and this thing is huge, as big as a city bus, it feels more like a battle.

"Whale disentanglement is an art form. It takes finesse; you have to take the whale's size and behavior into account. You need people with a wide variety of experience including excellent small-boat and rope-handling skills."

### **Clay George on follow-up efforts**

"It's a complex entanglement and the whale has been very evasive when approached on the water, so the odds are against us.

"One rope is embedded in the whale's rostrum and another rope has cut about 15 inches through the left lip. It's unclear whether the whale can even open its mouth. If we can't remove the rope, it will almost certainly die from starvation or infection.

"It's frustrating because we only need to make two cuts to disentangle the whale.

Unfortunately, the ropes we need to cut are located on the whale's head and it won't let us anywhere near its head. ...

"Whatever happens to this whale, it's important to remember that fishing gear entanglements are a problem for the entire right whale population. Over 70 percent of right whales have scars from previous fishing gear entanglements. At any given time, about 2 percent of the population is chronically entangled in fishing gear.

"The solution to the problem isn't saving each entangled whale. Disentanglement is expensive, often ineffective and dangerous. We need to prevent entanglements from occurring in the first place."