

Florida Field Nat. 26(3):91-93, 1998.

"FOOT-HUNTING" BEHAVIOR BY A GREAT HORNED OWL

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The Great Horned Owl (*Bubo virginianus*) is an opportunistic feeder occupying more habitat types and living under a greater variety of climatic conditions than any other North American owl (Johnsgard 1988). Typically Great Horned Owls hunt by making short (up to 100 m) flights from perches to capture prey (Marti 1974). Additional hunting methods include: harrier (*Circus sp.*)-like hunting (Sherman 1912), random flight method (flying into a large stream of bats and capturing one) (Baker 1962), foot pursuit and hawking insects (Duncan and Lane 1988). Hunting areas are typically open, but include woodlands and groves with at least scattered trees for perching. Great Horned Owls also have been observed giving the "broken wing" display while on the ground (Bent 1925). In this note I describe a method of hunting by Great Horned Owls that involves actively searching out prey by walking on the ground. This method should be regarded as distinct from either pursuit of prey on the ground, which usually involves running after prey that was missed in the initial attack, or hunting from a stationary ground perch. The observations described here do not involve flightless juvenile owls who may walk around in search of food until they can fly (Clark 1975).

I monitored Least Tern (*Sterna antillarum*) nests twice a week during the summers of 1992-93 in the Admiral Island (30°20'N, 87°19'W) tern nesting colony, Escambia County, Florida. Admiral Island is a treeless spoil island (approx. 27.5 ha) that contained more than 250 nesting pairs of Least Terns in 1992-93. Least Terns nested on Admiral Island for at least eight years (A. Forster, pers. comm.) previous to this study. On the morning of 8 June 1992, I observed Great Horned Owl tracks in the sand. Tracks were alternating and showed three large segmented toes. There was a small point or dot (talon) in the sand just beyond the end of each toe. Each foot measured an estimated 10 cm in length which includes a portion of the fourth or rear-facing toe and alternating tracks were 20 cm apart (center of track to center of track; see Murie 1974). Jeff Gore (Florida Game and Fresh Water Fish Commission; pers. comm.) independently confirmed the tracks were made by a Great Horned Owl, and Great Horned Owls have been heard calling from the island (M. Hudson, pers. comm.). Owl tracks and feathers were observed 14 times during the 1992 and 1993 breeding seasons and the trails left by these tracks ranged in length from 3 to 20 m. Owl tracks meandered through open areas and small vegetated dunes within the Least Tern colony as the owl apparently searched for Least Tern chicks. Great Horned Owl tracks often ended at Least Tern nests that had contained either eggs or young nestlings during monitoring visits. These nests were empty after I observed the tracks. Great Horned Owl predation on tern colonies has been described before, however, tracks were never mentioned or observed (Nisbet 1972, Nisbet 1975, Morris and Wiggins 1986). Previous evidence suggesting Great Horned Owl depredation included the presence of severed tern heads, dismembered tern bodies, and Great Horned Owl feathers.

In 1993, four nests containing eggs in early stages of development were empty by the following nest survey. Great Horned Owl tracks ended at these nests which contained small amounts of dried yolk stains. No other animal tracks were observed. While egg-eating has not been reported for the Great Horned Owl it seems likely that an owl would associate eggs with food. Eggshell fragments have been reported for a juvenile Short-eared Owl (*Asio flammeus*) that apparently consumed eggs of an unidentified sparrow species (Clark 1975); and a Short-eared Owl of unknown age has been reported to con-

sume passerine eggs (Wiebe 1991). It is possible that Least Terns were frightened off nests by the presence of the Great Horned Owl either causing damage to the eggs themselves (Nesbitt and Welton 1984) or exposing the eggs to another bird species or ghost crab (*Ocypode quadrata*). Ghost crabs are known predators of Least Tern eggs and even small nestlings (pers. obs.).

Most accounts of adult North American owl species foraging on foot involve the pursuit of moving prey. The Elf Owl (*Micrathene whitneyi*), Burrowing Owl (*Athene cunicularia*), Barn Owl (*Tyto alba*), Spotted Owl (*Strix occidentalis*) and Barred Owl (*Strix varia*) have all been observed pursuing prey on the ground (Johnsgard 1988, Taylor 1994). These pursuits may have resulted from failed capture attempts and, therefore, may not represent actual "foot hunting". There are, however, rare cases of owls hunting by foot. A Snowy Owl (*Nyctea scandiaca*) in Michigan was observed walking or hopping over snow listening for prey below the surface (Chamberlin 1980). A Barn Owl was observed hunting by foot through a meadow in a random fashion (Hadasch 1991).

This hunting technique may be more common than is known because of the difficulties in observing owls foraging at night and lack of readily visible sign. In California, S. Schultz (pers. comm.) observed Great Horned Owl tracks in a Least Tern colony. The owls walked a straight line until encountering an irregularity in the sand and then veered towards the irregularity. Least Terns often position their nests abutting these irregularities. Trails left by these tracks ranged in length from 8 to 66 m. In Massachusetts, P. Trull (pers. comm.) also observed Great Horned Owl tracks in the sand in two Common/Roseate Tern (*Sterna hirundo*/*Sterna dougallii*) colonies. The owls landed outside of the tern colony and than proceeded inside. Trail lengths ranged up to 10 m.

Great Horned Owls have been experimentally induced to hunt by foot for night-vision research (Marti 1974). Great Horned Owls appear to have adapted this unusual hunting technique to exploit large supplies of prey in treeless habitats. Circumstantial evidence suggests that the Great Horned Owl or owls may also have consumed Least Tern eggs.

I thank Jeff Gore, Steve McGehee, and Daniel Todd for editorial comments. Mike Hudson was invaluable in the field. Anne Forster provided historical information for Least Terns on Admiral Island. Sandy Schultz and Peter Trull provided information from their field notes. I would also like to thank Jim Jenniges and Jim Ozier for responding to a "request for information". Douglas McNair and an anonymous reviewer made valuable comments on an earlier version of the manuscript.

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