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feeding territories of up to 3 m in diameter from encroachment by Louisiana Herons (*Hydranassa tricolor*) and Little Blue Herons (*Florida caerulea*), but were not able to repel Great Egrets (*Casmerodius albus*). As the water level continued to drop, the numbers of day herons utilizing the pond increased until 20 days later 150 Great Egrets were feeding there. By this time, although the food supply was greater than previously, Black-crowned Night Herons fed in the pond only prior to dawn and left as the day herons arrived. It is possible that the increased number of day herons prevented the night herons from utilizing this concentrated food resource during the day. A result of such competition is that it would also lessen the opportunity for Black-crowned Night Herons to employ the more active feeding behaviors often advantageous in diurnal feeding.

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FOOD HABITS OF FLORIDA BURROWING OWLS

James C. Lewis

Food habits of Florida Burrowing Owls (*Speotyto cunicularia floridana* Ridgway) have been described only in general terms (Howell, Florida Bird Life, New York, Coward-McCann, Inc. 1932). These birds live in prairie or prairie-like habitat that has been diminishing as a result of encroachment by industry, cities, and agriculture. An understanding of the food habits and related habitat needs of Burrowing Owls is necessary to ensure their preservation.

As part of an ecological study of Burrowing Owls, *Speotyto cunicularia* (Molina), I tabulated records of stomach analyses on file at the Patuxent Wildlife Research Center, Laurel, Maryland. Included were records for 57 Florida Burrowing Owls (21 males, 19 females, and 17 unsexed) collected in the period 1907-1929 by C.H.M. Barrett, H.W. Beers, A.H. Howell, and W.W. Worthington. Food items had been identified by R.C. Erickson and Alexander Wetmore. The numbers of owls by month of collection were: February (16), March (17), April (11), May (2), and June (11). Stomachs contained an average of 5 cc of food.

Invertebrates constituted 82 percent of the volume, vertebrates 17 percent, and miscellaneous material 1 percent (Table 1). Beetles were the

Table 1. Food habits of Florida Burrowing Owls.

Order	Family	Species	Volume Percent	Frequency of Occurrence
<u>Invertebrates:</u>				
Coleoptera	Carabidae	Unidentified	5	18
Coleoptera	Carabidae	<u>Harplus</u> sp.	4	13
Coleoptera	Carabidae	<u>Pasimachus</u> sp.	2	10
Coleoptera	Curculionidae	Unidentified	1	10
Coleoptera	Scarabaeidae	Unidentified	2	6
Coleoptera	Scarabaeidae	<u>Canthon laevis</u>	18	20
Coleoptera	Scarabaeidae	<u>Ligyris gibbosus</u>	1	4
Coleoptera	Scarabaeidae	<u>Phanaeus vindex</u>	6	6
Coleoptera	Scarabaeidae	<u>Strategus antaeus</u>	15	19
Coleoptera	Scarabaeidae	<u>Strategus splenders</u>	5	4
Coleoptera	Scarabaeidae	<u>Strategus</u> sp.	5	6
Coleoptera	Misc. families (4)	Unidentified	2	17
Hemiptera	Unidentified	Unidentified	1	4
Lepidoptera	Phalaenidae	Unidentified	2	5

Table 1. Continued

Order	Family	Species	Volume Percent	Frequency of Occurrence
Orthoptera	Acrididae	Unidentified	1	11
Orthoptera	Misc. families (4)	Unidentified	4	10
Hymenoptera	Formicidae	Unidentified	Tr.	5
Collembola	Aphoruridae	<u>Anura</u> sp.	Tr.	2
Unidentified ¹	Unidentified	Unidentified	Tr.	2
Mesogastropoda	Unidentified	Unidentified	Tr.	1
Ophiliones	Unidentified	Unidentified	Tr.	2
Araneae	Lycosidae	Unidentified	4	11
Decapoda	Astacidae	<u>Cambarus</u> sp.	1	3
<u>Vertebrates:</u>				
Rodentia	Cricetidae	Unidentified	2	1
Rodentia	Sciuridae	Unidentified	2	1
Rodentia	Unidentified	Unidentified	1	1

Lagomorpha	Leporidae	<u>Sylvilagus</u> sp.	Tr.	1
Passeriformes	Fringillidae	<u>Pipilo erythrophthalmus</u>	2	1
Passeriformes	Fringillidae	<u>Passerherbulus</u> sp.	2	2

Table 1. Continued

Order	Family	Species	Volume Percent	Frequency of Occurrence
Passeriformes	Mimidae	<u>Dumetella carolinensis</u>	Tr.	1
Squamata	Colubridae	<u>Natrix</u> sp.	1	1
Squamata	Iguanidae	<u>Anolis carolinensis</u>	Tr.	1
Squamata	Unidentified	Unidentified	4	4
Saliaenta	Bufoiidae	<u>Bufo</u> sp.	1	5
Saliaenta	Hylidae	<u>Hyla</u> sp.	Tr.	1
Saliaenta	Ranidae	<u>Rana</u> sp.	2	4
<u>Miscellaneous:</u>				
Feathers, vegetation, gravel	Unidentified	Unidentified	1	19

¹ Class Diplopoda

most prevalent invertebrates by volume (66 percent) and in frequency of occurrence in the diet. Families of Coleoptera not listed in the table but included under "Miscellaneous" were Cerambycidae, Dytiscidae, Elateridae, and Hydrophilidae. Miscellaneous families of Orthoptera included Gryllidae, Locustidae, Oedipodidae, and Tettigoniidae.

Reptiles and rodents were the most abundant vertebrate food in volume consumed, but amphibians were eaten more frequently.

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FIELD IDENTIFICATION OF DIFFICULT BIRDS: I SHORT-TAILED HAWK

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The uncommon Short-tailed Hawk (*Buteo brachyurus*) is often searched for in peninsular Florida without being found. Almost certainly more would be reported, however, if its habits were better known, and if current field guides or other ornithological literature easily available to field workers contained more correct and fuller descriptions of this species' plumages. I present here information on behavior and plumages of Short-tailed Hawks which should aid in locating this species and in identifying it in the field. I offer this information in the hope that increased frequency of accurate sightings of Short-tails will occur, resulting in the accumulation of additional data on breeding biology, habitat, and food habits of this unusual, bird-hunting *Buteo* (Ogden, *Auk*, in press).

The Short-tailed Hawk is approximately the same size as the small race of Red-shouldered Hawk resident in south Florida (*Buteo lineatus extimus*), but differs considerably from these Red-shouldered Hawks in