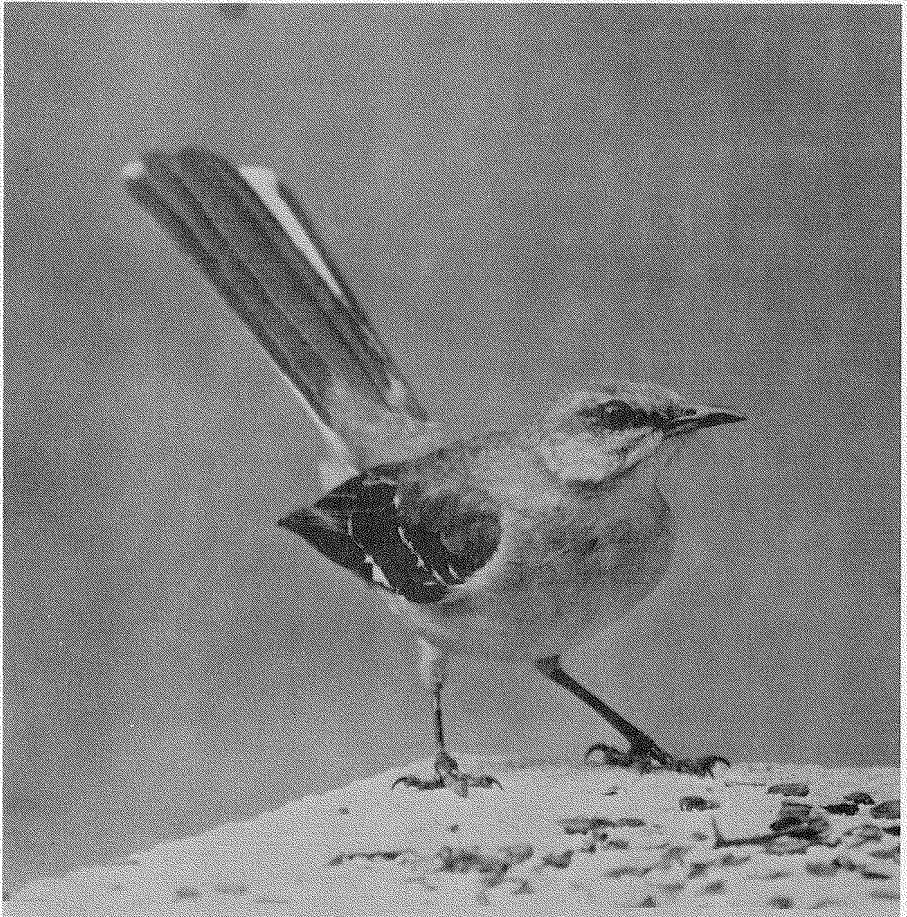


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Front Cover: Northern Mockingbird at Starkville, Mississippi.
[Photo by J.A. Jackson]

Common Barn-Owl Food Habits in Oktibbeha County, Mississippi

Michael L. Burchfield

Department of Biological Sciences
Mississippi State University
Mississippi State, MS 39762

The Common Barn-Owl (Tyto alba) is a large owl found throughout Mississippi and most of the world. It usually doesn't leave its daytime roost until dark, thus it is rarely seen by most people. Like all owls, the Common Barn-Owl swallows small prey whole and then, when the digestive process is complete, regurgitates the undigested bones, hair or feathers, and other hard items in compact "pellets." Two pellets are often produced in a 24-hour period (Burton 1973). By collecting and analyzing these pellets, we can determine much about the food habits of owls.

On 16 February 1983, I and several other members of Dr. Jerome Jackson's ornithology class collected pellets from the nesting area of a pair of Common Barn-Owls. The nest site was in the top of an old concrete silo about 3 km south of Starkville, Oktibbeha Co., Mississippi. We also randomly collected several "hand-fulls" of loose skeletal material from the accumulation of broken pellets around the nest site. This nest site had been in use for at least 7 years (J. Jackson, pers. comm.). In this paper I describe the results of analyzing the contents of these pellets.

Methods

The techniques used to analyze the contents of the pellets were those described by Sparks and Soper (1970) and Burton (1973). The length and width of pellets were measured at the greatest dimensions using dividers and a ruler. The pellets were then soaked in warm water for a moment, transferred to a sheet of white paper, and teased apart with dissecting needles. The remains of prey were then identified and the number of individuals counted. Mammalian remains were identified using Glass (1977) and Burt and Grossenheider (1976). Identifications were checked by using the mammal collection in the Biological Sciences Department at Mississippi State University. The avian remains were identified by comparison with the reference collection in the Biological Sciences Department at Mississippi State University.

Results

The average dimensions of the 25 pellets dissected were 5.65 (range 3.9-8.0) cm by 2.9 (range 2.4-3.8) cm. Three species of mammals were identified from the pellets; bird remains in the pellets were not identifiable to species (Table 1). More than two-thirds of the prey were hispid cotton rats.

Table 1. Prey identified from 25 pellets of the Common Barn-Owl.

Prey Species	Number of Individuals	% of Total Prey Individuals
Hispid Cotton Rat (<u>Sigmodon hispidus</u>)	34	69.4
Least Shrew (<u>Cryptotis parva</u>)	11	22.4
Pine Vole (<u>Pitymys pinetorum</u>)	2	4.1
Bird (species unknown)	2	4.1

Analysis of the older, loose material, showed a different composition (Table 2). Of 90 skulls in the loose material, only 34.4% were hispid cotton rats, while 44.4 % of the skulls belonged to pine voles.

The differences in the two samples may reflect changes in the small mammal population in the area, since the Barn Owl is not known to be particularly selective in its prey. The reality of such a change and causes for it cannot be discerned from this limited study, but these data suggest an area worthy of further investigation.

This study does support the idea that the hispid cotton rat is a major prey item of the Common Barn-Owl in the

southern United States. Bent (1938), Sprunt and Chamberlain (1949), and Dusi (1957) all reported the cotton rat as a major prey item in the South. Dusi (1957) collected 190 skulls from a roost on the Auburn University campus, Alabama, and found that 71.5% were from hispid cotton rats, 14.7 % were from Least Shrews, 4.4 % were from house mice (Mus musculus), 2.6% were from short-tailed shrews, 2.1% were from old field mice (Peromyscus polionotus), and lesser percentages were from several other species.

Table 2. Prey items identified from analysis of randomly collected material from disintegrated Common Barn-Owl pellets at a nest site.

Prey Species	Number of Individuals	% of Total Prey Individuals
Pine Vole	40	44.4
Hispid Cotton Rat	31	34.4
Short-tailed Shrew (<u>Blarina brevicauda</u>)	8	8.9
E. Harvest Mouse (<u>Reithrodontomys humulis</u>)	2	2.2
Least Shrew	1	1.1
Red-winged Blackbird (<u>Agelaius phoeniceus</u>)	7	7.8
Eastern Meadowlark (<u>Sturnella magna</u>)	1	1.1

Acknowledgments

I thank Dr. Jerome A. Jackson for his advice on this project. I also thank Dr. George Kulesza and Steve Sibley for their help.

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Iced Killdeer

Bette J. Schardien and Jerome A. Jackson

Department of Biological Sciences
Mississippi State University
Mississippi State, MS 39762

Following a snowfall of 4.4 cm (1.75 inches) on 14 January 1982, the temperature hovered right at freezing (31-33 F) creating "sticky" snow, which then froze as ice as the temperature cooled in the evening. On the morning 15 January we observed several Killdeer (Charadrius vociferus) (> 5) as they searched for food in bare areas. Each had snow/ice-coated legs and toes (Figure 1). This condition persisted for several hours, but the ice had melted by early afternoon. Although we could detect no restriction of movement or use of the legs or feet in these birds, we have noted one-legged Killdeer and others with apparently injured legs, either of which might result from such ice encrustation. Although we observed numerous other species at bird feeders and in open areas (e.g., Common Grackles, Quiscalus quiscula; Northern Cardinals, Cardinalis cardinalis; and European Starlings, Sturnus vulgaris), none accumulated snow or ice around their legs in the manner of the Killdeer.

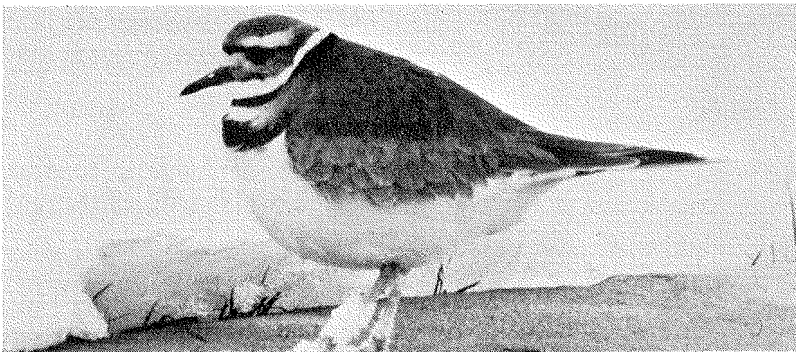


Figure 1. Iced Killdeer on the Mississippi State University campus.

Green-tailed Towhee Sight Record
from Hancock County, Mississippi

Judith A. Toups, Mickey Baker, and Dalton King
4 Hartford Place 200 North Shore Dr. 137 Markham Dr.
Gulfport, MS 39501 Biloxi, MS 39532 Gulfport, MS 39501

On 20 October 1983, we observed an adult-plumaged Green-tailed Towhee (Pipilo chlorurus) at Pearlinton, Hancock Co., Mississippi. The towhee was seen in an area of brush, beside a gravel road; the habitat was fairly open and consisted of mixed woods, young pines, and brush. It was adjacent to thick woods.

The roadside from which the towhee was seen borders the south fence of the Mississippi Welcome Center at Interstate 10 and Mississippi highway 607, and is part of the buffer zone of the National Aeronautics and Space Administration complex.

Noting movement in the brush, we stopped our car and began making "psshing" sounds. Immediately the towhee flew up to the top wire of the fence behind the Welcome Center. We had an unobstructed view from about 3 m. The most obvious characteristic of the bird was a bright rufous crown which was erected in the manner of a Ruby-crowned Kinglet (Regulus calendula) when agitated. Identification was made immediately on the strength of the raised orange crown feathers, olive green back, white throat, and pale gray undersides.

The Green-tailed Towhee remained on the fence for several seconds, all the time keeping its crown feathers erect. It appeared to have responded to our psshing sounds and behaved in an agitated manner, frequently changing position and jerking its tail, but at all times facing us.

It then flew across the gravel road and into heavy brush, where it was well concealed. At that point we played a tape of a Screech Owl (Otus asio) call and the towhee reacted by frequent changes of position within the brush. It then flew to the lower branch of a small pine, which was directly behind the brush, and remained there for about 30 seconds before it flew into an area of more mature woods about 50 m away.

It seemed to us that the towhee definitely responded, both to the pssing sounds and to the Screech Owl call. Accounts of the behavior of the Green-tailed Towhee in its normal range stress this species' shyness, and cite many instances when it has been known to skulk away under heavy brush rather than fly in the presence of an "intruder."

Two Green-tailed Towhees, which were seen by John Izral and Stephen Peterson during the Jackson County Christmas Bird Count on 18 December 1976, behaved in such a manner. However, behavior such as we observed on 20 October was judged to be in keeping with that species' behavior in at least some instances by Joseph McGee, who is familiar with the species (pers. comm.).

This sight record and the Izral-Peterson record cited above are the only records of the Green-tailed Towhee from Mississippi. However, it has occurred in many eastern states, including Alabama and Louisiana, and most such records are from early October through mid-April (Lowery 1974, Imhof 1976).

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