

WINTER PREY OF NORTHERN HARRIER IN MISSISSIPPI

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Data on the winter diet of Northern Harriers (Circus cyaneus) in the United States are few and most are qualitative (Sherrod 1978). There are only two published analyses of winter prey in the Southeastern United States. Stoddard (1946) remarked that remains of 925 Cotton Rats (Sigmodon hispidus) were found in 1,100 pellets in Southwestern Georgia. Jackson et al. (1972) also found that S. hispidus was the predominant prey in East-Central Mississippi with mammals accounting for 83.5 percent and birds for 16 percent of all prey individuals found in pellets in March 1971.

An analysis of the winter diet of the Northern Harrier was independently conducted the previous winter at the same site in East-Central Mississippi. On 15-16 January 1970, 102 pellets were collected from a large (> 75 individuals) winter roost in a broomsedge field at Golden Triangle Airport, Lowndes County. The surrounding area is primarily farmland (For a description of the site see Jackson et al. 1972). Northern Harrier pellets do not indicate accurately the numbers of prey taken per pellet, for pellets usually contain hair and feathers and few osseous remains, usually a few teeth and jawbones (Errington 1930, Craighead and Craighead 1956). Because of the inherent bias in analysis of pellets of the Northern Harrier, only the frequency of occurrence of each prey species for the total number of pellets was calculated.

Mammals were the predominant prey (Table 1). Somewhat surprising is the percentage of House Mouse (Mus musculus) taken, higher than other prey including S. hispidus. No other winter study has recorded a comparable frequency for M. musculus. Otherwise, the percentage of mammals and birds in the

winter diet are comparable to the study of Jackson et al. (1972).

In general, these results on winter diet of Northern Harrier agree with the literature. Mammals often form a larger part of the Northern Harrier's prey than birds, though a higher proportion of birds may be taken in summer than in winter (Watson 1977). Voles in Europe and mice in the United States are generally the principal winter prey when common; birds may be predominant prey if small mammals are scarce (Craighead and Craighead 1956, Schipper in Watson 1977).

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Table 1. Percentage of Northern Harrier pellets in which various prey were found. Data from 102 pellets collected near Columbus, Mississippi.

<u>Class/Order/Species</u>	<u>Frequencies</u>
Mammalia	
Insectivora (all shrews)	16.3
<u>Cryptotis parva</u>	6
<u>Blarina brevicauda</u>	2.5
<u>Unknown Soricidae</u>	7.8
Rodentia	62.6
<u>Reithrodontomys humulis</u>	3.6
<u>Sigmodon hispidus</u>	22.3
<u>Mus musculus</u>	36.1
<u>Unknown Rodentia</u>	0.6
Aves	
Passeriformes	21.1
<u>Sturnella, sp.</u>	7.2
<u>Small Birds</u>	13.9

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