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ANALYSIS OF LONG-EARED OWL (*ASIO OTUS*) PELLETS FROM EASTERN NEBRASKA

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INTRODUCTION

A common way to determine the food habits of an owl is to analyze prey remains found within regurgitated pellets, called "owl pellets." We collected and analyzed owl pellets found under a Long-eared Owl (*Asio otus*) roost in eastern Nebraska as part of two grade school science fair projects. The results are presented here to add to the knowledge about the food habits of this species in Nebraska.

MATERIALS and METHODS

We determined that a Long-eared Owl was using a dense stand of 12-year old Austrian pines as a roost 2 miles west of Blair, Nebraska in

Washington County by the presence of owl pellets and observing the bird in the windbreak. In April 1994, we collected 60 owl pellets from the site, and in November 1995, we collected an additional 12 whole pellets and many partial pellets.

The pellets were soaked in water to make dissection of them easier. Tweezers and dissecting needles were used to pull the pellets apart and separate the bones, teeth, and fur. A face mask was worn so we would not breathe any dust or mold from the pellets.

Each cranium was counted as one prey animal and was identified by using small mammal references and keys (Glass 1973, Hoffmeister and Mohr 1972, Jones 1964). Two lower jaws were matched with each skull and although these could not be identified to species, the number of extra lower jaws was recorded.

RESULTS and DISCUSSION

We found a total of 127 crania and 173 extra lower jaws in the pellets. Five species of animals, including four species of small mammals were identified and are listed in Table 1. Prairie vole (*Microtus orchrogaster*) was the most common species found with 50 (39.4% of the total) skulls, while Short-tailed shrew (*Blarina brevicauda*) was the least common with only five skulls (3.9%). Of particular interest was the presence of two unidentified small bird skulls in the pellets.

A comparison between the two separate collections of pellets, April 1994 and November 1995, is also shown in Table 1. Higher percentages of White-footed or Deer mice (*Peromyscus* sp.) and Harvest mouse (*Reithrodontomys* sp.) skulls occurred in the pellets collected in April 1994, while Prairie voles made up a higher percentage of the crania found in pellets from the November 1995 collection. This difference may indicate seasonal variation in prey availability.

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Table 1. Identification and occurrence of skulls found in Long-eared Owl Pellets from eastern Nebraska in April 1994 and November 1995. Numbers in parentheses are percent of total.

Species	April 1994	November 1995	Totals
Prairie Vole *Microtus orchrogaster*	16 (32.7%)	34 (43.6%)	50 (39.4%)
White-footed or Deer Mouse *Peromyscus sp.*	21 (42.9%)	28 (35.9%)	48 (38.6%)
Harvest Mouse *Reighrodontomys sp.*	10 (20.4%)	9 (11.5%)	19 (15%)
Short-tailed Shrew Blarina brevicauda	2 (4.1%)	3 (3.8%)	5 (3.9%)
Unidentified small mammal	0 (0%)	2 (2.6%)	2 (1.6%)
Unidentified small bird	0 (0%)	2 (2.6%)	2 (1.6)
Totals	49	78	127