

# FALL FOOD OF THE EASTERN SCREECH-OWL IN MANITOBA

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The Eastern Screech-owl is one of the most widespread owls in North America.<sup>4</sup> It ranges from the Gulf of Mexico north to southern Manitoba, and from Montana to the east coast of the United States.<sup>14</sup> This small (20-24 cm) highly nocturnal owl has a diet that is quite varied over its range and throughout the season.<sup>1,4,5,11,12,15,16,18</sup> Several studies of the Eastern Screech-owl's diet have been published, but none from the northern edge of its range.<sup>5,15,16,18</sup> Reports of Eastern Screech-owls in Manitoba occur as far north as Riding Mountain National Park.<sup>1</sup>

This study was done near Winnipeg in autumn, a time when numbers and types of prey available are changing.<sup>7,13,16</sup> The study area was in La Barriere Park along the La Salle River, just south of Winnipeg. The vegetative cover consisted primarily of Manitoba Maple (*Acer negundo*), Green Ash (*Fraxinus pennsylvanicus*), Bur Oak (*Quercus macrocarpa*) and Red Osier Dogwood (*Cornus stolonifera*). The land outside the wooded area is agricultural prairie, creating an ecotone. All prey remains were collected from and around Wood Duck nest boxes from La Barriere Park where a resident Eastern Screech-owl was seen. As Eastern Screech-owls are cavity nesters, Wood Duck nest boxes are a readily accessible nest and roost

site. Through examination of the prey remains, an owl's diet can be accurately quantified.<sup>6,8</sup>

Starting 13 October 1990, 40 nest boxes were checked for prey remains. Five of these contained pellets and/or bones and feathers, presumably the prey of the resident screech-owl. These five boxes, and the surrounding areas, were checked once a week from 13 October to 4 November 1990.

Prey were identified to species when possible. Mean individual prey weight was estimated by taking the average weight of five individuals of each species from the same time of year, based on data from Manitoba specimen collections.<sup>9</sup> From these individual prey weights a percent total weight was calculated for the prey species (Table 1).

A total of 26 individual prey items were identified from 17 pellets and prey remains. Thirteen of these were mammals: Meadow voles (*Microtus pennsylvanicus*), Deer Mice (*Peromyscus maniculatus*), Red-backed Voles (*Clethrionomys gapperi*) and unidentified small rodents (Table 1).

Variation in the number of species and weights of birds found in the prey remains was much greater than that in mammals (Table 1). The

**Table 1: Prey Remains of Eastern Screech-owl Pellets.**

Prey items	# Individuals	% Total Prey	Mean Weight (g)	% Biomass
<b>Mammals</b>				
Meadow Vole	3	11.5	74.7	10.7
Deer Mouse	2	7.7	32.0	4.6
Red-backed Vole	3	11.5	54.6	7.8
Unidentified small mammals	<u>5</u>	<u>19.2</u>		
<b>Total</b>	<u>13</u>	<u>49.9</u>		<u>23.1</u>
<b>Birds</b>				
Northern Flicker	2	7.7	252.0	36.1
White-breasted Nuthatch	2	7.7	45.4	6.5
Purple Finch	2	7.7	51.0	7.3
Bohemian Waxwing	1	3.8	60.2	8.6
Rose-breasted Grosbeak	1	3.8	43.6	6.2
American Robin	1	3.8	85.6	12.3
Unidentified passerines	<u>4</u>	<u>15.4</u>		
<b>Total</b>	<u>13</u>	<u>49.9</u>		<u>77.0</u>

Northern Flicker only represented 7.1% of the total prey but, with an estimated mean weight of 126.0 grams, it accounted for 31.6% of the total biomass. White-breasted Nuthatches and Purple Finches each constituted 7.7% of the total prey and 6.5% and 7.3% of the weights, respectively. The Bohemian Waxwing, Rose-breasted Grosbeak and American Robin each accounted for 3.8% of the total prey and 8.6%, 6.2% and 12.3% of the total biomass, respectively.

The Eastern Screech-owl has a highly variable diet, perhaps due to its opportunistic nature, taking whatever prey is available.<sup>2,4,5,10,16,18</sup> The highly diverse diet of the Eastern Screech-owl has been documented in more southerly reaches of its range. Small mammals (shrews, flying squirrels, chipmunks and bats), birds as large as Ruffed Grouse, amphibians, reptiles, invertebrates and, oddly enough, fish are all included in

the diet of Eastern Screech-owls.<sup>2,3,4,15,17</sup> There are even reports of cannibalism occurring in this species.<sup>4</sup> At least nine species of prey in this small sample demonstrate the highly variable diet as well as the opportunistic nature of the Eastern Screech-owl.

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Flowers stir our sense of beauty and lend a special charm to botanizing, whether in our gardens caring for roses and sweet peas or rambling in nature's paradise searching for rarer blooms. Flowering plants evolved along with our mammal ancestors; we grew up together during the last few hundred million years, and the roots of the attraction we feel for fragrant blossoms and bouquets lie deep within us. *Stan Rowe, 1990. Home Place: Essays on Ecology. NeWest, Edmonton.*