

Contents of Southern Indiana Wild Turkey Droppings

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Abstract

Food item volume percentages were determined of the contents of 207 adult and 84 juvenile wild turkey droppings collected over 4 seasons.

Material found in order of decreasing volume percentages was Gramineae seeds; soil and organic debris (including grit); unidentified plant material (leaves and stems); insect parts; various seeds of *Quercus* sp., *Cornus* sp. and *Smilax* sp.

The Gramineae constitutes a large portion of the diet over all seasons with the large seeds from small woody species being important only in the fall and winter.

Insects probably are not a large part of the diet of either adult or juvenile wild turkeys.

Introduction

The eastern wild turkey (*Meleagris gallopavo silvestris* Vieillot) disappeared from northern Indiana by 1870 and from southern Indiana by 1900 (2, 4, 7). The regrowth of forests and the increased protection due to hunting laws and management programs has allowed the successful re-establishment of this species in Indiana. In 1956, wild turkeys from Arkansas were released on the Crane Naval Ammunition Depot in Martin County and later releases of wild turkeys from Missouri were made in other parts of southern Indiana between 1962 and 1966. Wild turkey populations are now established at Brown County State Park, Clark State Forest (Clark, Scott and Washington Counties), Harrison County Turkey Management Area in the Harrison-Crawford State Forest, Lost River Area of Hoosier National Forest (Martin and Orange Counties), Mogan Ridge Turkey Management Area of the Hoosier National Forest (Perry County), Owen-Putnam State Forest (Owen and Putnam Counties), and Pike State Forest (Pike County).

Indiana wild turkey management programs may extend the present range. Markley (8) and Webb (11) have noted that the shortage of food may be a factor limiting wild turkey populations. Food habits of the re-introduced wild turkey in Indiana have not been studied. These data may be used by game biologists in future management programs.

This study concerned the food habits of the wild turkey in southern Indiana. Dropping analysis was used to determine the food habits because an adequate sample of crop and gizzard contents was unavailable for analysis due to the low populations and minimal hunting take.

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Methods and Materials

Wild turkey droppings were collected by Indiana game biologists in unglaciated portions of Clark, Harrison, Perry, and Monroe Counties. Sex and age of the wild turkeys producing the droppings were determined according to dropping size and shape (1, 6). Contents of droppings were separated and identified following procedures outlined by Korschgen (5) and Eaton, Moore, and Saylor (3). All remains from a given season and age class were pooled to obtain total volume. Food item volume percentages were then based on the total sample volume (6, 9).

Results

A total of 291 wild turkey droppings (collected between January 1968 and January 1971) was examined in this study. Food item volume percentages of the dropping contents are listed by season for adults in Table 1 and for juveniles in Table 2.

Plant seeds from the Family Gramineae constitute a major portion of the diet throughout the year for both juvenile and adult birds. Plant

TABLE 1. *Food items in 207 droppings of adult wild turkeys listed by seasonal volume percentages and dates collected.*

Food Items	Volume Percentages			
	Spring (Mar.-May) n=28	Summer (June-Aug.) n=6	Fall (Sept.-Nov.) n=64	Winter (Dec.-Feb.) n=109
Soil & Debris	12.3	—	46.0	48.2
Gramineae (several genera)	50.0	83.5	59.5	3.1
Undetermined Plants parts	33.3	13.9	1.7	1.7
Insect Parts	1.0	0.4	0.3	0.6
Grit	1.5	1.6	12.3	5.8
<i>Quercus</i> sp.	0.3	0.01	0.7	13.0
<i>Cornus</i> sp.	0.9	0.3	0.7	11.9
<i>Pinus</i> sp.	0.01	0.01	—	0.3
<i>Fraxinus</i> sp.	—	—	—	0.01
<i>Cercis canadensis</i>	—	—	0.01	—
<i>Rosa</i> sp.	—	—	—	0.01
<i>Smilax</i> sp.	0.8	0.1	14.9	13.0
<i>Rhus radicans</i>	0.8	—	0.9	1.1
Misc. materials each less than 0.01 per cent volume	0.1 ¹	0.4 ²	0.2 ³	1.2 ⁴

¹*Cyperus* sp., Labiatae.

²*Lonicera* sp., *Carex* sp.

³*Physalis* sp., *Solanum* sp., *Ranunculus* sp., *Lonicera* sp., *Sida* sp., reptile scales and bird feathers.

⁴*Vitis* sp., *Lespedeza* sp., *Lonicera* sp., *Rumex* sp., *Sida* sp., reptile scales, bird feathers and mammal hair.

material of undetermined origin was second in volume percentage over all seasons for both age classes, with soil and organic debris present in large quantities as well. This organic material is probably partially digested plant seeds, undigested cellulose and insect exoskeletons.

TABLE 2. Food items in 84 droppings of juvenile wild turkey listed by seasonal volume percentages and dates collected.

Food Items	Volume Percentages			
	Spring (Mar.-May) n=3	Summer (June-Aug.) n=1	Fall (Sept.-Nov.) n=39	Winter (Dec.-Feb.) n=41
Soil & Debris	—	—	50.8	25.9
Gramineae (several genera)	91.5	93.5	3.7	10.7
Undetermined Plant parts	4.2	0.01	8.9	18.6
Insect Parts	2.7	0.01	0.6	2.1
Grit	1.7	—	3.3	3.0
<i>Quercus</i> sp.	—	—	0.5	4.7
<i>Cornus</i> sp.	—	—	8.8	1.3
<i>Pinus</i> sp.	—	—	—	0.3
<i>Fraxinus</i> sp.	—	6.4	—	—
<i>Smilax</i> sp.	0.1	—	19.9	8.0
<i>Rhus radicans</i>	—	—	2.9	6.2
<i>Lonicera</i> sp.	—	—	1.1	—
<i>Lespedeza</i> sp.	—	—	0.1	0.3
Misc. materials each less than 0.01 per cent volume	—	—	0.04 ¹	0.04 ²

¹*Desmodium* sp., reptile scales.

²*Desmodium* sp., beetle feces, and reptile scales.

Seeds from *Cornus* sp., *Quercus* sp. and *Smilax* sp. are most abundant in the droppings collected during the fall and winter, and appear to constitute a large part of the diet during those months.

Insects are not a significant part of the annual diet of adult Indiana wild turkeys, but appear to be slightly more important to juvenile birds. Schorger (10) reports that insects form the most important food of young wild turkeys, but this study indicated that few insects are ingested by juveniles.

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