

American Museum Novitates

PUBLISHED BY THE AMERICAN MUSEUM OF NATURAL HISTORY
CENTRAL PARK WEST AT 79TH STREET, NEW YORK 24, N.Y.

NUMBER 2052

OCTOBER 12, 1961

Small Mammals in Pellets of Barn Owls from Miñaca, Chihuahua

BY SYDNEY ANDERSON¹ AND CHARLES A. LONG²

Three hundred and fifty-one intact pellets of barn owls (*Tyto alba*) were collected by Abbot S. Gaunt and the authors while on an expedition from the University of Kansas Museum of Natural History. The pellets were found along a rocky cliff 2 miles west of Miñaca, at 6900 feet, Chihuahua, Mexico, from June 30 to July 7, 1959. At least five different barn owls were seen along the cliff. The pellets contained parts of 646 small mammals and 10 birds. Fragments from weathered pellets also were collected and studied, but data thus derived add little to the information obtained from intact pellets. Little has been reported about the mammals of western Chihuahua. The wide valley of the Río Papigochic (= Río Haros) above 6000 feet in elevation was not investigated by any mammalogist prior to 1957. The owl pellets here reported contain remains of two species of mammals that heretofore have not been obtained from the valley by other methods.

Habitats within 1 mile of the place at which the pellets were collected include orchards, cultivated fields, irrigated plots of land, pastures, stone walls, rocky and sandy soils, cliffs, rock outcrops, scattered oak, juniper, and pine trees, grassy prairie, overgrazed prairie, a marsh-bordered lake, a small stream bordered by willow trees, and the Río Papigochic. This variety of habitats includes most types that occur

¹Department of Mammalogy, the American Museum of Natural History.

²The University of Kansas Museum of Natural History.

in the valley. At slightly higher elevations, about 10 miles to the west, pine trees are abundant.

Pellets were studied separately. Each of us examined all identified fragments twice. The number of individuals of each species (or genus) is given in table 1. Many fragments could be identified only to genus, or to one of two genera.

The following rodents were trapped: *Thomomys umbrinus* (two), *Perognathus flavus* (nine), *Dipodomys ordii* (two), *Reithrodontomys fulvescens* (nine), *Reithrodontomys megalotis* (six), *Peromyscus boylii* (six), *Peromyscus maniculatus* (five), *Peromyscus polius* (four), *Peromyscus truei* (one), *Baiomys taylori* (11), *Sigmodon minimus* (17), *Sigmodon ochrognathus* (three), *Neotoma mexicana* (eight), *Rattus rattus* (two), and *Mus musculus* (one). One *Spermophilus variegatus* was shot. Four species of lagomorphs were collected in the area: *Lepus californicus*, *Lepus gaillardi*, *Sylvilagus audubonii*, and *Sylvilagus floridanus*. No lagomorph was found in the owl pellets or among weathered fragments from pellets. One fragment of a skull of a ground squirrel, probably *Spermophilus spilosoma*, was among the weathered fragments. Of the species of rodents trapped, only *Rattus rattus* and *Mus musculus* definitely did not appear in the pellets. These two species were trapped only near buildings, and most individuals were discarded. More than one species of *Peromyscus* were present in the pellets, but specific identification was not attempted. Only one skull of *Sigmodon* from the pellets was certainly *S. ochrognathus*; perhaps others were also. Certainly most skulls were *S. minimus*. *Onychomys* was distinguished from *Peromyscus* by the longer coronoid process of the former. Fragments of skulls not associated with lower jaws are categorized as "*Peromyscus* or *Onychomys*" in table 1. Of the 25 *Reithrodontomys*, seven were identified with certainty to species; one was *R. fulvescens* and six were *R. megalotis*.

The single pellet having parts of the largest number of animals contained one *Dipodomys ordii*, two *Peromyscus*, two *Baiomys taylori*, and two *Perognathus flavus*.

Onychomys torridus, *Notiosorex crawfordi*, and *Microtus mexicanus* were found only in the pellets. *Onychomys torridus* is known from specimens at other localities within 20 miles of Miñaca, but *Notiosorex* and *Microtus* were not known previously from within 100 miles of Miñaca.

Traps were deliberately placed to obtain the greatest possible variety of species; consequently the mammals trapped do not indicate the relative abundances of small nocturnal mammals. The large sample from owl pellets probably provides a fair indication of relative abundance of species and also provides information on food habits of barn owls.

Remains of 10 birds in the pellets were: *Junco oregonus* (four), proba-

TABLE 1
SMALL MAMMALS AND BIRDS IN PELLETS OF BARN OWLS

Kind	No. of Individuals	Per Cent of Total	No. of Pellets	Per Cent of Total No. of Pellets (351)
<i>Peromyscus</i> (species undetermined)	213	32	136	39
<i>Dipodomys ordii</i>	145	22	127	36
<i>Sigmodon</i>	67	10	61	17
<i>Perognathus flavus</i>	45	7	37	11
<i>Peromyscus</i> (species undetermined), or <i>Oryzomys torridus</i>	44	7	41	12
<i>Thomomys umbrinus</i>	43	7	40	11
<i>Baiomys taylori</i>	39	6	32	9
<i>Reithrodontomys</i>	25	4	24	7
<i>Oryzomys torridus</i>	18	3	17	5
Birds	10	2	10	3
<i>Neotoma mexicana</i>	3	<1	3	1
<i>Notiosorex crawfordi</i>	3	<1	3	1
<i>Microtus mexicanus</i>	1	<1	1	<1
Total	656			

bly *Junco oregonus* (one), probably unidentified juncos (two), unidentified fringillid (one), and not identified (three). The birds were examined by Richard F. Johnston. No reptiles, amphibians, or insects were found in the pellets.

Reference to maps in Hall and Kelson (1959, The mammals of North America, New York, the Ronald Press) will reveal that records here reported extend the known ranges of several of the species listed above. For example, the known ranges of *Dipodomys ordii*, *Peromyscus maniculatus*, and *Perognathus flavus* are extended about 100 miles westward in Chihuahua. These and other records, and the subspecific assignment of the trapped specimens and the assignable remains, will be treated in an account of the mammals of Chihuahua being prepared by the senior author.

In conclusion, remains of 646 small mammals of at least 13 species, and 10 birds of at least two species, were recovered from 351 barn owl pellets from 2 miles west of Miñaca, Chihuahua. The known ranges of several species were extended. *Notiosorex crawfordi* and *Microtus mexicanus* were obtained only in owl pellets.