## ADDITIONAL RECORDS OF ILLINOIS MAMMALS

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The records of distribution of mammals of Illinois were last summarized by Necker and Hatfield in 1941. Since that time relatively few records of Illinois mammals have appeared and these data are scattered through the literature.

Specimens reported by Koestner (1941a and b; 1942) had been recorded by Necker and Hatfield through correspondence with Koestner. Goodnight and Koestner (1942) recorded mammals found in the general area of a quadrat study near Seymour, Champaign County; however, this list included no new county records, with the possible exception of a sight record of the red fox.

Bole and Moulthrop (1942) cited records which were new for the short-tailed shrew, Blarina brevicauda, from Bloomington, McLean County; the prairie meadow mouse, Microtus ochrogaster, from Ozark and Reevesville, Johnson County, and from Bloomington; and the lemming vole, Synaptomys cooperi, from Bloomington.

Mohr discussed the distribution of Franklin's ground squirrel, the thirteen-lined ground squirrel, the woodchuck (1943), and the prairie mole and pocket gopher (1946) but did not cite actual specimens. Mohr's discussion (1941) of the distribution of Illinois mammals was without citation of actual specimens.

This paper is an effort to summarize records from collections made since 1941, as well as a few records prior to that time which were not cited by Necker and Hatfield. These records were obtained from lists of collections supplied by the Chicago Natural History Museum, the Museum of Zoology of the University of Michigan, and the Department of Zoology of the University of Wisconsin; from examination by the writer of the collections of the Illinois State Natural History Survey, Normal State University, and the University of Illinois Natural History Museum; from the writer's collection; and from certain records obtained from the literature since 1941.

I should like to express my appreciation for the cooperation of the following institutions and more specifically to individuals at these museums: D. F. Hoffmeister, University of Illinois Natural History Museum; C. O. Mohr, Illinois State Natural History Survey; C. C. Sanborn, Chicago Natural History Museum; H. K. Gloyd, Chicago Academy of Sciences; W. H. Burt, Museum of Zoology, University of Michigan: Orlando Park. partment of Zoology, Northwestern University; J. T. Emlen, Jr., Department of Zoology, University of Wisconsin; and M. R. Lamkey. Normal State University, Normal, Illinois.

The collection of the State Natural History Survey included many unpublished records from recent collections, made largely by C. O. Mohr; and many old specimens either not specifically cited by Wood (1910) or not recorded in literature

at all. These latter groups contain specimens collected by Wood, Gross, and others and date back to 1877. The material at Normal University consists largely of old collections by the Natural History Survey when located at Normal and of remnants of the Major J. W. Powell collection.

There have been few literature citations of records of mammals collected from the western part of Illinois. The following list records for that part of the state many of the common mammals, as well as more noteworthy records such as the lemming vole, Synaptomys cooperi, and the eastern meadow mouse, Microtus pennsylvanicus.

The Carolina shrew, Sorex longirostris longirostris, has heretofore been reported only for the southernmost portion of Illinois, in Alexander and Johnson counties, with the exception of a possible record by Wood for Pistakee Bay, McHenry County. In 1946 Mohr obtained a specimen from Fox Ridge State Park in Coles County. This record extends the range of this southern shrew to at least central Illinois.

On the basis of literature citing specimens actually on deposit in museums, the cinereous shrew, Sorex cinereus cinereus, has been recorded only from northern Illinois in Cook, Lake, and Kankakee counties. Specific reference is made in the following list to a specimen collected at Normal, McLean County, now on deposit at the Illinois State Natural History Survey. This specimen was collected in 1877 and probably formed the basis of the McLean County record of Wood.

Existing records of the lemming vole, Synaptomys cooperi, have been

restricted to Crawford and Hardin counties to the south and Vermilion and Champaign counties in east central Illinois. In the fall and winter of 1946 trapping for this microtine was stimulated at the University of Illinois by the capture of two specimens near LeRoy, McLean County, by D. F. Hoffmeister; two specimens at Kickapoo State Park, Vermilion County, by the writer; one specimen four miles east of Urbana by Dean Ecke, a University of Illinois student: and the discovery in quadrat study by D. G. Allison and the writer of a high population of Synaptomys in the extensive undisturbed blue-grass areas of the Allerton Tract, five and one-half miles west of Monticello, Illinois. Hoffmeister (1947) continued study of the Synaptomys population on the Allerton Tract. As a result of this large population of the lemming vole, the number of specimens in the University of Illinois Natural History Museum is still increasing. In addition to these collections, recent specimens obtained by Mohr and by Sanborn and Eigsti, Chicago Natural History Museum, indicate a probable statewide, although spotty, distribution of this vole.

The distribution of the eastern meadow mouse, Microtus pennsylvanicus has been recorded largely as restricted to northern Illinois. Through no fault of Necker and Hatfield, two Synaptomys cooperi from Muncie, Vermilion County, were reported (1941) as M. pennsylvanicus. Mohr pointed out this discrepancy, and I have verified that the report is in error by examination

of the two specimens in alcohol on file at the Natural History Survey. In April 1947, six M. pennsylvanicus were trapped in a blue-grass pasture, which has been ungrazed for over seven years, two miles southeast of Good Hope, McDonough County. In this area M. ochrogaster was trapped at the same time and in approximately equal numbers. A record of M. pennsylvanicus for County was obtained from the Natural History Survey collection; the specimen is No. 38328 (skull only) and was collected February 12, 1908, at Monmouth. In addition, three specimens in alcohol at the Survey were collected at Normal in 1877 and 1878 and probably form the basis of Wood's McLean County records.

In general, the occurence of *M. pennsylvanicus* in Illinois appears to be nearly statewide, with the possible exclusion of the southern portion of the state. However, due to the early dates of many of the records and since present capture in central Illinois is restricted almost entirely to long undisturbed areas, the present distribution in Illinois is probably almost as spotty as is indicated by the actual records.

The restricting effects of agriculture and other efforts of man which have altered the natural prairie and forest-edge of the state is evident in the above mentioned distribution of *M. pennsylvanicus* and *S. cooperi*. This is probably more graphically seen in examination of records for the meadow jumping mouse, *Zapus hudsonius hudsonius*. Wood had no specimens of the jumping mouse and stated that it was apparently much rarer in the state than formerly, and perhaps on the verge

of extinction. Necker and Hatfield cite specimens from Cook, Jackson, Jo Daviess, Kane, Lake, and Marshall counties. From Wood's statements and those of Mohr (1941) and information gained elderly farmers, it is inferred that even in its southern range in Illinois, the jumping mouse was once not uncommon. This is somewhat borne out by the discovery of two specimens at Normal University, one from McLean County and one from nearby Woodford County, collected in 1875 and 1879 respectively. To these older records may be added a sight record by the writer in 1929 for McDonough County. Also, a jumping mouse was captured in a Sherman live trap on a population study grid-quadrat of the writer's at Kickapoo State Park, Vermilion County, in April, 1941. This particular area had been strip-mined approximately thirty years earlier and had received little further disturbance from man since that time.

## Additional Records of Mammals in Illinois

An effort has been made to be extremely conservative in listing these records of mammals for Illinois, and in many cases subspecies have not been mentioned. In some cases this is due to unsettled taxonomy of a particular genus and in others to the probability of the specimens being intergrades which have not been sufficiently studied to permit subspecific determinations. In listing the localities the general plan of that used by Necker and Hatfield is followed. In addition, the number of specimens on deposit is listed and in the cases in which a specimen is not

made up as study skin and skull, the condition of the specimen is indicated. The accession numbers, dates, and collectors are given, when available, for records of especial interest. The list of localities includes specimens in collections designated as follows:

CIM-Cleveland Museum of Natural History, Cleveland, Ohio

CNHM-Chicago Natural History Museum (Field Museum)

INHS-Illinois State Natural History Survey, Urbana, Illinois

M-Museum of Zoology, University of Michigan

N-Normal State University, Normal, Illinois

RMW-R. M. Wetzel, University of Illinois, Champaign, Illinois

UI-Natural History Museum, University of Illinois

UW-Department of Zoology, University of Wisconsin, Madison, Wiscon-

Didelphis virginiana virginiana Kerr. Virginia Opossum.

Coles-Mattoon, 1 INHS. only) land-Greenup, 1 (skull Fayette-Farina, 1 UW. INHS. Summum, 1 (skull only) Jackson—Grand Tower, 1 Fulton-INHS. (skull only) INHS. *Union*—Wolf Lake, 1 (skull only) INHS.

Sorex cinereus cinereus Kerr. Cinereous

Cook-Park Ridge, 1 (alc) INHS. Lake-Lake Zurich, 1 (alc) INHS. McLean—Normal, 1 (alc) (No. 37192—Nov. 6, 1877). INHS

Sorex longirostris longirostris Bachman.

Carolina Shrew.

Coles-Fox Ridge St. Park, 1 (alc) INHS (coll. C. O. Mohr-Oct. 12, 1946).

Blarina brevicauda (Say) subspecies. Short-tailed Shrew.

UI. Henry-Bureau-Ohio, Geneseo, 3 (alc) INHS. LaSalle— Starved Rock St. Park, 1 INHS. McLean—Bloomington, 26 Cl M (Bole & Moulthrop, 1942); Normal, 2 N, 8 (alc) INHS. McHenry—near Pistakee Bay, 5 (alc) INHS (Nos. 38262-4, 38275, 38277—Nov., 1907). Stephenson—Dakota, 1 (alc) INHS. Vermilion—Kickapoo St. Park, 1 CNHM, 1 RMW. Warren—Mon-mouth, 1 (alc) INHS (coll. F. E. Wood—Jan. 25, 1908). Cryptotis parva (Say) subspecies Small Short-tailed Shrew.

1 INHS Coles-Charleston, 38241—Dec., 1903). Iroquois— Onarga, 1 (alc) INHS; Thawville, 1 (alc) INHS. Mason—Havana, 2 INHS (No. 38241- Oct. 30, 1907, Piatt-Allerton Tract, & 1 alc). Monticello, 2 (1 whole skelton) UI.

Myotis lucifugus lucifugus (LeConte). Little Brown Bat.

Adams-Quincy, 1 (alc) INHS. Calhoun-Pere Marquette St. Park, 1 (alc) INHS. LaSalle-Starved Rock St. Park, 1 (alc) INHS. Monroe-Burksville, 1 (alc) INHS. Schuyler Beardstown, 1 (alc) INHS.

Lasionycteris noctivagans (LeConte).

Silver-haired Bat.

Ford-Gibson City, 1 (alc) INHS. Eptesicus fuscus fuscus (Beauvois). Big Brown Bat.

LaSalle-Peru, 7 CNHM.

Lasiurus borealis borealis (Müller).

Red Bat.

Calhoun-Pere Marquette St. Park, 1 (alc) INHS. Cook—Maywood, 3 (alc) INHS. LaSalle—Starved Rock St. Park, 1 (alc) INHS. Massac-New Columbia, 2 (alc) INHS. Mc-Lean-Normal, 7 (alc) INHS. Pope Bay City, 1 (alc) INHS; Herod, 1 (alc) INHS.

Nycticeius humeralis (Rafinesque).

Rafinesque's Bat.

McLean-Bloomington, M; Normal, 1 (alc) INHS.

Procyon lotor (Linnaeus) subspecies. Raccoon.

Champaign-Urbana, 1 (skull only) Cumberland-Greenup, INHS. Lake-Fox only) Lake, 1 INHS. Massac-Metropolis, 1 (skull only) INHS.

Mustela frenata noveboracensis (Emmons). Long-tailed Weasel.

Livingston-Dwight, 1 (pelt only) INHS. McLean-Normal, 1 INHS. Winnebago-Rockford, 1 INHS.

Mustela vison Schreber. Mink. Alexander-Olive Branch, 1 (skull only) INHS.

Mephitis mephitis avia Bangs. Striped Skunk.

Massac-Metropolis, 1 (skull only) INHS. McDonough-Good Hope, 1 RMW. Pike—Griggsville, 3 (pelts only) INHS.

Vulpes fulva (Desmarest). Red Fox. Douglas—Arcola, 3 (skulls only) INHS; Reynoldsville, 1 (skull only) INHS. Livingston—Dwight, 2 (skulls only) INHS; Manville, 3

(skulls only) INHS. Mason—Bath, 1 (skull only) INHS. Piatt—Allerton Tract, Monticello, 1 (skull only) RMW. Pike-Griggsville, 2 (skulls only) INHS.

Urocyon cinereoargenteus cinereoargenteus (Schreber). Gray Fox. Mason-Bath, 1 INHS; Havana, 1 (skull only) INHS. Pike-Griggs-

ville, 1 (skull only) INHS. Marmota monax monax (Linnaeus).

Woodchuck.

Massac-New Columbia, 1 (skull only) INHS. Ogle—Flag Center, 1 (skull only) INHS. Pike—Griggsonly) INHS. ville, 1 (pelt only) INHS. Union-Wolf Lake, 2 CNHM. Vermilion-Fairmont, 1 (skull only) RMW.

Citellus tridecemlineatus tridecemlineatus (Mitchill). Thirteen-lined Ground Squirrel.

Macon-Decatur, M.

Citellus franklinii (Sabine). Franklin's Ground Squirrel.

Douglas—Arcola, 1 INHS. Ogle— Oregon, 1 (skull only) INHS.

Tamias striatus griseus Mearns. Eastern Chipmunk.

DeKalb-Waterman, 1 UI. Jackson -Murphysboro, 1 CNHM. Lake-Antioch, 1 (alc) INHS. Possibly the specimen from Murphysboro is referable to T. striatus ohionensis

Bole and Moulthrop. Sciurus carolinensis Gmelin subspecies.

Gray Squirrel.

Carroll-Thomson, 1 (pelt only) INHS. Fayette-Farina, 1 UW. Jo Daviess-Galena, 1 (pelt only) INHS. Union-Wolf Lake, 1 (pelt only) INHS.

Sciurus niger rufiventer (Geoffroy).

Fox Squirrel.

Carroll—Thomson, 1 (pelt only) INHS. Logan-San Jose (east), M. Marshall-Rutland, 1 INHS. Massac New Columbia, 1 (skull only) INHS. McLean-Hudson, 1 N. Pike Griggsville, 2 INHS; Valley City, 1 (pelt only) INHS. Sangamon-Lanesville, 1 (pelt only) INHS. Union-Wolf Lake, 2 (pelts only) INHS. Vermilion-Muncie, 1 (skull only) INHS. Will-Wheatland Tp.,

Peromyscus maniculatus bairdii (Hoy and Kennicott). Prairie Deer Mouse. Calhoun-Pere Marquette St. Park, 1 (alc) INHS. Coles—Charleston, 4 (alc) INHS (Nos. 37977, 39666, 39668, 39670-1908). Jo Daviess-Galena, 2 (alc) INHS. Kankakee— Bourbonnais, 2 (alc) INHS. Marion -Salem, 1 INHS. Mason-7 (alc)

INHS. McDonough-Good Hope, 1 RMW. McHenry—near Pistakee Bay, 4 (alc) INHS. McLean—Nor-mal, 1 (alc) INHS (No. 37195— May 6, 1876). Vermilion—Kickapoo St. Park, 4 RMW. mouth, 5 (alc) INHS. Warren-Mon-

Peromyscus leucopus leucopus (Rafinesque). White-footed Mouse.

Jackson-Carbondale, 4 CNHM. Peromyscus leucopus noveboracensis (Fischer). White-footed Mouse.

Carroll-Thomson, 1 INHS. Coles —Charleston, 1 INHS. Fulton—Duck Island, 8 (1 w/skull only, 1 w/o skull) UI. Madison—Alton, M. Mason—Havana, 1 INHS; 1 CNHM. Ogle-White Pines St. Park, 2 RMW.

Neotoma floridana illinoensis Howell. Illinois Wood Rat.

Alexander—Horseshoe Lake (Olive Branch), 1 INHS.

Synaptomys cooperi Baird. Vole.

Champaign-Urbana, 2 INHS (No. 37969 alc & No. 37970-March 7, 1908), 1 UI (Nov., 1946). Fulton— Vermont, 1 (alc) INHS (Oct. 24, 1946). McLean—Bloomington, 2 ClM (Bole & Moulthrop, 1942; in-cludes type of S. c. saturatus); Le-Roy, 2 UI (Nov., 1946). Piatt-Allerton Tract, Monticello, 18 RMW (Nov., 1946 & Feb., 1947, 9 w/skulls only), 12 UI (Nov., 1946 & Feb., 1947). Richland-Olney, 20 (skulls only-from owl's nest) INHS (1934). Vermilion—Muncie, 2(alc) INHS (June, 1936. Reported by Necker & Hatfield, 1941, as Microtus pennsylvanicus); Kickapoo St. Park, 4 CNHM (July 21, 1942), 2 RMW (Nov. 7, 1946). Sangamon— Auburn, 1 RMW.

Microtus pennsylvanicus pennsylvanicus (Ord). Eastern Meadow Mouse.

Douglas-Arcola, 1 INHS. Kane-Sugar Grove, M. Lake-Waucanda, INHS (fragments of skulls). Mc-Donough—Good Hope, 6 RMW (April 6, 1947). McHenry—tamarack swamp near Pistakee Bay, 2 (alc) INHS (Nos. 38290, 38291— Nov., 1907). McLean-Normal, 3 (alc) INHS (Nos. 37183, 37194, 37863—1877 & 1878). Warren— Monmouth, 1 (skull only) INHS (No. 38328-Feb. 12, 1908).

Microtus ochrogaster (Wagner). low-bellied Meadow Mouse.

Adams—Lima, 2 INHS. Cook—Des Plaines, 3 UI. Hancock—Hamilton, 1 N (Jan., 1884). Iroquois-Onarga, 1 (alc) INHS. Jasper-Hunt, 2 (1 alc) INHS. Johnson—Ozark, 2
CNHM (Bole & Moulthrop, 1942);
Reevesville, 2 CNHM (Bole & Moulthrop, 1942).
Madison—Godfrey, 1
(skull only) INHS. McDonough—
Good Hope, 4 RMW. McLean—
Bloomington, 9 Cl M (Bole & Moulthrop, 1942);
Normal, 2 N; LeRoy, 1 UI. Piatt—Allerton Tract, Monticello, 2 UI; Monticello, 1 (alc)
INHS. Putnam—Putnam, 1 (alc)
INHS. Warren—Swan Creek, 1
RMW. Woodford—Eureka, 3 UI.

Pitymys pinetorum (LeConte). Pine Mouse.

Piatt—Allerton Tract, Monticello, 1 UI. Richland—Olney, 1 (alc) INHS.

Zapus hudsonius hudsonius (Zimmermann). Meadow Jumping Mouse.

McLean—no locality, 1 N (1875). Vermilion—Kickapoo St. Park, 1 RMW (April, 1941). Woodford— Kappa, 1 N (May 24, 1879).

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