



Inventory of Terrestrial Wild Mammals at Mammoth Cave National Park

Natural Resource Technical Report NPS/CUPN/NRTR—2013/741



ON THE COVER

L. to R.: Bobcat (*Lynx rufus*), white-tailed deer (*Odocoileus virginianus*), eastern mole (*Scalopus aquaticus*), prairie vole (*Microtus ochrogaster*), and coyote (*Canis latrans*) at Mammoth Cave National Park.

Photographs by: Ryan Williamson (bobcat and coyote), John Hutcherson (mole), and NPS Photo by Steven Thomas (deer and vole).

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Abstract

Among the least manipulated environments in our country, the national parks provide sources of baseline information on relatively undisturbed areas and refuges for declining species in America's changing landscape. In 1999, the National Park Service's Natural Resource Challenge identified a set of basic inventory data essential to understanding species richness, abundance, and distribution within national parks. Mammals were recognized as one of 7 basic taxonomic groups targeted for initial park biological inventories. An inventory of the volant mammals (i.e., bats) at Mammoth Cave National Park began in 2004 as a stand-alone research project. Although some large- and medium-sized terrestrial wild mammals were well-documented, no comprehensive effort had been made to inventory the entire terrestrial wild mammal community at Mammoth Cave National Park. Since the 1930s, mammal species lists had been generated by various park naturalists based on observations of live/dead specimens or sign. Twenty-five terrestrial mammal specimens, representing 18 species, were housed in the park's museum in 2005. All specimens, except one, were collected during the mid to late 1930s. Three small mammal trapping studies between 1988 and 1998 yielded only three small mammal species total. Thus, in 2005, a comprehensive inventory was needed to locate, identify and derive terrestrial wild mammal vouchers, and to describe species richness and abundance within the park. This report summarizes the results of a comprehensive effort aimed at documenting the occurrence of at least 90% of the terrestrial wild mammal species potentially present on the park from 2005 to 2013. Documentation of mammal occurrence was accomplished via visual encounters and trapping. Visual encounters included methods like sighting individuals, conducting spotlight surveys by boat, locating mammal sign (e.g., tracks, cuttings, scat), hearing mammal calls, and finding dead individuals. A variety of trapping methods were used, including remote "trail" cameras, live traps (e.g., Sherman live traps, cage live traps, foothold traps), pitfall traps, drift fence-pitfall arrays, and an assortment of other opportunistic capture methods (e.g., snap traps, hand capture, snake traps). A total of 792 terrestrial wild mammal records was documented by visual encounter or some trapping method representing six orders, 15 families, and 33 species. Of the 37 species either confirmed present ($n = 22$) or possibly present ($n = 15$) in 2005 at the park, 33 species (89%) were confirmed present in 2013. Total trapping effort (# of trap-nights) was 118,567 and only included effort from remote cameras, Sherman live traps, pitfalls, drift fence arrays, and snake traps. A total of 165 specimens was collected as vouchers to be stored in the park's museum. No federal or state listed species of terrestrial wild mammals were documented. Hopefully, the results of this inventory will contribute to a better understanding of the diversity and distribution of park mammals to help inform management decisions.

Acknowledgments

I wish to thank staff of the Cumberland Piedmont Network for their assistance with development, deployment and document review of this inventory effort. I am grateful for logistical support and mammal records provided by staff at Mammoth Cave National Park. I owe a tremendous amount of gratitude to project field assistants (Student Conservation Association Interns) K. O'Neill, P. Miles, H. Peters who installed, checked and pulled traps, sorted specimens, and entered data. I also owe a debt of gratitude to R. Williamson and A. Gaskill, J. MacGregor, B. Moore, and M. Mahan without whose data this inventory would be incomplete. Thanks to Dr. G. Schuster, Dr. K. Philips, and M. Smiley for identification of invertebrate specimens, and to S. Wigginton for curation of mammal specimens. Additional records were provided by Western Kentucky University student interns D. Foster, A. Edwards, and J. Taylor. Funding was provided by the National Park Service.

Introduction

The U.S. Congress passed the National Parks Omnibus Management Act in 1998. In response to concerns about the status of biodiversity within the national parks, the act calls for baseline inventory data for parks throughout the nation. Congress determined that these data will provide a pivotal step toward establishing an effective monitoring program, and furthering our ability to effectively manage and protect park resources.

The National Park Service (NPS) responded to Congressional mandates with the Natural Resource Challenge program, including the establishment of biome-based inventory and monitoring networks. These networks address the complex issue of fulfilling diverse inventory and monitoring needs. Networks encompass parks with similar resources and management issues, and represent an organized approach to reduce costs, ensure consistent products and increase information exchange among parks. Congress funds the Servicewide Inventory and Monitoring (I&M) Program of the NPS. This national program coordinates systematic efforts to acquire 12 basic inventory data sets for 270 parks with significant natural resources.

Within the I&M Program, the Cumberland Piedmont Network (CUPN) facilitates inventories of vascular plants and vertebrates within fourteen units, including Mammoth Cave National Park, in eight Southeast Region states. In addition to documenting the occurrence of vertebrate and vascular plant species, a secondary purpose of these inventories is to develop general knowledge of species-habitat associations, especially for sensitive species. Accordingly, the CUPN requires that descriptions of standard habitat attributes be included in all vertebrate and vascular plant inventories.

CUPN objectives are to document at least 90 percent of the species of vertebrates and vascular plants currently estimated to occur in each park; to describe the distribution and relative abundance of species of special concern, such as threatened and endangered species or exotic species occurring within park boundaries; to provide information to aid in the development of general monitoring strategies; and to provide information that will help to guide resource management actions. The status of current inventory information in the CUPN is variable, with numerous information gaps. A lack of inventory data is a common concern to managers, as it restricts their ability to make informed decisions regarding potential management actions within the parks.

Within the CUPN, mammals as a group were recognized in 1999 as one of 16 basic issue categories targeted for initial park inventories. A two-year inventory of the volant mammals (i.e., bats) at Mammoth Cave National Park started in 2004 as a stand-alone project. Although some large- and medium-sized terrestrial wild mammals were well-documented, no comprehensive effort had been made to inventory the entire terrestrial wild mammal community at Mammoth Cave National Park. Prior to park establishment, Bailey (1933) published an account of 33 terrestrial mammals of the Mammoth Cave region. Since the 1930s, mammal species lists generated by various park naturalists were based on observations of live/dead specimens or sign (Madsen 1933, Hibbard 1934, Berry 1969). Twenty-five mammal specimens, representing 18 species, were housed in the park's museum in 2005. All specimens, except one, were collected during the mid to late 1930s. Three small mammal trapping studies conducted

between 1988 and 1998 yielded only three small mammal species total (Viele and Studier 1990, Rebar 1993, Helf 2003). Thus CUPN and park staff recognized the need for a comprehensive inventory to locate, identify and derive terrestrial wild mammal vouchers, and to describe species richness and abundance within the park. Due to the paucity of credible information on small mammal assemblages at Mammoth Cave National Park, the CUPN provided funding for a small mammal inventory project in 2005 that later was expanded to include meso- and large terrestrial mammal species.

Mammals play an important role in the food chain of a given community. Small mammals, for example, aerate, mix, and fertilize the soil; influence the rate of mineral cycling; affect the quality, quantity, composition, and function of vegetation; affect the rate of surface runoff; help to control pest insects; help to disperse seeds; reduce predation on other wildlife (act as a buffer); and provide a food base for avian and terrestrial predators (Hamilton 1941, Golley et al. 1975, Schwartz and Schwartz 1981, Kalis and Davis 1992).

Probably the most important factor influencing the distribution and abundance of small mammals at Mammoth Cave National Park is the availability of suitable habitat. Some mammals are specialists, having specific habitat requirements, while others are generalists and can occupy a variety of habitats (Geier and Best 1980, Schwartz and Schwartz 1981). Most mammals are nocturnal or crepuscular (most active at dusk and dawn) and spend the majority of their time in sheltered sites like burrows, tunnels and runways (located beneath leaf litter, grass cover or underground), in dens (in trees, rock piles, rock shelters, caves or man-made structures), or concealed in brushy vegetation.

Based on a review of museum specimens and other sources in 2005, a preliminary list was formed of terrestrial wild mammal species confirmed present or possibly present on the park (Table 1). In 2005, twenty-two terrestrial wild mammal species (8 small mammals, 14 meso- and large mammals) were confirmed present on the park and 15 species (10 small mammals, 5 meso- and large mammals) were possibly present (Table 1). Feral or domesticated mammals (e.g., cat, dog, pig) occasionally occur within park boundaries; however they are not addressed in the report. This report summarizes the results of a broad effort aimed at documenting the occurrence of at least 90% of the terrestrial wild mammal species possibly present on the park from 2005 to 2013 in order to meet the goal of providing park managers with comprehensive, scientifically-based information about species in their parks that will be invaluable for making sound management decisions.

Table 1. Status of terrestrial wild mammal species at Mammoth Cave National Park in 2005.

Common Name	Latin Name	Park Status in 2005
Virginia opossum	<i>Didelphis virginiana</i> ^{*#+}	Confirmed present
Nine-banded armadillo	<i>Dasypus novemcinctus</i>	Unlikely present
northern short-tailed shrew	<i>Blarina brevicauda</i> ^{*#+}	Confirmed present
southern short-tailed shrew	<i>Blarina carolinensis</i>	Unlikely present
least shrew	<i>Cryptotis parva</i> ^{*#+}	Confirmed present
smoky shrew	<i>Sorex fumeus</i> ^{*#+}	Confirmed present
pygmy shrew	<i>Sorex hoyi</i>	Possibly present
southeastern shrew	<i>Sorex longirostris</i>	Possibly present
eastern mole	<i>Scalopus aquaticus</i> ^{*#+}	Confirmed present
eastern cottontail	<i>Sylvilagus floridanus</i> [#]	Possibly present
eastern chipmunk	<i>Tamias striatus</i> ^{*#+}	Confirmed present
woodchuck	<i>Marmota monax</i> ^{*#+}	Confirmed present
eastern gray squirrel	<i>Sciurus carolinensis</i> [#]	Confirmed present
eastern fox squirrel	<i>Sciurus niger</i> [#]	Possibly present
southern flying squirrel	<i>Glaucomys volans</i> ^{*#+}	Confirmed present
American beaver	<i>Castor canadensis</i> ^{*#+}	Confirmed present
Allegheny woodrat	<i>Neotoma magister</i> ^{*#+}	Confirmed present
eastern harvest mouse	<i>Reithrodontomys humulis</i> [#]	Possibly present
deer mouse	<i>Peromyscus maniculatus</i>	Possibly present
white-footed mouse	<i>Peromyscus leucopus</i> ^{*#+}	Confirmed present
golden mouse	<i>Ochrotomys nuttalli</i> [*]	Possibly present
prairie vole	<i>Microtus ochrogaster</i> ^{*#+}	Confirmed present
meadow vole	<i>Microtus pennsylvanicus</i>	Possibly present
woodland vole	<i>Microtus pinetorum</i> ^{*#+}	Confirmed present
southern bog lemming	<i>Synaptomys cooperi</i>	Possibly present
muskrat	<i>Ondatra zibethicus</i> ⁺	Confirmed present
house mouse	<i>Mus musculus</i>	Possibly present
Norway rat	<i>Rattus norvegicus</i>	Possibly present
meadow jumping mouse	<i>Zapus hudsonius</i>	Possibly present
red fox	<i>Vulpes vulpes</i>	Possibly present
gray fox	<i>Urocyon cinereoargenteus</i> [#]	Possibly present
coyote	<i>Canus latrans</i> ⁺	Confirmed present
raccoon	<i>Procyon lotor</i> ^{*#+}	Confirmed present
long-tailed weasel	<i>Mustela frenata</i> ^{*#+}	Confirmed present

Common Name	Latin Name	Park Status in 2005
mink	<i>Neovison vison</i> ⁺	Confirmed present
striped skunk	<i>Mephitis mephitis</i>	Possibly present
river otter	<i>Lontra canadensis</i> ⁺	Confirmed present
bobcat	<i>Lynx rufus</i> ^{#+}	Confirmed present
American black bear	<i>Ursus americanus</i>	Unlikely present
white-tailed deer	<i>Odocoileus virginianus</i> ^{*#+}	Confirmed present

*Species represented by specimen(s) in park museum.

#Species represented by a historical record (>10 years old) when inventory began in 2005.

+Species represented by a recent record (≤10 years old) when inventory began in 2005.

Note: see Appendix A for detailed list of museum specimens and other pre-2005 records and reports.

Study Area

Mammoth Cave National Park (approx. 21,500 ha; 53,000 ac) lies within the Western Mesophytic Forest region of Kentucky (Braun 1950) in Barren, Edmonson, and Hart counties in Kentucky (Figure 1). The park presents a mosaic of forest types. The wetter slopes are dominated by beech (*Fagus grandifolia*), tulip poplar (*Liriodendron tulipifera*) and sugar maple (*Acer saccharum*). The floodplain forests are dominated by sycamore (*Platanus occidentalis*), box elder (*Acer negundo*) and river birch (*Betula nigra*). Upland flats are drier and dominated by oaks such as chestnut oak (*Quercus prinus*), post oak (*Q. stellata*), black oak (*Q. velutina*), and southern red oak (*Q. falcata*). For more information on vegetative communities and diversity on the park, the reader is referred to Pyne et al. (2010). The park is characterized by sandstone capped ridges covering cave-rich limestone bedrock. The topography of the park ranges from broad ridges to steep slopes and even vertical walls along the Nolin and Green rivers, as well as some main tributaries. Park elevation ranges from about 140 m to nearly 275 m. Mammoth Cave National Park, containing the longest known cave system in the world (current total survey is approximately 635 km long), is part of the South-Central Kentucky Karst. The park should be viewed in context of the South-Central Kentucky Karst, where there are two historical and four functioning ecosystems. In pre-settlement times, prairie and savanna maintained by fire were prevalent, and these ecosystems were converted to agriculture over the past two centuries. Much of the landscape surrounding the park remains a greatly-altered agricultural ecosystem to this day. By comparison, on the park, its forest-based terrestrial, river-based aquatic, the terrestrial and aquatic cave ecosystems are intact and largely functional, though significantly distorted in many respects. The cave ecosystems are considered to be one of the world's most diverse, but the park also contains tremendous above-ground diversity. Established in 1941, the park was designated a World Heritage Site by the United Nations Educational and Scientific and Cultural Organization (UNESCO) in 1981, and declared an International Biosphere Reserve by UNESCO in 1990, in recognition of both its geological uniqueness and its significant biodiversity.

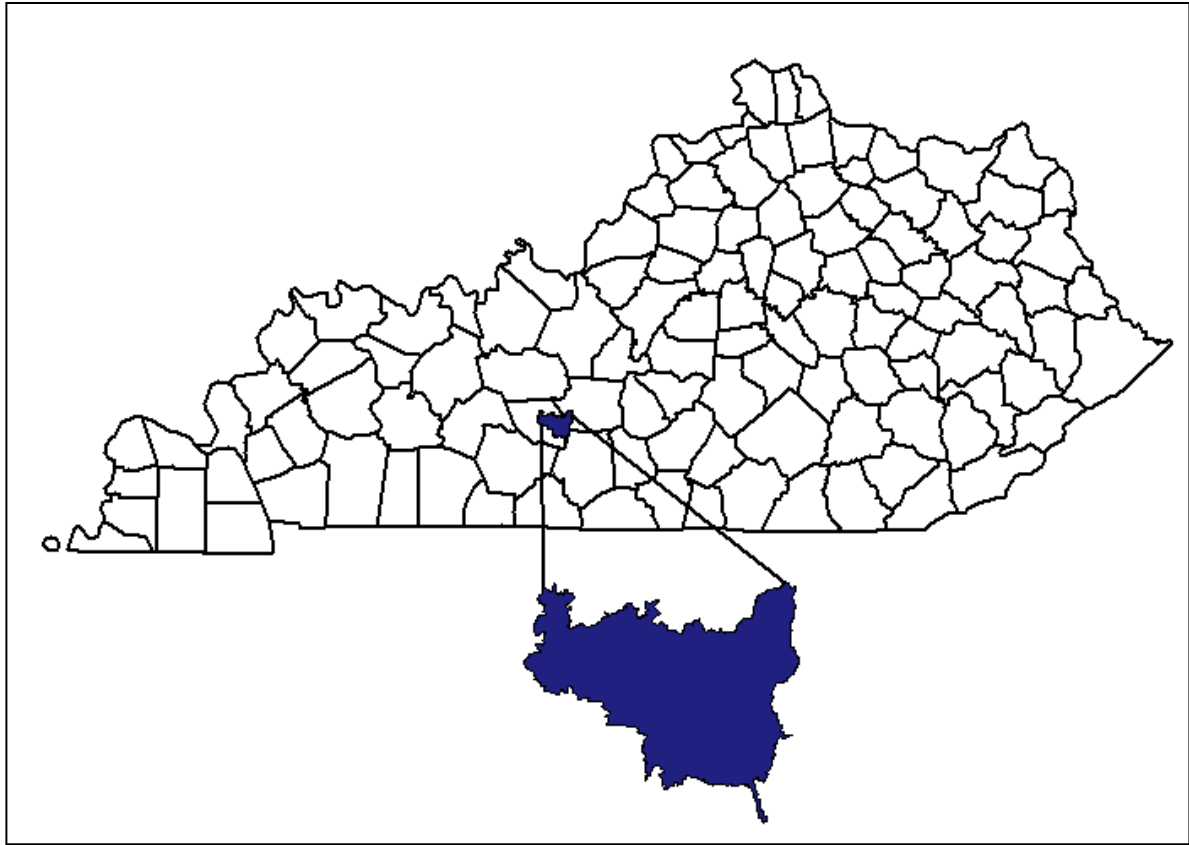


Figure 1. Map showing location of Mammoth Cave National Park in Kentucky.

Methods

Initially this inventory was proposed as an effort to inventory only the small mammals (i.e., shrews, moles, voles, lemmings, mice, and rats) at Mammoth Cave National Park. Sampling methods were selected to target the 10 species of small mammals possibly present on the park. It was determined that most of the species (6 out of 10) possibly present on the park could be captured effectively using non-lethal traps such as Sherman live traps. However, the remaining four species rarely enter live traps and could most effectively be captured using lethal means (e.g., pitfall traps, drift fence arrays) (Handley and Kalko 1993). Further, it was recognized that in some instances specimens would need to be collected. For instance, some species of long-tailed shrews can be identified with certainty only by examining characteristics of the teeth or skulls. Whenever possible, voucher specimens were collected of species not adequately represented in the park's mammal collection.

Later, the inventory was expanded to include all meso- (i.e., opossums, rabbits, squirrels, woodchucks, beavers, muskrats, raccoons, weasels, and skunks) and large (i.e., otters, foxes, coyotes, bobcats, and deer) terrestrial wild mammals, thus additional sampling methods were needed to accommodate the expanded focus. Due to limited resources, a systematic sampling design was not used for most species and the author sought ways to utilize mammal data collected on the park from other sources (e.g., Allegheny woodrat monitoring, muskrat-river otter interaction study, herpetofauna inventory using large sheets of tin, project to document the presence of a large long-tailed cat using remote cameras, opportunistic encounters by NPS staff and partners) as long as records could be verified. The resultant methods used to obtain mammal inventory data were grouped into two main categories: 1) visual (including auditory) encounters, and 2) trapping. The locations of most of the sampling methods used are shown in Figure 2.

1. Visual Encounters – A variety of field observation techniques were used to document mammals on the park. These approaches included sighting individuals, conducting spotlight surveys via boat, locating mammal sign (e.g., nest, dam, tracks, cuttings, scat, runs/mounds), hearing mammal calls, and finding dead individuals.

Spotlight Surveys – Spotlight surveys were conducted via motorboat in park rivers (Figure 2) to monitor the changes in muskrat densities during a 2-year muskrat-river otter interaction study (Williamson 2009). When possible, data on muskrats (and other mammal species) from these surveys collected during 2007 and 2008 were included in this mammal inventory.

Sightings, Sign, Salvage, etc. – A number of individual mammals and species were documented by opportunistic encounters with animals themselves or evidence of their presence (e.g., signs or calls). Whenever possible and appropriate, photos were taken manually or specimens/signs were collected.

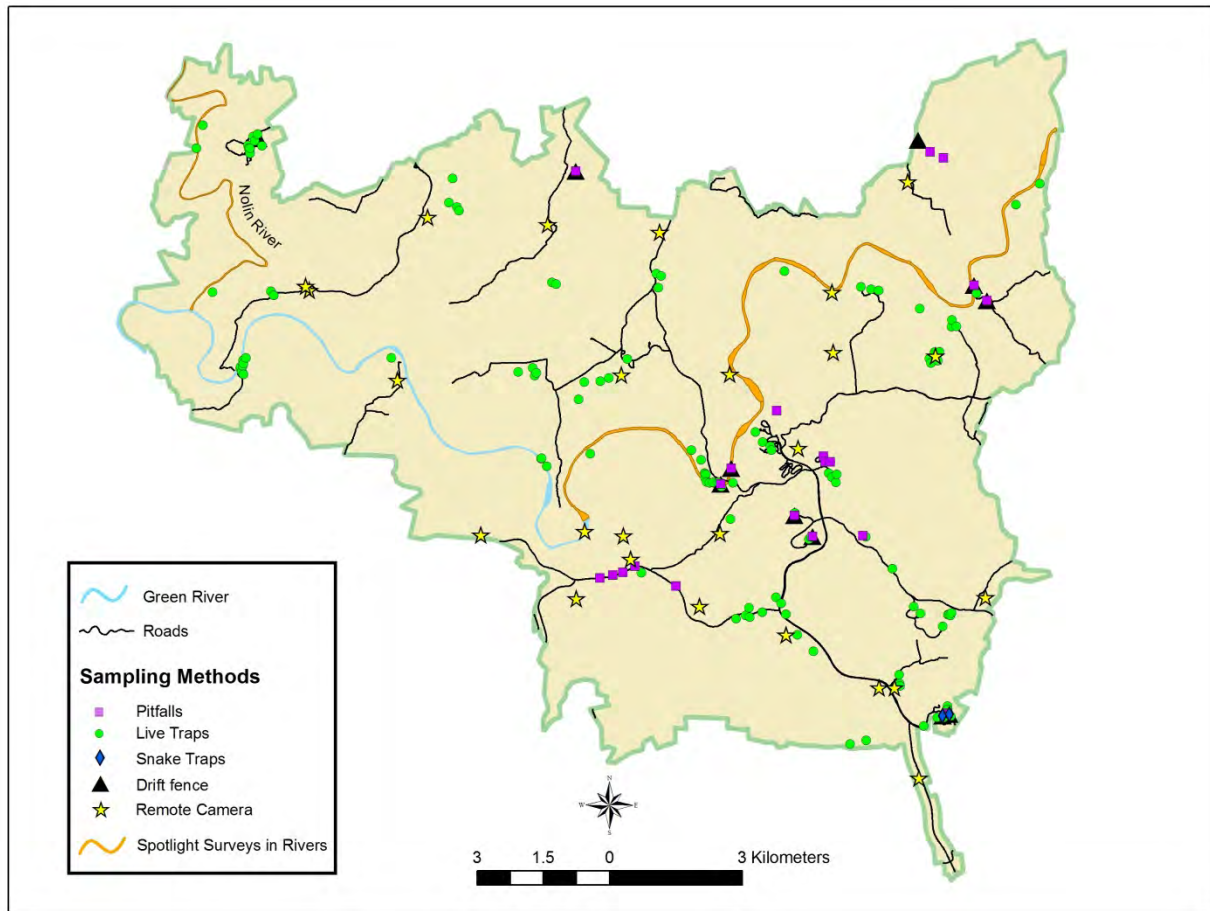


Figure 2. Map of Mammoth Cave National Park with locations of various sampling methods used to inventory the terrestrial wild mammals from 2005 to 2010.

2. Trapping Methods – Several field capture methods were used to document park mammals, including remote “trail” cameras, live traps (e.g., Sherman live traps, cage live traps, foothold traps), pitfall traps, drift fence-pitfall arrays, and an assortment of other opportunistic methods (e.g., snap traps, hand capture, snake traps, mist nets).

Remote (“trail”) Cameras – Remotely activated digital and film cameras were deployed in 25 locations to capture photographs of mammals (Figure 2). Trap sites were usually baited with cougar urine. This effort was primarily aimed at attempting to document reported sightings of a large long-tailed cat on the park, but also provided a useful dataset of park terrestrial mammal fauna.

Sherman Live Traps – A total of 52 live trap grids averaging 20 traps each, with 10 m spacing between traps, was established in open areas (i.e., grasslands, old fields, near buildings) in order to capture field mice and voles/lemmings (Figure 2). Sherman traps (7.5 x 9 x 23 cm; H. B. Sherman Traps, Inc., Tallahassee, Florida) were baited with rolled oats with peanut butter, except

when trap disturbance by ants, raccoons or opossums was excessive (then peanut butter was omitted). Traps were be baited and set in the afternoon, then checked and rebaited as necessary early the following morning. Trapping was conducted for up to 3 consecutive nights at each site. No specimens were marked for identifying recaptures because only qualitative data were sought. Specimens were released after species identification and photograph (when necessary). Any trap deaths were placed in labeled zip-lock type bags and frozen for subsequent museum curation.

Cage Live Traps – Squirrel/rat-size cage live traps (Tomahawk® # 102 & 201) baited with sliced apples were placed at 50 trapping stations (two traps per station) for two consecutive nights to capture Allegheny woodrats as part of a long-term monitoring effort on the park (Woodman et al. 2007).

Foothold Live Traps – Modified #11 double long-spring foothold traps (Sleepy Creek Manufacturing , Berkeley Springs, West Virginia, USA) were placed (2 to 4 traps per site) near park rivers in order to capture river otters during a 2007 study (Williamson 2009). River otter capture data, as well as non-target mammal capture data, were included in this inventory.

Pitfall Traps in Transects – A total of 20 transect lines of small (16 oz. plastic cups) pitfall traps was placed in appropriate habitats (e.g., grassy roadways, grasslands, old fields, moist woodlands, river floodplains) in order to collect shrews, voles/lemmings, and mice (Figure 2). Traps were spaced approximately 10 m apart and transects contained an average of 13 traps (range 5 to 20). Unbaited pitfalls were installed flush with the ground's surface, half-filled with water and holes were punched in the sides to prevent overfilling after rain events (Hudson and Solf 1959, McComb et al. 1991). Holes (6" deep) were dug using hand augers that were the same diameter (4") as the pitfall cups. Dirt removed from the holes was placed next to the holes for later replacement. Normally, traps were checked daily during warm months and less frequently during cold months. Collected specimens were removed with straining spoons, placed in labeled zip-lock type bags, and frozen for later identification, photograph (if necessary and appropriate) and museum curation. Transects were kept in place at each site for an average of four months. Invertebrates unintentionally captured in traps were collected for later identification, curation, and documentation of invertebrate species richness and distribution.

Pitfall Traps in Compact Drift Fence Arrays – Twelve compact arrays of small (16 oz. plastic cups) pitfall traps, arranged in transect lines of up to 5 triads in each array, were placed in appropriate habitats (e.g., moist woodlands, river floodplains, old fields) in order to collect shrews, voles/lemmings and mice (Figure 2). Pitfalls, joined by 1.2 m long "drift fences" made from 10" aluminum flashing turned on edge and buried approximately 2" deep (using a hand edging tool or flat shovel), were arranged in a "Y" shape to form a triad. Triads were placed in a transect line to form an array (Figure 3). Pitfall traps with drift fences were placed, checked, and removed in the same manner as pitfall traps in transects without drift fences (see above).

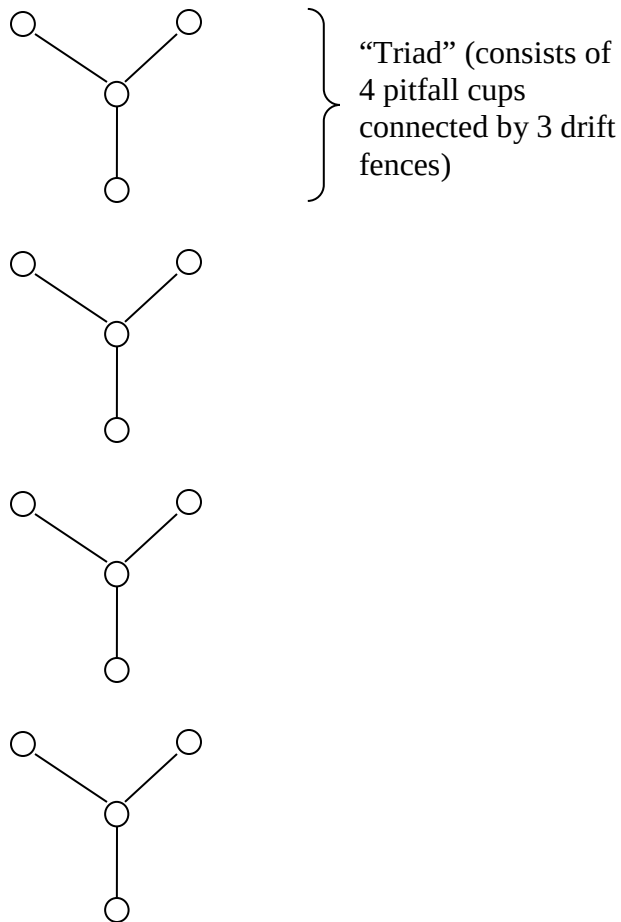


Figure 3. Diagram of a pitfall with drift fence array consisting of four triads arranged in a transect line (after Handley and Kalko 1993).

Other Opportunistic Trapping Methods – A few individual mammals and species were documented by an assortment of opportunistic trapping methods (e.g., snap traps, hand capture, snake traps, mist nets). Snake traps consisted of metal funnel-type minnow traps placed along the side of a drift fence with the bottom third of the trap buried in the ground. Snap traps were set individually inside park office buildings to capture nuisance mice.

Collections and Archives

No attempt was made to capture or collect federally threatened or endangered species during this inventory. All mammal specimens captured alive were identified, photographed (if necessary and appropriate for identification and documentation), and released. Dead specimens were placed in zip-lock type freezer bags labeled with at least the following information: 1) collection location site name, 2) collection date, 3) trap method, and 4) name of collector. All dead specimens were frozen for subsequent identification and processing. Later, each thawed specimen was identified, standard museum measurements taken, and sex and reproductive condition determined, when possible. Specimens in good condition were saved for creating a museum study skin. However, a severe ice storm in January 2009 caused the power to the freezer to go out for several days and all the specimens thawed—the skulls were kept for

curation. All specimen heads were removed and placed in a dermestid beetle colony for cleaning. The remaining bodies were destroyed.

Identification of each small mammal specimen was rechecked using a dissecting microscope once the skull was cleaned. All skulls were properly labeled, bottled, and deposited in the park's museum collection to serve as voucher specimens. Some non-target organisms captured in traps were released/photographed (if alive), or collected and fluid-preserved in appropriate containers following park museum staff instructions for identification by taxonomic experts.

All selected digital photos referenced in this report (Cover, Table 3, and Appendix B), along with all field notes directly associated with this inventory, were appropriately archived (including metadata) by park museum staff. Copies or print outs of the images are available upon request from the park museum curator.

Taxonomic nomenclature in this report was after Wilson and Reeder (2005).

Results

A partial list of pre-2005 terrestrial wild mammals with 261 entries was assembled from: 1) published literature, 2) specimens in the museum at Mammoth Cave National Park and the University of Illinois, Museum of Natural History, 3) records from park projects, and 4) reports in park researcher files (Appendix A). A total of 792 terrestrial wild mammal records was documented from the park between 2005 and 2012 by visual encounter or some trapping method representing six orders, 15 families, and 33 species (Tables 3-5; Appendix B). Of the 37 species either confirmed present ($n = 22$) or possibly present ($n = 15$) in 2005 at the park, 33 (89%) were confirmed present in 2013 (Table 2). The species possibly present in 2005, but not documented by the end of 2013 included four species of mice/voles (deer mouse, golden mouse, house mouse and meadow vole) (Table 2). Field work associated with this inventory ended in 2010, however one record from 2012 was included in the report because it documented the presence of a species (red fox) not recorded from 2005 to 2010. No federal or state listed species of terrestrial wild mammals were documented. Fourteen species of small mammals were documented with the most records obtained for Allegheny woodrat ($n = 86$), white-footed mouse ($n = 72$), and northern short-tailed shrew ($n = 42$) (Tables 4 and 5). Eighteen meso- and large mammals were documented with muskrat ($n = 112$), white-tailed deer ($n = 101$), and river otter ($n = 77$) providing the most records (Tables 4 and 5). Total trapping effort (# of trap-nights) was 118,567—which only included effort from remote cameras, Sherman live traps, pitfalls, drift fence arrays, and snake traps (Table 5). A total of 165 specimens (representing 23 species) was collected as vouchers (usually a cleaned skull) and stored in the park's museum. Information obtained for each voucher specimen is provided in Appendix B.

On 13 January 2006, a meadow vole skull fragment (upper molars still intact) was collected at the sheltered entrance to Cathedral Cave (Appendix B). Although the skull was obtained during this study, the author decided to designate the “Park Status in 2013” (Table 2) as “Unconfirmed” for this species for the following reasons: 1) the location of Cathedral Cave---in mature forest limestone cliffline along the Green River---was not meadow vole habitat (although the cave may have been adjacent to meadow vole habitat decades ago when the site was in private ownership), 2) the age of the skull was uncertain and may have been decades old, and 3) even if the skull was fairly recent, it may have been deposited just inside the cave entrance by a bird of prey (e.g., eastern screech owl) that captured the vole in appropriate habitat on private property just outside the park; such habitat was available in 2006 just east of Park Ridge Road in the southwest corner of Hart County. The skull fragment was curated, accessioned (MACA-00559), cataloged (MACA 59317), and included as a voucher specimen for this inventory project.

On 17 October 2012, park Division of Science and Resources Management employee, Eddie Wells, reported seeing two nine-banded armadillo foraging holes at the park's Air Quality Station (UTM X=575600, UTM Y=4109953). This site is located on private property about 150 meters from the southwestern boundary of the park. According to Wells, the funnel-shaped holes were “...about 2-3 inches in diameter and about 4-5 inches deep, with tailings pushed off to the side.” He thought the holes were not made by a full-grown adult, based on experience with armadillos he gained while employed at Arkansas Post National Memorial in southeastern Arkansas. Wells took several photos. Based on this evidence, nine-banded armadillo was listed as “Probably Present” on the park (Table 2). Since this record came from outside the park boundary, it was not included in Appendix B.

Table 2. Status of terrestrial wild mammal species at Mammoth Cave National Park in 2005 and 2013.

Common Name	Latin Name	Park Status in 2005	Park Status in 2013 ¹
Virginia opossum	<i>Didelphis virginiana</i> ^{*##+}	Confirmed present	Present in Park
nine-banded armadillo	<i>Dasypus novemcinctus</i>	Unlikely present	Probably Present
northern short-tailed shrew	<i>Blarina brevicauda</i> ^{*##+}	Confirmed present	Present in Park
southern short-tailed shrew	<i>Blarina carolinensis</i>	Unlikely present	Unconfirmed
least shrew	<i>Cryptotis parva</i> ^{*##+}	Confirmed present	Present in Park
smoky shrew	<i>Sorex fumeus</i> ^{*##+}	Confirmed present	Present in Park
pygmy shrew	<i>Sorex hoyi</i>	Possibly present	Present in Park
southeastern shrew	<i>Sorex longirostris</i>	Possibly present	Present in Park
eastern mole	<i>Scalopus aquaticus</i> ^{*##+}	Confirmed present	Present in Park
eastern cottontail	<i>Sylvilagus floridanus</i> [#]	Possibly present	Present in Park
eastern chipmunk	<i>Tamias striatus</i> ^{*##+}	Confirmed present	Present in Park
woodchuck	<i>Marmota monax</i> ^{*##+}	Confirmed present	Present in Park
eastern gray squirrel	<i>Sciurus carolinensis</i> ^{*##}	Confirmed present	Present in Park
eastern fox squirrel	<i>Sciurus niger</i> [#]	Possibly present	Present in Park
southern flying squirrel	<i>Glaucomys volans</i> ^{*##+}	Confirmed present	Present in Park
American beaver	<i>Castor canadensis</i> ^{*##+}	Confirmed present	Present in Park
Allegheny woodrat	<i>Neotoma magister</i> ^{*##+}	Confirmed present	Present in Park
eastern harvest mouse	<i>Reithrodontomys humulis</i> [#]	Possibly present	Present in Park
deer mouse	<i>Peromyscus maniculatus</i>	Possibly present	Unconfirmed
white-footed mouse	<i>Peromyscus leucopus</i> ^{*##+}	Confirmed present	Present in Park
golden mouse	<i>Ochrotomys nuttalli</i> [*]	Possibly present	Unconfirmed
prairie vole	<i>Microtus ochrogaster</i> ^{*##+}	Confirmed present	Present in Park
meadow vole	<i>Microtus pennsylvanicus</i>	Possibly present	Unconfirmed
woodland vole	<i>Microtus pinetorum</i> ^{*##+}	Confirmed present	Present in Park
southern bog lemming	<i>Synaptomys cooperi</i>	Possibly present	Present in Park
muskrat	<i>Ondatra zibethicus</i> ⁺	Confirmed present	Present in Park
house mouse	<i>Mus musculus</i>	Possibly present	Unconfirmed
Norway rat	<i>Rattus norvegicus</i>	Possibly present	Present in Park
meadow jumping mouse	<i>Zapus hudsonius</i>	Possibly present	Present in Park
red fox	<i>Vulpes vulpes</i>	Possibly present	Present in Park
gray fox	<i>Urocyon cinereoargenteus</i> [#]	Possibly present	Present in Park
coyote	<i>Canus latrans</i> ⁺	Confirmed present	Present in Park

Common Name	Latin Name	Park Status in 2005	Park Status in 2013 ¹
raccoon	<i>Procyon lotor</i> ^{*#+}	Confirmed present	Present in Park
long-tailed weasel	<i>Mustela frenata</i> ^{*#+}	Confirmed present	Present in Park
mink	<i>Neovison vison</i> ⁺	Confirmed present	Present in Park
striped skunk	<i>Mephitis mephitis</i>	Possibly present	Present in Park
river otter	<i>Lontra canadensis</i> ⁺	Confirmed present	Present in Park
bobcat	<i>Lynx rufus</i> ^{#+}	Confirmed present	Present in Park
American black bear	<i>Ursus americanus</i>	Unlikely present	Unconfirmed
white-tailed deer	<i>Odocoileus virginianus</i> ^{*#+}	Confirmed present	Present in Park

¹Park Status in 2013 categories from NPSpecies Data Dictionary for Users: Field and Value Definitions, 2004.

*Species represented by specimen(s) in park museum.

#Species represented by a historical record (>10 years old) when inventory began in 2005.

+Species represented by a recent record (≤10 years old) when inventory began in 2005.

Note: see Appendix A for detailed list of museum specimens and other pre-2005 records and reports.

Some non-target organisms captured in traps were photographed/released (if alive), or collected and fluid-preserved or dried and pinned. A total of 3,613 specimens (1,838 of these identified to species level) representing 5 classes, 14 orders, 37 families, 86 genera and 58 species was identified. The breakdown of each taxonomic class is as follows. Class **Amphibia** was represented by the order Caudata—salamanders, of which one adult marbled salamander (*Ambystoma opacum*) specimen was captured in a “Wondering Woods” drift fence array by Heidi Peters and Maggie Mahan on 25 May 2006 (UTM X=583805, UTM Y=4109874), photographed by Heidi Peters and released at the capture site, and one adult mud salamander (*Pseudotriton montanus*) specimen was captured in the “swamp” pitfall trap transect by the author and Heidi Peters on 4 April 2006 (UTM X=575340, UTM Y=4122166), later identified by Bill Moore, photographed by Rick Olson and released at the capture site. Class **Arachnida** was represented by the following two orders: 1) Opiliones—harvestmen, from 28 specimens; and 2) Ixodida—ticks/mites, from 1 specimen. Class **Malacostraca** was represented by the following two orders: 1) Decapoda—crayfishes, of which 16 specimens of the species *Cambarus polychromatus* were identified; and 2) Isopoda—isopods, from one specimen. Class **Entognatha** was represented by the order Collembola—springtails, of which one specimen was identified. Class **Insecta** was represented by the following eight orders: 1) Coleoptera—beetles, of which 2,870 specimens from 15 families, 62 genera, and 48 species were identified (1,542 specimens were identified to species); 2) Blattaria—cockroaches, from 42 specimens; 3) Diptera—true flies, from 17 specimens; 4) Hemiptera—true bugs, of which 28 specimens from 5 families and 5 genera were identified; 5) Hymenoptera—ants/bees/wasps, of which 99 specimens from 3 families were identified; 6) Lepidoptera—butterflies/moths, of which 153 specimens from 4 families, 8 genera and 3 species were identified (11 specimens were identified to species); 7) Orthoptera—grasshoppers/crickets, of which 372 specimens from 5 families, 6 genera and 4 species were identified (267 specimens were identified to species); 8) Phasmida—walking sticks, of which 2 specimens from 2 families and 2 genera were identified. A total of 3,611 invertebrate specimens was curated, accessioned (MACA-00559), cataloged, and included as voucher specimens for this inventory project.

1. Visual Encounters – A total of 343 terrestrial wild mammal records, representing 25 species, was obtained by some form of visual encounter during the inventory (Table 4).

Spotlight Surveys – Spotlight surveys on the upper half of the Green River within the park from 18 January 2007 to 13 August 2008 yielded 202 records from 5 species [muskrat ($n = 111$), American beaver ($n = 55$), raccoon ($n = 32$), mink ($n = 3$), and river otter ($n = 1$)] (Table 4). Only limited data from spotlight surveys for species other than muskrat were available for use in this report.

Sightings, Sign, Salvage, etc. – The remaining 141 terrestrial wild mammal records were obtained from a variety of other types of visual encounters (Table 4). There were 50 sightings of 17 species of mammals, and 28 mammals from 16 species were found dead—primarily along roads as a result of vehicle collisions. Only two species of mammal (62 individuals) were documented via their sign (i.e., river otter—tracks near foothold live traps, scat, and American beaver—cuttings, dam and slide), and only one species (one individual) by its vocalization (i.e., southern flying squirrel).

2. Trapping Methods – A total of 449 terrestrial wild mammal records, representing 25 species, was obtained at over 111 sites during the inventory by some method of trapping (Table 5). The total number of trapping sites does not include Allegheny woodrat monitoring sites using cage live traps, river otter foothold sites, or most opportunistic trapping sites (i.e., hand captures, mist nets, or snap traps).

Remote (“trail”) Cameras – Remote cameras placed at 25 sites were set for 756 “trap-nights” and yielded 136 unique records (# photographs obtained was greater than 136 due to multiple images often being taken of the same species at the same site on the same date) of 8 mammal species (Table 5). The majority of these records ($n = 97$) were photos of white-tailed deer. Remote cameras also “captured” images of coyotes ($n = 14$), river otter ($n = 10$), raccoon ($n = 9$), Virginia opossum ($n = 2$), eastern gray squirrel ($n = 2$), and 1 each of an American beaver and bobcat.

Sherman Live Traps – A total of 52 sites was sampled using Sherman live traps for 4,546 trap-nights and provided 79 mammal records from 5 species (Table 5). These species included white-footed mouse ($n = 55$), prairie vole ($n = 17$), eastern harvest mouse ($n = 5$), eastern chipmunk ($n = 1$), and northern short-tailed shrew ($n = 1$).

Cage Live Traps – Tomahawk live traps used for Allegheny woodrat monitoring, yielded 83 unique records of this species, and one record of an eastern cottontail (Table 5). Numbers of trap-nights and sites using this method were not calculated from the monitoring data obtained.

Foothold Live Traps – A third live trapping method used at the park—foothold traps set to capture river otters for a research project—provided a total of 19 mammal records from 7 species. While the number of sites and trap-nights for this method was not calculated the following species were captured: raccoon ($n = 7$), river otter ($n = 5$), coyote ($n = 2$), bobcat ($n = 2$), and one each from American beaver, woodchuck, and muskrat (Table 5).

Pitfall Traps in Transects – Pitfall trapping was conducted at 20 sites with 66,990 trap-nights of effort and yielded 87 records of small mammals from nine species (5 shrews and 4 mice/voles) (Table 5). Shrew species captured in pitfall traps included northern short-tailed shrew ($n = 26$), smoky shrew ($n = 20$), southeastern shrew ($n = 13$), pygmy shrew ($n = 11$), and least shrew ($n = 6$). Mice/vole species obtained via pitfalls included white-footed mouse ($n = 4$), eastern harvest mouse ($n = 3$), woodland vole ($n = 3$), and meadow jumping mouse ($n = 1$).

Pitfall Traps in Compact Drift Fence Arrays – A total of 12 drift fence array sites was established on the park and sampled for 45,585 trap-nights (Table 5). Thirty-eight small mammal records were obtained from 10 species—the same nine species recorded in pitfall traps placed in transects (above), plus one record of an eastern mole. The species most frequently captured in drift fence arrays were southeastern shrew ($n = 11$), northern short-tailed shrew ($n = 10$), and least shrew ($n = 5$).

Other Opportunistic Trapping Methods – The remaining six terrestrial wild mammal records, representing four species, were obtained from a variety of other types of trapping methods (e.g., snap traps, hand capture, snake traps, mist nets) (Table 5). There were 690 trap-nights of snake

trapping at two sites that provided only two small mammal records (1 white-footed mouse and 1 northern short-tailed shrew). One least shrew and one white-footed mouse records were obtained by hand capture, one white-footed mouse was captured with a snap trap, and one southern flying squirrel was live-trapped in mist net set at night to capture bats.

Table 3. Terrestrial wild mammal species documented during 2005-2013 at Mammoth Cave National Park, Kentucky.

Common Name	Latin Name	Documentation Type ¹	Abundance ²
Virginia opossum	<i>Didelphis virginiana</i>	specimen, photo, sighting	common
northern short-tailed shrew	<i>Blarina brevicauda</i>	specimen, photo, live capture, sighting	common
least shrew	<i>Cryptotis parva</i>	specimen, photo, sighting	uncommon
smoky shrew	<i>Sorex fumeus</i>	specimen, photo	rare
pygmy shrew	<i>Sorex hoyi</i>	specimen, photo	rare
southeastern shrew	<i>Sorex longirostris</i>	specimen, photo	rare
eastern mole	<i>Scalopus aquaticus</i>	specimen, photo, sighting	common
eastern cottontail	<i>Sylvilagus floridanus</i>	photo, live capture, sighting	common
eastern chipmunk	<i>Tamias striatus</i>	photo, live capture	common
woodchuck	<i>Marmota monax</i>	specimen, photo, live capture, sighting	common
eastern gray squirrel	<i>Sciurus carolinensis</i>	specimen, photo, sighting	abundant
eastern fox squirrel	<i>Sciurus niger</i>	specimen, photo, sighting	uncommon
southern flying squirrel	<i>Glaucomys volans</i>	photo, live capture, auditory	common
American beaver	<i>Castor canadensis</i>	photo, live capture, sighting, sign	common
Allegheny woodrat	<i>Neotoma magister</i>	specimen, photo, live capture, sighting	common
eastern harvest mouse	<i>Reithrodontomys humulis</i>	specimen, photo, live capture	uncommon
white-footed mouse	<i>Peromyscus leucopus</i>	specimen, photo, live capture, sighting	common
prairie vole	<i>Microtus ochrogaster</i>	specimen, photo, live capture	common
woodland vole	<i>Microtus pinetorum</i>	specimen, photo, sighting	common
southern bog lemming	<i>Synaptomys cooperi</i>	sighting	rare
muskrat	<i>Ondatra zibethicus</i>	photo, live capture, sighting	common
Norway rat	<i>Rattus norvegicus</i>	specimen, photo	rare
meadow jumping mouse	<i>Zapus hudsonius</i>	specimen, photo	rare
red fox	<i>Vulpes vulpes</i>	specimen, photo	rare
gray fox	<i>Urocyon cinereoargenteus</i>	specimen, photo, sighting	uncommon
coyote	<i>Canus latrans</i>	photo, live capture, sighting	common

Common Name	Latin Name	Documentation Type ¹	Abundance ²
raccoon	<i>Procyon lotor</i>	specimen, photo, live capture, sighting	common
long-tailed weasel	<i>Mustela frenata</i>	sighting	rare
mink	<i>Neovison vison</i>	sighting	rare
striped skunk	<i>Mephitis mephitis</i>	photo, sighting	common
river otter	<i>Lontra canadensis</i>	specimen, photo, live capture, sighting, sign	rare
bobcat	<i>Lynx rufus</i>	photo, live capture	rare
white-tailed deer	<i>Odocoileus virginianus</i>	specimen, photo, sighting	abundant

¹Photo documentation includes remote camera, as well as photos taken from a hand-held camera.

²Abundance categories (from NPSpecies Data Dictionary for Users: Field and Value Definitions, 2004):

abundant = May seen/heard daily in suitable habitat and season, and in large numbers.

common = May be seen/heard daily, in suitable habitat and season, but not in large numbers.

uncommon = Likely to be seen/heard monthly in appropriate season/habitat. May be locally common.

rare = Present, but usually seen/heard only a few times each year.

Note: Abundance categories were assigned to each species based on the author's judgment. The abundance category assigned for a given species is not necessarily related to the number of records in Appendix B. For example, certain species designated as "rare" by the author were the focus of intense sampling effort [e.g., river otter (Williamson 2009)] and are therefore represented by many records in Appendix B. However, other species designated as "common" (e.g., southern flying squirrel) or "abundant" (e.g., eastern gray squirrel) are represented by a paucity of records in Appendix B due to low sampling effort (e.g., not every eastern gray squirrel observed by the author during the inventory was recorded).

Table 4. Numbers of records¹ of terrestrial wild mammals visually encountered at Mammoth Cave National Park, Kentucky: 2005-2012.

Species	Visual Encounters					Total
	Sighting	Spotlight Survey	Sign	Auditory	Found Dead	
Virginia opossum	1				1	2
northern short-tailed shrew	2				2	4
least shrew	5					5
eastern mole	5				5	10
eastern cottontail	3				2	5
woodchuck	5				1	6
eastern gray squirrel	3				3	6
eastern fox squirrel	3				1	4
southern flying squirrel				1		1
American beaver		55	1			56
Allegheny woodrat	1				2	3
white-footed mouse	5				2	7
woodland vole	6				1	7
southern bog lemming	1					1
muskrat		111				111
Norway rat					1	1
red fox					1	1
gray fox	1				2	3
coyote	3					3
raccoon		32			2	34
long-tailed weasel	2					2
mink		3				3
striped skunk	1				1	2
river otter		1	61			62
white-tailed deer	3				1	4
Total number of records¹	50	202	62	1	28²	343²
Total number of species	17	5	2	1	16	25

¹Record = at least one individual documented at one location on one date.

²Total number of records does not include 1 meadow vole found dead (skull fragment)--see results.

Table 5. Numbers of records¹ of terrestrial wild mammals documented by various methods of trapping at Mammoth Cave National Park, Kentucky: 2005-2010.

Species	Trapping Method					Total
	Remote Camera	Live Trapping	Pitfall	Drift Fence	Other ²	
Virginia opossum	2					2
northern short-tailed shrew		1	26	10	1	38
least shrew			6	5	1	12
smoky shrew			20	2		22
pygmy shrew			11	2		13
southeastern shrew			13	11		24
eastern mole				1		1
eastern cottontail		1				1
eastern chipmunk		1				1
woodchuck		1				1
eastern gray squirrel	2					2
southern flying squirrel					1	1
American beaver	1	1				2
Allegheny woodrat		83				83
eastern harvest mouse		5	3	2		10
white-footed mouse		55	4	3	3	65
prairie vole		17				17
woodland vole			3	1		4
muskrat		1				1
meadow jumping mouse			1	1		2
coyote	14	2				16
raccoon	9	7				16
river otter	10	5				15
bobcat	1	2				3
white-tailed deer	97					97
Total number of records¹	136	182³	87³	38³	6	449³
Total number of species	8	14	9	10	4	25
Total trapping effort (# of trap-nights⁴)	756	4,546⁵	66,990	45,585	690⁶	118,567
Total number of trap sites	25	52⁵	20	12	2⁶	111

¹Record = at least one individual documented at one location on one date.

²Other trapping methods include: snap trap, hand capture, snake trap, mist net.

³Total number of records does not include the following 7 unidentified specimens: 1 *Blarina* spp. (drift fence), 5 *Peromyscus* spp. (4 pitfall, 1 drift fence), and 1 "mouse" (live trapping).

⁴One "trap-night" = one trap (or camera) set for one night at one location.

⁵Total given only for live trapping with Sherman live traps and does not include Allegheny woodrat monitoring efforts using cage live traps or river otter foothold trapping efforts.

⁶Total given only for trapping with snake traps and does not include other trapping methods.

Discussion

A primary objective of this inventory was to document at least 90% of the terrestrial wild mammal species possibly present on the park. This study documented 89%, or 33 of 37 species on the initial list (Table 1). Of the four species not documented during this effort, only one had been previously documented on the park—one golden mouse specimen was collected on 2 April 1935 at Civilian Conservation Corps camp #1 and one golden mouse specimen was collected on 22 April 1961 between Little Hope Church and Sand Cave. The composition and diversity of vegetation communities on the park have changed significantly since 1935 and 1961, however it is possible that golden mice are present on the park but went undetected despite the concentrated effort to capture them. The other three species evidently never documented on the park were all documented during the 1990s (Thomas 2001) in at least one of the three counties which encompass the park (deer mouse = Barren and Hart counties, meadow vole = Hart County, house mouse = Hart County). Deer mice prefer open weedfields and grasslands of which there is a limited amount on the park. Meadow voles prefer moist grasslands and are common in central and northern Kentucky. What little there is available of these habitats on the park was intensively trapped during the inventory and should have yielded deer mice and meadow voles if they were present. The exotic house mouse inhabits weedfields, as well as man-made structures. In addition to the intensive trapping effort in open weedfields, a substantial effort was made to trap around all areas on the park with buildings, but only white-footed mice were captured. There have been a number of unconfirmed reports of various terrestrial mammals on the park, such as, large long-tailed cat, and American black bear. Some effort has been made to verify these reports, but they remain unconfirmed. In June 2013, reports of an American black bear (thought to be a transient subadult male) outside of the park in Barren County were confirmed by the Kentucky Department of Fish and Wildlife Resources (KDFWR) (S. Dobey, personal communication). The author decided to designate the “Park Status in 2013” (Table 2) as “Unconfirmed” for this species. The park and its surroundings probably lack an adequate amount of suitable habitat to support viable populations of extirpated terrestrial mammals such as American bison (*Bos bison*), elk (*Cervus elaphus*), and the gray wolf (*Canis lupus*).

Below is a summary of the distribution, documentation (partial), habitat, and abundance of the 33 species documented in this inventory (Tables 2 and 3).

Didelphimorpha

Only one species in the order Didelphimorpha was documented on the park, the Virginia opossum.

Virginia opossum.

This omnivorous mammal is found throughout Kentucky in a wide variety of habitats (Barbour and Davis 1974, Whitaker and Hamilton 1998). Prior to the start of the inventory this species was represented by two specimens in the park museum collected in the mid-1930s, and more recently by records of tracks at scent stations along the Green and Nolin rivers in 2002-2003 (Asmus 2003, Appendix A). During this inventory, the Virginia opossum was documented by four records consisting of a specimen found dead, two remote camera photos, and a sighting with photographs and a movie clip (Appendix B). This species is considered widespread and common on the park.

Soricomorpha

Six species in the order Soricomorpha, five shrews and one mole, were documented on the park.

Northern short-tailed shrew.

This is the largest shrew found in the park. This ubiquitous shrew is found in a wide variety of habitats in all but the Jackson Purchase area in far western Kentucky where it is replaced by the smaller southern short-tailed shrew (Barbour and Davis 1974, Whitaker and Hamilton 1998). It is perhaps the most common mammal in Kentucky (Barbour and Davis 1974). Prior to the start of the inventory this species of shrew was represented by one specimen in the park museum collected in 1935, one specimen in the University of Illinois, Museum of Natural History, collected in 1960, and more recently by 11 visual records underneath tin in 2004 (MacGregor 2007, Appendix A). During this inventory, the northern short-tailed shrew was documented in Barren, Edmonson and Hart counties by 42 records consisting of 40 collected specimens (including photos), and two sightings (Tables 4 and 5, Appendix B, MacGregor 2007). This species is considered widespread and common on the park. A single specimen collected during this inventory on October 19, 2005 in Edmonson County had morphological measurements intermediate between northern and southern short-tailed shrew and thus was identified as *Blarina* spp. This record resulted in “Unconfirmed” being assigned to southern short-tailed shrew for its “Park Status in 2013” (Table 2).

Least shrew.

This small shrew is found almost exclusively in grasslands and occurs statewide in Kentucky (Barbour and Davis 1974, Whitaker and Hamilton 1998). Prior to the start of the inventory this species was represented by one visual record and one specimen in the park museum, both from the mid-1930s, and more recently by one visual record underneath tin in 2004 (MacGregor 2007, Appendix A). During this inventory effort, the least shrew was documented by 17 records from Barren, Edmonson and Hart counties consisting of 12 collected specimens (including photos), and five sightings (Tables 4 and 5, Appendix B, MacGregor 2007). This species is restricted to grassy open areas and is uncommon on the park.

Smoky shrew.

This shrew seems to prefer moist, shady woodlands with moss-covered logs or rocks, and is found in eastern and south-central Kentucky (Barbour and Davis 1974, Whitaker and Hamilton 1998, Thomas 2001). Prior to the start of the inventory this species was not reported from Barren or Hart counties. It was represented by four Edmonson County specimens captured in the early 1930s at the mouth of Mammoth Cave (Bailey 1933, Barbour and Davis 1974), by one specimen in the park museum collected in 1934, and more recently by one skull found in an Edmonson County cave by the author in 2003 (Appendix A). During this inventory, the smoky shrew was documented by 22 records that were all collected specimens (including photos) from Barren, Edmonson and Hart counties (Table 5, Appendix B). This species is restricted to mesic woods and is rare on the park.

Pygmy shrew.

This is the smallest shrew found in the park and among the smallest mammals in the world. It seems to prefer slopes of wooded ravines with fallen logs and leaf litter, and is found in eastern, western, and south-central Kentucky (Whitaker and Hamilton 1998, Thomas 2001). Prior to the start of the inventory this species was not reported from the park, or from Barren, Hart or

Edmonson counties. During this inventory, the pygmy shrew was documented in Barren, Edmonson and Hart counties by 13 records that were all collected specimens (including photos) (Table 5, Appendix B). This species is restricted to rich woods especially with slopes and is rare on the park.

Southeastern shrew.

This medium-sized shrew is found in a fairly wide variety of habitats, but is most abundant in lowlands (Barbour and Davis 1974, Whitaker and Hamilton 1998). It occurs throughout most of the state (Barbour and Davis 1974, Thomas 2001). Prior to the start of the inventory this species was not reported from the park, or from Barren or Edmonson counties. During this inventory, the southeastern shrew was documented in Barren, Edmonson and Hart counties by 24 records that were all collected specimens, but one specimen was never retrieved from the dermestid beetle colony (including photos) (Table 5, Appendix B). This species is widely distributed, but is rare on the park.

Eastern mole.

This fossorial mammal is found throughout Kentucky in a wide variety of habitats with loose, well-drained soils (Barbour and Davis 1974, Whitaker and Hamilton 1998). Prior to the start of the inventory this species of mole was represented by a single specimen in the park museum collected in 1934, and more recently by 2 visual records and 2 records of sign in 2004 (MacGregor 2007, Appendix A). During this inventory, the eastern mole was documented by 11 records from Barren and Edmonson counties consisting of six collected specimens (including photos), and five sightings (Tables 4 and 5, Appendix B, MacGregor 2007). This species is considered widespread and common on the park.

Lagomorpha

Only one species in the order Lagomorpha was documented on the park during this study, the eastern cottontail.

Eastern cottontail.

This rabbit is found throughout Kentucky in a wide variety of non- to sparsely-forested habitats (Barbour and Davis 1974, Whitaker and Hamilton 1998). Prior to the start of the inventory this species was not documented on the park based on a collected specimen or a specific sighting, although it was included in two general checklist reports in 1934 and 1969. During this inventory, the eastern cottontail was documented in Barren and Edmonson counties by six records consisting of one photo record of a dead specimen, a live capture, an observed dead specimen, and three sightings of live individuals (Tables 4 and 5, Appendix B). This species is limited to thick, brushy openlands and areas with few trees, and it is common on the park.

Rodentia

Fifteen species in the order Rodentia were documented on the park; five in the squirrel family, one in the beaver family, and nine in the rats/mice/voles family.

Eastern chipmunk.

This species of ground-dwelling squirrel is found throughout Kentucky in a wide variety of primarily-forested habitats (Barbour and Davis 1974, Whitaker and Hamilton 1998). Prior to the start of the inventory this species was represented by one specimen in the park museum collected

in 1934, and more recently by 13 live captures from 1997 to 1999 (Thomas 2003, Appendix A). During this inventory, the eastern chipmunk was documented in Edmonson County by one record consisting of a live capture and photos (Table 5, Appendix B). This species mainly uses wooded areas and along edges of woods—which occur throughout the park, however this mammal is common on the park.

Woodchuck.

This species is found throughout Kentucky (more common in the east than in the west) in a wide variety of habitats, but it is most abundant in sparsely-wooded areas (Barbour and Davis 1974, Whitaker and Hamilton 1998). Prior to the start of the inventory this species was represented by one specimen in the park museum collected in 1935, and more recently by one sighting by the author in 1997 (Appendix A). During this inventory, the woodchuck was documented by seven records from Barren and Edmonson counties consisting of one collected dead specimen (including photos), a live capture, and five sightings of live individuals (Tables 4 and 5, Appendix B). Woodchucks are sometimes considered a nuisance mammal, especially when they burrow underneath buildings. This species is considered widespread and common on the park.

Eastern gray squirrel.

This species of tree squirrel is found throughout Kentucky in a wide variety of forested habitats (Barbour and Davis 1974, Whitaker and Hamilton 1998). Prior to the start of the inventory this species was represented by one specimen in the park museum collected in 1935, a sighting from the same time period, and more recently by one sighting in 1978 (Appendix A). During this inventory, the eastern gray squirrel was documented by eight Edmonson County records consisting of one collected (including photos) dead and two not collected (one including photos) dead specimens, two remote camera records, and three sightings of live individuals (Tables 4 and 5, Appendix B). This species is considered widespread and abundant on the park.

Eastern fox squirrel.

This tree squirrel is found throughout Kentucky, especially in the Bluegrass and far west, in a wide variety of sparsely forested habitats (Barbour and Davis 1974, Whitaker and Hamilton 1998). Prior to the start of the inventory this species was not documented on the park based on a collected specimen or a specific sighting, although it was included in two general checklist reports in 1934 and 1969 (Appendix A). During this inventory, the eastern fox squirrel was documented in Edmonson County by four records consisting of one collected dead specimen (including photos), and three sightings of live individuals (Table 4, Appendix B). This species primarily uses half-open oak or hickory stands and similar areas with few trees, and is uncommon on the park.

Southern flying squirrel.

This species of tree squirrel is found throughout Kentucky in a wide variety of forested habitats (Barbour and Davis 1974, Whitaker and Hamilton 1998). Prior to the start of the inventory this species was represented by one specimen secured near Mammoth Cave in the early 1930s (Bailey 1933), two specimens in the park museum collected in 1934, a sighting from the same time period, and more recently by one auditory record by the author in 2004 (Appendix A). During this inventory, the southern flying squirrel was documented by two Edmonson County records consisting of one live capture in a mist net intended for bats (including photos) and one

auditory record by the author (Tables 4 and 5, Appendix B). This species is considered widespread and common on the park.

American beaver.

This species of rodent, the largest in North America, is found throughout Kentucky in a wide variety of forested habitats wherever there are suitable bodies of water (Barbour and Davis 1974, Whitaker and Hamilton 1998). Bailey (1933) indicated a lack of beavers in the Mammoth cave area for a generation or more in 1933. Prior to the start of the inventory this species was represented by three specimens (in generally poor condition) in the park museum collected on an unknown date, and more recently by two sightings in 1978 and 1980, and by six spotlight survey records in 2002 (Asmus 2004, Appendix A). During this inventory, the American beaver was documented by 58 records from Edmonson County consisting of 55 spotlight survey records, one live capture (including photo), one remote camera photo, and one observation of sign (including photos) (Williamson 2009, Tables 4 and 5, Appendix B). This species is restricted to forested areas with appropriate bodies of water, but is common on the park.

Allegheny woodrat.

This species of native rat is found in eastern and south-central Kentucky in a wide variety of forested habitats wherever there is suitable rocky habitat available (Barbour and Davis 1974, Whitaker and Hamilton 1998). Prior to the start of the inventory this species was represented by two specimens in the park museum, one collected in 1934 when the species at the park was known as the eastern woodrat (*Neotoma floridana*), and one collected by the author in 1997 after the name had been changed (Hayes and Harrison 1992, Hayes and Richmond 1993). Additional documentation prior to the start of this inventory included live trapping records from woodrat monitoring 1997-2003 (Thomas 2003), and 16 live trapping records [one report from 1987 (Hayes 1987) and 15 from 2004 woodrat monitoring (Woodman et al. 2007)]. During this inventory, the Allegheny woodrat was documented in Barren and Edmonson counties by 86 records consisting of 83 live captures (including one photo) from long-term woodrat monitoring, two collected dead specimens, and one sighting (Woodman et al. 2007, Tables 4 and 5, Appendix B). This species is restricted to forested areas with appropriate rocky habitat (e.g., cliffs, caves, boulders), but is common on the park.

Eastern harvest mouse.

This small mouse is found almost exclusively in grasslands and occurs statewide in Kentucky (Barbour and Davis 1974, Whitaker and Hamilton 1998). Prior to the start of the inventory this species was not documented on the park based on a collected specimen or a specific sighting, although it was included in two general checklist reports in 1934 and 1969. During this effort, the eastern harvest mouse was documented by 10 records from Barren and Edmonson counties consisting of six collected specimens, and four live trap captures/releases (including photos of one) (Table 5, Appendix B). This species is restricted to tall, dense grassy open areas and is uncommon on the park.

White-footed mouse.

This species of mouse, one of Kentucky's most widely distributed and abundant mammals, is found throughout the state and occurs in a wide variety of forested habitats (Barbour and Davis 1974, Whitaker and Hamilton 1998). Prior to the start of the inventory this species was represented by several individuals captured in the entrance of Mammoth Cave in the early 1930s

(Bailey 1933), one specimen in the park museum collected in 1934, by 16 specimens in the University of Illinois, Museum of Natural History collected in 1960, and more recently by 19 sighting records underneath tin in 2004 (MacGregor 2007, Appendix A). During this inventory, the white-footed mouse was documented in Barren, Edmonson and Hart counties by 72 records consisting of 12 collected specimens (including photographs of one), five sightings of live individuals (including a photo of one), 54 live trap captures/releases, and one individual was found dead but not kept for a museum specimen (MacGregor 2007, Tables 4 and 5, Appendix B). This species is considered widespread and common on the park.

Prairie vole.

This vole is found exclusively in grasslands and occurs nearly statewide (absent from the mountains in the southeast) in Kentucky (Barbour and Davis 1974, Whitaker and Hamilton 1998). Prior to the start of the inventory this species was represented by one specimen in the park museum collected in 1935, and more recently by one sighting record underneath tin (MacGregor 2007, Appendix A). During this inventory, the prairie vole was documented by 17 records from Barren and Edmonson counties consisting of 5 collected specimens (including photographs of three) and 12 live trap captures/releases (Table 5, Appendix B). This species is restricted to grassy open areas, but is common on the park.

Woodland vole.

This vole with a short tail is found in a wide range of habitats and occurs statewide in Kentucky (Barbour and Davis 1974, Whitaker and Hamilton 1998). Prior to the start of the inventory this species was represented by three specimens in the park museum collected in 1934, and more recently by one specimen found dead and collected by the author in 2002, as well as 17 sighting records underneath tin in 2003 and 2004 (MacGregor 2007, Appendix A). During this inventory, the woodland vole was documented in Barren, Edmonson and Hart counties by 11 records consisting of 5 collected specimens (including photographs of one) and by six sighting records underneath tin (MacGregor 2007, Tables 4 and 5, Appendix B). This species is considered widespread and is common on the park.

Southern bog lemming.

This short-tailed lemming is found in a variety of grassland habitats and occurs statewide in Kentucky, except in the far western part of the state (Barbour and Davis 1974, Whitaker and Hamilton 1998). Prior to the start of the inventory this species was not reported from the park, or from Edmonson County (Thomas 2001). During this inventory, the southern bog lemming was documented by one record—a sight record underneath tin in Edmonson County (MacGregor 2007, Table 4, Appendix B). This species is restricted to grassy open areas, is patchy in its local distribution and is rare on the park.

Muskrat.

This species of rodent is found throughout Kentucky wherever there are suitable bodies of water (Barbour and Davis 1974, Whitaker and Hamilton 1998). Prior to the start of the inventory this species was not documented on the park based on a collected specimen, however Bailey (1933) mentioned they had been considered common in the Green River in the 1920s but were scarce in the early 1930s due to the high price of their fur. This species was documented by 33 spotlight survey records on the Green River in 2002 (Asmus 2004, Appendix A). During this inventory, the muskrat was documented by 112 records in Edmonson County consisting of 111 spotlight

survey records along the Green and Nolin rivers, and one live capture on the Nolin River (including photo) (Williamson 2009, Tables 4 and 5, Appendix B). This species is restricted to areas with appropriate bodies of water and is common on the park.

Norway rat.

This exotic, invasive rat is found statewide in Kentucky wherever humans live and provide adequate food and shelter (Barbour and Davis 1974, Whitaker and Hamilton 1998). Prior to the start of the inventory this species was not documented on the park (or from Barren, Hart or Edmonson counties) based on a collected specimen or a specific sighting, although it was included in two general checklist reports in 1934 and 1969 (Thomas 2001, Appendix A). During this inventory, the Norway rat was documented by one collected dead specimen record from inside Mammoth Cave in Edmonson County (including photos) (Table 4, Appendix B). This specimen, found dead near a tourist trail in the developed portion of Mammoth Cave, may have arrived inside the cave on a shipment of supplies or equipment and subsequently died of starvation. This species is restricted to areas with appropriate human-provided food and shelter, and is considered to be rare on the park.

Meadow jumping mouse.

This species of long-tailed mouse with large hind feet is found in tall, weedy grasslands near streams and occurs in central and western Kentucky (Barbour and Davis 1974, Whitaker and Hamilton 1998). Prior to the start of the inventory this species was not documented on the park or from Barren, Hart or Edmonson counties (Thomas 2001, Appendix A). During this inventory, the meadow jumping mouse was documented by two collected specimen records (including photos of one), one from Barren and one from Edmonson County (Table 5, Appendix B). This species is restricted to tall, weedy grasslands or open woodlands near streams or moist lowlands, and is considered to be rare on the park.

Carnivora

Nine species in the order Carnivora were documented on the park; three in the dog family, one in the raccoon family, three in the weasel family, one in the skunk family, and one in the cat family.

Red fox.

This species of fox occurs statewide in Kentucky and prefers mainly open areas, farmlands and forest edges, such as is found adjacent to much of the park's boundary (Barbour and Davis 1974, Whitaker and Hamilton 1998). Prior to the start of the inventory this species was not documented on the park based on a collected specimen or a specific sighting, although it was included in a general checklist report in 1969 (Appendix A). Field work associated with this inventory ended in 2010, however before the report was completed the red fox was documented on 22 October 2012 by one collected dead specimen record (vehicle collision) from Edmonson County on Highway 70, 1km inside (east) the Brownsville Entrance to the park (Table 4, Appendix B). The fractured skull and a whole-specimen digital photograph were curated, accessioned, cataloged, and included as a voucher specimen for this project. This species primarily uses grassy open areas and similar areas with scattered trees, and is rare on the park.

Gray fox.

This species of fox is found in hardwood forests and occurs statewide in Kentucky (Barbour and Davis 1974, Whitaker and Hamilton 1998). Prior to the start of the inventory this species was

documented on the park based on one specimen collected on 17 March 1959 (the specimen was shot by a ranger and subsequently tested positive for rabies) (Appendix A). During this inventory, the gray fox was documented by three Edmonson County records including one found skull, one specimen found dead along Highway 70 and photographed but not collected, and one sighting record (Table 4, Appendix B). This species is considered widespread, but uncommon on the park.

Coyote.

This species of dog is found throughout the eastern United States in a wide variety of habitats (Whitaker and Hamilton 1998). Although originally found primarily in western North America, the coyote has expanded its range eastward both naturally and through accidental/intentional transplants (Whitaker and Hamilton 1998). Prior to the start of the inventory this species was represented by one sighting by the author in 2004, and by several records of tracks at scent stations along the Green and Nolin rivers in 2002-2003 (Asmus 2003, Appendix A). During this inventory, the coyote was documented in Edmonson and Hart counties by 14 remote camera records, two live trapping captures (including photos of each), and three sighting records (Tables 4 and 5, Appendix B). This species is considered widespread and common on the park.

Raccoon.

This species prefers wooded habitats and occurs statewide in Kentucky (Barbour and Davis 1974, Whitaker and Hamilton 1998). Prior to the start of the inventory this species was represented by one specimen in the park museum collected in 1938, by one specimen reportedly shot by hunters in 1957, by three spotlight survey records in 2002, and by several records of tracks at scent stations along the Green and Nolin rivers in 2002-2003 (Asmus 2004, Appendix A). During this inventory, the raccoon was documented by 50 records in Barren and Edmonson counties consisting of 32 spotlight survey records, 9 remote camera photo records, 7 live captures (including photos of two records), one specimen found dead and photographed but not collected, and one skull found and collected (Williamson 2009, Tables 4 and 5, Appendix B). This species is considered widespread and common on the park.

Long-tailed weasel.

This species of weasel is found throughout Kentucky in a wide variety of forested habitats, but prefers forest edge (Barbour and Davis 1974, Whitaker and Hamilton 1998). Prior to the start of the inventory this species was represented by one specimen in the park museum collected in 1935, and by one specimen live captured by the author in 2000 (Thomas 2003, Appendix A). During this inventory, the long-tailed weasel was documented by two records—sight records on subsequent days in a cave in Edmonson County (Table 4, Appendix B). This species mainly uses wooded areas and along edges of woods—which occur throughout the park, however this mammal is considered rare on the park.

Mink.

This species of weasel is found in diverse wetland habitats with permanent water and occurs statewide in Kentucky (Barbour and Davis 1974, Whitaker and Hamilton 1998). Prior to the start of the inventory this species was represented by spotlight survey records and records of tracks at scent stations along the Green and Nolin rivers in 2002-2003 (Asmus 2004, Appendix A). During this inventory, the mink was documented by 3 spotlight survey records in Edmonson

County (Williamson 2009, Table 4, Appendix B). This species is restricted to areas with appropriate wet habitats and is rare on the park.

River otter.

This species of weasel is found in diverse wetland habitats with much water and occurs sporadically across the state of Kentucky (Barbour and Davis 1974, Whitaker and Hamilton 1998). River otters were thought to be extirpated from Kentucky by the early to mid 1900s. The latest record Bailey (1933) could find from the park was one caught about 1910 (Appendix A). From 1991 to 1994 the KDFWR conducted a river otter restoration project in the eastern half of the state (Cramer 1995). The only release in relatively close proximity to the park was 25 individuals (15 males, 10 females) released at the Bacon Creek boat ramp along the upper Nolin River in Hart County on 12 February 1994. Also, in early 2001 a KDFWR conservation officer relocated 5 nuisance otters (2 males, 3 females) from the Wax marina on Nolin Lake to the Green River at the US Route 31E bridge in eastern Hart County (T. Slone, personal communication)—approximately 48 km (30 mi) upstream of the park boundary. Prior to the start of the inventory this species was represented on the park by spotlight survey records and records of tracks at scent stations along the Green and Nolin rivers in 2002-2003 (Asmus 2004, Appendix A). During this inventory, the river otter was documented by 77 records from Edmonson and Hart counties consisting of 61 records of sign at live traps and scat sign, 10 remote camera photo records, 5 live captures (including photos of three records), and one spotlight survey record (Williamson 2009, Tables 4 and 5, Appendix B). This species is restricted to areas with appropriate very wet habitats and is rare on the park.

Striped skunk.

This species of skunk is found throughout Kentucky in a wide variety of non- to sparsely-forested habitats, especially farmland and woodland edge (Barbour and Davis 1974, Whitaker and Hamilton 1998). Prior to the start of the inventory this species was documented on the park based on a sighting and sign in the early 1930s (Bailey 1933), and it was included in three general checklist reports in 1934, 1957 and 1969 (Appendix A). During this inventory, the striped skunk was documented by two Edmonson County records consisting of photos of a dead specimen, and one sighting of a live individual (Table 4, Appendix B). This species mainly uses openlands and areas with few trees, and it is common on the park.

Bobcat.

This species of cat is found in a wide variety of habitats and is found sporadically throughout Kentucky (Barbour and Davis 1974, Whitaker and Hamilton 1998). Prior to the start of the inventory this species was represented by a record of sighting tracks in 1934, a sighting of a live individual in 1980, and spotlight survey records and records of tracks at scent stations along the Green and Nolin rivers in 2002-2003 (Asmus 2004, Appendix A). During this inventory, the bobcat was documented by three records from Edmonson County consisting of one remote camera photo record and two live capture records (including photos of both records) (Williamson 2009, Table 5, Appendix B). This species uses a wide range of habitats found on the park, however this mammal is considered rare on the park.

Artiodactyla

Only one species in the order Artiodactyla, white-tailed deer, was documented on the park.

White-tailed deer.

This species is found throughout Kentucky in a wide variety of habitats (Barbour and Davis 1974, Whitaker and Hamilton 1998). Prior to the start of the inventory this species was represented by one specimen in the park museum collected on an unknown date, by trapping and visual records in 1948, 1946-1951, 1955, 1976, 1977, and more recently from spotlight survey records and records of tracks at scent stations along the Green and Nolin rivers in 2002-2003 (Asmus 2004, Appendix A). During this inventory, the white-tailed deer was documented in Barren, Edmonson and Hart counties by 101 records consisting of 97 remote camera photo records, three sightings (with photos of each), and one specimen found dead and collected (including photos) (Williamson 2009, Tables 4 and 5, Appendix B). This species is considered widespread and abundant on the park.

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Appendix A

Appendix A. Records and reports of terrestrial wild mammals prior to the start of an inventory at Mammoth Cave National Park, Kentucky in 2005.

Species Name and Classification

Acc/ Cat#	Voucher Specimen ?	Obs. Date	Historic in 2005? (> 10 yrs. Old)	Obs. Type	Observer(s)	UTM X	UTM Y	Location Description	Notes/Source
Order: Didelphimorphia									
Family: Didelphidae									
Virginia opossum (<i>Didelphis virginiana</i>)									
--	N	?/?/1934	Y	captured/ skin collected	Claude W. Hibbard	--	--	no specific record	Report to the Wildlife Division, NPS, Berkely, California, Emergency Conservation Work, Mammoth Cave National Park (Proposed)
MACA- 00002; MACA 1939	Y	14-Oct-35	Y	museum specimen	Tanner, H	--	--	Found at C.C.C. Camp #2	MACA SRM curatorial museum; CS, CAB 24, DR5; stuffed skin
MACA- 00006; MACA 1767	Y	13-Jul-37	Y	museum specimen	Kuony, John H.	--	--	Found at Temple Hill	MACA SRM curatorial museum; CS, CAB 24, DR6; disarticulated skeleton
--	N	?/?/1969	Y	no specific sighting	Ken Berry	--	--	no specific record	Wildlife Checklist of Mammoth Cave National Park by Ken Berry, Seasonal Park Naturalist
--	N	2002-2003	N	no specific tracks at scent stations	Kimberly Ann Asmus	--	--	along Green and Nolin Rivers	Relationships Between Muskrats and Freshwater Mussels Prior to River Otter Restoration at Mammoth Cave, Kentucky
Order: Soricomorpha									
Family: Soricidae (Shrews)									
northern short-tailed shrew (<i>Blarina brevicauda</i>)									
--	N	?/?/1934	Y	no specific sighting	Claude W. Hibbard	--	--	no specific record	Report to the Wildlife Division, NPS, Berkely, California, Emergency Conservation Work, Mammoth Cave National Park (Proposed)
MACA- 00002; MACA 1958	Y	23-Mar-35	Y	museum specimen	Claude W. Hibbard	--	--	Found at River Styx	MACA curatorial museum; CS, CAB 24, DR6
UIMNH 26492	Y	31-Dec-60	Y	museum specimen	J. T. Wallace	--	--	Little Hope Church area	University of Illinois, Museum of Natural History

Species Name and Classification									
Acc/	Voucher		Historic					Location	
Cat#	Specimen	?	in 2005?		Observer(s)	UTM X	UTM Y	Description	Notes/Source
(Y/N)	Obs. Date	(Y/N)	(> 10 yrs. Old)	Obs. Type					
northern short-tailed shrew (<i>Blarina brevicauda</i>) (cont.)									
--	N	?/?/1969	Y	no specific sighting	Ken Berry	--	--	no specific record	Wildlife Checklist of Mammoth Cave National Park by Ken Berry, Seasonal Park Naturalist
--	N	?/?/2003	N	visual-spotlight	Kim Asmus	--	--	along Green River	Relationships Between Muskrats and Freshwater Mussels Prior to River Otter Restoration at MACA N.P., KY
--	N	7-Nov-04	N	Visual	John R. MacGregor	582189	4119440	great onyx meadow tin site	MACA Herp Inventory
--	N	21-Oct-04	N	Visual	John R. MacGregor	582189	4119440	great onyx meadow tin site	MACA Herp Inventory
--	N	23-Sep-04	N	Visual	John R. MacGregor	583836	4118650	floyd collins family home tin site	MACA Herp Inventory; called "floyd Collins 1" in herptinsites spreadsheet
--	N	11-Sep-04	N	Visual	John R. MacGregor	581975	4119477	great onyx picnic shelter tin site	MACA Herp Inventory; called "go pavillion" in "herptinsites" spreadsheet
--	N	11-Sep-04	N	Visual	John R. MacGregor	584364	4112198	little hope church tin site	MACA Herp Inventory; called "little hope church site" in "herpstinsites" spreadsheet
--	N	10-Sep-04	N	Visual	John R. MacGregor	571338	4120459	houchins ferry road ca 1.1 mi w of jagers cemetery	MACA Herp Inventory; called "houchins ferry 2" in "herpstinsites" spreadsheet
--	N	10-Apr-04	N	Visual	John R. MacGregor	582189	4119440	great onyx meadow tin site	MACA Herp Inventory
--	N	10-Apr-04	N	Visual	John R. MacGregor	581975	4119477	great onyx picnic shelter tin site	MACA Herp Inventory; called "go pavillion" in "herptinsites" spreadsheet
--	N	10-Apr-04	N	Visual	John R. MacGregor	583732	4109793	wondering woods #1 old homesite tin site	MACA Herp Inventory; called "chaumont 1" in "herpstinsites" spreadsheet
--	N	10-Apr-04	N	Visual	John R. MacGregor	583727	4110146	wondering woods #6 prairie tin site	MACA Herp Inventory; called "chaumont 6" in "herpstinsites" spreadsheet
--	N	8-Mar-04	N	Visual	John R. MacGregor	583732	4109793	wondering woods #1 old homesite tin site	MACA Herp Inventory; called "chaumont 1" in "herpstinsites" spreadsheet; under set tin
least shrew (<i>Cryptotis parva</i>)									
MACA-00002; MACA 1955	Y	8-Jan-35	Y	museum specimen	Claude W. Hibbard			Found at Fish Trap Hollow	MACA curatorial museum; CS, CAB 24, DR6
--	N	?/?/1969	Y	no specific sighting	Ken Berry			no specific record	Wildlife Checklist of Mammoth Cave National Park by Ken Berry, Seasonal Park Naturalist

Species Name and Classification									
Acc/ Cat#	Voucher Specimen ?	Obs. Date	Historic in 2005? (> 10 yrs. Old)	Obs. Type	Observer(s)	UTM X	UTM Y	Location Description	Notes/Source
least shrew (<i>Cryptotis parva</i>) (cont.)									
--	N	22-Dec-34	Y	Visual	Claude W. Hibbard			North side of Green River	Report to the Wildlife Division, NPS, Berkely, California, Emergency Conservation Work, Mammoth Cave National Park (Proposed)/ New Mammal Records for Mammoth Cave National Park, Kentucky. Journal of Mammalogy Vol. 16, No. 4, November, 1935, p. 329.
--	N	21-Oct-04	N	Visual	John R. MacGregor	582189	4119440	great onyx meadow tin site	MACA Herp Inventory; 2 individuals observed
smoky shrew (<i>Sorex fumeus</i>)									
--	N	?/?/1933	Y	trapping	V. Bailey/ Leonard Giovannoli			among the rocks in the mouth of Mammoth Cave	Three specimens taken by Giovannoli and one by Bailey at this location; in Cave Life of Kentucky, 1933
MACA-00002; MACA 1954	Y	6-Dec-34	Y	museum specimen	Claude W. Hibbard			Found at River Styx	MACA curatorial museum; CS, CAB 24, DR6
--	N	?/?/1934	Y	no specific sighting	Claude W. Hibbard			no specific record	Report to the Wildlife Division, NPS, Berkely, CA, Emergency Conservation Work, MACA N.P. (Proposed)
--	N	?/?/1969	Y	no specific sighting	Ken Berry			no specific record	Wildlife Checklist of MACA N.P. by Ken Berry, Seasonal Park Naturalist
MACA-00559; MACA 59319	Y	13-May-03	N	found skull	Steven C. Thomas	579316	4115377	White Cave	MACA curatorial museum
Family: Talpidae (Moles)									
eastern mole (<i>Scalopus aquaticus</i>)									
MACA-00002; MACA 1961	Y	6-Oct-34	Y	museum specimen	Claude W. Hibbard			Found in the park	MACA curatorial museum; CS, CAB 24, DR6
--	N	?/?/1934	Y	no specific sighting	Claude W. Hibbard			no specific record	Report to the Wildlife Division, NPS, Berkely, CA, Emergency Conservation Work, MACA N.P. (Proposed)
--	N	?/?/1969	Y	no specific sighting	Ken Berry			no specific record	Wildlife Checklist of MACA N.P. by Ken Berry, Seasonal Park Naturalist
--	N	9-Jul-04	N	Sign	John R. MacGregor	575619	4118379	good spring church cemetery	MACA Herp Inventory; tunnels observed in cemetery; site not in "herpstinsites", so was digitized based on description

Species Name and Classification

Accl/ Cat#	Voucher Specimen ?	Obs. Date	Historic in 2005? (> 10 yrs. Old)	Obs. Type	Observer(s)	UTM X	UTM Y	Location Description	Notes/Source
eastern mole (<i>Scalopus aquaticus</i>) (cont.)									
--	N	9-Jul-04	N	Sign	John R. MacGregor	576771	4113265	Joppa Baptist Church cemetery	MACA Herp Inventory; site not in "herpstinsites", so was digitized based on description
--	N	20-Jun-04	N	Visual	John R. MacGregor	571858	4121247	Houchins Ferry Rd ca .4mi w of Jaggers cm	MACA Herp Inventory; called "houchins ferry 1 north" (or south) in "herpstinsites" spreadsheet
--	N	19-Jun-04	N	Visual	John R. MacGregor	583836	4118650	floyd collins family home tin site	MACA Herp Inventory; called "floyd Collins 1" in herpstinsites spreadsheet
Order: Lagomorpha									
Family: Leporidae (Rabbits)									
eastern cottontail (<i>Sylvilagus floridanus</i>)									
--	N	?/?/1934	Y	no specific sighting	Claude W. Hibbard	--	--	no specific record	Report to the Wildlife Division, NPS, Berkely, California, Emergency Conservation Work, Mammoth Cave National Park (Proposed)
--	N	?/?/1969	Y	no specific sighting	Ken Berry	--	--	no specific record	Wildlife Checklist of Mammoth Cave National Park by Ken Berry, Seasonal Park Naturalist
Order: Rodentia									
Family: Sciuridae (Squirrels)									
eastern chipmunk (<i>Tamias striatus</i>)									
MACA-00002; MACA 1941	Y	5-Nov-34	Y	museum specimen	Claude W. Hibbard	--	--	Found near Ollie	MACA SRM curator.museum; CS, CAB 24, DR6; stuffed skin
--	N	?/?/1934	Y	no specific sighting	Claude W. Hibbard	--	--	no specific record	Report to the Wildlife Division, NPS, Berkely, California, Emergency Conservation Work, Mammoth Cave National Park (Proposed)
--	N	?/?/1969	Y	no specific sighting	Ken Berry	--	--	no specific record	Wildlife Checklist of Mammoth Cave National Park by Ken Berry, Seasonal Park Naturalist
--	N	11-Jul-97	N	live trapped	Steven C. Thomas and Dan Figert	570581	4119907	Allegheny woodrat monitoring trap station #4; in upper First Creek drainage	Woodrat Monitoring MS Access database associated with Allegheny Woodrat Monitoring Final Report 2003 by Steven C. Thomas
--	N	11-Jul-97	N	live trapped	Steven C. Thomas and Dan Figert	570995	4120175	Allegheny woodrat monitoring trap station #15; in upper First Creek drainage	Woodrat Monitoring MS Access database associated with Allegheny Woodrat Monitoring Final Report 2003 by Steven C. Thomas

Species Name and Classification									
Acc/ Cat#	Voucher Specimen ?	Obs. Date	Historic in 2005? (> 10 yrs. Old)	Obs. Type	Observer(s)	UTM X	UTM Y	Location Description	Notes/Source
eastern chipmunk (<i>Tamias striatus</i>) (cont.)									
--	N	11-Jul-97	N	live trapped	Steven C. Thomas and Dan Figert	570864	4120350	Allegheny woodrat monitoring trap station #20; in upper	Woodrat Monitoring MS Access database associated with Allegheny Woodrat Monitoring Final Report 2003 by Steven C. Thomas
--	N	28-Jan-98	N	live trapped	Steven C. Thomas	571067	4120139	Allegheny woodrat monitoring trap station #13; in upper First Creek drainage	Woodrat Monitoring MS Access database associated with Allegheny Woodrat Monitoring Final Report 2003 by Steven C. Thomas
--	N	17-Mar-98	N	live trapped	Steven C. Thomas and Brian Clark	570581	4119907	Allegheny woodrat monitoring trap station #4; in upper First Creek drainage	Woodrat Monitoring MS Access database associated with Allegheny Woodrat Monitoring Final Report 2003 by Steven C. Thomas
--	N	17-Mar-98	N	live trapped	Steven C. Thomas and Brian Clark	570868	4119932	Allegheny woodrat monitoring trap station #6; in upper First Creek drainage	Woodrat Monitoring MS Access database associated with Allegheny Woodrat Monitoring Final Report 2003 by Steven C. Thomas
--	N	20-May-98	N	live trapped	Steven C. Thomas and Sunni Lawless	570536	4119797	Allegheny woodrat monitoring trap station #2; in upper First Creek drainage	Woodrat Monitoring MS Access database associated with Allegheny Woodrat Monitoring Final Report 2003 by Steven C. Thomas
--	N	20-May-98	N	live trapped	Steven C. Thomas and Sunni Lawless	570868	4119932	Allegheny woodrat monitoring trap station #6; in upper First Creek drainage	Woodrat Monitoring MS Access database associated with Allegheny Woodrat Monitoring Final Report 2003 by Steven C. Thomas
--	N	11-Jul-98	N	live trapped	Steven C. Thomas	570581	4119907	Allegheny woodrat monitoring trap station #4; in upper First Creek drainage	Woodrat Monitoring MS Access database associated with Allegheny Woodrat Monitoring Final Report 2003 by Steven C. Thomas
--	N	11-Jul-98	N	live trapped	Steven C. Thomas	570818	4120198	Allegheny woodrat monitoring trap station #18; in upper First Creek drainage	Woodrat Monitoring MS Access database associated with Allegheny Woodrat Monitoring Final Report 2003 by Steven C. Thomas
--	N	11-Jul-98	N	live trapped	Steven C. Thomas	570848	4120225	Allegheny woodrat monitoring trap station #19; in upper First Creek drainage	Woodrat Monitoring MS Access database associated with Allegheny Woodrat Monitoring Final Report 2003 by Steven C. Thomas

Species Name and Classification									
Acc/	Voucher Specimen	Obs. Date	Historic in 2005? (> 10 yrs. Old)	Obs. Type	Observer(s)	UTM X	UTM Y	Location Description	Notes/Source
Cat#	(Y/N)								
eastern chipmunk (<i>Tamias striatus</i>) (cont.)									
--	N	28-Jul-99	N	live trapped	Steven C. Thomas	570995	4120175	Allegheny woodrat monitoring trap station #15; in upper First Creek drainage	Woodrat Monitoring MS Access database associated with Allegheny Woodrat Monitoring Final Report 2003 by Steven C. Thomas
--	N	28-Jul-99	N	live trapped	Steven C. Thomas	571059	4119964	Allegheny woodrat monitoring trap station #10; in upper First Creek drainage	Woodrat Monitoring MS Access database associated with Allegheny Woodrat Monitoring Final Report 2003 by Steven C. Thomas
woodchuck (<i>Marmota monax</i>)									
--	N	?/?/1934	Y	no specific sighting	Claude W. Hibbard	--	--	no specific record	Report to the Wildlife Division, NPS, Berkely, California, Emergency Conservation Work, Mammoth Cave National Park (Proposed)
MACA-00002; MACA 1967	Y	16-May-35	Y	museum specimen	Lyen, L.	--	--	Found at Bruce Hollow	MACA SRM curatorial museum; CS, CAB 24, DR5; stuffed skin
--	N	?/?/1957	Y	no specific sighting	MACA employees	--	--	no specific record	Annual Wildlife Report: Mammoth Cave National Park
--	N	?/?/1969	Y	no specific sighting	Ken Berry	--	--	no specific record	Wildlife Checklist of Mammoth Cave National Park by Ken Berry, Seasonal Park Naturalist
--	N	9-Mar-97	N	visual	Steven C. Thomas and Bree Enderle	--	--	upper First Creek drainage between First Creek and Houchins Ferry Road	observed live woodchuck between old trap sites #7 and #9
eastern gray or eastern fox squirrel (<i>Sciurus</i> spp.)									
--	N	2002-2003	N	tracks at scent stations	Kimberly Ann Asmus	--	--	along Green and Nolin Rivers	Relationships Between Muskrats and Freshwater Mussels Prior to River Otter Restoration at Mammoth Cave, Kentucky
eastern gray squirrel (<i>Sciurus carolinensis</i>)									
--	N	?/?/1934	Y	no specific sighting	Claude W. Hibbard	--	--	no specific record	Report to the Wildlife Division, NPS, Berkely, California, Emergency Conservation Work, Mammoth Cave National Park (Proposed)
MACA-00002; MACA 1942	Y	23-Jan-35	Y	museum specimen	Claude W. Hibbard	--	--		MACA SRM curatorial museum; CS, CAB 24, DR5; stuffed skin

Species Name and Classification									
Acc/	Voucher		Historic					Location	
Cat#	Specimen	?	in 2005?		Observer(s)	UTM X	UTM Y	Description	Notes/Source
	(Y/N)	Obs. Date	(> 10 yrs. Old)	Obs. Type					
eastern gray squirrel (<i>Sciurus carolinensis</i>) (cont.)									
--	N	3-Mar-35	Y	visual	Claude W. Hibbard	--	--	found in felled trees during fire hazard reduction work	Breeding Seasons of Gray Squirrel and Flying Squirrel. Journal of Mammalogy. Vol. 16, No. 4, November, 1935, pp. 325-326. By Claude W. Hibbard
--	N	?/?/1969	Y	no specific sighting	Ken Berry	--	--	no specific record	Wildlife Checklist of Mammoth Cave National Park by Ken Berry, Seasonal Park Naturalist
--	N	?/?/1978	Y	visual	Anna Hansen/Sandy Suddarth	--	--	Green River near Sand Cave Island	A Habitat Study of Castor canadensis
eastern fox squirrel (<i>Sciurus niger</i>)									
--	N	?/?/1934	Y	no specific sighting	Claude W. Hibbard	--	--	no specific record	Report to the Wildlife Division, NPS, Berkely, California, Emergency Conservation Work, Mammoth Cave National Park (Proposed)
--	N	?/?/1969	Y	no specific sighting	Ken Berry	--	--	no specific record	Wildlife Checklist of Mammoth Cave National Park by Ken Berry, Seasonal Park Naturalist
southern flying squirrel (<i>Glaucomys volans</i>)									
--	N	?/?/1933	Y	1 specimen collected	Leonard Giovannoli			no specific location	Cave Life of Kentucky, 1933, The University Press, Notre Dame, Ind. By Vernon Bailey
--	N	?/?/1934	Y	skins collected	Claude W. Hibbard	--	--	no specific record	Report to the Wildlife Division, NPS, Berkely, California, Emergency Conservation Work, Mammoth Cave National Park (Proposed)
MACA-00002; MACA 1945	Y	8/22/1934	Y	museum specimen	Gibson, Frank	--	--	Found at Woodcrew Camp #2	MACA SRM curatorial museum; CS, CAB 24, DR6; stuffed skin
MACA-00002; MACA 1944	Y	8/22/1934	Y	museum specimen	Gibson, Frank	--	--	Found at Woodcrew Camp #2	MACA SRM curatorial museum; CS, CAB 24, DR5; stuffed skin
--	N	4-Apr-35	Y	visual	Claude W. Hibbard	--	--	found in felled trees during fire hazard reduction work	Breeding Seasons of Gray Squirrel and Flying Squirrel. Journal of Mammalogy. Vol. 16, No. 4, November, 1935, pp. 325-326. By Claude W. Hibbard
--	N	?/?/1969	Y	no specific sighting	Ken Berry	--	--	no specific record	Wildlife Checklist of Mammoth Cave National Park by Ken Berry, Seasonal Park Naturalist
--	N	30-Jun-04	N	auditory	Steven C. Thomas, T. Wethington,	573627	4117727	Buffalo Trail Pond	Heard a southern flying squirrel vocalizing in a tree while mist netting bats; from field data sheet

Species Name and Classification									
Acc/	Voucher Specimen ?	Obs. Date	Historic in 2005? (> 10 yrs. Old)	Obs. Type	Observer(s)	UTM X	UTM Y	Location Description	Notes/Source
Family: Castoridae (Beaver)									
American beaver (<i>Castor canadensis</i>)									
MACA-00037; MACA 2661	Y	Unknown	Y	museum specimen	Unknown	--	--	Unknown	MACA SRM curatorial museum; CS, CAB 24, DR2; folded skin
MACA-00037; MACA 2662	Y	Unknown	Y	museum specimen	Unknown	--	--	Unknown	MACA SRM curatorial museum; CS, CAB 24, DR3; poor folded skin
MACA-00037; MACA 2663	Y	Unknown	Y	museum specimen	Unknown	--	--	Unknown	MACA SRM curatorial museum; CS, CAB 24, DR4; folded skin
--	N	?/?/1969	Y	no specific sighting	Ken Berry	--	--		Wildlife Checklist of Mammoth Cave National Park by Ken Berry, Seasonal Park Naturalist
--	N	6-Oct-78	Y	visual	Anna Hansen/Sandy Suddarth	--	--	Green River near Turnhole Bend/near Boardcut I Island	Observed after 11:45 am by WKU Mammalogy students; also the authors of this report
--	N	13-Sep-80	Y	visual	MACA employees	--	--	Stice Island	1980 Wildlife Survey, in Memorandum to all Employees from Chief Ranger, June 16, 1981
--	N	3-Aug-02	N	spotlight surveys	Kimberly Ann Asmus	581051	4119521	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	3-Aug-02	N	spotlight surveys	Kimberly Ann Asmus	580875	4119656	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	3-Aug-02	N	spotlight surveys	Kimberly Ann Asmus	578872	4118042	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	3-Aug-02	N	spotlight surveys	Kimberly Ann Asmus	578881	4115911	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	3-Aug-02	N	spotlight surveys	Kimberly Ann Asmus	578868	4115803	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	10-Aug-02	N	spotlight surveys	Kimberly Ann Asmus	580744	4119735	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	?/?/2003	N	spotlight surveys	Kimberly Ann Asmus	--	--	Green River, Mammoth Cave National Park	Relationships Between Muskrats and Freshwater Mussels Prior to River Otter Restoration at Mammoth Cave, Kentucky

Species Name and Classification									
Acc/	Voucher		Historic						
Cat#	Specimen	?	in 2005?						
	(Y/N)	Obs. Date	(> 10 yrs. Old)	Obs. Type	Observer(s)	UTM X	UTM Y	Location Description	Notes/Source
Family: Cricetidae (New World Rats and Mice)									
Eastern woodrat (<i>Neotoma floridana</i>)									
MACA-00002; MACA 1965	Y	6-Dec-34	Y	museum specimen	Claude W. Hibbard			Found in park	MACA curatorial museum; CS, CAB 24, DR5
--	N	7/10-12/87	Y	live trapping, visual	John P. Hayes			Frozen Niagara, New Entrance, Crystal Cave	Research on Eastern Woodrat Populations At Mammoth Cave National Park by John P. Hayes
Allegheny woodrat (<i>Neotoma magister</i>)									
--	N	?/?/1934	Y	no specific sighting	Claude W. Hibbard			no specific record	Report to the Wildlife Division, NPS, Berkely, California, Emergency Conservation Work, Mammoth Cave National Park (Proposed)
--	N	?/?/1969	Y	no specific sighting	Ken Berry			no specific record	Wildlife Checklist of Mammoth Cave National Park by Ken Berry, Seasonal Park Naturalist
MACA-00363; MACA 35888	Y	9-May-97	N	museum specimen	Steven C. Thomas	571019	4119832	Found at the eastern side of First Creek drainage.	MACA curatorial museum; CS, CAB 24, DR6; Disarticulated skeleton.
--	N	28-Nov-01	N	live trapping, visual	Steven C. Thomas			several locations	Allegheny Woodrat Monitoring Final Report 2003
--	N	18-Nov-04	N	Live Traps	Steven C. Thomas	583647	4111863	Frozen Niagara Entrance	Tattoo # 3LGH; no ecto-parasites; 2.5 pieces of apple eaten; very docile; vaginal opening not perforate (unbred); age class "S."
--	N	19-Nov-04	N	Live Traps	Steven C. Thomas	583647	4111863	Frozen Niagara Entrance	2 fleas, tattoo # 3RGL; rat seemed to have a balance problem and was very docile while handling (almost thought she was dead), she peed while in bag; vaginal opening crusted shut, mammae small and crusted tips; VAG not missing hair and not discolored.
--	N	23-Nov-04	N	Live Traps	Steven C. Thomas	583799	4112129	Pipe Cave	vaginal opening crusty; VAG not discolored and not missing hair; tear in margin of left ear; mammae small and covered by fur; put a green "I" in left ear (tattoo #LGI); no parasites seen; typical activity level for first time capture; good condition, a "squeeler" woodrat

Species Name and Classification									
Acc/ Cat#	Voucher Specimen ?	Obs. Date	Historic in 2005? (> 10 yrs. Old)	Obs. Type	Observer(s)	UTM X	UTM Y	Location Description	Notes/Source
Allegheny woodrat (<i>Neotoma magister</i>) (cont.)									
--	N	24-Nov-04	N	Live Traps	Steven C. Thomas	583850	4112162	Little Hope Crow Cave	mammae very small; some hair missing around bases; VAG not discolored and not missing hair, adult pelage, vaginal opening appears never to have been bred; put a green "M" tattoo in right ear; docile; took 3 or 4 digital photos. New ear tag # 3RGM
--	N	23-Nov-04	N	Live Traps	Steven C. Thomas	582510	4113165	Cathedral Domes Pit	Vaginal opening crusted shut; mammae not elongated or baggy, but are missing hair around bases; VAG not discolored and not missing hair; put a green "J" in left ear (tattoo #LGJ), very docile; not sure if I squeezed hard enough for tattoo to puncture skin.
--	N	24-Nov-04	N	Live Traps	Steven C. Thomas	578840	4114289	Fault Cave	New tattoo # 3LGK; vaginal opening crusted shut; mammae elongated, crusted and missing hair (she probably has a litter of pups), > 5 fleas, fairly active; VAG not discolored and not missing hair; put a green "K" tattoo in left ear; vocal, caught in trap to
--	N	23-Nov-04	N	Live Traps	Bill Moore	582679	4110574	Rubble Cave	new tag # 167; age class S?
--	N	18-Nov-04	N	Live Traps	Steven C. Thomas	581799	4119549	Great Onyx Cave	Tattoo # 3LBE; VAG not discolored but missing hair; normal level of activity for first time capture; all bait gone; 1 flea
--	N	19-Nov-04	N	Live Traps	Steven C. Thomas	580665	4113894	Violet City Entrance	VAG not missing hair and not discolored; good condition; put a black "F" in left ear (tattoo #LBF); typical amt. of activity for 1st time captured; 1 flea
--	N	23-Nov-04	N	Live Traps	Bill Moore	581551	4109203	Long Cave	new ear tag #164; tag both ears; all bait gone
--	N	23-Nov-04	N	Live Traps	Bill Moore	582680	4110517	Two Tub Cave	tag #176
--	N	24-Nov-04	N	Live Traps	Bill Moore	580361	4111670	France Sandstone Cave 2	new tag # 173
--	N	24-Nov-04	N	Live Traps	Bill Moore	580726	4111296	Owens Valley Talus Cave	new tag # 174
--	N	24-Nov-04	N	Live Traps	Bill Moore	582664	4110768	Union City Cave #3	new tag # 172; fleas multiple, all bait consumed, trap closest to entrance
--	N	24-Nov-04	N	Live Traps	Bill Moore	579280	4112073	Katy Pace Talus Cavelet	New tag # 175, right ear only; could not see vaginal opening?, visible mam. Glands/left ear torn while tagging, left eye greatly reduced, swelled almost completely shut, old injury, fleas, no visible woodrat sign

Species Name and Classification									
Accel/ Cat#	Voucher Specimen ?	Obs. Date	Historic in 2005? (> 10 yrs. Old)	Obs. Type	Observer(s)	UTM X	UTM Y	Location Description	Notes/Source
eastern harvest mouse (<i>Reithrodontomys humulis</i>)									
--	N	?/?/1934	Y	no specific sighting	Claude W. Hibbard			no specific record	Report to the Wildlife Division, NPS, Berkely, CA, Emergency Conservation Work, MACA N. P. (Proposed)
--	N	?/?/1969	Y	no specific sighting	Ken Berry			no specific record	Wildlife Checklist of MACA N.P. by Ken Berry, Seasonal Park Naturalist
white-footed mouse (<i>Peromyscus leucopus</i>)									
--	N	?/?/1933	Y	several caught	Vernon Bailey			entrance of Mammoth Cave	Cave Life of Kentucky, 1933, The University Press, Notre Dame, Ind. By Vernon Bailey
--	N	?/?/1934	Y	no specific sighting	Claude W. Hibbard			no specific record	Report to the Wildlife Division, NPS, Berkely, CA, Emergency Conservation Work, MACA N. P. (Proposed)
MACA- 00002; MACA 1953	Y	7-Nov-34	Y	museum specimen	Claude W. Hibbard			Found at sink near Jim Lee Ridge	MACA curatorial museum; CS, CAB 24, DR6
UIMNH 26530	Y	28-Dec-60	Y	museum specimen	J.T. Wallace			utility area or Little Hope Church	University of Illinois, Museum of Natural History
UIMNH 26531	Y	30-Dec-60	Y	museum specimen	J.T. Wallace			utility area or Little Hope Church	University of Illinois, Museum of Natural History
UIMNH 26532	Y	30-Dec-60	Y	museum specimen	J.T. Wallace			utility area or Little Hope Church	University of Illinois, Museum of Natural History
UIMNH 26533	Y	30-Dec-60	Y	museum specimen	J.T. Wallace			utility area or Little Hope Church	University of Illinois, Museum of Natural History
UIMNH 26534	Y	30-Dec-60	Y	museum specimen	J.T. Wallace			utility area or Little Hope Church	University of Illinois, Museum of Natural History
UIMNH 26535	Y	30-Dec-60	Y	museum specimen	J.T. Wallace			utility area or Little Hope Church	University of Illinois, Museum of Natural History
UIMNH 26536	Y	30-Dec-60	Y	museum specimen	J.T. Wallace			utility area or Little Hope Church	University of Illinois, Museum of Natural History
UIMNH 26537	Y	30-Dec-60	Y	museum specimen	J.T. Wallace			utility area or Little Hope Church	University of Illinois, Museum of Natural History
UIMNH 26538	Y	31-Dec-60	Y	museum specimen	J.T. Wallace			Little Hope Church area	University of Illinois, Museum of Natural History
UIMNH 26539	Y	31-Dec-60	Y	museum specimen	J.T. Wallace			utility area or Little Hope Church	University of Illinois, Museum of Natural History
UIMNH 26540	Y	28-Dec-60	Y	museum specimen	J.T. Wallace			utility area or Little Hope Church	University of Illinois, Museum of Natural History

Species Name and Classification									
Acc/ Cat#	Voucher Specimen ?	Obs. Date	Historic in 2005? (> 10 yrs. Old)	Obs. Type	Observer(s)	UTM X	UTM Y	Location Description	Notes/Source
white-footed mouse (<i>Peromyscus leucopus</i>) (cont.)									
UIMNH 26541	Y	28-Dec-60	Y	museum specimen	J.T. Wallace				University of Illinois, Museum of Natural History
UIMNH 26542	Y	28-Dec-60	Y	museum specimen	J.T. Wallace				University of Illinois, Museum of Natural History
UIMNH 26543	Y	28-Dec-60	Y	museum specimen	J.T. Wallace				University of Illinois, Museum of Natural History
UIMNH 26544	Y	28-Dec-60	Y	museum specimen	J.T. Wallace				University of Illinois, Museum of Natural History
UIMNH 26633	Y	29-Dec-60	Y	museum specimen	J.T. Wallace				University of Illinois, Museum of Natural History
--	N	?/?/1969	Y	no specific sighting	Ken Berry			no specific record	Wildlife Checklist of MACA N.P. by Ken Berry, Seasonal Park Naturalist
--	N	7-Nov-04	N	Visual	John R. MacGregor	582189	4119440	great onyx meadow tin site	MACA Herp Inventory
--	N	7-Nov-04	N	Visual	John R. MacGregor	571858	4121247	houchins ferry road ca 0.4 mi w of jagggers cemetery	MACA Herp Inventory; called "houchins ferry 1 north" (or south) in "herpstinsites" spreadsheet; 2 individuals observed
--	N	21-Oct-04	N	Visual	John R. MacGregor	583836	4118650	floyd collins family home tin site	MACA Herp Inventory; called "floyd Collins 1" in herptinsites spreadsheet; female with 2 juveniles observed
--	N	23-Sep-04	N	Visual	John R. MacGregor	583004	4112320	frozen niagara tin/plywood site	MACA Herp Inventory; called "frozen niagara cedar glade" in "herptinsites" spreadsheet
--	N	10-Sep-04	N	Visual	John R. MacGregor	571338	4120459	houchins ferry road ca 1.1 mi w of jagggers cemetery	MACA Herp Inventory; called "houchins ferry 2" in "herpstinsites" spreadsheet
--	N	10-Sep-04	N	Visual	John R. MacGregor	578227	4116372	north entrance road ca 0.9 mi n of green river ferry	MACA Herp Inventory; 1 live individual observed crossing road at night
--	N	18-Jul-04	N	Visual	John R. MacGregor	583832	4109821	wondering woods #4 honeysuckle tin site	MACA Herp Inventory; called "chaumont 4" in "herpstinsites" spreadsheet
--	N	18-Jul-04	N	Visual	John R. MacGregor	583750	4110006	wondering woods #7 foundation plywood	MACA Herp Inventory; called "chaumont 7" in "herpstinsites" spreadsheet
--	N	7-Jul-04	N	Visual	John R. MacGregor	583732	4109757	wondering woods #2 tin (rusty 4 tin sheets)	MACA Herp Inventory; called "chaumont 2" in "herpstinsites" spreadsheet
--	N	24-Jun-04	N	Visual	John R. MacGregor	571338	4120459	houchins ferry rd. ca 1.1 mi w of jagggers c.	MACA Herp Inventory; called "houchins ferry 2" in "herpstinsites" spreadsheet; 2 individuals observed

Species Name and Classification

Acc/	Voucher Specimen ?	Obs. Date	Historic in 2005? (> 10 yrs. Old)	Obs. Type	Observer(s)	UTM X	UTM Y	Location Description	Notes/Source
white-footed mouse (<i>Peromyscus leucopus</i>) (cont.)									
--	N	20-Jun-04	N	Visual	John R. MacGregor	571858	4121247	houchins ferry road ca 0.4 mi w of jagers cemetery	MACA Herp Inventory; called "houchins ferry 1 north" (or south) in "herpstinsites" spreadsheet; 6 individuals observed
--	N	20-Jun-04	N	Visual	John R. MacGregor	571338	4120459	houchins ferry road ca 1.1 mi w of jagers cemetery	MACA Herp Inventory; called "houchins ferry 2" in "herpstinsites" spreadsheet; 5 individuals observed
--	N	19-Jun-04	N	Visual	John R. MacGregor	583840	4118703	floyd collins house (closet)	MACA Herp Inventory; called "floyd Collins 2" in herpstinsites spreadsheet; 4 individuals observed
--	N	24-Apr-04	N	Visual	John R. MacGregor	583732	4109793	wondering woods #1 old homesite tin site	MACA Herp Inventory; called "chaumont 1" in "herpstinsites" spreadsheet
--	N	10-Apr-04	N	Visual	John R. MacGregor	583720	4109659	wondering woods #3 hillside tin site	MACA Herp Inventory; called "chaumont 3" in "herpstinsites" spreadsheet
--	N	10-Apr-04	N	Visual	John R. MacGregor	583834	4109895	wondering woods #5 bat towers tin site	MACA Herp Inventory; called "chaumont 5" in "herpstinsites" spreadsheet; female/4 suckling young observed
--	N	8-Mar-04	N	Visual	John R. MacGregor	583732	4109793	wondering woods #1 old homesite tin site	MACA Herp Inventory; called "chaumont 1" in "herpstinsites" spreadsheet; 2 individuals observed; under set tin
--	N	8-Mar-04	N	Visual	John R. MacGregor	583720	4109659	wondering woods #3 hillside tin site	MACA Herp Inventory; called "chaumont 3" in "herpstinsites" spreadsheet
--	N	8-Mar-04	N	Visual	John R. MacGregor	583834	4109895	wondering woods #5 bat towers tin site	MACA Herp Inventory; called "chaumont 5" in "herpstinsites" spreadsheet; 3 individuals observed
deer mouse (<i>Peromyscus maniculatus</i>)									
--	N	?/?/1969	Y	no specific sighting	Ken Berry			no specific record	Wildlife Checklist of MACA N.P. by Ken Berry, Seasonal Park Naturalist
golden mouse (<i>Ochrotomys nuttalli</i>)									
MACA-00002; MACA 1957	Y	2-Apr-35	Y	museum specimen	Wyson, N.			Found at C.C.C. Camp #1.	MACA curatorial museum; CS, CAB 24, DR6; stuffed skin.
UIMNH 26583	Y	22-Apr-61	Y	museum specimen	J.T. Wallace			0.45mi ENE Little Hope Church, 0.1mi NW Sand Cave	University of Illinois, Museum of Natural History
--	N	?/?/1969	Y	no specific sighting	Ken Berry			no specific record	Wildlife Checklist of MACA N.P. by Ken Berry, Seasonal Park Naturalist

Species Name and Classification									
Accl/ Cat#	Voucher Specimen ?	Obs. Date	Historic in 2005? (> 10 yrs. Old)	Obs. Type	Observer(s)	UTM X	UTM Y	Location Description	Notes/Source
prairie vole (<i>Microtus ochrogaster</i>)									
MACA-00002; MACA 1960	Y	12-Feb-35	Y	museum specimen	Claude W. Hibbard			Found at C.C.C. Camp #3	MACA curatorial museum; CS, CAB 24, DR6; stuffed skin.
--	N	21-Oct-04	N	Visual	John R. MacGregor	581975	4119477	great onyx picnic shelter tin site	MACA Herp Inventory; called "go pavillion" in "herptinsites" spreadsheet
meadow vole (<i>Microtus pennsylvanicus</i>)									
--	N	?/?/1934	Y	no specific sighting	Claude W. Hibbard			no specific record	Report to the Wildlife Division, NPS, Berkely, California, Emergency Conservation Work, Mammoth Cave National Park (Proposed)
--	N	?/?/1969	Y	no specific sighting	Ken Berry			no specific record	Wildlife Checklist of Mammoth Cave National Park by Ken Berry, Seasonal Park Naturalist
woodland vole (<i>Microtus pinetorum</i>)									
MACA-00002; MACA 1966	Y	7-Nov-34	Y	museum specimen	Claude W. Hibbard			Found at sink near Jim Lee Ridge	MACA curatorial museum; CS, CAB 24, DR6
MACA-00002; MACA 1956	Y	4-Dec-34	Y	museum specimen	Claude W. Hibbard			Found at sink near Jim Lee Ridge	MACA curatorial museum; CS, CAB 24, DR6
MACA-00002; MACA 1962	Y	4-Dec-34	Y	museum specimen	Claude W. Hibbard			Found at Floating Mill Hollow	MACA curatorial museum; CS, CAB 24, DR6
--	N	?/?/1969	Y	no specific sighting	Ken Berry			no specific record	Wildlife Checklist of Mammoth Cave National Park by Ken Berry, Seasonal Park Naturalist
MACA-00559; MACA 59318	Y	24-Jun-02	N	found dead	Steven C. Thomas	575165	4122760	PIF point #13 on Collie Ridge Rd	MACA curatorial museum
--	N	4-Sep-03	N	Visual	John R. MacGregor	567602	4122866	original job corps <i>Gastrophryne</i> site	MACA Herp Inventory; under chunk of old satellite dish
--	N	7-Nov-04	N	Visual	John R. MacGregor	581975	4119477	great onyx picnic shelter tin site	MACA Herp Inventory; called "go pavillion" in "herptinsites" spreadsheet; female/4 young observed

Species Name and Classification									
Acc/ Cat#	Voucher Specimen ?	Obs. Date	Historic in 2005? (> 10 yrs. Old)	Obs. Type	Observer(s)	UTM X	UTM Y	Location Description	Notes/Source
woodland vole (<i>Microtus pinetorum</i>) (cont.)									
--	N	23-Sep-04	N	Visual	John R. MacGregor	583836	4118650	floyd collins family home tin site	MACA Herp Inventory; called "floyd Collins 1" in herptinsites spreadsheet
--	N	10-Sep-04	N	Visual	John R. MacGregor	583836	4118650	floyd collins family home tin site	MACA Herp Inventory; called "floyd Collins 1" in herptinsites spreadsheet
--	N	24-Aug-04	N	Visual	John R. MacGregor	583836	4118650	floyd collins family home tin site	MACA Herp Inventory; called "floyd Collins 1" in herptinsites spreadsheet
--	N	24-Aug-04	N	Visual	John R. MacGregor	582189	4119440	great onyx meadow tin site	MACA Herp Inventory
--	N	24-Aug-04	N	Visual	John R. MacGregor	581726	4117185	great onyx water tanks tin site	MACA Herp Inventory; called "go water treatment" in "herpstinsites" spreadsheet
--	N	24-Jun-04	N	Visual	John R. MacGregor	568200	4122947	job corps entrance arch tin site	MACA Herp Inventory; called "job corps site" in "herpstinsites" spreadsheet; 4 individuals observed
--	N	24-Apr-04	N	Visual	John R. MacGregor	581975	4119477	great onyx picnic shelter tin site	MACA Herp Inventory; called "go pavillion" in "herptinsites" spreadsheet; female/3 sucklings + female/1 suckling observed
--	N	20-Apr-04	N	Visual	John R. MacGregor	582189	4119440	great onyx meadow tin site	MACA Herp Inventory
--	N	20-Apr-04	N	Visual	John R. MacGregor	583832	4109821	wondering woods #4 honeysuckle tin site	MACA Herp Inventory; called "chaumont 4" in "herpstinsites" spreadsheet
--	N	20-Apr-04	N	Visual	John R. MacGregor	583834	4109895	wondering woods #5 bat towers tin site	called "chaumont 5" in "herpstinsites" spreadsheet
--	N	10-Apr-04	N	Visual	John R. MacGregor	582189	4119440	great onyx meadow tin site	MACA Herp Inventory
--	N	10-Apr-04	N	Visual	John R. MacGregor	581975	4119477	great onyx picnic shelter tin site	MACA Herp Inventory; called "go pavillion" in "herptinsites" spreadsheet; including female/2 suckling young observed
--	N	10-Apr-04	N	Visual	John R. MacGregor	583720	4109659	wondering woods #3 hillside tin site	MACA Herp Inventory; called "chaumont 3" in "herpstinsites" spreadsheet
--	N	10-Apr-04	N	Visual	John R. MacGregor	583832	4109821	wondering woods #4 honeysuckle tin site	MACA Herp Inventory; called "chaumont 4" in "herpstinsites" spreadsheet
--	N	8-Mar-04	N	Visual	John R. MacGregor	583732	4109793	wondering woods #1 old homesite tin site	MACA Herp Inventory; called "chaumont 1" in "herpstinsites" spreadsheet; under set tin
muskrat (<i>Ondatra zibethicus</i>)									
--	N	?/?/1934	Y	no specific sighting	Claude W. Hibbard	--	--	no specific record	Report to the Wildlife Division, NPS, Berkely, California, Emergency Conservation Work, Mammoth Cave National Park (Proposed)

Species Name and Classification									
Accl/ Cat#	Voucher Specimen ?	Obs. Date	Historic in 2005? (> 10 yrs. Old)	Obs. Type	Observer(s)	UTM X	UTM Y	Location Description	Notes/Source
muskrat (<i>Ondatra zibethicus</i>) (cont.)									
--	N	?/?/1969	Y	no specific sighting live trapping, tracks at	Ken Berry	--	--	no specific record	Wildlife Checklist of Mammoth Cave National Park by Ken Berry, Seasonal Park Naturalist
--	N	2002-2003	N	scent stations, visual by spotlight survey	Kimberly Ann Asmus	--	--	along Green and Nolin Rivers	Relationships Between Muskrats and Freshwater Mussels Prior to River Otter Restoration at Mammoth Cave, Kentucky
--	N	17-Jul-02	N	spotlight surveys	Kimberly Ann Asmus	579212	4118410	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	17-Jul-02	N	spotlight surveys	Kimberly Ann Asmus	579167	4119353	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	17-Jul-02	N	spotlight surveys	Kimberly Ann Asmus	580891	4119605	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	17-Jul-02	N	spotlight surveys	Kimberly Ann Asmus	581348	4119570	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	17-Jul-02	N	spotlight surveys	Kimberly Ann Asmus	581464	4119911	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	17-Jul-02	N	spotlight surveys	Kimberly Ann Asmus	580349	4120069	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	17-Jul-02	N	spotlight surveys	Kimberly Ann Asmus	580068	4120102	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	17-Jul-02	N	spotlight surveys	Kimberly Ann Asmus			Green River Boat Ramp	Spotlight Survey field data sheet
--	N	19-Jul-02	N	spotlight surveys	Kimberly Ann Asmus	579223	4118697	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	19-Jul-02	N	spotlight surveys	Kimberly Ann Asmus	579129	4119127	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	19-Jul-02	N	spotlight surveys	Kimberly Ann Asmus	579849	4120142	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	19-Jul-02	N	spotlight surveys	Kimberly Ann Asmus	579864	4120135	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	19-Jul-02	N	spotlight surveys	Kimberly Ann Asmus	580562	4119857	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet

Species Name and Classification									
Acc/ Cat#	Voucher Specimen ?	Obs. Date	Historic in 2005? (> 10 yrs. Old)	Obs. Type	Observer(s)	UTM X	UTM Y	Location Description	Notes/Source
muskrat (<i>Ondatra zibethicus</i>) (cont.)									
--	N	19-Jul-02	N	spotlight surveys	Kimberly Ann Asmus	581375	4119629	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	19-Jul-02	N	spotlight surveys	Kimberly Ann Asmus	581398	4119725	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	19-Jul-02	N	spotlight surveys	Kimberly Ann Asmus	581497	4119953	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	19-Jul-02	N	spotlight surveys	Kimberly Ann Asmus	579143	4118932	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	19-Jul-02	N	spotlight surveys	Kimberly Ann Asmus	578933	4118096	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	19-Jul-02	N	spotlight surveys	Kimberly Ann Asmus	579488	4117133	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	3-Aug-02	N	spotlight surveys	Kimberly Ann Asmus	581403	4119664	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	3-Aug-02	N	spotlight surveys	Kimberly Ann Asmus	579831	4120151	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	3-Aug-02	N	spotlight surveys	Kimberly Ann Asmus	579226	4119545	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	3-Aug-02	N	spotlight surveys	Kimberly Ann Asmus	579147	4119360	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	3-Aug-02	N	spotlight surveys	Kimberly Ann Asmus	578799	4117937	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	3-Aug-02	N	spotlight surveys	Kimberly Ann Asmus	578889	4117604	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	10-Aug-02	N	spotlight surveys	Kimberly Ann Asmus	584117	4119080	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	10-Aug-02	N	spotlight surveys	Kimberly Ann Asmus	581883	4120537	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	10-Aug-02	N	spotlight surveys	Kimberly Ann Asmus	581332	4119540	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	10-Aug-02	N	spotlight surveys	Kimberly Ann Asmus	579287	4119732	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	10-Aug-02	N	spotlight surveys	Kimberly Ann Asmus	579235	4118531	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	10-Aug-02	N	spotlight surveys	Kimberly Ann Asmus	579106	4116372	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet

Species Name and Classification

Acc/ Cat#	Voucher Specimen ?	Obs. Date	Historic in 2005? (> 10 yrs. Old)	Obs. Type	Observer(s)	UTM X	UTM Y	Location Description	Notes/Source
muskrat (<i>Ondatra zibethicus</i>) (cont.)									
--	N	10-Aug-02	N	spotlight surveys	Kimberly Ann Asmus	579063	4116344	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
--	N	10-Aug-02	N	spotlight surveys	Kimberly Ann Asmus	578813	4115297	Dennison Ferry to Green River Ferry	Spotlight Survey field data sheet
Family: Muridae (Old World Rats and Mice)									
house mouse (<i>Mus musculus</i>)									
--	N	?/?/1934	Y	no specific sighting	Claude W. Hibbard			no specific record	Report to the Wildlife Division, NPS, Berkely, California, Emergency Conservation Work, Mammoth Cave National Park (Proposed)
--	N	?/?/1969	Y	no specific sighting	Ken Berry			no specific record	Wildlife Checklist of Mammoth Cave National Park by Ken Berry, Seasonal Park Naturalist
Norway rat (<i>Rattus norvegicus</i>)									
--	N	?/?/1934	Y	no specific sighting	Claude W. Hibbard			no specific record	Report to the Wildlife Division, NPS, Berkely, California, Emergency Conservation Work, Mammoth Cave National Park (Proposed)
--	N	?/?/1969	Y	no specific sighting	Ken Berry			no specific record	Wildlife Checklist of Mammoth Cave National Park by Ken Berry, Seasonal Park Naturalist
Order: Carnivora									
Family: Canidae (Dogs and Allies)									
gray fox (<i>Urocyon cinereoargenteus</i>)									
--	N	?/?/1934	Y	no specific sighting	Claude W. Hibbard	--	--	no specific record	Report to the Wildlife Division, NPS, Berkely, California, Emergency Conservation Work, Mammoth Cave National Park (Proposed)
--	N	17-Mar-59	Y	visual, shot by ranger	Stan Clark	--	--	1/4 mile N. of Mammoth Cave (Green River) Ferry on MACA-Stockholm Rd.	Natural History Field Observation (Form 10-257) Specimen was tested and found to have evidence for rabies by KY State Dept. of Health. Record found in MACA-Wildlife 1933- 1983 file at SRM
--	N	?/?/1969	Y	no specific sighting	Ken Berry	--	--	no specific record	Wildlife Checklist of Mammoth Cave National Park by Ken Berry, Seasonal Park Naturalist
red fox (<i>Vulpes vulpes</i>)									
--	N	?/?/1969	Y	no specific sighting	Ken Berry	--	--	no specific record	Wildlife Checklist of Mammoth Cave National Park by Ken Berry, Seasonal Park Naturalist

Species Name and Classification									
Acc/	Voucher Specimen ?	Obs. Date	Historic in 2005? (> 10 yrs. Old)	Obs. Type	Observer(s)	UTM X	UTM Y	Location Description	Notes/Source
Family: Mustelidae (Weasels and Allies)									
long-tailed weasel (<i>Mustela frenata</i>)									
--	N	?/?/1934	Y	no specific sighting	Claude W. Hibbard	--	--	no specific record	Report to the Wildlife Division, NPS, Berkely, California, Emergency Conservation Work, Mammoth Cave National Park
MACA-00002; MACA 1963	Y	22-Apr-35	Y	museum specimen	Claude W. Hibbard	--	--	Found at Parkridge between first and second creek	MACA SRM curatorial museum; CS, CAB 24, DR6; stuffed skin
--	N	?/?/1969	Y	no specific sighting	Ken Berry	--	--	no specific record	Wildlife Checklist of Mammoth Cave National Park by Ken Berry, Seasonal Park Naturalist
--	N	20-May-00	N	live trapped	Steven C. Thomas	571059	4119964	Allegheny woodrat monitoring trap station #10; in upper First Creek drainage	Woodrat Monitoring MS Access database associated with Allegheny Woodrat Monitoring Final Report 2003 by Steven C. Thomas
mink (<i>Neovison vison</i>)									
--	N	?/?/1934	Y	no specific sighting	Claude W. Hibbard	--	--	no specific record	Report to the Wildlife Division, NPS, Berkely, California, Emergency Conservation Work, Mammoth Cave National Park (Proposed)
--	N	?/?/1969	Y	no specific sighting	Ken Berry	--	--	no specific record	Wildlife Checklist of Mammoth Cave National Park by Ken Berry, Seasonal Park Naturalist
--	N	2002-2003	N	visual-spotlight survey and tracks at scent stations	Kimberly Ann Asmus	--	--	along Green and Nolin Rivers	Relationships Between Muskrats and Freshwater Mussels Prior to River Otter Restoration at Mammoth Cave, Kentucky
river otter (<i>Lontra canadensis</i>)									
--	N	?/?/1910	Y	captured	Vernon Bailey	--	--	just below the old entrance of Mammoth Cave	one otter caught in Cave Life of Kentucky, 1933, The University Press, Notre Dame, Ind. By Vernon Bailey
Family: Mephitidae (Skunks)									
striped skunk (<i>Mephitis mephitis</i>)									
--	N	?/?/1933	Y	visual	Leonard Giovannoli			just above the mouth of Mammoth Cave	L. Giovannoli observed one killed by dogs in Cave Life of Kentucky, 1933, The University Press, Notre Dame, Ind.
--	N	?/?/1933	Y	tracks and a hole	Vernon Bailey			near the mouth of Great Onyx Cave	V. Bailey observed tracks and a hole in Cave Life of Kentucky, 1933, The University Press, Notre Dame, Ind.

Species Name and Classification									
Acc/	Voucher Specimen ?	Obs. Date	Historic in 2005? (> 10 yrs. Old)	Obs. Type	Observer(s)	UTM X	UTM Y	Location Description	Notes/Source
striped skunk (<i>Mephitis mephitis</i>) (cont.)									
--	N	?/?/1934	Y	no specific sighting	Claude W. Hibbard	--	--	no specific record	Report to the Wildlife Division, NPS, Berkely, California, Emergency Conservation Work, Mammoth Cave National Park (Proposed)
--	N	?/?/1957	Y	no specific sighting	MACA employees	--	--	no specific record	Annual Wildlife Report: Mammoth Cave National Park
--	N	?/?/1969	Y	no specific sighting	Ken Berry	--	--	no specific record	Wildlife Checklist of Mammoth Cave National Park by Ken Berry, Seasonal Park Naturalist
Family: Felidae (Cats)									
bobcat (<i>Lynx rufus</i>)									
--	N	21-Feb-34	Y	visual-tracks	Claude W. Hibbard	--	--	near Dennison Ferry	Report to the Wildlife Division, NPS, Berkely, California, Emergency Conservation Work, Mammoth Cave National Park (Proposed)
--	N	1969	Y	no specific sighting	Ken Berry	--	--	no specific record	Wildlife Checklist of Mammoth Cave National Park by Ken Berry, Seasonal Park Naturalist
--	N	1-Nov-80	Y	visual	MACA employees	--	--	Mt. McKinley Rd.	1980 Wildlife Survey, in Memorandum to all Employees from Chief Ranger, June 16, 1981
--	N	2002-2003	N	tracks at scent stations	Kimberly Ann Asmus	--	--	Green and Nolin Rivers within MACA N.P.	Relationships Between Muskrats and Freshwater Mussels Prior to River Otter Restoration at Mammoth Cave, Kentucky
--	N	2002-2003	N	tracks at scent stations, visual-spotlight surveys	Kimberly Ann Asmus	--	--	along Green and Nolin Rivers	Relationships Between Muskrats and Freshwater Mussels Prior to River Otter Restoration at Mammoth Cave, Kentucky
Order: Artiodactyla									
Family: Cervidae (Deer)									
white-tailed deer (<i>Odocoileus virginianus</i>)									
MACA-00362; MACA 35876	Y	Unknown	Y	museum specimen	Unknown	--	--		MACA SRM curatorial museum; CS, CAB 24, DR1; folded skin
--	N	?/?/1934	Y	no specific sighting	Claude W. Hibbard	--	--	no specific record	Report to the Wildlife Division, NPS, Berkely, California, Emergency Conservation Work, Mammoth Cave National Park

Species Name and Classification									
Acc/ Cat#	Voucher Specimen ?	Obs. Date	Historic in 2005? (> 10 yrs. Old)	Obs. Type	Observer(s)	UTM X	UTM Y	Location Description	Notes/Source
white-tailed deer (<i>Odocoileus virginianus</i>) (cont.)									
--	N	1946-1951	Y	visual-trappings (47 deer released in park)	John L. DeLime	--	--	throughout park	Live Trapping and Restocking. Kentucky Division of Game and Fish Federal Aid Unit Earl Wallace, Director, Frankfort, KY July 1, 1951 by John DeLime
--	N	13-Feb-48	Y	trapping	Earl Wallace/Division of Game and Fish, Frankfort, KY	--	--	captured outside park and released in park with 42 others during same year	Kentucky Division of Game and Fish Live Trapping and Release Record and letters between park Superintendent and Earl Wallace, Director of Kentucky Division of Game and Fish
--	N	13-May-55	Y	visual sighting of doe giving birth to fawn	Charles R. Montgomery	--	--	near Good Springs Church	Birth of a Fawn
--	N	?/?/1969	Y	no specific sighting	Ken Berry	--	--	no specific record	Wildlife Checklist of Mammoth Cave National Park by Ken Berry, Seasonal Park Naturalist
--	N	12/?/1976	Y	trapping (13 animals)	Joe Bruna	--	--	Mammoth Cave National Park	Monthly Activity Report: Forest Wildlife Management Areas in Deer Trapping Reports file in SRM file cabinet
--	N	?/?/1977	Y	visual/trapping	George H. Matschke	--	--	throughout park	Antifertility Action of Two Synthetic Progestins in Female White-Tailed Deer. The Journal of Wildlife Management. Vol. 41, No. 2, April 1977. The Wildlife Society, Inc.
--	N	2002-2003	N	tracks and visual-spotlight survey	Kimberly Ann Asmus	--	--	along Green and Nolin Rivers	Relationships Between Muskrats and Freshwater Mussels Prior to River Otter Restoration at Mammoth Cave, Kentucky

Appendix B

Appendix B. All terrestrial wild mammals documented during an inventory at Mammoth Cave National Park, Kentucky 2005-2012.

Species Name and Classification										Length (mm)				Weight (g)	Trap/Obs. Method	Photo ID Name
										Total	Tail	Hind Foot	Ear			
Cat# ¹	Voucher (Y/N)	Obs Date	UTM X	UTM Y	County	Collector ²	Sex	Repro. Cond. ³	Age ⁴ Class							
Order: Didelphimorphia																
Family: Didelphidae																
Virginia opossum (<i>Didelphis virginiana</i>)																
--	N	13-Sep-06	580373	4115908	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca5091306diviEV
--	N	7-Oct-06	569219	4119572	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca2100706diviHR2
59316	Y	12-Mar-09	576609	4113214	Edmonson	SCT	--	--	--	--	--	--	--	--	Found dead	DSCN9866
--	N	11-Feb-10	579875	4112212	Edmonson	SCT	--	--	--	--	--	--	--	--	Visual	DSCN0126; DSCN0124 (movie)
Order: Soricomorpha																
Family: Soricidae (Shrews)																
northern or southern short-tailed shrew (<i>Blarina</i> spp.)																
59173	Y	19-Oct-05	575339	4122165	Edmonson	KLO	U	U	U	94	21	12	4	--	Drift Fence	--
northern short-tailed shrew (<i>Blarina brevicauda</i>)																
--	N	17-May-05	583727	4110146	Barren	JRM	--	--	--	--	--	--	--	--	Visual	--
59182	Y	11-Aug-05	580984	4115587	Edmonson	KLO PTM	F	N	A	102	22	14	6	--	Pitfalls	--
59176	Y	29-Aug-05	584649	4119233	Hart	KLO PTM	F	L	A	106	25	14	6	--	Drift Fence	--
59162	Y	16-Sep-05	580701	4113900	Edmonson	PTM KLO	F	L	A	117	26	14	6	--	Pitfalls	--
59159	Y	21-Sep-05	584357	4119578	Hart	KLO PTM	F	U	A	112	21	13	7	--	Pitfalls	--
59157	Y	28-Sep-05	578621	4115088	Edmonson	KLO	M	U	A	108	22	14	5	--	Drift Fence	--
59165	Y	19-Oct-05	584357	4119578	Hart	KLO	M	U	A	103	22	14	6	--	Pitfalls	--
59156	Y	30-Oct-05	578621	4115088	Edmonson	KLO	F	N	A	104	22	14	5	--	Drift Fence	--
59169	Y	7-Nov-05	584357	4119578	Hart	KLO	M	U	A	117	20	14	6	--	Pitfalls	--
59168	Y	14-Nov-05	575339	4122165	Edmonson	KLO	M	U	A	97	20	14	--	--	Pitfalls	--
59303	Y	18-Nov-05	583533	4109801	Barren	KLO	U	U	U	--	18	--	--	--	Live Traps	--
59240	Y	3-Apr-06	579812	4116800	Edmonson	HMP	M	U	A	93	20	13	4	--	Found dead	--
59236	Y	7-Apr-06	576680	4113228	Edmonson	HMP	M	U	A	106	23	13	5	--	Pitfalls	--

Species Name and Classification										Length (mm)				Weight (g)	Trap/Obs. Method	Photo ID Name
Voucher			UTM X	UTM Y	County	Collector ²	Sex	Repro. Cond. ³	Age ⁴ Class	Total	Tail	Hind Foot	Ear			
Cat# ¹	(Y/N)	Obs Date														
northern short-tailed shrew (<i>Blarina brevicauda</i>) (cont.)																
59238	Y	7-Apr-06	578621	4115088	Edmonson	HMP	M	U	A	97	22	13	4	--	Pitfalls	--
59239	Y	7-Apr-06	578621	4115088	Edmonson	HMP	F	U	A	99	22	13	4	--	Pitfalls	--
59257	Y	7-Apr-06	578865	4115435	Edmonson	HMP	M	U	A	99	21	13	5	--	Pitfalls	--
59266	Y	12-Apr-06	578865	4115435	Edmonson	HMP	F	U	A	112	18	13	--	--	Pitfalls	--
59273	Y	21-Apr-06	580947	4115710	Edmonson	HMP	F	U	A	100	23	13	4	--	Pitfalls	--
59278	Y	12-May-06	579889	4116744	Edmonson	HMP	F	U	A	98	21	13	4	--	Pitfalls	--
59244	Y	12-May-06	580701	4113900	Edmonson	HMP	F	U	A	97	22	12	5	--	Pitfalls	--
59198	Y	18-May-06	580701	4113900	Edmonson	HMP	F	U	A	95	21	11	4	--	Drift Fence	--
59248	Y	25-May-06	577614	4112775	Edmonson	HMP	F	U	A	--	21	12	--	--	Pitfalls	--
59231	Y	25-May-06	578621	4115088	Edmonson	HMP	MMM	U	A	100	20	11	--	--	Drift Fence	--
59262	Y	25-May-06	580701	4113900	Edmonson	HMP	M	U	A	100	22	13	5	--	Drift Fence	--
59194	Y	14-Jun-06	576408	4113089	Edmonson	HMP	U	U	A	--	24	--	--	--	Pitfalls	--
59216	Y	26-Jun-06	583770	4109899	Barren	HMP	M	U	A	109	23	14	5	--	Drift Fence	--
59264	Y	27-Jun-06	584649	4119233	Hart	HMP	M	U	A	--	23	13	--	--	Pitfalls	--
59206	Y	3-Jul-06	583770	4109899	Barren	HMP	F	U	A	105	24	15	4	--	Pitfalls	--
59306	Y	7-Jul-06	580635	4113852	Edmonson	unknown	M	U	A	95	22	13	--	--	Found dead	--
59200	Y	7-Jul-06	584649	4119233	Hart	HMP	U	U	A	--	24	14	--	--	Pitfalls	--
59201	Y	7-Jul-06	584649	4119233	Hart	HMP	F	U	A	98	23	14	5	--	Pitfalls	--
59188	Y	29-Aug-06	583770	4109899	Barren	HMP	F	U	A	108	20	12	--	--	Pitfalls	--
59199	Y	26-Sep-06	584649	4119233	Hart	HMP	U	U	A	--	21	13	--	--	Drift Fence	--
--	N	8-Oct-06	582189	4119440	Edmonson	JRM	--	--	--	--	--	--	--	--	Visual	--
59195	Y	12-Oct-06	578621	4115088	Edmonson	HMP	F	U	A	99	22	13	5	--	Pitfalls	--
59214	Y	17-Oct-06	584649	4119233	Hart	HMP	F	N	A	100	21	13	4	--	Drift Fence	--
59189	Y	19-Oct-06	578621	4115088	Edmonson	HMP	F	L	A	104	19	13	5	--	Pitfalls	--
59190	Y	19-Oct-06	578621	4115088	Edmonson	HMP	M	U	A	110	24	14	5	--	Pitfalls	--
59192	Y	24-Oct-06	583770	4109899	Barren	HMP	F	U	A	103	23	13	4	--	Drift Fence	--
59224	Y	3-Nov-06	583648	4109841	Barren	HMP	M	U	A	105	22	13	6	--	Snake Trap	DSCN8674
59209	Y	21-Nov-06	578865	4115435	Edmonson	HMP	M	U	A	113	24	15	4	--	Pitfalls	--
59215	Y	7-Dec-06	583366	4122604	Hart	HMP	F	N	A	107	23	14	4	--	Pitfalls	--

Species Name and Classification											Length (mm)				Weight (g)	Trap/Obs. Method	Photo ID Name
Voucher			UTM X	UTM Y	County	Collector ²	Sex	Repro. Cond. ³	Age ⁴ Class	Total	Tail	Hind Foot	Ear				
Cat# ¹	(Y/N)	Obs Date															
least shrew (<i>Cryptotis parva</i>)																	
--	N	17-May-05	583727	4110146	Barren	JRM	--	--	--	--	--	--	--	--	Visual	--	
--	N	30-May-05	583732	4109793	Barren	JRM	--	--	--	--	--	--	--	--	Visual	--	
--	N	30-May-05	583834	4109895	Barren	JRM	--	--	--	--	--	--	--	--	Visual	--	
59154	Y	26-Sep-05	584357	4119578	Hart	KLO	U	U	A	76	17	10	4	--	Pitfalls	--	
59170	Y	27-Oct-05	584357	4119578	Hart	KLO	U	U	A	72	15	10	5	--	Pitfalls	--	
59299	Y	2-Nov-05	582189	4119440	Edmonson	SCT KLO	U	U	A	66	15	10	6	--	Hand capture	--	
59164	Y	14-Nov-05	583770	4109899	Barren	KLO	F	N	A	70	16	11	4	--	Pitfalls	--	
59175	Y	6-Dec-05	578621	4115088	Edmonson	KLO	M	U	A	78	17	10	5	--	Drift Fence	--	
59265	Y	14-Apr-06	576680	4113228	Edmonson	HMP	F	U	U	--	13	9	--	--	Pitfalls	--	
59243	Y	14-Apr-06	583770	4109899	Barren	HMP	F	U	A	69	16	10	4	--	Drift Fence	--	
59247	Y	25-May-06	577614	4112775	Edmonson	HMP	M	U	A	80	16	10	--	--	Pitfalls	--	
59259	Y	25-May-06	583805	4109874	Barren	MMM	U	U	A	75	17	10	--	--	Drift Fence	--	
59226	Y	1-Jun-06	583805	4109874	Barren	HMP	U	U	U	--	14	9	--	--	Drift Fence	--	
59246	Y	6-Jul-06	577614	4112775	Edmonson	HMP	U	U	U	--	15	--	--	--	Pitfalls	--	
--	N	8-Oct-06	582189	4119440	Edmonson	JRM	--	--	--	--	--	--	--	--	Visual	--	
--	N	8-Oct-06	583834	4109895	Barren	JRM	--	--	--	--	--	--	--	--	Visual	--	
59249	Y	26-Oct-06	583648	4109841	Barren	HMP	U	U	A	70	12	10	5	--	Drift Fence	DSCN3197	
smoky shrew (<i>Sorex fumeus</i>)																	
59179	Y	28-Jul-05	581840	4113920	Edmonson	KLO PTM	M	U	A	104	45	13	--	--	Pitfalls	--	
59180	Y	28-Jul-05	581840	4113920	Edmonson	KLO PTM	M	U	A	105	46	13	6	--	Pitfalls	--	
59181	Y	28-Jul-05	581840	4113920	Edmonson	KLO PTM	U	U	A	116	46	13	--	--	Pitfalls	--	
59160	Y	8-Aug-05	581840	4113920	Edmonson	KLO PTM	M	U	A	--	44	13	--	--	Pitfalls	--	
59177	Y	19-Sep-05	584649	4119233	Hart	KLO PTM	F	U	A	99	40	13	6	--	Pitfalls	--	
59172	Y	24-Oct-05	583770	4109899	Barren	KLO	M	U	A	118	49	14	7	--	Pitfalls	--	
59171	Y	14-Nov-05	580292	4114371	Edmonson	KLO	U	U	U	--	45	--	--	--	Pitfalls	--	
59237	Y	7-Apr-06	580701	4113900	Edmonson	HMP	F	U	A	--	40	13	--	--	Pitfalls	--	
59241	Y	8-Apr-06	581840	4113920	Edmonson	HMP	M	U	A	117	45	14	5	--	Pitfalls	DSCN8684	
59277	Y	18-May-06	581840	4113920	Edmonson	HMP	F	N	A	106	44	14	6	--	Pitfalls	--	
59270	Y	18-May-06	583770	4109899	Barren	HMP	M	U	A	115	43	13	7	--	Pitfalls	--	

Species Name and Classification										Length (mm)				Weight (g)	Trap/Obs. Method	Photo ID Name
Cat# ¹	Voucher (Y/N)	Obs Date	UTM X	UTM Y	County	Collector ²	Sex	Repro. Cond. ³	Age ⁴ Class	Total	Tail	Hind Foot	Ear			
smoky shrew (<i>Sorex fumeus</i>) (cont.)																
59230	Y	25-May-06	579889	4116744	Edmonson	HMP	F	U	A	103	43	13	7	--	Pitfalls	--
59250	Y	25-May-06	581840	4113920	Edmonson	HMP	M	U	U	104	46	13	4	--	Pitfalls	--
59251	Y	25-May-06	581840	4113920	Edmonson	HMP	F	U	U	102	42	12	5	--	Pitfalls	--
59252	Y	25-May-06	581840	4113920	Edmonson	HMP	F	N	U	98	42	12	5	--	Pitfalls	--
59253	Y	25-May-06	581840	4113920	Edmonson	HMP	M	U	A	116	45	13	5	--	Pitfalls	--
59283	Y	30-May-06	579889	4116744	Edmonson	HMP	U	U	A	--	42	14	--	--	Pitfalls	--
59256	Y	2-Aug-06	581840	4113920	Edmonson	HMP	M	U	A	111	43	14	--	--	Pitfalls	--
59211	Y	9-Aug-06	584649	4119233	Hart	HMP	U	U	A	--	41	--	--	--	Drift Fence	--
59196	Y	21-Oct-06	583670	4122462	Hart	HMP	F	L	A	116	43	13	--	--	Pitfalls	--
59197	Y	21-Oct-06	583670	4122462	Hart	HMP	M	U	SA	103	41	13	--	--	Pitfalls	--
59193	Y	24-Oct-06	583770	4109899	Barren	HMP	M	U	A	112	41	14	6	--	Drift Fence	--
pygmy shrew (<i>Sorex hoyi</i>)																
59185	Y	31-Aug-05	580292	4114371	Edmonson	KLO PTM	U	U	U	--	24	8	--	--	Pitfalls	--
59183	Y	14-Sep-05	580292	4114371	Edmonson	KLO PTM	M	U	A	72	25	8	--	--	Pitfalls	--
59184	Y	19-Sep-05	583770	4109899	Barren	KLO PTM	M	S	A	74	24	8	6	--	Drift Fence	--
59166	Y	19-Oct-05	584357	4119578	Hart	KLO	M	U	A	71	22	8	4	--	Drift Fence	DSCN0892
59232	Y	14-Apr-06	581840	4113920	Edmonson	HMP	F	U	A	72	23	9	--	--	Pitfalls	--
59233	Y	14-Apr-06	581840	4113920	Edmonson	HMP	M	U	A	73	27	9	4	--	Pitfalls	--
59234	Y	21-Apr-06	580292	4114371	Edmonson	HMP	F	L	A	71	23	8	5	--	Pitfalls	--
59272	Y	21-Apr-06	581840	4113920	Edmonson	HMP	M	U	A	--	28	9	5	--	Pitfalls	--
59280	Y	12-May-06	581840	4113920	Edmonson	HMP	M	U	A	70	24	8	6	--	Pitfalls	--
59229	Y	25-May-06	579889	4116744	Edmonson	HMP	F	U	A	71	25	9	--	--	Pitfalls	--
59261	Y	25-May-06	583770	4109899	Barren	HMP	U	U	A	--	25	8	6	--	Pitfalls	--
59219	Y	7-Sep-06	580701	4113900	Edmonson	HMP	M	U	A	73	25	--	--	--	Pitfalls	--
59289	Y	7-Dec-06	583366	4122604	Hart	HMP	U	U	A	60	22	8	5	--	Pitfalls	DSCN3186
southeastern shrew (<i>Sorex longirostris</i>)																
59186	Y	6-Sep-05	578865	4115435	Edmonson	KLO PTM	M	U	A	79	28	10	6	--	Drift Fence	--
59163	Y	26-Sep-05	583770	4109899	Barren	KLO	M	U	A	81	29	10	7	--	Pitfalls	--
59155	Y	30-Sep-05	584357	4119578	Hart	KLO	M	U	A	85	32	11	8	--	Drift Fence	--

[illegible]

Species Name and Classification											Length (mm)				Weight (g)	Trap/Obs. Method	Photo ID Name
Cat# ¹	Voucher (Y/N)	Obs Date	UTM X	UTM Y	County	Collector ²	Sex	Repro. Cond. ³	Age ⁴ Class	Total	Tail	Hind Foot	Ear				
eastern mole (<i>Scalopus aquaticus</i>) (cont.)																	
--	N	24-Jul-06	583832	4109821	Barren	JRM	--	--	--	--	--	--	--	--	Visual	--	
59307	Y	21-Aug-06	574575	4112560	Edmonson	MMM	M	U	A	165	26	18	--	--	Found dead	--	
59217	Y	21-Sep-06	579913	4116705	Edmonson	HMP	F	U	A	170	25	20	--	--	Found dead	DSCN9022	
--	N	8-Oct-06	583727	4110146	Barren	JRM	--	--	--	--	--	--	--	--	Visual	--	
59292	Y	8-Oct-09	580730	4114265	Edmonson	SCT	M	U	A	170	16	22	--	--	Found dead	DSCN3194	
Order: Lagomorpha																	
Family: Leporidae (Rabbits)																	
eastern cottontail (<i>Sylvilagus floridanus</i>)																	
--	N	25-Oct-06	583832	4109821	Barren	SCT	--	--	--	--	--	--	--	--	Visual	--	
--	N	31-Jan-07	574184	4113794	Edmonson	SCT	--	--	--	--	--	--	--	--	Found dead	--	
--	N	21-Jun-07	581022	4115553	Edmonson	SCT and Bill Moore	--	--	--	--	--	--	--	--	Visual	--	
--	N	25-Sep-07	580843	4115725	Edmonson	SCT	--	--	--	--	--	--	--	--	Visual	--	
--	N	8-May-08	575530	4117390	Edmonson	Bill Moore and Jason Taylor	--	--	--	--	--	--	--	--	Live Traps	--	
--	N	8-Mar-10	579900	4112215	Edmonson	SCT	--	--	--	--	--	--	--	--	Found dead	DSCN0215	
Order: Rodentia																	
Family: Sciuridae (Squirrels)																	
eastern chipmunk (<i>Tamias striatus</i>)																	
--	N	18-Jul-06	579772	4115854	Edmonson	HMP	--	--	--	--	--	--	--	--	Live Traps	DSCN7924	
woodchuck (<i>Marmota monax</i>)																	
--	N	2-Apr-07	580070	4119898	Edmonson	RW AG	--	--	--	--	--	--	--	--	Live Traps	040207mamo	
--	N	21-Apr-07	580139	4113233	Edmonson	SCT	--	--	--	--	--	--	--	--	Visual	--	
--	N	23-May-07	581022	4115553	Edmonson	SCT	--	--	--	--	--	--	--	--	Visual	--	
--	N	29-May-07	581057	4115575	Edmonson	SCT	--	--	--	--	--	--	--	--	Visual	--	
--	N	7-Jun-07	583527	4110082	Barren	SCT	--	--	--	--	--	--	--	--	Visual	DSCN9309	
--	N	25-Sep-07	581057	4115575	Edmonson	SCT	--	--	--	--	--	--	--	--	Visual	IMGP0013	
59312	Y	6-Jun-08	582923	4109690	Edmonson	SCT	F	L	A	620	153	85	31	--	Found dead	DSCN9513	
eastern gray squirrel (<i>Sciurus carolinensis</i>)																	
--	N	4-Sep-06	569219	4119572	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Ca	maca2090406sccaHR2	

Species Name and Classification										Length (mm)				Weight (g)	Trap/Obs. Method	Photo ID Name
Cat# ¹	Voucher (Y/N)	Obs Date	UTM X	UTM Y	County	Collector ²	Sex	Repro. Cond. ³	Age ⁴ Class	Total	Tail	Hind Foot	Ear			
eastern gray squirrel (<i>Sciurus carolinensis</i>) (cont.)																
--	N	13-Oct-06	583489	4117998	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Ca	maca4101306sccaOJC
--	N	18-Oct-06	580991	4114036	Edmonson	SCT	--	--	--	--	--	--	--	--	Found dead	--
--	N	13-Mar-07	576046	4112979	Edmonson	SCT	--	--	--	--	--	--	--	--	Visual	--
--	N	31-Mar-07	579544	4115917	Edmonson	SCT	--	--	--	--	--	--	--	--	Visual	DSCN9041
--	N	4-Jun-07	580916	4113655	Edmonson	SCT	--	--	--	--	--	--	--	--	Found dead	DSCN9295
59297	Y	3-Jul-07	574376	4113570	Edmonson	SCT	M	N	A	440	190	68	31	--	Found dead	DSCN3204
--	N	31-Dec-10	580600	4113505	Edmonson	Kelly Brownson	--	--	--	--	--	--	--	--	Visual	--
eastern fox squirrel (<i>Sciurus niger</i>)																
--	N	31-Oct-06	574722	4121413	Edmonson	SCT	--	--	--	--	--	--	--	--	Visual	--
--	N	24-May-07	581663	4120303	Edmonson	Bill Moore	--	--	--	--	--	--	--	--	Visual	--
59294	Y	26-Jun-07	573351	4113852	Edmonson	SCT	M	S	A	--	260	70	25	--	Found dead	DSCN9326; DSCN3196
--	N	31-Aug-07	578509	4115241	Edmonson	SCT	--	--	--	--	--	--	--	--	Visual	--
southern flying squirrel (<i>Glaucomys volans</i>)																
--	N	19-Jun-08	579250	4117328	Edmonson	SCT & RW SCT, Joe Johnson, DeVaughn Fraser	--	--	--	--	--	--	--	--	Auditory	--
--	N	10-Sep-09	573815	4117832	Edmonson		F	N	--	--	--	--	--	--	Mist Net	raf proj 706
Family: Castoridae (Beaver)																
American beaver (<i>Castor canadensis</i>)																
--	N	18-Jan-07	582114	4120230	Edmonson	RW AG	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	25-Jan-07	578969	4117339	Edmonson	RW AG	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	25-Jan-07	578995	4117914	Edmonson	RW AG	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	25-Jan-07	579659	4119860	Edmonson	RW AG	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	16-Feb-07	579179	4118101	Edmonson	AG RW EB	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	16-Feb-07	580997	4119312	Edmonson	AG RW EB	--	--	--	--	--	--	--	--	Spotlight Survey	--

Species Name and Classification											Length (mm)				Weight (g)	Trap/Obs. Method	Photo ID Name
Cat# ¹	Voucher (Y/N)	Obs Date	UTM X	UTM Y	County	Collector ²	Sex	Repro. Cond. ³	Age ⁴ Class	Total	Tail	Hind Foot	Ear				
American beaver (<i>Castor canadensis</i>) (cont.)																	
--	N	16-Feb-07	581152	4119259	Edmonson	AG RW EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	16-Feb-07	581336	4119378	Edmonson	AG RW EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	16-Feb-07	581466	4119740	Edmonson	AG RW EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	16-Feb-07	585786	4121697	Edmonson	AG RW EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	16-Feb-07	585966	4122059	Edmonson	AG RW EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	22-Feb-07	576468	4116106	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	22-Feb-07	579086	4117268	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	22-Feb-07	579376	4119702	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	22-Feb-07	579394	4119717	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	22-Feb-07	581200	4119245	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	4-Mar-07	578851	4115424	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	4-Mar-07	579030	4117961	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	4-Mar-07	579660	4119857	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	4-Mar-07	581159	4119251	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	4-Mar-07	581446	4119598	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	4-Mar-07	584128	4118903	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	4-Mar-07	585839	4121795	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	8-Mar-07	578771	4117582	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	8-Mar-07	580135	4119917	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	

Species Name and Classification											Length (mm)				Weight (g)	Trap/Obs. Method	Photo ID Name
Cat# ¹	Voucher (Y/N)	Obs Date	UTM X	UTM Y	County	Collector ²	Sex	Repro. Cond. ³	Age ⁴ Class	Total	Tail	Hind Foot	Ear				
American beaver (<i>Castor canadensis</i>) (cont.)																	
--	N	8-Mar-07	580383	4117900	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	8-Mar-07	581267	4119246	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	8-Mar-07	583640	4119021	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	8-Mar-07	585779	4122148	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	13-Mar-07	577296	4116084	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	13-Mar-07	578113	4115066	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	13-Mar-07	580883	4119389	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	13-Mar-07	584862	4119998	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	13-Mar-07	579121	4118021	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	21-Mar-07	578695	4114815	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	21-Mar-07	579019	4117300	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	21-Mar-07	579482	4116522	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	21-Mar-07	580949	4119341	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	21-Mar-07	584694	4119971	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	21-Mar-07	586258	4122845	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	21-Mar-07	580845	4119403	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	21-Mar-07	579291	4117198	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	31-Mar-07	581975	4120281	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	31-Mar-07	583460	4119194	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	

Species Name and Classification											Length (mm)				Weight (g)	Trap/Obs. Method	Photo ID Name
Cat# ¹	Voucher (Y/N)	Obs Date	UTM X	UTM Y	County	Collector ²	Sex	Repro. Cond. ³	Age ⁴ Class	Total	Tail	Hind Foot	Ear				
American beaver (<i>Castor canadensis</i>) (cont.)																	
--	N	31-Mar-07	584249	4119602	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	31-Mar-07	585937	4122105	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	31-Mar-07	587235	4119680	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	3-Apr-07	581144	4119436	Edmonson	RW AG	--	--	--	--	--	--	--	--	Live Traps	--	
--	N	5-Apr-07	575290	4115354	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	5-Apr-07	578322	4114878	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	5-Apr-07	580037	4119927	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	5-Apr-07	582017	4120275	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	5-Apr-07	582156	4120202	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	5-Apr-07	583012	4119774	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	5-Apr-07	583860	4118885	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	5-Apr-07	585898	4121790	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	20-Oct-10	568270	4124029	Edmonson	SCT and BJM	--	--	--	--	--	--	--	--	Sign	84; 90; 93	
--	N	1/?/2007	575546	4114027	Edmonson	RW AG	--	--	--	--	--	--	--	--	Remote Camera	maca5010007caca	
Family: Cricetidae (New World Rats and Mice)																	
Allegheny woodrat (<i>Neotoma magister</i>)																	
--	N	13-Jan-05	583135	4119055	Edmonson	SCT	M	N	A	--	--	--	--	323	Live Traps	--	
--	N	13-Jan-05	583145	4112153	Edmonson	SCT	F	N	A	--	--	--	--	215	Live Traps	--	
--	N	9-Mar-05	583861	4118796	Edmonson	SCT	F	N	A	--	--	--	--	250	Live Traps	--	
--	N	5-May-05	574557	4115658	Edmonson	SCT	F	P	A	--	--	--	--	268	Live Traps	--	
--	N	5-May-05	574564	4115669	Edmonson	SCT	F	PL	A	--	--	--	--	265	Live Traps	--	
--	N	5-May-05	578840	4114289	Edmonson	BJM	F	PL	A	--	--	--	--	293	Live Traps	--	

Species Name and Classification										Length (mm)				Weight (g)	Trap/Obs. Method	Photo ID Name
Voucher			UTM X	UTM Y	County	Collector ²	Sex	Repro. Cond. ³	Age ⁴ Class	Total	Tail	Hind Foot	Ear			
Cat# ¹	(Y/N)	Obs Date														
Allegheny woodrat (<i>Neotoma magister</i>) (cont.)																
--	N	5-May-05	580100	4112139	Edmonson	BJM	F	PL	A	--	--	--	--	270	Live Traps	--
--	N	5-May-05	580361	4111670	Edmonson	BJM	M	S	A	--	--	--	--	285	Live Traps	--
--	N	5-May-05	582510	4113165	Edmonson	BJM	F	L	A	--	--	--	--	315	Live Traps	--
--	N	5-May-05	582664	4110768	Edmonson	BJM	F	PL	A	--	--	--	--	310	Live Traps	--
--	N	5-May-05	582680	4110517	Edmonson	BJM	F	N	A	--	--	--	--	293	Live Traps	--
--	N	6-May-05	579280	4112073	Edmonson	BJM	M	N	U	--	--	--	--	275	Live Traps	--
--	N	6-May-05	579989	4112381	Edmonson	BJM	F	L	A	--	--	--	--	370	Live Traps	--
--	N	11-May-05	583145	4112153	Edmonson	SCT	F	L	A	--	--	--	--	330	Live Traps	--
--	N	11-May-05	583647	4111863	Barren	SCT	F	L	A	--	--	--	--	270	Live Traps	--
--	N	12-May-05	581799	4119549	Edmonson	SCT	M	N	A	--	--	--	--	270	Live Traps	--
--	N	14-Jul-05	583145	4112153	Edmonson	SCT	F	N	A					280	Live Traps	--
--	N	15-Jul-05	583647	4111863	Barren	SCT	F	N	A	--	--	--	--	272	Live Traps	--
--	N	8-Sep-05	583145	4112153	Edmonson	SCT	F	L	A	--	--	--	--	322	Live Traps	--
--	N	8-Sep-05	583647	4111863	Barren	SCT	F	L	A	--	--	--	--	268	Live Traps	--
--	N	2-Nov-05	583145	4112153	Edmonson	SCT	F	PL	A	--	--	--	--	335	Live Traps	--
--	N	2-Nov-05	583647	4111863	Barren	SCT	F	L	A	--	--	--	--	285	Live Traps	--
--	N	9-Nov-05	574564	4115669	Edmonson	SCT	F	PL	A	--	--	--	--	305	Live Traps	--
--	N	9-Nov-05	579187	4112113	Edmonson	BJM	M	N	J	--	--	--	--	160	Live Traps	--
--	N	9-Nov-05	579877	4112524	Edmonson	BJM	F	PL	A	--	--	--	--	195	Live Traps	--
--	N	9-Nov-05	580100	4112139	Edmonson	BJM	F	PL	A	--	--	--	--	255	Live Traps	--
--	N	9-Nov-05	582510	4113165	Edmonson	BJM	F	N	J	--	--	--	--	150	Live Traps	--
--	N	9-Nov-05	582510	4113165	Edmonson	BJM	F	PL	A	--	--	--	--	270	Live Traps	--
--	N	10-Nov-05	574557	4115658	Edmonson	SCT	M	N	J	--	--	--	--	137	Live Traps	--
--	N	10-Nov-05	578840	4114289	Edmonson	BJM	M	N	A	--	--	--	--	320	Live Traps	--
--	N	3-May-06	583145	4112153	Edmonson	SCT	F	PL	A	--	--	--	--	395	Live Traps	--
--	N	3-May-06	583647	4111863	Barren	SCT	F	L	A	--	--	--	--	245	Live Traps	--
--	N	10-May-06	574564	4115669	Edmonson	SCT	M	N	U	--	--	--	--	157	Live Traps	--
--	N	10-May-06	579560	4112182	Edmonson	BJM	M	N	A	--	--	--	--	324	Live Traps	--
--	N	10-May-06	580100	4112139	Edmonson	BJM	F	PL	A	--	--	--	--	175	Live Traps	--

Species Name and Classification										Length (mm)				Weight (g)	Trap/Obs. Method	Photo ID Name
Voucher			UTM X	UTM Y	County	Collector ²	Sex	Repro. Cond. ³	Age ⁴ Class	Total	Tail	Hind Foot	Ear			
Cat# ¹	(Y/N)	Obs Date														
Allegheny woodrat (<i>Neotoma magister</i>) (cont.)																
--	N	11-May-06	581904	4113889	Edmonson	BJM	F	PL	A	--	--	--	--	173	Live Traps	--
--	N	13-Jul-06	580665	4113894	Edmonson	SCT	M	N	J	--	--	--	--	160	Live Traps	--
--	N	14-Jul-06	580665	4113894	Edmonson	SCT	F	L	A	--	--	--	--	275	Live Traps	--
--	N	1-Nov-06	568436	4119448	Edmonson	SCT	F	N	U	--	--	--	--	175	Live Traps	--
--	N	1-Nov-06	576828	4113076	Edmonson	BJM	F	N	J	--	--	--	--	175	Live Traps	--
--	N	1-Nov-06	579413	4116266	Edmonson	BJM	M	N	A	--	--	--	--	235	Live Traps	--
--	N	1-Nov-06	579877	4112524	Edmonson	BJM	M	N	J	--	--	--	--	190	Live Traps	--
--	N	1-Nov-06	581904	4113889	Edmonson	BJM	F	U	A	--	--	--	--	305	Live Traps	--
--	N	1-Nov-06	583850	4112162	Barren	BJM	M	N	A	--	--	--	--	--	Live Traps	--
--	N	2-Nov-06	579989	4112381	Edmonson	BJM	F	N	J	--	--	--	--	205	Live Traps	--
--	N	2-Nov-06	580100	4112139	Edmonson	BJM	F	U	A	--	--	--	--	215	Live Traps	--
--	N	2-Nov-06	582664	4110768	Edmonson	BJM	M	N	A	--	--	--	--	300	Live Traps	--
--	N	2-Nov-06	582679	4110574	Edmonson	BJM	M	N	A	--	--	--	--	285	Live Traps	--
--	N	7-Nov-06	580307	4114430	Edmonson	SCT	M	N	U	--	--	--	--	218	Live Traps	--
--	N	7-Nov-06	580665	4113894	Edmonson	SCT	F	N	U	--	--	--	--	210	Live Traps	--
--	N	7-Nov-06	583145	4112153	Edmonson	SCT	F	N	A	--	--	--	--	365	Live Traps	--
--	N	7-Nov-06	583647	4111863	Barren	SCT	F	N	A	--	--	--	--	250	Live Traps	--
--	N	9-May-07	568436	4119448	Edmonson	SCT	F	L	A	--	--	--	--	205	Live Traps	--
--	N	9-May-07	572697	4121273	Edmonson	SCT	M	S	A	--	--	--	--	335	Live Traps	--
--	N	9-May-07	574564	4115669	Edmonson	SCT	M	S	A	--	--	--	--	325	Live Traps	--
--	N	9-May-07	577277	4119789	Edmonson	SCT	M	N	A	--	--	--	--	263	Live Traps	--
--	N	9-May-07	579989	4112381	Edmonson	BJM	F	PL	A	--	--	--	--	238	Live Traps	--
--	N	9-May-07	580361	4111670	Edmonson	BJM	F	L	A	--	--	--	--	262	Live Traps	--
--	N	9-May-07	581904	4113889	Edmonson	BJM	M	N	A	--	--	--	--	325	Live Traps	--
--	N	9-May-07	582664	4110768	Edmonson	BJM	M	S	A	--	--	--	--	317	Live Traps	--
--	N	9-May-07	582679	4110574	Edmonson	BJM	M	N	A	--	--	--	--	305	Live Traps	--
--	N	10-May-07	572465	4121453	Edmonson	SCT	M	S	A	--	--	--	--	323	Live Traps	--
--	N	17-May-07	583145	4112153	Edmonson	SCT	F	PL	A	--	--	--	--	355	Live Traps	--
--	N	5-Sep-07	579575	4116030	Edmonson	BJM	M	N	A	--	--	--	--	245	Live Traps	--

Species Name and Classification										Length (mm)				Weight (g)	Trap/Obs. Method	Photo ID Name
Voucher			UTM X	UTM Y	County	Collector ²	Sex	Repro. Cond. ³	Age ⁴ Class	Total	Tail	Hind Foot	Ear			
Cat# ¹	(Y/N)	Obs Date														
Allegheny woodrat (<i>Neotoma magister</i>) (cont.)																
--	N	7-Nov-07	574564	4115669	Edmonson	SCT	F	N	U	--	--	--	--	200	Live Traps	--
--	N	7-Nov-07	574685	4115481	Edmonson	SCT	F	PL	A	--	--	--	--	227	Live Traps	--
--	N	7-Nov-07	577169	4119845	Edmonson	SCT	F	N	U	--	--	--	--	200	Live Traps	--
--	N	7-Nov-07	580100	4112139	Edmonson	BJM	F	PL	A	--	--	--	--	250	Live Traps	--
--	N	7-Nov-07	581904	4113889	Edmonson	BJM	M	N	A	--	--	--	--	313	Live Traps	--
--	N	8-Nov-07	568436	4119448	Edmonson	SCT	F	PL	A	--	--	--	--	215	Live Traps	--
--	N	14-Nov-07	580307	4114430	Edmonson	SCT	M	N	A	--	--	--	--	228	Live Traps	--
--	N	14-Nov-07	583145	4112153	Edmonson	SCT	F	N	A	--	--	--	--	338	Live Traps	--
--	N	15-Nov-07	580665	4113894	Edmonson	SCT	F	N	U	--	--	--	--	200	Live Traps	--
--	N	7-May-08	579413	4116266	Edmonson	BJM	M	N	A	--	--	--	--	285	Live Traps	--
--	N	7-May-08	580100	4112139	Edmonson	BJM	F	L	A	--	--	--	--	255	Live Traps	--
--	N	8-May-08	581904	4113889	Edmonson	SCT	M	N	A	--	--	--	--	268	Live Traps	--
--	N	15-May-08	580665	4113894	Edmonson	SCT	F	L	A	--	--	--	--	265	Live Traps	--
--	N	15-May-08	583145	4112153	Edmonson	SCT	F	P	A	--	--	--	--	375	Live Traps	DSCN9509
--	N	8-Jul-08	580307	4114430	Edmonson	SCT	M	N	A	--	--	--	--	282	Live Traps	--
--	N	8-Jul-08	583647	4111863	Barren	SCT	F	N	U	--	--	--	--	195	Live Traps	--
--	N	9-Jul-08	579575	4116030	Edmonson	SCT	M	N	A	--	--	--	--	293	Live Traps	--
--	N	9-Jul-08	580307	4114430	Edmonson	SCT	F	N	U	--	--	--	--	212	Live Traps	--
--	N	9-Jul-08	583647	4111863	Barren	SCT	M	N	U	--	--	--	--	217	Live Traps	--
59309	Y	25-Nov-09	583544	4110097	Barren	SCT	M	N	A	410	195	40	25		Found dead	--
59310	Y	31-Mar-10	581225	4115315	Edmonson	SCT	U	U	A	--	--	--	--	--	Found dead	--
--	N	1-Dec-10	580635	4113852	Edmonson	SCT	--	--	A	--	--	--	--	--	Visual	--
eastern harvest mouse (<i>Reithrodontomys humulis</i>)																
--	N	14-Jun-05	583582	4118078	Edmonson	KLO	SCT	F	P	A	--	--	--	--	Live Traps	DSCN0497
--	N	15-Jun-05	583538	4117874	Edmonson	KLO	F	P	A	--	--	--	--	--	Live Traps	--
59301	Y	21-Jul-05	583533	4109801	Barren	KLO	F	L	A	118	52	15	10	--	Live Traps	--
59268	Y	6-Apr-06	581101	4115589	Edmonson	HMP	M	N	A	111	50	16	--	--	Pitfalls	--
59245	Y	12-Apr-06	581101	4115589	Edmonson	HMP	M	U	A	124	56	17	--	--	Pitfalls	--
59274	Y	21-Apr-06	580947	4115710	Edmonson	HMP	F	U	U	--	40	13	--	--	Pitfalls	--

Species Name and Classification										Length (mm)				Weight (g)	Trap/Obs. Method	Photo ID Name
Cat# ¹	Voucher		UTM X	UTM Y	County	Collector ²	Sex	Repro. Cond. ³	Age ⁴ Class	Total	Tail	Hind Foot	Ear			
	(Y/N)	Obs Date														
eastern harvest mouse (<i>Reithrodontomys humulis</i>) (cont.)																
59281	Y	29-May-06	583805	4109874	Barren	HMP	M	U	A	--	61	15	--	--	Drift Fence	--
59288	Y	5-Jun-06	583648	4109841	Barren	HMP	F	P	A	120	56	15	10	--	Drift Fence	--
--	N	29-Jun-06	568031	4122948	Edmonson	HMP	F	U	U	--	--	--	--	--	Live Traps	--
--	N	29-Jun-06	568031	4122948	Edmonson	HMP	F		A	--	--	--	--	--	Live Traps	--
white-footed mouse or deer mouse (<i>Peromyscus</i> spp.)																
59254	Y	7-Apr-06	577614	4112775	Edmonson	HMP	F	N	J	130	62	20	14	--	Pitfalls	--
59255	Y	7-Apr-06	580292	4114371	Edmonson	HMP	F	N	J	120	55	19	14	--	Pitfalls	--
59167	Y	19-Oct-05	580701	4113900	Edmonson	KLO	F	N	J	115	54	18	15	--	Pitfalls	--
59161	Y	30-Sep-05	583770	4109899	Barren	KLO	F	U	J	130	57	18	16	--	Pitfalls	--
59275	Y	21-Apr-06	583770	4109899	Barren	HMP	F	N	J	105	45	17	11	--	Drift Fence	--
white-footed mouse (<i>Peromyscus leucopus</i>)																
--	N	7-Jun-05	583718	4109892	Barren	KLO SCT	U	U	A	--	--	--	--	--	Live Traps	--
--	N	9-Jun-05	583718	4109892	Barren	KLO SCT	M	U	J	--	--	--	--	--	Live Traps	--
--	N	15-Jun-05	583538	4117874	Edmonson	KLO	U	U	U	--	--	--	--	--	Live Traps	--
--	N	16-Jun-05	583718	4109892	Barren	KLO	M	U	A	--	--	--	--	--	Live Traps	--
--	N	16-Jun-05	583718	4109892	Barren	KLO	M	U	A	--	--	--	--	--	Live Traps	--
--	N	1-Oct-05	581142	4115238	Edmonson	KLO	F	U	A	--	--	--	--	--	Live Traps	--
--	N	2-Oct-05	581142	4115238	Edmonson	KLO	F	U	A	--	--	--	--	--	Live Traps	--
--	N	27-Oct-05	583345	4117922	Edmonson	KLO	U	U	J	--	--	--	--	--	Live Traps	--
--	N	28-Oct-05	583464	4118069	Edmonson	SCT & DF	M	U	SA	--	--	--	--	--	Live Traps	--
--	N	28-Oct-05	583582	4118078	Edmonson	SCT & DF	M	U	SA	--	--	--	--	--	Live Traps	--
--	N	14-Nov-05	581119	4115283	Edmonson	KLO	F	U	J	--	--	--	--	--	Found dead	--
--	N	23-Nov-05	568233	4122735	Edmonson	KLO	F	U	A	--	--	--	--	--	Live Traps	--
59258	Y	7-Apr-06	578865	4115435	Edmonson	HMP	F	N	U	142	65	20	16	--	Pitfalls	--
59267	Y	12-May-06	577614	4112775	Edmonson	HMP	F	PL	A	151	65	21	17	--	Pitfalls	--
59271	Y	25-May-06	583770	4109899	Barren	MMM	M	N	A	151	68	21	16	--	Drift Fence	--
59300	Y	31-May-06	580673	4115410	Edmonson	MMM	M	N	A	150	66	19	14	--	Found dead	--
59287	Y	5-Jun-06	583648	4109841	Barren	HMP	M	N	A	153	72	19	15	--	Drift Fence	--
59263	Y	8-Jun-06	579889	4116744	Edmonson	HMP	M	N	A	144	69	20	15	--	Pitfalls	--

Species Name and Classification										Length (mm)				Weight (g)	Trap/Obs. Method	Photo ID Name
Cat# ¹	Voucher (Y/N)	Obs Date	UTM X	UTM Y	County	Collector ²	Sex	Repro. Cond. ³	Age ⁴ Class	Total	Tail	Hind Foot	Ear			
white-footed mouse (<i>Peromyscus leucopus</i>) (cont.)																
--	N	17-Aug-06	578642	4115021	Edmonson	HMP	--	--	--	--	--	--	--	--	Live Traps	--
--	N	18-Aug-06	578273	4115221	Edmonson	HMP	--	--	--	--	--	--	--	--	Live Traps	--
--	N	18-Aug-06	578642	4115021	Edmonson	HMP	--	--	--	--	--	--	--	--	Live Traps	--
59308	Y	31-Aug-06	581087	4115681	Edmonson	Amy Edwards	M	S	A	160	70	20	16	--	Snap Trap	--
--	N	2-Sep-06	584416	4119399	Hart	HMP	--	--	--	--	--	--	--	--	Live Traps	--
--	N	8-Oct-06	582189	4119440	Edmonson	JRM	--	--	--	--	--	--	--	--	Visual	--
--	N	8-Oct-06	581726	4117185	Edmonson	JRM	--	--	--	--	--	--	--	--	Visual	--
--	N	8-Oct-06	583720	4109659	Barren	JRM	--	--	--	--	--	--	--	--	Visual	--
59223	Y	11-Oct-06	583670	4122462	Hart	HMP	F	PL	A	165	72	21	16	--	Pitfalls	--
59202	Y	26-Oct-06	583090	4122864	Hart	HMP	M	S	A	151	73	21	16	--	Drift Fence	--
--	N	26-Oct-06	583693	4109821	Barren	HMP SCT	--	--	--	--	--	--	--	--	Live Traps	--
59302	Y	26-Oct-06	583752	4110070	Barren	SCT	M	U	A	--	64	19	12	--	Live Traps	--
--	N	26-Oct-06	583756	4110058	Barren	HMP SCT	--	--	--	--	--	--	--	--	Live Traps	--
--	N	26-Oct-06	583756	4110058	Barren	HMP SCT	--	--	--	--	--	--	--	--	Live Traps	--
--	N	26-Oct-06	583756	4110058	Barren	HMP SCT	--	--	--	--	--	--	--	--	Live Traps	--
--	N	26-Oct-06	583759	4109986	Barren	HMP SCT	--	--	--	--	--	--	--	--	Live Traps	--
--	N	27-Oct-06	583756	4110058	Barren	HMP SCT	--	--	--	--	--	--	--	--	Live Traps	--
--	N	27-Oct-06	583759	4109986	Barren	HMP SCT	--	--	--	--	--	--	--	--	Live Traps	--
--	N	29-Nov-06	582023	4119486	Edmonson	HMP	--	--	--	--	--	--	--	--	Live Traps	--
--	N	29-Nov-06	582023	4119486	Edmonson	HMP	--	--	--	--	--	--	--	--	Live Traps	--
--	N	30-Nov-06	582023	4119486	Edmonson	HMP	--	--	--	--	--	--	--	--	Live Traps	--
--	N	30-Nov-06	582023	4119486	Edmonson	HMP	--	--	--	--	--	--	--	--	Live Traps	--
59290	Y	27-Mar-09	579582	4116027	Edmonson	SCT	F	L	A	151	64	17	17	--	Hand captured	DSCN3187
--	N	8-Jun-09	583840	4109914	Barren	SCT	--	--	--	--	--	--	--	--	Visual	batmouse
--	N	18-Aug-06	578273	4115221	Edmonson	HMP	M	U	U	--	--	--	--	--	Live Traps	--
prairie vole (<i>Microtus ochrogaster</i>)																
59296	Y	20-Jul-05	583533	4109801	Barren	KLO	F	N	A	128	28	17	11	27.5	Live Traps	DSCN0551; DSCN3202
59305	Y	23-Nov-05	568031	4122948	Edmonson	KLO	F	U	A	116	29	18	--	--	Live Traps	DSCN0812

Species Name and Classification											Length (mm)				Weight (g)	Trap/Obs. Method	Photo ID Name
Cat# ¹	Voucher (Y/N)	Obs Date	UTM X	UTM Y	County	Collector ²	Sex	Repro. Cond. ³	Age ⁴ Class	Total	Tail	Hind Foot	Ear				
muskrat (<i>Ondatra zibethicus</i>) (cont.)																	
--	N	5-Apr-07	585071	4120653	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	13-Apr-07	579135	4118041	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	20-Apr-07	578788	4117573	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	20-Apr-07	577541	4115914	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	22-Apr-07	566892	4123201	Edmonson	RW AG	--	--	--	--	--	--	--	--	Live Traps	100_1910	
--	N	10-May-07	578966	4115972	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	10-May-07	577575	4115899	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	10-May-07	575060	4114867	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	14-May-07	578940	4117889	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	14-May-07	576856	4116099	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	26-May-07	578790	4115055	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	26-May-07	577787	4115613	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	3-Jun-07	582567	4119994	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	3-Jun-07	578781	4117664	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	3-Jun-07	578812	4117538	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	3-Jun-07	578857	4117462	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	3-Jun-07	577683	4115751	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	3-Jun-07	577625	4115824	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	3-Jun-07	576635	4116115	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--	

Species Name and Classification										Length (mm)				Weight (g)	Trap/Obs. Method	Photo ID Name
Cat# ¹	Voucher (Y/N)	Obs Date	UTM X	UTM Y	County	Collector ²	Sex	Repro. Cond. ³	Age ⁴ Class	Total	Tail	Hind Foot	Ear			
muskrat (<i>Ondatra zibethicus</i>) (cont.)																
--	N	5-Jun-07	577597	4115853	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	5-Jun-07	577289	4116072	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	5-Jun-07	575860	4115879	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	11-Jun-07	579081	4117999	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	11-Jun-07	577671	4115794	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	11-Jun-07	576690	4116112	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	11-Jun-07	576903	4116120	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	11-Jun-07	575663	4115710	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	17-Jun-07	577366	4116046	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	17-Jun-07	575594	4115681	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	25-Jun-07	566400	4123505	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	25-Jun-07	567288	4123749	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	25-Jun-07	566852	4123161	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	25-Jun-07	566741	4122750	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	25-Jun-07	566664	4122051	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	25-Jun-07	566418	4121637	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	25-Jun-07	566910	4121415	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	25-Jun-07	567156	4121511	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	25-Jun-07	567260	4121617	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--

Species Name and Classification										Length (mm)				Weight (g)	Trap/Obs. Method	Photo ID Name
Voucher Cat# ¹	(Y/N)	Obs Date	UTM X	UTM Y	County	Collector ²	Sex	Repro. Cond. ³	Age ⁴ Class	Total	Tail	Hind Foot	Ear			
muskrat (<i>Ondatra zibethicus</i>) (cont.)																
--	N	25-Jun-07	567557	4121283	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	25-Jun-07	567451	4120945	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	25-Jun-07	567533	4120730	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	25-Jun-07	567728	4120458	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	25-Jun-07	568335	4119845	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	1-Jul-07	578793	4117673	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	16-Jul-07	578827	4117790	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	16-Jul-07	578811	4115200	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	30-Jul-07	578787	4117558	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	30-Jul-07	577175	4116106	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	30-Jul-07	576996	4116111	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	30-Jul-07	575458	4115578	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	25-Jul-07	566479	4124555	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	25-Jul-07	566432	4123563	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	25-Jul-07	567246	4123792	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	25-Jul-07	567300	4123659	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	25-Jul-07	566764	4122880	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	25-Jul-07	566520	4121981	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	8-Aug-07	566424	4124671	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--

Species Name and Classification										Length (mm)				Weight (g)	Trap/Obs. Method	Photo ID Name
Cat# ¹	Voucher (Y/N)	Obs Date	UTM X	UTM Y	County	Collector ²	Sex	Repro. Cond. ³	Age ⁴ Class	Total	Tail	Hind Foot	Ear			
muskrat (<i>Ondatra zibethicus</i>) (cont.)																
--	N	8-Aug-07	566197	4123863	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	8-Aug-07	567118	4123781	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	8-Aug-07	567131	4121546	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	8-Aug-07	567480	4121737	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	8-Aug-07	568200	4120020	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	14-Aug-07	580043	4119929	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	14-Aug-07	576750	4116109	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	14-Aug-07	575901	4115919	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	20-May-08	583310	4119434	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	20-May-08	579291	4116204	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	20-May-08	575155	4114471	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	28-May-08	567280	4123769	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	28-May-08	568034	4120157	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	28-May-08	567556	4119757	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	7-Jun-08	566779	4122420	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	7-Jun-08	566737	4122233	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	7-Jun-08	567520	4121704	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	7-Jun-08	567664	4120518	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	7-Jun-08	567906	4119937	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--

Species Name and Classification										Length (mm)				Weight (g)	Trap/Obs. Method	Photo ID Name
Cat# ¹	Voucher (Y/N)	Obs Date	UTM X	UTM Y	County	Collector ²	Sex	Repro. Cond. ³	Age ⁴ Class	Total	Tail	Hind Foot	Ear			
muskrat (<i>Ondatra zibethicus</i>) (cont.)																
--	N	7-Jun-08	567749	4119969	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	17-Jun-08	566963	4123699	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	17-Jun-08	566440	4121665	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	17-Jun-08	566541	4121323	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	17-Jun-08	567557	4120694	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	17-Jun-08	567974	4120237	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	14-Jul-08	566179	4123569	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	14-Jul-08	566372	4121450	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	14-Jul-08	567352	4121746	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	14-Jul-08	567733	4120447	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	1-Aug-08	566767	4122274	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	1-Aug-08	566612	4121322	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	1-Aug-08	567554	4121311	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	1-Aug-08	567533	4120696	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	11-Aug-08	579296	4117191	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	13-Aug-08	567320	4121722	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	13-Aug-08	567544	4121180	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--
--	N	13-Aug-08	567781	4120411	Edmonson	RW	--	--	--	--	--	--	--	--	Spotlight Survey	--

Species Name and Classification											Length (mm)				Weight (g)	Trap/Obs. Method	Photo ID Name
Cat# ¹	Voucher (Y/N)	Obs Date	UTM X	UTM Y	County	Collector ²	Sex	Repro. Cond. ³	Age ⁴ Class	Total	Tail	Hind Foot	Ear				
Family: Muridae (Old World Rats and Mice)																	
Norway rat (<i>Rattus norvegicus</i>)																	
59298	Y	6-Aug-08	579575	4116030	Edmonson	SCT	M	S	A	287	77	41	20	--	Found dead	DSCN9811; DSCN3206	
Family: Dipodidae (Jumping Mice)																	
meadow jumping mouse (<i>Zapus hudsonius</i>)																	
59174	Y	19-Oct-05	575339	4122165	Edmonson	KLO	M	U	J	188	119	29	10	--	Drift Fence	DSCN0901	
59269	Y	18-May-06	583770	4109899	Barren	HMP	M	S	A	192	115	27	10	--	Pitfalls	--	
Order: Carnivora																	
Family: Canidae (Dogs and Allies)																	
red fox (<i>Vulpes vulpes</i>)																	
59320	Y	22-Oct-12	574269	4113697	Edmonson	SCT	M	U	A	978	355	150	88	4,355	Found dead	P1000718	
gray fox (<i>Urocyon cinereoargenteus</i>)																	
--	N	10-Oct-07	574954	4113140	Edmonson	SCT	--	--	--	--	--	--	--	--	Visual	--	
59311	Y	9-Sep-08	575797	4113192	Edmonson	Jason Taylor	U	U	U	--	--	--	--	--	Found skull	--	
--	N	17-Oct-09	577031	4113127	Edmonson	David M. Alexander	--	--	--	--	--	--	--	--	Found dead	DSC00255	
coyote (<i>Canus latrans</i>)																	
--	N	3-Feb-05	580771	4115261	Edmonson	SCT	--	--	--	--	--	--	--	--	Visual	--	
--	N	6-Dec-05	579726	4112250	Edmonson	SCT	--	--	--	--	--	--	--	--	Visual	--	
--	N	22-Jul-06	582206	4110487	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca4072206calaUC	
--	N	14-Aug-06	582553	4110483	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca3081406calaBBS	
--	N	19-Aug-06	569299	4119485	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	BOBCAM6081906HF3	
--	N	22-Aug-06	569219	4119572	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca2082206calaHR2	
--	N	14-Sep-06	580373	4115908	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca5091406calaEV	
--	N	15-Sep-06	583489	4117998	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca4091506calaOJC	
--	N	26-Jan-07	581144	4119436	Edmonson	RW AG	--	--	--	--	--	--	--	--	Remote Camera	maca2012607cala	

Species Name and Classification											Length (mm)				Weight (g)	Trap/Obs. Method	Photo ID Name
Cat# ¹	Voucher (Y/N)	Obs Date	UTM X	UTM Y	County	Collector ²	Sex	Repro. Cond. ³	Age ⁴ Class	Total	Tail	Hind Foot	Ear				
coyote (<i>Canus latrans</i>) (cont.)																	
--	N	27-Jan-07	575546	4114027	Edmonson	RW AG	--	--	--	--	--	--	--	--	Remote Camera	maca5012707cala	
--	N	29-Jan-07	581144	4119436	Edmonson	RW AG	--	--	--	--	--	--	--	--	Remote Camera	maca2012907cala	
--	N	3-Feb-07	581144	4119436	Edmonson	RW AG	--	--	--	--	--	--	--	--	Remote Camera	maca2020307cala	
--	N	6-Feb-07	581144	4119436	Edmonson	RW AG	--	--	--	--	--	--	--	--	Remote Camera	maca2020607cala	
--	N	8-Feb-07	581144	4119436	Edmonson	RW AG	--	--	--	--	--	--	--	--	Remote Camera	maca2020807cala	
--	N	10-Feb-07	581144	4119436	Edmonson	RW AG	--	--	--	--	--	--	--	--	Remote Camera	maca2021007cala	
--	N	20-Feb-07	581144	4119436	Edmonson	RW AG	--	--	--	--	--	--	--	--	Remote Camera	maca2022007cala	
--	N	7-Apr-07	578825	4117583	Edmonson	RW AG	--	--	--	--	--	--	--	--	Live Traps	040707cala	
--	N	11-Apr-07	585307	4121401	Hart	RW AG	--	--	--	--	--	--	--	--	Live Traps	041107cala5	
--	N	7-Dec-07	578327	4111897	Edmonson	SCT	--	--	--	--	--	--	--	--	Visual	--	
Family: Procyonidae (Raccoons)																	
raccoon (<i>Procyon lotor</i>)																	
--	N	14-May-06	576420	4113928	Edmonson	SCT	--	--	--	--	--	--	--	--	Remote Camera	maca1051406prloJC2	
--	N	20-Jun-06	583110	4108445	Barren	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca5062006prloDC	
--	N	26-Jun-06	571984	4121128	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca1062606prloHR1	
--	N	14-Jul-06	577243	4120792	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca3071406prloNS	
--	N	28-Jul-06	578610	4113983	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca1072806prloJR	
--	N	8-Aug-06	578678	4111951	Edmonson	SCT	--	--	--	--	--	--	--	--	Found dead	DSCN7936	
--	N	20-Sep-06	580373	4115908	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca5092006prloEV	
--	N	5-Oct-06	569219	4119572	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca2100506prloHR2	
--	N	14-Oct-06	583489	4117998	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca4101406prloOJC	

Species Name and Classification											Length (mm)				Weight (g)	Trap/Obs. Method	Photo ID Name
Cat# ¹	Voucher (Y/N)	Obs Date	UTM X	UTM Y	County	Collector ²	Sex	Repro. Cond. ³	Age ⁴ Class	Total	Tail	Hind Foot	Ear				
raccoon (<i>Procyon lotor</i>) (cont.)																	
--	N	18-Jan-07	580341	4119830	Edmonson	RW AG	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	18-Jan-07	584261	4118883	Edmonson	RW AG	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	25-Jan-07	582042	4120270	Edmonson	RW AG	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	16-Feb-07	581726	4120180	Edmonson	AG RW EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	22-Feb-07	578040	4115145	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	22-Feb-07	578296	4114895	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	4-Mar-07	581342	4119317	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	4-Mar-07	584128	4118903	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	8-Mar-07	582970	4119815	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	13-Mar-07	577114	4116115	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	13-Mar-07	577611	4115840	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	13-Mar-07	579684	4119860	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	13-Mar-07	584327	4118909	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	13-Mar-07	579133	4118723	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	13-Mar-07	579121	4118021	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	13-Mar-07	579450	4116442	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	21-Mar-07	575822	4118826	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	21-Mar-07	579202	4118491	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	21-Mar-07	582387	4120051	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	

Species Name and Classification											Length (mm)				Weight (g)	Trap/Obs. Method	Photo ID Name
Cat# ¹	Voucher (Y/N)	Obs Date	UTM X	UTM Y	County	Collector ²	Sex	Repro. Cond. ³	Age ⁴ Class	Total	Tail	Hind Foot	Ear				
raccoon (<i>Procyon lotor</i>) (cont.)																	
--	N	21-Mar-07	583925	4118875	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	31-Mar-07	575195	4115197	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	31-Mar-07	581445	4119624	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	31-Mar-07	583427	4119277	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	3-Apr-07	581144	4119436	Edmonson	RW AG	--	--	--	--	--	--	--	--	Live Traps	040307prlo2	
--	N	5-Apr-07	579239	4118383	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey		
--	N	5-Apr-07	580149	4119922	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	5-Apr-07	581443	4119602	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	5-Apr-07	581952	4120294	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	5-Apr-07	582573	4119997	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	5-Apr-07	583299	4119443	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	5-Apr-07	583472	4119186	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	5-Apr-07	584356	4119867	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	5-Apr-07	585130	4120198	Edmonson	AG HP EB	--	--	--	--	--	--	--	--	Spotlight Survey	--	
--	N	14-Apr-07	581144	4119436	Edmonson	RW AG	--	--	--	--	--	--	--	--	Live Traps	--	
--	N	20-Apr-07	567116	4119424	Edmonson	RW AG	--	--	--	--	--	--	--	--	Live Traps	100_1889	
--	N	21-Apr-07	566753	4122680	Edmonson	RW AG	--	--	--	--	--	--	--	--	Live Traps		
--	N	22-Apr-07	567116	4119424	Edmonson	RW AG	--	--	--	--	--	--	--	--	Live Traps	--	
--	N	23-Apr-07	566753	4122680	Edmonson	RW AG	--	--	--	--	--	--	--	--	Live Traps	--	
--	N	24-Apr-07	567116	4119424	Edmonson	RW AG	--	--	--	--	--	--	--	--	Live Traps	--	
--	N	?-Jan-07	575546	4114027	Edmonson	RW AG	--	--	--	--	--	--	--	--	Remote Camera	maca5010007prlo	

[illegible]

Species Name and Classification											Length (mm)				Weight (g)	Trap/Obs. Method	Photo ID Name
Cat# ¹	Voucher		UTM X	UTM Y	County	Collector ²	Sex	Repro. Cond. ³	Age ⁴ Class	Total	Tail	Hind	Ear				
	(Y/N)	Obs Date										Foot					
river otter (<i>Lontra canadensis</i>) (cont.)																	
--	N	25-Apr-07	566753	4122680	Edmonson	RW AG	--	--	--	--	--	--	--	--	Live Traps-sign	--	
--	N	25-Apr-07	566892	4123201	Edmonson	RW AG	--	--	--	--	--	--	--	--	Live Traps	--	
--	N	26-Apr-07	566753	4122680	Edmonson	RW AG	--	--	--	--	--	--	--	--	Sign-scat	--	
--	N	9-May-07	566753	4122680	Edmonson	RW	--	--	--	--	--	--	--	--	Sign-scat	--	
--	N	14-May-07	585853	4121880	Edmonson	RW	--	--	--	--	--	--	--	--	Sign-scat	--	
--	N	5-Jun-07	566753	4122680	Edmonson	RW	--	--	--	--	--	--	--	--	Sign-scat	--	
--	N	31-Jul-07	566758	4122693	Edmonson	RW	--	--	--	--	--	--	--	--	Sign-scat	--	
--	N	16-Dec-07	578825	4117583	Edmonson	RW	--	--	--	--	--	--	--	--	Sign-scat	--	
--	N	18-May-08	580067	4119899	Edmonson	RW	--	--	--	--	--	--	--	--	Sign-scat	--	
--	N	18-May-08	580602	4119701	Edmonson	RW	--	--	--	--	--	--	--	--	Sign-scat	--	
--	N	18-May-08	581275	4119288	Edmonson	RW	--	--	--	--	--	--	--	--	Sign-scat	--	
--	N	19-May-08	566777	4122599	Edmonson	RW	--	--	--	--	--	--	--	--	Sign-scat	--	
--	N	19-May-08	571157	4117935	Edmonson	RW	--	--	--	--	--	--	--	--	Sign-scat	--	
--	N	20-May-08	575558	4113812	Edmonson	RW	--	--	--	--	--	--	--	--	Sign-scat	--	
--	N	7-Jun-08	566892	4123201	Edmonson	RW	--	--	--	--	--	--	--	--	Sign-scat	--	
--	N	15-Jul-08	581284	4119309	Edmonson	RW	--	--	--	--	--	--	--	--	Sign-scat	--	
--	N	18-Jul-08	566677	4121330	Edmonson	RW	--	--	--	--	--	--	--	--	Sign-scat	--	
--	N	19-Jul-08	566761	4121317	Edmonson	RW	--	--	--	--	--	--	--	--	Sign-scat	--	
--	N	19-Jul-08	567246	4123787	Edmonson	RW	--	--	--	--	--	--	--	--	Sign-scat	--	
Family: Mephitidae (Skunks)																	
striped skunk (<i>Mephitis mephitis</i>)																	
--	N	16-Oct-06	575564	4112976	Edmonson	SCT	--	--	--	--	--	--	--	--	Visual	--	
--	N	22-Nov-06	577031	4113127	Edmonson	SCT	--	--	--	--	--	--	--	--	Found dead	DSCN8636	
Family: Felidae (Cats)																	
bobcat (<i>Lynx rufus</i>)																	
--	N	31-Jan-07	581144	4119436	Edmonson	RW AG	--	--	--	--	--	--	--	--	Remote Camera	maca2013107lyru	
--	N	12-Apr-07	581144	4119436	Edmonson	RW AG	--	--	--	--	--	--	--	--	Live Traps	041207lyru2	
--	N	23-Apr-07	566892	4123201	Edmonson	RW AG	--	--	--	--	--	--	--	--	Live Traps	100_1915	

Species Name and Classification											Length (mm)				Weight (g)	Trap/Obs. Method	Photo ID Name
Cat# ¹	Voucher (Y/N)	Obs Date	UTM X	UTM Y	County	Collector ²	Sex	Repro. Cond. ³	Age ⁴ Class	Total	Tail	Hind Foot	Ear				
Order: Artiodactyla																	
Family: Cervidae (Deer)																	
white-tailed deer (<i>Odocoileus virginianus</i>)																	
59315	Y	10-Nov-05	574430	4117575	Edmonson	SCT	M	U	A	--	--	--	--	--	Found dead	DSCN0754	
--	N	14-May-06	576420	4113928	Edmonson	SCT	--	--	--	--	--	--	--	--	Remote Camera	maca1051406odviJC2	
--	N	18-May-06	576420	4113928	Edmonson	SCT	--	--	--	--	--	--	--	--	Remote Camera	maca1051806odviJC2	
--	N	13-Jun-06	577243	4120792	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca3061306odviNS	
--	N	16-Jun-06	582861	4121936	Hart	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca4061606odviWO	
--	N	21-Jun-06	584613	4112528	Barren	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca2062106odviSC	
--	N	22-Jun-06	584613	4112528	Barren	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca2062206odviSC	
--	N	23-Jun-06	577243	4120792	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca3062306odviNS	
--	N	24-Jun-06	571984	4121128	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca1062406odviHR1	
--	N	25-Jun-06	571984	4121128	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca1062506odviHR1	
--	N	25-Jun-06	584613	4112528	Barren	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca2062506odviSC	
--	N	28-Jun-06	571984	4121128	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca1062806odviHR1	
--	N	28-Jun-06	577243	4120792	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca3062806odviNS	
--	N	3-Jul-06	571984	4121128	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca1070306odviHR1	
--	N	4-Jul-06	571984	4121128	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca1070406odviHR1	
--	N	4-Jul-06	583110	4108445	Barren	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca5070406odviDC	
--	N	5-Jul-06	571984	4121128	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca1070506odviHR1	
--	N	6-Jul-06	571984	4121128	Edmonson	MMM	--	--	A,J	--	--	--	--	--	Remote Camera	maca1070606odviHR1	

Species Name and Classification										Length (mm)				Weight (g)	Trap/Obs. Method	Photo ID Name
Cat# ¹	Voucher (Y/N)	Obs Date	UTM X	UTM Y	County	Collector ²	Sex	Repro. Cond. ³	Age ⁴ Class	Total	Tail	Hind Foot	Ear			
white-tailed deer (<i>Odocoileus virginianus</i>) (cont.)																
--	N	7-Jul-06	571984	4121128	Edmonson	MMM	--	--	J	--	--	--	--	--	Remote Camera	maca1070706odviHR1
--	N	9-Jul-06	577243	4120792	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca3070906odviNS
--	N	11-Jul-06	582861	4121936	Hart	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca4071106odviWO
--	N	11-Jul-06	583110	4108445	Barren	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca5071106odviDC
--	N	16-Jul-06	582861	4121936	Hart	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca4071606odviWO
--	N	17-Jul-06	582861	4121936	Hart	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca4071706odviWO
--	N	19-Jul-06	583110	4108445	Barren	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca5071906odviDC
--	N	21-Jul-06	571302	4117450	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca3072106odviJBK
--	N	21-Jul-06	580100	4111679	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca5072106odviLSP
--	N	22-Jul-06	571302	4117450	Edmonson	MMM	--	--	A,J	--	--	--	--	--	Remote Camera	maca3072206odviJBK
--	N	22-Jul-06	578610	4113983	Edmonson	MMM	--	--	J	--	--	--	--	--	Remote Camera	maca1072206odviJR
--	N	25-Jul-06	578610	4113983	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca1072506odviJR
--	N	26-Jul-06	580100	4111679	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca5072606odviLSP
--	N	28-Jul-06	571302	4117450	Edmonson	MMM	--	--	A,J	--	--	--	--	--	Remote Camera	maca3072806odviJBK
--	N	28-Jul-06	575354	4112499	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca2072806odviJCS
--	N	28-Jul-06	578610	4113983	Edmonson	MMM	M	--	A	--	--	--	--	--	Remote Camera	maca1072806odviJR
--	N	28-Jul-06	580373	4115908	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca5072806odviEV
--	N	30-Jul-06	571302	4117450	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca3073006odviJBK

Species Name and Classification										Length (mm)				Weight (g)	Trap/Obs. Method	Photo ID Name
Cat# ¹	Voucher (Y/N)	Obs Date	UTM X	UTM Y	County	Collector ²	Sex	Repro. Cond. ³	Age ⁴ Class	Total	Tail	Hind Foot	Ear			
white-tailed deer (<i>Odocoileus virginianus</i>) (cont.)																
--	N	1-Aug-06	578610	4113983	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca1080106odviJR
--	N	9-Aug-06	569299	4119485	Edmonson	MMM	M	--	A	--	--	--	--	--	Remote Camera	BOBCAM6080906HF3
--	N	10-Aug-06	582553	4110483	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca3081006odviBBS
--	N	12-Aug-06	569299	4119485	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	BOBCAM6081206HF3
--	N	13-Aug-06	574703	4120971	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca1081306odviCR
--	N	13-Aug-06	580373	4115908	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca5081306odviEV
--	N	13-Aug-06	582553	4110483	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca3081306odviBBS
--	N	15-Aug-06	582553	4110483	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca3081506odviBBS
--	N	16-Aug-06	574703	4120971	Edmonson	MMM	--	--	A,J	--	--	--	--	--	Remote Camera	maca1081606odviCR
--	N	16-Aug-06	576369	4117565	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca2081606odviSH
--	N	19-Aug-06	582553	4110483	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca3081906odviBBS
--	N	19-Aug-06	583489	4117998	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca1081906odviOJC
--	N	20-Aug-06	580373	4115908	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca5082006odviEV
--	N	20-Aug-06	583489	4117998	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca1082006odviOJC
--	N	21-Aug-06	580373	4115908	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca5082106odviEV
--	N	21-Aug-06	582553	4110483	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca3082106odviBBS
--	N	21-Aug-06	583489	4117998	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca1082106odviOJC
--	N	22-Aug-06	580373	4115908	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca5082206odviEV

Species Name and Classification											Length (mm)				Weight (g)	Trap/Obs. Method	Photo ID Name
Cat# ¹	Voucher (Y/N)	Obs Date	UTM X	UTM Y	County	Collector ²	Sex	Repro. Cond. ³	Age ⁴ Class	Total	Tail	Hind Foot	Ear				
white-tailed deer (<i>Odocoileus virginianus</i>) (cont.)																	
--	N	22-Aug-06	582553	4110483	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca3082206odviBBS	
--	N	22-Aug-06	583489	4117998	Edmonson	MMM	M	--	A	--	--	--	--	--	Remote Camera	maca1082206odviOJC	
--	N	23-Aug-06	582553	4110483	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca3082306odviBBS	
--	N	23-Aug-06	583489	4117998	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca1082306odviOJC	
--	N	24-Aug-06	580373	4115908	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca5082406odviEV	
--	N	24-Aug-06	582553	4110483	Edmonson	MMM	--	--	J	--	--	--	--	--	Remote Camera	maca3082406odviBBS	
--	N	24-Aug-06	583489	4117998	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca1082406odviOJC	
--	N	25-Aug-06	580373	4115908	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca5082506odviEV	
--	N	25-Aug-06	582553	4110483	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca3082506odviBBS	
--	N	25-Aug-06	583489	4117998	Edmonson	MMM	M	--	A	--	--	--	--	--	Remote Camera	maca1082506odviOJC	
--	N	26-Aug-06	580373	4115908	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca5082606odviEV	
--	N	26-Aug-06	583489	4117998	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca4082606odviOJC	
--	N	27-Aug-06	583489	4117998	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca4082706odviOJC	
--	N	28-Aug-06	583489	4117998	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca4082806odviOJC	
--	N	30-Aug-06	583489	4117998	Edmonson	MMM	M	--	A	--	--	--	--	--	Remote Camera	maca4083006odviOJC	
--	N	31-Aug-06	580373	4115908	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca5083106odviEV	
--	N	31-Aug-06	583489	4117998	Edmonson	MMM	M	--	A	--	--	--	--	--	Remote Camera	maca4083106odviOJC	
--	N	1-Sep-06	583489	4117998	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca4090106odviOJC	
--	N	3-Sep-06	583489	4117998	Edmonson	MMM	M	--	A	--	--	--	--	--	Remote Camera	maca4090306odviOJC	

Species Name and Classification											Length (mm)				Weight (g)	Trap/Obs. Method	Photo ID Name
Cat# ¹	Voucher (Y/N)	Obs Date	UTM X	UTM Y	County	Collector ²	Sex	Repro. Cond. ³	Age ⁴ Class	Total	Tail	Hind Foot	Ear				
white-tailed deer (<i>Odocoileus virginianus</i>) (cont.)																	
--	N	4-Sep-06	580373	4115908	Edmonson	MMM	--	--	A,J	--	--	--	--	--	Remote Camera	maca5090406odviEV	
--	N	7-Sep-06	580373	4115908	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca5090706odviEV	
--	N	7-Sep-06	583489	4117998	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca4090706odviOJC	
--	N	8-Sep-06	580373	4115908	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca5090806odviEV	
--	N	8-Sep-06	583489	4117998	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca4090806odviOJC	
--	N	9-Sep-06	569219	4119572	Edmonson	MMM	M	--	A	--	--	--	--	--	Remote Camera	maca2090906odviHR2	
--	N	9-Sep-06	580373	4115908	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca5090906odviEV	
--	N	10-Sep-06	580373	4115908	Edmonson	MMM	--	--	J	--	--	--	--	--	Remote Camera	maca5091006odviEV	
--	N	11-Sep-06	569219	4119572	Edmonson	MMM	M	--	A	--	--	--	--	--	Remote Camera	maca2091106odviHR2	
--	N	12-Sep-06	580373	4115908	Edmonson	MMM	M	--	A	--	--	--	--	--	Remote Camera	maca5091206odviEV	
--	N	12-Sep-06	583489	4117998	Edmonson	MMM	M	--	A	--	--	--	--	--	Remote Camera	maca4091206odviOJC	
--	N	14-Sep-06	580373	4115908	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca5091406odviEV	
--	N	14-Sep-06	583489	4117998	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca4091406odviOJC	
--	N	16-Sep-06	583489	4117998	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca4091606odviOJC	
--	N	17-Sep-06	580373	4115908	Edmonson	MMM	--	--	J	--	--	--	--	--	Remote Camera	maca5091706odviEV	
--	N	17-Sep-06	583489	4117998	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca4091706odviOJC	
--	N	18-Sep-06	569219	4119572	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca2091806odviHR2	
--	N	25-Sep-06	583489	4117998	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca4092506odviOJC	
--	N	27-Sep-06	583489	4117998	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca4092706odviOJC	

Species Name and Classification										Length (mm)				Weight (g)	Trap/Obs. Method	Photo ID Name
Cat# ¹	Voucher (Y/N)	Obs Date	UTM X	UTM Y	County	Collector ²	Sex	Repro. Cond. ³	Age ⁴ Class	Total	Tail	Hind Foot	Ear			
white-tailed deer (<i>Odocoileus virginianus</i>) (cont.)																
--	N	1-Oct-06	583489	4117998	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca4100106odviOJC
--	N	2-Oct-06	580373	4115908	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca5100206odviEV
--	N	6-Oct-06	583489	4117998	Edmonson	MMM	M	--	A	--	--	--	--	--	Remote Camera	maca4100606odviOJC
--	N	8-Oct-06	583489	4117998	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca4100806odviOJC
--	N	13-Oct-06	583489	4117998	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca4101306odviOJC
--	N	16-Oct-06	569219	4119572	Edmonson	MMM	--	--	--	--	--	--	--	--	Remote Camera	maca2101606odviHR2
--	N	31-Aug-07	580058	4112805	Edmonson	SCT	--	--	--	--	--	--	--	--	Visual	DSCN9359
--	N	31-Aug-07	580921	4114219	Edmonson	SCT	--	--	--	--	--	--	--	--	Visual	DSCN9354
--	N	15-Sep-07	581087	4115681	Edmonson	SCT	--	--	--	--	--	--	--	--	Visual	DSCN9364

¹Accession number for all voucher specimens collected during this study is MACA-00559, and all catalog numbers begin with "MACA".

²Collectors: AG = Alana Gaskell; BJM = Bill Moore; DF = Douglas Foster; HMP (HP) = Heidi Peters; JRM = John MacGregor; KLO = Katie O'Neill; MMM = Maggie Mahan; PTM = Paul Miles; RW = Ryan Williamson; SCT = Steven Thomas

³Reproductive Condition: L = lactating; N = non-reproductive; P = pregnant; PL = post lactating; S = scrotal; U = unknown

⁴Age Class: A = adult; J = juvenile; SA = subadult; U = unknown

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