A guide to the Mammals of University Farm

Squire Valleevue and Valley Ridge Farms
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Important notes on this guide

- This is an introductory guide to the mammal species of University farm.
- It lists the species present or possibly present, and attempts to provide baseline information that will be useful to anyone wishing to learn more about the mammals found here.
- The physical descriptions are of the summer fur colorings/markings.
- Make sure you have a good field guide in hand before setting off to discover the mammals of the farm!
- There are some species that are not native to this area, classified as either introduced or non-native.
  - **Introduced:** Intentionally or unintentionally carried to this area by humans
  - **Non-native:** Species that has been able to expand its native range to include this area, often as a result of human activity
Important notes on this guide

Throughout this guide you will find notes on the conservation status of species, both in the state of Ohio and worldwide.

- **Extirpated:** A species that occurred in Ohio at the time of European settlement and has since disappeared from the state.
- **Extinct:** A species that occurred in Ohio at the time of European settlement and has since disappeared worldwide.
- **Endangered:** A species in immediate danger of becoming extirpated or extinct.
- **Threatened:** A species that, with increased or continued danger, will become endangered.
- **Species of Concern:** A species that, with increased or continued danger, will become threatened.

Information on mammals that occurred or may have occurred at the farm but are now extirpated or extinct can be found at the end of this guide.
Class Mammalia - Mammals

- Warm blooded
- Young are usually born live
- Young are rather helpless for a time after birth, and usually feed on milk from mother
- Skin covered with hair or fur
- Several orders, grouped into the two subclasses Prototheria (egg-laying mammals) and Theria (includes the infraclasses Metatheria [marsupials] and Eutheria [placental mammals])
Didelphis virginiana
Opossum

- Class Mammalia
  - Order Marsupialia
    - Family Didelphidae

- Prefers riparian and swamp habitats

- Gray, white and black; long snout with long whiskers, scaly tail

- Documented mostly in forests, but may be seen anywhere; common

Source: http://animaldiversity.ummz.umich.edu/site/resources/phil_myers/classic/didelphis_virginiana.jpg/view.html
Blarina brevicauda
Short-tailed shrew

- Class Mammalia
  - Order Insectivora
    - Family Soricidae
- Prefers damp, brushy forests and field edges
- Slate gray; short tail and snout, ears hidden by fur; 75-105mm long
- Documented mostly in forest ravines, sometimes in fields; scarce

Source: www.daviessaudubon.org/shorttailed_shrew.htm
**Sorex fumeus**
Smoky shrew

- **Class Mammalia**
  - **Order Insectivora**
    - **Family Soricidae**

- Prefers to hide in leaf litter of most forest types

- Silver/gray; long snout, visible ears, long tail without fur

- Documented in the forest interior, mostly in ravines; common

Source: http://www.enature.com/fieldguide/showSpecies_LI.asp?imageID=18923
**Sorex cinereus**
Masked shrew

- **Class Mammalia**
  - Order Insectivora
    - Family Soricidae
- **Prefers fields and forests with moist, sandy soil**
- **Brown above, white beneath; short snout, tail almost as long as rest of body; avg. 99mm long**
- **Not documented on property, but likely present**

Source: http://faculty.cns.uni.edu/~demastes/Mammalogy/pics/sorex1.JPG
Scalopus aquaticus
Eastern mole

- Class Mammalia
  - Order Insectivora
    - Family Talpidae
- Prefers fields and open areas
- Dark gray to copper; large clawed feet; round, nearly hairless tail
- Not documented on property, but likely abundant

Parascalops breweri
Hairy-tailed mole

- Class Mammalia
  - Order Insectivora
    - Family Talpidae
- Prefers meadows and 2nd growth forest with dry soil
- Black; large clawed feet; short snout; short, hairy tail
- Not documented on property, but likely present

Source: http://tim.rawle.org/moles/gallery/htail.htm
Condylura cristata
Star-nosed mole

- Class Mammalia
  - Order Insectivora
    - Family Talpidae
- Prefers wet forests and meadows
- Black/brown; large clawed feet; hairless snout with 22 fleshy “tentacles”
- Not documented on property, but likely present

Species of concern in Ohio

Evening bats, Vesper bats

- **Class Mammalia**
  - **Order Chiroptera**
    - **Family Vespertilionidae**
- **Prefer to live in caves, but will use mine shafts, buildings, etc.**
- **Black/brown, long tails; forelimbs used in flight**
- **Unidentified species documented flying over ponds at dusk and dawn; likely common**

Source: www.terrambiente.org/ fauna/Mammiferi/chiroptera/
**Sylvilagus floridanus**  
*Eastern cottontail*

- **Class Mammalia**
  - **Order Lagomorpha**
    - **Family Leporidae**
- **Prefers shrubby forest edges**
- **Brown/white/gray; long ears; underside of short tail is white**
- **Documented in forests and along fence rows; scarce**

Source: http://www.nenature.com/Images/EasternCottontailLAT.jpg
Marmota monax
Woodchuck, Groundhog

- Class Mammalia
  - Order Rodentia
    - Family Sciuridae
- Prefers forest edges and open farmland
- Brown; short legs; broad, flat head; small ears; large incisors
- Documented mostly in fields and forest edges, also forest interior; abundant

Source: toadstool.se/journal/category/outdoors/
**Tamias striatus**

**Eastern chipmunk**

- Class Mammalia
  - Order Rodentia
    - Family Sciuridae
- Prefers forest interiors, but avoids dense shade
- Reddish brown, 5 black stripes on back; pouches; short, furry tail
- Documented in all forested areas, more common in old growth forests; abundant

Source: [http://theenchantedforest.com/Communities/Eastern_Chipmunk.jpg](http://theenchantedforest.com/Communities/Eastern_Chipmunk.jpg)
**Tamisciurus hudsonicus**  
Red squirrel

- Class Mammalia
  - Order Rodentia
    - Family Sciuridae
- Prefers dense forests of virtually any composition
- Reddish back, often with a black stripe on side; relatively small tail
- Documented in all forests, but more common on Valley Ridge Property; common

Source: http://animaldiversity.ummz.umich.edu/site/resources/phil_myers/classic/rs7.jpg/view.html
Sciurus niger
Eastern fox squirrel

- Class Mammalia
  - Order Rodentia
    - Family Sciuridae
- Prefers forests with a high species richness
- Brown/orange back; larger than red squirrel; large, very bushy tail
- Documented everywhere trees occur, but more common in old growth forests; abundant

Source: http://dirttime.ws/Notebook/Squirrel.htm
Glaucomys volans
Southern flying squirrel

- Class Mammalia
- Order Rodentia
  - Family Sciuridae
- Prefers mature forests with many seed-producing hardwoods
- Brown/white; membrane of skin from wrist to ankle for gliding; flat tail
- Not documented on property, but likely present

**Peromyscus leucopus**

White-footed mouse

- Class Mammalia
  - Order Rodentia
    - Family Muridae
- Prefer warm, dry forests and brushy areas
- Tan/white; long, slender tail; large, rounded ears
- Documented in forests and woody fence rows, occasionally in fields; abundant

Source: faculty.evansville.edu/ck6/bstud/mouse.html
Microtus pennsylvanicus
Meadow vole

- Class Mammalia
  - Order Rodentia
    - Family Muridae
- Prefer lowland fields bordering rivers and lakes
- Reddish-brown/gray; tail as long as rest of body; small ears
- Documented in old fields and orchards, not in forests; common

Ondatra zibethicus
Muskrat

- Class Mammalia
  - Order Rodentia
    - Family Muridae
- Prefer marshes with water 4-6 feet deep
- Brown; scaly tail 9” long, body 3” long; large feet webbed for swimming
- Documented occasionally around ponds, population likely declining; scarce

Source: http://www.hlasek.com/ondatra_zibethicus_da1036.html
**Rattus norvegicus**

**Norway rat, Brown rat**

- Class Mammalia
  - Order Rodentia
    - Family Muridae

- Native habitat in China was forests, but here it occurs anywhere humans establish dwellings

- Brown; large, hairless ears; long tail; 40cm long

- Not documented on property, but likely present

**Mus musculus**
*House mouse*

- **Class Mammalia**
  - **Order Rodentia**
    - **Family Muridae**
- **Native to Asia (habitat unknown); now worldwide, mostly in human dwellings**
- **Brownish/white; long, hairless tail with circular scales; large, oval ears**
- **Not documented on property; likely common**

Zapus hudsonius
Meadow jumping mouse

- Class Mammalia
  - Order Rodentia
    - Family Zapodidae
- Prefers moist grasslands
- Yellow & brown; large back legs; tail almost twice as long as body
- Documented in the fields adjacent to forest edges; scarce

Vulpes vulpes
Red fox

- Class Mammalia
  - Order Carnivora
    - Family Canidae
- Prefer areas with diverse habitat types, particularly farmlands
- Yellowish-red/white; black paws; thick tail
- Documented traversing all terrestrial habitats; common

Source: www.nhptv.org/ natureworks/redfox.htm
*Urocyon cinereoargenteus*

**Gray fox**

- **Class Mammalia**
  - **Order Carnivora**
  - **Family Canidae**
- **Prefers larger tracts of deciduous forests**
- **Gray back, grey-red sides, white belly, black tip on tail**
- **Not documented on property, but is possibly present**

Canis latrans
Coyote

- Class Mammalia
  - Order Carnivora
    - Family Canidae
- Found in all terrestrial habitats, preferably those without wolves
- Gray/brown/yellow, reddish legs; drooping tail; larger than foxes
- Recently documented on property, due to range expansion; scarce

Non-native

Source: http://tipt3.utoledo.edu/starters/coyote/coyote2a.jpg
**Procyon lotor**

**Raccoon**

- Class Mammalia
  - Order Carnivora
    - Family Procyonidae
- Prefer woodlands near water; den in trees
- Black mask across eyes; bushy tail with several black rings; tail as long as body
- Documented everywhere on property; abundant

Source: [http://www.loomcom.com/raccoons/gallery/jpegs/fish](http://www.loomcom.com/raccoons/gallery/jpegs/fish)
**Mustela erminea**

**Short-tailed weasel, ermine**

- **Class Mammalia**
  - **Order Carnivora**
    - **Family Mustelidae**
- **Prefers shrubby, riparian woodlands**
- **Brown/white; black tip on tail (1/3 of total length)**
- **Likely scarce if present; one unidentified individual of the Mustela genus documented on property**

Source: http://popgen0146uns50.unimaas.nl/~jlindsey/commanster/Mammals/SpMammals/Mustela.erminea.jpg

Species of concern in Ohio
Mustela frenata
Long-tailed weasel

- Class Mammalia
  - Order Carnivora
    - Family Mustelidae
- Prefers open woodlands and suburban areas
- Red-brown/yellow-white; tail as long as body
- Likely scarce if present; one unidentified individual of the Mustela genus documented on property

**Mustela nivalis**

**Least weasel**

- **Class** Mammalia
  - **Order** Carnivora
    - **Family** Mustelidae
- **Prefers open woodlands and farmlands**
- **Brown/white; very short tail; large, round ears**
- **Likely scarce if present; one unidentified individual of the *Mustela* genus documented on property**

**Mustela vison**

**American mink**

- Class Mammalia
  - Order Carnivora
    - Family Mustelidae
- Prefers wooded streams, ponds and lakes
- Brown-black all around; tail as long as body
- Likely scarce if present; one unidentified individual of the *Mustela* genus documented on property

Mephitis mephitis
Striped skunk

- Class Mammalia
  - Order Carnivora
    - Family Mustelidae
- Prefers open woodlands and grasslands, <2 miles from water
- Black with white stripe between eyes & forked white stripe on back
- Not documented on property, but likely present

Source: http://www.radio-canada.ca/jeunesse/betes/studio/283/tiche/
*Lynx rufus*

Bobcat

- **Class** Mammalia
  - **Order** Carnivora
    - **Family** Felidae
- **Found in forests and brushlands**
- **Brown with black stripes and spots; short tail; tufts of hair on side of face**
- **Not documented on the property; scarce if present**

Endangered in Ohio

Source: http://www.lioncrusher.com/images/Bobcat_02.jpg
**Ursus americanus**

American black bear

- **Class** Mammalia
  - **Order** Carnivora
    - **Family** Ursidae
- **Prefer remote habitat with thick understory vegetation**
- **Black/brown with pale muzzle; furry ears; convex profile**
- **Not documented on property, but possible to see**

Endangered in Ohio

Source: [http://animals.timduru.org/dirlist/bear/AmericanBlackBear_07-Closeup-OnGrass.jpg](http://animals.timduru.org/dirlist/bear/AmericanBlackBear_07-Closeup-OnGrass.jpg)
Odocoileus virginianus

White-tailed deer

- Class Mammalia
  - Order Artiodactyla
    - Family Cervidae
- Prefers forest edges with dense undergrowth
- Brown-gray; underside of tail is white; 3’ tall
- Documented in old orchards, but will traverse all terrestrial habitat; common

Source: http://www.fcps.k12.va.us/StratfordLandingES/Ecology/mpages/white-tailed_deer.htm
Summary of Mammals at the University Farm

- **Class Mammalia**
  - **Order Marsupialia**
    - Family Didelphidae
      - *Didelphis virginiana* C
  - **Order Insectivora**
    - Family Soricidae
      - *Blarina brevicauda* S
      - *Sorex fumeus* C
      - *Sorex cinereus* P
    - Family Talpidae
      - *Scalopus aquaticus* P
      - *Parascalops breweri* P
      - *Condylura cristata* P
  - **Order Chiroptera**
    - Family Vespertilionidae C
  - **Order Lagomorpha**
    - Family Leporidae
      - *Sylvilagus floridanus* S
  - **Order Rodentia**
    - Family Sciuridae
      - *Marmota monax* A
      - *Tamias striatus* A
      - *Tamiasciurus hudsonicus* C
      - *Sciurus niger* A
      - *Glaucomys volans* P

*A = abundant  C = common  S = scarce  P = possible to see, though not previously reported*
Summary of Mammals at the University Farm

Class Mammalia (contd.)
  Order Rodentia (contd.)
    Family Muridae
      Peromyscus leucopus A
      Microtus pennsylvanicus C
      Ondatra zibethicus S
      Rattus norvegicus P
      Mus musculus P
    Family Zapodidae
      Zapus hudsonius S
  Order Carnivora (contd.)
    Family Mustelidae
      Mustela ermenia P
      Mustela frenata P
      Mustela nivalis P
      Mustela vison P
      Mephitis mephitis P
    Family Felidae
      Lynx rufus P
    Family Ursidae
      Ursus americanus P
  Order Artiodactyla
    Family Cervidae
      Odocoileus virginanus C

A = abundant       C = common       S = scarce
P = possible to see, though not previously reported
Extirpated Mammals

of Ohio

The following mammals can no longer be found in Ohio. Though they were never documented at University Farm, it is possible that they once occurred here.
Oryzomys palustris
Marsh rice rat

- **Class Mammalia**
  - **Order Rodentia**
  - **Family Muridae**

- **Status:** Extirpated

- Brown; bottoms of feet are white; tail longer than body; tail dark on top and light on bottom

- Currently found in the southeastern US, as far north as Kentucky

Endangered worldwide

Source: [http://www.discoverlife.org/nh/tx/Vertebrata/Mammalia/Muridae/Oryzomys/palustris/#Geographic%20distribution](http://www.discoverlife.org/nh/tx/Vertebrata/Mammalia/Muridae/Oryzomys/palustris/#Geographic%20distribution)
Erethizon dorsatum
North American porcupine

- Class Mammalia
- Order Rodentia
  - Family Erethizontidae
- Status: Extirpated
- Dark brown; quills, often tipped with light color, on all of the dorsal surface
- Currently found in Canada, the western US and the northeastern US as far south as New York

Source: http://animaldiversity.ummz.umich.edu/site/resources/corel_cd/porcupine.jpg/view.html
Canis lupus
Timber wolf, gray wolf

- Class Mammalia
  - Order Carnivora
    - Family Canidae
- Status: Extirpated
- Appearance varies widely, depending on location; largest wild canine species
- Currently found in the western US and Canada; once covered nearly the entire northern hemisphere

Source: http://animaldiversity.ummz.umich.edu/site/resources/corel_cd/wolves.jpg/view.html

Endangered worldwide
Martes americana
American marten

- Class Mammalia
  - Order Carnivora
  - Family Mustelidae

- Status: Extirpated

- Gray head, white chest, legs and tail darker than body; large eyes; cat-like ears

- Currently found as far south as parts of Michigan and New York

**Martes pennanti**

**Fisher**

- **Class Mammalia**
  - **Order Carnivora**
    - **Family Mustelidae**

- **Status:** *Extirpated*

- **Brown with black feet and tail**

- **Currently found in Canada, as well as down the Sierra Nevada and Appalachian mountain ranges**

Puma concolor
Mountain lion, cougar, puma

- Class Mammalia
  - Order Carnivora
    - Family Felidae
- Status: **Extirpated**
- Light brown; largest native feline
- Currently found as far east as Missouri; isolated population in Florida; once covered almost all of North and South America

Source: http://seiway2.net/2002/a26e/pumaintreel.jpg
**Lynx canadensis**
Canada lynx

- **Class** Mammalia
  - **Order** Carnivora
    - **Family** Felidae
- **Status**: Extirpated
- Similar to bobcat, but
  - longer fur, larger body,
  - less conspicuous spots,
  - extremely short tail, long
  - legs
- Currently found as far
  - south as New England

Threatened worldwide

Source: http://gladstone.uoregon.edu/~jcooper3/canada/canada%20lynx.jpg
Cervus canadensis
Elk, wapiti

- Class Mammalia
  - Order Artiodactyla
    - Family Cervidae
- Status: Extirpated
- Dark, shaggy mane on neck; dark brown with white rump
- Currently found in the Rocky Mountains; small, isolated population in Michigan; once covered most of North America

Source: http://www.bnpsworldwide.com/calendars/elk13.jpg
Bison bison
American bison

- Class Mammalia
  - Order Artiodactyla
    - Family Bovidae
- Status: Extirpated
- Massive animal with shoulder hump; large head; long hair in front
- Currently found only on protected and private lands in western North America; once covered entire continent

Source: http://animaldiversity.ummz.umich.edu/site/resources/corel_cd/bison.jpg/view.html
References

- Case Western Reserve University Farm Inventory and Analysis. 1983
References

References