

Order Carnivora—Families Mustelidae, Mephitidae, and Procyonidae

Need to know

Family Mustelidae

Mustela erminea = skin, skull*, NH

Mustela frenata = skin, skull*, NH

Mustela nigripes = skin, NH

Mustela nivalis = skin, skull, NH

Neovison vison = skin, skull, NH

Martes americana = skin, skull, NH

Gulo gulo = skin, skull, NH

Lontra (Lutra) canadensis = skin, skull, NH

Taxidea taxus = skin, skull, NH

* need a ruler

Family Mephitidae

Mephitis mephitis = skin, skull, NH

Spilogale gracilis = skin, skull, NH

Family Procyonidae

Procyon lotor = skin, skull, NH

Bassariscus astutus = skin, skull, NH

***Mustela erminea* (short-tailed weasel/ermine)**

***M. frenata* (long-tailed weasel)**

***M. nivalis* (least weasel)**

***Neovison vison* (mink)**



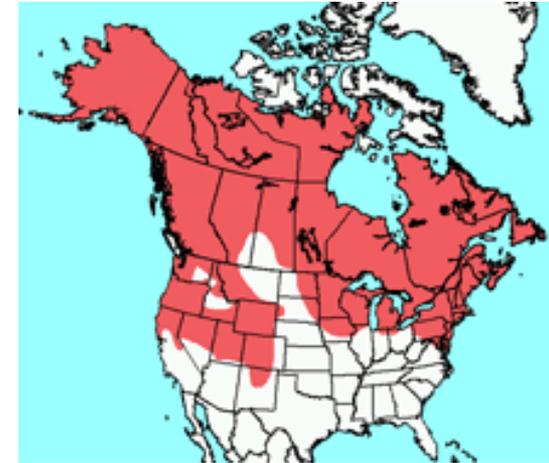
- 1) 3 upper premolars
- 2) Auditory bullae nearly twice as long as wide
- 3) Posterior edge of palatines rounded and extend beyond M1 (contrast with Mephitis and Spilogale)
- 4) *nivalis* = <33 mm; *erminea* and *frenata* = 34-53 mm; *vison* = >54 mm

Mustela erminea (short-tailed weasel or ermine)

- 1) Brown dorsal, white ventral pelage (summer)**
- 2) Tail 30% of total length, black tip**

Natural history:

- 1) Exhibits seasonal molts and cryptic coloration**
- 2) Exhibits 4-5 year cycles with voles and lemmings at northern latitudes**
- 3) Like other weasels, kill prey with a crushing bite to cranium**

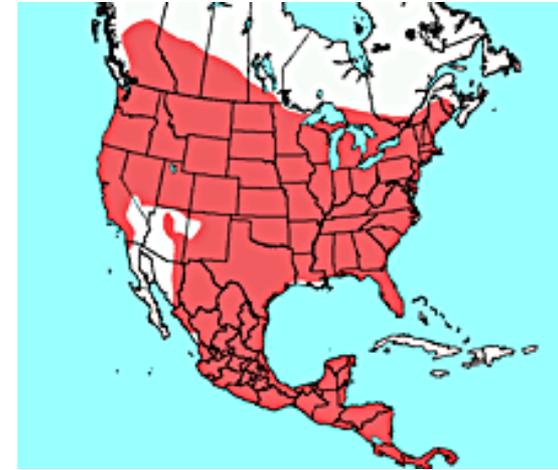


Mustela frenata (long-tailed weasel)

- 1) Brown dorsal, yellow ventral pelage (summer)
- 2) Tail 50% of total length, black tip

Natural history:

- 1) Voracious predator; can kill Sylvilagus or Lepus 4x its mass
- 2) Sexual size dimorphism: males 1.5x size of females
- 3) Seasonal molts at higher latitudes
- 4) Most widespread mustelid in the North America

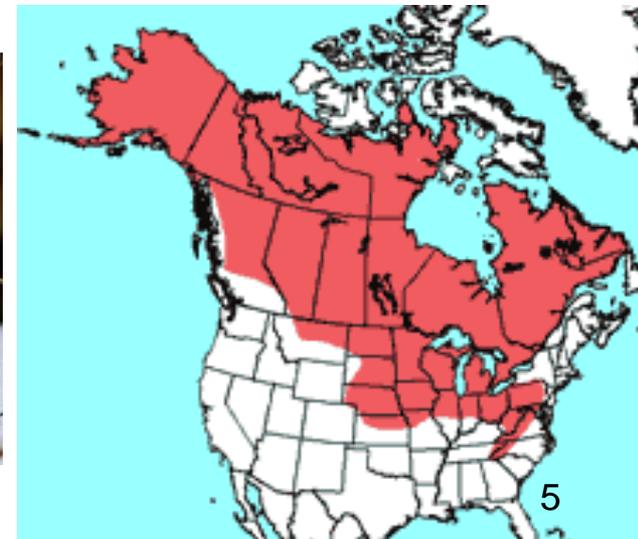
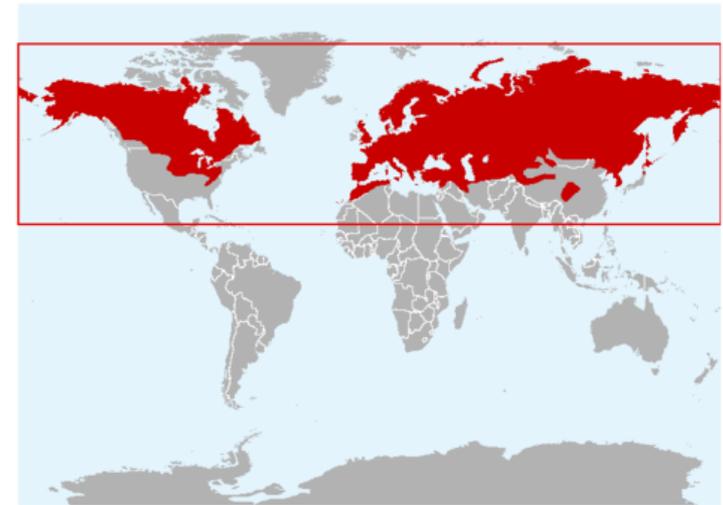


Mustela nivalis (least weasel)

- 1) Brown dorsal, white ventral pelage (summer)
- 2) Tail <25% of total length, no black tip
- 3) Smaller than M. erminea and M. frenata

Natural history:

- 1) One of the largest geographic distributions of any mammal
- 2) Smallest extant carnivore; roughly the size of Microtus pennsylvanicus (which it eats)
- 3) Seasonal molts at higher latitudes

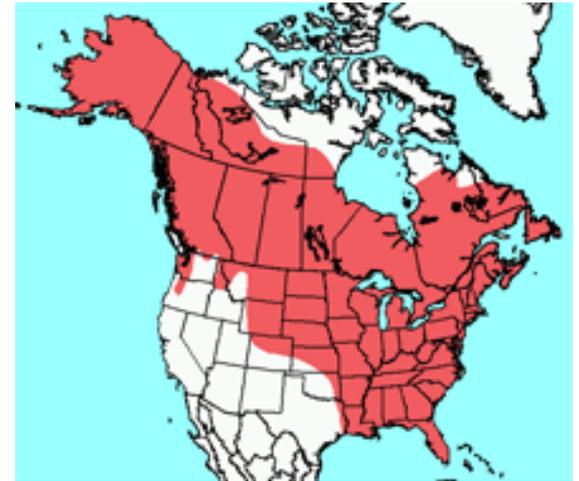


Neovison vison (American mink)

- 1) Brown pelage, often with white on throat
- 2) Partially-webbed feet

Natural history:

- 1) Semi-aquatic, preying on fish, crayfish, and frogs
- 2) Historically an economically-important furbearer; currently, most fur comes from individuals raised on fur farms
- 3) Dens in abandoned beaver or muskrat lodges



Mustela nigripes (black-footed ferret)

- 1) Yellow-brown pelage with black mask, black feet and black tail tip

Natural history:

- 1) Was thought extinct in the wild until rediscovered near Meeteetse in 1981; all reintroduced populations are descendents of Meeteetse ferrets
- 2) Specialist on Cynomys spp
- 3) IUCN Critically Endangered
- 4) Threats to survival: collapse of prairie dog towns due to plague and poisoning, canine distemper and parvovirus

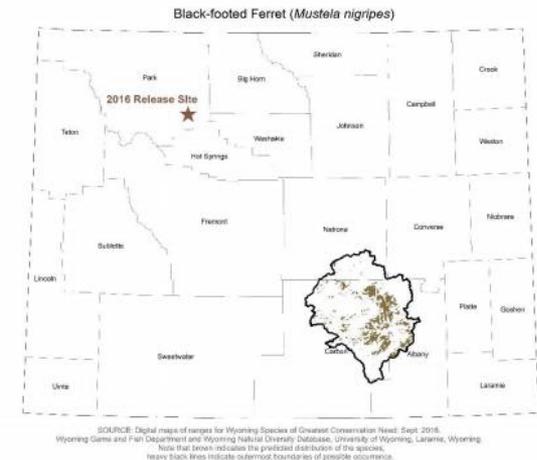


Figure 4: Range and predicted distribution of *Mustela nigripes* in Wyoming.

Martes americana (American marten)



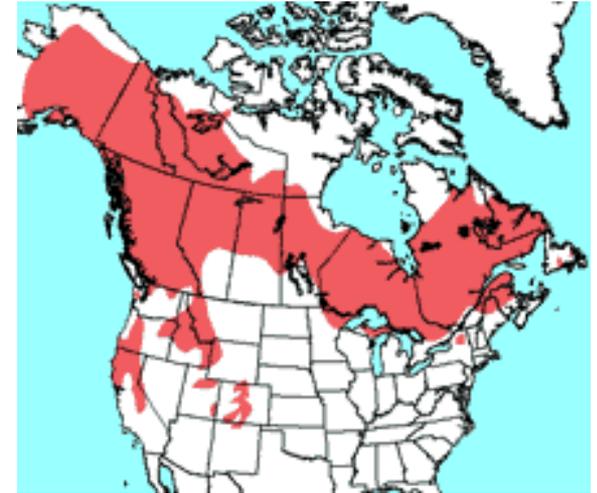
- 1) 4 upper premolars
- 2) Auditory bullae elongated but not twice as long as wide as in Mustela

Martes americana (American marten)

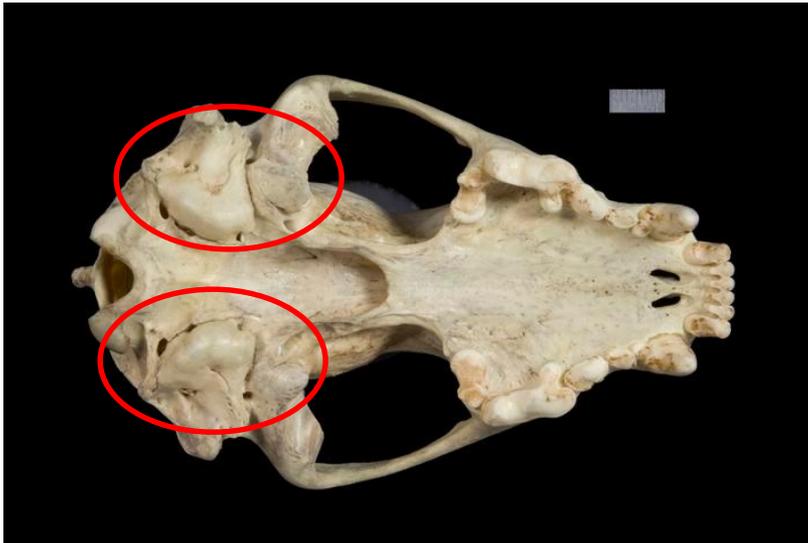
- 1) Brown pelage, typically with orange or yellow markings on throat
- 2) Bushy tail

Natural history:

- 1) Old-growth coniferous and mixed forest specialist
- 2) Omnivorous but prefers Tamiasciurus and Clethrionomys
- 3) Economically-important furbearer
- 4) Arboreal
- 5) Pine marten (Martes martes) is Eurasian species



***Gulo gulo* (wolverine)**



- 1) 4 upper premolars**
- 2) Auditory bullae not elongated like in other mustelids**
- 3) Prominent sagittal crest**

Gulo gulo (wolverine)

- 1) Brown pelage, typically with orange or yellow stripes on side
- 2) Relatively short tail

Natural history:

- 1) Largest weasel next to giant otter
- 2) Habitat generalist, but requires remote areas
- 3) Extremely wide-ranging (individual collared in Grand Teton NP made several movements into northern CO)
- 4) Hydrophobic (frost resistant) fur
- 5) Populations have been declining steadily since mid-1800s with fur trapping
- 6) Population size in lower 48 (WY, ID, MT) between 28-52 individuals;



Lontra (Lutra) canadensis (river otter)



- 1) 4 upper premolars
- 2) Skull flattened dorsally
- 3) Reduced rostrum
- 4) Large braincase

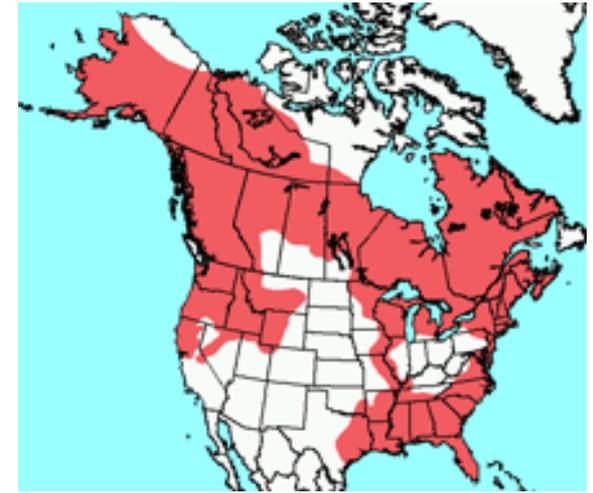


Lontra (Lutra) canadensis (river otter)

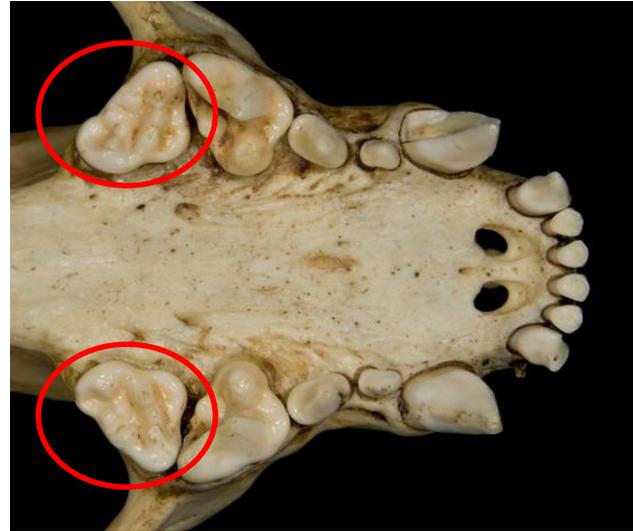
- 1) Thick brown pelage
- 2) Rudder-like tail
- 3) Webbed feet
- 4) Reduced ears

Natural history:

- 1) Oily, lustrous coat—20,000-30,000/year trapped for fur
- 2) Sensitive to water pollution
- 3) Among the most social of mustelids



***Taxidea taxus* (American badger)**



- 1) 3 upper premolars**
- 2) Triangular braincase**
- 3) M1 is rounded, not dumbbell-shaped like in other mustelids**

Taxidea taxus (American badger)

- 1) Grizzled pelage with black and white mask
- 2) Long claws on forelimbs
- 3) Short tail
- 4) Dorso-ventrally flattened body

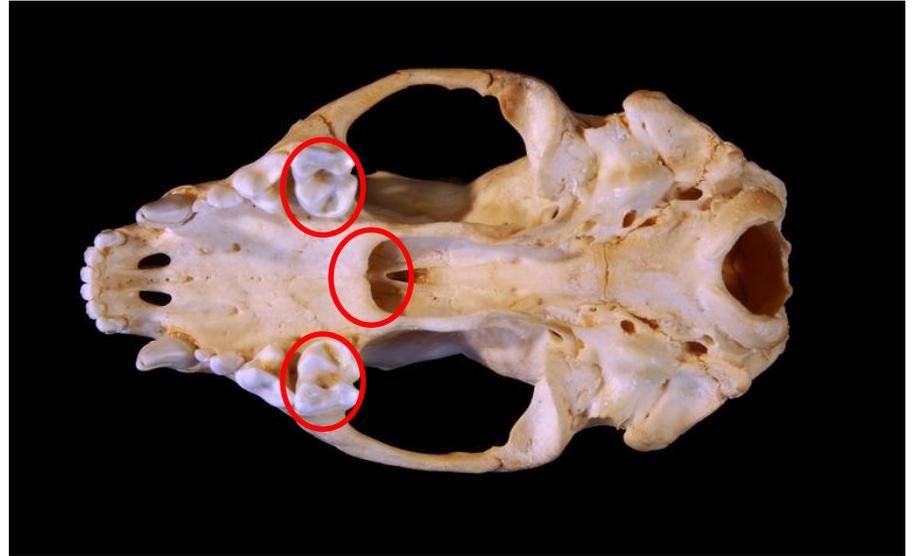
Natural history:

- 1) Semi-fossorial
- 2) Strong ties to Cynomys or Spermophilus colonies
- 3) Facultative hunting mutualisms with Canis latrans



Family Mephitidae

Mephitis mephitis (striped skunk)



- 1) M1 squarish (contrast with Mustela)
- 2) Profile of cranium appears convex (contrast with Spilogale)
- 3) Palate does not extend appreciably beyond M1 (contrast with Mustela)

Mephitis mephitis (striped skunk)

- 1) Black with white stripes
- 2) Bushy tail

Natural history:

- 1) Omnivorous
- 2) Aposematic coloration
- 3) Kits are capable of spraying musk at 8 days
- 4) Typically warn (stamp feet) prior to spraying
- 5) Few predators; great horned owls are an exception



***Spilogale gracilis* (western spotted skunk)**



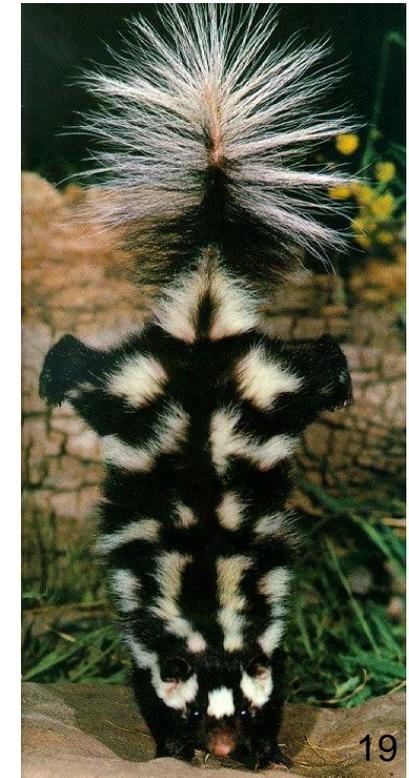
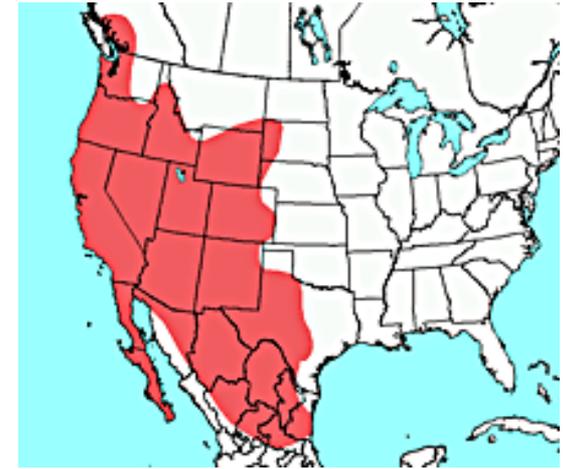
1) Similar to Mephitis, except profile of skull is straight

Spilogale gracilis (western spotted skunk)

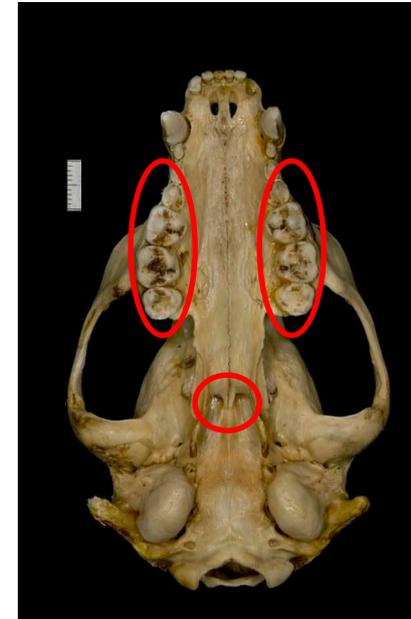
- 1) Black pelage with white blotches or stripes
- 2) Bushy tail
- 3) White spot on forehead and in front of each ear

Natural history:

- 1) Omnivorous
- 2) Aposematic coloration
- 3) Differs from eastern spotted skunk (S. putorius) in having delayed implantation; mating occurs in Fall but fertilized egg doesn't implant to uterine wall until Spring
- 4) Climbs trees
- 5) Sprays from a "handstand" position



Procyon lotor (North American raccoon)



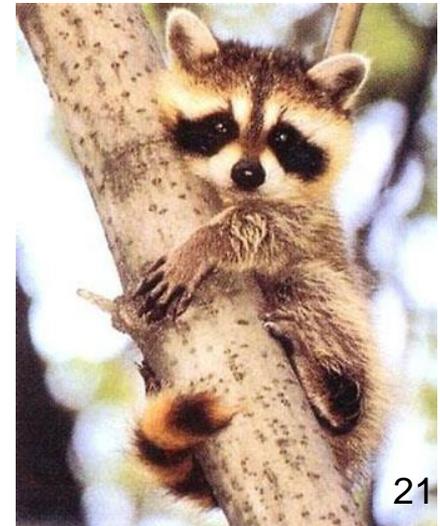
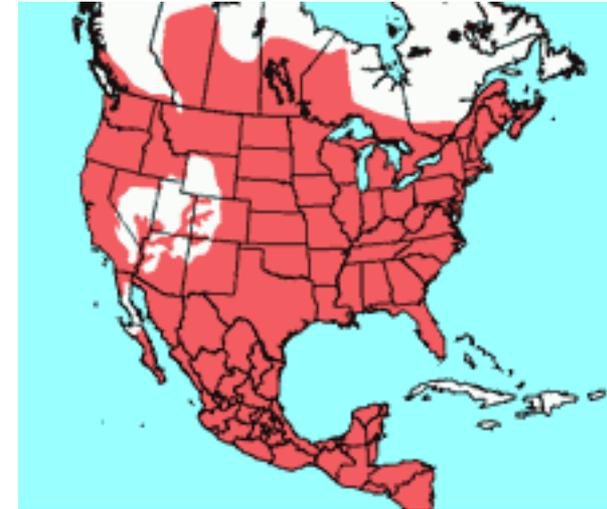
- 1) Bunodont molars
- 2) Rounded cranium
- 3) Poorly-developed carnassials
- 4) Palate terminated posteriorly to molars
(contrast with Bassariscus)

Procyon lotor (North American raccoon)

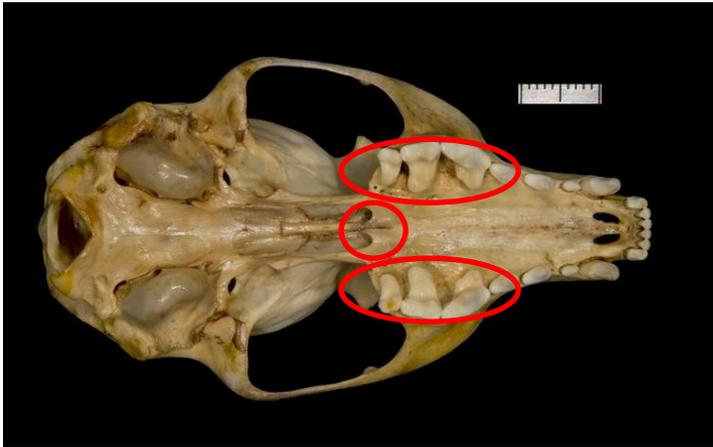
- 1) Grizzled pelage with ringed tail
- 2) Black and white mask on face

Natural history:

- 1) Omnivorous
- 2) Commensal with humans in many areas
- 3) Weighs 5-15 lbs in wilderness; can weigh up to 60 lbs in urban and suburban areas
- 4) Dexterious hands
- 5) Semi-arboreal



***Bassariscus astutus* (ringtail)**



- 1) **Transversely-elongated molars**
- 2) **Palate terminates at edge of molars (contrast with Procyon)**

Bassariscus astutus (ringtail)

- 1) Grizzled dorsum with white venter ringed tail
- 2) Cat-like appearance

Natural history:

- 1) Omnivorous
- 2) Rarely seen but has a “tame” demeanor
- 3) Semi-arboreal
- 4) Ankles can rotate 180 degrees
- 5) Easily domesticated and kept as a pet

