

Common Mammals of the Wenatchee Watershed



Text and photos (unless noted) by Susan & Paul Ballinger.

Sources:

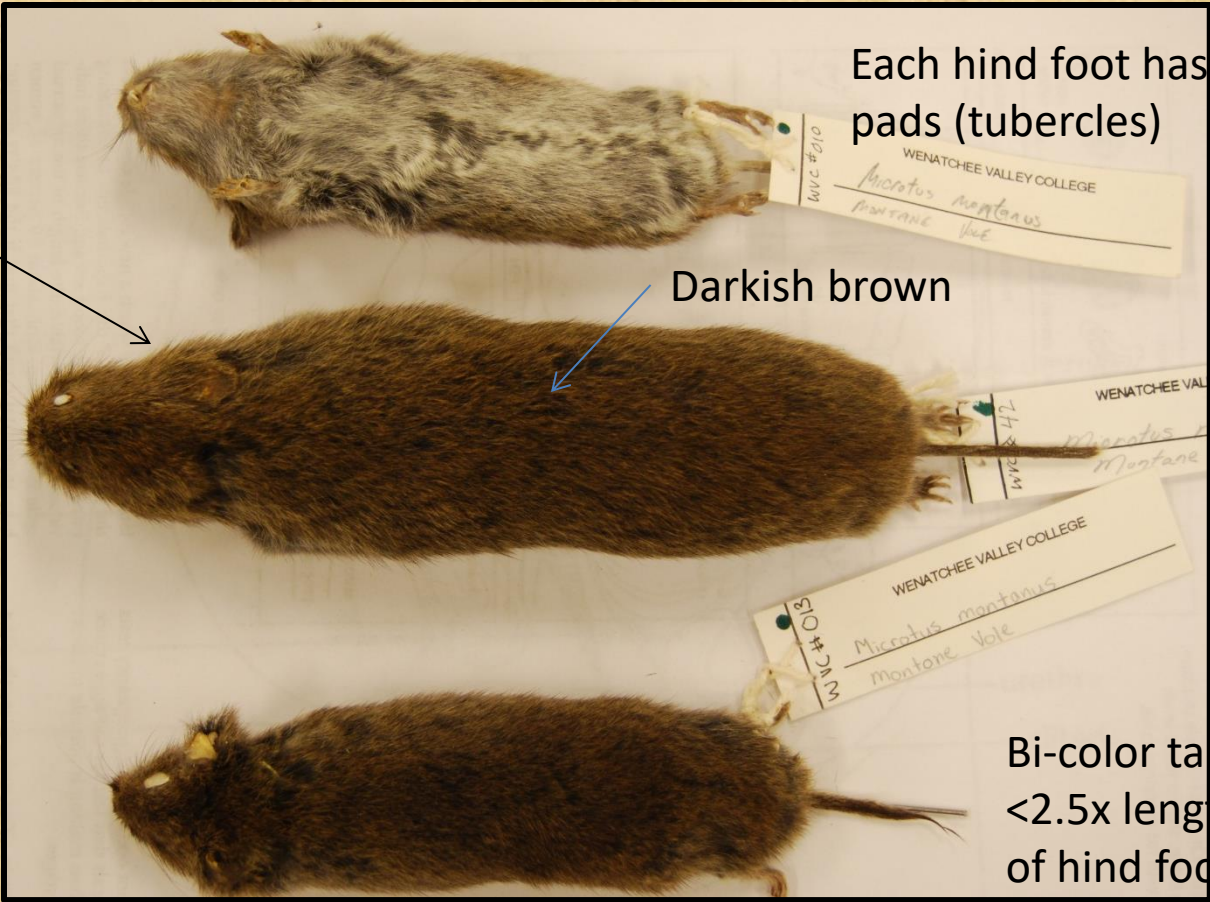
- American Natural History Museum – photos of displayed animals
- *Mammals of the Pacific States* by Lloyd Ingles
- *Mammalogy* (3rd edition) by Terry A. Vaughan
- *Living with Wildlife in the Pacific Northwest* by Russell Link
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***Microtus montanus* montane vole Order Rodentia; Family: Muridae Subfamily: Microtinae**

Sub-family Microtinae traits:

- Tails shorter than head+body length
- Ears inconspicuous due to long hairs covering them
- Flattened crowns on molars
- Six genera in subfamily. Easy to confuse, so look at habitat & biology
- Sizes range from sagebrush vole (<5 inches long) to muskrat (15 in. long)

Montane vole Herbivore- mainly forb (wildflowers) stems & leaves. Prey of hawks, owls, weasels, and snakes. Cuts tunnels through grass & under snow.



Each hind foot has 6 pads (tubercles)

Darkish brown

Bi-color tail <2.5x length of hind foot

***Microtus montanus* montane vole**

Microtus montanus montane vole
Order Rodentia; Family: Muridae S
ubfamily: Microtinae



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All rodents- teeth specialized to Gnaw

1 pair each of upper & lower incisors

Back surface of incisors not covered with enamel- incisors sharpen themselves against one-another

Incisors are rootless & grow continuously.

no canines "gap"



Clethrionomys gapperi Southern red-backed vole

Order Rodentia; Family: Muridae Subfamily: Microtinae

Microtinae Sub-family traits: tails shorter than head+body length, Ears inconspicuous due to long hairs covering them, flattened crowns on molars

Habitat: found in coniferous, deciduous, and mixed forests with abundant stumps, rotting logs, and exposed roots. Uses a burrow-system created by other mammals and natural runways.

Omnivore: shift diet depending upon available food. Eats plants, nuts, seeds, berries, lichens, fungi, arthropods. Eaten by weasels & hawks. Active year-round.

Locomotion: Hops and runs.



Broad red dorsal (back) contrasting with gray or dusky sides and buffy white under parts. Length: 138-162 mm.

***Ondatra zibethica* muskrat Order Rodentia; Family: Muridae Subfamily: Microtinae**

Sub-family Microtinae traits: Tails shorter than head+body length, Ears inconspicuous due to long hairs covering them, Flattened crowns on molars

Named for pair of musk glands found on either side of lower abdomen in both sexes.

Hind foot >2 inches long (from back of heel to tip of longest claw)

Scaly tail laterally compressed



***Ondatra zibethicus* muskrat**

Habitat- near freshwater. Eats water-growing plants (cattails, tules, rushes), bulbs, and grasses. Builds a house from aquatic plants; has submerged door.

Ondatra zibethica muskrat Order Rodentia; Family: Muridae Subfamily: Microtinae

Named for pair of musk glands found on either side of lower abdomen in both sexes.

Habitat- near freshwater. Eats water-growing plants (cattails, tules, rushes), bulbs, and grasses.

Builds a house from aquatic plants; has submerged door.

All Rodents- 1 pair each of upper & lower incisors



Hind foot >2 inches long, from back of heel to tip of longest claw



TRACK ID: Hind foot much larger than fore foot

Scaly tail laterally compressed



flattened crowns on molars



All Rodents- a "gap" – no canine teeth

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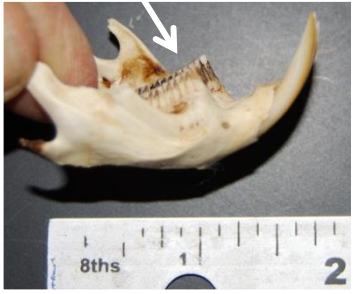


TRACK ID: Hind foot much larger than fore foot

Scaly tail laterally compressed



flattened crowns on molars



All Rodents- a "gap" – no canine teeth

Tamias amoenus Yellow-pine chipmunk

Order Rodentia Family: Sciuridae

Sciuridae Family traits: tail usually bushy, 4 toes on front feet, 5 toes on hind feet, squirrels & chipmunks have internal cheek pouches.

Tamias amoenus ID traits:

- Strongly marked facial stripes
- Dark-tipped tail; tail 73-85% of head & body length
- White, buffy-tinged belly
- Ears indistinctly bicolored
- Brightly colored with contrasting light & dark stripes on back and upper sides.



Photo: Dave Hillstad



Photo: Dave Hillstad



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- Day-active
- Hibernators
- Have internal cheek pouches to carry food.
- Cache food underground to eat when occasionally awake & in early spring
- Eat seeds & fruit
- Often associated with Cascades golden-mantled ground squirrel
- Open montane forests

Cascade golden-mantled ground squirrel *Spermophilus saturatus*

Order Rodentia; Family: Sciuridae

Family Sciuridae traits: tail usually bushy, 4 toes on front feet, 5 toes on hind feet, squirrels & chipmunks have internal cheek pouches.

15 species in the Pacific Northwest of ground-dwelling squirrels that are active during the day & spend the night in underground burrows. Most hibernate for 2/3rds of life. Most give warning whistle to alert close relatives when a predator approaches.

Head & shoulders tawny
(yellowish-brown)

Habitat: in higher eastside Cascades- pine, fir, & spruce forests.

Eats nuts & seeds gathered on the ground. **Eaten by** hawks, eagles, coyotes, & badgers.

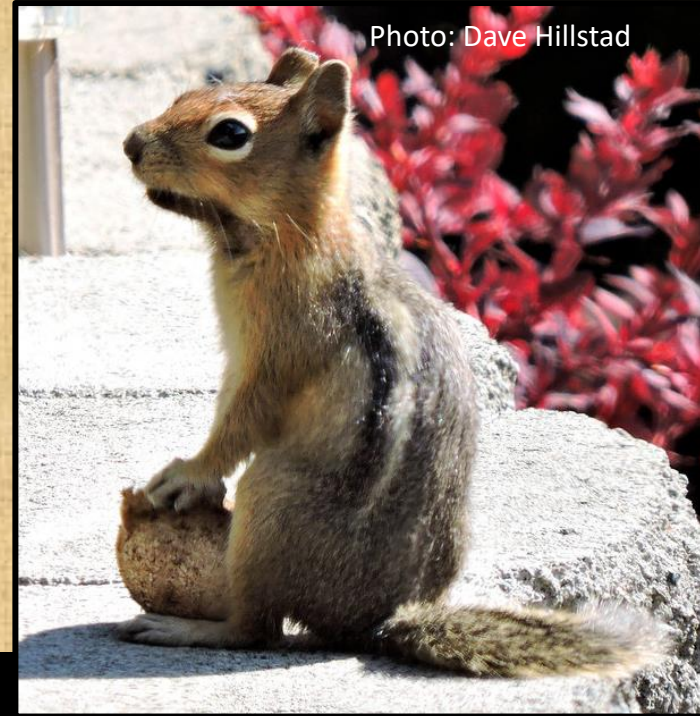


Photo: Dave Hillstad



Photo: Rod Gilbert

One white-stripe on each side of back,
bordered by 2 black stripes of variable length



about 1 ft. long



Marmota flaviventris Yellow-bellied marmot

Order Rodentia; Family: Sciuridae

Photos:
Dave Hillstad

Family Sciuridae traits: tail usually bushy, 4 toes on front feet, 5 toes on hind feet

1 of 4 species of marmots in Pacific NW & Canada
Largest members of squirrel family
No internal cheek pouches. Do not cache food;
instead store as layers of body fat

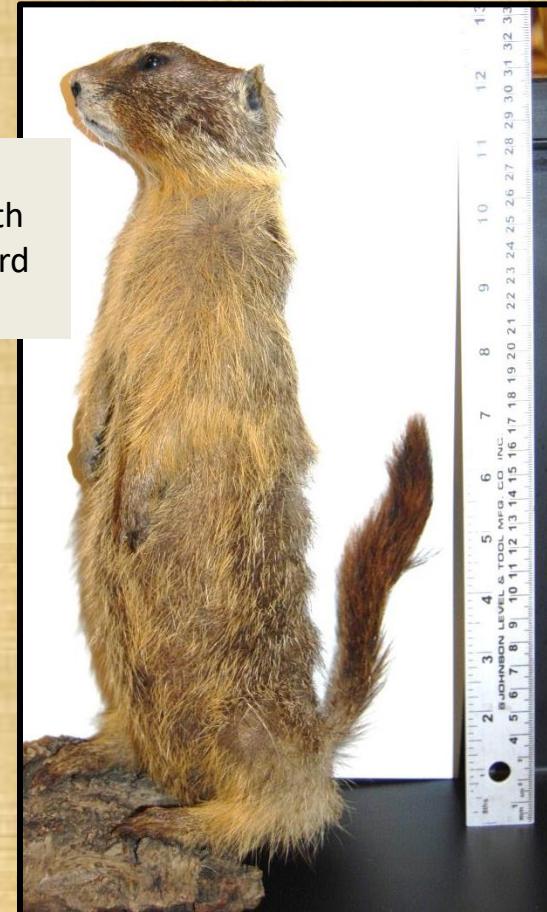
Dormant for much of the year (depends on elevation
& location) with summer and winter hibernation

Herbivores: green forbs and grasses. Eaten by
badgers, coyotes, eagles, owls, and hawks.

During time of food scarcity, goes into an inactive state, with reduced metabolism & oxygen consumption. Stored fat provides needed energy. An adaptation to live in a harsh environment.



Back: yellowish-grizzly brown, with white-tipped guard hairs.



***Marmota flaviventris* Yellow-bellied marmot**
Order Rodentia; Family: Sciuridae

Skull 80-91 mm

During time of food scarcity, goes into an inactive state, with reduced metabolism & oxygen consumption. Stored fat provides needed energy. An adaptation to live in a harsh environment.



***Tamiasciurus douglasii* Douglas squirrel or Chickaree** Order Rodentia; Family: Sciuridae

Family Sciuridae traits: tail usually bushy, 4 toes on front feet, 5 toes on hind feet, squirrels & chipmunks have internal cheek pouches.

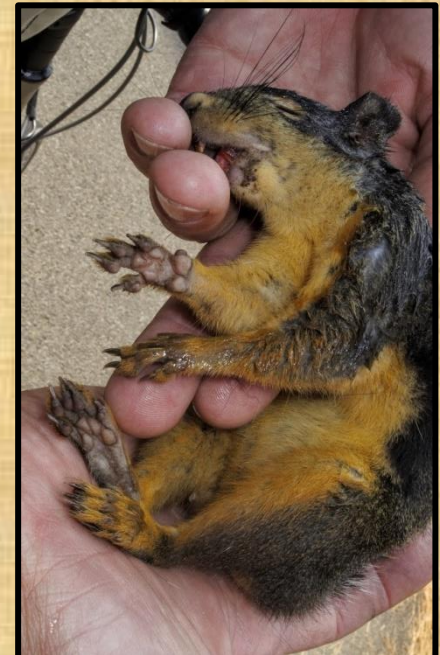
Upper parts- dusky olive; whitish-tipped tail hairs

Underparts- yellowish/white to deep orange

In summer, a dark line demarks dorsal edge

Ears tipped with long hairs

Like all Sciuridae Family, 4 toes on front feet and 5 toes on hind feet



Order Rodentia; Family: Sciuridae
***Tamiasciurus douglasii* Douglas squirrel or Chickaree**



Eats: conifer cones, cut from trees in the fall and stored in a moist place for 1-3 years. Also eats fungi. **Eaten by:** coyotes, bobcats, goshawks, horned owls.

Tree squirrels differ from ground squirrels and chipmunks by having:

- 1. Long, bushy tails
- 2. Lack of stripes or spots on sides
- 3. No internal cheek pouches

Tree squirrels do not hibernate and are active during the day (except for Northern flying squirrel)



Douglas squirrels cut down ponderosa pine branches with unopened cones, and then extract the seeds, leaving the cone scales behind.

Sciurus griseus Western gray squirrel Order Rodentia; Family: Sciuridae

Family Sciuridae traits: tail usually bushy, 4 toes on front feet, 5 toes on hind feet, squirrels & chipmunks have internal cheek pouches



Photos: Rod Gilbert



Largest tree squirrel in Pacific NW. Associated with pine (nesting cover & seeds) and oak (nest holes and acorns). Nests in a mistletoe “witches broom”. Populations have greatly declined over last 100 years due to habitat reduction. 3 separate populations in WA: South-central WA, North Cascades, S. Puget trough. Protected in WA since 1993 with a recovery plan in place.

Comparing Pacific Northwest *Sciurus species* Rodentia; Family: Sciuridae



D = Douglas: Body-7 in. Tail-5 in.

W= Western gray: Body-12 in. Tail-12 in.

**Compared to Douglas squirrel,
Western gray squirrel has:**

- Tail very bushy with white-edged hairs.
- Back color: salt-&-pepper to steel gray with contrasting white underparts.
- Large feet & prominent ears.

Introduced to some WA cities, **Eastern gray squirrels** are mid-sized, have relatively narrow tails and short ears. Color is pale gray with red-brown on face, back, and tail.

In North Cascades, 4 native tree squirrel species overlap- Douglas, Red, & Western gray, and Northern flying squirrel.



Glaucomys sabrinus Northern Flying Squirrel

Order Rodentia; Family: Sciuridae

Family Sciuridae , traits: tail usually bushy, 4 toes on front feet, 5 toes on hind feet, squirrels & chipmunks have internal cheek pouches

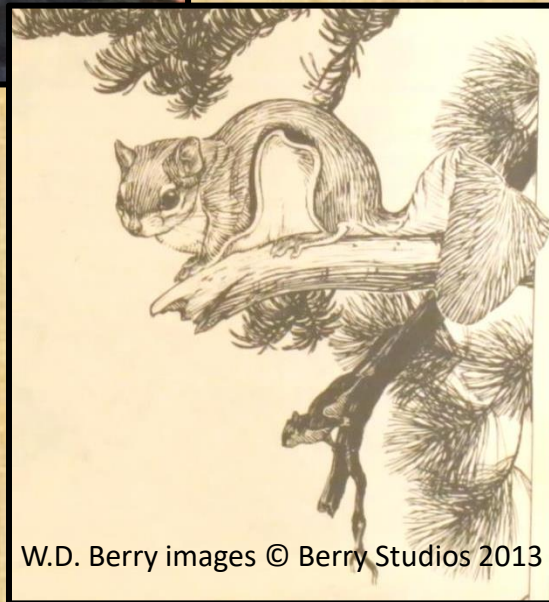


Body: Above:
Lead gray
Underside- dull
creamy white

Both sides of
flattened tail
are gray



Only subfamily Pteromyinae species of nocturnal tree squirrel in region.
Has large eyes & long whiskers (vibrissae)
Glides using flat furry membrane between ankle and wrist.
Jumps from a tree & glides 150 feet to base of another tree.



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Habitat: high montane coniferous forests. Aboreal. **Eats:** in summer-fungi; in winter-hair lichen; also nuts, fruit, & insects. Does not cache food. **Eaten by:** owls, martens, bobcats, coyotes.

Glaucomys sabrinus Northern Flying Squirrel

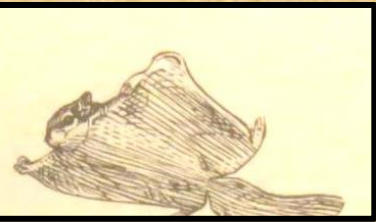
Order Rodentia; Family: Sciuridae

Only nocturnal tree squirrel in region.

Has large eyes & long whiskers (vibrissae)

Glides using flat furry membrane between ankle and wrist. Jumps from a tree & glides 150 feet to base of another tree.

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Thomomys talpoides Northern pocket gopher

Order Rodentia, Family Geomyidae

Family: Geomyidae traits: burrowing rodents with fur-lined external cheek pouches, tails always shorter than combined head and body length. Difficult to identify to the 5 Northwest species based on external features alone.



Herbivores: eat roots, bulbs, and fleshy plant parts
Found underground. Under Snowpack, will eat bark of trees and shrubs. Don't require a source of water as they obtain needed water from plant foods.



ID traits:

- Stout bodied
- Small eyes & ears
- Large-clawed front paws
- Sparsely haired short tail used as a sensory organ.
- Large front teeth used to loosen soil & rocks and to cut and eat plants.
- Short fur, various colors
- Play important role in aerating soil, increasing water-holding capacity of soil, fertilizing, and creating fresh soil for new seedbeds.
- provide burrows for reptiles & amphibians.
- Are prey for mammals, birds, & snakes



Large front claws used for digging

Photo by Ty Smedes <http://wdfw.wa.gov/>

After snow melt, packed dirt that a pocket gopher filled in to an under snow tunnel



***Thomomys talpoides* Northern pocket gopher Order Rodentia, Family Geomyidae**

Pocket gophers, like other Rodents are Herbivores with teeth specialized for cutting and eating plants

After snow melt, packed dirt that a pocket gopher filled in to an under snow tunnel



Incisors- well developed for cutting plants; ever-growing in Rodents. Outer surface covered in very hard orange enamel; inner surface is softer dentine. Allows wear to form a chisel-shape.

Canines absent; a large gap allows mammal to hold & carry plant parts

Cheek teeth surfaces complex to allow for grinding & plants
Chew “sideways” transversely



Castor canadensis American beaver Order Rodentia; Family: Castoridae

2 living species worldwide. Have Adaptations for semi-aquatic lifestyle including: large size, underfur covered by outer long guard hairs for insulation, webbed hind feet for swimming, small eyes with outer membrane covering, valve openings to ears & nostrils, can open mouths while underwater without taking water into the lungs.



Largest rodent in North America, weighing up to 74 lbs
Herbivores; eat plant leaves and inner bark.



***Castor canadensis* American beaver**
Order Rodentia; Family: Castoridae



Beaver incisor teeth marks visible



Beaver constructed lodge, Methow River



Beaver dam, Methow River



Beaver cuts on a living black cottonwood



Beaver prints along Methow River

***Peromyscus maniculatus* deer mouse** Order Rodentia; family Cricetidae: Subfamily Cricetinae

Subfamily Cricetinae traits : Have large membranous ears not covered in hair. Have long tail length of over 3/4s of the head and body length. Have cups on unworn molar teeth.

No external cheek pouches



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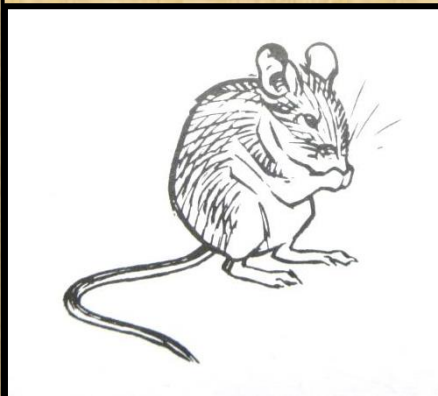


<https://en.wikipedia.org/wiki/Peromyscus>

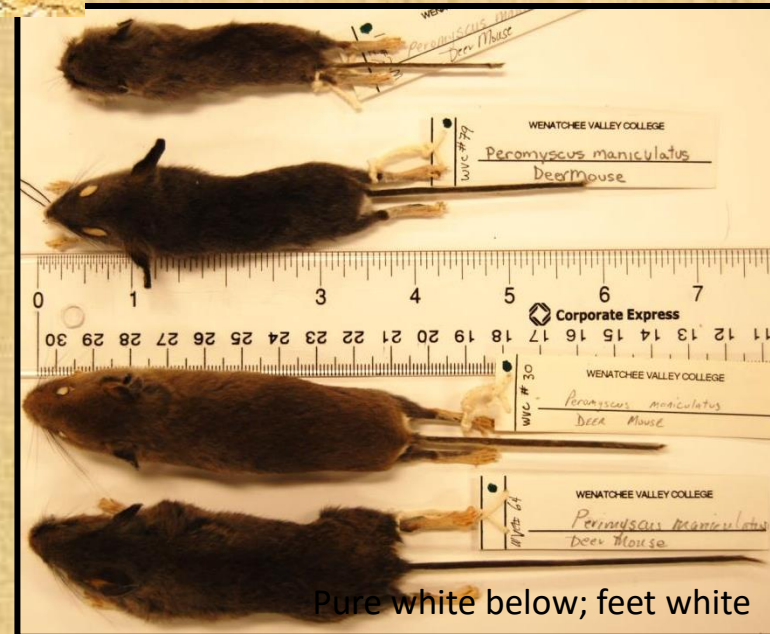


- 7 species of deer mice in the Pacific states
- Primarily nocturnal
- Wide-ranging and common in any terrestrial habitat in North America
- Eat all kinds of seeds, fruits, insects and store large caches of food.
- Are active all winter above the snow.
- Many birds and mammals are predators.
- Many sub-species

Tail bicolored- dark above, white below



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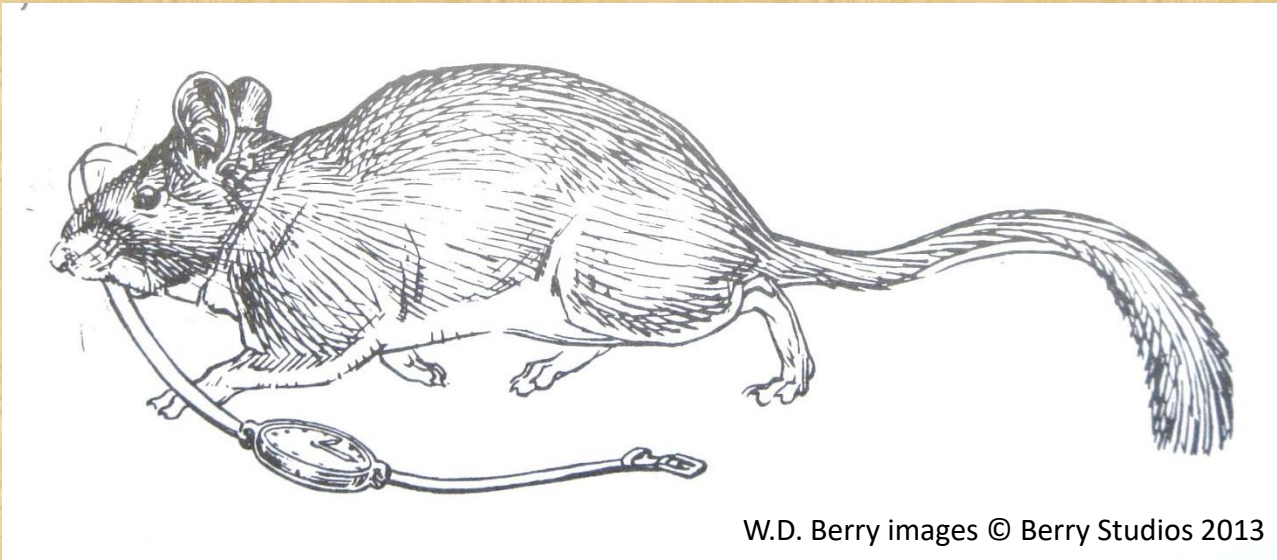
Pure white below; feet white

Order Rodentia; Family: Muridae

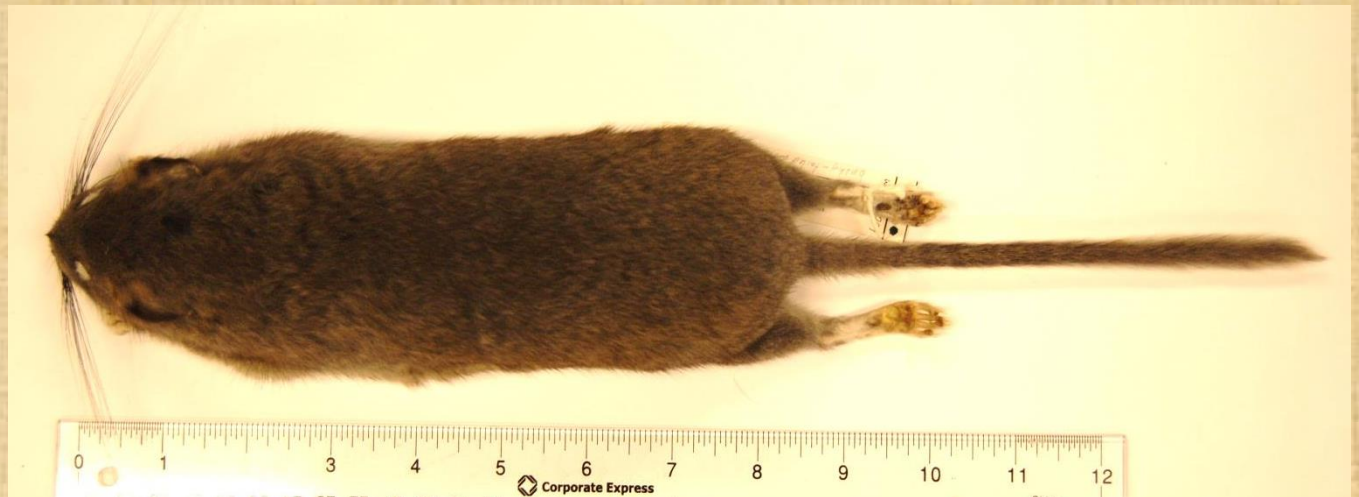
Peromyscus keenii Columbian mouse (forest deer)



Order Rodentia; Family: Muridae
Nootoma cinerea bushy-tailed woodrat



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Order Rodentia; Family: Zapodidae
Zapus princeps Western jumping mouse



Erthizon dorsatum common porcupine Order Rodentia; Family: Erthizontidae

Family Erthizontidae traits: large heavily built rodents , all species have quills tipped with backwards-pointing barbs. Tree-living adaptations include feet with broad soles with pads that increase traction, and toes with long curled claws. Herbivores.

Heavy-bodied, short-legged slow moving, with a waddling gate. Color varies: black to light yellowish brown.

Habitat mostly in forests. **Food:** Herbivores,. In summer, eat buds, twigs, leaves, flowers, berries, nuts. In winter eat evergreen needles & inner bark of trees and woody shrubs.



Quills: sharp barb-tipped that cover most of body, that easily detach after contact with flesh or fur. Quills provide buoyance, so porcupines can swim to get aquatic plant foods.



W.D. Berry images © Berry Studios 2013

Usually solitary.

Den in caves, hollow logs, ground burrows



Body length: 24-36 inches, Tail 6-9 inches

Erthizon dorsatum porcupine

Order Rodentia; Family: Erthizontidae

Family Erthizontidae traits: large heavily built rodents , all species have quills tipped with backwards-pointing barbs. Tree-living adaptations include feet with broad soles with pads that increase traction, and toes with long curled claws. Herbivores.





Canis latrans coyote Order Carnivora; Family: Canidae

Canidae family traits: walk on toes, have long legs adapted for running, have non-retractable claws. All have bushy tails and well developed “slicing” cheek teeth (carnassials).

Size: Males-25 inches tall at shoulder, 20-35 Pounds. Females slightly smaller.

Key ID Features: bushy tail, large pointed ears. Color highly variable- black-brown-gray-rust-tan-to-yellow.

Mostly active at night, but can be seen hunting during daylight hours. Coyotes are extremely wary and have excellent sense of smell, with well-developed sense of hearing and sight.

Habitat: Widespread and increasing due to high adaptability to humans



Photo: Lisa Robinson



Coyotes are opportunistic **omnivores**- they eat plants and animals-dead or alive. They hunt small mammals, reptiles, fish, and birds, and eat carrion (dead flesh). In summer, they also eat fruits, berries, & grass.

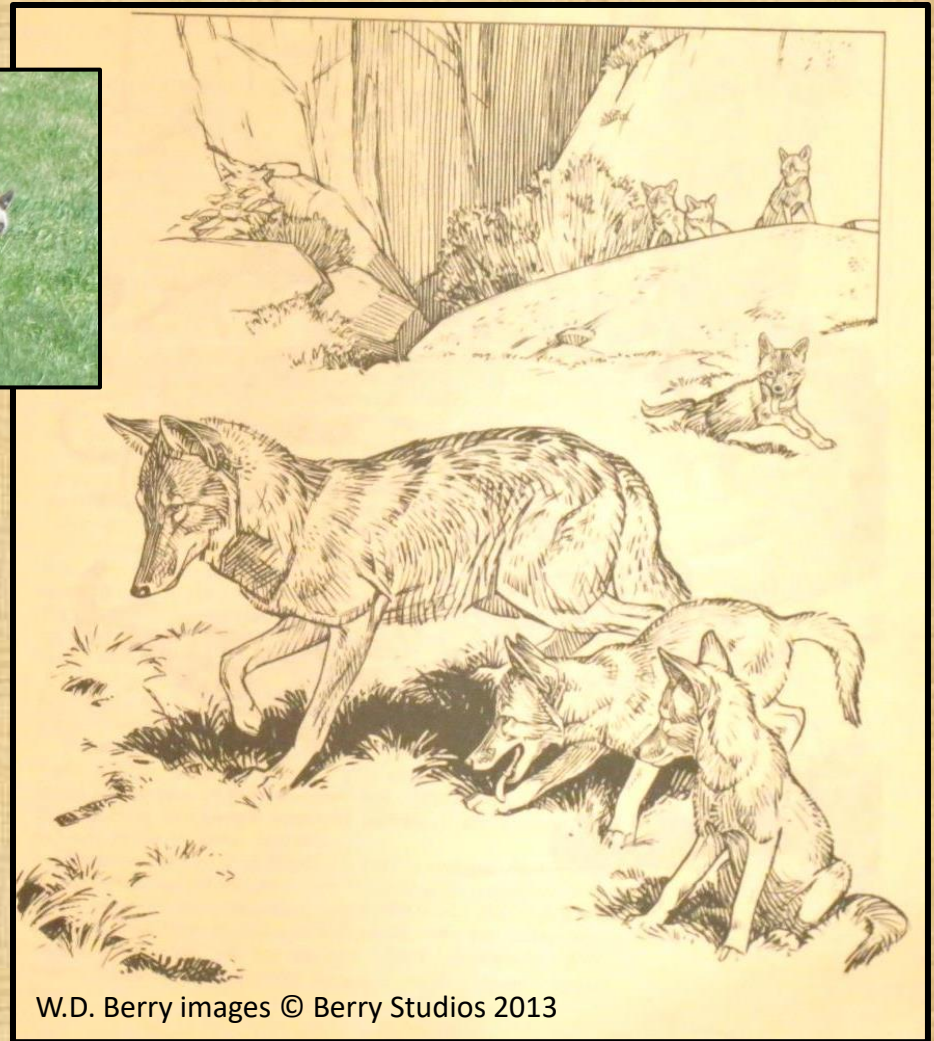
***Canis latrans* coyote Order Carnivora; Family: Canidae**

Canidae family traits: walk on toes, have long legs adapted for running, have non-retractable claws. All have bushy tails and well developed “slicing” cheek teeth (carnassials).



Coyote hunting rodents in a hay field

Coyote scat, March, Methow River



W.D. Berry images © Berry Studios 2013

Coyotes are omnivore with both kinds of teeth so can eat meat & plants

- **Incisors**- well-developed for biting & cutting
- **Canines**- long & relatively sharp for piercing & holding prey

Cheek teeth- premolars & molars a combination of sharp scissor-like teeth for tearing meat, and flattened molars with rounded cusps for grinding plants

Tight jaw joint, compared to an herbivore less side-to-side movement



Ursus americanus black bear Order Carnivora; Family: Ursidae

Ursidae family traits: walk on entire sole of foot, as humans do. Have rudimentary tails. Molar teeth have blunt cusps that are not as sharp as other carnivore order mammals.

Except for Grizzly, our largest carnivore]

Habitat: Mountains; ranges widely in search of seasonal foods



Eats mostly plants: roots, fruits, nuts, & grasses. Also eats insects, ants, fish, & small mammals. Sometimes preys on larger mammals



Ursus americanus black bear Order Carnivora; Family: Ursidae

Ursidae family traits: walk on entire sole of foot, as humans do. Have rudimentary tails. Molar teeth have blunt cusps that are not as sharp as other carnivore order mammals.

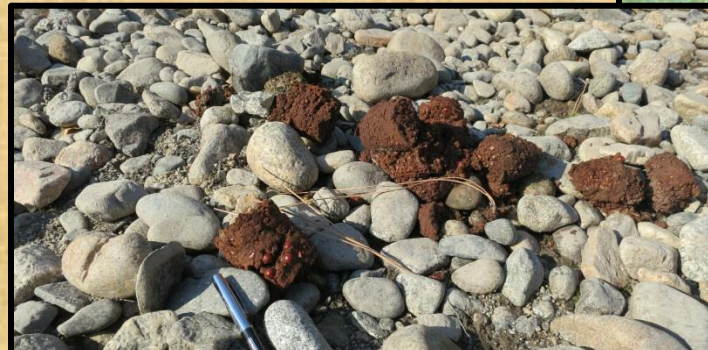


An Omnivore with teeth suited to both plants and meat

Have excellent sense of smell & hearing.
Poor eyesight



Photo: Rod Gilbert

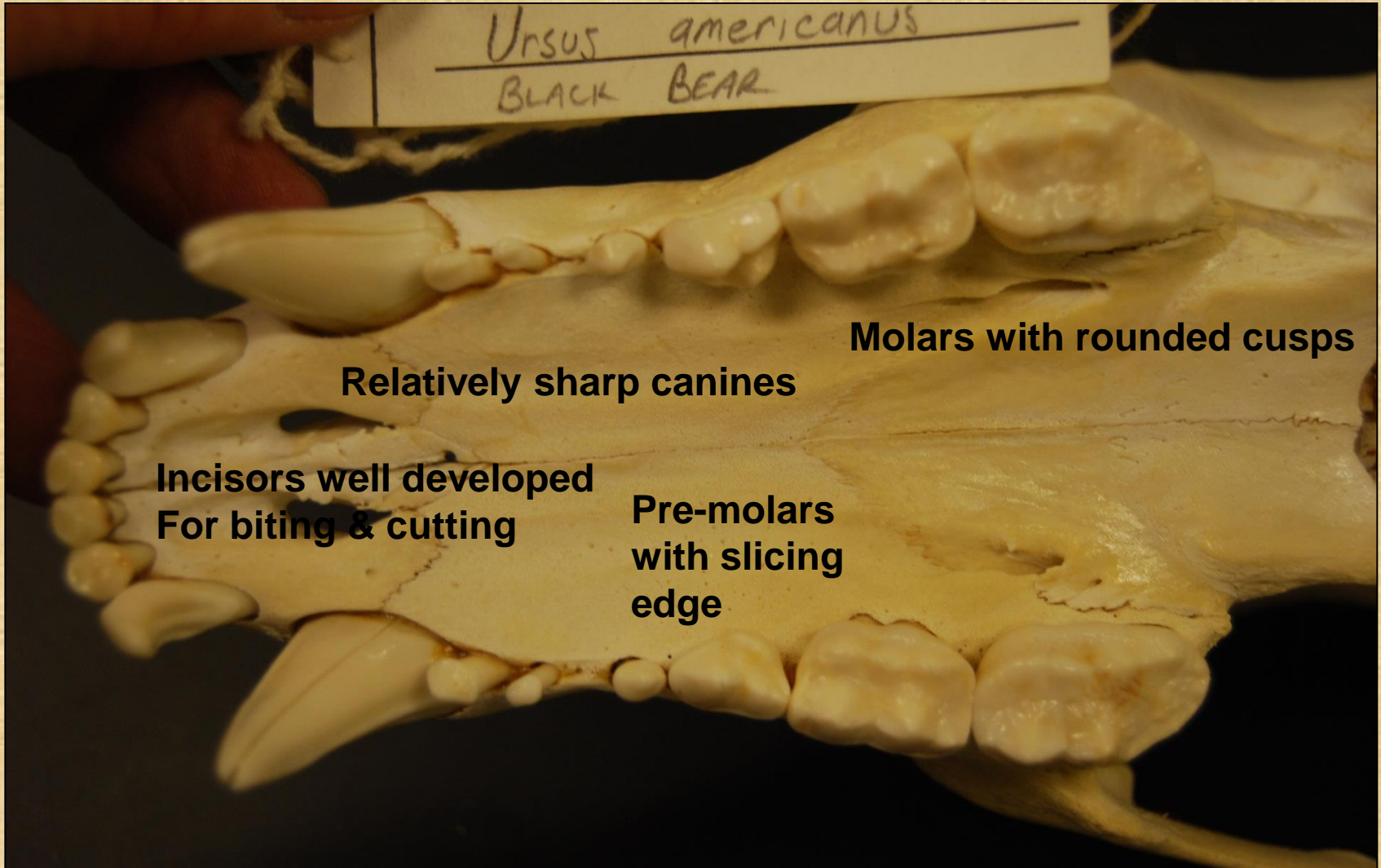


Bear scat in October along Entitat River, full of chokecherries



***Ursus americanus* black bear Order Carnivora; Family: Ursidae**

Ursidae family traits: walk on entire sole of foot, as humans do. Have rudimentary tails. Molar teeth have blunt cusps that are not as sharp as other carnivore order mammals.



Teeth features tell you that the black bear is an omnivore

Ursus arctos grizzly bear Order Carnivora; Family: Ursidae

Ursidae family traits: walk on entire sole of foot, as humans do. Have rudimentary tails. Molar teeth have blunt cusps that are not as sharp as other carnivore order mammals.

Largest carnivore in North America



Procyon lotor raccoon Order Carnivora; Family: Procyonidae

Family Procyonidae traits: Walk on entire sole of foot, teeth lack “slicing” character of most other Carnivores, have ringed tails. 2 species in North America

Omnivore: eats crayfish, fish, turtles, frogs, small mammals, birds, eggs, insects, corn, melons, acorns, berries, grapes



Curious –handle items with sensitive feet

Photo: Rod Gilbert



Habitat: near streams, lakes , marshes. Adaptable to urban environments



***Martes americana* American marten** Order Carnivora; Family: Mustelidae

Mustelidae characteristics: All have short legs with 5 toes on each foot, fur of fine quality, and highly developed scent glands. Short rostrum (snout). Have 1 molar tooth on each side of upper jaw, and 2 molars on each side of lower jaw (only group with this pattern).



Habitat: dense conifer forest & rockslides in high mountains. Secretive

Eats: squirrels, mice, hares, voles, and berries.



- **ID traits:**
- Bushy cylindrical tail
- Rich yellow-brown fur
- Large cat-like ears
- size of a tree squirrel
- Often seen in trees
- Feet and tail-tip blackish
- Yellow-orange on throat & chest

Photo: Drew & Cathy Gaylord

Mustela frenata long-tailed weasel Order Carnivora; Family: Mustelidae

Mustelidae family traits: Have short legs with 5 toes on each foot, fur of fine quality, highly developed scent glands, and a short nose. One molar on each side of upper jaw, two molars on each side of lower jaw.



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***Mustela vison* mink Order Carnivora; Family: Mustelidae**

Mustelidae family traits: Have short legs with 5 toes on each foot, fur of fine quality, highly developed scent glands, and a short nose. One molar on each side of upper jaw, two molars on each side of lower jaw.



Photo: Rod Gilbert



Taxidea taxus American badger Order Carnivora; Family: Mustelidae

Mustelidae family traits: Have short legs with 5 toes on each foot, fur of fine quality, highly developed scent glands, and a short nose. One molar on each side of upper jaw, two molars on each side of lower jaw.



***Taxidea taxus* American badger Order Carnivora; Family: Mustelidae**

Like all Carnivores , Badgers have teeth specialized for tearing and shearing

Badger *Taxidea taxus*

Canines- eye teeth

Sharp & long for piercing and holding prey

Tight-fitting jaw joint allowing carnassial teeth to overlap tightly

Badger

molars

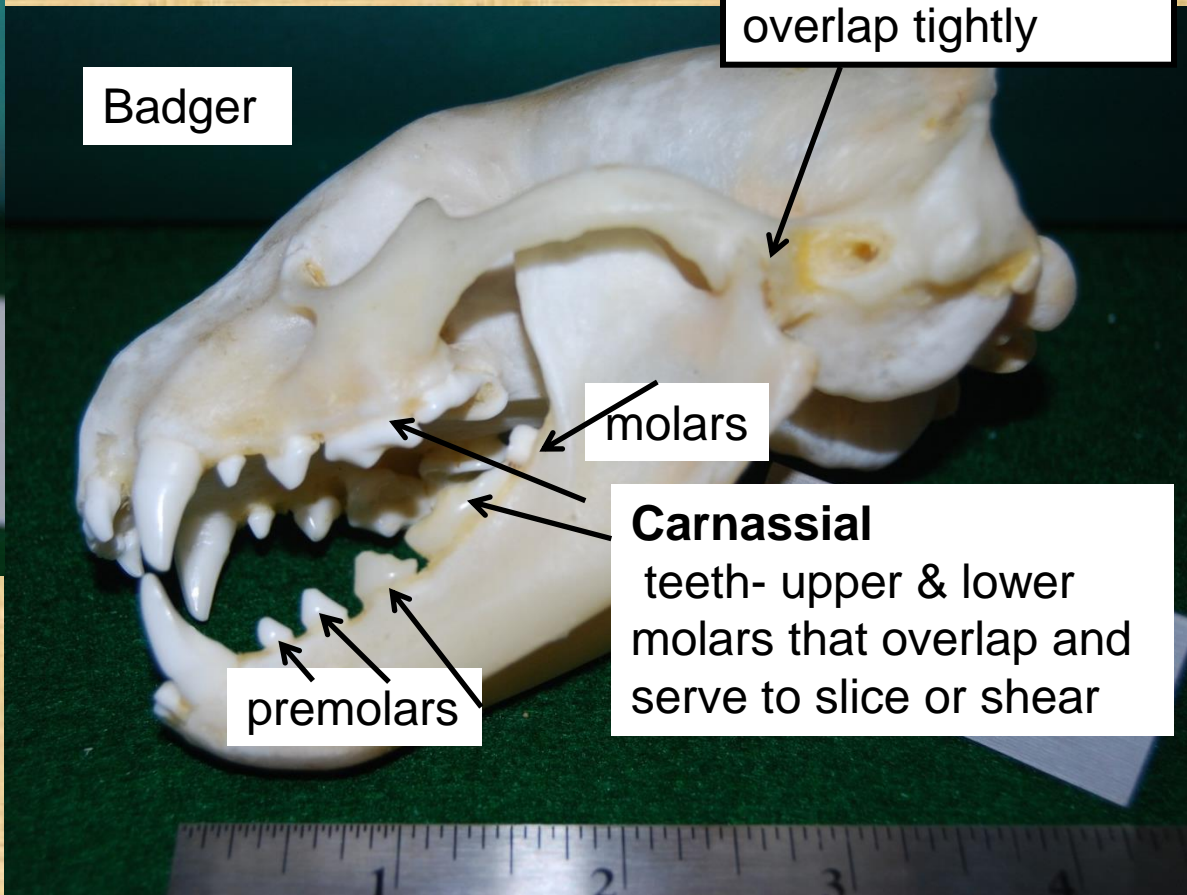
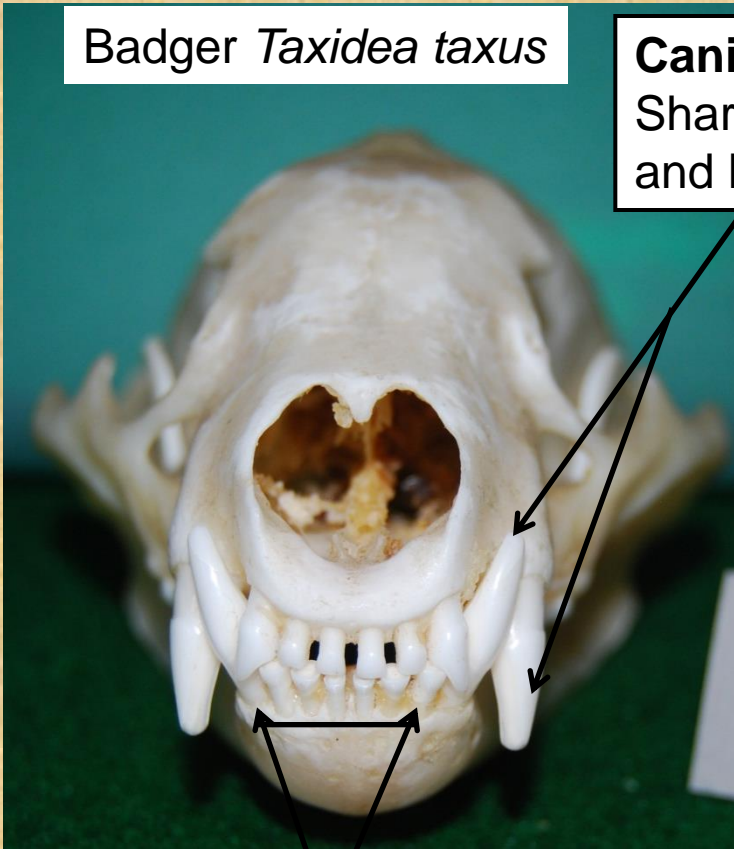
Carnassial

teeth- upper & lower molars that overlap and serve to slice or shear

premolars

Incisors- front teeth

Small, less developed, used for nipping and grooming
6 upper & 6 lower incisors



***Mephitis mephitis* striped skunk Order Carnivora; Family: Mustelidae**

Mustelidae family traits: Have short legs with 5 toes on each foot, fur of fine quality , highly developed scent glands, and a short nose. One molar on each side of upper jaw, two molars on each side of lower jaw.



Lutra canadensis Northern river otter Order Carnivora; Family: Mustelidae

Mustelidae family traits: Have short legs with 5 toes on each foot, fur of fine quality, highly developed scent glands, and a short nose. One molar on each side of upper jaw, two molars on each side of lower jaw.

Opportunistic Carnivores that eat mostly fish &, crabs, crayfish, amphibians, large aquatic beetles, birds (primarily injured or molting ducks and geese), bird eggs, fish eggs, and small mammals (muskrats, mice, young beavers).

Habitat: ponds, lakes, rivers, sloughs, estuaries, bays, and in open waters along coast.



Photo: Tim Gallaher, Fish Lake

Adult males: 4 feet long;
20-28 lbs. Females smaller

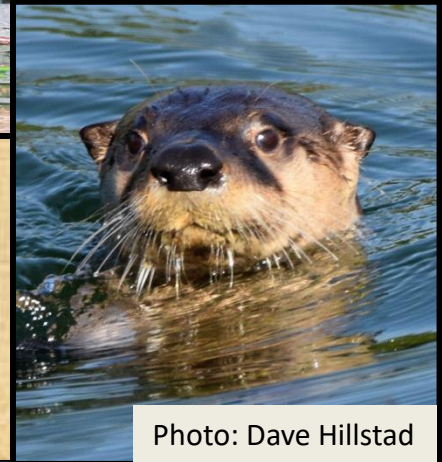
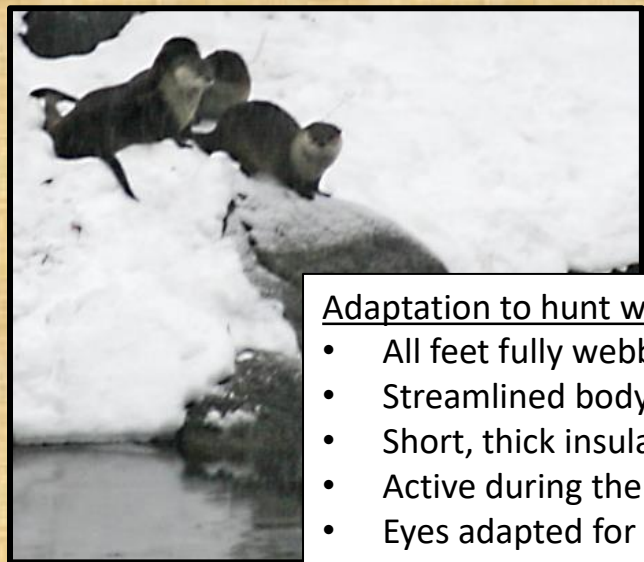


Photo: Dave Hillstad



Adaptation to hunt while swimming:

- All feet fully webbed
- Streamlined body & tail
- Short, thick insulating fur
- Active during the day & night
- Eyes adapted for seeing underwater in low light

cougar *Felis concolor* mountain lion/puma Family *Felidae*

Family Felidae traits include: sharp, flesh-cutting cheek teeth. 3 species in Pacific Northwest : bobcat, lynx, & cougar (all with retractable claws).

Males: 8 ft. nose to tail tip; 180 pounds

Male Home range = 50-100 square miles, depending upon food availability, time of year, and age of male. Often overlaps with several female home ranges.



Cougars

- Are solitary and secretive,
- known for their ability to jump using powerful legs
- Have a powerful jaw that enables it to take down kill prey larger than itself
- Largest cat in N. America

Color varies from reddish-brown, to tawny, to gray.



Black tipped tail

Females: 25% smaller than males

Prey: deer, also small mammals like skunks, & porcupines.

Habitat: widespread in western U.S. Uses steep canyons, boulders, and dense Vegetation to remain hidden while hunting

Puma concolor (*Felis concolor*) Mountain lion/ cougar

Order Carnivora; Family: Felidae

Felidae Family traits: Have sharp, flesh-cutting cheek teeth (Carnassials), our species have retractable claws



Cougars, as Felidae Family members have:

- A short nose (rostrum) that facilitates a powerful bite.
- Large eye sockets facing forward- adaption for sight hunting
- Incisors (6 upper & 6 lower)
- Canines
- Carnassial teeth

Note: Lower jaw has 2 premolars & 1 molar; upper jaw has 3 premolars & 1 molar- altogether are carnassials

Lynx rufus (Felis rufus) Bobcat Order Carnivora; Family: Felidae

Family Felidae traits include: sharp, flesh-cutting cheek teeth. 3 species in Pacific Northwest : bobcat, lynx, & cougar (all with retractable claws).

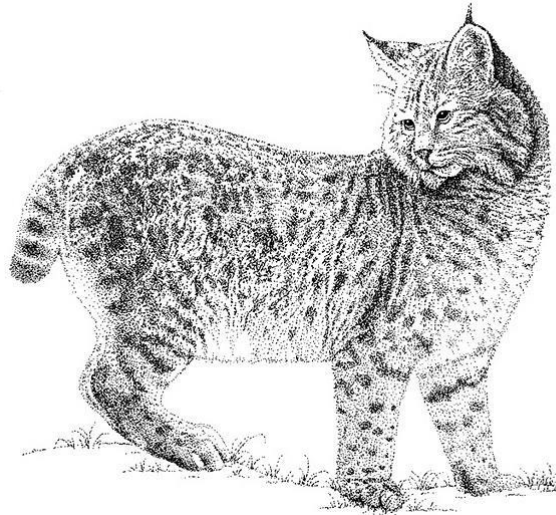
Habitat: wide-ranging from sea level to above timberline in Pacific NW. Rock ledges, cliffs, & outcroppings used for shelter, resting, & rearing young.

Size: 3 feet long; 20-30 pounds. Males slightly larger than females

Food: opportunistic, feeding on small mammals, insects, reptiles, birds, & carrion. Seldom seen; hunt using sight & sound. Bobcats avoid open areas & stay close to cover.



Long ears, with black tufts at end



Source: <http://wdfw.wa.gov/gallery/index.php/wildlife/Mammals/album19/Lynx2>



spotted all over



3 inch, short bobbed tail

***Canadian lynx* *Lynx canadensis* Order Carnivora; Family: Felidae**

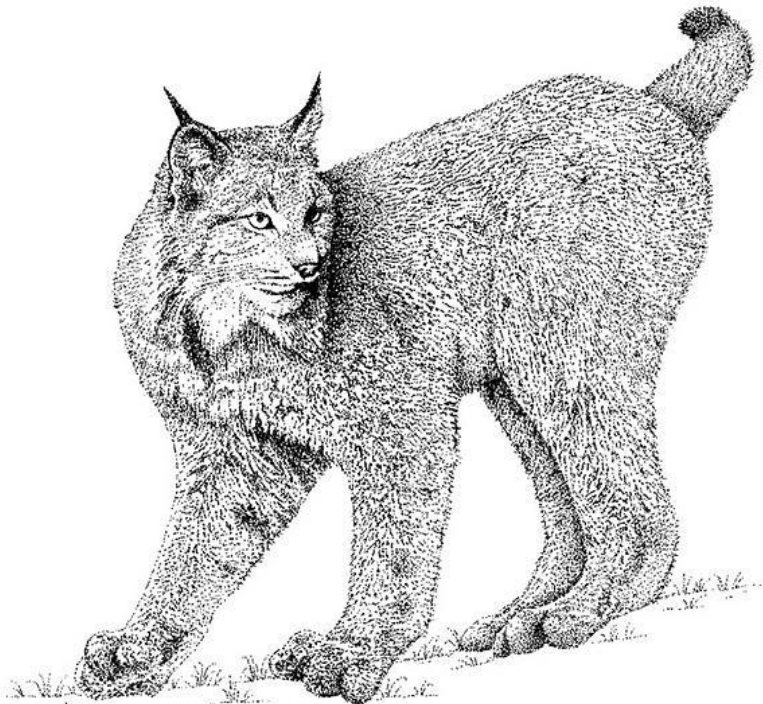
Family Felidae traits include: sharp, flesh-cutting cheek teeth. 3 species in Pacific Northwest : bobcat, lynx, & cougar (all with retractable claws).

Lynx differ from bobcats. Lynx have:
Short tail, black-tipped with no bars
Long, pointed dark-edged ears tipped with long black hairs
Larger size. Lynx weigh up to 28 lbs.
Bobcats weigh 15-20 lbs.

Habitat: Dense coniferous forests, prefers remote & isolated areas. In Washington, found higher parts of Cascades, Blue Mountains, & in NE mountains.

Food: rodents, birds, and snowshoe hare (main food in winter).

Source: <http://wdfw.wa.gov/gallery/index.php/wildlife/Mammals/album19/Lynx2>



Dorsal Color: soft gray with yellowish wash

long, unspotted legs

Underparts color:
gray with indistinct spots

Order: Lagomopha Family Leporidae -cottontails, rabbits, hares

Family traits: long ears, long hind legs, soft fur, & short cottony tail. Move by hopping.

Lagomorphs are herbivores with teeth specialized for cutting and eating plants

Incisors- well developed for cutting plants; ever-growing Lagomorpha

Canines absent; a large gap allows mammal to hold & carry plant parts

Cheek teeth surfaces complex to allow for grinding & plants

Chew “sideways” transversely



Snowshoe hare *Lepus americanus* Order: Lagomopha Family Leporidae -

Family traits: long ears, long hind legs, soft fur, & short cottony tail. Move by hopping.

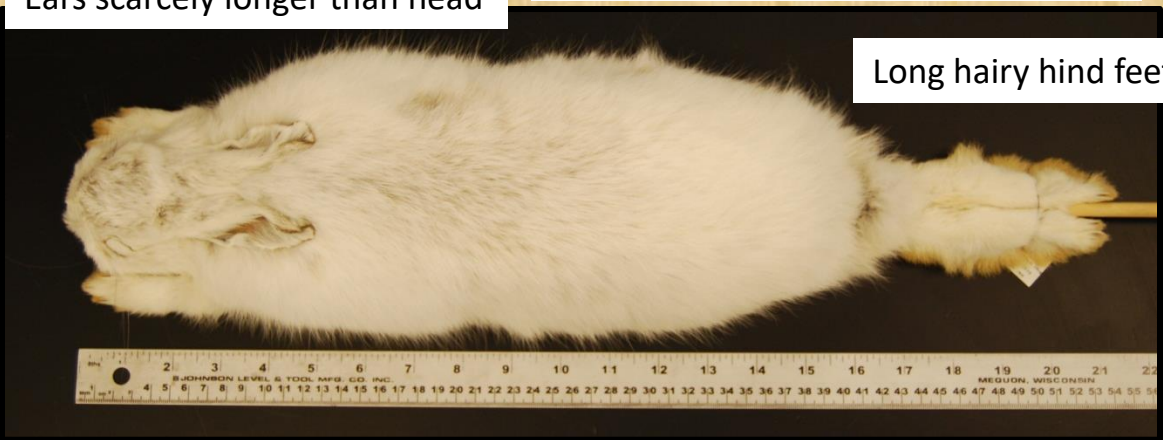


Has 2 annual molts: brown in summer; white in winter

Ears scarcely longer than head

Underside of tail is brown year-round

Long hairy hind feet



Food: bark & twigs of aspen, willow, alder, & conifers.

Eaten by: coyote, fox, bobcat, lynx, great horned owls

Habitat: Conifer forests & wetland thickets in mountains

***Oreamnos americanus* mountain goat** Order Artiodactyla Family: Bovidae

Order Artiodactyla Family: Bovidae: usually large sized; do not shed horns. Horns may be present in both sexes. Lack upper incisors; all chew-cud & have complex stomachs. Lower canine is spatula-shaped. World-wide, provide meat, milk, leather, wool, and serve as beasts of burden.

- Permanent horns in both sexes. Black, saber-like in shape
- Long white hairs & wooly under-fur all over body, except on face
- Two toes have large hooves with soft pads (help to grip rocks)
- Food: grasses, forbs, shrubs, and lichens
- In summer, found above timberline & in spruce/hemlock forests. Move to lower elevations in winter



Photos: Dave Hillstad



Rocky mountain big horn sheep *Ovis canadensis canadensis*

Order Artiodactyla Family: Bovidae: usually large sized; do not shed horns. Horns may be present in both sexes. Lack upper incisors; all chew-cud & have complex stomachs. Lower canine is spatula-shaped. World-wide, provide meat, milk, leather, wool, and serve as beasts of burden.

- Both sexes have horns. Male horns spiral
- Except during mating seasons, adult males move in separate bands from females & ewes.
- Mating season is Nov.-Dec. when males have terrific fights, with predictable aggressive moves
- A severe winter and food shortages are the biggest predator of young. Subject to domestic sheep diseases
- Have acute vision & hearing

Abdomen, insides of legs, & rump are white



Food: sedges, grass, & small forbs

Photos: Dave Hillstad

Most U.S. populations have been re-introduced. Current range is open alpine meadows & grassy slopes near cliffs and rock ridges in mountains. They prefer sites with good visibility and little competition from other grazing animals. Often move downslope in winter.

***Odocoileus hemionus hemionus* mule deer Order Artiodactyla Family: Cervidae**

Order Artiodactyla traits: main axis of foot directly between 3rd and 4th digit, ankle bone has both ends rounded, premolars are simpler than the molars, 1st molar usually 3-lobed. Many families are ruminants.

Cervidae family traits: Cud-chewing ruminant with no upper incisors. Have complex 4-chambered stomach that break down plant cellulose enabling them to graze or browse for a long period and then retire away from predators & midday heat to cud-chew and digest. antlers shed every year, antlers usually only on males

Mule deer have large dark ears. Tail (7-8 inches long) is white, except for a black tip. Largest deer in Pacific NW- Adult bucks up to 250 lbs. Color: summer- tan to light brown; winter- salt-& pepper gray. In Pacific NW, 2 species & 4 subspecies of deer occur.

Habitat: east of the Cascades in WA, OR, and Interior B.C. preferring open forest and shrub-steppe. Are **Browsers** – eat the growing tips of trees & shrubs. In late winter, eat grass & herbaceous plants. In winter, prefer bitterbrush over sagebrush. In summer use over 30 species of trees and shrubs



Mule deer range elevationally long distances during spring and fall to follow food and avoid snow.



Males: antlers fork evenly

Order Artiodactyla traits: main axis of foot directly between 3rd and 4th digit, ankle bone has both ends rounded, premolars are simpler than the molars, 1st molar usually 3-lobed. Many families are ruminants.

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Cervidae Family members (deer, elk, moose, caribou) are herbivores with teeth specialized for cutting and eating plants

Cud-chewing mammals (Ruminants) have:

- **No upper canines or incisors;** instead a hard palate that the lower teeth press against to nip plants and hold in the gap (diastema).
- **Cheek teeth-** have upper surfaces designed to grind and section plant parts.
- **Muscles to Chew sideways-transverse**



White-tailed deer

Cervus elaphus nelsoni Rocky Mountain elk Order Artiodactyla Family: Cervidae

Cervidae family traits: Cud-chewing ruminant with no upper incisors. Have complex 4-chambered stomach that break down plant cellulose enabling them to graze or browse for a long period and then retire away from predators & midday heat to cud-chew and digest. antlers shed every year, antlers usually only on males

Larger than deer, smaller than moose.

Summer: reddish tan color, with buff-colored rump.

Winter: dark brown with a shaggy mane hanging from the neck to chest.

Social: Live in herds much of year; use distinct summering & wintering areas.

Bull (male) elk have large spreading antlers, shed annually in late winter.

Food: Spring-Summer: grazers of grass, sedges, flowering plants.

Food: Fall-Winter: browsers of shrub & tree branches; all graze on grass



Photo source: <http://wdfw.wa.gov/gallery>