

**Rodentia (Families: Castoridae, Erethizontidae, Geomyidae, Heteromyidae)  
Lagomorpha (Families: Leporidae and Ochotonidae)**

**Order Rodentia:**

**Family Castoridae**

**Castor canadensis**—ID based on skull and skin, n. history

**Family Erethizontidae**

**Erethizon dorsatum**—ID based on skull and skin, n. history

**Family Geomyidae—ID based on skull**

**Geomys bursarius**—ID based on skin, n. history

**Thomomys talpoides**—ID based on skin, n. history

**Thomomys clusius**—ID based on skin, n. history

**Family Heteromyidae—ID based on skull**

**Chaetodipus hispidus**—ID based on skin, n. history

**Dipodomys ordii**—ID based on skull and skin, n. history

**Perognathus spp**—ID based on skull and skin, n. history

**Order Lagomorpha:**

**Family Leporidae**

**Brachylagus idahoensis**—ID based on skin, n. history

**Lepus spp**—ID based on skull

**Lepus townsendii**—ID based on skin, n. history

**Lepus californicus**—ID based on skin, n. history

**Sylvilagus spp**—ID based on skull and skin

**Sylvilagus audubonii**—ID based on n. history

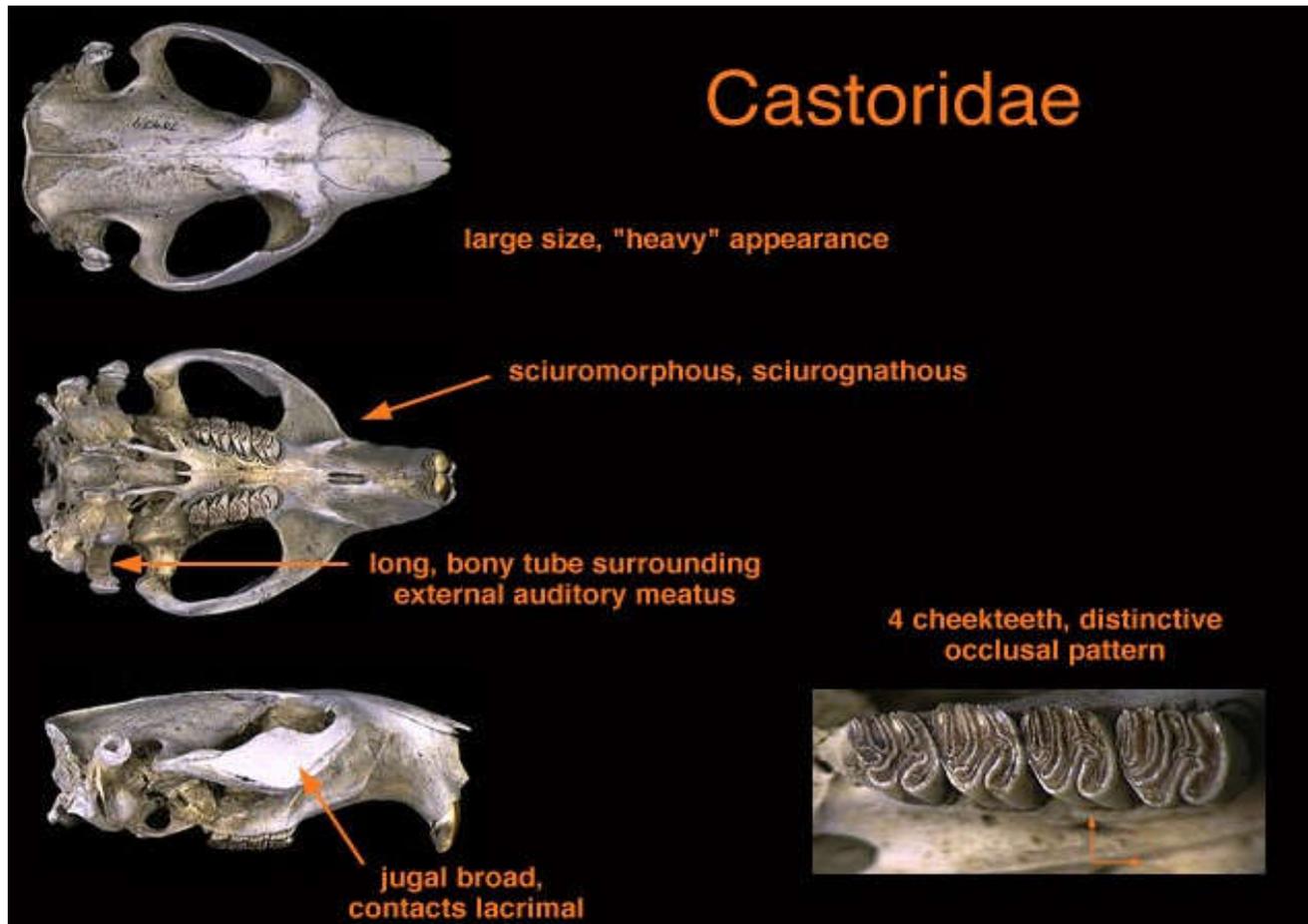
**Sylvilagus nuttallii**—ID based on n. history

**Family Ochotonidae**

**Ochotona princeps**—ID based on skull, n. history

Good source for  
additional pictures:  
[www.arkive.org](http://www.arkive.org)

# Order Rodentia, Family Castoridae—beavers *Castor canadensis*—American beaver



- 1) jugal is conspicuously broad
- 2) long bony tube surrounding external auditory meatus
- 3) incisors massive

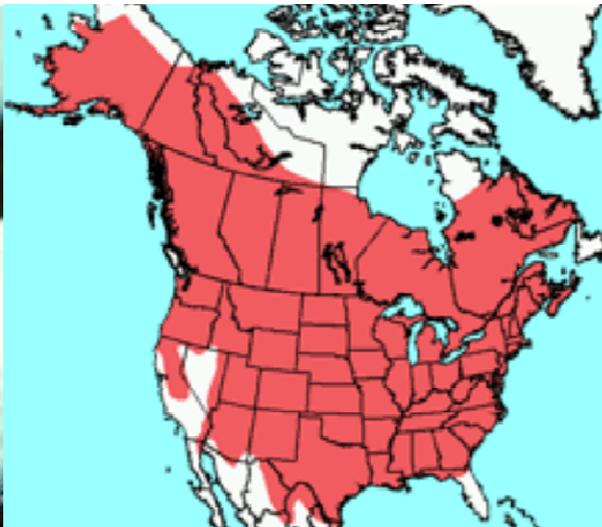
## Castor canadensis -- North American beaver

### Physical description

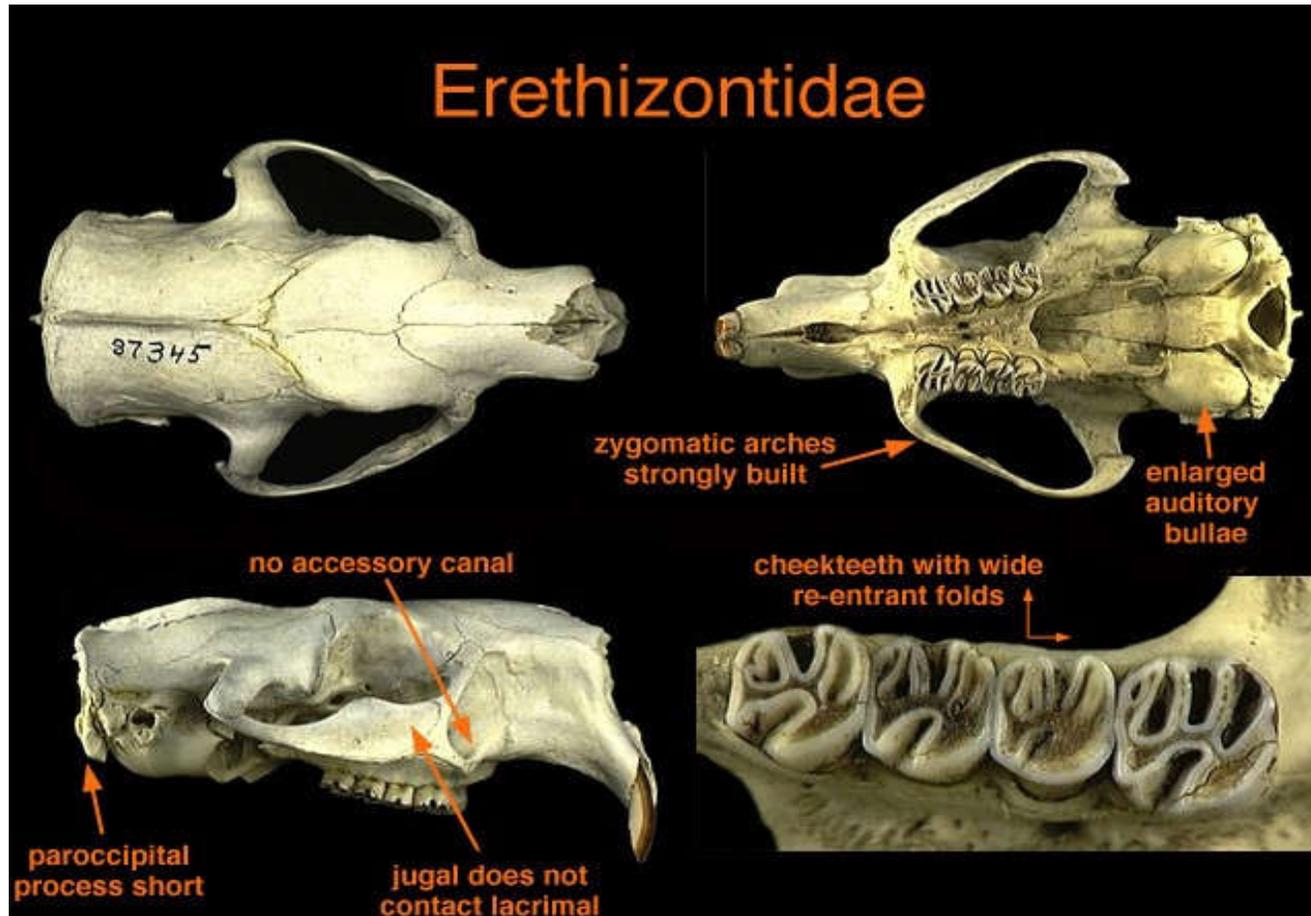
- 1) Largest member of Rodentia
- 2) Small dark brown or black colored ears
- 2) Webbed feet
- 3) Scaly, large, flat 'paddle-like' tail

### Natural history

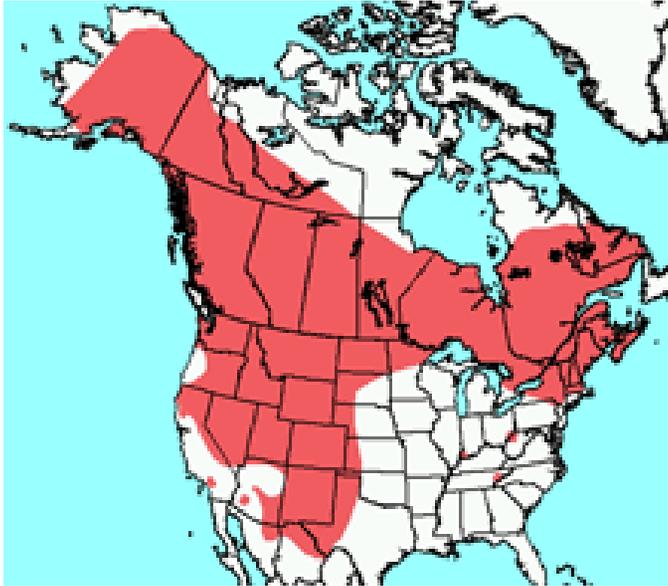
- 1) Often builds dams out of sticks and logs
- 2) Castor glands for [scent marking](#)
- 3) Social and territorial
- 4) Ecosystem engineer / keystone species



Order Rodentia, Family Erethizontidae—American porcupines  
*Erethizon dorsatum*—North American porcupine



- 1) massive infraorbital foramen
- 2) incisors massive
- 3) auditory bullae larger than *Castor canadensis*, lacks bony auditory meatus



**Erethizon dorsatum**  
**North American porcupine**

**Physical Description**

- 1) Second largest member of the order Rodentia
- 2) Dark brown to black pelage with white to yellowish dorsal guard hairs and spines (quills)
- 3) Large claws

**Natural History**

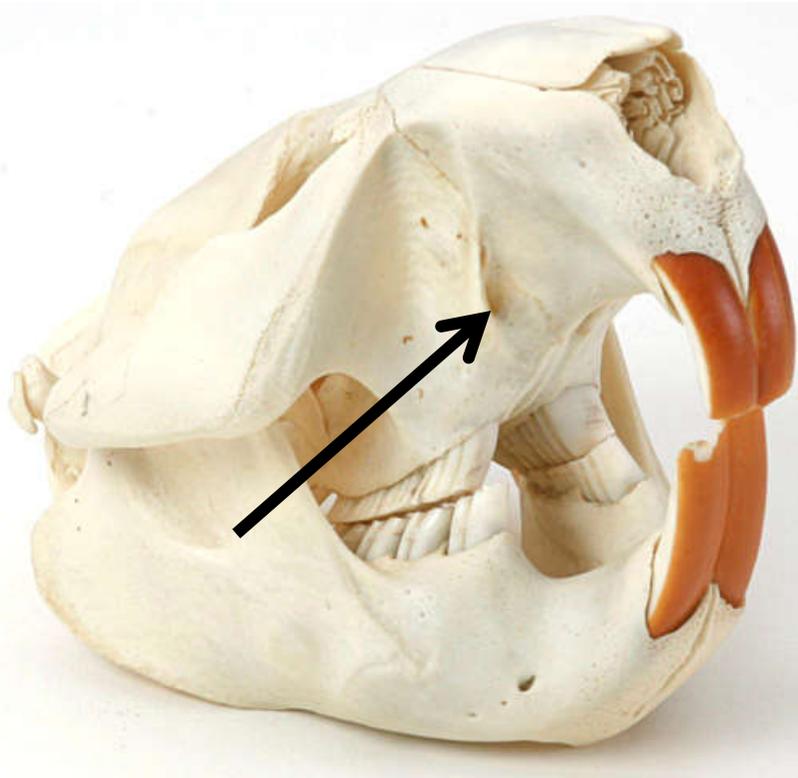
- 1) Nocturnal
- 2) Sexually dimorphic
- 3) Solitary during summer but share dens in during winter
- 4) Only known natural predator is the fisher (*Martes pennanti*)



# Compare Infraorbital Foramens

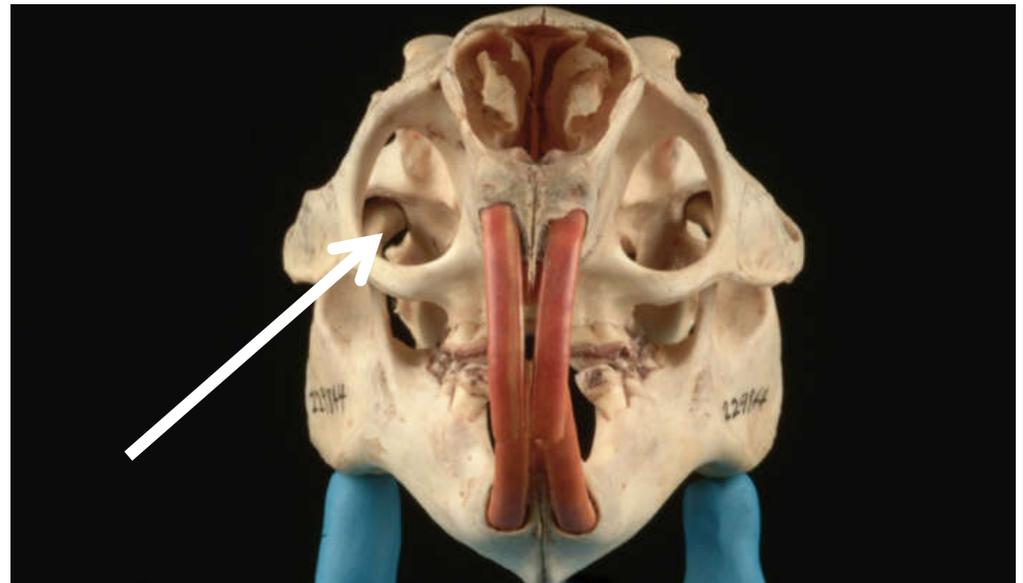
*Castor canadensis*

- North American beaver



*Erethizon dorsatum*

- North American porcupine



# Compare Dentition

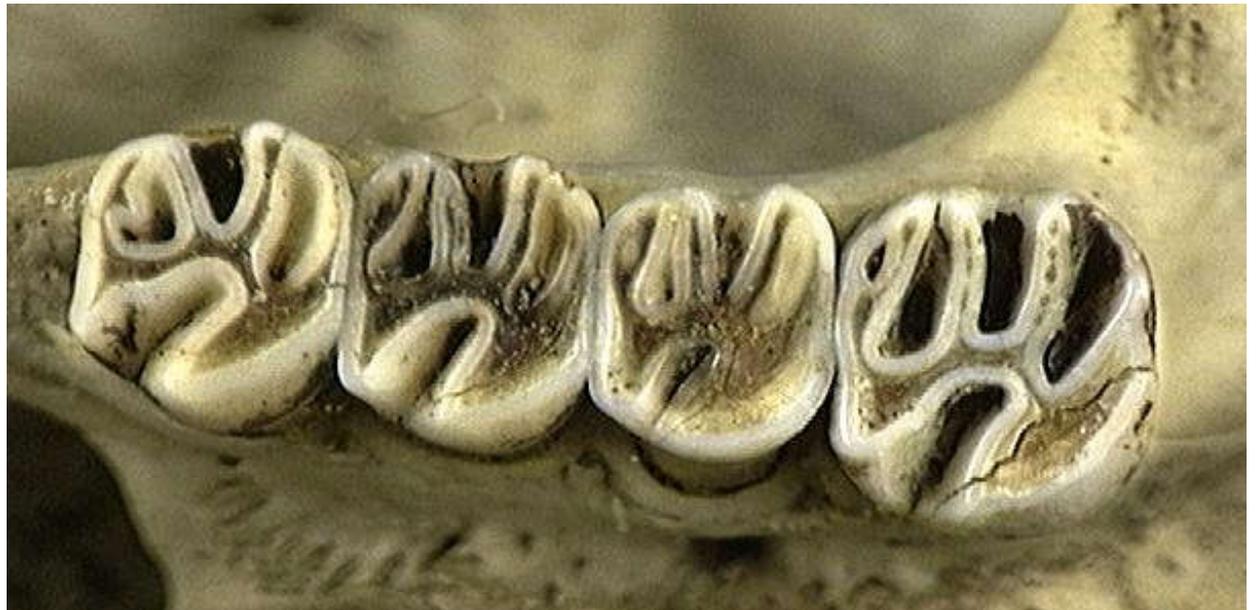
## ***Castor canadensis***

-North American  
beaver



## ***Erethizon dorsatum***

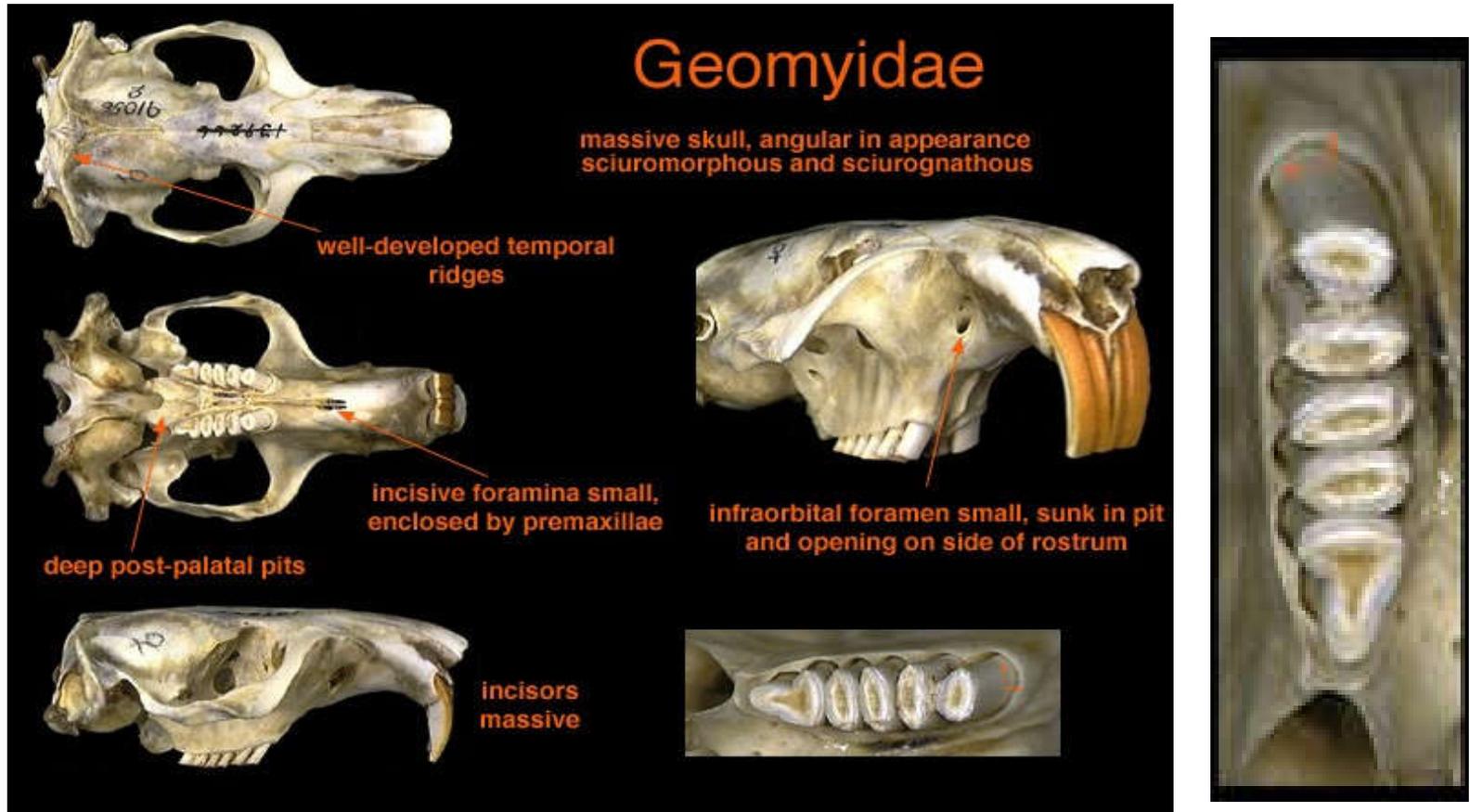
- North American porcupine



# Order Rodentia, Family Geomyidae—pocket gophers

*Thomomys spp.*—northern and Wyoming pocket gophers

*Geomys bursarius*—plains pocket gopher



1) upper and lower cheek teeth form "8"s

## Geomys bursarius -- plains pocket gopher

### Physical Description

- 1) Pelage variable; black, brownish, chestnut, gray
- 2) Dorsum lighter than ventrum
- 3) Heavier claws than *Thomomys talpoides*

### Natural History

- 1) Typically found in prairies and agricultural areas
- 2) Prefers deep sandy or loam soils
- 3) Asocial and territorial



## Thomomys talpoides -- northern pocket gopher

### Physical Description

- 1) Pelage grayish-brown to yellowish-brown to brown
- 2) Short limbs and strong claws, but claws more slender than *Geomys bursarius*
- 3) Black patch behind ear

### Natural History

- 1) Asocial and territorial
- 2) Do not hibernate
- 3) Intricate tunnel system, latrine levels and food storage levels
- 4) Habitat Generalist



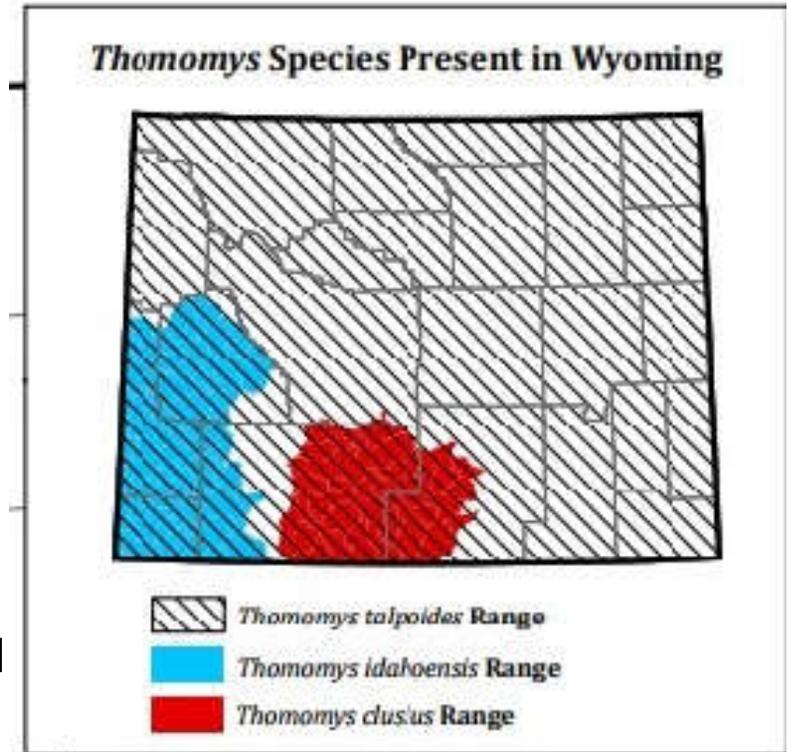
## Thomomys clusius – Wyoming pocket gopher

### Physical Description

- 1) buffy, yellow pelage
- 2) Margins of pinnae are fringed with white hair
- 3) No black patch behind ear

### Natural History

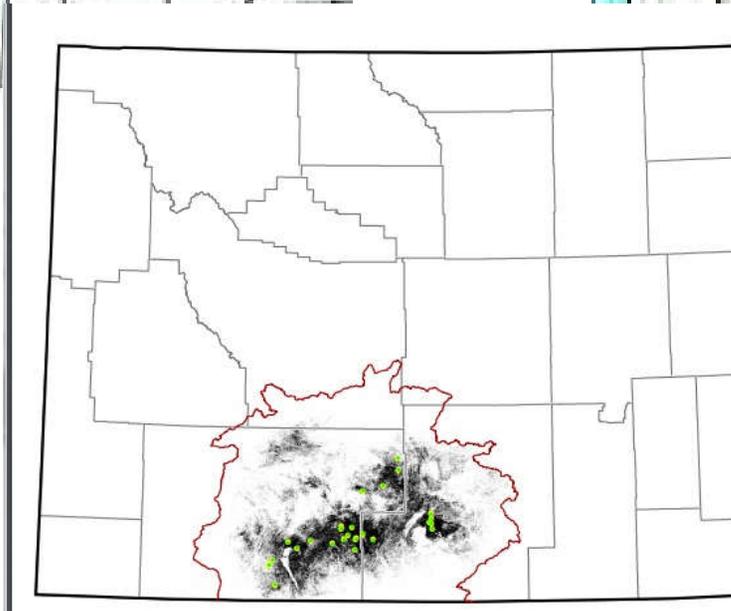
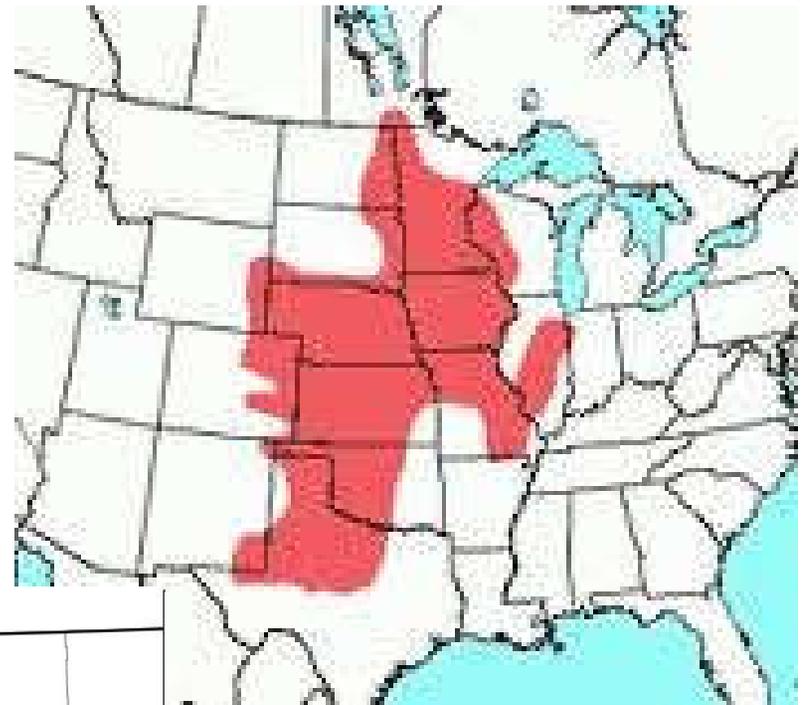
- 1) Asocial and territorial
- 2) Do not hibernate
- 3) Intricate tunnel system, latrine levels and food levels
- 4) Habitat Specialist – saltbush communities



**Thomomys talpoides**  
northern pocket gopher

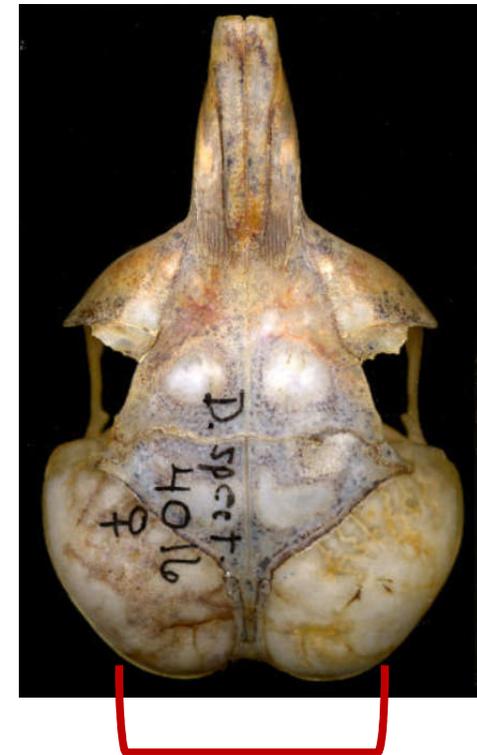
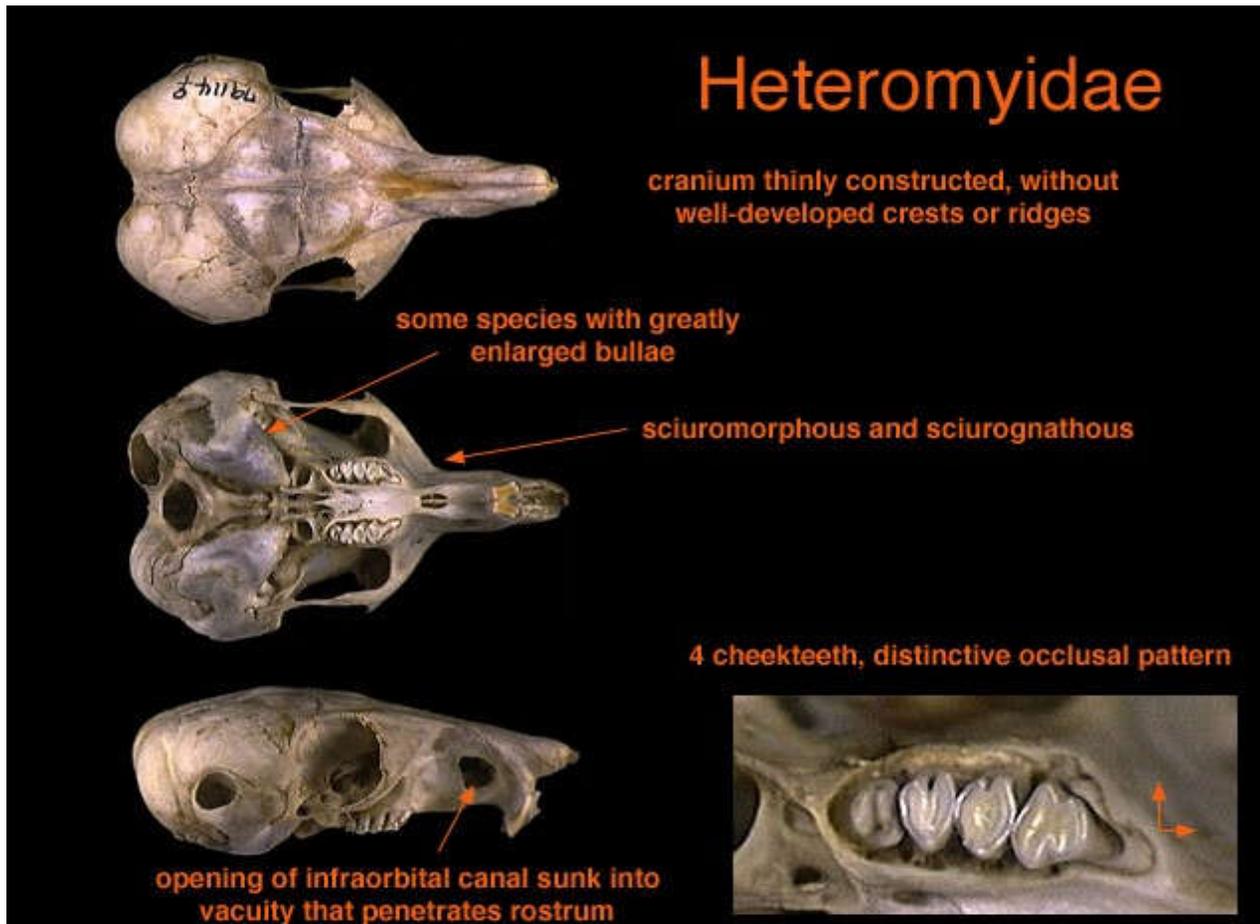


**Geomys bursarius**  
plains pocket gopher



**Thomomys clusius**  
Wyoming pocket gopher

# Order Rodentia, Family Heteromyidae—heteromyids pocket mice and kangaroo rats



- 1) inflated auditory bullae almost touch anteriorly
- 2) delicately built zygomatic arch



***Chaetodipus hispidus***  
(hispid pocket mouse) (coarse-furred pocket mice)

### Physical Discription

- 1) Hind legs heavier than front legs
- 2) Ventral pelage white; dorsal pelage brown, grizzled with orange and black; orange lateral line on side; coarse
- 3) Orange ring around eye
- 4) Bicolored tail
- 5) Cheek pouches

### Natural History

- 1) Granivorous
- 2) Common in grassy areas with sandy soil
- 3) Form burrows for denning, nesting, and food storage
- 4) Asocial





**Perognathus spp.**  
(soft-furred pocket mice)

**Physical Description**

- 1) Smaller than *Chaetodipus spp.* and *Dipodomys spp.*
- 2) Fur silky and smooth; soft
- 3) Pale orange patch behind ear; white patch below ear
- 4) Pale orange lateral line
- 5) Bicolored tail

**Natural History**

- 1) Granivorous
- 2) Very rarely drink water
- 3) Burrow
- 4) Go into torpor often during cold temperatures and seasons

***Perognathus flavus***



***Perognathus parvus***



***Perognathus flavescens***



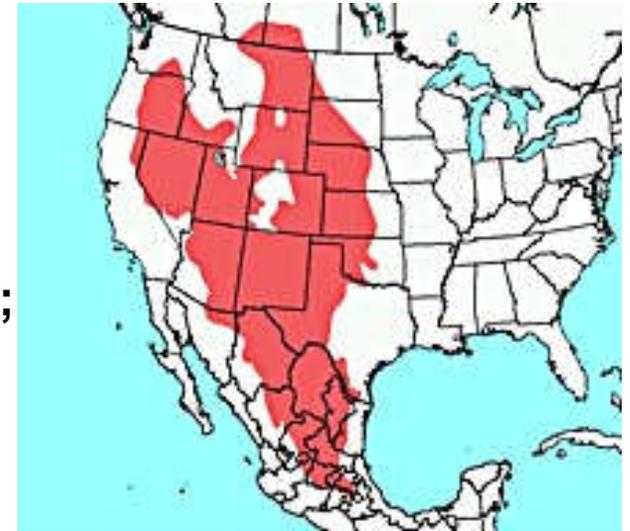
## Dipodomys ordii -- Ord's kangaroo rat

### Physical Description

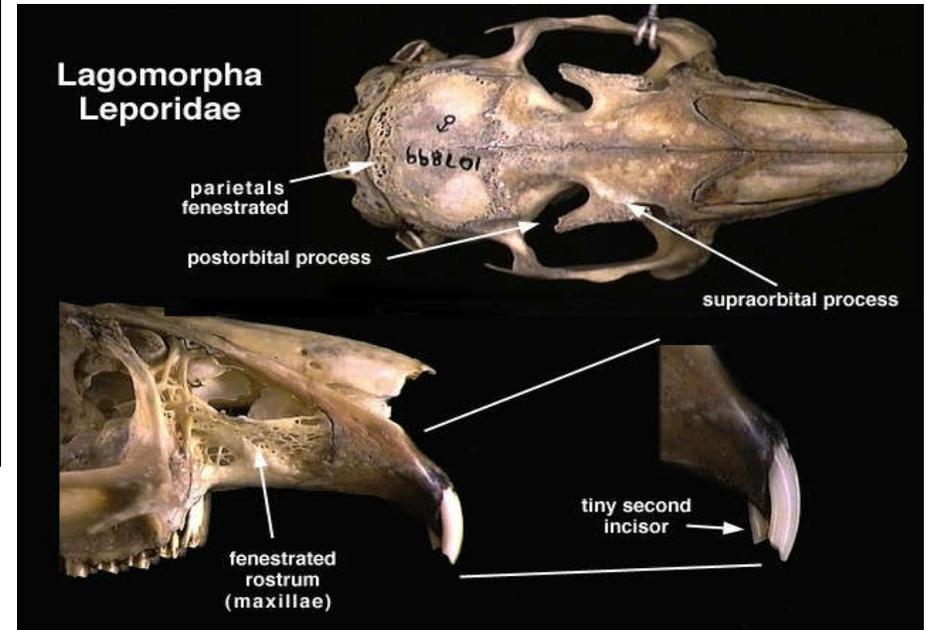
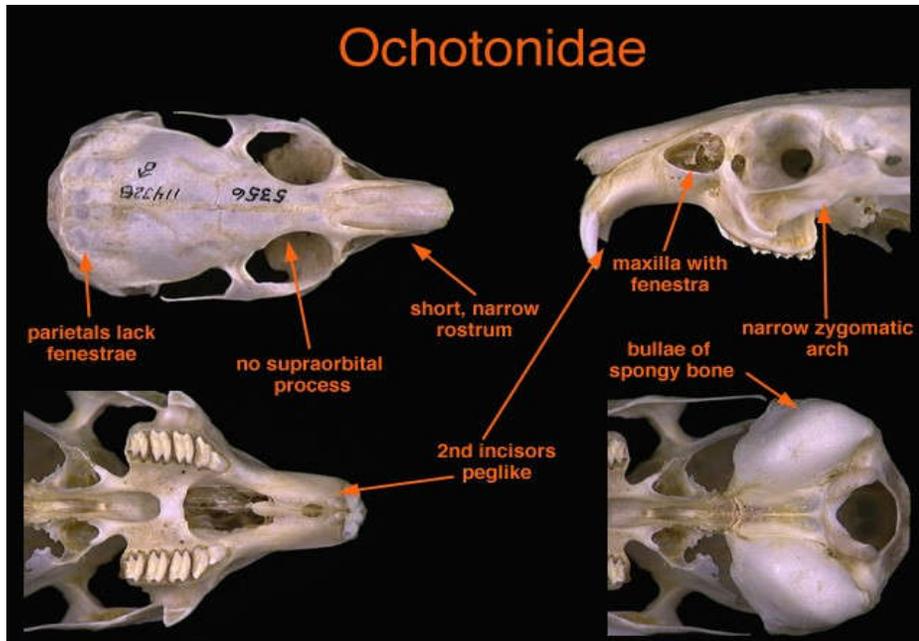
- 1) Hind legs heavier than front legs
- 2) White spots above eyes
- 3) No orange stripe on side
- 4) Dark stripes on dorsal and ventral portions of tail; dark tip on tail; tufted tail

### Natural History

- 1) Granivorous – cache their seeds
- 2) Common in arid grasslands, sagebrush, and pine-juniper woodlands; sandy soils
- 3) Burrows

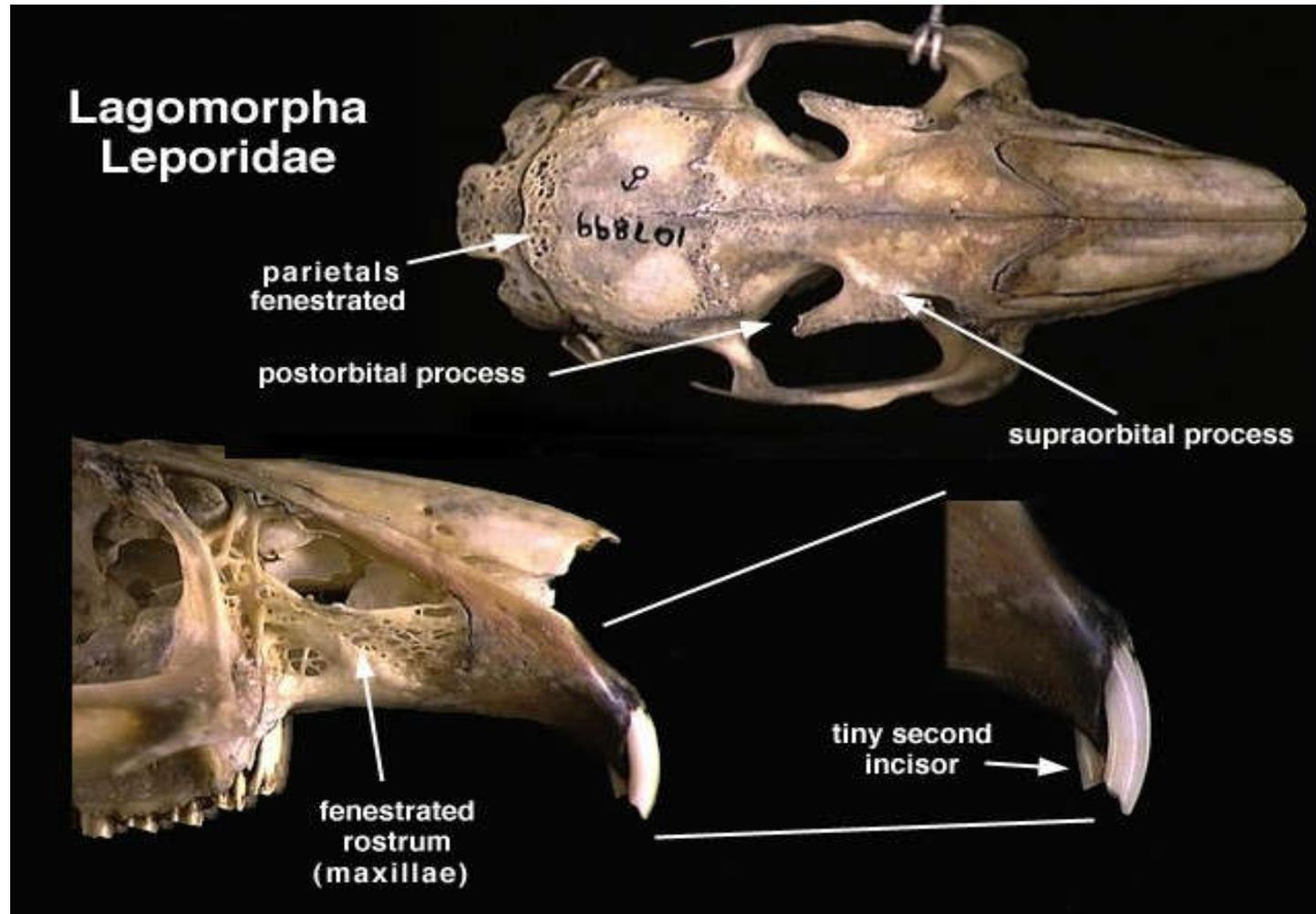


# Order Lagomorpha



- 1) four upper incisors (unlike rodents)  
→ 2 are prominent, 2 are small and peg-like.
- 2) diastema (like rodents, artiodactyls, etc)

# Order Lagomorpha, Family Leporidae—rabbits and hares



- 1) jugal projects posteriorly, but not to meatus
- 2) supraorbital processes
- 3) fenestrated (honeycomb) rostrum

## Family Leporidae

*Sylvilagus audubonii*: desert cottontail

*Sylvilagus nuttallii*: mountain cottontail



- 1) Distinct interparietal on adults
- 2) Supraorbital processes thinner than *Lepus*



**Sylvilagus audubonii**  
**(desert cottontail)**

**Physical Description**

- 1) Smaller body size than *Lepus spp.*
- 2) Smaller ears than *Lepus spp.*, but larger than *S. nuttallii*
- 3) Inner ears well furred
- 4) Nape pale orange; 'cotton-tailed'

**Natural History**

- 1) Altricial young; fur-lined nest
- 2) Large ears help with thermoregulation
- 3) Inhabit xeric grasslands and woodlands, as well as riparian shrub communities; typically <6000 ft.
- 4) Asocial



**Sylvilagus nuttallii**  
**(mountain cottontail)**

**Physical Description**

- 1) Smaller body size than *Lepus spp.*
- 2) Ears smaller than *S. audubonii*
- 3) Nape pale orange; 'cotton-tailed'
- 4) Inner ears well furred

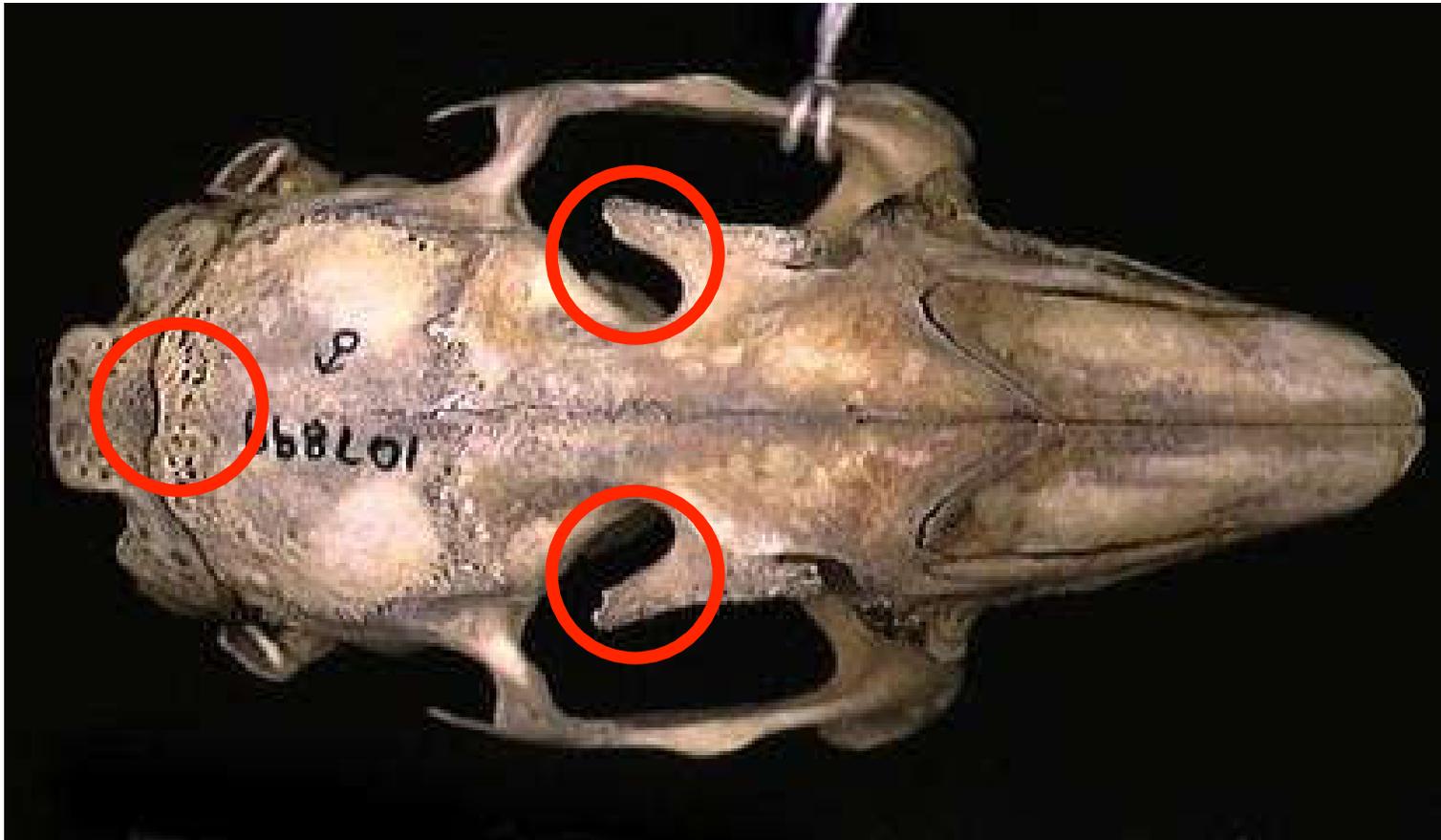
**Natural History**

- 1) Common on mountainsides in sagebrush, shrub communities, riparian shrubs, and grasses; typically >6000 ft.
- 2) Burrow underground or in rock crevices
- 3) Asocial

## Family Leporidae

*Lepus townsendii*: white-tailed jackrabbit

*Lepus californicus* : black-tailed jackrabbit



1) No interparietal

2) Supraorbital processes broad and winglike



**Lepus townsendii**  
**(white-tailed jackrabbit)**

**Physical Description**

- 1) Pelage varies by region and habitat → turn *white* in winter in northern portion of distribution
- 2) Long ears (longer than head)
- 3) Larger body than *Sylvilagus spp.*
- 4) Dorsal portion of tail colored white

**Natural History**

- 1) Asocial
- 2) Young born precocial
- 3) Can jump up to 16 ft., and run up to 35 mph
- 4) Common in open grassland, meadows, sagebrush and agricultural areas up to 14,000 ft.



**Lepus californicus**  
**(black-tailed jackrabbit)**

**Physical Description**

- 1) Ears longer than *Lepus townsendii*
- 2) Ears heavily vascularized
- 3) Dorsal portion of tail colored black
- 4) Dorsal and ventral pelage generally darker in color than *L. townsendii*

**Natural History**

- 1) Asocial
- 2) Utilize many xeric prairie, sagebrush, and desert shrub habitats
- 3) Similar running and jumping capabilities to *L. townsendii*

*Sylvilagus spp.*



*Lepus spp.*



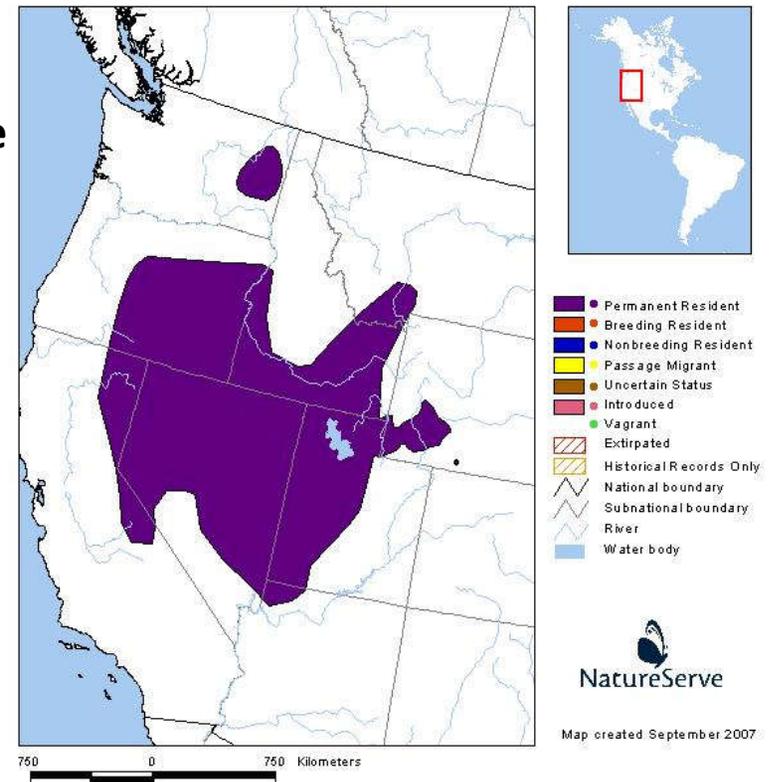
## Brachylagus idahoensis – Pygmy rabbit

### Physical Description

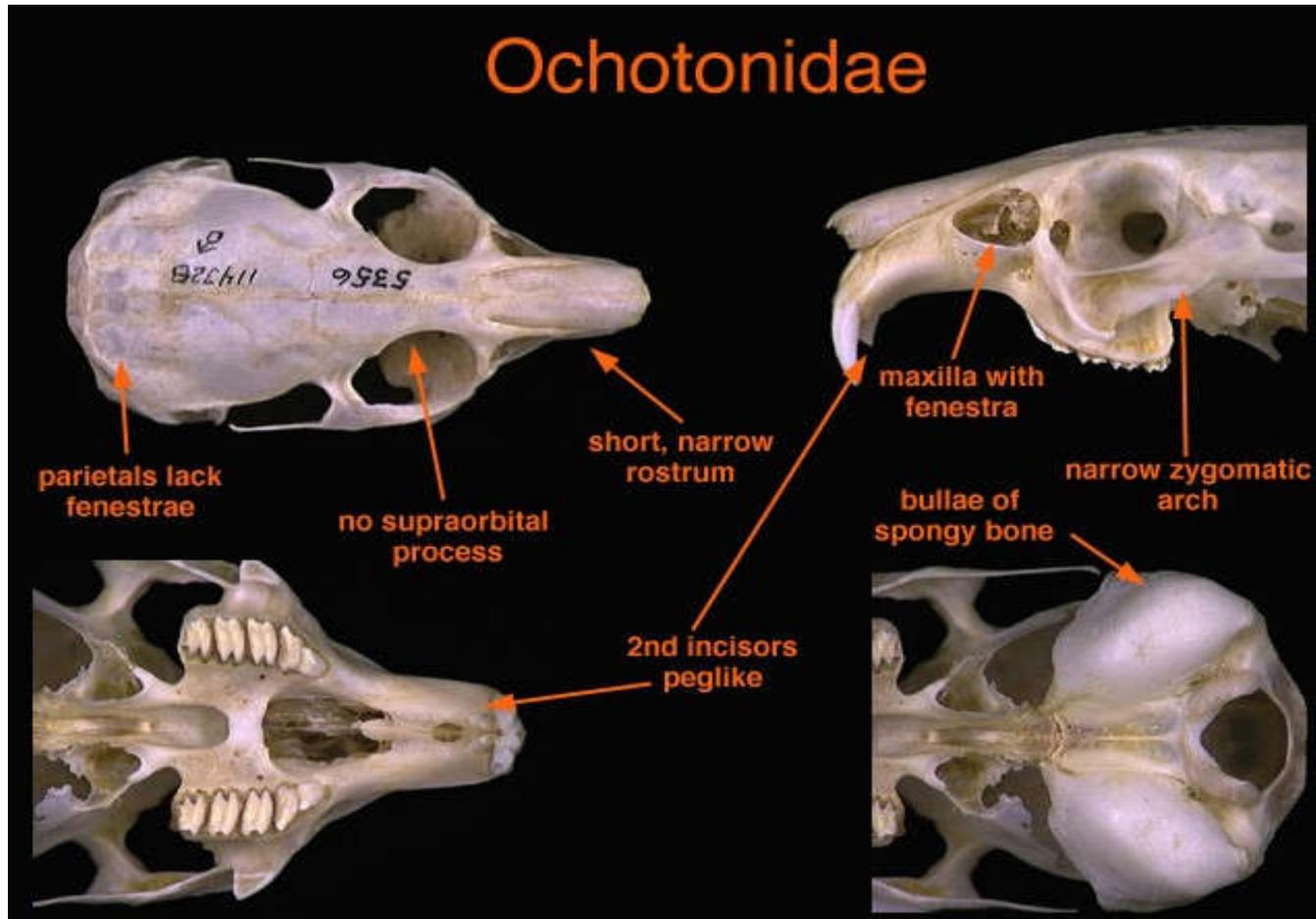
- 1) Pelage varies from brown to dark grey
- 2) Short, round ears with white margins
- 3) Very short tail
- 4) Weighs up to about 1 pound

### Natural History

- 1) Typically found in areas of dense, big sagebrush
- 2) Herbivorous grazer
- 3) Crepuscular
- 4) Listed as endangered species in Washington State



# Order Lagomorpha, Family Ochotonidae—pikas



- 1) Jugal projects posteriorly almost to meatus
- 2) No supraorbital process (unlike Leporidae)
- 3) Maxilla has a fenestra (opening)



## Ochotona princeps – American pika

### Physical Description

- 1) Four hind toes, five front toes
- 2) Dorsal pelage varies regionally from gray-brown to orange-brown to dark brown; ventral pelage lighter
- 3) Round ears
- 4) Smaller than rabbits and hares

### Natural History

- 1) Thermoregulate behaviorally and physiologically
- 2) Monogamous, asocial and territorial
- 3) Form 'hay' piles

