Order Lagomorpha

BIOL 140
• Closest to Rodentia
• Lagomorpha phylogeny
  • NA Rabbits (Sylvilagus/Brachylagus) nested in European rabbits (Oryctolagus)
  • All rabbits nested within hares (Lepus)
• Pikas (Ochotonidae) more distantly related
Order Lagomorpha

- 2 Pacific Northwest Lagomorpha families
  - Leporidae
    - Rabbits/Hares
      - Pygmy rabbit
      - Brush rabbit
      - Eastern cottontail
      - Mountain cottontail
      - European rabbit
    - Hares
      - Snowshoe hare
      - Black-tailed jackrabbit
      - White-tailed jackrabbit
  - Ochotonidae
    - Pikas
      - American pika
Characteristics

- Chisel-like upper incisors
  - Caused classification w/rodents
  - But lagomorphs have 2\textsuperscript{nd} pair upper incisors
    - Behind first pair
  
- Strict vegetarians
  
- Inefficient digestive system
  - Solved by coprophagy
    - Food passed as soft green pellet first time
      - Reingested
      - Pass through a second time
      - 2\textsuperscript{nd} pellets brown and hard/fibrous
  
- Typically don’t hibernate
Characteristics

- **Leporidae**
  - Long, upright ears, especially hares
  - Long hind legs for jumping
    - Huge hind feet
  - Short puffy tails
  - Mostly nocturnal
  - Hare offspring precocial
    - Eyes open, furred
  - Rabbit offspring altricial
- **Ochotonidae**
  - More rodent-like
    - Short, round ears, squat bodies
    - Fore and hind legs same length
      - Don’t hop
  - Diurnal
**Pygmy Rabbit**

- *Brachylagus idahoensis*
  - 10-12” long, tail 1-1.25”, 10-15 oz.
  - Smallest rabbit in world
  - Tawny to cinnamon in color
    - Occasionally dark gray to nearly black
    - Small white spot on each side of nose
  - Tail gray
- Found in SE OR
  - Sagebrush, rabbit-brush, semi-desert
  - Columbia Basin Pygmy Rabbit
    - Former tiny remnant pop in SE WA
    - Last male died in 2006, last female in 2008
- Dig own burrow
  - One of only two species
  - Keystone species
- Diet – mostly sagebrush leaves
Brush Rabbit

- *Sylvilagus bachmani*
  - 11-15” long, tail 0.75-1.5”, 1-2 lbs., ears 2”
  - Tawny to reddish brown, flecked w/dark gray base hairs
    - Underside lighter
    - Winter coat lighter
  - Whiskers black, tail white
  - Found west of Cascades in OR and CA coast
    - CA have longer ears/legs
  - Habitat-Anywhere with brushy cover
    - Love blackberry brambles
  - Diet – grasses, clover, berries
  - May have up to 5 litters/yr
**Eastern Cottontail**

- *Sylvilagus floridanus*
  - 16-18” tail, 1.5-2.75”, 28-56 oz.
  - Pale buffy gray
    - Orange on back of neck, possibly on sides of nose
    - Legs cinnamon
    - Tail brown above, white below
    - Whitish underneath

- Native to east coast NA
  - Found only in Willamette Valley/Puget Trough in PNW

- Habitat – brushy riparian sites or lawns
- Diet – clover, grasses, forbs, sapling bark
- Breed year-round, 1-9 bunnies/litter
**Sylvilagus nuttali**

- 13-16” long, tail 1.25-2.5”, 1.5-2.25 lbs.
- Grizzled grayish upper w/whitish underneath year-round
  - Tail dark above/whitish below
  - May have orange on nape of neck
  - Ears white edged
- Spends most of day in “forms” under cover
  - Like most rabbits
  - Heavy rain reduces activity
- Habitat – east of Cascades in WA/OR
  - Anywhere cover is found adjacent to ag fields, meadows
- Diet – Grasses, forbs, in some areas sagebrush, juniper berries
- Warm season breeding
  - Females breed hours after birth
**Snowshoe Hare**

- *Lepus americanus*
  - 15-21” long, tail 1.8-2.2”, 2.25-3.25 lbs.
  - Seasonal coats
    - Summer – rusty brown above, top of head darker/less red
      - Back of neck, top of tail grayish brown, ear tips black
      - Chin, tail, belly, underside tail white
    - Winter – where coats change color
      - outer ends of hairs white
      - Base of hairs/under-fur dark gray to brown
      - Ear tips still black
      - Change triggered by day length
  - Huge furry hind-feet allow walking on snow
    - Like lynx
    - Predator/prey cycle – also willows/alders
  - Habitat – mostly mountainous areas with forests/brush
  - Diet – grasses, forbs, brush, in winter - willow, alder
Black-tailed Jackrabbit

*Lepus californicus*  
- Jackrabbits
  - 20-24” long, tail 2.75-3.75, 5-10 lbs.
  - Huge ears w/black tips
  - Gray to grayish brown upper, belly whitish
    - Does not change seasonally
    - Tail w/medial black stripe on top
      - Stripe extends onto back
  - Ear length among hares dictated by latitude
    - More southern - larger
      - For cooling, hearing in warmer areas
  - Fantastic leapers – 6’ high to 20’ long
  - Run 35mph
  - Habitat – prefers valley bottoms and ag fields
    - But everywhere in range but alpine forests
  - Diet – herbaceous and woody material
    - More shrubs in winter
  - Pops cycle w/rainfall – effecting coyotes/hawks/etc
White-tailed Jackrabbit

*Lepus townsendii*

- 21-25”, tail 2.75-4.25”, 6.5-12 lbs.
  - Largest in PNW
- Seasonal coat
  - Summer – upper grayish brown, belly whitish
    - Back ear tips
  - Winter – White by Nov except grayish forehead/muzzle, black ear tips
    - Long, white tail
- Habitat – East of Cascades
  - Open areas with shrubs for cover, woodlands for winter shelter
- Diet – Grasses, forbs
- 1-9 Young disperse quickly but return to nurse 1-2x/day for 2-3 weeks
American Pika

- **Ochotona princeps**
  - 6.5-8.5” long, tail not visible, 4.25-6.25 lbs.
  - Gray to tawny gray, soft round body
    - Yellowish to buffy underneath
  - Large round ears, small beady black eyes (rodent-like)
  - Long whiskers, no external tail
  - Fore and hind Legs same length
- Habitat – (sub)Alpine talus slopes, boulder piles
  - Reside in tunnels between/under boulders
  - Collect grass bundles to cache for winter
  - Generally stay in tunnels under snow in winter
- Vocalizations
  - Chirps, squeaks, bleats
    - Echo off rocks allowing warning calls without revealing location
- Diet – plants, grasses, sedges