Tracking

Expectations for Today

- You will be expected to be able to:
  - Identify species based-off their tracks
  - Identify species based-off their scat
  - Describe common sign resulting from teeth
  - Recognize other types of sign and attribute them to appropriate species/taxa

Tracking

- Tracking is goal oriented: what are you trying to track and why? e.g.:
  - Assessing which scavengers have been eating carrion
  - Determining which animals are damaging crops
  - Assessing the presence of multiple species in an area

- As such, taking in the full picture and capturing as many details as possible is important

Common Types of Sign

- Tracks

- Scat

- Teethmarks

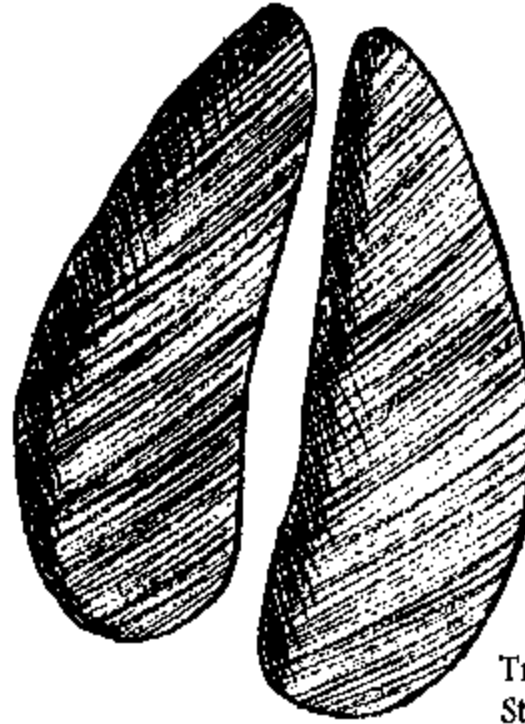- Other environmental alterations unique to individual species or clades

Tracks

- Tracks – footprints left by an animal that has passed through an area (typically left in mud, snow, or other malleable surfaces)

- Things to look for:
  - Symmetry
  - # and placement of toes
  - metacarpal/heel pad shape
  - Nails/claws
  - Negative Space

Elk

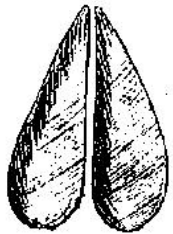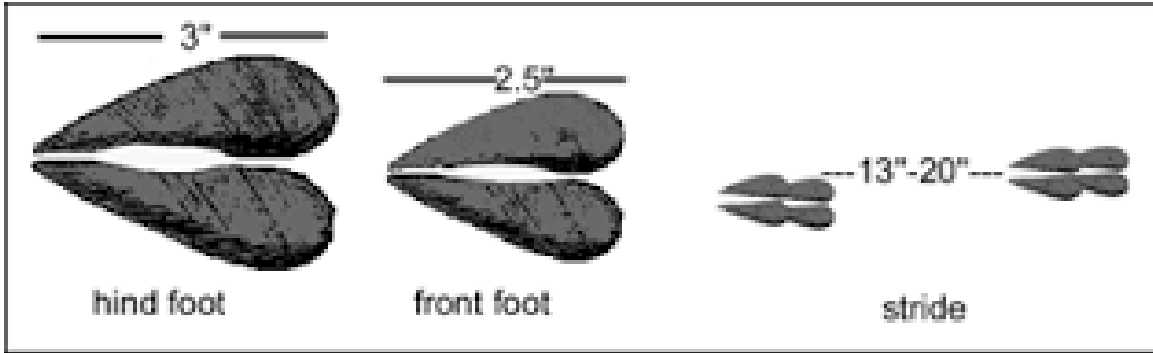4¾" L x 3" W

Trail width: 8"
Stride length: 26"-28"

Trail Pattern

White-tailed deer

3"

hind foot

2.5"

front foot

13"-20"

stride

3½" L x 2½" W

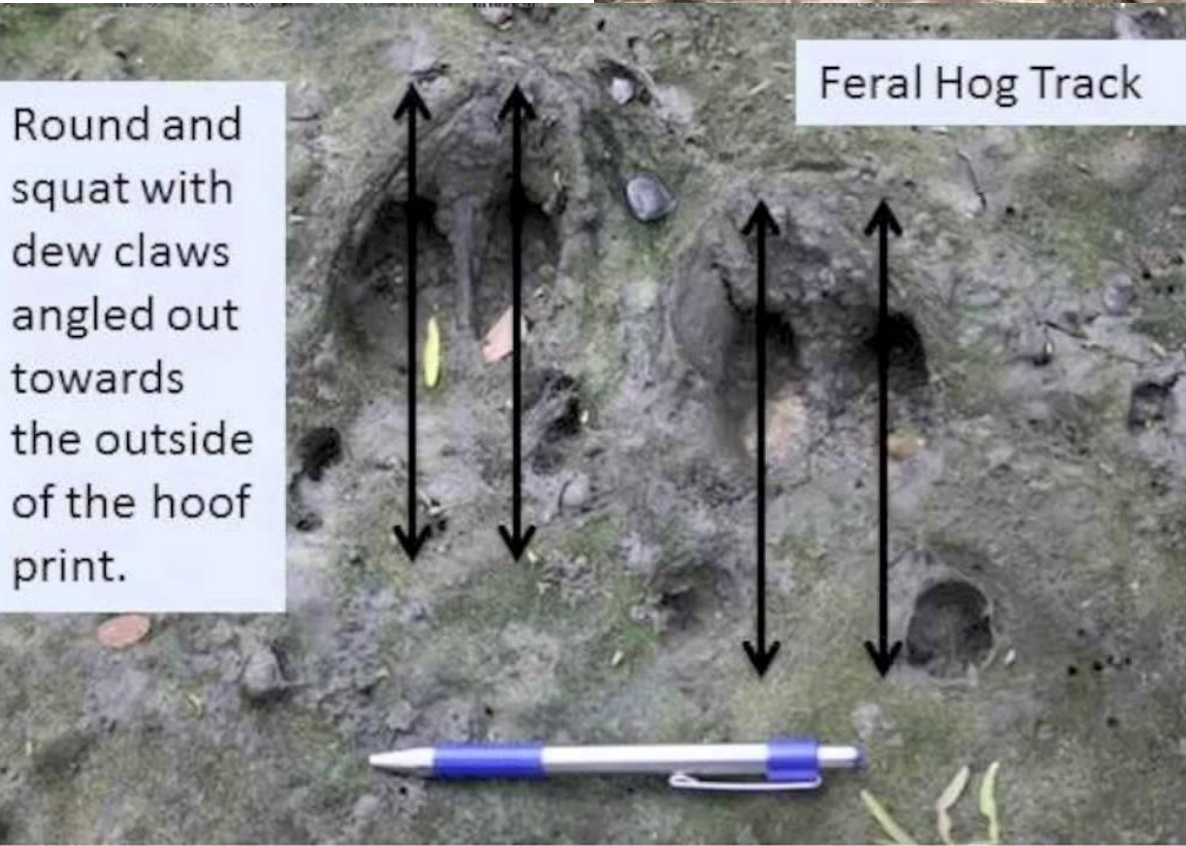Trail width: 6"
Stride length: 21"-24"

Toes spread when in soft mud or when the animal is running. Dewclaws show.
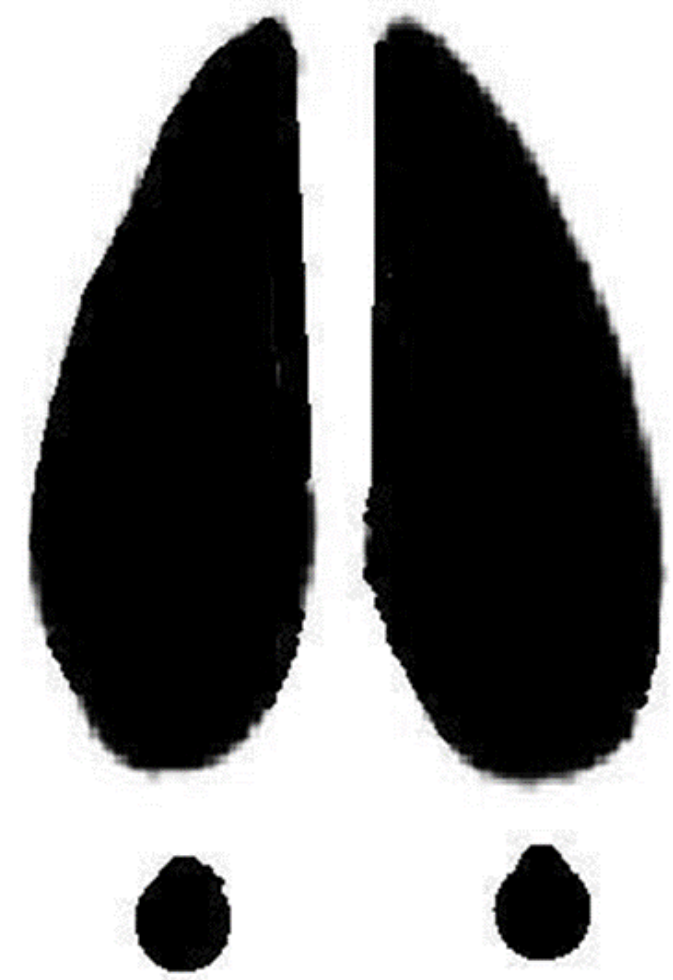
Trail Pattern

Feral Hog
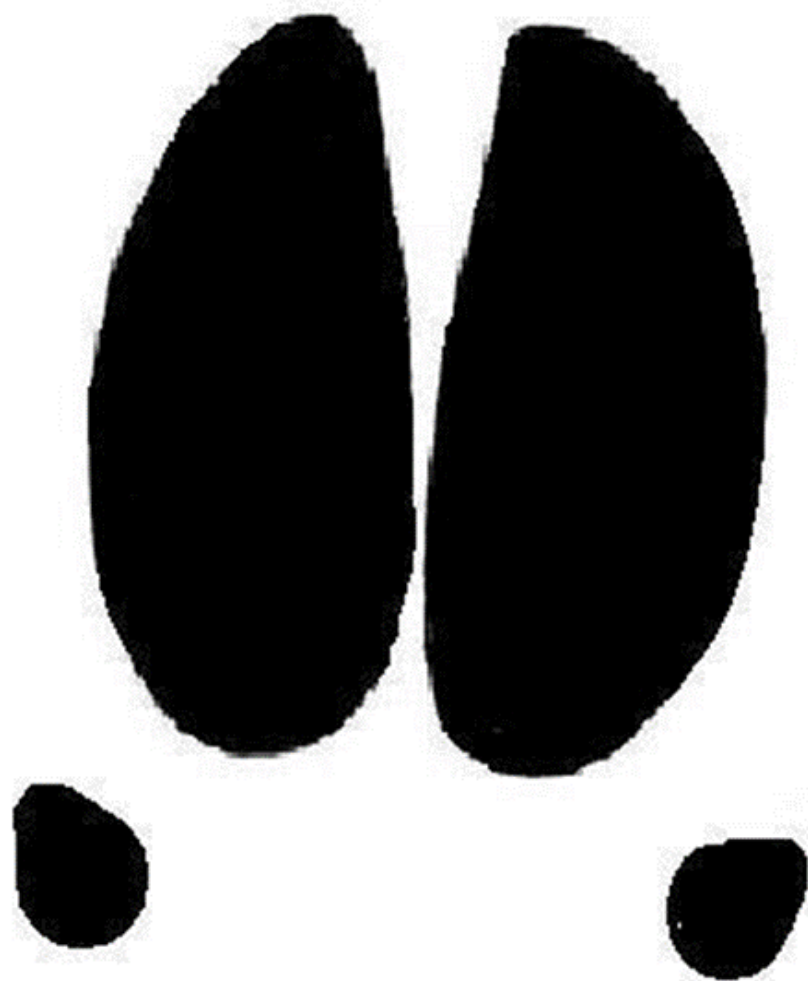

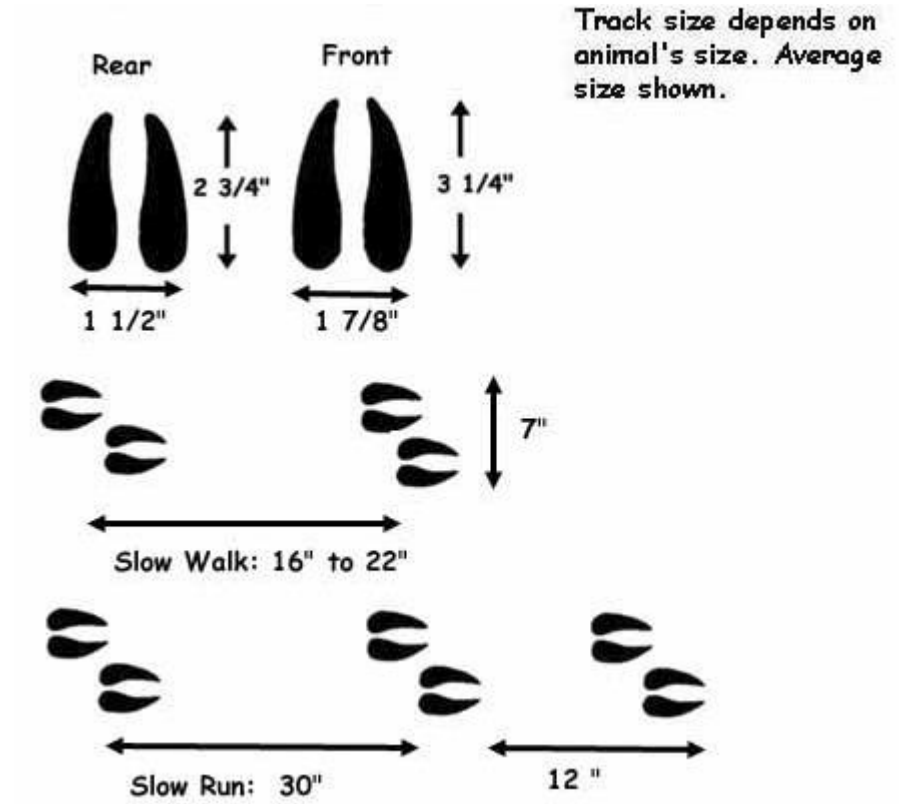Round and squat with dew claws angled out towards the outside of the hoof print.

Feral Hog Track

Wild Hog

Deer

Pronghorn

Track size depends on animal's size. Average size shown.

Rear: 2 3/4" (height), 1 1/2" (width)

Front: 3 1/4" (height), 1 7/8" (width)

7"

Slow Walk: 16" to 22"

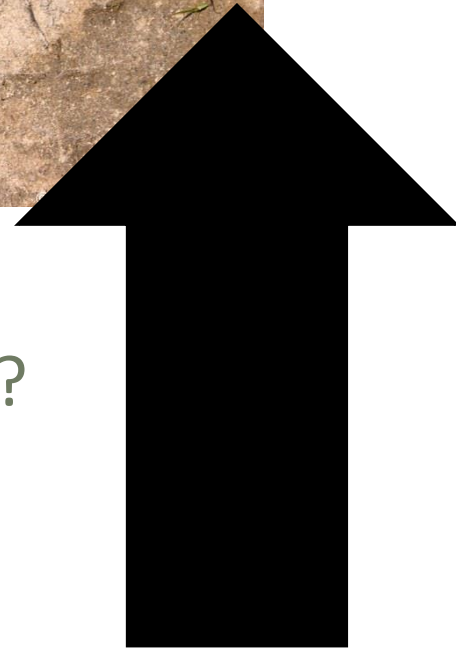Slow Run: 30"   12"

5356585

Wild horse

Domestic

Wild

Which direction are these tracks headed?

Which set is a domestic horse?

Black Bear
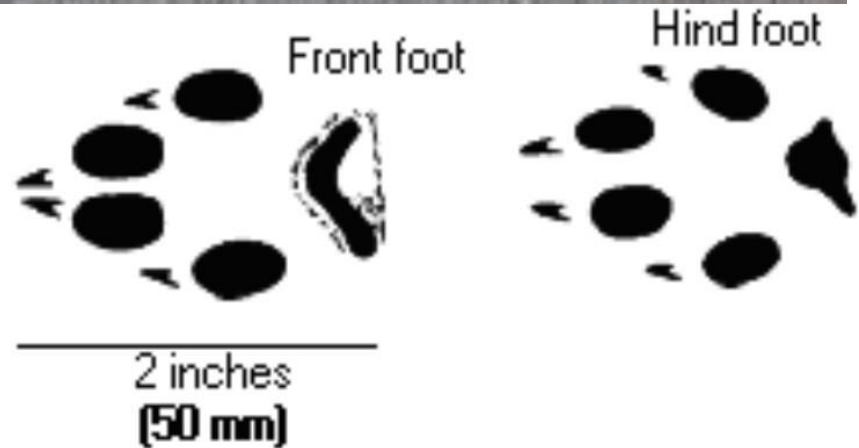

Black Bear

Front foot
4½" L x 3¾" W

Round front heel pad doesn't always show in tracks.

Hind foot
7" L x 3½" W

Trail width: 14"
Stride length: 18"

Trail Pattern

Red Fox

Front foot   Hind foot

Trotting   8-15 inches
(203-381 mm)

2 inches
(50 mm)

Canids

- Wild canids typically have narrower gait than domestic dogs

Wolf

Coyote

Red fox

Large dog

Dog

Fox

Wolf
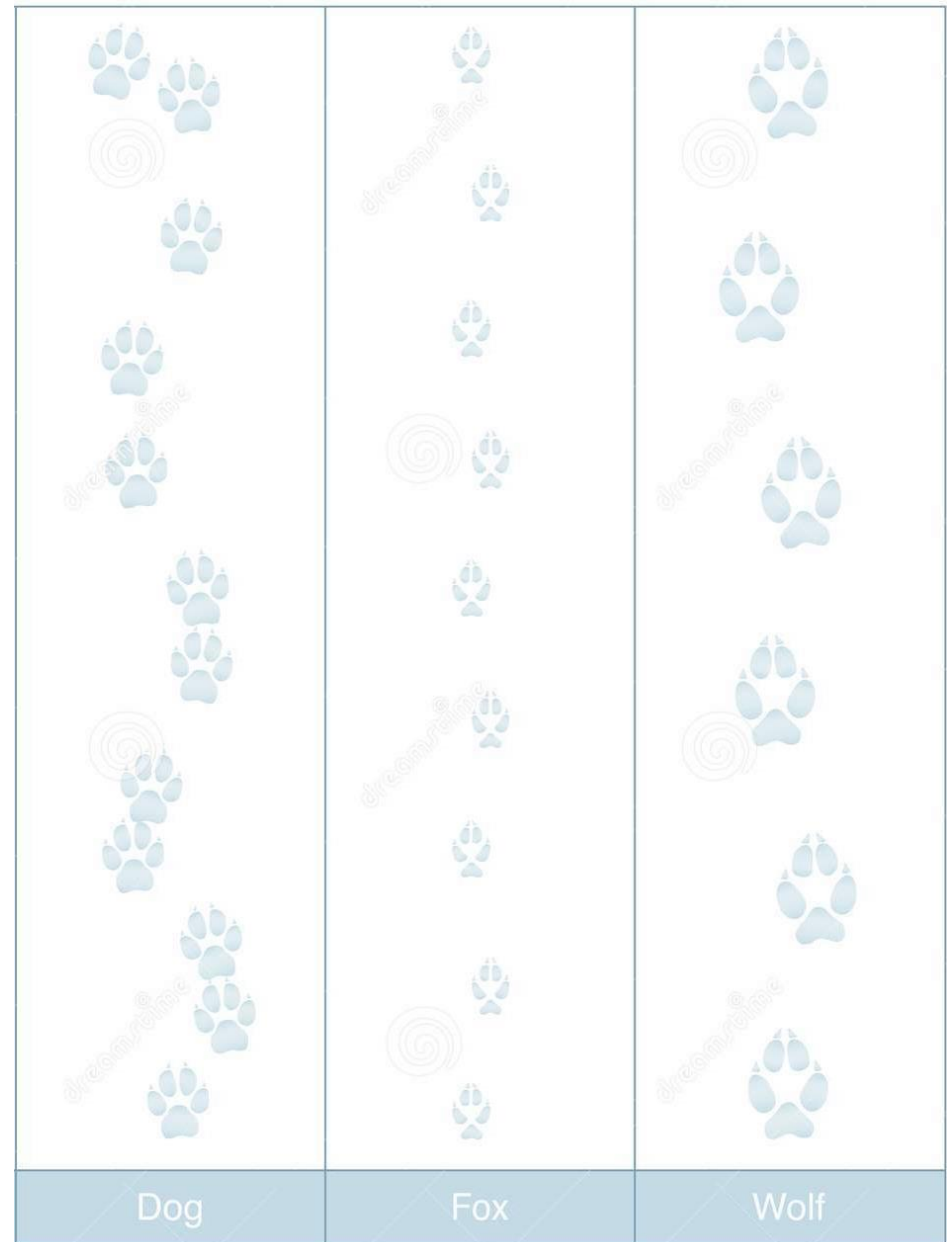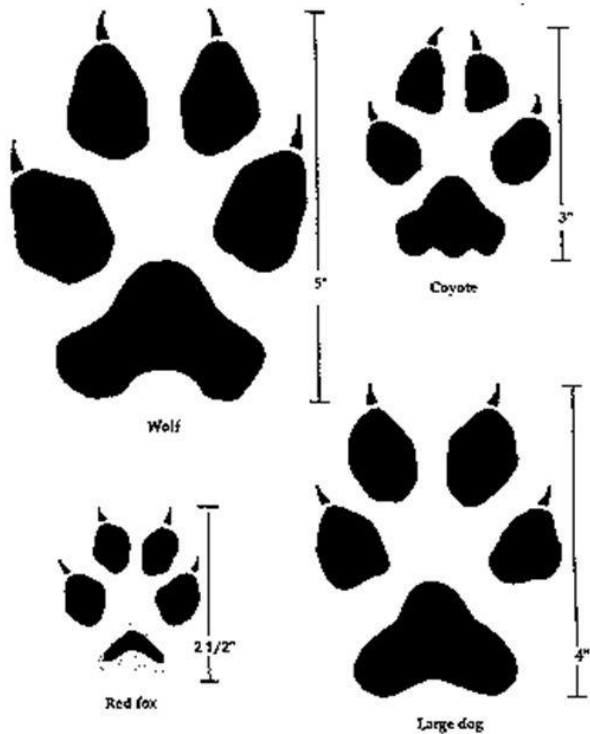
Bobcat

Bobcat

Front foot
2" L x 1 7/8" W

Hind foot
1 7/8" L x 1¾" W

Trail width: 5"
Stride length: 10"-13"

Trail Pattern

Mountain Lion

Mountain lion tracks

Claw marks are generally not visible, unless the lion has been running

Mountain lion | Front | Dog
Toenails present
Hind

Front

3–4 inches

Prints shown at average actual size

	Male	Female
Length (nose to tip of tail)	8 feet	7 feet
Weight (pounds)	130-150	65-90

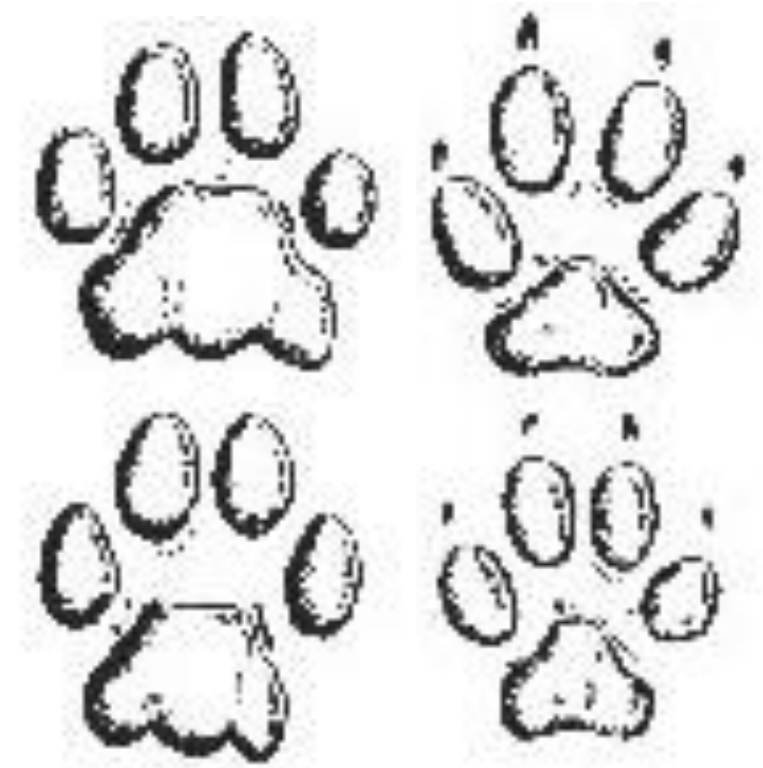Large three-lobed heel pads

Hind

Source: California Department of Fish and Game

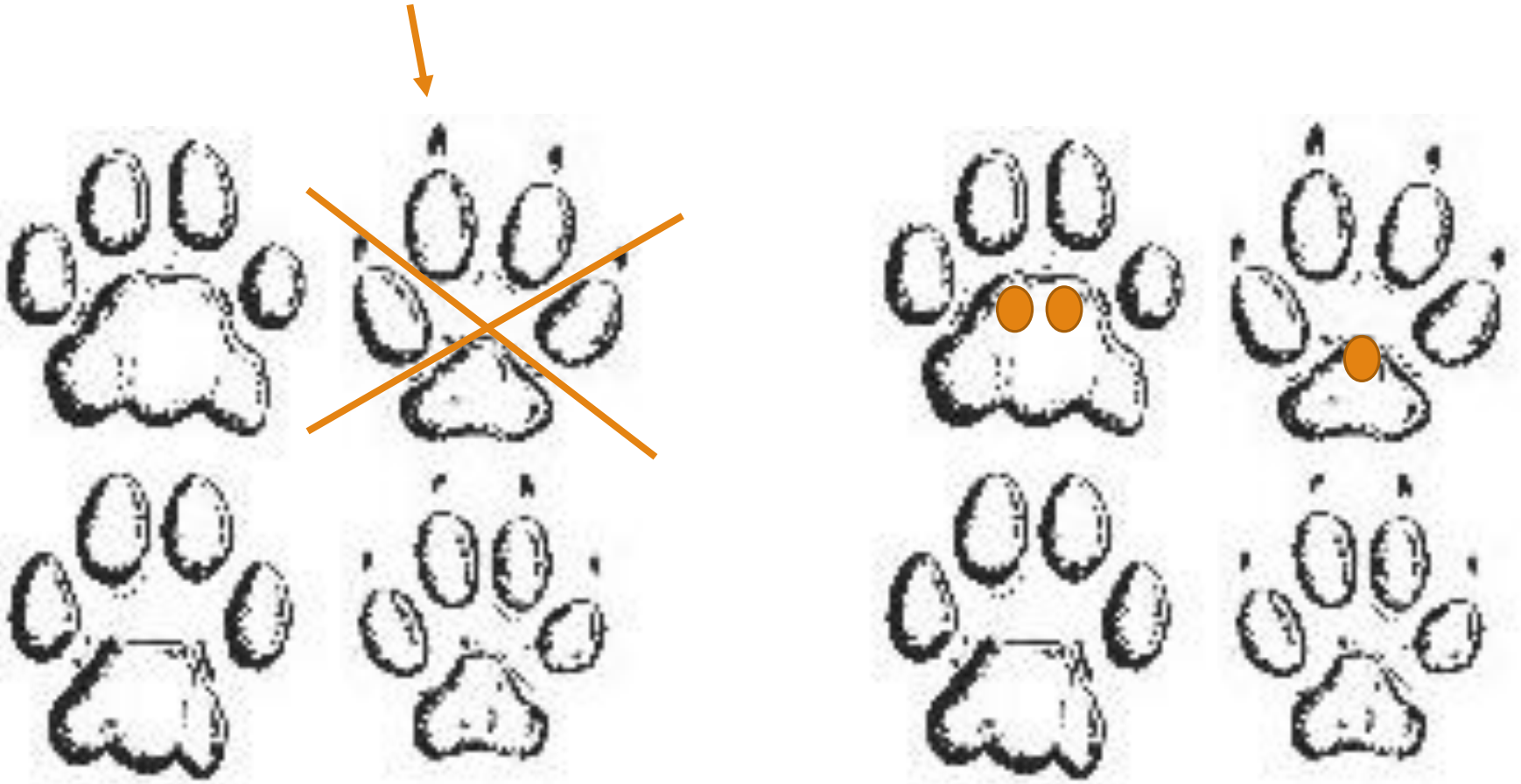JOHN BLANCHARD / The Chronicle

Canid vs. Felid Tracks

- Three key differences:
  - Claw marks in canids
  - "X" through center of canids
  - Single lobe in canids

*These aren't perfect indicators

Canid vs. Felid Tracks

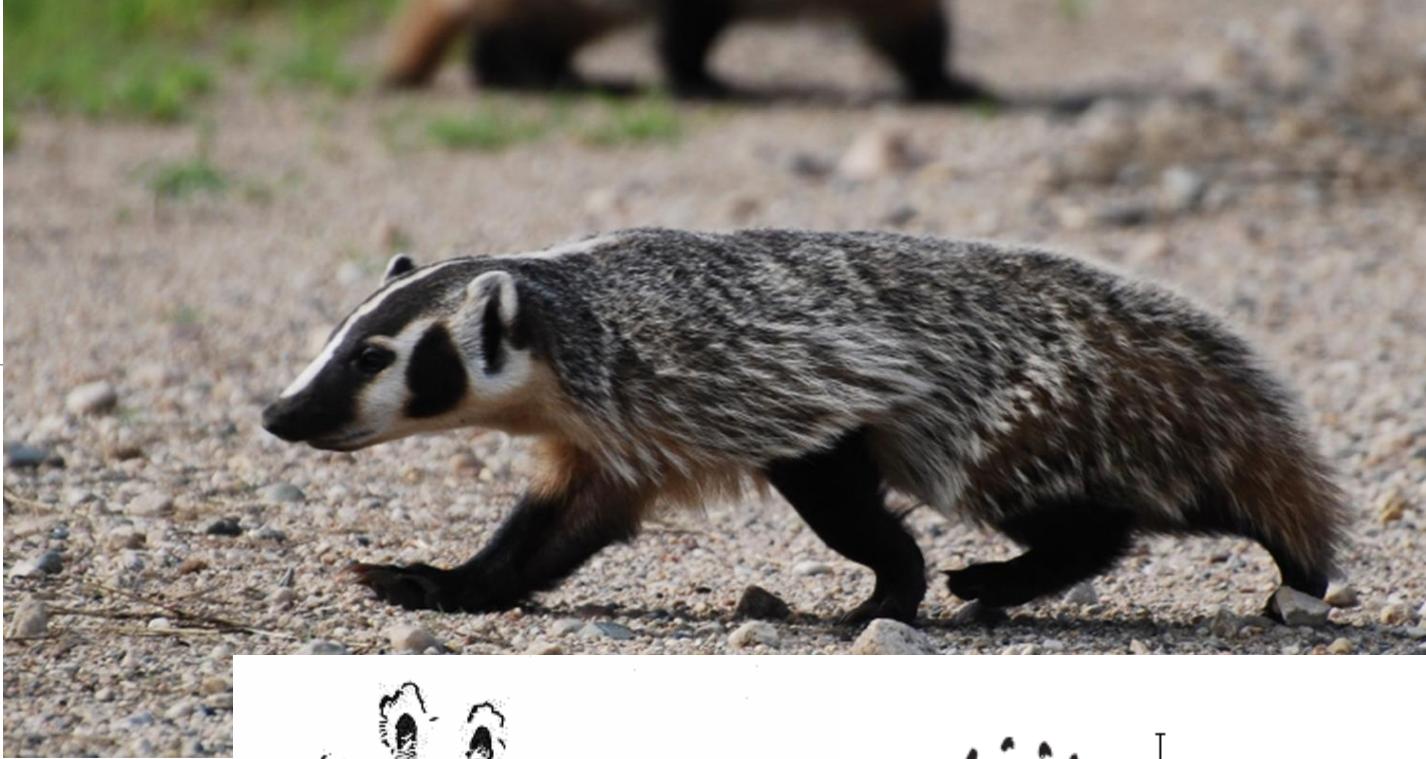# River Otter

© Terry Kem

Wolverine

Badger

FRONT   HIND

3 in
(8 cm)

Right front

Right hind

Opossum

Walking

2"

6"

Opossum tracks

Raccoon

Walking   6"   Front foot

Hind foot
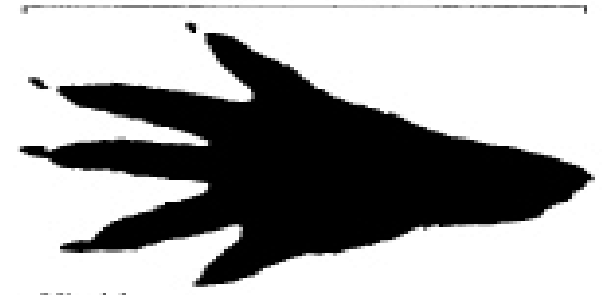
4 1/4"
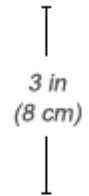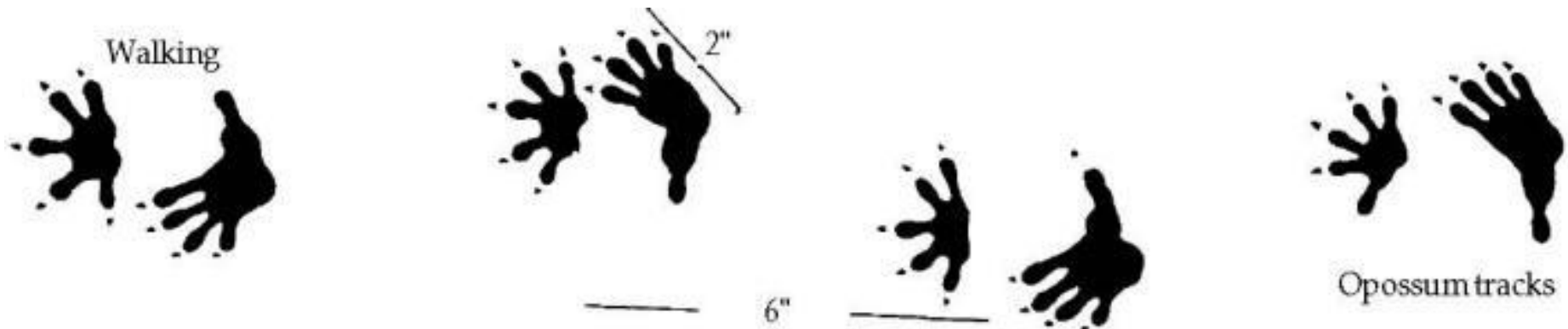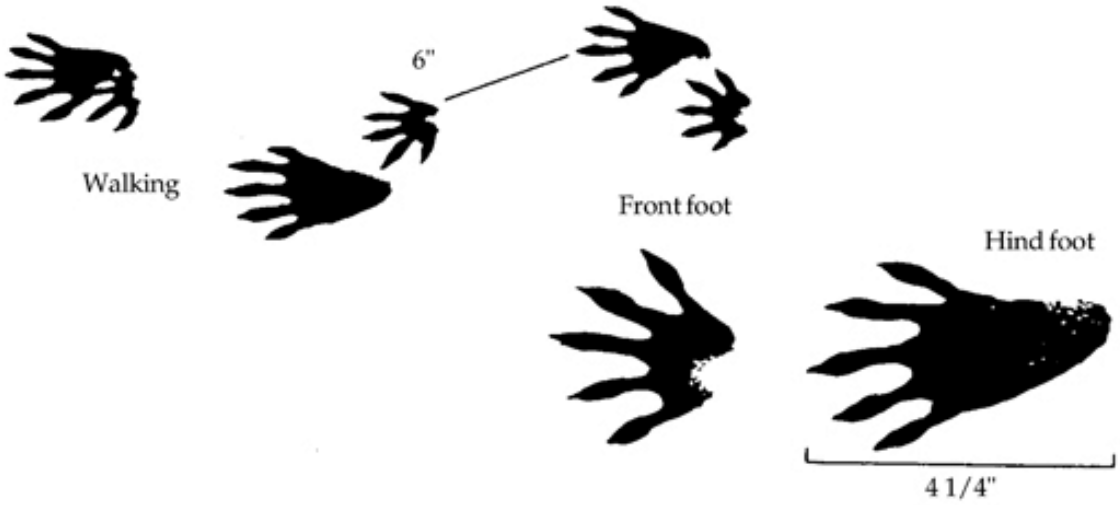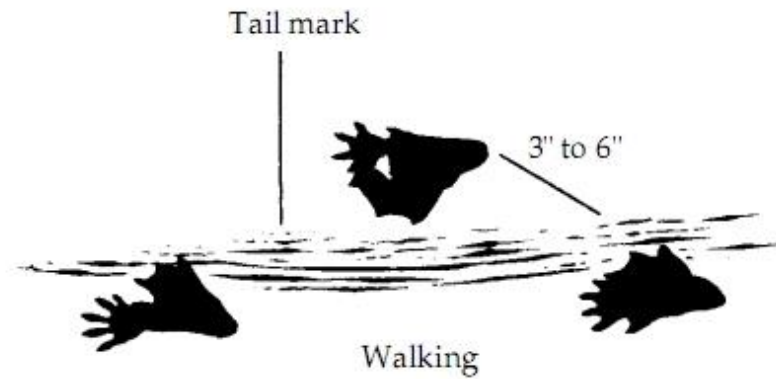
Muskrat

Tail mark sometimes shows

Walking

6"

Front foot

Hind foot

Beaver Tracks

Marks of webs not always distinct

Front foot

Hind foot

Tail mark

3" to 6"

Walking

Striped Skunk
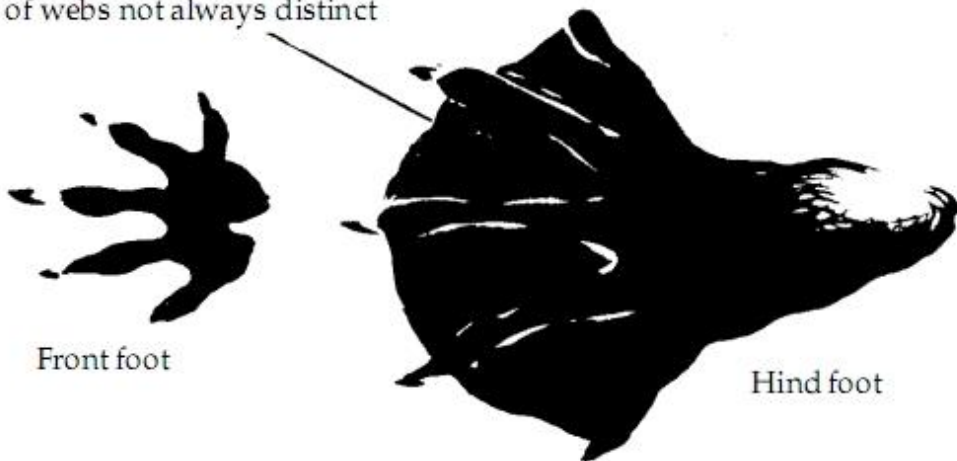
LF
Striped Skunk Track

FRONT   HIND

Grey Squirrel

Hind feet

Front feet
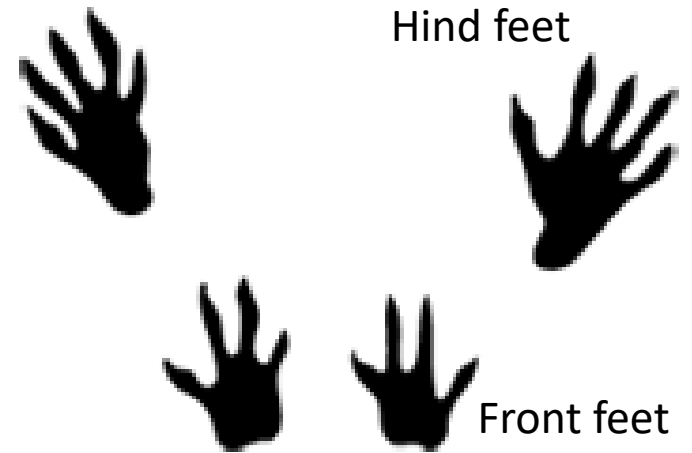
Mouse (*Peromyscus spp.*)

Hind feet

Front feet
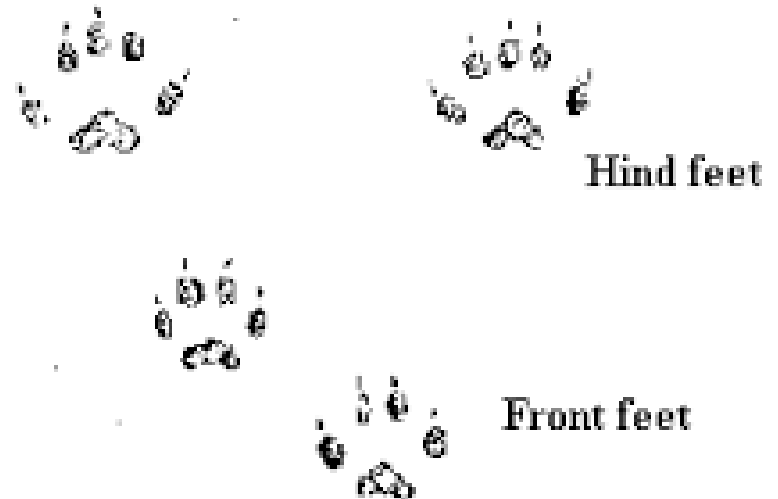
Rabbit

Vole

Animal Tracks
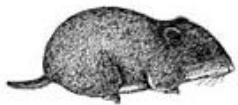
Vole
front foot .3x.3"
back foot .4x.3"

Actual Sized Tracks

Trotting Track Pattern

Bounding Track Pattern

Vole tracks blown up
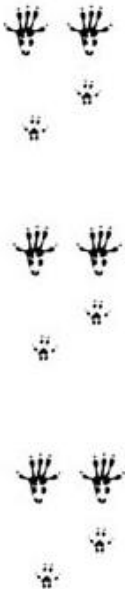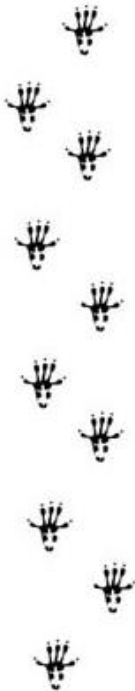
Groundhog

Black Bear scat

Black Bear Scat

©Kim A. Cabrera 2007
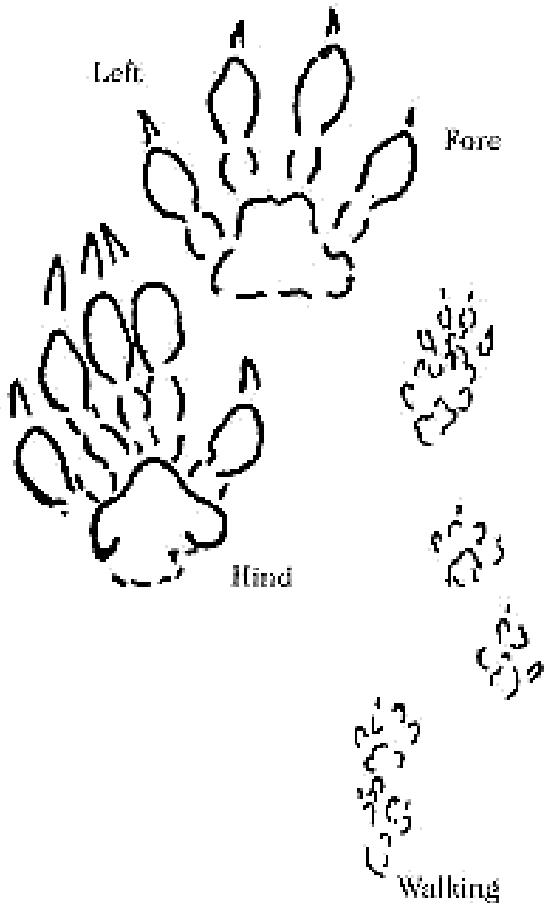
Well, I guess that answers that!
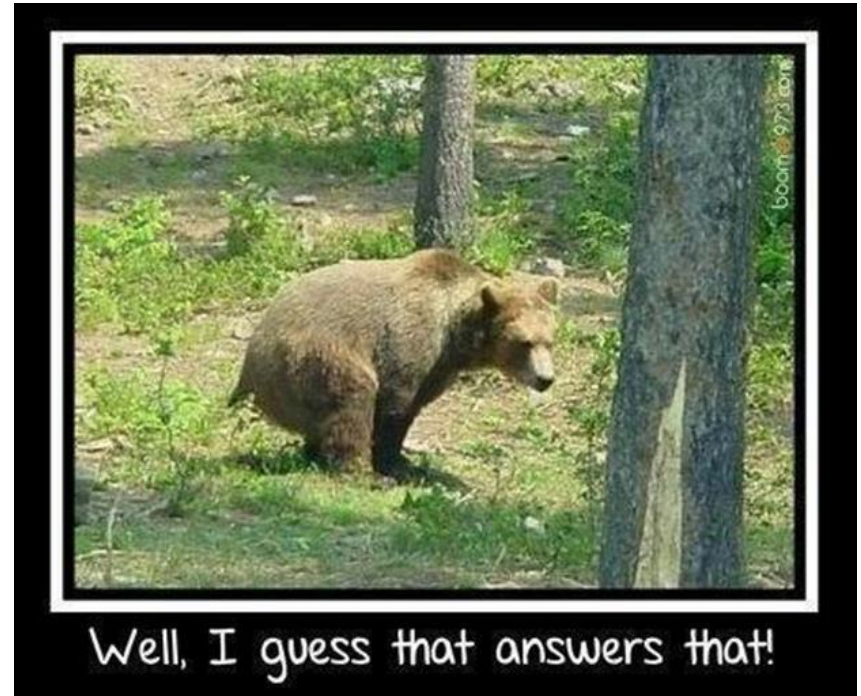
Raccoon scat

Porcupine scat

Deer vs. Rabbit Scat

white-tailed deer
(smooth texture, oval shape)

eastern cottontail
(coarse texture, rounded)

Felid vs. Canid

Bobcat

Coyote

- Hair integrated in felids

- Segmented in felids

*Not perfect rules

Beaver scat

- Beaver scat is often hard to find because it is usually in the water

- It's also soft so it disintegrates quickly on land

© Terry Kem

SCAT
1 x 0.7 inches
(2.5 x 2 cm)

wood chips

Weasel scat

folded back

1.5 x 0.1 in
(3.8 x 0.3 cm)

tail
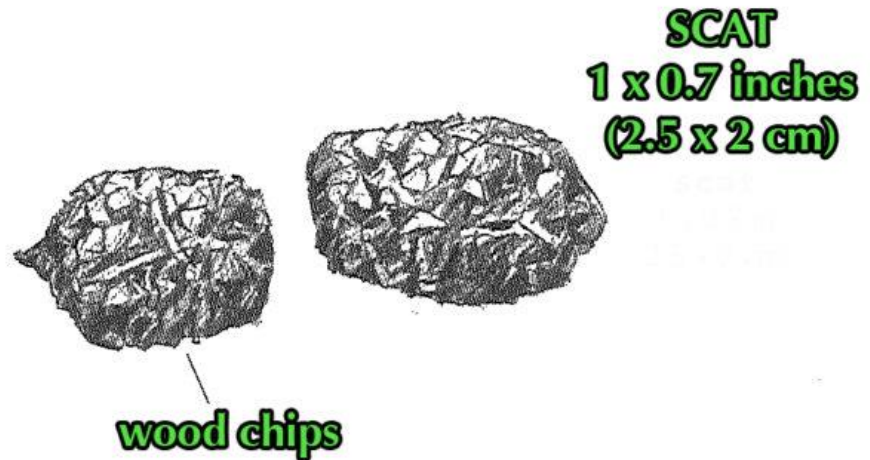
WEASEL scat
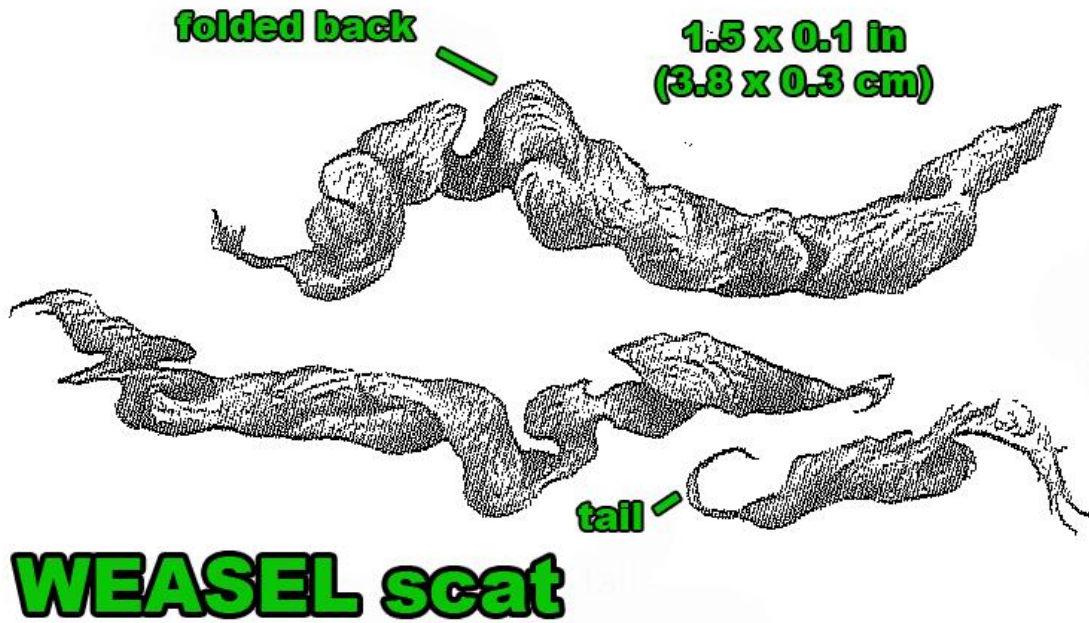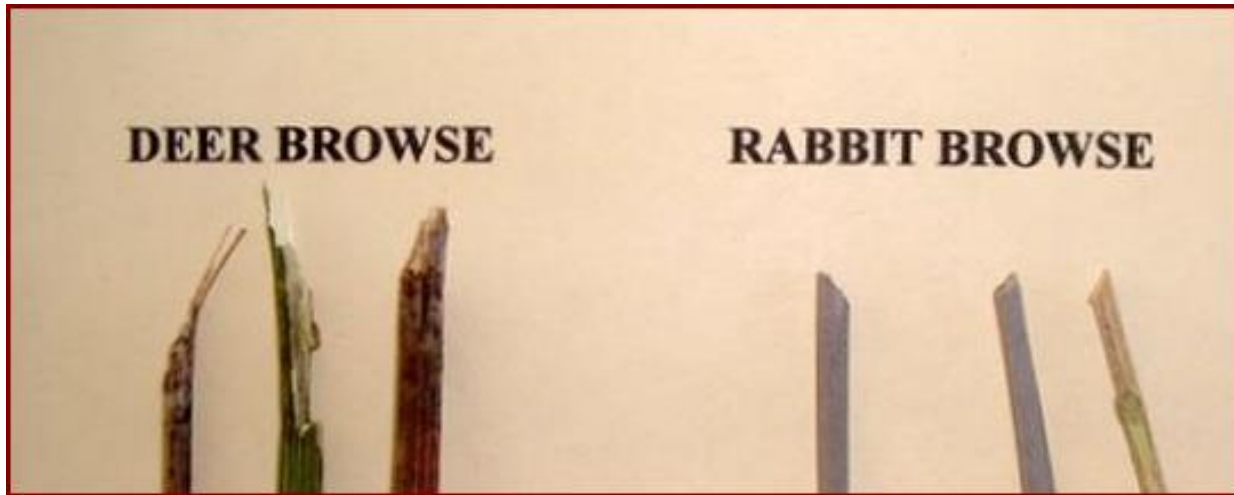
Teethmarks

- Many ungulates don't have upper incisors and rip vegetation

- Rodents typically clip off vegetation pinching between lower and upper incisors

Teethmarks

- Looking at the width and pattern of canine indentations can reveal predator types

- Mountain lions latch on, coyotes bite and tear, bears crunch straight through

Gray Squirrel / Fox Squirrel Drey (leaf nest)

Black Bear dens

- Excavated root systems

- Dense thickets

- Caves

- Tree hollows

- Entrances typically 18-23"

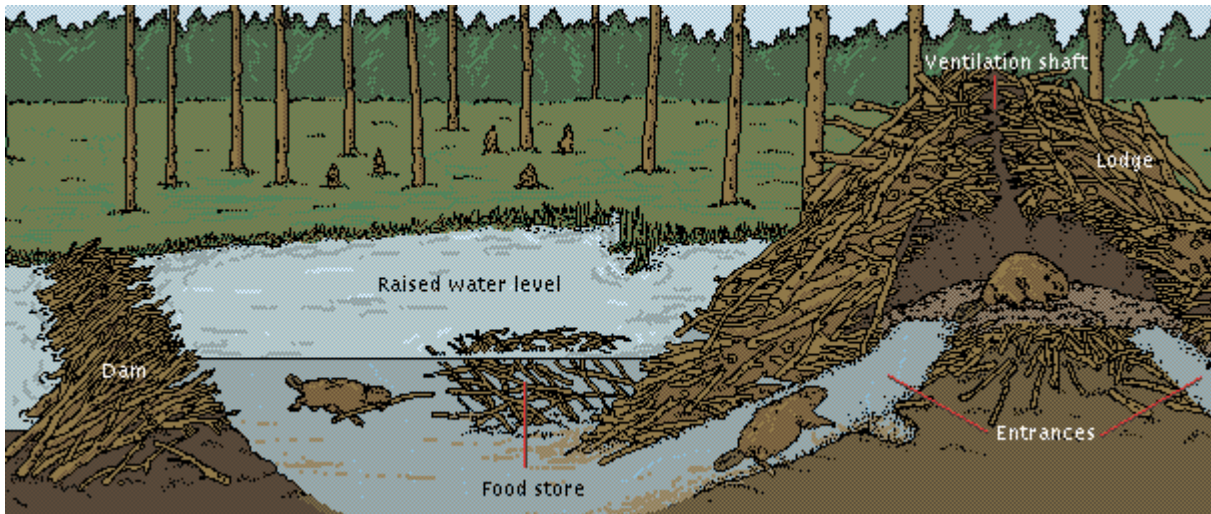© Sumio Harada/Minden/Solent

Fox dens

- Main entrance often has conspicuous mound of dirt

- Tracks and scat accumulate at main entrance

- Two entrances are common

- Similar to coyote dens, but smaller

Beaver dams, lodges, and tree cutting

- Made of woody debris and mud

- Typically surrounded by high water level from nearby dam

- Entrances are underwater

Muskrat lodges

- Use soft material (cattails, reeds, other vegetation, and mud) to build lodges

- Typically build in shallow water

White-tailed Deer Bed

Deer Rub on Tree

- May favor trees with soft wood like pine

Feral Pig rooting

Black Bear Marking Tree

Vole Runways

- Same route used again and again
- Tend to form runways under cover
- May look like miniature dirt tracks

Sign to Know:

Tracks

Badger	Pronghorn
Beaver	Raccoon
Black bear	River otter
Cottontail Rabbit	Skunk
Elk	Squirrel
Fox	Vole
Mouse	Whitetail deer
Muskrat	Wolverine

Scat
Beaver
Canid
Deer
Felid
Porcupine
Rabbit
Raccoon
Weasel

Other Sign
Dens (Canid vs Bear)
Lodges (Muskrat vs Beaver)
Feral Pig Rooting
More sign of your choosing

Spring Creek Prairie

- Next week, field trip to Spring Creek Prairie

- Who's coming?

- Please fill out a waiver before leaving class