

Animal Signs PowerPoint Outline

Slide 1:

Picture on left – owl droppings on rhododendron leaves

Picture on right – collapsed owl pellet next to acorn pile. Bones from pellet are visible.



- This animal sign was found in the forest, at the base of a tree.
- The animal might use the tree as resting/feeding perch. This might indicate a bird of some type.
- Bones and fur found in pellet indicate animal is predator, eating small animals with fur.
- Chewed acorns indicate that the forest has many small animals feeding on nuts; they would provide food for the predator.
- Owls and hawks are two predator birds that live in forested areas. Due to the size of the collapsed pellet, this is probably a perch for a great-horned owl.

Slide 2

Great horned owl



- Great horned owls live and nest in the tops of trees, often nesting in large dead limbs or in “snags”—dead trees off of which the top has broken or fallen. Their brown mottled feathers are excellent camouflage, and the fluffy tufts of feathers on their head help them blend into the tree so they look like just another jagged broken branch.
- Owls have large eyes that let in a lot of light which allows them to see well at night. One of their main hunting strategies is to perch silently in a tree, watching and waiting for a prey animal to come along, at which point the owl swoops down and snatches them up. Special fringe on owls’ wing feathers allow them to be virtually silent in flight.

Slide 3:

Top left: centipede

Top right: isopods

Bottom center: woolly bear caterpillar.



- These animals were found on the ground--the surfaces are different, perhaps indicating that the animals have different life habits.
- None of these animals have wings, so we can assume they live on the ground, at least at this stage of their life cycle. Another clue to their ground dwelling status is the presence of lots of legs for crawling along the ground.
- The isopods were found on a log with lots of holes in it. Perhaps these animals created the holes by chewing through the dead wood. They might also eat the wood.
- The isopods are camouflaged while the centipede and woolly bear are more noticeable. Perhaps the centipede does not need as much protection from predators. The bristles on the woolly bear may make it unpalatable to predators.

Slide 4:

Various types of insect damage to leaves of plants growing in the understory of the forest.



- Insects and other animals that feed on plant leaves have characteristic ways of chewing on the leaves.
- Some tiny insects feed on plant tissue within the epidermis of the leaf. They are called leaf miners, because they create tunnels or “mines” within the leaf.
- Other insects, called leaf skeletonizers, eat the plant tissue between the veins, leaving behind a leaf skeleton.
- Other insects leave behind characteristic round holes, or jagged edges.

Slide 5

Top left – Oak apple gall

Top right – Spruce gall

Bottom left – Tent caterpillar

Bottom right – Bark beetle tunnel



- These animal signs are located on the leaves, branches and trunks of trees.
- The galls are abnormal swellings created by insects injecting the trees with chemicals from their bodies that cause abnormal growths. The insect larvae live and feed inside the galls. Gall making insects are very specific as to the type of plant they infest, and their galls have unique and characteristic shapes.
- Tent caterpillars create dense webs between tree branches, where they live and feed.
- Bark beetles chew tunnels through the layer of the tree just under the bark. When the bark falls away, the tunnels are exposed. Different types of beetles have different tunnel patterns.

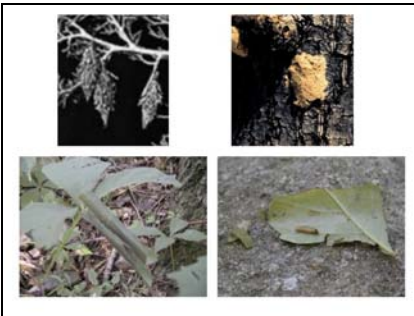
Slide 6

Top left – bagworm cocoon

Top right – gypsy moth egg case

Bottom left – leaf roller

Bottom right – leaf roller caterpillar



- On the leaves, branches and trunks of trees you can also spot cocoons and egg cases of insects.
- These egg masses and cocoons are often camouflaged to look like part of the tree.

Slide 7

Left – tunnel web

Top right – tunnel web spider

Bottom right – Argiope spider



- Tunnel webs are usually found on or near the ground.
- The web is not sticky, but if an insect lands on it, the spider darts out of its hiding place inside the tunnel to seize its prey.
- Each spider group has its own signature web style.
- The bright colors of the argiope spider mimic those of yellowjackets and other stinging insects, which confuses potential spider predators.

Slide 8

Top left – caterpillar droppings, (frass)

Bottom right – deer droppings, small type



- The study of animal droppings, (called “scat” by wildlife scientists), indicates a great deal about the animal. The size, shape and consistency of the droppings gives clues about the size of the animal, how its digestive system works, and what it eats.



Slide 9

Top left – raccoon
 Bottom left – Whitetail deer
 Top right – raccoon track
 Bottom right – deer track

- Animal tracks offer clues to the lifestyle of the animal that left them behind. Hoofs, toes and foot padding can indicate the way the animal moves and looks for food.

Slide 10

Top left – spruce cone stripped of seeds
 Bottom left – hickory husk that has been gnawed
 Top right – empty black walnut shell
 Bottom right – pile of chewed acorns



- Squirrels, mice, and chipmunks all feed on seeds that they find on the ground, such as pinecones, acorns, walnuts and hickory nuts. All of these animals are rodents, which means that often the shells will show evidence of gnawing.
- Chipmunks and red squirrels hide their food in piles called a “cache,” gray and fox squirrels bury many nuts scattered over a wide area. A large pile of nuts or seeds often indicated the presence of a red squirrel.
- Squirrels strip the bracts from evergreen cones to expose the small seeds located at the base. As a result of this practice they often leave behind piles of the stripped “cobs” of the cone.

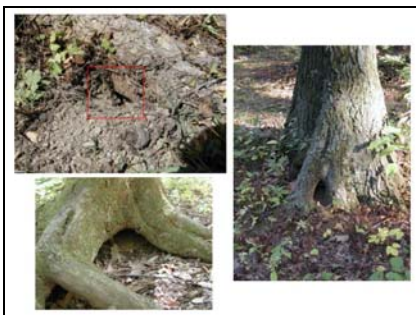


Slide 11

Top – Grey Squirrel
 Bottom – Chipmunk

Slide 12

Top left – hole in ground near tree root
 Bottom left – excavation at base of tree
 Right – small hole at base of tree



- Very often students can find holes made by animals in or near trees. Often these holes have evidence nearby of the animal that made the holes, such as piles of seed shells or bits of chewed acorns.
- Dead and dying trees are a very important part of the forest ecosystem, and they provide shelter for many types of wildlife.
- Small animals that utilize ground nests and tunnels will usually have several entrances and exits in close proximity, in order to have multiple escape routes from predators.

Slide 13

Top – Mole hole

Bottom – Mole



- Mole holes are frequently found in the forest grounds. These holes have a characteristic circle of excavated dirt around the entrance to the hole.
- Moles dig through the soil to locate their food, which consists of insects, worms and grubs.
- Moles eyes are small in comparison to their large pointed noses. The mole's nose is highly sensitive and helps them locate food.
- Another feature of a mole's anatomy are large flattened front paws adapted for digging in the soil.
- Moles have short, dark fur that allows them to slide quickly through their tunnels and blend in with their subterranean surroundings.

Slide 14

Top left – goldfinch nest

Bottom right – goldfinch



- Goldfinches nest in shrubby areas near open fields where they feed on seeds.
- The inside of a goldfinch's nest is lined with thistle down, (the fluff attached to thistle seeds). Besides being a neat, small rounded cup, down lining is one of the features that distinguishes a goldfinch nest.
- Thistle seeds are goldfinches' favorite plant food. Feeding on or near these prickly plants helps protect the birds from predators.
- The thick short beak of the goldfinch is adapted for cracking open tough outer husks of seeds.
- The bright yellow color of the male finch distracts predators away from nests during the breeding season. At other times of the year, the goldfinch's plumage changes to a duller olive color that blends in with the fall and winter foliage in their meadow habitat.

Slide 15

Top left – holes in tree left by unknown woodpeckers, (most likely downy or red bellied woodpeckers)

Bottom left – Downy woodpecker

Top right – holes in tree left by Yellow-bellied sapsucker

Bottom right – Yellow-bellied sapsucker



- These woodpecker signs are located on tree trunks. The yellow-bellied sapsucker has a distinctive habit of poking a line of holes in the bark of living trees. Sap pours out of these holes and the woodpecker feeds on the sap and the insects that gather around the sap.
- Besides having a chisel shaped beak, woodpeckers have gray, brown and white mottled feathers that helps them blend in to the branches and tree bark of their treetop habitat.
- Woodpeckers also have stiff tail feathers that help them balance against the tree trunks while drilling and poking around for an insect meal.

Slide 16

The entrance to crayfish burrows along the banks of a small stream

Inset – crayfish



- Holes and mud piles along the banks of streams or ponds often indicate the presence of crayfish. Crayfish hide and nest in these holes, and pile towers of mud around the entrance. Crayfish homes look like collapsing sand castles, hence their nickname "crayfish castles."
- Anyone who has ever tried to catch a crayfish knows you have to get them from the back, to avoid getting nabbed by the pincers in the front. One strategy crayfish have for survival is to back up into their holes, thus protected their rear while fending off predators from the front with their claws.