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The Pennsylvania Game Commission is the State Wildlife Management Agency. Our mission is Manage and protect wildlife and their habitats while promoting hunting and trapping for current and future generations. During this presentation, we will talk all about North America's largest game bird, the Eastern Wild Turkey.

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The Wild Turkey is an American original. Turkeys are gallinaceous "chickenlike" birds related to grouse, quail, pheasants and chickens. Wild turkeys are native only to North America. There are two species: the wild turkey and the ocellated turkey. The wild turkey is if found in the lower 48 United States and in Hawaii (not found in Alaska), six Canadian provinces, and Mexico. The ocellated turkey is found in Mexico, Belize, and Guatemala.

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There are five distinct subspecies of the wild turkey: Rio Grande, Merriam's, Gould's, Osceola (Florida), and the Eastern. The eastern wild turkey is the most widely distributed, abundant, and hunted turkey of the subspecies.

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We will be talking a lot about North America's largest game bird, so let's get familiar with it. There are several terms that help to describe the turkey. A snood is a fleshy appendage that attaches just above the beak. A spur, typically found on a male, is a bony protrusion on the back leg. Beards are specialized feathers that grow out of the chest, most common on males. Caruncles are fleshy bumps that grow on the head and neck. The dewlap aka wattle is a patch of skin between the head and neck.

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An adult turkey has 5,000-6,000 feathers on its body. Each wing consists of 10 stiff primary feathers that are dark and barred with white and 18 or 19 secondary feathers. There are typically 18 large quill feathers (sometimes a few more) on their tails. Feathers can help identify the sex and age of the turkey.

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Turkeys flock together for protection. Flock sizes vary with seasons as well as with age and sex. During the spring, once poults reach about three to four weeks old, several families of hens and poults join together. Older toms are typically by themselves or in the company of one or two other toms. In the fall, family groups can become quite large. By mid to late winter, the large flocks typically section out into separate groups; older and younger hens, jakes, and older toms. Turkeys fight for dominance in each group,

establishing pecking orders within the groups. Around mid-March the large winter flocks begin to break up with birds moving to breeding areas. Movements are typically 0-10 miles, depending on sex and age of bird and habitat.

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Male turkeys, called gobblers or toms are about three feet tall, four feet long, and weigh up to twenty-five pounds, averaging 16. Their iridescent plumage appears to be brownish-black, but when sunlight hits their feathers they gleam with copper, blue, green, and mahogany highlights. A gobbler's head and neck are nearly bald and their heads are pink to red in color. Gobblers have sharp spurs that are used in fighting. Black, specialized feathers, called mesofiloplumes, form a "beard" that protrudes from their chests. These beards grow quickly for their first few years, then more slowly, until they're about 12 inches long. These modified feathers never molt. Less than 10% of gobblers have more than one beard. Two beards is the most common number of multiple beards, but up to 8 have been reported. Male breast feathers are tipped in black. A young male is called a Jake.

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A hen's plumage is more drab. The head and neck of a hen is a blue-gray color. Their less vibrant color helps to camouflage them and protect them from predators. Hens are about one-third shorter than males and weigh about half as much, about 9-12 pounds. Turkey weights vary with seasons and food availability. Female breast feathers are tipped in tan or buff color. Young hens are called Jennys.

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Some hens grow beards and have spurs, too. In fact, up to 1/3 of the hens in some areas across the state are known to have beards, but on average about 10% of adult females have beards. These beards however are typically pencil-thin and usually top out at about 8". A small percentage of females may have spurs, if they do, it's typically only on one leg and is less than a 1/2 inch in length. Usually, hens have neither spurs nor beards.

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Turkeys have great eyesight. Their field of vision is about 270 degrees. Turkeys can see color which is important in responding to breeding displays and aggression. They can see better during the day than night.

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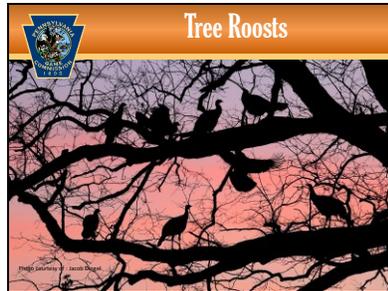
Turkeys have great hearing. Although, they do not have an external flap that concentrates sounds, they can pinpoint sounds from long distances. In fact, they hear low-frequency and distant sounds better than humans.

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Turkeys can fly about a mile once airborne by alternating strong wingbeats and gliding. They can reach speeds up to an estimated 40 to 55 mph.

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Turkeys fly into trees each night. Large flocks may roost in the same tree or in adjacent trees. When weather is bad, they prefer to roost in conifer trees, or in areas protected from wind and other elements. Roosting in trees is a life-saving technique, allowing them to avoid ground predators. They typically move to different sites and trees each night, however, they may use the same trees each night. In the early morning, the flock glides to the ground, calls and regroups for feeding.

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While turkeys can fly, they usually rely on their feet to get them to where they need to go and to escape danger. Their top running speeds are estimated at 18mph with strides measured at 4 feet.

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About 90% of a turkey's overall diet is vegetation. However, this changes depending on the season. In the spring they feed on emerging plants, insects and nuts. During the summer, brood hens and their poults feed mainly on insects for the protein which allows the poults to grow quickly and the hen to gain the weight she lost during incubation. They consume insects grasshoppers, beetles, walking-sticks, ants, and larvae. They also eat spiders, ticks, millipedes, centipedes, and snails and slugs, to name a few. In the fall they

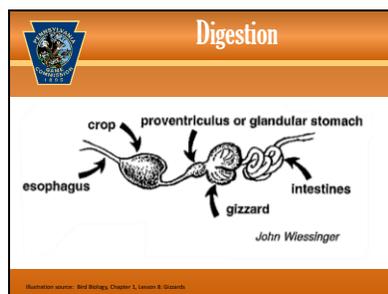
eat beechnuts, acorns, dogwood, grape, cherry, gum and thornapple fruits as well as seeds from grasses and sedges, ash, corn, oats, and weeds, plus insects, grubs, etc. In the winter, they eat leftover seeds, nuts, and fruits. They also find foods such as green plants, crustaceans and insect larvae in and around spring seeps. The waters emerging from the seeps are above freezing temperatures, therefore providing food for turkeys and other wildlife all winter.

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Turkeys can tear up large areas as they scratch for their food. These torn up areas are often in the shape of a V since they use both feet to scratch.

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Once a turkey swallows its food, such as an acorn, it goes into a crop (a sac at the bottom of the esophagus) where the food is temporarily stored and softened by fluids and heat. The crop is a special adaptation in birds that need to quickly swallow large amounts of whole foods, such as acorns, faster than the stomach can accommodate. The crop of the turkey is large, allowing a large gobbler to eat a pound of food at one meal. Then, the softened food passes into the gizzard (a muscular part of the stomach). Turkeys will swallow small

stones and gravel, called grit, to aid in digestion. In the gizzard the grit and muscles work to grind down the food, although grit is not necessary for digestion.

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Turkeys communicate using a variety of sounds. The gobble is the most well-known. This vocalization is heard in the spring to attract females and announce territory. Other turkey sounds include yelps, clucks, purrs, kee-kee run, and putts. To listen to turkey sounds or for an explanation of each go to:

<https://www.nwtf.org/hunt/wild-turkey-basics/turkey-sounds>

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A male turkey begins to change physically toward the end of March, which marks the beginning of the breeding season. During courtship displays, his snood may become long and swollen and extends to hang down over his beak and the color of his head and neck changes quickly from red to blue, purple and white. Males will develop a thick, spongy breast layer that contains oils and fats to help sustain him over breeding season. Typically, older gobblers with longer beards are more successful in attracting females to breed.

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During the breeding season, male turkeys display and gobble to attract hens. During their display, they fan their tails, erect their feathers, and tuck their heads back against their body and strut back and forth, hissing and dragging their wing tips on the ground.

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During the mating season, gobblers will fight with other males for the right to mate with hens. During battle, "each grasps the other's head or neck in his bill and tries to shove or pull his foe off balance. The first bird to let go or lose balance gets thrashed with wing and spur." Males are polygamous. A dominant male may form a harem of a ½ dozen hens or more.

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Once bred, the hen breaks away from the flock to lay her eggs. Females typically choose a nest sites in a wooded or brushy area with water and a forest opening or field nearby. Turkeys nests are simple depressions on the ground lined with leaves. Nests are often near a guard object such a tree or log often concealed by fallen branches and vegetation.

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A hen lays about 1 egg per day and incubation begins after the entire clutch is laid. Usually a clutch contains 8 to 15 eggs with 12 being the average; the clutch is smaller for younger birds. The eggs are about 3" long , pointed at 1 end, and are tan colored with brown speckling. The male does not participate in any part of raising the young.

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Hens will incubate day and night, which makes them more prone to predation. Nesting hens are predated upon by several animals including foxes, coyotes, bobcats and great horned owls. Eggs are also eaten by these predators as well as by raccoons, opossums, black snakes, skunks, crows, red squirrels, minks and even house cats. Just about any predator that is lucky enough to come across a turkey nest will eat the eggs.

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Adult hens will re-nest if predation occurs, whereas first-year hens often do not have enough energy resources to do so. She can lay up to 2 clutches with one breeding from a male. Incubation takes about 28 days. After young hatch, the hen broods them until they're dry and then leads them away from the nest.

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While the young make their way out of the shell (called pipping), hens will make soft clucks to imprint the hatchlings.

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Young turkeys are called poults. Poults have a fuzzy brownish coloration and a long neck and legs, giving them the classic turkey appearance. Poults are flightless making them easy prey. More than half die within the first two weeks. Hens will feign an injury to lure a predators toward her and away from her young. The best defense a poult has against a predator is to hide.

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Poults begin to peck at food within hours of hatching. Hens soon lead poults to open areas to feed on beetles, crickets, and other insects and larvae. Poults need this high-protein diet to grow quickly. They gain about 2.5 ounces of weight per week.

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The hen broods the poults each night for approximately two weeks until their wings develop and they can fly into trees to roost. Within a few weeks the poults and hen join with other poults and hens to form a flock.

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As the poults mature and reach full size during the fall, they are still distinguishable from adults because they haven't molted into all their adult feathers yet. The central tail feathers (adult sized) are longer than the outer feathers. When a jake displays his fan, the middle (adult) feathers will stick up above the rest of the tail feathers. In comparison, the edge of an adult tail forms an even curved line.

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Turkeys are hardy birds. On average they live to three years old in Pennsylvania. However, two leg banded male turkeys in Pennsylvania lived to be a t least 9 years old.

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So where do turkeys live? In order for turkeys to meet their seasonal needs they need varying habitat.

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Turkeys seem to do best with a mix of forested...

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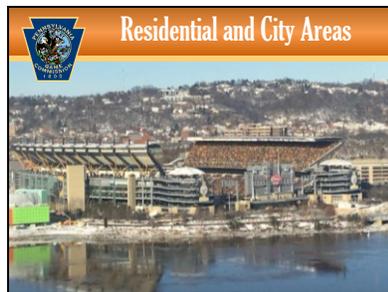
actively farmed...

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And reverting farmland habitat types. “Their ideal habitat consists of 60% wooded and 40% agriculture and shrublands. They aren’t the deep-woods critter we once thought they were.”

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Wild turkey populations exist in residential areas and cities, too. Turkeys are found in every county of Pennsylvania, including Allegheny County (Pittsburgh area) and even some in the parks of Philadelphia County.”

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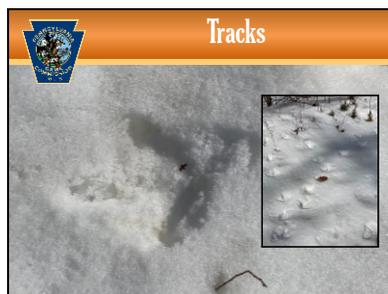
You may not see a turkey, but just like all other wildlife, turkeys leave sign behind in the areas they have been. Turkey sign can be a number of things from tracks, droppings, sounds, and feathers. Learning there signs and how to read them can enhance your outdoor experience.

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Some turkey sign can help you determine if it was left behind from a male or female. If the dropping is J-shaped it was left by a male (think J for Jake), and if the dropping looks like a curly-que-like on top of a Dairy Queen cone, it was left by a female (think queen for female). Fresh droppings are tan and white in color. If you find the droppings under a tree it may indicate where they are roosting. You can also look for....(click)

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Tracks. If the middle toe is  $4\frac{1}{4}$  inches, from the back of the heel pad to the tip of middle toe, It's likely that it is a male turkey track. If it is less than that, it was likely left by a female. Track size will vary with age with younger turkeys leaving smaller tracks.

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Again, turkeys scratch for their food, so finding a scratching is a good indicator turkeys have spent time in that area.

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When the weather is hot, you can also look for dustings or dust bowls. A turkey scrapes out a bowl of loose soil to sit in and kick over their bodies to "dust" themselves daily.

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It is very common to find a few breast feathers in the dust bowls. Breast feathers are different for males and females. Males breast feathers have black tips and females breast feathers have buff or tan colored tips.

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You may also find tail feathers, or

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Or wing feathers.

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Hopefully the next time you see North America's largest game bird, the wild turkey, or their sign you'll think of their interesting biology and behaviors. What does the wild turkey mean to you? The strategic goal for wild turkey management is "to provide optimum wild turkey populations in suitable habitats throughout Pennsylvania for hunting and viewing opportunities by current and future generations."

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Information sources: Pennsylvania  
Game Commission>>  
Wildlife>>Wildlife  
Species>>Pennsylvania Wild Turkey:  
Frequently Ask Questions: Biology,  
Wildlife Note; Management Plan;  
National Wild Turkey Federation