



Finally Fall: Wild Turkey

When it comes to absurd looking birds, few surpass the **eastern wild turkey** (*Meleagris gallopavo*). The adult males, called gobblers or toms, have all kinds of unique physical attributes to attract females (hens). When combined with their ostentatious plumage, wild **gobbling**, and strutting displays, tom turkeys simply can't be ignored.



Eastern wild turkey gobbler in full strut.

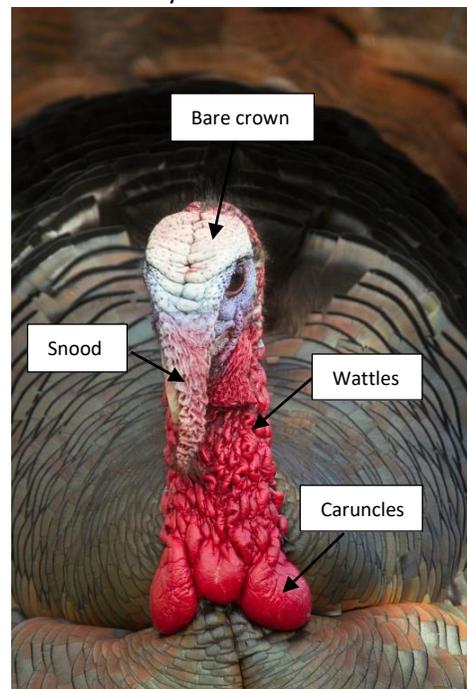
There are two species of the wild turkey, the American wild turkey and the ocellated wild turkey of Central America. The American is comprised of five subspecies each displaying feather patterns which match the colors of their habitats and provide better chances of survival where they live. The eastern wild turkey is the subspecies we are familiar with here in New Jersey and all over the eastern portion of the United States.

Turkey Parts

Wild turkeys are enormous birds with long, dinosaur-looking legs and feet. Adult males stand up to 4 feet tall and weigh anywhere from 18 to 30 pounds. Females are smaller standing about 3 feet tall and weighing around 8 to 12 pounds. Turkeys appear dark brown to black overall, but a closer look reveals there is a greenish-bronze iridescence to most of their plumage. Their primary wings feathers are long and dark brown with bold white stripes. Their rump and tail feathers are broad fans with a chestnut colored or pale band depending on the subspecies.

Males have a swatch of broom like bristles called beards that protrude from their chests. Females sometimes have small versions of beards as well. The function of the wild turkey beard is not well understood but it is suspected to play a role in mate selection by the female. A longer beard signifies an older healthier male and thus a superior mate choice. Surprisingly, the beard is considered a modified type of feather!

A turkey's head is covered with all kinds of loose fleshy appendages that seem to play a role in attracting mates. The **snood** is a flap of loose, wrinkled flesh that hangs over the beak. It seems that female wild turkeys prefer to mate with long-snooded males, and males within a flock take a subservient role to males with relatively longer snoods. The **wattles** and **caruncles** are lumps of neck flesh that are also thought to play a role in attracting a mate. The males' caruncles can become engorged with blood and turn vivid shades of red, white, or blue.



To the human eye, male turkey heads are bizarre affairs. Their heads and necks are featherless, and the bare skin can vary in color from white to blue to red. Their heads can also change



color when the birds are threatened or excited. Until recently, the brightly colored naked heads and necks were thought to function solely in sexual reproductive displays. However, studies now suggest that uninsulated body regions may serve an important role in heat dissipation. A turkey's body temperature is more easily regulated by means of a bald head. The loss of head and neck feathers in wild turkeys is an adaptation that allowed the species to expand into hot regions where dangers of overheating could be overcome.

Male turkeys have wicked sharp spurs on their ankles that they use to fight to establish dominance in a flock. Older, dominant wild turkeys have the longest and sharpest spurs. This generally helps them fend off competition from younger turkeys when vying for the right to breed. Both sexes are born with a small button spur, consisting of smooth, shiny keratin. The spur starts to grow soon after birth in young males called jakes, but not juvenile females (jennies).

Turkey Life

Wild turkeys are very social birds that live and travel together in flocks. If you see a single turkey, you can be sure there are more nearby. During the spring breeding season, the flocks disperse to find mates, but throughout most of the year the hens and young birds live in groups of up to 30 or more. Mature toms and young jakes may gather together forming a bachelor flock, but they often hang close to a flock of hens and young birds. There is usually one dominant male who maintains breeding privileges with more than one female in the flock, but every turkey has a place in the social hierarchy.



Turkeys spend most of their time foraging for food on the ground. They travel on foot, but when trouble is brewing, they can run up to 25 miles per hour. They can also fly. To escape a predator, the flock will take off in explosive bursts and fly for short distances to clear the threat. However, when really stressed, Eastern wild turkeys can fly at a speed of 30 to 35 miles per hour!

The area that a turkey lives in is called its home range. A turkey's home range may be anywhere from 100 to 5000 acres. Turkeys thrive best when they have several different kinds of habitats within their range. These include forests with nut trees for food and mature trees and evergreens for roosting at night. They also need open fields that provide insects, croplands that provide corn and other leftover crops at the end of a growing season, and meadows of tall grasses for foraging and hiding nests.

Wild turkeys mate in spring. As days get longer, toms begin gobbling and **strutting** to attract hens. They fluff their feathers, fan their tails and drag their wings as they strut. Male turkeys are polygamous, mating with more than one partner, and a just small number of gobblers do most of the breeding. After mating, the female scratches out a nest on the ground on the forest or meadow floor. She usually lays between 10 to 15 eggs over a period of 12 to 18 days. Incubation takes 28 days. Hatching occurs during the end of May and early June.





During their first three weeks, the **poults** stay close to their mom and follow her like a magnet. They are born ready to eat and run and the mother hen shows them where to find food and cover. Mortality rates are high for the young poults because of cold or wet weather and predators. Of a dozen poults born in the spring usually only three to seven will survive into the fall.

As summer approaches, several hens and their poults will flock and travel together. The birds are very vocal and these multi-family units have many different sounds for communicating. They have vocalizations for assembling, for getting attention, to express contentment, excitement and alarm, calls for roosting, for finding lost juveniles, and more. The males of course use the classic gobbling for calling mates, as well as challenges for dominance.

A typical day for the hens and poults begins at sunrise. They fly down from the trees where they spend the night roosting, and the families forage through the morning. At some point, if conditions are dry, turkeys will take a dust bath. They love to scratch up loose soil and wiggle their feathers in the dust. This may be a way turkeys deal with parasites.

The flock may rest until early afternoon when they start foraging again. At dusk, the turkeys that are mature enough to fly will head up into large trees to roost for the night. They are safe there from most predators except the great horned owl! Poults don't begin to roost with their mother till about three weeks of age. While they are still too young to fly, the poults roost for the night on the ground huddled under the hen's wings. As they grow, they start roosting further and further away from their mother hen. By fall, the poults will be roosting in other trees near their mother.



Hen and poults foraging in a meadow.

Turkey Food

From the time they hatch, young poults need high protein foods in the form of insects. The hen will take them to agricultural fields and grassy meadows to forage for insects. Adult turkeys also eat insects from spring through fall, but during the summer they supplement their diets with plants, fruits, and berries. When autumn arrives, turkeys spend more time foraging in woodlands where they feed on acorns, hickory nuts and beech nuts. The nuts are high in fat and help the turkeys build up fat reserves, which helps keep them alive when food is buried under the snow.

In years without high nut yields, and if all other food is covered by deep, powdery snow, turkeys may have difficulty finding enough food to keep them alive. In winters without a lot of snow cover turkeys will continue to rely on nuts and seeds, and they will also forage in corn fields looking for dried leftover corn. During heavy snow cover, turkeys must rely on food found on top of the snow, the edges of ponds, or on patches of bare ground. Then they will eat the buds off twigs as well as mosses and fern spores. Hard-crusting snow makes it easier for turkeys to move and find food, while deep powdery snow can cause starvation. Don't be surprised to see turkeys feeding on the ground under bird feeders.

Many of the foods that turkeys rely on have hard, woody shells and seed coats. Turkeys have unique stomachs that make eating and digesting things like acorns possible. Turkeys, like all birds do not have teeth so turkeys ingest small stones that go into a part of their stomachs called the **gizzard**, which helps the turkey break down food. The gizzard also called the ventriculus, gastric mill, and gigerium, has thick muscular walls that contract and grind the hard-coated seeds between the stones. Turkeys actually have two stomachs: the glandular stomach that softens the food with gastric juices, and the gizzard that grinds it up before being passed to the intestines.



Here at Duke Farms, flocks of wild turkeys are commonly seen foraging for insects in the lowlands along the Raritan River in spring and summer. In the fall and winter, they are often spotted scoffing up acorns in the woodlands around the hay barn and bicycle tent, and under the bird feeders around the property.

Turkeys in History

There's a legend that Ben Franklin campaigned the government of our new republic to name the wild turkey as our national bird. This stems from a letter to his daughter Sarah, dated January 26, 1784 in which he wrote at length about how the gobbler was superior to the bald eagle. What people forget is that his opinion piece was meant only as a critique of an honorary medal issued to remember veterans of the Continental Army. He was unhappy that the medal featured a bald eagle and clearly said so. Ben wrote, "For my own part I wish the bald eagle had not been chosen as the representative of our country." He felt that the eagle was "a bird of bad moral character" that "does not get his living honestly" because it steals food from the fishing hawk and is "too lazy to fish for himself."

Franklin had much higher praise for the wild turkey and thought the bird would have been a better choice to honor the veterans. He called the turkey "a much more respectable bird" and "a true original native of America." While he considered the eagle "a rank coward," Franklin believed the turkey to be "a bird of courage" that "would not hesitate to attack a grenadier of the British Guards who should presume to invade his farmyard with a red coat on." But the letter was a private matter and Franklin never made his views public. When he was given the chance to officially propose a national symbol for the United States, his idea was a biblical theme that did not include birds of any kind.

The virtues of wild turkeys were well known to the Native Americans who lived here well before Ben Franklin. For the Plains and Eastern indigenous people, turkeys were important for food and as a source of feathers to decorate head dressings, ceremonies, and arrows. They also used turkey spurs to make arrow points and other sharp utensils.

Contrary to popular belief, historians doubt if wild turkeys were served at the Wampanoag and Pilgrims' first Thanksgiving in 1621. It's much more likely that waterfowl like ducks and geese were on the table for that fateful event.

The Pilgrims and other European colonists did rely on the bountiful turkeys in the new world and hunted them for food. And they hunted them and hunted them until by the early 1900's they were nearly extinct. In the 1950's conservationists found a way to reintroduce wild turkey and today there at least 7 million roaming around the country! The farm raised turkeys that grace our thanksgiving tables today are far removed from their wild brethren of woods and fields, but we should still give thanks for the wild ancestors who made modern thanksgiving dinner possible.

Activity: Talk Turkey - Make your Own Turkey Call

Wild turkeys have as many as 30 different **vocalizations** for communication within and between flocks. You can make a turkey caller from a plastic cup and thread and use it to imitate many of the turkey calls, such as:

- Tree call – This call is made from the roost in a tree first thing in the morning. The call is to other members of the flock to touch base first thing in the morning.
- Putt or yelp – This is a short, one-syllabled alarm call. Turkeys in distress or that sense danger will repeat this “Putt, Putt, Putt!”
- Cluck – This call is a series of short, soft notes similar to a chicken. It is used to get the attention of the poults or another member of the flock.
- Purr – A soft cooing sort of call; the purr is often made by content turkeys mainly when they are feeding.
- Assembly call – This call is usually made by the adult hen when calling her young.
- Gobble – This call is made primarily by male turkeys in the spring to attract female turkeys for mating.

Materials:

- Plastic cup
- Push pin and 2 foot piece of sewing thread or thin string
- Cup of water for dipping fingers and wetting the thread (or use a wet sponge)

Instructions:

1. Turn the cup over and poke two pin holes approximately ½ an inch apart in the bottom of the cup.
2. Pass the thread through the pin holes so that the thread is hanging down in two strands inside the over-turned cup.
3. Turn cup upright and tie the two dangling threads together in a knot as close as possible to the bottom of the cup.
4. Turn cup upside down again with strings dangling from center of cup.
5. Dip fingers in water and run wet fingers down thread to moisten it (or use a wet sponge)
6. Finally, grasp the wet thread between thumb and forefinger and pull the thread in a quick jerking motion.
7. Experiment with different sounds by pulling the string in different ways. Then go on a nature walk and imitate the turkeys!



Make a turkey caller with a plastic cup and sewing thread *photo courtesy of Pinterest

**Note: This activity is adapted from Project Beak; Calling All Turkey*

Activity: What it is Like to Live the Life of a Turkey?

“My Life As a Turkey “ is a BBC and PBS video that documents one man’s year long journey to raise a family of turkey chicks to adulthood. It is an amazing story and worth viewing if you can spare an hour. Watch it online [here](#).

Review the turkey information presented in this video with [this](#) fact sheet.

Go on on a walk at Duke Farms, in a park or in a place with trees to look for turkey food. See if you can find any turkey food such as acorns, hickory nuts, or beech nuts. Can you find anything else that turkeys might eat in the winter?

Additional Resources

- [All About Birds, Wild Turkey](#)
- [Wild Turkey Education resources](#)
- [NRCS Wild Turkey Fact Sheet](#)
- [PBS Video trailer](#)
- [PBS Turkey Fact Sheet](#)
- [Eastern Wild Turkey Education Guide](#)
- [Thermoregulation of Unfeathered Turkey Heads](#)

Turkey photos courtesy of Cornell University Laboratory of Ornithology, Macaulay Library, Ithaca N.Y.