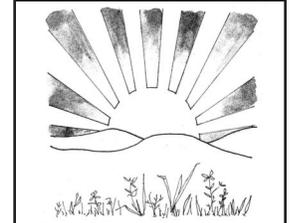
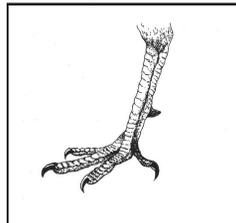
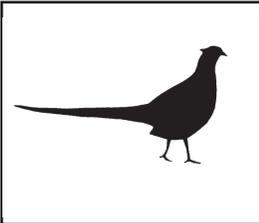




# Gallinaceous Birds

Order Galliformes  
Family Phasianidae



**Gallinaceous birds refer to a group of ground-living birds**, like pheasants, turkeys, grouse and quail, that are chicken-like and share certain physical characteristics. They have **strong legs and very thick, powerful toes with well developed nails, which are perfect for scratching the ground** in search of seeds & grains. They also eat fruits, berries, shoots, leaves, grasses and insects. They have **strong seed-cracking bills**.

**Males in this group often have elaborate plumage** they can raise or spread during breeding season to entice a harem of females. Most males, also known as cockbirds or roosters, do not help with raising the **precocial chicks**. Females are called hens.

These birds usually only **fly in short, explosive bursts for short distances** (sometimes accompanied by a raucous call) before settling down again.



## Wild Turkey *Meleagris gallopavo*



Famous for its role in that all-American of holidays, Thanksgiving, the turkey is **our largest game-bird**. Adult **males, “gobblers” or “toms,”** stand up to 3 feet tall and 3 to 4 feet long. The hens are almost a third shorter and weigh half as much. Like all ground birds that rely little on flight, **turkeys are heavy birds** – an adult tom may be up to 25 pounds. Compare that to a large great horned owl that may weigh only three pounds!

Wild turkeys have **long slender necks and bodies with a fleshy, multi-colored head and neck**. Their overall plumage is metallic bronze, browns and blacks to help them camouflage in the wild, and their **tail feathers are edged in brown** instead of the white tips found on domesticated turkeys. Tom turkeys have breast feathers tipped in black, while the hens end with a pale brown.

The smooth bumps on a turkey's featherless head and neck are called "**caruncles**," and the **fleshy flap of skin** dangling from above their beak during breeding, fighting or during extreme heat is called the "**snood**." The fold of skin under a turkey's chin is called the "**dewlap**" – similar to the "wattles" found on a chicken.

The adult turkey's lower leg is red-colored and the Tom's have **spurs**, which are sharp, bony spikes on the lower backs of their legs used in fighting. Tom's also sport a rough, black "**beards**," growing from the upper breast. These hair-like feathers are called **mesofiloplumes**. They can reach up to a foot in length and are believed to help other turkeys know at a glance which is an adult or juvenile. But its not a reliable determination of age because the hairs can break off.



Toms let loose with a **robust gooble, gooble, gooble during the breeding season**, especially in early morning or late evening. But both the tom and hen have an array of vocalizations for communication. Hens lay about a dozen eggs in a solitary leaf-lined ground nest. It takes almost a month for the clutch to hatch. The young **precocial birds** are called **poults** and follow the hen as soon as they dry – surviving by scattering or "freezing" in place at the hen's alarm call. Until their wings are fully developed and they can **roost in trees**, and the **hen will brood the poults under her wings overnight**.

Poults thrive on a high-protein diet of **insects, soft greens and fruits**. By fall, the poults will add **mast** (beechnuts, acorns) to their diet. When they eat large, hard nuts like acorns they extend their long necks and swallow the nuts whole. The nut remains stored in the bird's **crop**, where digestive juices and body heat soften the food. From the crop the nut is passed into the **gizzard**. **Gallinaceous birds often pick up and swallow small stones and gravel** called grit that make their way into the gizzard and **act like teeth to further digest hard seeds**, eventually grinding down food like an acorn.



**Ring-necked Pheasant**  
*Phasianus colchicus*



The ring-necked pheasant rooster sports **mixed hues of golds, reds, browns** and black on its body along with distinct **red cheek marks**, iridescent dark green head, gold breast and greenish-blue lower back. The hens are a subdued blend of browns designed to hide them in tall grasses. Adult cockbirds stand about a foot high, though their entire body length from beak to tail tip is almost three feet in length. The **bright white ring of feathers around their neck** gives them their name. The tail is long & pointed with black horizontal bars. The short, round wings allow for **rapid, pumping, low-flights** across meadows or woodland edges when startled.



The rooster's call includes a **loud double crow followed by quick, muffled wing-drumming**. Usually heard at sunrise and sunset during breeding season, cock-birds also cackle when flushed from a roost. The hens, like most female birds, remain quiet except for soft clucks to her young.



During courtship the **rooster of struts, spreading tail and wings and ruffling his neck feathers** to attract a harem of hens. Nests are scratched into the ground in a hayfield, overgrown pastures or fencerows. The well-concealed nest is lined with a bit of vegetation to hold up to 15 pale green eggs that hatch about two weeks later (early July). The **precocial chicks** are sheltered by the hen in poor weather (she sits on top of them) until they can roost in the trees at night. If danger is near, the young **freeze-in-place like a deer's fawn**, tucked low to the ground to allow their camouflage to work.



## Ruffed Grouse

*Bonasa umbellus*



First of all, they're **our state bird**. You should know that. And second, it is called the **ruffed grouse, not "ruffled."** They are found throughout Pennsylvania, but are not common. Grouse love **brushy cover**. Their **drumming wingbeats and fanning tail feathers** signal their annual courtship ritual.

**Like all ground birds, the grouse's plumage is designed to help them blend into the landscape.** The body is mostly a deep brown mixed with white & black on its back and white with dark barring on its breast and undersides. Their brown tail has black and gray banding across it. They rarely may be found in a "silver-tailed" or "red-ruff" color phase. **A ruff of black feathers around the neck gives the birds their name - ruffed grouse.**

Grouse are about the size of a chicken but not quite as tall, with a wingspan of up to two feet. They weigh less than two pounds and males are larger than females with more prominent neck ruff, which he uses during courtship. The hen's tail is shorter with a break in the center of the black tail band.

In addition to seeds, nuts and berries, **grouse love tree buds**, especially aspen, birch, and apple. They'll also eat green leaves, ferns and conifer seeds. Grouse like to **take dust baths**, which are believed to stimulate feather growth or perhaps rid them of parasites. In winter, grouse sometimes **dive into a snowbank to keep warm or avoid danger**. They will also roost under evergreen boughs during snowstorms. **In winter their feet grow fringes around the toes.** This increases the surface area of each toe – sort of like growing snowshoes, enabling them to more easily maneuver on the surface of the snow.



Grouse are not strong fliers, but after a **rapid take-off they fly quickly for a short distance, lock their wings and glide down for a landing.** The total flight may be 100 yards or less, unless forced by some disturbance to repeat the flight to a new location.

The ruffed grouse is best known for the **males's breeding behavior** in March and April when **he finds a suitable log or rock on which to perform.** In his efforts to attract the female he will rapidly **slap the air with his wings creating a low drumming sound.** He also struts with his tail and ruff fanned out, while hissing.

The **sheltered nest is a depression on the ground** at the base of a tree or in brush. Up to 16 white or buff eggs are deposited on leaves. Grouse are precocial and are raised similar to pheasants, bobwhite and turkey.



## Northern Bobwhite

Family Odontophoridae  
*Colinus virginianus*



They whistle their name with a sharp, "**bob-white, bob...bob-white.**" The short, rotund bobwhite quail is the **definitive game bird of south-central Pennsylvania's** woodlands and hedgerows bordering large expanses of overgrown meadows. Year-round residents, we are their northernmost range and local bobwhite populations are greatly affected by our habitats and climate. Their **diet includes just about any plant seed** as well as **insects**, including pest beetles, mosquitoes, aphids and grasshoppers. They love farm grains such as corn & sorghum and will eat green shoots, nuts, berries, acorns and hickory nuts.



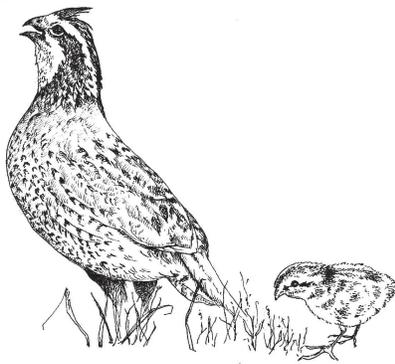
Bobwhites have short wings and a short, round tail. Adults stand about 6 inches high. Their rich chestnut-brown plumage is marked with white and black, orange-tinged sides and white or cream bellies lightly barred with black. Their **white throat and eye-stripe separated by a dark bank.**

Bobwhites **live most of the year in coveys** - a social group of up to 30 birds. Coveys offer protection while the the birds work together to find food or rest. When **roosting at night, bobwhites form a circle on the ground with their tails together and heads pointing outward.** This behavior helps them maintain body heat and keep an eye on threats from every direction. If frightened, the entire covey will flush in all directions.

Unlike other game birds, **bobwhites mate with only one female instead of a harem of hens.** They will nest in high grass, weeds along a fencerow, roadside or stream bank; or in timothy, alfalfa or clover fields. Locations near old farmsteads are perfect (below right). A simple **nest is scratched into the soil and lined with dead grasses.** Two broods may be raised between May and August.

Up to 20 creamy white eggs are laid and then incubated by both parents. **If threatened, the adult may feign an injury like a broken wing, dragging itself away from the nest in an attempt to lure a predator away.** Once they are a safe distance from the eggs the bobwhite will simply fly off, satisfied that its charade has worked to keep the nest safe.

After a little more than three weeks the precocial chicks hatch and are able to run about and feed themselves as soon as their feathers are dry. Fuzzy and well camouflaged, **the parents still protect them at night, and in poor weather, by sitting on top of them.**



## A Simple Review of Gallinaceous Birds



The term “**gallinaceous**” birds may not be familiar to you. But you have probably heard of “**game**” **birds.** Both names refer to the same group of birds. Turkeys, pheasants, grouse and bobwhite (or quails) are all gallinaceous birds.

These are ground-walking birds, usually with lovely mottled brownish, black and white plumage to help them camouflage with their surroundings. Males (roosters or cockbirds) in this order often have special feathers or appendages they can display during breeding season to attract a harem, or group, of females.

The chicks are precocial and raised only by the hens.

Though they are considered ground birds, they can and do fly and even roost in trees. But their flight is usually only for a short, fast flight, calling loudly as they burst up off the ground.

The best known gallinaceous birds is the **wild turkey**. **Benjamin Franklin** was so taken with these birds he **wanted them to be our national symbol** – instead of the bald eagle.

The **male turkey or tom** has a beautiful tail feather that it spreads proudly while strutting for the attention of hen. The tom's have a small, blue featherless head that can change color according to his mood. He also has a **beard of feathers** that dangle from his breast, **red throat wattles and spurs on his legs**. He is our largest game bird.



Although the turkey never did become our national bird, another of our game birds, the **ruffed grouse**, did become **our state bird**. Grouse are chicken-sized birds that live within the dense undergrowth of deciduous and coniferous forest. **Males stand upon fallen logs “drumming” their wings**. The calls echo through the woods during breeding season, thanks to the hollow log.

**Grouse are well-suited to our snowy winters**. They can **dive into snowdrifts** to keep warm or roost under a snow-covered pine branch low to the ground. They also **grow extra feathers around their toes in winter**. These act as snowshoes, allowing them to walk on top of the snow and reach the tree buds, greens and seeds they love to eat.



The **Northern bobwhite or quail** is a bit smaller than a grouse and more plumb. Their beautiful plumage camouflages them well in the overgrown **fields and farmlands** they love to inhabit. They song is their name, **“bobwhite, bobwhite,”** repeated over and over in a clear, whistling tone. Bobwhites are social birds that like to **live in groups called coveys**.

These coveys offer the birds protection when searching for seeds or insects. **When roosting at night they form circles** on the ground with their heads pointing out. In addition to helping the groups stay safer; their close contact helps keep them all warm.

Of all of our game birds, only the **ring-necked pheasant is an introduced species**. These larger chicken-like gallinaceous birds were brought over from Asia about 150 years ago for the purpose of hunting. They are also one of our most colorful birds with coppery body feathers, an iridescent green head, white neck ring, and bright red eye patch and wattles. Their **long, slender tail is pointed**.

One **rooster keeps a harem of hens**. In contrast to his striking plumage, the hens and **precocial chicks** are muted tans and browns. Perfect for a life hidden among the overgrown grasses on the **meadows and farm fields** they love.

