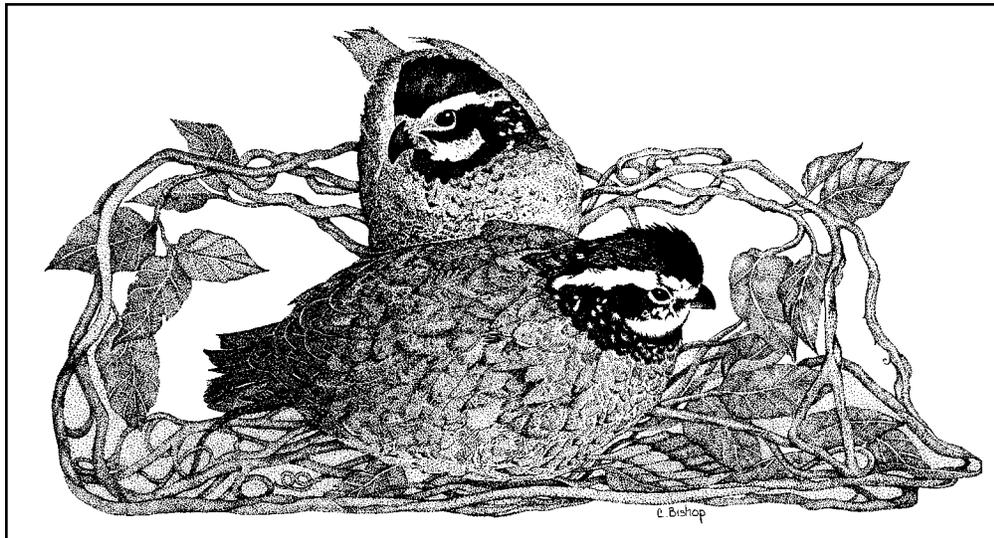
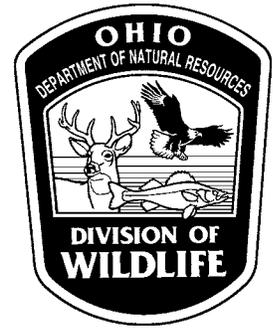


# Northern Bobwhite Quail

Scientific Name: *Colinus virginianus*



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## Introduction

**BOB-WHITE!** The familiar call of the Northern bobwhite has greeted rural Ohioans since the early 19th century. Quail were probably absent from Ohio until early settlers cleared Ohio's extensive forests for agriculture. Early efforts to tame Ohio's vast, foreboding forests resulted in a landscape mosaic that benefited many farmland edge species, including the bobwhite. This agricultural landscape had small crop fields, hayfields, and pastures divided by brushy fencerows and was scattered among numerous woodlots and forest remnants. As a result, the bobwhite expanded its range to nearly every Ohio county by the 1860s.

Like other small game species, quail abundance and distribution is intimately related to habitat quality and weather conditions. Land-use in Ohio in the late 1800s and early 1900s produced abundant high quality habitat and high densities of quail resulted. However, Ohio's quail were at the northern fringes of this game bird's regional distribution. Thus, severe winter weather had the potential to reduce populations and limit distribution. Quail numbers fluctuated dramatically in the early 20th century as their numbers were reduced by the severe winters of 1912-13, 1917-18, 1928-29, and 1935-36.

Subsequent changes in agriculture also adversely affected the habitats relied upon by bobwhite. Removal of brushy fencerows and elimination of woodlots to increase crop field sizes degraded habitat quality. The advent of pesticides reduced the availability of quail

foods (e.g., insects and weed seeds). Despite this declining trend in habitat quality and several severe winters in the early 1900s, Ohio quail populations were able to persist in relatively high numbers, especially in the southern half of the state.

Unfortunately, the winters of 1976-77 and 1977-78 were particularly devastating to Ohio's bobwhite population. Several months of snow cover and below normal temperatures characterized the winter of 1977-78. On January 26, 1978, temperatures fell 40° in five hours and precipitation changed from rain to blizzard conditions with wind speeds of 56 mph gusting to 70 mph statewide! Quail population levels in the fall of 1978 were 90 percent below their previous 17-year average and many counties were completely devoid of quail. The quail hunting season was closed in the fall of 1978.

Quail numbers improved enough in southern Ohio to open a limited quail hunting season in 1984. However, increasing fragmentation of existing quail habitat as a result of development across Ohio's rural landscape and intensive agriculture continue to degrade habitat quality and make dispersal from the few remaining healthy populations very unlikely without wildlife management intervention.

## Description

Bobwhites are relatively small game birds with short tails and mottled reddish-brown plumage that is extremely effective camouflage. They

can be easily identified by their distinctive facial markings, consisting of a throat patch and prominent streak above each eye. On males these markings are white; on females they are a buffy yellow.

## Habitat and Habits

Bobwhite quail are a forest edge species. They are found in rural Ohio where there is a mix of brushy woodlot edges, fencerows, old fields, pastures, meadows, and small crop fields. While quail prefer some overhead cover, the vegetation must be open enough for this small bird to run on the ground and flush out when being pursued by predators. Bobwhites are a challenging and tasty game bird, but like many other small animals they are short-lived. The species has an annual turnover rate of 80 percent, at normal population levels, which means that 8 out of every 10 birds will die annually, whether they are hunted or not.

In late summer, family groups join forming coveys that stay together through fall and winter. Bobwhite coveys roost at night side by side, forming a circle with their heads facing outward to conserve warmth and protect themselves against predators. When disturbed, coveys will flush in several directions so that at least some birds will survive the intrusion. Birds re-assemble by using a covey call that draws each member back to the group.

When quail are on the northern edge of their range, they are susceptible to high overwinter mortality when there are long periods of deep snow cover, rapid changes in temperature and precipitation, and ice storms. Winter habitat for bobwhites includes woods and brushy cover in proximity to food sources like harvested crop-fields, or old fields with seed-producing weeds such as common ragweed, annual lespedezas, beggar-ticks, smartweed, and foxtail. In early spring, coveys break up and pairs disperse to more open cover for nesting.

## Reproduction and Care of Young

Quail begin whistling their distinctive "bob-white" call in Ohio as early as March. By late May most adult males have paired with a female and have begun nesting. The pair builds a dome-shaped nest in a shallow depression in the ground. Grass is the principal nest material used, usually early maturing species such as bluegrass and cheat, or residual cover provided by late maturing species from the previous year such as broomsedge. Bobwhites nest in idle fields, pastures, hayfields, and grassy roadsides.

Vegetation that occurs in fields 3-10 years out of production, an interspersed of grass and herbaceous cover with brambles and shrubs, is ideal bobwhite nesting habitat.

Nests are incubated primarily by females, although occasionally a male will take over incubation and the hen may begin a second nest in a new location. The brood is tended by both male and female. By two weeks of age chicks can fly short distances and hide when in danger. Chicks resemble adults by 15 weeks of age.

## Management Plans

Management practices that would benefit quail include leaving unharvested grain along brushy fencerows for food and escape cover, encouraging odd areas of weeds, grass, low shrubs and small trees for nesting, and planting woody thickets adjacent to feeding areas for winter cover. Ideally, these management areas should be connected to other quality habitat by brushy fencerows that can act as travel lanes.

The Division of Wildlife manages for grassland habitat on many wildlife areas in glaciated Ohio. Portions of some major wildlife areas are managed to provide a mixture of grassland, shrubs, and food sources to benefit bobwhites. Wild quail have been trapped and transferred to several areas with the goal of starting new populations in parts of the state with very low numbers. The Division also assists landowners and conservation organizations to increase grassland habitat on private land. Improvements such as these will help to ensure future generations have the opportunity to enjoy this interesting and popular bird.

## Viewing Opportunities

Northern bobwhite quail are small, elusive, well-camouflaged birds and they are not easily observed. Perhaps the best time to try to see bobwhites is during their spring/early summer whistling period. Quail begin calling "bob-white!" as early as March but peak whistling in Ohio is in June. The bird will often find a high spot, perhaps a fencepost, from which to sing its distinctive call as the dawn breaks.

Good opportunities to see bobwhite quail occur at "Watchable Wildlife" areas including Woodbury Wildlife Area, Killbuck Marsh Wildlife Area, Tranquility Wildlife Area, and Crown City Wildlife Area. Quail can also be found at Rush Run, Indian Creek, Fallsville, Paint Creek, and Spring Valley wildlife areas in southwestern Ohio.

## Do Something Wild!

The Division of Wildlife manages for wildlife diversity in the state. We attempt to create and/or conserve the habitat that will support as wide a diversity of wildlife as possible. Many species like the bobwhite quail are hunted in Ohio, but many more are not. The Division has a special program to manage and research nongame species that is supported by the generous citizens of the state of Ohio. With money either donated through the state income tax checkoff, by the purchase of wildlife license plates, or direct contributions to the Endangered Species Special Account, the Division is able to purchase critical habitat that is essential to sustaining many species of wildlife and to implement special efforts like the reintroduction of the osprey and the trumpeter swan to the state.

Contributions to our Wildlife Diversity Program are accepted throughout the year. To make a donation, please send a check to:  
Endangered Species Special Account  
ODNR Division of Wildlife, 2045 Morse Road,  
Bldg. G, Columbus, Ohio 43229-6693. All contributions, whether made on your income tax return or directly, are tax deductible.

## At A Glance

Mating: Monogamous

Peak Breeding Activity: May and June

Incubation Period: 23 days

Clutch Size: 10-25 eggs; 15 average

Young are Hatched: May through September; peak hatch is late June through mid-July

Young: precocial, leave nest when down is dry; first flight at 2 weeks; resemble adults at 15 weeks.

Number of Broods per Year: 1; if first nest is disrupted, may renest and lay 8-12 eggs.

Adult Weight: 6-7 + ounces

Adult Length: 9-11 inches, including the tail

Adult Wingspan: 14 +- 15 + inches

Life Expectancy: Average less than 1 year; maximum 3-4 years

Movement: Home range radius is 1/4 mile

Feeding period: mostly in morning and evening, except during incubation when it is during midday

Typical Foods: Seeds of corn, soybeans, lespedeza, common ragweed, smartweed, foxtail, sassafras, sumac, poison ivy, and wild grape; also insects

Native to Ohio: No

