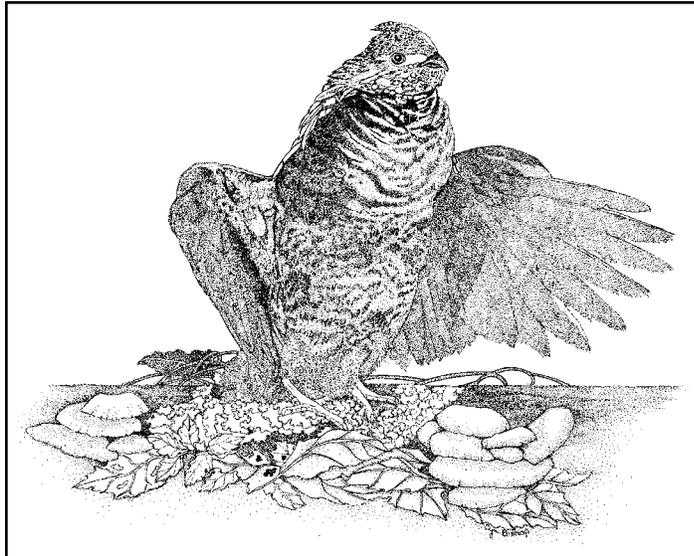


Ruffed Grouse

Scientific Name: *Bonasa umbellus*



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Introduction

The ruffed grouse is the most widely distributed game bird in North America and is found in portions of 39 states and 11 Canadian provinces. It reaches its greatest abundance in the aspen forests of the Upper Great Lakes region and is famous for the 10-year population cycles associated with fluctuations in snowshoe hares and predators such as Northern goshawks and lynx.

Grouse populations in Ohio do not reach the high densities or undergo the dramatic population cycles found in some parts of the range. In good habitat, fall grouse densities may average five to eight birds per 100 acres. Populations fluctuate in response to variations in annual reproductive success and survival. Recent Ohio studies have found the annual survival rate of adult males was 45 – 50 percent; survival of females and juveniles was somewhat lower and ranged from 15 – 35 percent. Most mortality was attributed to avian predators such as Cooper's hawks, great-horned and barred owls, and mammalian predators such as raccoons, foxes, and mink. Hunting had little impact on grouse populations.

The ruffed grouse originally inhabited all of Ohio, but populations were relatively sparse in the virgin forests which covered more than 90 percent of the state. As settlement occurred in the early 1800s, grouse populations increased rapidly as timber was harvested and young forest cover increased. However, as settlement progressed, massive deforestation left only

remnant grouse populations. In the twentieth century, abandoned farmlands reverted to forest and brush in northeast, east-central, and southeast Ohio and provided increased habitat for expanding grouse populations in the 1970s and early 1980s. In more recent years grouse populations have declined to low levels as forests have matured and resulted in lower quality habitat. Presently, grouse can be found in low, but stable, numbers in 40 eastern Ohio counties.

Description

The ruffed grouse is a large chicken-like bird with a fan-shaped tail. Most grouse in Ohio are of the red (sometimes called brown) color phase, although the gray phase occurs occasionally in northeast Ohio. The black ruff on each side of the neck is most conspicuous in the male. A black band, extending across and near the end of the tail is interrupted with a mottled grayish-brown on the central tail feathers in most females and in some males. A fully developed central tail feather will measure (when plucked) more than 6¼ inches in 99 percent of males; it is almost always shorter in females. Another method to separate the sexes is the number of white spots that occur on the rump feathers. Males have two to three white spots on each feather while females have only one spot. Birds of the year can be separated from adult grouse by the appearance of the outer two primaries (flight feathers) on each wing. Juvenile birds do not replace

these feathers in their first fall and the feathers often appear sharply pointed and well-worn. These feathers are replaced each year in older birds and they appear more rounded.

Habitat and Habits

Good grouse habitat includes three general forest types: mixed species stands of hardwood shrubs, saplings, and brush-vine tangles; moist areas with dense clumps of shrubs interspersed with lush herbaceous growth; and young forest stands of mixed hardwoods. Drumming logs are typically found in dense sapling stands that afford protection from aerial predators while the male is drumming. Territorial males are usually associated with a 20 to 40-acre area surrounding a specific log for most of their lives. Hens often nest near openings or trails in second growth hardwoods. Broods are often associated with logging roads that have been seeded to clover or small clearings in the forest with lush herbaceous vegetation during summer months. These areas provide an abundant supply of insects and berries for the growing chicks.

Early in the fall, broods break-up and a phenomenon called "crazy flight" occurs. Young grouse disperse from their natal range and may move several miles to an unoccupied territory. During this time period, the instinct to disperse is so great that grouse have been known to crash through windows. Ohio winters, although comparatively mild, can still be a stressful time for grouse. Dense thickets and small patches of young conifers are especially valuable as roosting cover during winter. When snow depths are greater than 12 inches, grouse will sometimes burrow into the snow to conserve body heat. Many hunters have been too surprised by a grouse bursting out of a snow bank to even get off a shot!

Reproduction and Care of Young

The male ruffed grouse performs his annual spring mating display on a platform – usually a log, but stumps, earthen banks, or large rocks are sometimes used. Standing on the platform, male grouse brace themselves and beat their wings slowly at first, then more rapidly for 8-10 seconds to produce the "drumming" sound – a hollow, low-pitched sound created when air rushes into the vacuum created by their wingbeats. When heard for the first time, people often liken the sound to an engine starting up at a distance. Drumming is used by males to attract mates and to defend their territory against rival males.

After mating with one or more males in early April, the hen selects a nest site near a good food supply. About 14 to 17 days are required

to lay an average clutch of 10 eggs. The hen incubates the eggs without any help from the male for 24 days. Down-covered chicks hatch in the last two weeks in May and are escorted from the nest site by the hen as soon as they are dry. Chicks can feed as soon as they hatch, but they must be brooded frequently by the hen for the first two to three weeks while their flight feathers develop. During this early period, the hen will often charge an approaching predator with ruffs and crests erected, wings spread, and make a hissing sound to protect the brood; other times the hen may lead predators away from her brood with a broken wing display. Since hazards in the wild are many, a hen that has 4 out of 10 chicks survive to the point when broods break-up in September has had good success.

Management Plans

Currently, the Division of Wildlife monitors ruffed grouse population trends through the use of a spring drumming survey, summer brood observations, fall squirrel hunter observations, and a Grouse Hunter Cooperator Survey in which hunters provide information about flush rates and the number of grouse killed per hunt. Additionally, many research projects have provided valuable information on ruffed grouse habitat use and movements, reproduction, survival, hunting mortality rates, and the effects of various timber management practices on grouse populations in Ohio.

Habitat management for ruffed grouse involves increasing the amount and distribution of young forest cover through the use of even-aged timber harvests. A well-planned timber rotation can enhance and maintain grouse habitat for many years. Light grazing can be beneficial to grouse habitat, but overgrazing by livestock or deer is detrimental. Technical assistance for private landowners wishing to manage their land for ruffed grouse can be obtained from the Division of Wildlife or the Ruffed Grouse Society.

Viewing Opportunities

Ruffed grouse are common residents on many of the wildlife areas located in the eastern counties of Ohio. Grouse can be most easily observed drumming during the spring breeding season. Males can be located by following drumming sounds until the bird is observed or flushed from or near the drumming log. Another way to locate a drumming grouse is to search for the presence of fresh droppings on logs that are being regularly used. Blinds for photographing or viewing the birds can be set up close to active logs, but usually must be approached well before daylight to avoid scaring

off the grouse. During summer months, broods can often be found along old logging roads or in lush herbaceous vegetation in small clearings in the forest.

Do Something Wild!

The Division of Wildlife has used money from the Do Something Wild! income tax checkoff to study species of special interest. Through the generosity of Ohio citizens who either donated through the checkoff or made their contribution to the Endangered Species and Wildlife Diversity Fund, the Division is able to sponsor special projects benefiting animals that contribute to the wildlife diversity of the state.

Tax time is not the only time you can help. Contributions to our Endangered Species and 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 tax return or directly, are tax deductible.

At a Glance

Mating: Polygynous.

Peak Breeding Activity: Mid-April.

Nesting Period: April-May; peak of hatch in late May.

Clutch Size: 8 -14 eggs; average 10.

Incubation: 24 days.

Young: Precocial; leave nest when down is dry; first flight at 1-2 weeks; resemble adults at 16 weeks; sexually mature at 10-12 months.

Number of Broods Per Year: 1; if first nest is destroyed, may reneest and lay a smaller clutch of eggs; reneest average 7 eggs.

Adult Weight: 16 - 27 ounces

Adult Body Length, Including Tail: 16 - 19 inches

Life Expectancy: Average less than 1 year; birds that survive their first year often live 2 - 3 years; record age of a wild grouse in Ohio is 8 years.

Home Range: Home range of territorial adult males in Ohio is 20 - 40 acres; home ranges of

adult females are typically greater (50 - 150 acres). When brood break-up occurs in fall, juveniles may disperse several miles to find an unoccupied territory.

Feeding Periods: Feeds mostly in early morning and late afternoon, but active throughout the day.

Typical Foods: Young grouse eat insects and berries; adults will eat parts of more than 100 different wild plants such as bedstraw, cinquefoil, avens, greenbrier, grape, dogwood, ferns, sumac, bittersweet, poison ivy, cherry, hawthorn, hophornbeam, blueberry, blackberry, viburnum, oak, aspen, and hazelnut; no cultivated crop plants.

Native to Ohio: Yes

The ruffed grouse is classified as a game bird and is an important recreational resource in Ohio. Many Buckeye hunters enjoy the challenging sport of grouse hunting - grouse live in thick cover in rough terrain and are elusive in flight. The average Ohio hunter spends more than 30 hours afield to harvest one grouse. Check the current hunting regulations digest for hunting season dates and bag limits. If you are interested in participating in the Grouse Hunter Cooperator Survey, contact the Waterloo Wildlife Research Station (740-664-2745) for more information.

