

RUFFED GROUSE



Ruffed grouse live in 34 of the 49 continental states and in all Canadian provinces. Michigan is an important portion of the grouse range. Often thought of as a bird of the deep forest, grouse actually thrive best in young, aspen forests and brushlands. When aspen is not available, oak, lowland brush, and dense stands of trees are optional habitats. Grouse are a welcome sight at bird feeders in neighborhoods where natural habitat is available. Despite human encroachment, grouse are able to survive.

You can manage for grouse in Michigan if you own 20-40 acres of woodlands, and birds have access to other nearby woodlots. When habitat needs are met, ruffed grouse usually spend their entire lives in an area of 40 acres or less. If critical habitat is not available, grouse will disperse up to several miles in search of a new home. Birds are basically solitary and do not collect in coveys like bobwhite quail, although several grouse may feed or roost together. Be aware that populations fluctuate even when habitat needs are met.

Life Cycle

Adult males establish territories as small as six to 10 acres and aggressively defend them against other males during the breeding season. After territories are determined, males select a log, stone, or

earth mound from which to display in spring. Grouse beat their wings which results in a putt-putt-putt sound similar to a small gasoline engine starting up. This display is called "drumming" and is used to warn other males and attract hens. Drumming goes on all year but increases in spring. The male grouse chooses a drumming site that has the following characteristics: a large log for good visibility located in thick cover of young saplings or brush for protection.

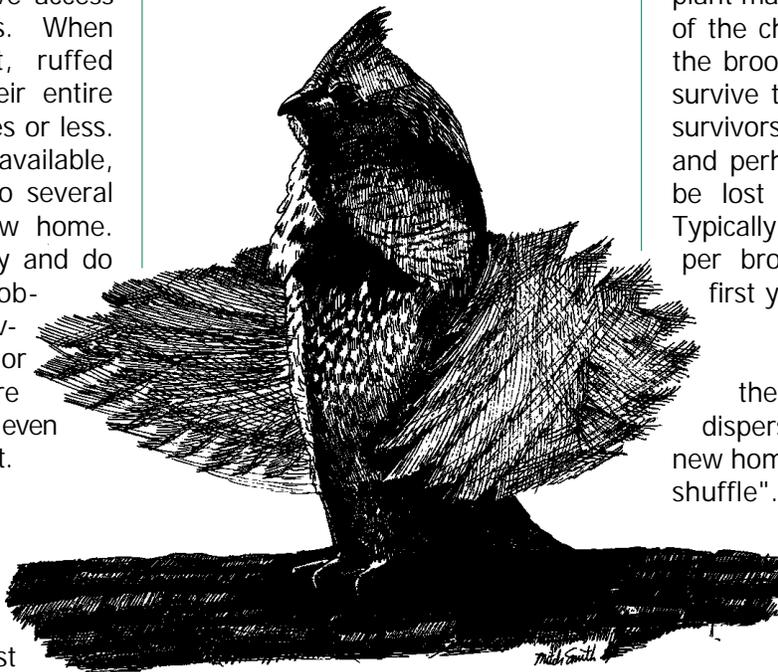
Hens usually nest within a half-mile of their mates. After hollowing out a depression in the leaf litter at the base of a tree or stump,

the hen lays one egg each day until her clutch, which numbers from eight to 14 light-colored eggs, is complete. After the last egg is laid, she incubates the clutch. Hatching occurs in 24 to 26 days.

Soon after hatching, the chicks follow the hen to a summer brood range, which can be several miles away. Ideal brood habitat is dense stands of brush, young aspen, and hardwoods, or lowland alders, with the ground clear of thick, low-growing vegetation.

Chicks feed heavily on insects during the first few weeks of life. Gradually their diet shifts to green plant materials and fruits. Mortality of the chicks is high. Only half of the brood hatched in late May will survive to mid-August. Half those survivors will not make it to winter, and perhaps one or two more will be lost by the following spring. Typically, only one to three birds per brood survive through their first year.

At 16 to 18 weeks old, the fully-grown young grouse disperse from family units to find new homes, which is called the "fall shuffle". During this period of movement grouse fill available existing habitat, and are vulnerable to predators and human hunting. The first to leave are the young males, which may travel as far as 4 1/2 miles. Young hens



A drumming log is a necessity for attracting hens in the spring.



leave the family about two weeks after the young males, and they may disperse 15 or more miles.

Grouse populations fluctuate according to weather trends, food availability, predation, and other reasons not fully understood. Evidence suggests the high-to-low population cycle repeats itself every 10 years.

Habitat Management

The best way to attract grouse onto your property is to offer habitat that meets the grouse's needs for food and safety. Optimum ruffed grouse habitat should include brushy areas, young aspen stands, mature aspen stands with an understory of hazel or ironwood, and dense sapling aspen stands. Oak, conifers, and lowland brush and trees are an option when aspen is absent.

The best grouse habitat is created when a forest with aspen is clear-cut every 40 to 50 years in small dispersed patches. Refer to the **Aspen/Birch** chapter in the Forest Management section. Aspen trees 15 years and older provide the most important year-round food sources in the form of green leaves, flower buds, and catkins.

During winter the flower buds of aspen become the staple grouse food, but winter catkins of hazel and those of willow and birch are also eaten.

Aspen younger than 12 or 15 years provide the thick, dense cover that helps protect nesting grouse and hens with broods from aerial predators (hawks and owls) and land predators (foxes and coyotes). Therefore, the key to more grouse is to create varying ages of aspen, when possible, and a variety of hardwoods and brushy covers when aspen is not available. A grouse can be sustained in 10 to 20 acres if the habitat is ideal.

Management opportunities for ruffed grouse and other forest wildlife in oak forests depend, in part, on the composition and arrangement of the principal tree, shrub, and herbaceous food and cover plants. A mixture of oaks, aspen, and conifers are beneficial to grouse. Providing a dense understory and overhead cover, these habitats are most productive when they are 10-15 feet in height. However, it is important to avoid a domination of one species within a woodlot mixture - especially hardwoods and conifers as this may reduce the potential movement of



grouse onto your property.

Species composition and density also determine the long-term capabilities of your woods in sustaining grouse. Tall shrubs, greater than 5 feet, provide year round food and cover. Recommended species include hazel-nut, dogwood, witch hazel, serviceberry, and nannyberry. Maintenance of dense young forest should be the highest priority of grouse habitat management. In addition, ground cover such as blown down trees and debris, also provide substantial cover and necessary drumming sites.

Oaks can be maintained by cutting 30 to 80 percent of all trees, except saplings. However, it is also important to leave small clumps of trees for seed such as aspen, birch, and ironwood. Oak cuts should be 5 to 20 acres in size. They can be as large as 40 acres as long as they are shaped irregularly. Spacing between cuts of the same age should exceed 600 to 900 feet.



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Grouse enjoy eating nuts and berries and gain cover protection from the shrubs that produce these foods.

In southern Michigan, grouse will inhabit lowland hardwoods such as red maple, cottonwood, white ash, swamp white oak, pin oak, sycamore, and black gum if there is sufficient understory growth. Opening the canopy by selective cutting will allow sunlight to the ground and stimulate ground vegetation necessary for cover and food for grouse, rabbits, deer, and other wildlife species.

Establishing a lowland hardwood stand beneficial to grouse can be accomplished by selectively harvesting in a three stage rotation within a 30 year cycle. Vertical cover, of seedlings and saplings, and 20-30 year old poles, along with the horizontal cover provided by shrub and herbaceous growth are all needed. The 30 year rotation will at all times retain 1/3 of the stand in cover less than 10 years old. These strips of herbaceous growth, paralleled by pole and saplings stands, are intended to provide the mixed food and cover needs for a greater variety of wildlife.

If there are no aspen, oak, or lowland hardwoods on your wooded property, grouse may still be attracted to woody plants such as apples, crabapples, hawthorn, wild plums, dogwoods, nannyberry,

raspberry, blackberry, sumac, grape, willow, cherry, hazelnut, and ironwood. Make small clearcuts no larger than 2 1/2 acres in size in the interior of the woods, sparing the above species.

The result will be an explosion of dense thickets of young trees and shrubs, which will attract grouse.

You may consider transplanting aspen sprouts from another location or planting aspen seedlings, which will grow in the newly created open sunlight. Make sure the soil is conducive to aspen. Also, protect young trees with guards to discourage browsing by deer, rabbits, and mice.

Whenever you make a clearcut for grouse, be sure to leave one log per acre as a potential drumming site. The log must be at least 10 inches in diameter and cut at least 3 feet from the ground so as to leave a sufficiently sized stump. Eventually young trees will grow over the log, and a drumming site will develop.

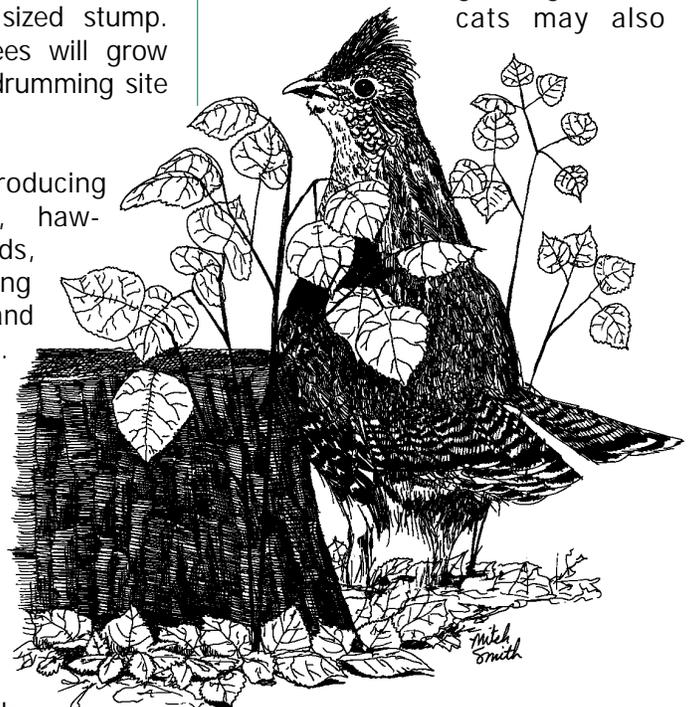
Plant fruit-producing shrubs (crabapples, hawthorns, dogwoods, sumac, etc.) along woodland edges and within openings. Encourage these and other shrubs by cutting away competing growth, thinning, and pruning if necessary. Protect the smaller shrubs with mouse guards (1/4-inch mesh wire or sheet metal 12 inches high) and deer and rabbit guards (1-inch mesh

wire or sheet metal three to four feet high). Mow open areas and trails and plant with mixtures of clover, legumes, and grass.

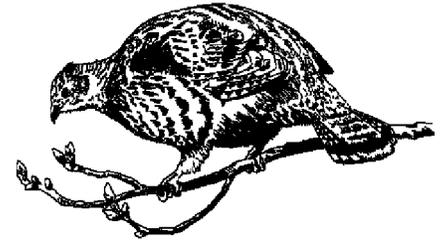
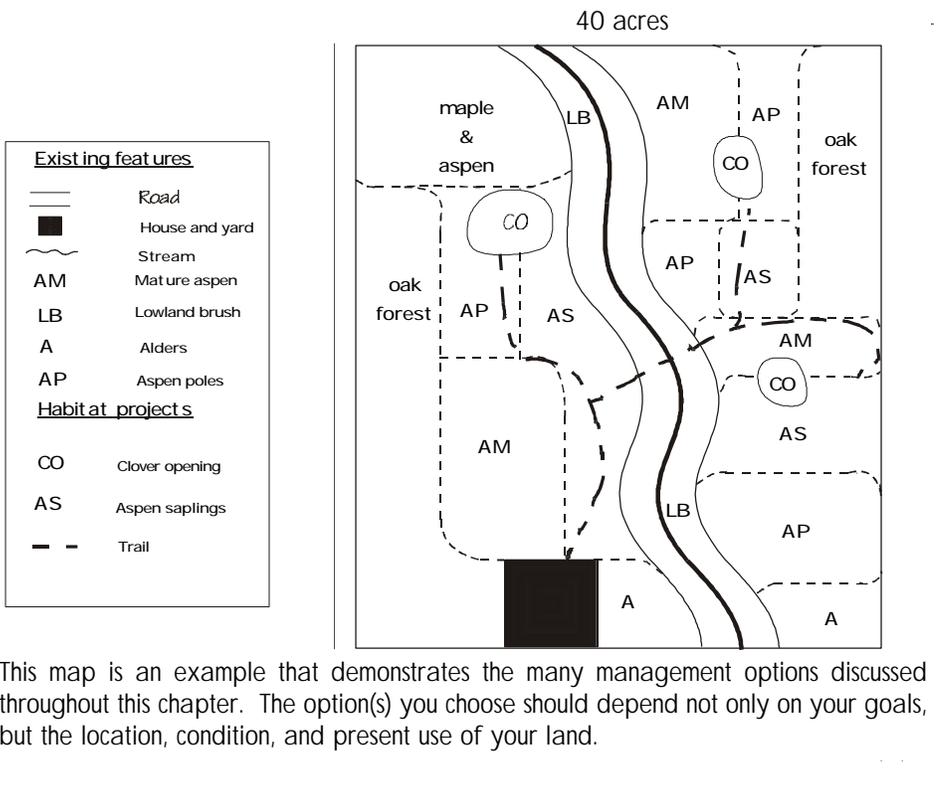
Concerns

No matter how you manage your property for wildlife, your decisions will always have impacts. For example, clearcutting aspen or oak stands for grouse will discourage mature forest loving wildlife such as woodpeckers, some warblers, and squirrels. For this reason, it is important to have an overall management plan with specific goals in mind.

You should also be aware that creating or enhancing habitats may invite unwanted guests. For example, if you plant trees and shrubs, in the hopes of providing food for grouse and songbirds, you most likely will also lure deer, rabbits, and mice that can become a nuisance by eating the new plantings and even killing them. Free-roaming dogs and cats may also



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be attracted to any habitat that suddenly has an abundance of wildlife.

FOR ADDITIONAL CHAPTERS CONTACT:
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Private Land Partnerships: This partnership was formed between both private and public organizations in order to address private lands wildlife issues. Individuals share resources, information and expertise. This landowner's guide has been a combined effort between these groups working towards one goal: Natural Resources Education. We hope this guide provides you with the knowledge and the motivation to make positive changes for our environment.

FOR ADDITIONAL ASSISTANCE: CONTACT YOUR LOCAL CONSERVATION DISTRICT