

INTRODUCTION TO SPECIES MANAGEMENT



Because of its varied landscapes, soil and habitat cover types, and vast water resources, Michigan supports a wide diversity of wildlife species. The chapters in this section will help you create, restore, or enhance habitat on your property to

attract the kinds of wildlife that interest you. There are individual chapters on specific species throughout Michigan including wild turkeys, deer, grouse, woodcock, rabbits, pheasants, quail, squirrels, and waterfowl. Other species included are black bears, bats, and frogs, turtles, and snakes. Other chapters included are songbirds, bluebirds, woodland birds, wetland birds, and grassland birds.

Proper wildlife management considers species habitat requirements, and includes knowing how plants and animals respond to changes that occur to their habitat, both natural (windstorms, floods, succession) and human induced (timber harvest, haying). Your management plan can make a critical difference for targeted species or communities of species. The kinds and numbers of wildlife that use your land can very well be the direct and indirect result of your efforts. For these reasons it is important to understand your property's potential, to know its history, its soils, and to be able to identify its plant and animal species.

Whenever possible consult with and work with your neighbors. After habitat destruction, habitat fragmentation is a serious threat that many wildlife encounter. If you are managing your land primarily for turkey, and your neighbor wants more pheasants, your plans could cancel each other out. Therefore, finding ways to work



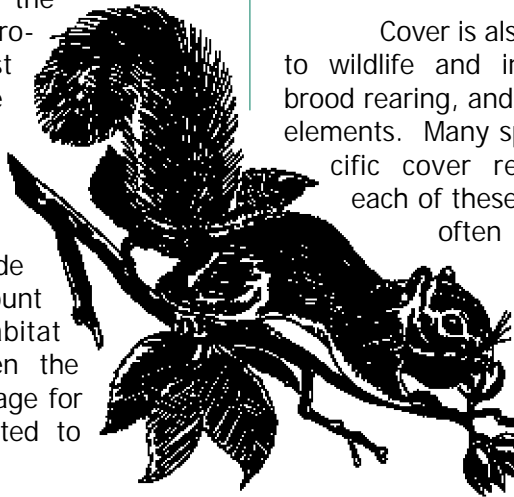
with your neighbors may result in more effective wildlife plans.

Habitat Considerations

Each species requires different variations of the four basic habitat components: food, water, cover, and space. In order to determine which species will benefit from your land, and subsequently which will not, you must determine what each species needs for survival. Instead of picking a species that you want to see on your property, you should first determine what habitats occur there, or could feasibly be created, and then decide which species are likely to benefit from enhancement of these habitats. For example, if your property and surrounding areas are comprised primarily of grassland and agricultural fields, it is not realistic to want to manage



your land for turkeys. You would be wiser to manage for pheasants or other grassland birds. Once you have determined what species are likely to frequent the habitat you can provide, you must determine the specific habitat need of the species you want to feature. If you provide the correct amount of required habitat components, then the species you manage for should be attracted to your property.



The presence of food will greatly enhance the attractiveness of your property. Food can best be provided through plantings of mast producing trees and shrubs, grasses, and flowers. These can be planted as borders on your property, in gardens, or as the main component of your land. There are also many ways to enhance the food that your land already produces with active management tools such as timber harvesting, mowing, and burning.

Water is another component essential to a species survival. The restoration of a wetland, creation of a pond, or maintenance of a stream are great ways of providing this component. An area with

water will attract a wide variety of species. Since Michigan is home to many lakes, and streams, water is usually not a limiting factor.

Cover is also very important to wildlife and includes nesting, brood rearing, and shelter from the elements. Many species have specific cover requirements for each of these uses, which are often seasonal. For example, establishing a stand of switchgrass, will provide winter shelter for pheasants. It is important to establish year round cover for a species in order to provide adequate habitat.

Space is another requirement that must be met. Some species require a small amount of living space. However, other wildlife may need large tracts of land to survive. You must be aware of the amount of space a species needs, and how your management activities will effect them. You must also be concerned with the edge sensitivity of certain species. For example, in managing for turkeys you decide to create openings in your forest to regenerate oaks. However, this decision would impact woodland birds that require a large amount of undisturbed forest.

Succession and Wildlife

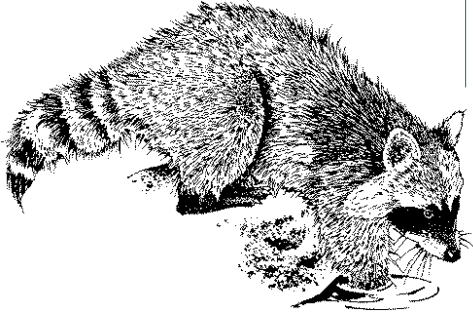
"Succession" is the word used to describe how land changes over time, with or without our help. Each successional stage provides different habitat components. Natural succession does not only move forward, but is also set back by natural disturbances such as wildfire, windthrow, flooding, disease, and storms.

As habitats change, forward or backward in succession, different types of wildlife are attracted to them. Begin by understanding the five basic stages of succession and the kinds of wildlife attracted to each. Keep in mind that the species appearing in different successional stages vary in different parts of the state, with different soils, and with different natural disturbances. The species described in the following example are geared towards southern Michigan, but the concept is the same throughout Michigan.

Bare soil is the starting block, and the first plants to establish themselves in bare soil are annuals such as ragweed, lambsquarter, and foxtail. This successional stage provides seasonal nesting cover for killdeer, horned larks, and other small songbirds, as well as brood-rearing cover for pheasants and quail.



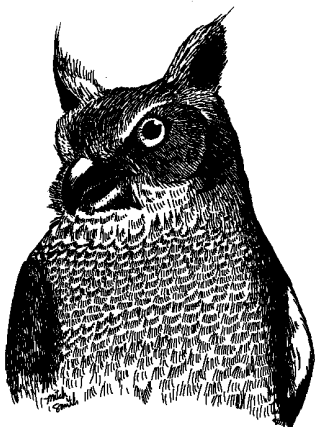
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The next successional stage is the perennial grasses and forbs. These include goldenrod, asters, black-eyed Susan, and many kinds of grasses. This provides food and cover for species such as mice, rabbits, skunks, foxes, hawks, owls, butterflies, meadowlarks, bobolinks, and other songbirds.

After a few years shrubby plants such as sumac, dogwood, and blackberry begin to invade the area. It now becomes more attractive to raccoons, opossums, deer, grouse and songbirds such as cardinals, brown thrashers, and song sparrows.

As succession continues the first tree species move in such as cottonwood, aspen, and chokecherry. During the early



stage of this forest development, young seedlings provide browse for rabbits and deer. The increasing amount of vertical structure attracts thrushes, ruffed grouse, blue jays, and orioles.

As the forest grows over time, more shade-tolerant trees like beeches and maples invade. Squirrels, wild turkeys, deer, and wood ducks are examples of wildlife that eat the nuts produced by these trees, which also furnish den cavities for screech owls, squirrels, raccoons, and woodpeckers. There are several different tree species in these stages that are dependent on the forest type that grows there.

You may decide to let succession run its course. However, you can also manage your land for any stage of succession. This is dependent on the current conditions of your land in conjunction with your goals. There are several ways to change successional stages such as burning, mechanical alterations, chemical use, or planting. These tools are either used to set back succession by removing unwanted species, or to speed up succession by promoting the growth of desired species.

Prescribed burning is the well planned and controlled use of fire. A hot fire will set back succession, while a cool fire can advance succession in a young forest such as Jack pine. Mechanical alterations include mowing, cutting, disking, and plowing. This is primarily used to set back succession, but can also be used to increase the growth of species such as aspen, sumac, and autumn olive that spread more rapidly when cut. Chemicals can also be used to speed up or set back succession. Herbicides are

used to remove vegetation, either to set back succession or to encourage the growth of desired species. Fertilizers are also used to enhance plant growth. Plantings are often used to advance succession. Refer to the chapters on **Prescribed Burning, Timber Harvesting, Grass Planting, Tree and Shrub Planting, and Grain Plot Planting** for more information.



Management Implications

Regardless of what you and your neighbors do to your land, certain species of wildlife will likely visit, and some will possibly occupy the habitat you have created. Therefore, species that use your property reflect both the habitat niche available as well as the collection of diverse habitats within the area.

As your property and the land that surrounds it change, so will the wildlife that use those landscapes. For every management decision you make, there are some species that will be negatively effected. For example, if we plant native prairie grasses to encourage

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pheasants, quail, grassland and ground nesting songbirds to use the habitat, we will discourage forest-loving wildlife such as thrushes, woodpeckers, and squirrels. You cannot manage for both species in one area as they have different habitat needs. Therefore, you must be aware of the trade-offs involved when making management decisions. Determine what species will be effected, and then decide if the benefits will be greater with your management plan. If not, then you may need to consider other alternatives.

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 attracting wild turkeys and songbirds, you will most likely also lure deer, rabbits, and mice that can become a nuisance by eating the new plantings. Free-roaming dogs and cats may also be attracted to any habitat that suddenly has an abundance of wildlife.

In summary, before providing habitat for wildlife, you must know what they need to survive. Providing the correct habitat requirements for a certain species will encourage them to visit and possibly occupy your land. It is important to know what habitat your land can provide before deciding which species you want to manage for. Also, you must be aware of the trade-offs that are involved, or what species will be impacted, in your management plan.

**FOR ADDITIONAL
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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*