Forestry/Wildlife
Myths and Misconceptions

Every year in autumn thousands of Mississippi sportsmen head for fields to hunt their favorite game. Except for a few wildlife species, most of this hunting is done in the forests of Mississippi. Mississippi's forests provide the habitat (food and cover) our wildlife need. The better the habitat, the healthier and more plentiful the wildlife.

Forest landowners in Mississippi can make their forest land more productive for native wildlife, especially game species such as deer and turkey. All forests are different and are probably the most variable natural resource we have. We have pine forests, hardwood forests, and pine-hardwood forests. Some forests are old with large trees, and others are young, with small sapling trees. Forests come in all shapes, sizes, and species. Since forests are not the same, the wildlife habitat they provide is not the same.

How good is the wildlife habitat on your forest land? Can you improve this wildlife habitat? What effect do forest management practices have on your wildlife habitat? These are just a few of the questions many landowners are asking themselves, especially today, with the rising value of timber.

Forest landowners, with the help of foresters, can improve the wildlife habitat of their forest lands and, at the same time, improve their timber. Many landowners and outdoorsmen fancy themselves knowledgeable in timber management just because they own a tract of timberland or hunt often. Others seem to believe that knowledge of timber management is hereditary, and since granddad made a timber sale, they automatically know how it's done.

Many forestry/wildlife myths and misconceptions have been passed down through the years from misinformed individuals. Forestry myths and misconceptions can cause forest landowners to hesitate about managing their forest land properly, and they are damaging to Mississippi's timber industry.

This publication discusses some widespread myths and misconceptions about forest management. We will try to replace rumor and myth with fact and understanding. The forest resources of Mississippi are too valuable to be managed by hearsay. As forest landowners, we must learn what our forest factory is worth and how to manage it to its full advantage.

Misconception #1: Fire is bad for wildlife.

Wildfires can be very bad for wildlife and timber, but **prescribed burning** in pine stands improves wildlife habitat.

Prescribed burning is the deliberate use of fire under controlled conditions to accomplish certain forest-land objectives. It is one of the best wildlife habitat improvement techniques available to forest managers.

Browse plants (hardwood sprouts and other forage plants) soon grow beyond the reach of deer in managed pine stands. Prescribed burning at 2- to 3-year intervals keeps browse within reach of deer and stimulates the growth of green, succulent plants. Also, fire improves the nutritional quality of deer browse for 2 to 3 years. Quail and turkey also benefit because heavy brush is removed and annual plants are encouraged to grow.

Prescribed burning used with pine thinnings can dramatically improve wildlife habitat. Research has shown it can result in the production of more than five times the available wildlife food.

Misconception #2: Pine forests are biological deserts and there is nothing there for wildlife.

Outside the Mississippi Delta and other major river bottoms, the majority of Mississippi's

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land is better adapted to pine, and, in most cases, forest landowners and forest industries should be managing this land for pine.

The debate over hardwood or pine, however, is not the most important issue. How we manage our pine stands is really the most important issue. About half of our forests are pine, and because many other forests and fields are now being converted to pine plantations, many sportsmen are afraid wildlife habitat is being destroyed. Through proper forest management, these pine plantations can provide good wildlife habitat and may actually provide more wildlife food for certain game species such as deer, turkey, and quail.

By now you may be thinking of those pine plantations you have seen that are just rows of pine trees with nothing but pine needles on the forest floor. Pine plantations such as these have been called "biological deserts." We have all seen pine plantations in this condition, and they definitely are not producing very much wildlife food, but this situation does not and should not go on in a properly managed pine stand.

Unfortunately, the picture most of us see when pine trees are mentioned is one of dense, dark rows of pine trees. Pine plantations go through many stages, just as a person goes through many changes from birth to adulthood. Throughout the lifespan of a pine plantation (which may vary from 30 to 60 years), wildlife habitat is constantly changing.

For the first 5 to 6 years after pines are planted, a wide assortment of grasses, forbs, and browse in the understory provide lots of food for deer and turkeys. In this period, a pine plantation can be very productive for wildlife, especially if these young pine stands are mixed with other habitat types, such as older pine stands, hardwood stands, and pine-hardwood stands.

After this first growth period, management plays a key role. The pine tree crowns soon grow close together, and sunlight is shaded from the forest floor. Ultimately, the grasses, forbs, and browse plants will start to disappear because they need sunlight to grow. If left unmanaged, the "biological desert" perception of pine stands results. This is where management in the form of thinnings plays an important role.

As soon as pine plantations reach pulpwood size, between 15 to 18 years of age, they should be marked and thinned. Properly thinned stands will allow production of substantial amounts of forage. Herbaceous plants respond to the increased sunlight and produce food for wildlife.

Pine stands should be thinned every 5 to 6 years to maintain production of browse plants. After three to four periodic thinnings, the stand should be ready for a harvest cut and, once again, reforested. Over the entire life of a pine forest (30 to 60 years), only 5 to 8 years could actually be in the dense, dark, unproductive stage most people think of in a pine plantation.

To improve our wildlife habitat, we must learn to manage our pine stands. Our main soil types dictate that we grow pine trees. If we manage these pine trees, we will not sacrifice good wildlife habitat. Properly managed pine stands can and do produce very good wildlife habitat for most of our game species.

Misconception #3: All hardwoods are good for wildlife.

Are all hardwoods good for wildlife? The answer to this question would have to be "not necessarily." Many hardwood species provide little value to wildlife, although others provide tremendous benefits.

Ask yourself these questions: "What hardwood species are beneficial?" "Do these hardwood species exist in my favorite hunting area?"

If you are interested in deer, turkeys, or squirrels, oak trees are the species you need to look for. Oaks produce acorns, one of our most valuable and nutritious wildlife foods. However, acorn production each year depends on two important factors:

1. The age of oak trees in a hardwood forest is very important. Most species of oaks in Mississippi begin producing acorns after about 25 years. Therefore, a hardwood forest must have oak trees more than 25 years old to ensure acorn production. Does your favorite hardwood forest have oak trees this old?
2. The type of oak trees is also very important. The two types of oaks in Mississippi are red oaks and white oaks.

The major difference in red oaks and white oaks is in acorn production. White-oak acorns mature in one growing season, or every year. Red-oak acorns usually mature in two growing seasons. White oaks are often prolific seeders or acorn producers, but good acorn years do not occur regularly, and sometimes several years may pass without an acorn crop. Red oaks are generally more reliable acorn producers than white oaks, but red-oak acorn production can also vary from year to year.

Some red oaks common to Mississippi are cherrybark oak, southern red oak, shumard oak, nuttall oak, black oak, and water oak. White oak, overcup oak, post oak, and swamp chestnut oak are some of the white oaks found in Mississippi.

The composition of oaks in a hardwood forest does affect the dependability and size of acorn crops each year. Do white oaks, red oaks, or both grow in your favorite hardwood hunting area?

Misconception #4: Cutting only big trees leaves the younger trees room to become more valuable.

You have probably heard this statement, "The best way to harvest (or sell) timber is to cut the big trees and let the little ones grow." Another way to express the same thought is, "When I sell timber, I sell only the trees bigger than 14 inches in diameter." These statements reflect the common misconception that large trees are old trees and small trees are young trees.

Larger trees are not necessarily older than small trees. In fact, often the larger trees in a stand of timber are about the same age as the skinny trees. The large trees are bigger

because they grew faster. Prove this to yourself the next time you see a pine plantation. The diameters of the trees in the plantation will vary in size from small to large, even though all the trees were planted at the same time. This can also be true in natural stands.

The rate at which a tree grows depends on species, soil fertility, competition, and other factors. It's a mistake simply to "cut the big trees and let the little ones grow." You may be harvesting the fastest growing trees and leaving the poorest ones.

Suppose you had a herd of dairy cows. Each year you sold the cows that produced the most milk and kept the poorest producers. How long would you be in the dairy business? Not long, because soon you would be left with only dry cows! When you harvest your timber by cutting everything larger than a specified diameter (for example, 14 inches), you are doing the same thing to your timber that was done to the dairy herd. This technique is called "diameter-limit cutting." It is one of the most common ways timber is sold and harvested in Mississippi. Many Mississippians have sold timber this way only to realize later the "little trees" that are left are very poor quality and unable to reseed the harvest area. Often the only alternatives available afterward are expensive site preparation and planting or leaving the land cut over and out of production.

Misconception #5: Clearcutting is bad for wildlife.

Clearcutting is OK! Did you feel upset when you read that? Did you get angry? Somehow, over the last 10 or 15 years, we have been conditioned to respond negatively to the suggestion of clearcutting. Let's look at the facts as we consider clearcutting's place in Mississippi wildlife management.

As a starting point, let's consider clearcuts in general. Most people think of clearcutting as the end of a forest. Foresters regard clearcutting as a way to reproduce or begin a new stand. Clearcutting is the complete removal of all trees from a designated area and is the best regeneration method for sun-loving or intolerant tree species, such as southern pine and many valuable hardwood species.

Many oak species that are most valuable for wildlife are very shade intolerant. This means they must have open sunlight to regenerate and grow. In other words, they do not reproduce under other trees in a forest. This can and has caused loss of good hardwood forests for wildlife.

When hardwoods were harvested in the past, and in most cases when harvested today, the larger trees were cut and smaller trees were left. This is not good forest management, and it is also poor wildlife management. Because good oak species are shade intolerant, they usually are not found in hardwood understories. Therefore, when the large oak trees are cut, they usually are replaced by other hardwood species less valuable to wildlife. This is why wildlife managers sometimes recommend small clearcuts in hardwood stands. The small clearcuts provide habitat diversity, understory browse, and plant growth, and most importantly, clearcuts provide for the regeneration of valuable oak species that require open sunlight. Have you taken a good look at the species composition of your favorite hardwood forest lately?

Clearcutting is a valuable management tool for foresters and wildlife managers. Many wildlife species need diversity in their habitat. That is, they need open areas, large timber, and herbaceous vegetation in their natural range. Often this natural range is relatively small, and it is hard to find these conditions on a small area. By the proper use of clearcutting, you can maintain this diversity, and you can create and maintain the "edge effect," where two of the conditions meet.

Good clearcuts for wildlife are small, irregular in shape, and well-distributed over the tract of land being managed. Also, streamside management zones should be left where streams run through these cuts. You can use the clearcut to maintain the diverse habitat conditions required by wildlife while practicing good forest management.

Contrary to popular belief, clearcutting does provide some benefits for many of our most important game species. For rabbits and deer, there is an abundance of food plants. Brushy conditions also are available for rabbit nesting and cover. Quail find food plants, thickets for nesting, and open vegetation. Cleared areas offer turkeys open grassy areas for summer food and brood rearing, as well as brushy areas for nesting. Clearcutting, however, virtually eliminates squirrel habitat and should not be used if squirrels are the major management consideration.

If you consider the different age classes of trees on your property, and if you properly design and execute your clearcuts in terms of size and shape for maximum "edge," interior diversity, and spacing, you will see benefits to game populations. Let's put this misconception to rest. Clearcutting is not bad for all wildlife. In fact, when done properly, clearcutting provides many positive benefits for game.

Misconception #6: Foresters are converting all our hardwood areas to pine.

Uninformed people often make this statement. Sometimes you hear, "Timber companies are cutting all our hardwoods!" or "We would have more hardwood forests if we did not have so many timber companies, foresters, and sawmills!"

It is true that many acres are being converted to pine from low-grade, off-site hardwoods to meet landowner and industry objectives and product demands. In addition, timber industries are practicing more intensive pine management. Hardwood forests cover 51 percent of Mississippi's forest land, and the number of hardwood forest acres has increased 10 percent between 1987 and 1994. The number of pine forest acres increased 20 percent in that period.

The real culprit of hardwood losses is the conversion of hardwood forests to other uses, such as agriculture, housing developments, and road construction. A glaring example of this is the Mississippi Delta. Between 1957 and 1977, more than 530,000 acres of bottomland hardwoods were cleared for agricultural purposes.

Misconception #7: It is good hardwood land if white oaks are growing on it.

The majority of the hardwood trees in Mississippi grow best on moist, fertile soils. This is one reason bottomland hardwood forests are so productive for wildlife. These soils are very fertile and result in good wildlife habitat.

Good hardwood sites are found in stream bottoms, small drainages, coves and hollows, and generally the lower one-third slope on hill land. The soil on these sites will produce good growth of hardwood trees and also of understory plants, which are very important to many wildlife species, such as deer and turkey.

Hardwoods do not grow very well on dry, sandy, well-drained soils. Hardwoods, including white oaks, however, do grow on these sites but do not produce the quality of wildlife habitat we see in bottomland hardwoods. Soils dictate how productive hardwoods are for wildlife, and these sites have very poor soils for hardwoods.

If you are planning a hunting trip, be sure to look closely at the hardwood forest where you hunt. If it is on steep, dry, sandy soils, the wildlife habitat it provides may not be as good as you expect.

The amount of food produced in a hardwood forest is determined by the soil type. Good hardwood sites (moist, fertile soils) produce more nutritious food for wildlife. Acorn crops are usually heavier and more consistent on good hardwood sites. Poor hardwood sites produce a lot less food for wildlife, and acorn crops tend to be lighter and more sporadic. Here again, it is because dry, sandy, well-drained soils are poor hardwood sites. Trees on these sites are also of less value and quality for timber.

All plants and trees have their place and value, but many hardwood species provide little value to wildlife, especially if growing on poor sites. These poor sites are referred to as "off sites." Even though oaks grow on these "off sites," this does not mean it is good hardwood land.

Misconception #8: If you have plenty of mast-producing oaks, you don't have to worry about providing wildlife food.

Although many species of wildlife feed on acorns, acorns and other mast are seasonal and sporadic. Deer, for example, must depend on year-round browse plants for their food supply.

The two basic wildlife food-producing areas in a forest are the trees and the forest floor. Hardwood trees produce acorns, nuts, berries, and fruits. Plants growing under hardwood and pine trees produce other food sources: grasses, forbs, fruits, and browse.

Acorn production in Mississippi is very unpredictable. This makes it difficult to manage wildlife populations because this food source varies from year to year. To add to this problem, acorn production by oaks depends on soil types. Good hardwood sites produce more acorns than poor sites.

Deer and other wildlife must find food year-round, and, at best, acorns will be available for only a few months. Other food sources must be available. These other food sources are normally found on the forest floor. Forest management usually enhances this food source. For example, thinning or harvesting trees allows sunlight to reach the ground. The result is a great increase in grasses, forbs, and browse on the forest floor.

Acorns and other mast are very nutritional and are beneficial to many wildlife species. However, unless other food sources are available, acorns by themselves are not nearly enough of the total food many wildlife species need.

Misconception #9: We can't manage timber and wildlife on the same acreage.

Another statement similar to this is, "We would have more good places to hunt if it weren't for foresters."

Nothing can be further from the truth. Sound timber management practices will create a dynamic forest habitat that can be modified to meet specific wildlife objectives.

Thinning pine forests increases timber growth on future crop trees but also increases understory browse and plant growth for wildlife. Prescribed burning benefits timber but usually benefits wildlife even more. Fire lanes protect timber from fire and provide logging roads for future harvests, but they also provide good wildlife food plots if planted in wildlife plants. Clearcutting timber is part of growing a crop of trees and also of beginning a new forest. If done properly, clearcuts can provide food, cover, edge, and diversity to wildlife habitat.

Good forest management, in most cases, will enhance wildlife habitat for most of our game species. It is not the answer to all wildlife habitat problems, but forest management and wildlife can co-exist on the same acreage with each benefiting from forest management practices.

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