

Following Wild Turkeys Through the Seasons

— *In Our Southern Pine Forests.*

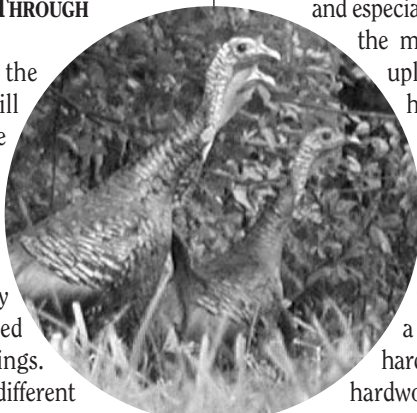
ARE YOU A HUNTER, LANDOWNER, or landmanager with an interest in having wild turkeys in your favorite block of woods? If your dealings have landed you in an area having pine trees, whether they are naturally regenerated, mixed with hardwoods, or plantations, you will want to understand what turkeys need and “look for” in our southern pine ecosystem to survive and maintain their populations.

The scientific community, thanks to sportsmen and other wildlife supporters, has accumulated decades of wild turkey research and findings in southern pine forests. We will present some of research’s landscape level findings that could help turkey enthusiasts in our state to manage their property for turkeys and other wildlife.

FOLLOWING TURKEYS THROUGH THE SEASONS...

■ **Summer:** During the summer, turkeys will readily use certain pine forests. Some research has shown that they prefer these areas during the summer—especially when the piney woods are interspersed with managed openings.

However, among the different pine forest types, those with wide stocking densities (e.g., 10’ x 10’ or 12’ x 12’) that have been thinned and then prescribed burned will provide quality habitat for turkeys and many other wildlife species. Of these piney woods, turkeys prefer thinned timber stands that are 15 years of age or older. In fact, research has shown that they avoid pine plantations that are 6 to 13 years old. In pine plantations, this time period is typically when the stand is too thick for access by turkeys or the upper pine canopy



has closed and very little light reaches the ground. This lack of light prevents herbaceous ground vegetation from growing, which in turn provides very little food or cover for wildlife.

However, if a stand is managed properly, these piney woods would be thinned, allowing for a new burst of understory growth to occur. Periodic prescribed burns will stimulate new growth and prevent the understory from becoming too thick for turkeys to use.

■ **Fall/Winter:** In general, most of the research has found that turkeys avoid pine plantations and piney habitats during fall and especially winter. Turkeys spend the majority of their time in upland and bottomland hardwoods and field-edges during winter. They probably favor these areas because they are searching for a source of carbohydrates found in hard mast from a variety of oak and other hardwood species. Because

hardwoods along creeks and rivers provide an excellent source and diversity of mast food types, it is a good idea to maintain or establish streamside management zones, where harvest of trees is avoided or limited, from a minimum of 50 to 75 yards on both sides of creeks and rivers. Because turkeys and other animals are dependent on hard mast during fall and winter and also heavily use hardwood forests throughout the year, it is crucial for landowners to maintain mast producing hardwoods. In pine dominated ecosystems,

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the greater the amount of the land base with a hardwood component (bottomland hardwoods, upland hardwoods, hardwood-pine stands and pine-hardwood stands), the better the overall habitat quality for turkeys.

■ **Spring:** Following winter, turkeys will jump right into the midst of spring with “love” on their minds. While gobblers will be trying to find mates, hens will have the additional and more complicated task of locating suitable habitat for nesting and brood rearing. They will seek a quality nesting spot that is relatively close to a good area for poults to find and catch plenty of insects. Availability of insects will mean life or death to young poults during their first 2 weeks of life.

For all these reasons, turkeys will utilize a wider variety of habitat types during the warm season. In pine plantations, nesting hens will favor areas that have been thinned 3 to 5 years earlier and burned the same year following the thinning. Nesting hens will also select clearcuts and seed-tree cuts that are less than 10 years old, if the understory vegetation is not too thick, as well as mature pine and mixed pine/hardwood stands. When raising poults, hens prefer habitat that has dispersed openings which comprise about 12 to 25% of the landscape. In general, hens with poults favor non-forested openings instead of forest understories when searching for insects to meet their high protein requirement. One study found 25 times more insects in openings than in forested understories. Broods prefer openings maintained between ankle and knee high and also favor widely spaced plantings, sparse forest mid-story, and herbaceous ground vegetation.

WHAT MAKES THE ‘BEST KIND’ OF TURKEY WOODS?

For those with an interest in wildlife, understanding wild turkey research can help us make informed management decisions. With wildlife in mind, even if it [Cont. on 14]

Mississippi Bobwhite Quail Populations on Decline

By Dave Godwin
& Dr. Wes Burger

THE DECLINE OF BOBWHITE quail populations in Mississippi and across the South has been well documented. The decline has been linked primarily to widespread changes in land use practices during the past 30 years. While much is known about the bobwhite quail and its management, many significant questions remain. To address these questions, the MDWFP has cooperated with Mississippi State University to develop one of the nation's leading quail and small game research programs.

The following is a list of some of the MSU quail research projects funded or co-funded by the MDWFP:

- Evaluate effects of bobwhite quail management on Black Prairie WMA
- Economic impact of bobwhite hunting in Mississippi
- Bobwhite response to land use and vegetative changes on Copiah County WMA
- Effects of field border management practices on bobwhite populations

- Bobwhite habitat use and reproductive success in managed old field habitats in Mississippi
- Effects of discing and burning on vegetative structure and invertebrate abundance in CRP fields
- Reproductive success of bobwhite on Cameron Plantation, Mississippi

The decline of the quail population has been linked primarily to widespread changes in land use practices during the past 30 years.

- Effects of radio-transmitter on body-condition, harvest rate, and survival of bobwhite on Divide Section WMA
- Cooperative quail and small game habitat development on multiple-use lands
- Response of mammalian predators to quail habitat management

While these research projects have not single-handedly brought back Mississippi's quail

population, they have given us new insight into factors that are limiting the birds in today's landscape. Many of these projects have provided management information that is currently being used to increase local quail populations on numerous public and private lands in Mississippi. Additionally, management implications from these studies have been incorporated into federal Farm Bill programs (such as the Conservation Reserve Program, Wildlife Habitat Incentives Program, etc.) giving Mississippi landowners opportunities to improve quail habitat while obtaining federal cost-share funds.

Field research to answer quail management questions is still ongoing in Mississippi. Current quail research continues to focus on cost-effective management practices that benefit quail. If you would like additional information on the Mississippi Quail Research Program, contact Dave Godwin, Small Game Coordinator, at 662-325-5119. **WI**

DR. WES BURGER is an avian ecologist at Mississippi State University and cooperates with MDWFP on many projects.

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[Cont. from 8] to monitor and manage the resource in the best interest of wild turkeys, wildlife, and wildlife enthusiasts. Recent work activities include:

- Developing a detailed strategic plan to guide the turkey program during the next several years
- Compiling, editing and validating data from more than 20,000 turkey hunts during the 2001 spring gobbler hunting season
- Providing turkey management advice to private landowners, MDWFP wildlife management areas, U.S. Forest Service and Corps of Engineers

- Making presentations on turkey biology and management at numerous workshops and public meetings
- Coordinating the annual brood survey to monitor reproduction
- Developing Tele-check, a telephone harvest reporting system that will provide turkey and deer harvest information at the county level
- Coordinating the Mississippi Chapter of the National Wild Turkey Federation's Super Fund program and assisting with the development of a 5-year strategic plan for the Chapter
- Conducting and analyzing multiple surveys to determine attitudes towards legalizing hunting turkeys and deer over bait
- Working with Mississippi State University on recently completed turkey research projects and planning future projects
- Writing articles on turkey biology and management for various media sources. **WI**

FOLLOWING TURKEYS

[Cont. from 9] is a secondary priority behind wood production, a landowner can make a difference by maintaining quality habitat for wildlife. A landowner, especially during the planning stage prior to harvesting timber on their property, can choose to "carve" their

Prior to harvest, landowners can choose to "carve" their property into many different habitat compartments.

property into different habitat compartments. With turkeys and most wildlife, a well-dispersed variety of habitat types is most desirable. This is especially true in areas where landowners have decided to establish pine plantations. Valuable wildlife habitat types include well-dispersed tracts of hardwoods, mixed pine-hardwoods, older age

class pine stands that have been thinned and burned, open lands (such as gated and planted roadways, pastures, agricultural fields, food plots, etc.), and streamside management zones that are at least 50 to 75 yards wide on both sides of a creek or river. If you manage your land accordingly, you should have an excellent chance of being able to accommodate and enjoy some of Mississippi's healthiest and hardest wildlife populations.

Consulting with a professional wildlife biologist before altering habitats on your property will ensure you make management decisions that best meet your objectives. If providing quality habitat for wild turkeys is your objective, contact the MDWFP Turkey Program at 662-234-0890 or 601-824-9077 for assistance. We'll gladly meet with you to make recommendations and/or write a management plan. **WI**

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