

A Look at Wild Turkey Conservation in Mississippi

By Adam Butler

The return of the wild turkey to Mississippi's woods and fields has been one of the greatest stories of conservation during the last century. Today, Mississippi has a rich turkey hunting tradition, is home to nationally-known turkey call makers, and is a widely recognized destination for hunting the Eastern wild turkey. We are truly living in the "good ole days," and Magnolia State hunters are blessed with some of the nation's finest springtime opportunities. However, these magnificent birds came dangerously close to becoming a lost part of our history.

The early days

It has been estimated that prior to the arrival of European settlers, wild turkey numbers in Mississippi exceeded 1 million birds, and historical reports can be traced all the way back to 1699. *Penicaut's Annals of Louisiana*, contains an account from the summer of 1699 in which the author writes,

"On the banks of the Mississippi River, about 40 leagues from its entrance to the sea ... [we] encamped one night under the trees, oak, ash, elm, etc. upon which a vast number of turkeys roosted." The noted naturalist John James Audubon also wrote of an abundance of turkeys during his visits to the Natchez area in the early 19th century.

As the state became settled, the vast flocks of wild turkey encountered by the pioneers were quickly decimated by overhunting and forest destruction. During the late 1800s, as the vast forests of the Great Lake states became overharvested, Northern timber barons turned their attention to the South, and by 1900, Mississippi had become a leading timber exporter. Between 1880 and 1920, nearly 95 percent of the state's original forests were clearcut. This large-scale loss of forested habitat spelled disaster for wild turkeys. Furthermore, rural citizens hunted turkeys throughout the year with no regard for conservation, and market hunters wiped out local flocks for profit. By 1892, the Legislature attempted to alleviate the dire situation by establishing that turkeys could only be harvested from October 1st to May 1st. Unfortunately, such a liberal season with no source of enforcement ensured that this measure would do little to help.

By the time the renowned conservationist Aldo Leopold visited Mississippi in 1929, wild turkeys were nearly gone.

His report declared, "It is therefore safe to say that the wild turkey is 90 percent cleaned out as to potential area, and 99 percent cleaned out of potential abundance." Leopold did offer hope for the future by stating, "On account of the high proportion of forest lands, and especially the wide dispersion of natural refuges in the form of swamps, no state has a more



Jacob Brumfield

favorable chance than Mississippi to produce a large and stable crop of wild turkeys." Yet despite Leopold's warnings, turkeys continued to decline, and a dozen years later the estimated statewide population numbered less than 5,000 birds.

The restoration phase

With the establishment of the Mississippi Game and Fish Commission in 1932, the foundation for restoration was finally in place. Restoration of the wild turkey was one of the Commission's first priorities, and an initial survey by the agency revealed meager populations in only 45 of Mississippi's 82 counties. The Commission soon began purchasing pen-raised "game farm" turkeys for release into the wild. Between 1934 and 1939, nearly 2,700 pen-reared turkeys were released across the state, but these early attempts at restoration were failures. Pen-raised turkeys simply did not have the instincts needed to survive and reproduce in the wild.

The Commission received unexpected assistance in its turkey restoration efforts on December 7, 1941. When the U.S. entered World War II, the Commission's work took a



Courtesy of David Ham



MDWFP

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back burner to more pressing national issues, but so too did the constant poaching that continued to suppress the state's few remaining turkey flocks. The demand for military service took many young men away from the farm, and those left behind were focused intensely on supporting

the war effort. As a result, hunting pressure lessened, and wildlife surveys later revealed that the statewide population unexpectedly doubled during the time in which the nation was at war. Though this was encouraging, the biggest breakthrough was yet to come.



Casey Owen

many sportsmen, typical restockings during this era were relatively small. In most cases, flocks of 8-10 hens and 3-4 gobblers were all that would be released at a single location. Under the right conditions, groups of this size were all that was necessary to repopulate portions of entire counties.

Learning to manage

While the state's forests were recovering from the deforestation of earlier times and were beginning to mature, Commission Conservation Officers were ensuring that newly established flocks were protected from year-round poaching. These changes, along with the continued restocking of turkeys, helped the population to skyrocket. In 1958, the statewide population numbered 20,000 birds with a spring harvest of 878 gobblers. Twenty years later the population had grown to over 200,000. As turkey numbers continued their impressive growth, so too did the number of turkey hunters.

In the spring of 1980, an estimated 42,757 resident turkey hunters harvested 34,759 gobblers. This steadily increasing demand on the resource led wildlife officials to recognize that a deeper understanding of wild turkey biology was needed to ensure that populations could be managed effectively. Consequently, in 1983 a partnership was formed between Mississippi Department of Wildlife Conservation (formerly the Game and Fish Commission) and Mississippi State University to start an intensive study on all aspects of the wild turkey.

The findings from this 15-year research project on Tallahala WMA and private timberlands in Kemper County would be ground-breaking. Radio telemetry allowed researchers to closely follow hens and gobblers and document many aspects of their biology including survival rates, causes of mortality, nesting and reproduction, habitat use, home range size, and the relationship between turkey populations and hunting success. These data were used to build computer models that demonstrated how populations could be expected to grow and change under different conditions. Widely held myths were put to rest as researchers showed that turkeys could



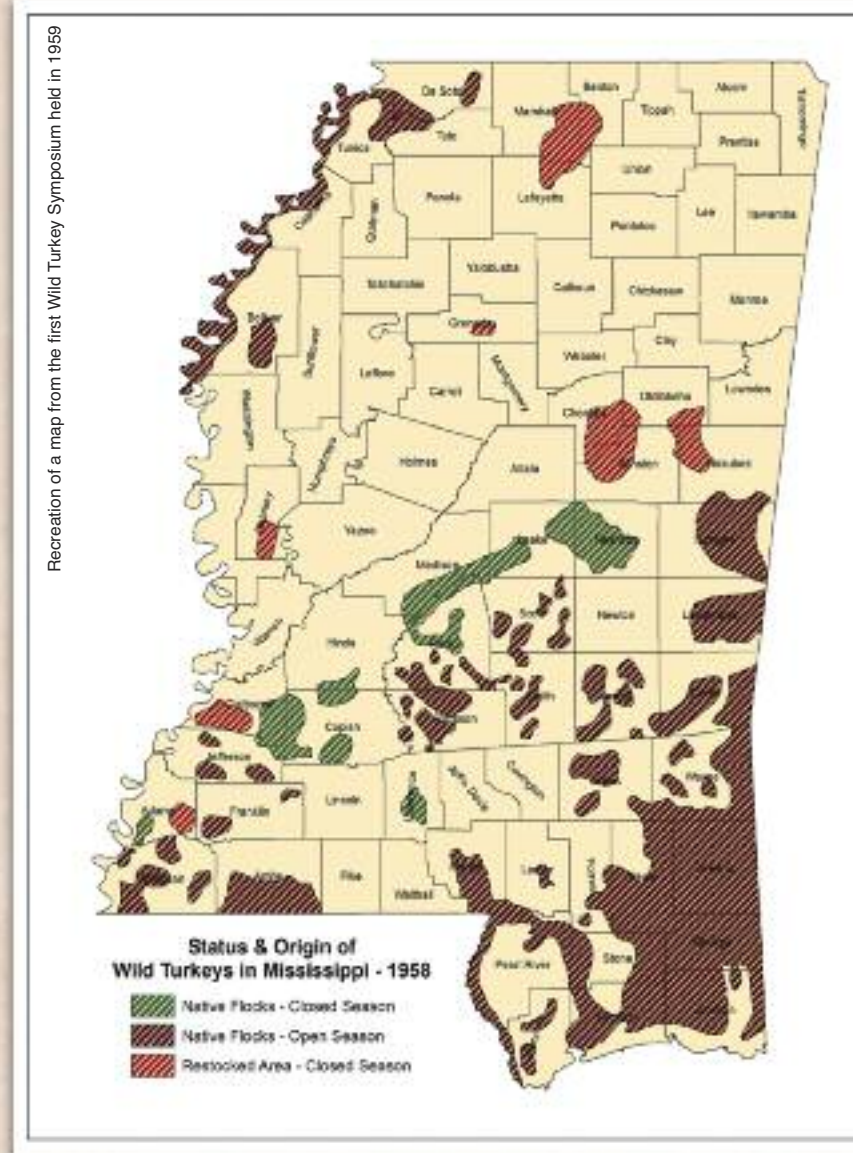
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Radio transmitters allow researchers to closely follow hens and gobblers.

In 1940, Commission employees had incidentally caught wild turkeys in box traps while attempting to capture deer in Pearl River County. These few birds were relocated onto what was at the time known as the Leaf River Refuge (now Leaf River Wildlife Management Area). This small introduced population quickly exploded. The relocation of wild birds appeared to be the key to starting new populations, but the type of traps used for deer proved inefficient for the capture of large numbers of turkeys. A better method was needed if statewide restoration was to become a realistic goal.

In the 1950's a technique was perfected to capture wild turkeys using cannon nets originally designed to catch waterfowl. It proved ideal for catching a wary bird like the wild turkey. This setup could be triggered remotely and consisted of a large net with attached projectiles fired from mortar-like cannons. These traps were mobile, easily camouflaged, and could be used effectively in tight quarters such as logging roads.

By the early 1960s, the Commission's efforts to restore wild turkey populations were in full swing, and wild turkeys were being captured in areas of abundance and moved to suitable but unoccupied habitat. Contrary to the thoughts of



Recreation of a map from the first Wild Turkey Symposium held in 1959

thrive in landscapes dominated by pine plantations when these forests were managed properly. Findings from these studies are still cited by wildlife biologists throughout the country as some of the most important work ever conducted on the Eastern wild turkey.

The increased understanding of turkey populations gained from Tallahala WMA and Kemper County, coupled with the rise of wild turkeys as one of the state's most pursued game species, led the Department of Wildlife Conservation, which had now been reformed as the Mississippi Department of Wildlife, Fisheries, and Parks (MDWFP), to form a Wild Turkey Program within its Wildlife Bureau during the mid-1990s. This modernized the agency's approach to turkey management by allowing for program biologists that could be exclusively focused on issues pertaining to the management of the state's turkey resource.

Following the formation of the Wild Turkey Program several new surveys of turkeys and turkey hunters were instituted which continue today. These included the annual brood survey in 1994 and the Spring Gobbler Hunting Survey (SGHS) in 1995. The brood survey allowed for a gauge of

statewide turkey reproduction each year, while the SGHS enlisted hundreds of volunteer hunters across the state to record observations and gobbling activity during their spring hunts. These datasets allowed for a more in-depth glimpse into statewide population trends than had ever before been available.

During the 1998 spring season, turkey hunting in Mississippi changed with the implementation of the "no jake" regulation. For the first time, juvenile gobblers were off-limits. Though this law was initially questioned by some hunters, the change ultimately proved wise when gobbling activity and age structure in the harvest increased during subsequent years. This regulation remains in place today, and allows Magnolia State hunters to enjoy a long, liberal season without worry of overharvest. Mississippi was the first state in the country to offer protection to first-year gobblers.

A look to the future

To date, over 3,569 wild turkeys have been trapped in Mississippi for relocation, and the restoration phase of turkey management has been successfully concluded. Mississippi's turkey flock is now estimated at slightly over a quarter of a million birds, and nearly all suitable areas are occupied. Population growth has leveled and numbers fluctuate annually based on the productivity of each year's hatch. Lack of high-quality habitat is now the primary limiting factor in most areas, and much effort on the part of the MDWFP and its conservation partners

like the National Wild Turkey Federation is spent promoting and implementing land management practices that meet the needs of wild turkeys.

Although much has been accomplished in Mississippi to ensure the persistence of our largest gamebird, there is still much to be undertaken. Recent declines in the number of young turkeys observed during summer brood surveys across the Southeast is alarming, and MDWFP is partnering with other state wildlife agencies to examine the factors behind these trends. Additionally, more research is needed to yield a better understanding of how and why populations change through time, as is a more proactive means of regulating and monitoring harvest. Finally, continued declines in the number of young hunters being recruited into turkey hunting is cause for concern, and the MDWFP and its partners have begun initiatives aimed at exposing more youth to hunting and the outdoors. These efforts are vital because the voice of sportsmen will always be critical to ensuring the future of this majestic bird.

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