
HABITAT

PLAYS A PART



Is restoring habitat the key to increasing quail populations?



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Bobwhite quail once were prevalent across Alabama and one of the most common game birds in the Southeast. Their populations have plummeted in recent decades. Many young hunters have never experienced quail hunting and have only heard stories of hunts of wild coveys over great bird dogs.

Since the 1960s, Alabama has seen a decline in bobwhite quail populations of roughly 4 percent each year, with approximately an 80 percent decline overall since the 1960s. The *bobwhite* calls of males that were once commonly heard during the summer months are now few and far between.

WHY THE DECLINE?

What has caused such a drastic population decline in this species? Many people have theories, but one thing is certain; habitat has played a big part in the decline of the bobwhite quail. Changing landscapes and habitat loss are two factors we can point to as the culprits here in Alabama.

Bobwhite quail are short-lived birds with an annual survival rate of approximately 20 percent. They rely

on annual production to maintain their populations. Habitat plays a key role in the survival of these birds throughout the year. Quail require a certain amount of available cover throughout the year in the form of bunch grasses, weedy ground cover and thickets. During nesting season, bunch grasses such as broomsedge are important for these ground nesters to protect their eggs. After hatching, young quail chicks require protective cover made up of weedy vegetation such as forbs, legumes and insect-producing plants to provide foraging habitat with open ground underneath to easily travel through and feed.

Predation plays a big part in the survival rate of quail. Bobwhite quail have many known predators such as owls, snakes, raccoons and opossums, with the most notable being Cooper's hawks. No one species preys on



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One habitat that can provide good cover for quail throughout the year is an open canopy pine forest such as the longleaf pine ecosystem. Longleaf pine, when managed properly with frequent fire disturbance and thinning, provides an open understory with weedy groundcover that allow quail to thrive.

quail exclusively, making predator management harder than one may think.

Some feel that predator control is essential to boost quail populations. While predator management can be done in accordance with state and federal laws and regulations, not all predators can be controlled. All raptors are protected by the Migratory Bird Treaty Act and cannot be harmed in anyway. Habitat management is one way that predator populations can be managed. Hardwood trees provide nesting areas for many quail predators such as Cooper's hawks. Removal of hardwoods from areas managed for quail may reduce the abundance of predators. Providing important escape cover for quail can also increase survival of adults as well as chicks.

Overgrown fencerows that once were prevalent throughout agricultural fields

provide excellent escape cover to protect quail from predators during winter months. These days it is hard to find any such fencerows, as managers and farmers have cleaned up their fields or replaced fencerows with mature trees that don't offer adequate cover. Providing ample cover for nesting, brood rearing, and protection during the winter are beneficial for seasonal survival of quail. To maintain that cover, there needs to be some type of disturbance such as burning, disking, grazing or cropping.

One habitat that can provide good cover all year is an open canopy pine forest such as the longleaf pine ecosystem. This type of ecosystem was once prevalent across the Southeast, but has declined greatly just as quail populations have. Fire suppression over the last century has made most pine forests unsuitable for

quail by creating dense hardwood thickets in the understory and midstory where quail and their chicks cannot easily maneuver. The increase in woody stems due to the lack of fire limits herbaceous plants that quail need. Longleaf pine, when managed properly with frequent fire disturbance and thinning, provides an open understory with weedy groundcover that allow quail to thrive.

WHO IS TRYING TO HELP?

To try to curb the steady decline of bobwhites, the Southeast Quail Study Group, now known as the National Bobwhite Technical Committee (NBTC), was established in 1995 to bring bobwhite experts together from across the region to develop a recovery plan. The NBTC brings together 25 states within the bobwhite quail range to try, as their slogan states, to “Bring Back Bobwhites.” They created a regionwide plan to develop habitat restoration objectives and quail population goals. Biologists across the Southeast agree that the best opportunity to increase wild quail populations is to focus management and habitat restoration efforts on open pine forests such as longleaf pine savannas. While this is great habitat for quail, many other species including white-tailed deer and turkeys also benefit from this type of management.

One area of southeast Alabama best

known for quail hunting is around Barbour and Bullock counties. Barbour Wildlife Management Area (WMA) is located in the middle of large quail plantations and in a high priority area for managing quail as determined by the NBTC. This 30,000-acre management area was once used for quail research, but experienced a significant decline in population numbers. However, recent management activities have led to increases in bobwhite populations on certain portions of the WMA.

Approximately 4,000 acres of the north side of Barbour are in the process of being restored to longleaf pine. Poor quality timber stands are being removed from the project area and replanted with longleaf seedlings. Bicolor lespedeza (*Lespedeza bicolor*), once heavily promoted for quail, is being controlled with herbicides to allow native grasses and legumes to grow. Bicolor lespedeza was once planted in strips throughout the WMA to provide food for quail until it was discovered that with frequent disturbances such as prescribed fire and timber production, bicolor would spread and dominate the forest understory. Extensive herbicide treatments allow bicolor to be managed and controlled. A controlled burning regime has also been established to maintain the open understory that quail favor.


The longleaf pine restoration effort at Barbour began in 2006, and a bird-moni-

toring program was established in 2011 to monitor quail and other bird populations within the project area. In the last three years, there has been a noticeable increase in the number of bobwhites present as well as other species of conservation concern.

Barbour is not the only WMA with ongoing restoration efforts to benefit quail. Other WMAs in the state have seen an increase in quail populations as a result of management activities. Longleaf pine is continuing to be restored and managed on Fred T. Stimpson Sanctuary in Clarke County. Several longleaf restoration projects are ongoing on Forever Wild properties across the state. In north Alabama, on Freedom Hills WMA, Lauderdale WMA and James D. Martin-Skyline WMA, shortleaf pine restoration efforts on both The Alabama Division of Wildlife and Freshwater Fisheries (WFF) and Forever Wild properties are creating more quail friendly habitat. Along with forest regeneration efforts, there are several WMAs, such as James D. Martin-Skyline WMA, where biologists are attempting to restore native warm season grasses to benefit quail and other bird species. Several of these areas are also included in the bird-monitoring project to track changes in quail populations.

WHAT ABOUT PRIVATE LAND?

With all of the recent management and restoration activities across the state, quail are becoming a common sight once again on public land. While this is nice to see, the majority of potential quail habitat in the state occurs on private lands. Private landowners are essential for successful bobwhite habitat and to achieve population restoration goals.

While it is not possible to bring back quail on all properties because of extensive habitat alterations through the years, there is potential on many private lands where quail do exist to increase those populations. WFF can provide technical guidance to those interested in managing for wild quail. For additional information on management and conservation of bobwhite quail visit www.outdooralabama.com or call 334-242-2469 to find a biologist in your area. 



The Alabama Department of Conservation and Natural Resources is restoring approximately 4,000 acres of the Barbour Wildlife Management Area to longleaf pine. Poor quality timber stands are being removed from the project area and replanted with longleaf seedlings.