

Turning Back Time



by Kevin C. Shelly

The New Jersey Savannas Reborn

When John Battistini looks at about 130 acres of cleared land surrounded by a forest at Buckshutem Wildlife Management Area in southern New Jersey, he sees the future in the region's past.

It's not just how the region looked 40 years ago when the cutover woodlands and abundant agricultural edges yielded dependable coveys of quail in the region. Battistini has a longer view — back to about 400 years ago.

Others without his vision may only just perceive a stark raw scar carved into the woodlands, but Battistini, chairman of Quail Unlimited in New Jersey, senses a long-term promise of renewal for northern bobwhite quail and other species that thrive in grasslands or scrub/shrub habitat that once dotted the oak and pine forests common in the southern half of the state.

The earliest European explorers noted large expanses of grasslands and open woodlands — savannas — within the denser forests of the region. Naturally occurring fires, ignited by lightning strikes and also set by Native Americans to make hunting and travel easier, kept the park-like grasslands clear. Early successional species covered as much as 30 percent of the land in the 1600s. With increasing European settlement, additional land opened up as forests were cleared and agriculture spread, increasing the amount of successional habitat.

But during the past 100 years, farming in New Jersey has diminished in importance, with more than one million agricultural acres lost — cutover acreage either reverted to unbroken and featureless forests or the cleared land developed for commercial use or housing.

With homes and businesses dotting the landscape, fire, which was used as a management tool by Indians and European settlers for more than 10,000 years, went out of fashion. Indeed, authorities branded fire an enemy and vigorously suppressed it, though a more sophisticated view of the role that fire plays is slowly emerging.

The result, for now, is that less than five percent of New Jersey's landscape remains at the successional stage, with many species dependent on relatively open land in decline — and sometimes even threatened or endangered.

QU, working with the New Jersey Division of Fish & Wildlife's Bureau of Land Management,



above—A mound of chipped wood from trees removed to recreate the savanna.

left—Forester Bob Williams, QU State Chairman John Battistini and BLM Regional Superintendent Lee Widjeskog discuss the project.





Guests watched as an opening was made in the forest of the Buckshutem Wildlife Management Area to allow the land to return to the savanna habitat common to the area 400 years ago. The change will benefit many threatened species, including bobwhite quail.



forester Bob Williams and the South Jersey Resource Conservation and Development Council, is experimenting with recreating savannas at Buckshutem. The target acreage at Buckshutem is covered with low-quality, 60-year-old growth made up predominately of oak, pine, hickory, huckleberry and laurel. Wildlife agencies throughout the mid-Atlantic region are watching to see if the project succeeds and can be replicated in their states.

There's no evidence of any fire since the forest regenerated six decades ago, according to Lee Widjeskog, regional superintendent for the state's Bureau of Land Management, but there is evidence that the area once sheltered many grassland and shrub species.

In addition to pockets of northern bobwhite quail that the Buckshutem Wildlife Management Area savanna project is designed primarily to benefit, there are many other species expected to utilize the same mix of grassland and shrub habitat in the newly created openings. Grasshopper sparrows and red-headed woodpeckers, both threatened in New Jersey, are likely to see a major benefit. Farmers who lease

land on the site leave winter wheat stubble in place after harvest, providing nesting areas for the sparrows. Standing dead trees were left in cleared areas to provide potential nest sites for the woodpeckers, which are cavity nesters that need open woodlands.

Other birds, many of which are declining in numbers, are also expected to benefit. They include the kestrel, bluebird, bobolink, loggerhead shrike, yellow-breasted chat, eastern meadowlark, summer tanager, savanna sparrow, blue-winged warbler, yellow-bellied sapsucker and whip-poor-will.

Several butterflies and moths that need grasslands — Edward's hairstreak, frosted elfin, northern cloudy-wing and swarthy skipper — are all expected to thrive.

Rabbits, turkey and deer are also expected to prosper in the grassland and shrub environment.

QU put up \$3,000 in seed money to get the project started. "It wouldn't have happened without Quail Unlimited to push it," said Laurie Pettigrew, the principal biologist for the state's Bureau of Land Management.

Williams drew up a management plan, calling for tree removal to create savanna islands within the forest and also establish new woodland edges where remaining fields meet forests. Standing dead wood was left as homes for cavity nesters, such as woodpeckers, and some trees were girdled to add to the number of snags available for nesting. Sapling hickories were also left in place because they provide a food source for an uncommon moth species that prefers forest openings.

Through his connections as a professional forester, Williams lined up a company willing to cut and chip the wood at a break-even price in order to keep its own employees busy and keep the

costs down for the state and QU. The better quality chips became paper and the rest mulch.

With the ground laid bare, a drum chopper broke up the compacted mineral soil and killed stumps, the better to allow warm-season grasses such as broom sedge, nut sedge, panic grass and deer tongue to seed and root on their own, explained Williams. False indigo was planted because it is a food source for a threatened butterfly that needs forest openings to flourish.

Widjeskog expects the habitat to shift gradually.

The cutting began in 2002 and he doesn't expect the openings to completely fill in until 2005. Once the grasses are established, Widjeskog said burning or mowing every three to four years will keep the opening predominately in grasses.

Some cleared plots will get seeded in order to compare them to parcels that were allowed to regenerate spontaneously.

Pettigrew says there's not a need to plant the regenerating land with quail. "The quail are already here. They'll regenerate on their own," she said.



Editor's Note:

Good habitat, properly managed, has always been the key to regenerating quail populations. The realization that quail habitat is beneficial to many other wildlife species should never be overlooked.

Congratulations to the South Jersey Quail Unlimited Chapter for making this potential, precedent — setting project come to life.

Resources

Additional information about the savanna restoration project and how to duplicate it is available from the following contacts:

Quail Unlimited New Jersey State Chairman John Battistini, 131 Cumberland Avenue, Estell Manor, NJ 08319. Or phone 609-476-2184.

New Jersey Division of Fish & Wildlife Bureau of Land Management Regional Superintendent Lee Widjeskog, Millville Wildlife Management Area, 8747 Ferry Road, Millville, NJ 08332. Or phone 856-785-0455. Reach Laurie Pettigrew, the state's principal biologist with the BLM at the same address. phone: 856-785-0592 e-mail: laurie.pettigrew@dep.state.nj.us.

Forrester Bob Williams, P.O. Box 204, Grenloch, NJ 08032. phone: 856-228-8150