# Fire restores habitat at Temple Flat Rock

By Doug Nicholas

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Flames racing across the land. Smoke choking out the sky. Images of environmental catastrophe. Now images of environmental redemption.

More and more, scientists and land managers are understanding the role of fire in maintaining ecosystems. And more and more they are using fire to achieve specific conservation goals.

On January 12 at Temple Flat Rock, TLC took its first leap into the fire. Jim MacIntire, a NC Forest Service certified burn boss, took advantage of the weather conditions—overcast skies, cool temperatures and little breeze—to perform a controlled burn on the 17-acre field.

"We're converting the field at Temple Flat Rock back to native warm season grasses and wildflowers," said Tom Craven, TLC's director of stewardship. "Then we'll maintain it as a Piedmont prairie, mimicking nature as much as possible."

What is a Piedmont prairie? As early as 1540, European explorers reported open 'savannas' in the Carolina Piedmont. These grassy expanses were created by fires set by Native Americans to clear land for planting and by fires from lightning strikes. The many streams and rivers in the Piedmont created natural firebreaks keeping Piedmont prairies from ranging to more than 25 miles across, much smaller than those occurring in the Midwest.

Prairie plants like little bluestem, Indian grass, switch grass, Georgia aster, tall larkspur, smooth coneflower and Schweinitz's sunflower all gained footholds. Prairie animals also thrived, including ground-nesting birds like eastern meadowlark, grasshopper sparrow and Henslow's sparrow.

When European settlers arrived, they cultivated the prairies and planted fescue for grazing cattle and other livestock. By the end of the 20th century, only a few remnants of Piedmont prairies remained.

**The restoration plan**

At Temple Flat Rock, a restoration committee that includes Dr. Jon Stucky, associate professor of botany at N.C. State University, and Donna Wright, a teaching technician in the same department, devised a plan to recreate a Piedmont prairie system.

The January fire was the first of what will be biennial burns. Combined with propagation of prairie grasses and wildflowers, this is the final step of the prairie conversion plan.

The first steps involved annual mowing to keep the field from reverting to forest, and herbicide spraying by trained volunteers to reduce the dominance of invasive plants, like Chinese lespedeza. (The Wildlife Habitat Incentives Program of the Natural Resources Conservation Service provided a $3,500 grant that helped pay the cost of this stage of the process.)

The changes to the landscape will provide habitat for the groundnesting prairie birds named above, as well as other species like grouse, quail and pheasant.

The property will also provide an educational resource for local universities. The NCSU botanists will be conducting ongoing research on the site, performing tests to determine the most effective way to control invasive species and which seed collection methods work best, among others.

To learn more about Temple Flat Rock and the Piedmont prairie restoration, go online to www.tlc-nc.org/temple_property.shtml.