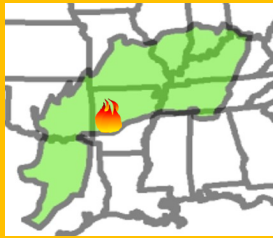


Pine-Bluestem Buffalo Road Tour

FIRE SCIENCE HOT SPOTS



In this feature, we bring into focus
fire science on-the-ground

The [Pine-Bluestem Buffalo Road Tour](#), located on the Poteau-Cold Springs District of the Ouachita National Forest (~7 miles south of Waldron, Arkansas), showcases an inspiring story of partnerships, ecosystem restoration, economic sustainability, and science. Here, within the Shortleaf Pine-Bluestem Grass Ecosystem Management Area (~155,000 acres), regional stakeholders, including forest and wildlife managers, timber industry, NGOs, and researchers, manage shortleaf pine-dominated sites at landscape-scale, to improve habitat conditions for numerous plants and animals, including the red-cockaded woodpecker (*Leuconotopicus borealis*). Treatment prescriptions for second-growth shortleaf pine stands typical of the restoration area include overstory thinning to a residual basal area of about 60 ft²/acre and felling much of the woody midstory, followed by prescribed burning at 3-4 year intervals. One lesson learned by area managers is that the critical role of fire cannot be over-emphasized, especially in young stands of shortleaf pine, and must be applied early in stand development, i.e., at 3-5 year stand-age, and continue through the life of the stand. Ecosystem restoration at this scale offers valuable research opportunities to investigate management effects on a variety of plants and animals of concern, as well as human social/economic considerations- evidenced by the extensive level of research conducted (80+ scientific study citations [HERE](#)).



The Buffalo Road self-guided driving tour begins at the control (top-left), or no-treatment area, where management activities (forest thinning or prescribed fire) have not occurred in over 50 years. The tour continues through different stages of ecosystem restoration, including a commercial timber marking demonstration area (top-right) and an area which exhibits desired ecological conditions (bottom-left). The latter shows effects of 11 dormant-season prescribed fires, and one commercial timber harvest, since 1978. Ecosystem traits shown here (mature, well-spaced live and dead pine trees and open forest understories) are required for the red-cockaded

woodpecker (inset same photo), and are favorable to various plants such as Ohio spiderwort (*Tradescantia ohioensis*, inset bottom-right), butterfly weed (*Asclepias tuberosa*, bottom-right), and insect species such as the federally-listed Diana fritillary (*Speyeria diana*, orange and black butterfly in the bottom-right image). Click on each image for full-size and downloadable images. Photo credits: red-cockaded woodpecker and Diana fritillary - Warren Montague, Ouachita National Forest; Ohio spiderwort - Clarence Coffey; others - Oak Woodlands & Forests Fire Consortium.

