

West Plains Daily Quill

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FIRE FROM THE SKY

At first, tiny flames gently licked debris-covered soil, crackling in dried grasses, leaves and twigs. Then, as the fire sucked air, it created its own breeze, propelling it forward. Soon it

formed a hot orange line marching through the forest, catching fire to fallen limbs and devouring whole oak sprouts, their still-clinging leaves providing tinder for a quick, sizzling burst.

Ignited by a U.S. Forest Service team, this prescribed fire burned 4,125 acres in the Pineknott area in southwest Carter County on March 13.

As the fire progressed, the orange line meandered, sometimes accelerating when hitting a pocket that fed it, sometimes fizzling out where fuel was sparse. Unlike the unfortunate oak sprouts, the blaze skimmed over a patch of foot-high pine seedlings without even browning their tender green needles.

The line of flames didn't linger long, and after it passed, mottled patches of blackened and unburned ground intermixed in a mosaic pattern. Previously hidden acorns were exposed, unscathed.

Most mature trees barely noticed. Shortleaf pine and oaks – white, scarlet, black and post-sporting newly blackened

Mark Twain administrators were disregarding the wishes of Eighth District Congressman Jason Smith (R-Salem). Last fall, Smith ushered through the U.S. House a fire ban for the Mark Twain, but the bill was stuck in a Senate subcommittee when the

the pines. For centuries it was common throughout the Southeast, supporting herds of grazers. Native Americans using fire maintained it, but fire suppression and land use changes have reduced it to a globally rare and fragmented ecosystem, said retired

around 1900 nearly wiped out the big shortleaf. It was replaced by crowded oaks.

In early 2012, the Mark Twain was approved for a \$12.5 million, 10-year project to restore these two pine-dominated plant communities on about 116,000 acres. Funding was part of a national initiative, the Collaborative Forest Landscape Restoration Program.

Between 2007, when work began in the restoration area, and the end of 2013, project implementers conducted burns on nearly 27,000 acres. Several areas were burned multiple times, so prescribed fires have totaled about 61,000 acres, said Davidson. They're also using chain saws to thin the canopy, providing more sunlight to encourage desired herbaceous ground cover. More than 8,000 acres were thinned in 2012 and 2103, he said.

In areas treated for several years, oaks are less crowded and the fire-resistant pines are gaining ground, Davidson said. Plot monitoring is showing good responses of forbs and grasses in the areas that have been thinned and burned.

However, "it will take a long time to get to desired conditions," Davidson said. "Probably 20 years."

NEIGHBORS' REACTIONS VARY

Reaction to the big fires, the thinning operations and the restoration itself has been mixed.

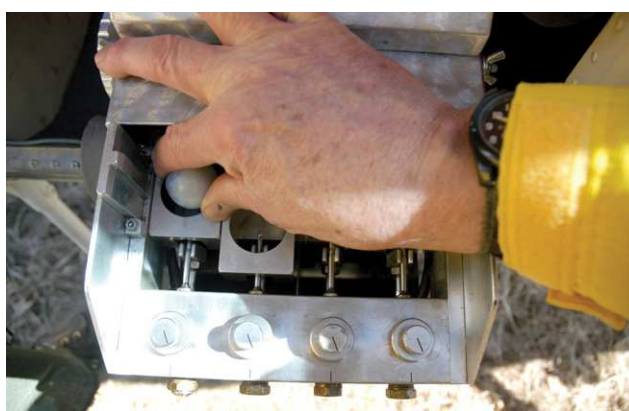
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FLYING LOW over the forest with door open, the helicopter drops small plastic balls that catch fire on the ground. On this day, the ship flew over 4,125 acres, dropping some 6,500 balls, one by one. (Quill/Vaughn)



THE SHIP, as they call it, arrived from the Forest Service's main helibase in Rolla and parked in a pasture a few miles from the burn area. Here, pilot Pat Parkhill hits the power-on button so that David Schott, center, can test the Premo machine. That's a device that injects flammable chemicals into spheres like ping-pong balls and then spits them out the chute near Schott's knee. About 20 to 30 seconds after ejection, each ball ignites. (Quill/Vaughn)



THE PREMOMARK III machine, top view, contains four slots to receive the lightweight plastic incendiary spheres, which already contain potassium permanganate, a dark powder. A needle injects liquid glycol (common antifreeze) into the ball, which starts a chemical reaction. The ball drops from the ship, then ignites about a half-minute later. (Quill/Vaughn)

bark in degrees varying from none to a patch here and there. Dead snags smoldered but only rarely did a live tree show signs of actually catching fire.

Each year, Mark Twain National Forest staff intentionally burns an average of 30,000 acres in parcels ranging from 40 to 8,000 acres, scattered throughout the forest's 1.5 million acres. Mostly their purpose is to reduce hazardous fuels. As a bonus, deer, turkey, quail and other species can benefit from improved habitat, said wildlife biologist Jody Eberly, fire program manager for the Mark Twain.

CONGRESSMAN ENTERS ONGOING DEBATE

The March 13 prescribed burn had another purpose but not everyone thinks it's worthwhile. A debate is ongoing; on the surface, it's about using fire for ecosystem restoration, but the conversation dips into seemingly unrelated topics such as oak decline and climate change.

In proceeding with this burn and others,

CLIMATE CHANGE, OAK DECLINE ENTER DEBATE OVER PRESCRIBED BURNS TO RESTORE SHORTLEAF PINE

BY DENISE HENDERSON VAUGHN
 Quill Correspondent

spring fire season arrived. Smith wants the Forest Service to halt burning until it has documented that prescribed fires are accomplishing goals and not harming forests.

SHORTLEAF PINE-BLUESTEM WOODLANDS NOW RARE

The controversial purpose of the repeated prescribed fires in the Pineknott area is to restore two natural plant communities.

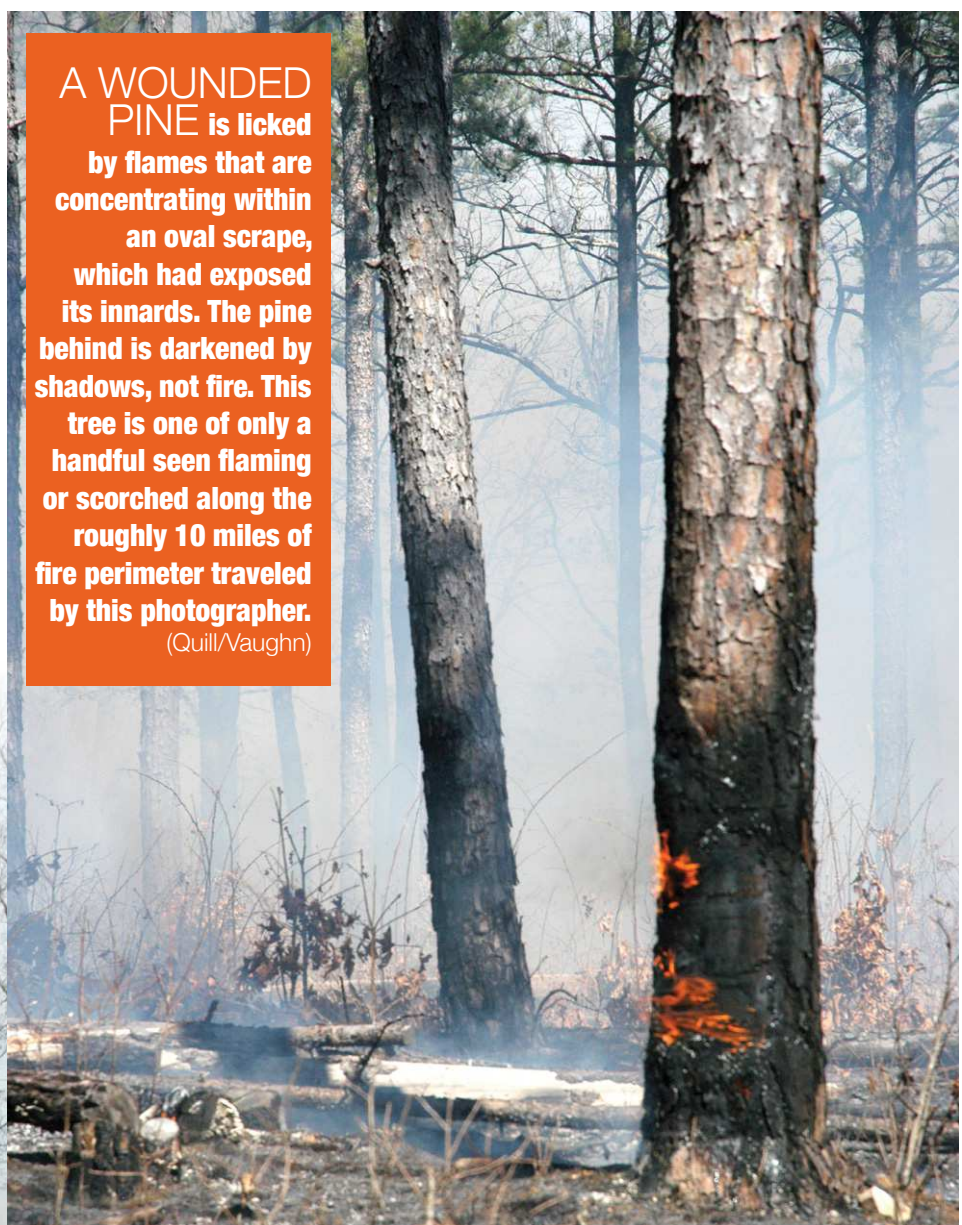
One community, known as shortleaf pine-bluestem woodlands, has a park-like appearance, with hundreds of species of grasses and forbs growing between

Forest Service ecologist Paul Nelson.

In the Ozarks, remnant pockets of shortleaf pine-bluestem woodlands are found in the Pineknott area and around Cane Ridge near Poplar Bluff, said Brian Davidson, who spearheads the restoration project.

This pine-bluestem ecosystem, along with the second plant community, the closely related shortleaf pine-oak woodland, together formerly dominated more than six million acres in southern Missouri.

Europeans who settled in Carter and nearby counties found these ecosystems intact, but industrial timber exploitation in the decades



A WOUNDED PINE is licked by flames that are concentrating within an oval scrape, which had exposed its innards. The pine behind is darkened by shadows, not fire. This tree is one of only a handful seen flaming or scorched along the roughly 10 miles of fire perimeter traveled by this photographer. (Quill/Vaughn)

A PRIVATE PASTURE burns before the flames move into the woods. Landowner John Orr cooperates with the Forest Service, allowing his land to be burned along with the adjoining national forest. This relationship saves the agency money because fewer fire lines are needed to circumvent the private land, and Orr also provides a spot to land the helicopter if needed. (Quill/Vaughn)