

REMNANTS & RELICS:

RESTORATION OF NATURAL BEAUTY

A remnant prairie awash in color at Jackson County's Ozark Wildlife Area.

STORY AND PHOTOS BY

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I've heard it before: Jackson County is one of Iowa's best-kept secrets. The more I think about it, the more I agree. Maybe I should keep Jackson County a secret and keep it to myself—but that wouldn't be fair to the people of Iowa or the land itself. (That said, there are still a few secrets I'll be keeping.)

Not hosting any of Iowa's major population centers, Jackson County is often overlooked. But with its proximity to the Mississippi and unique geological positioning, it's home to some real ecological gems. Most know about the Maquoketa Caves—and yes, they are spectacular—but there's so much more to Jackson County than folks realize.

By Iowa standards, Jackson County has quite a bit of public land. There's Maquoketa Cave State Park, Bellevue State Park, the birding hotspot Green Island Wildlife Management Area and the federally managed Upper Mississippi Wildlife Refuge. But the real "secret sauce" are the county parks as some contain little nuggets of "original" Iowa—remnant and relic areas of high-quality ecological communities that escaped the plow and development over the past 175 years or so. For example, there are enchanting plant assemblages on top the bluffs above the Maquoketa and North Fork of the Maquoketa rivers. While hard to get to, for those willing to hike in, respect the land, and pay attention to native flora and fauna, the reward is real.

A bit of background: Jackson County's landscape and remnant areas are shaped by its geologic history and proximity to the Mississippi River. Sitting at the confluence of three geological regions, Jackson County lies on the southwestern edge of the Paleozoic Plateau "Driftless Area," the eastern portion of the Southern Iowa Drift Plain, and the northern edge of the Iowan Surface's southeastern extension. These unique geologies—and the erosional forces of the Mississippi—create rugged terrain, especially compared to the rest of Iowa. And rugged terrain often means more intact natural areas. In Jackson County, that includes Driftless Area features like dry hill "goat prairies," coldwater trout streams, and algific talus slopes—cold air features that provide refuge for species left behind by the last glacial retreat. You'll also find dolomite prairies, warm oak savannas and open woodlands that feel more at home in southern Iowa or northern Missouri.

Jackson County Conservation (JCCB) manages some incredible public lands that vary in development and access. Some, like Prairie Creek Recreation Area, have paved parking and well-maintained trails. Others are true wildlife areas with rough access and minimally maintained trails. If gravel roads and farm easements don't scare you off, these are the places where the magic happens. I'm lucky to be part of managing these places—especially the gems hidden on the bluffs. These are remnants and relics from Old

Crews from Conservation Corps of Iowa remove shade-tolerant and invasive species from remnant oak savanna. The county is working to open oak woodlands and also restore remnant prairie and protect other special areas in the county.



Iowa: hill prairies, savannas, and oak woodlands too rugged and rocky to have ever been plowed. They also hide algific slopes where glacial-era ecological communities still cling to their southernmost range. Flourishing in cool climates, they did well during the Ice Age and survive here in small microclimates created where cold air seeps from hillside vents and cracks from caves.

Now, let's talk restoration—specifically of prairies, savannas and oak woodlands. JCCB manages a number of small but mighty remnant areas. In recent years we've really ramped up restoration efforts. These areas were often spared from the plow because they're steep and rocky, usually with a south or southwest aspect that keeps them sunny and dry—slowing the advance of woody and invasive species.

These are disturbance-dependent ecosystems. After Euro-American settlement, the processes that sustained them—frequent fire, usually from lightning or set by Indigenous peoples, and grazing from large herbivores like bison—were mostly eliminated. Without this, even high-quality remnants degrade. Some were grazed or hayed, and ironically, those grazed under the right conditions often remained in better shape than those that weren't touched at all.

Lacking fire and grazing, woody plants encroach to shade

out sun-loving prairie species and reduce biodiversity. In savannas and oak woodlands, dense canopy growth suppresses oak regeneration as oak saplings need full sun to grow. Shade-tolerant native species like sugar maple, ironwood and hackberry move in, increasing the shade and decreasing biodiversity even more. Add in invasive species, and our remnants aren't what they once were—or what they could be.

Remnants that remain are smaller and often confined to the steepest, driest south-facing slopes. Jackson County still has remnant areas—areas whose management and future keeps me up at night and sometime dream about. In the past few years, JCCB has been pushing harder on restoration—preserving quality communities that are left and supporting rare species like timber rattlesnakes, five-lined skinks, rusty patched bumblebees, large-flowered false foxglove, prairie brome and more. We're doing what we can with the capacity we've got.

What does that look like? Well, it's site-specific. The kind of habitat, species present and overall site health guide what we do. First, we inventory species—especially any threatened, endangered or species of concern. That helps determine not just what kind of management a site needs,

but when management techniques are applied. We locate the highest-quality areas and identify problem spots. We look at what site management strategies are most appropriate for the site. We also use historical aerial photography and LiDAR to map site boundaries. With all this, we set goals, make an adaptive management plan and get to work.

As a habitat manager, I often feel like a surgeon—using invasive techniques to heal patients. And like surgery, there are scars. Restoration usually starts with cutting and removing both invasive and overabundant native species—especially those out of balance or suppressing diversity. It's a lot of chainsaw work and herbicide on stumps to prevent re-sprouts. Early-stage restoration can look pretty rough—seeing trees come down is hard—but that sunlight is what brings these ecosystems back to life.

We prioritize removing invasive species from the highest-quality areas and work outward to reconnect isolated remnants by removing woody growth. It's a long process—often taking years—but worth it.

Once initial clearing is done, monitoring is key. We revisit to see what regrows, cut and re-treat if needed and keep an eye out for reappearing beneficial native species. What comes back helps guide future management. Ideally, a more favorable herbaceous layer starts developing, then we introduce prescribed fire.

Prescribed fire mimics historical fire regimes. It stimulates native plants, helps suppress invaders and keeps prairies, savannas and oak woodlands in good shape. We vary timing of burns to target different species and support a diverse plant community. It's important to not burn the same areas at the same time each year, or you'll start favoring a narrow group of species and lose broader diversity. Leaving some unburned patches also provides refugia for insects, plants and wildlife.

Midland shooting star
(*Dodecatheon meadia*)



Prescribed fire on an oak savanna helps remove woody shrubs and restore grasses.



Every management activity benefits some species and harms others—even native ones. Burn too rarely and woody species take over. Burn too often and you may lose the very species you're trying to promote. Balance and diversity in burn timing and structure are key.

Long story short: cut stuff down, burn it at different times, watch what grows back, and adjust as you go. It's not quite that simple—but you get the gist.

Restoration is ongoing. It requires flexibility, observation and a realistic assessment of your tools and funding. But I'm happy to say that JCCB's remnant sites are responding. In areas where we removed woody encroachment, native species are coming back. Sites are starting to carry fire again. Oaks are regenerating. We're seeing more conservative species—and even discovering new ones we didn't know were there. Our quality areas are expanding and habitat improving.

Don't get me wrong—some areas still need a lot of work. Some are in really rough shape. But we're excited to do that work.

So if you find yourself in our neck of the woods—or rather oak woodlands, savannas and prairies—and you don't mind a gravel road, a farm easement and a rugged hike, check out a few of Jackson County's best-kept secrets: Buzzard Ridge Wildlife Area, Maquoketa River Overlook, Ozark Wildlife Area, and, when open to the public, the privately owned Codfish Hollow (Hamilton) Hill Prairie. Come see some of Jackson County's secrets for yourself. 🐾



Paintbrush
(*Castilleja coccinea*)

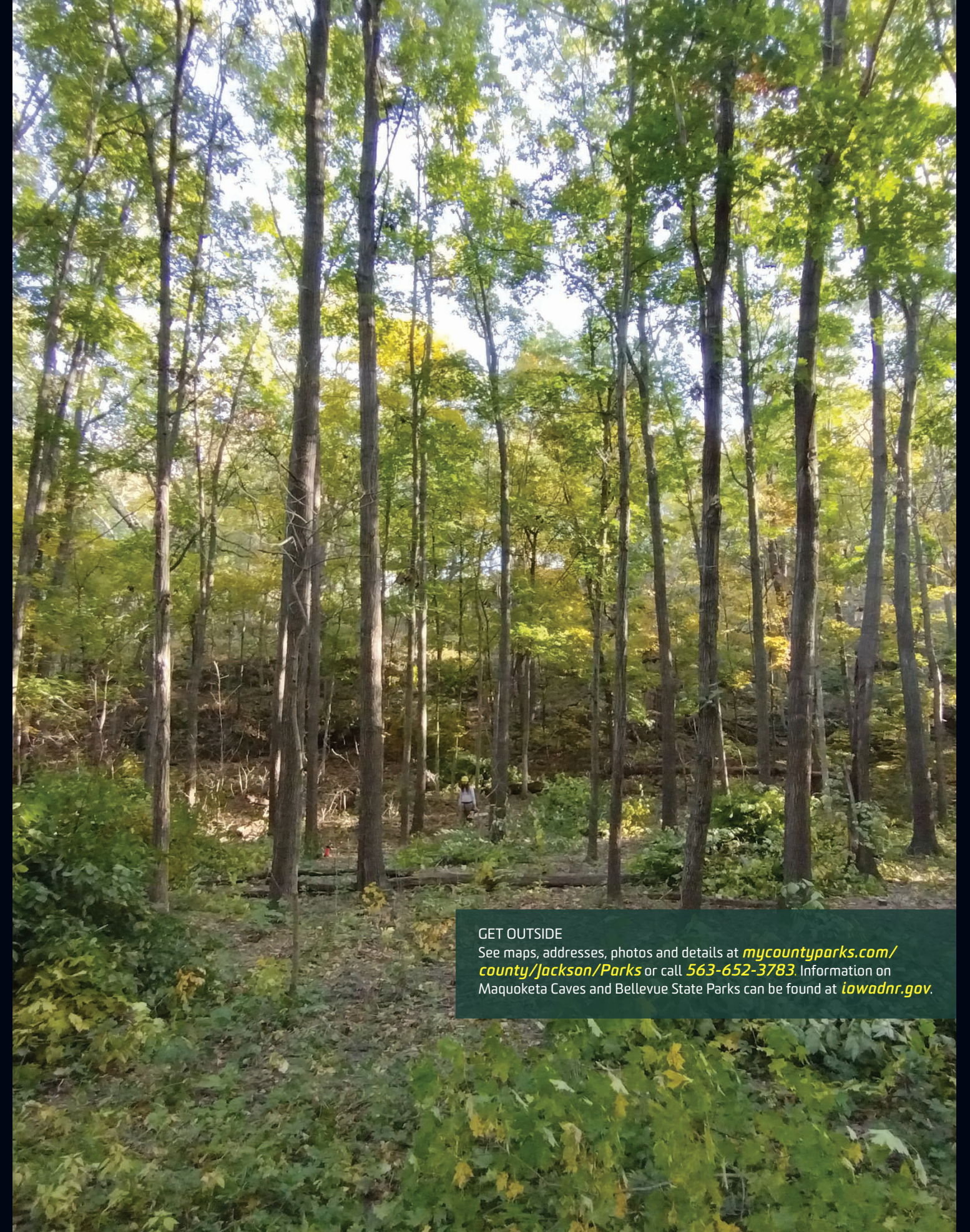


Timber Rattlesnake
(*Crotalus horridus*)



Prairie Rose (*Rosa arkansana*)
on a bluff overlooking the
Maquoketa River system.
OPPOSITE: The forest area is
open after removal of shade
tolerant tree species and
woody vegetation. Red oaks
will be able to regenerate with
more light reaching the forest
floor and native grasses and
wildflowers will flourish, too.

Prairie Rose
(*Rosa arkansana*)



GET OUTSIDE

See maps, addresses, photos and details at mycountyparks.com/county/Jackson/Parks or call **563-652-3783**. Information on Maquoketa Caves and Bellevue State Parks can be found at iowadnr.gov.