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Tree Invasion

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EASTERN RED CEDAR *has spread across our tallgrass and mixed-grass prairies at an alarming and accelerating rate.*
If nothing is done, this grassland will soon disappear once these trees begin producing seed.

Tree Invasion

“I think that I shall never see . . . A poem lovely
as a tree.” These first lines of Joyce Kilmer’s
poem “Trees” reflect deeply-held values for
generations of Americans. No doubt, I stand
among those who place great value on trees.
As a boy I climbed them, drew them, and
explored kid-sized wilderness wherever I could
roam in even an acre of them.



Perhaps we who live in prairie
states value trees more than most.
Those roots run deep. Who hasn’t
heard of European settlers cursing the
incessant wind, the blazing summer
sun, and sheer exposure of the Great
Plains? They and their descendants
were determined to change that. And
how better to do it than with trees?
As early as 1873, Nebraska Senator
Phineas Hitchcock introduced the
Timber Culture Act, a federal law

that offered 160 acres of prairie to
anyone who would plant 40 of those
acres to trees. Years later, University
of Nebraska botany professor Charles
Bessey advanced the idea that the vast
grasslands of the Nebraska Sandhills
should rightfully be pine forest. The
level of enthusiasm with which his
idea was embraced, then and now, is
evidenced by the Nebraska National
Forest near Halsey. There, about 30
square miles of man-planted forest, in

the heart of one of North America's greatest remaining grasslands, attest to our love for trees . . . and to our ignorance of grassland.

True, the weather of the Great Plains can be harsh and the beauty of our grasslands is sometimes subtle. But I think Joyce Kilmer would have also waxed poetic had he seen a bluestem prairie's rosy glow in the refracted light of an October sunset. Too few of us appreciate their beauty or comprehend the true value of our Great Plains grasslands. This and our culture's love of trees has sewn the seeds of change that threaten our signature landscape . . . the prairies . . . like nothing since John Deere's invention of the moldboard plow.

For over a century, we have planted trees all across the Great Plains. Windbreaks for farmsteads, crop fields, livestock, and wildlife allowed us to bring the more moderate conditions and wildlife of the East onto the plains, at least on small scales. By themselves, tree plantings have altered, but perhaps

not seriously threatened our remaining prairie ecosystems. But our collective failure to understand prairie ecology has resulted in grassland management or, more correctly, lack of management that has allowed some species of trees to escape their original planting sites. Fire, the prairie's natural ally, was often suppressed and grazing sometimes misapplied, leaving a weakened prairie community vulnerable to an onslaught of invasive trees that is now swallowing our grasslands at an alarming rate.

No prairie is immune. Eastern red cedar, hedge, and black-jack oak have invaded much of the Kansas Flint Hills. Russian olive, cedar, black locust, and honey locust have consumed our central sand prairies. Red cedar is devouring the prairies of the Red Hills. In the Smoky Hills, cedar and hedge are the main culprits. They are a metastasizing cancer on our prairies.

Prairies, often taken for granted, are among Earth's most threatened landscapes. The prairie's unique



assemblage of wildlife is a rare treasure on the global scale. Yet, many of us who live here suffer from the delusion that meadowlarks are somehow ordinary. Grassland birds have shown steeper and more widespread declines than any other guild of birds in North America. Foremost among these species are prairie chickens, amazing creatures of wide open spaces and

clear horizons. Eons of adaptation have favored the survival of those birds that avoided trees, the hunting perches of hawks and owls, and habitat for many predators. This avoidance means it won't take a sweeping front of woodland, but only widely-scattered trees to eliminate prairie chickens from otherwise suitable landscapes. And tree invasion is just as much the enemy

of bobwhite, grassland songbirds, and the exquisite upland sandpiper.

Prairie chickens are disappearing from lack of fire in some places and from too much fire in others. Annual

Conservation is an ongoing journey with frequent course corrections.

spring burning of vast sections of the central Flint Hills has left greater prairie-chickens and other ground dwelling birds with little or no nesting cover. Neither extreme is what's needed. Most prairie wildlife are adapted to a shifting mosaic of burned and unburned areas. Suffice it here to say that burning frequently, but not annually, would go far toward improving prairie health, while leaving nesting cover and suppressing tree invasion.

Conservation is an ongoing journey with frequent course corrections. The first step in making those corrections

is to acknowledge we've made mistakes. Inevitably, as our ecological knowledge grows, hindsight shows some practices were not as clearly beneficial as once believed. Tree plantings at the hand of man, no matter how good the intentions, have been the source of invasive trees throughout the Great Plains. More troubling is the fact that inappropriate tree plantings still continue.

More landowners and land managers must recognize the magnitude of this threat . . . and soon. Many cases of tree invasion are rooted in an inadvertent failure to recognize the problem, but just as many stem from simple failures to act. It's just too easy to ignore little tree seedlings scattered around a pasture. But with tree invasion, the old axiom, "an ounce of prevention is worth a pound of cure," is very much an understatement.

Ranchers are stewards of the prairies. Most recognize their interest in preventing invasive trees from taking over grasslands. We must join with them as allies to turn back this invasion. It

will take money, time, and effort. The soldiers can range from ranchers to boy scouts, from government officials to private entrepreneurs. They must wield weapons like tree shears and pruning shears, chain saws and bow saws, drip torches and Tordon. In the process, they will better understand the value of prairie and the value of helpful friends.

Of paramount importance is the need to assure that invasive trees advance no further. Complacency toward our remaining uninvaded prairies would prove a huge mistake. Focusing on the worst-invaded grasslands could leave our resources and resolve exhausted if we rise from our task to see two new acres invaded for each one reclaimed.

There are good uses and appropriate places for trees on the plains. But we have planted trees on the prairie with a near-religious fervor . . . only to discover that some spread like hell. Those of us living on the Great Plains must come to realize it is as much an act of redemption for us to kill trees that invade our

prairies as it is for others to plant trees in urban parks. We must realize that for the prairie, occasional fire is an act of renewal, not destruction. We should applaud, not deride, those who properly and carefully apply it.

It is not for us on the plains to grow third-rate versions of the great deciduous forests of the east or the conifer forests of the west. Our responsibility is to guard our precious remaining prairies for ourselves and our children, for spectacular prairie chickens and tiny grasshopper sparrows, and for the other people and creatures of the Earth. Maybe you remember the chorus of an old Joni Mitchell song : *Don't it always seem to go that you don't know what you've got 'till it's gone?* When it comes to our prairies, I hope the answer is "No!"

Randy Rodgers is a wildlife biologist from Hays who has worked for the Kansas Department of Wildlife and Parks for 31 years. The full-length version of this article appeared in Kansas Wildlife and Parks, Volume 60 (2003), Issue 5 (Sept–Oct), Pages 17–24.

NOTES



You take care of the grass, the grass will take care of you.
—*Local wisdom*

