

THE PRAIRIE IS A BATTLEGROUND

But Our Native Plant Community Was Not Prepared to Fight this Exotic Invader



Article by **William R. Browning, MD**



White Flags (or pink flags) are not carried to signify surrender. Roger O'Neill and Kaeyla Keating joined in the difficult search for all of the invaders, and flags were used to mark their positions for an assault with the herbicide Escort. A few *Sericea lespedeza* seeds were apparently included in the native grass and/or forb seeds purchased for planting fields enrolled in CRP on the Klataske family farm in Washington County, and land in Pottawatomie County. *Sericea* flowers in late summer/early fall. Photos by Ron Klataske.

In September 2008 my local newspaper "The Madison News," a wonderful weekly that truly binds our community together, printed this basic article that I had submitted. Nothing about this situation has changed since, except for the worse.

Is it the most beautiful year across the Flint Hills that most of us will experience in our lifetimes? After some of the most abundant and timely rains and clement temperatures in memory, the prairie may climax this week with a profusion of gold, yellow, blue and purple wildflowers to greet the peaking monarch butterfly migration. All this amidst the tallest ever tall grasses, in places, so much so that the old timers claim that one could tie the grass stems in a knot across the saddle horn has come true.

Amidst all this beauty and largess, the prairie is sick, choking to death. The sickness, as is the case in many other natural systems, is an exotic – in this instance a plant called *Sericea lespedeza*. The prairie is a battleground, it has been said, between hundreds of plant species, all warring for a niche, all struggling against adversaries they became familiar with during tens of thousands of years.

Oh, there have been a few other hapless white-man introductions and the prairie has opened up, taken them in stride, begrudgingly allowed them a small role, but *Sericea lespedeza* (*Lespedeza cuneata*) is plowing furrows through the forbs and grasses against which the prairie is apparently defenseless.

It was reputedly introduced and promoted by USDA in many venues across the southern U.S. as a substitute for alfalfa on poor soils – and extension publications were even distributed to espouse its virtues. Obviously it will grow almost anywhere and the Missouri Department of Highways used it extensively to vegetate roadsides. The seed was sold by vendors advertising in Quail Unlimited magazine, and reportedly more than forty years ago even wildlife biologists with the old Kansas Forestry, Fish and Game Commission promoted *sericea*. It was fancied to be ideal upland

game bird food. Although this did not turn out to be the case, it was none-the-less distributed to many optimistic landowners and sportsmen duped into believing that scattering the seed was a beneficial act.

Today in many pastures is the evidence of which farmers and ranchers were most convincingly deceived. In these locations the plant has achieved monoculture status. But it is not limited to these sites. Its seeds travel, in the cleft of a steer's hoof or a cow's ruman, in a bird's craw, or in the gut of a coyote that ate the mouse that ate the seeds. The seeds are also carried down the watershed with the rains.

At some expense, but I suspect without much optimism, Kansas has held seminars for farmers and ranchers desperate to rid themselves of the invader. At these meetings, instructions are disseminated about which chemical to apply at which season, and how strongly to mix it. But in truth these efforts are no more effective than cutting out a cancer that has already spread to bone, liver and brain, or trying to block a cold front with bed sheets. Sericea's true power is in the seed. This year a single healthy plant may drop a thousand of them. Some of these may germinate next spring and some in 20 or 30 springs.

Finding and killing that first plant is obviously key, but many Flint Hills ranches encompass thousands of acres. Some ranchers will have enthusiasm for only desultory efforts to control the plant. Other ranches are held by absentee owners who have no awareness of the plant, whose major connection to the land could be a check in the mail each fall representing the grazing lease net for the year. Others may simply be overwhelmed by the magnitude of the requisite effort.

On our northwest Greenwood County ranch of several thousand acres, the other owners have given me explicit or tacit approval to control the invasion. The relative scarcity of the plant on our place is testimony to the resistance of my forebears to the

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alleged wisdom of planting sericea. But we have it nonetheless. It's been recommended to use a GPS device to locate and next year relocate sericea patches when widely scattered on large acreages. I began to do this last growing season and had nearly 100 "hits." This

year I am approaching 200. I can extrapolate this out to more than 200,000 patches ten years from now and 3,000,000 by the time I am 80, at which time I suspect I will be reduced to keeping it out of the yard.

Part of the success of sericea can be attributed to its poor palatability to cattle. Its high tannin content tastes bad to them. Goats will eat it more readily, but an acquaintance who followed that path now says his sericea has out bred his hundreds of goats. In parts of the Southeast US, sericea has been planted in pure stands in old fields, a successor to cotton I guess. Where there is nothing else, cattle will eat it and survive rather than starve. And therein lies the rub. Although sericea threatens to destroy the whole plant complex of the prairie, the formerly dominant feature of Central North America, and now reduced pretty much to the Flint Hills, it has value elsewhere. And of course in our culture, commerce will always trump nature.

Because of that we cannot go to sericea's homeland, find out what keeps it from being the only thing growing there and import what controls it. To do so would threaten the profits of those doing business elsewhere with this exotic. We did intentionally import an insect that provides some control of musk thistle, another Eurasian invader of the prairie, a plant whose leaves have needles so sharp one can't ride a horse through a patch. But no one was making money on thistles, so that was okay.

At one of the "how to kill sericea with chemical spray" meetings, I asked exactly where it was native, but the K-State expert did not reply to the question. I guess that would have been dangerous knowledge. In this modern world where everything eventually seems to get everywhere, the sericea bug will likely finally arrive – but too late to save the prairie.

In the meantime I will continue to spot spray from my 4-wheeler, hoping in my lifetime not to have to resort, as so many in the county have, to spraying whole pastures with airplanes, an effort that can pretty much wipe out all the hundreds of plants that are not grass – meaning the wildflowers. Besides, not all seeds will be killed and the residual will eventually germinate so that these owners have the same situation within three years of the spraying.

If my sad description of the situation sounds too grim to believe, I would invite others to contradict it. Perhaps those who promoted it in the federal and state agriculture, extension and wildlife agencies would like to come forward to refute this likely scenario for our tallgrass prairie in the next very few decades. They cannot.



Back to the present

AOK, in response to this grim threat, has endorsed a resolution urging the government to begin immediate studies that could lead to control of this exotic invader. The proclamation will be sent to our state's governor, legislators, our state Secretary of Agriculture, the US Secretaries of Agriculture and the Interior, and to various deans of Ag studies at Kansas State University. Further, we will be enlisting other stakeholders to support us in this request for assistance. These entities would include the Kansas Livestock Association, Kansas Farm Bureau, Tallgrass Legacy Alliance, and Kansas Wildlife Federation.



Note that this previously overlooked pod of sericea – probably starting with a single seed--has expanded into a dense thicket crowding out native grasses and forbs. A few goldenrod plants are shown on the edge of the expanded sericea thicket, along with a few sumac plants that may survive.

Whereas Kansas is a prairie state and continues to have vast expanses of native tallgrass, midgrass and shortgrass prairies;

And whereas a large portion of agricultural revenue in our state is derived from prairie grasses;

And whereas, *Sericea lespedeza* is a listed species on Kansas's Noxious Weed List;

And whereas, promotion and establishment of this plant was facilitated and conducted by state and federal agencies in the past;

And whereas, it is increasingly obvious that the prairie is defenseless against *Sericea lespedeza* and may soon be largely replaced by a *Sericea* monoculture;

And whereas, this will result in the destruction of the native prairie, a source of pride for Kansas, and will greatly reduce rancher income from cattle gains;

And whereas, the conversion of prairie to *Sericea* monoculture will be greatly detrimental to all native wildlife;

And whereas, currently tens of thousands of gallons of herbicide are being spread annually onto the Arkansas and Missouri River watersheds in a futile effort to stem the invasion of *Sericea*;

And whereas, hundreds of agriculture workers are suffering heavy exposure to herbicides in that same effort;

Now, therefore, be it resolved that Audubon of Kansas actively supports and advocates that the officials of the State of Kansas petition the United States Department of Agriculture, the Animal Plant Health Inspection Service and the Agriculture Research Service to conduct investigations leading to new strategies for control of *Sericea lespedeza* and in particular to the research of biological controls.

For a further discussion of the origin and control attempts in neighboring Oklahoma, please see:

<http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Rendition-7591/PSS-2874web+color.pdf>

A Compelling Audubon of Kansas Question & Viewpoint

It is widely documented and recognized that invasive species displace native species, disrupt ecosystems, and affect citizens' livelihoods and quality of life throughout the world.

Invasive species such as *Sericea lespedeza* cost landowners and managers thousands of dollars and the public millions of dollars in damages and control expenditures.

Why shouldn't governmental agencies, other entities and even individuals responsible for introducing and promoting these non-native plants (and other destructive exotics) be somehow held accountable for damages caused and control costs?

If they had been, maybe Americans wouldn't be burdened with the ecological and financial costs created by the introduction and promotion of Johnson grass, old world bluestems (the next major threat to native grasslands), various honeysuckles, and the destructive and dangerous Asian carp now in major river systems.