Outrageous Speculation

Article by Bill Browning

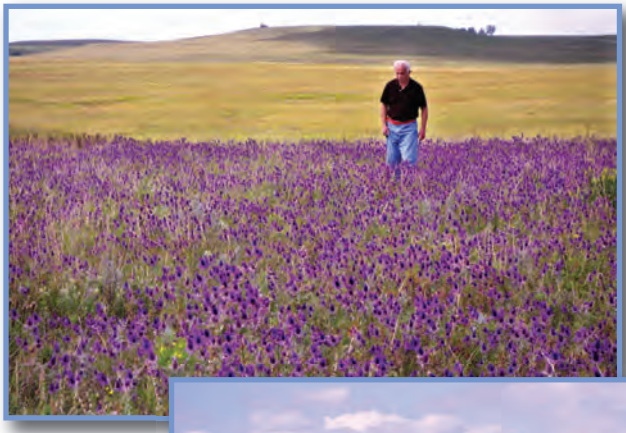
Sometimes a spectacle of nature can jolt one to a revelation that might otherwise be inaccessible.

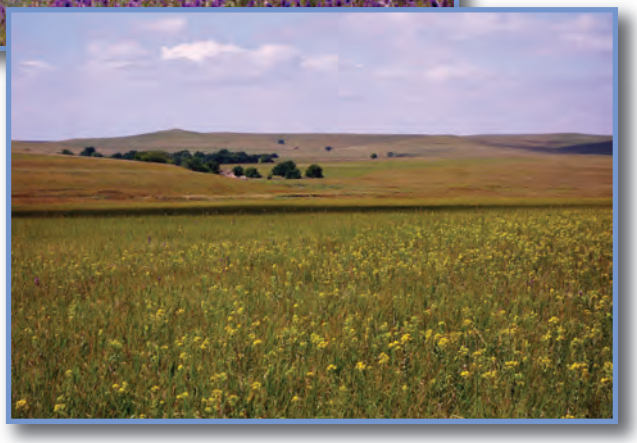
Fifteen years ago I was driving across one of our pastures with a US Fish & Wildlife Service biologist who remarked about the abundance of goldenrod (*Solidago rigida*, in this case), implying that it was excessive, causing me to suspect that chronic overgrazing was reflected in the weedy appearance of the area. Although the recent history of the pasture has been moderate stocking rates, I have some old photos of my grandfather around 1912 – pictures of him on horseback in that vicinity – and invariably the horses' hooves are mostly visible, indicating very short grass. The condition of the ironweed in one photo suggests high summer. Both, the very short forage and the ironweed, would be evidence of overuse.

Also in that part of the pasture is a persistent infestation of *Sericea lespedeza,* so I am in the vicinity frequently to address that problem with spot spraying. So as the goldenrod approached blooming this year I was very aware of it and encouraged my sister, who is quite a photographer, to come out and capture its spectacle and a nearby large patch of Leavenworth Eryngo. When she arrived for her photos on September 21, she acquired quality shots of both species. But, I was noticing among those blooms, as I had been noticing elsewhere in the previous days, the striking absence of monarch butterflies, whose migration was due to peak shortly.

A week later I returned suspecting that the goldenrod would be in decline. It was not. And although I was seeing few monarchs at home and elsewhere, they were abundant in that part of the pasture. At that point I began to really take stock of the goldenrod situation. It was a dominant plant in prominent patches, some numbering only a few dozen plants but others from one to more than five acres in extent. The layout of the patches was such that an area a mile east and west and up to one half mile north and south was involved – perhaps 200 acres. In fact, the intensity of the blooming flowers was so pervasive in the region that I was later able to appreciate a golden glow across the area from a high ridge top one mile to the west- a view that was made more remarkable with good binoculars. All this was amidst a big pasture where miles of cross fencing had been removed. The perimeter of the patches did not correspond to any fences past or present. Had it done so, overgrazing in one pasture might have been implicated, but in fact it was in what had previously been four different pastures. Only the east fence, where the patches abruptly terminated, seemed to affect it. There a neighbor had boom sprayed his side of the fence with 2-4D thirty years ago, apparently lopping off that end of the reach of the patches.

O.J. Reichman in his 1987 book *Konza Prairie* first awakened me to the idea of patches in the prairie. In his words, "a group of indistinguishable individuals forming monotonous populations," is how many of us view the prairie. In fact I recall that it was once a goal of mine that our ranch would look that way: grass, grass and more grass. Reichman wrote that "close inspection reveals that [the prairie is] composed of small-to-medium patches…and the heterogeneity they engender are where the action takes place on the tallgrass prairie." I have slowly come to accept this and with some struggle and imagination have





Photos by Susan Pogany

begun to see that our ranch lies within a much larger area of abundant wild quinine (*Parthenium integrifolium*) – absent from much of the Flint Hills and Osage cuestas – and at the western terminus of a large extent of wild licorice (*Glycyrrhiza lepidota*). Within the ranch are patches of wild hyacinth (*Camassia scilloides*), fall blooming pink wild onion (*Allium stellatum*), strips of Downy Gentian (*Gentiana puberlenta*), colonies of Sullivant's Milkweed (*Asclepias sullivantii*) and only one 15 ft diameter patch of slender mountain mint (*Pycnanthemum tennifolium*). And these are just a few examples.

Now back to September 28. I began arcing through the goldenrod patches on my four-wheeler, counting monarchs as they flushed off the flowers. I quit at 250 and estimated that I had surveyed about 10% of the area. Much relieved about the butterflies' plight, I returned home. Not until the following day did I start to see the full force of the monarch migration, as they winged south across all the roads and prairies west of Madison, KS.

I began to ponder all this and I began to surmise. Those goldenrods were not weeds caused by overgrazing the last 150 years. They are an ancient community. Monarchs have been chowing down on them for centuries. But how did thousands of them accumulate there over a period of seven days when there were hardly any others in the vicinity?

A week later I was back at the Sericea. The monarchs were still there, widely scattered but just as abundant. On a rocky ledge, goldenrods, on thin soil, seemed to be particularly succulent, and thirty or forty butterflies flew up as I approached. I returned to show the concentration to my wife and son late that afternoon for some grand photos. Suddenly a bi-plane appeared and began spewing what I presumed was Escort herbicide (metsulfuron methyl) across a neighbor's pasture to our west, not the first time that has happened there. Sometimes the Sericea is so bad that such an action is about the only practical response. But that pasture seems particularly bereft of the forbs that might feed fall-migrating monarchs.

More and more pastures are being boom sprayed or aerial sprayed in the fall for Sericea with collateral damage to fall blooming plants. (Indeed, the Escort label indicates activity against goldenrods and asters.) And another grimmer practice is the spraying of entire pastures in spring or early summer with more potent herbicides that kill everything but the grass (man's money maker), leaving little to nothing for the rest of creation.

There is great concern that our monarchs will disappear as their hibernation grove in Mexico is converted to fire wood and the critical food plants for their larvae – the milkweeds — succumb to row crops and ubiquitous herbicides. Will a third threat be loss of the fall flowering plants that power their migration and imbue them with the health they need to overwinter?

And finally, if they have an internal guidance system that leads them to that grove in Mexico, does another part of it lead a subset of them to those ancient patches of goldenrod southwest of my house? You can bet those plants are safe with me.

Photos by William Browning