

# PAINT THE PRAIRIE—BLAZING STAR

Lorne Fitch, P. Biol.  
lafitch@shaw.ca

From across a drab and desiccated expanse of grassland, one can make out a tiny flame, not of a fire, but of the lavender blossoms of Blazing Star.

Native grassland plants hold their cards close to their stems and closer to their roots. It's basic survival—don't waste resources, especially moisture. Most flower and set seed when spring snow melt and rain have provided a surplus of moisture. From early moss phlox and prairie crocus to the later asters and blue gramma grass, the show is short and quickly over. By late summer most have senesced, called it quits, gone to bed, and retreated to their roots.

But not Blazing Star. It blooms late, providing a welcome splash of colour to a virtually universal hue of browns and yellows. While others wilt from the heat and dryness, it literally “blazes” in the dog-days of late summer and into the autumn.

Blazing Star is a forb in the Aster family and some of its relatives are also late bloomers. The plant has speckled leaves, earning it the Latin name of *Liatris punctata*, the latter word meaning dotted. So the common name is Dotted Blazing Star.

Why it blooms late, outside of the period of better moisture, seems a mystery. Walt Whitman, in *Leaves of Grass*, touched on this when he wrote: “We feel the long pulsation, the ebb and flow of endless motion, the tones of unseen mystery, the vague and vast suggestions.” Maybe the plant has an inferiority complex, not wanting to compete with the subtle purple shades of the crocus, the wedding dress white of the saskatoon blossoms, or the gaudy, highlighter yellow of the balsam root.

That it does bloom late is probably much appreciated by native bumble bees, butterflies, and moths, since the lavender spike of flowers provides a late season buffet in lieu of the other prairie plants that have abandoned their pollinators.

Blazing Star likely pulls few human heart strings. Not only is it a prairie plant, living in a landscape that gets shunned by

many, but it blooms past the time when the few native plant aficionados are keen to visit the flowers of the grassland. As a shout-out, friends Liz and Andy named their flat-coated retriever kennel after the plant, in recognition of its place amid the native plants on their bit of prairie.

Like most prairie plants, Blazing Star goes about its business quietly, largely out of sight, and unheralded. However, early plant ecologists provide some insights on the plants of the native prairie environment, to which it would be worthwhile to pay attention.

Two of these, R. Coupland and R. Johnson from Saskatchewan, investigated how prairie plants make a living in dry conditions. Since moisture is the key to survival, they looked at root systems and rooting depths. They painstakingly excavated trenches in prairie soils and then disentangled the root systems of individual plants from the dirt. For anyone who has ever dug a hole by hand, or tried to plant a fence post in these soils, the effort required for this work would have to be acknowledged as herculean.

For Blazing Star, they found it drove its roots down to almost two metres into the soil. Another earlier researcher in Nebraska (John Weaver) found rooting depths for the plant to be nearly five metres! The rooting depth exceeds the above ground portion of the plant by 13 to 33 times. Whitman was right on about “unseen mystery.”

Compared to most other prairie plants, Blazing Star had deeper roots. This likely explains why it has the luxury of blooming late, when there is little or no surface moisture available. It taps deeper, subterranean sources of water. Like Blazing Star though, none of the native grassland plants investigated had shallow roots (like introduced species do) and are admirably adapted to the semi-arid conditions of the prairies. To say these native plants are “drought-tolerant” seems like stereotypical understatement, obvious and trite.

John Weaver was an early U.S. prairie plant ecologist. In his 50-year career, his investigations of the prairie are stellar and wide-ranging. The bibliography of research papers he wrote or contributed to runs to



Dotted blazing star (*Liatris punctata*).  
Photo credit: Dale Hjertaas.

four long pages. In one piece entitled *The Wonderful Prairie Sod*, he said “To the prairie sod only the plow is lethal.”

In another paper Weaver pointed out that: “Dotted blazing star develops slowly and is long lived. Ring counts in root crowns showed plant ages greater than 35 years.” That requires a pause for reflection—35 years! This is old-growth prairie, akin to old-growth forest.

On many levels, Weaver and others have consistently provided information on the elegant role, value, and adaptability of prairie plants. There was a time this was not understood and thinking grasslands could be “improved,” much of that habitat went under the plow. We are at a point now where it cannot be said we lack an understanding of the virtues and values of leaving these landscapes alone. Yet even as we are better informed, we avoid using that information to make appropriate choices, and plow up more grassland.

Imagine what Blazing Star could teach us—if we had a mind to listen—about patience and persistence, of living successfully in a semi-arid environment, one under the additional crisis of climate change. We prairie people could be similarly deeply rooted, parsimonious in water use, and part of a community that thrives on natural diversity.

*Lorne Fitch is a Professional Biologist, a retired Fish and Wildlife Biologist and a former Adjunct Professor with the University of Calgary. He is the author of Streams of Consequence—Dispatches from the Conservation World.* 🐦