

Tickling the Bellies of the Buffalo

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In metropolitan Chicago, it is difficult to imagine an unbounded, fenceless world of the kind that existed in this region a mere two hundred years ago. Prairie grasses that dominated and defined the area—with wispy stalks brushing the saddles of travelers on horseback, and roots extending ten to fifteen feet into the ground—are now scarce in this Prairie State. Remnants spangle the embankments of railroad right-of-ways, line the pockets of forgotten cemetery edges, and adorn larger forest patches and prairie savannas. Salvaged by accidents of history and the foresight of nineteenth-century Chicago planners, who envisioned an “emerald necklace” circling the city, these urban green spaces account for a great irony: more biodiversity exists in metropolitan Chicago than in rural Illinois, where the soils have largely been repurposed for corn and soybean monocultures—from fencerow to fencerow—to provide forage for livestock, fuel for automobiles, and food for hungry cities near and far.

Dividing up the tallgrass prairie of Illinois was very good for some species but not for others. I think particularly of two animals, bison and wolves, their stories entangled as predator and prey in the dance of the tallgrass prairie’s evolution. Like the prairie flora that co-evolved in their presence, these large mammals were uprooted from places they inhabited for thousands of years.

And yet they have not vanished. They linger on the fringes of memory and in present-day enclosures, evoking future possibilities for a landscape undivided.



I pay homage to the defining habitat of Illinois by visiting a restored prairie near Batavia, to stand within shouting distance of one of its more imposing creatures: *Bison bison*. Most people know this shaggy-maned, one-ton behemoth more familiarly as the buffalo, and there is a small herd in Batavia, cropping the grass an hour’s drive west of Chicago’s Loop.

These bison are residents of the Fermi National Accelerator Laboratory (Fermilab), a high-energy physics facility. Bison and particle physics may seem an odd combination, but Fermilab’s founding director Robert Wilson had a vision for both. Underground would be the realm of quarks and neutrinos, as

well as massive particle accelerators that are modern-day marvels of engineering. Aboveground would be still more marvels, but unlike subatomic particles, these could be seen with the naked eye.

Bison were brought to Fermi in 1969. Three years later, Wilson took things further. Persuaded by biologist Bob Betz (a man who described himself as a willing victim of “prairie fever”), Wilson was convinced that representing the indigenous landscape of Illinois was preferable to thousands of acres of suburban lawn. Betz got the green light to spread his prairie enthusiasm, beginning with ten acres above the Fermi accelerator ring. His determination soon attracted others to the cause, and the Fermi prairie restoration has since spread to over 1,200 acres that serve as a diverse mosaic of habitats for Chicagoland wildlife.

Fermilab’s initial group of five bison also expanded over time, and the herd is now managed to hold steady at around twenty-five animals. Some suggestions have been made to join the bison with the prairie restoration. Thus far, however, these massive beasts function only as living symbols of a bygone era. A perimeter of double-fencing divides them from lands they once shaped so extensively, as much to protect the bison as the people who might mistake them for gentle giants.

The role of bison as landscape architects of the prairie is well documented. Among other things, they recycle nutrients, disperse seed, open up patchy areas of increased plant diversity through their grazing, and create wallows that hold water and provide resources and breeding grounds for other prairie species. Their influence on the variety and abundance of prairie species once loomed large. Could bison in Illinois again play such roles? It’s an open question. There isn’t much prairie left.

I lean into the fence and wrap my fingers around the cool metal, watching the Fermilab herd graze at their leisure. I wonder, do they ever sniff at the air in June, when the prairie is afire with colorful blooms, and feel their bodies straining to know what is on the other side of these fences?



On weekday mornings, a train whisks me along its tracks and deposits me near the Chicago River. I begin my walk to work and stop at a spot where the North and South Branch of the river merge. At this confluence, the North Branch’s western bank is occupied by some high-end condos known as Riverbend. I stare at the vertical human habitat and imagine the landscape before the skyscrapers and office buildings, before the river was forced to change directions in 1900 and flow into the Mississippi, before the infamous flames of 1871 jumped these waters and left 100,000 people homeless, and before Chicago was incorporated as a city in 1837, when it was a modest trading outpost and portage site. In 1832 a simple log-cabin watering hole stood here. The name of the place was Wolf Point Tavern.

In this city of 2.8 million, it is now hard to imagine wolves roaming the banks of the river. Yet they did, and not too long ago. According to historian Wil-

liam Cronon, author of *Nature's Metropolis*, a Chicagoan could still shoot a wolf “within earshot of city center during the 1830s” (30). By the latter decades of the 1800s, however, one would have been hard-pressed to hear a wolf howl in the state of Illinois. The extirpation of wolves conformed to a historical pattern of colonization. Waves of settlers disrupted dynamic relationships among native flora and fauna, homogenizing diverse ecological systems, oftentimes in favor of only a handful of species useful for livestock production and agricultural cultivation.

Chicago was a major catalyst for such upheavals. As the “gateway to the West,” the city was a hub whose spokes reached widely across the continent’s interior, connecting once-distant lands to Atlantic coast cities. The continental-scale decimation of wolves in the late nineteenth century was facilitated by the railroads that converged in Chicago, known at one time as the “Rail Capital” of the world. Evolutionary time scales were compressed, then crushed, by the commercial linkages created by trains, and wolves were unacceptable obstacles to the nation’s efficient metabolization of natural resources into hard currency.

I listen to the screech of metal on metal as the elevated train passes over the river into the Loop. For a moment, I think I hear a sound just underneath the metallic squeal and rumble, something rippling over the surface of the river like a breathy wind, something like a howl.



On a train to the city, I read a *Tribune* article about a wolf who recently wandered from Wisconsin to Illinois. Because I keep tabs on the topic, I know there have been twelve wolf sightings in Illinois since 2002. Nine were shot or killed by hunters; one wolf was struck by a car in Lake County in 2005; and in March 2010, near Aurora, a live wolf was photographed for the first time in Illinois. For now, there are no established packs in the state; the wolves that create minor headline material for newspapers are lone dispersers, likely probing the landscape for new territories.

The only place that wolves escaped eradication in the contiguous United States was northern Minnesota. Once the Endangered Species Act was passed in 1973, those wolves gained protections that allowed them to steadily repopulate not only Minnesota but also Wisconsin and the Upper Peninsula of Michigan. Wild wolf populations later reached sufficient sizes to allow their delisting as a threatened species in the Midwest. In 2012 state-issued hunting licenses for wolves were available for the first time in Michigan and Wisconsin, a reflection both of the population rebound of wolves and the limits of human tolerance.

The *Tribune* article presents an opposing viewpoint about these hunts from Mic Isham Jr., of the Lac Courte Oreilles Band of Lake Superior Chippewa. Isham offers a distinctive perspective about what the presence of wolves in the Midwest means: “The way we hold the wolf is like how the Catholics hold the Holy Trinity—Father, Son, Holy Spirit. . . . The wolf is like one of those to us. It’s a sacred, holy being. To us the wolf was put on Earth at the same time as man to walk together as brothers, and as one goes, so goes the other.”

I fold the newspaper in my lap and linger on Isham's words. Most of the reasoning I see for ecological restoration, including the reintroduction or conservation of animals who rely on healthy lands and waters, is couched in scientific language (rare and threatened species, biogeochemical cycles, ecological dynamics, natural disturbance regimes, successional trajectories, biodiversity recovery, and so on). The language of science has appeal to the midwestern pragmatist—of course we should restore the prairie, for the land is a “living laboratory.” But push a little further, and I think connecting and restoring the remnant prairies of Illinois is based on something more intimate, something that relies on a place-based wisdom of mutual healing, something that could be called sacred. As one goes, so goes the other.



There are still bison in the city of Chicago—long since expired, but present in their own manner. I seek them out on a visit to the Field Museum, one of Chicago's most outstanding refuges for natural history.

Through the “Nature Walk” section of the main level, I enter one of the museum's narrower hallways. Dioramas on opposite sides of the hall create the illusion of space, stretching nearly floor-to-ceiling with carefully painted backgrounds that mimic distant horizons from around the world. The foldout map in my hand tells me I am in a part of the museum called “Messages from the Wilderness.”

I am drawn down the corridor to the diorama of American bison, and I take a seat on a simple wooden bench in front of the ten-foot-tall plate glass. A wind-whipped sky rolls over the upper half of a painted back wall. Atop a sandy wash, a gnarled juniper tree clings to an eroded bank. Bison are milling about, waiting to descend for a drink at a gently flowing stream. Directly behind the glass, five full-size bison and one calf are frozen in mid-stride. My gaze lingers, softening. It seems the small band of bison in the foreground might take their next step at any moment. I stare into the black, unblinking eye of a bull. I hear the thunder of hooves in the distance. My imagination tramples other competing sounds, other competing thoughts, transporting me to when I last taught environmental studies classes to undergraduates.

During one class session, I would take my students out to a nearby graveyard, adjacent to an underutilized campus golf course. This was not due to a fascination with morbidity. I wanted to highlight the essay “Prairie Birthday” from Aldo Leopold's *A Sand County Almanac*. In this short piece, Leopold tells of a country cemetery he visits where a single cut-leaf silphium (compass plant) dwells in a forgotten, unmowed corner. He speculates that this tenacious, sunflower-like prairie plant, disregarded as a weed by most people, might be the last remaining celebrant of the prairie's July blooms in the western half of Dane County, Wisconsin. Between doses of good humor about the supposed progress of “mechanized man” who considers it an improvement to be rid of such plants, Leopold makes a profound statement about relationships: “We grieve only for what we know”—and so the prairie is dying. For him, the land told a

story of deep interrelations whose pages were being torn out. Something precious was passing away, in the landscape and in the human ability to know and care for it. Leopold remarks, “What a thousand acres of Silphiums looked like when they tickled the bellies of the buffalo is a question never again to be answered, and perhaps not even asked.”

Since I didn’t have silphium conveniently on hand, I made use of a huge oak whose massive galls would seat a person with legs dangling. I asked the students to scan the horizon with their imaginations. They obliged, looking out across the cemetery at the unkempt golf course, a softball field, and a wisp of meandering creek threading its way into a distant culvert. The oak we sat under, I told them, has witnessed many changes. Perhaps honoring its age, perhaps by happenstance, the university spared the oak even while some of its kin were uprooted and replaced by Bermuda grass. But two hundred years ago, when there was not a single campus building, before this institution of higher learning was even conceived, the oak began to grow here, anchoring itself to the ground and extending fresh branches to catch the welcome warmth of summer light. When it was a sapling, all of the landscape was prairie and oak savanna. On that prairie were bison. Bison wallowing in clouds of dust, bison calves prancing between their mothers, bison bulls snorting warnings into the air. There may have been wolves nearby, surreptitiously skirting the margins of the herd. I asked the students: “What would a thousand acres of silphiums look like tickling the bellies of the buffalo?”



I drive my five-year-old son to Wolf Park, a seventy-five-acre facility in Battleground, Indiana, founded in the 1970s by animal behaviorist Erich Klinghammer and now home to ten wolves. My son, a prehistoric-life enthusiast, has more familiarity with dire wolves, but he gushed at the prospect of encountering their real, modern-day descendants. The strongest selling point was that since it was a Friday, there was a group howl session scheduled for the evening.

It would take a wolf on a single-minded mission four days to reach Wolf Park from Chicago. With the advantage of a car, it took us a little under two and a half hours.

The wolves at Wolf Park are socialized to humans and spend their lives in fenced enclosures. Until recently, Wolf Park also hosted a once-a-week, forty-minute demonstration of predator-prey dynamics, in which a select group of wolves was allowed to “test” the resident bison herd under controlled conditions. Problematic as that may sound, no major injuries occurred over the span of the thirty-year program (the bison actually dictated most of the engagement).

That night, the resident wolves gathered near the fence line of the main pack’s seven-acre enclosure; they were restless, feigning aggression, reaffirming social order. Following an educational introduction about the purpose of howling, a park volunteer encouraged those of us seated in the viewing area to

initiate the chorus. About forty people, some tilting their heads upward, began tentatively. My son stirred on my lap. He had been waiting for this. As the chorus thickened, I watched him make an O shape with his lips; he then quavered out the full-bodied howl of a five-year-old. He sounded remarkably like one particular wolf perched on a large boulder in the enclosure. Their alternating howls echoed in call-and-response. We howled again and again, the pitch of our voices rising and descending. In those moments, the visceral power of sound became more clear to me. Voices carry through fences, unmindful of chain-link barriers. The wolves and the humans were at least for that moment in unison, until all our voices faded into a full silence and the quiet again encircled us.

Maybe I brought my son to Wolf Park seeking a certain kind of knowledge, the kind discovered in participation. If we grieve only for what we know, as Leopold put it, then a corollary must also be true: we celebrate only what we know.



I am on my way to Fermilab again, thinking about bison and wolves. I pass by lands that are dissected by a tangle of physical boundaries (roadways, fences of all kinds, housing developments) and a still more confusing amalgamation of invisible barriers (private property, public lands, zoning ordinances). Given these obstacles, it seems fanciful to imagine a mutual restoration between cities and rural lands, people and prairie, and animals such as bison and wolves. But because of their need for large habitats and their key roles in shaping those habitats, large mammals like bison and wolves may point the way to such possibilities.

Twenty-five years ago, geographers Deborah and Frank Popper began earnestly pitching the idea of a Buffalo Commons, “the metaphor for a restoration-based future” (31) that would mobilize a long-term vision for the Great Plains region. It is an idea that has gained traction in many places. A full-blown “buffalo commons” is a mismatch for the climate and demography of the Chicagoland region, which has a more intensive history of agricultural settlement and hosts a much denser human population than the Great Plains. Still, it is striking that a nonhuman animal—and recognition of its key ecological and cultural roles—served to broadly define a commons area, a shared place with shared responsibilities to both human and nonhuman residents.

Over fifteen years ago, stirrings for a landscape-wide vision for Chicago coalesced around the phrase “Chicago Wilderness”—an arresting pairing of words. To me, the phrase signals that after a long and brutal legacy of presuming that humans and cities are incompatible with nature—that nature is a vast storehouse of goods fit only to be plundered—urban places are being reimagined as areas nested within a larger commons. This Chicago Wilderness commons is a shared habitat, one in which the needs of other species should be carefully weighed, and the long-term well-being of the land is not merely a remnant of the historical past but an opportunity to forge new relationships.

The bison are starting to get a hearing. Places like Nachusa Grasslands,

Midewin National Tallgrass Prairie, and Fermilab are all within the larger Chicago metropolitan reach, and all of them either have bison or plan to reintroduce bison to their restored prairies in the near future. Meanwhile, wolves are testing the landscape, fitfully making their way back to Illinois. The restoration of fragmented lands that could serve as primary habitats and corridors—both within the larger metropolitan area and outside of its official limits—may give these species an opportunity to once again engage in their prairie dance.

As I watch the bison at Fermilab, I am reminded that the recovery of such relationships is a process both dynamic and incremental. On another portion of Fermilab's property, on the edge of one of the site's restored tallgrass prairies, there is a boulder with an engraved plaque. The plaque honors the late Bob Betz, the man with "prairie fever" who was so instrumental in envisioning and then carrying forward Fermi's prairie restoration. In his book *The Prairie of the Illinois Country*, Betz recounts the story of his first meeting with Robert Wilson, Fermilab's director. When Betz pitched his prairie idea, Wilson wanted to know, "How long would it take to restore such a prairie?" Betz knew it would take decades, maybe hundreds of years, but he low-balled his answer: five, ten, maybe twenty years, he said. Wilson pondered this for a moment, and then replied, "If that's the case, I guess we should start this afternoon."

My eyes drift past the boulder with Betz's plaque to the bright colors of native plants spread across the horizon. The yellow-starred blooms of silphium dot the land like a constellation.

Recommended Resources

Books and Articles

- Betz, Robert F. *The Prairie of Illinois Country*. Westmont, IL: DPM Ink, 2011.
- Cronon, William. *Nature's Metropolis: Chicago and the Great West*. New York: Norton, 1991.
- Gates, C. Cormack, Curtis H. Freese, Peter J. P. Gogan, and Mandy Kotzman, eds. *American Bison: Status Survey and Conservation Guidelines 2010*. Gland, Switzerland: IUCN, 2010.
- Hoffmeister, Donald F. *Mammals of Illinois*. Urbana: University of Illinois Press, 1989.
- Lopez, Barry. *Of Wolves and Men*. 1978. Reprint, New York: Scribner Classics, 2004.
- Matthews, Anne. *Where the Buffalo Roam: Restoring America's Great Plains*, 2nd ed. Chicago: University of Chicago Press, 2002.
- Mech, L. David, and Luigi Boitani, eds. *Wolves: Behavior, Ecology, and Conservation*. Chicago: University of Chicago Press, 2003.
- Popper, Deborah E., and Frank J. Popper. "The Onset of the Buffalo Commons." *Journal of the West* 45, no. 2 (2006): 29–34.

Websites

- Fermilab Prairie: <http://sustainability.fnal.gov/ecology/prairie/index.html>
- Great Plains Restoration Council: <http://gprc.org/research/buffalo-commons/>
- Midewin National Tallgrass Prairie: <http://www.fs.usda.gov/main/midewin/home>
- Nachusa Grasslands: <http://www.nachusagrasslands.org/>

Nature Conservancy, “Nachusa Grasslands”: <http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/illinois/placesweprotect/nachusa-grasslands.xml>

U.S. Fish & Wildlife Service, “Wolf—Western Great Lakes”: <http://www.fws.gov/midwest/wolf/>

Wolf Park: www.wolfpark.org