

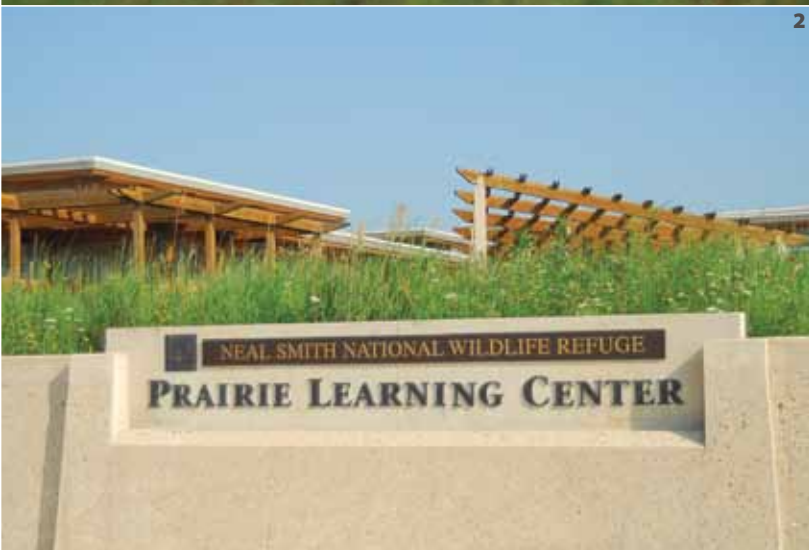
# Tallgrass Treasure

The open tallgrass prairie of Neal Smith National Wildlife Refuge will envelop you in Iowa's ecological history.

BY JENNIFER WILSON PHOTOS BY CLAY SMITH



LEFT: A young male, one of nearly 40 bison, grazes. Bison help restored prairies by taking tops off plants, allowing more water to reach seedlings and increasing plant diversity. The refuge is home to more than just large mammals and plants. Butterflies, insects and rare moths are found, including a recently discovered new moth species. 1) The center's prairie style architecture blends into the area, offering spacious views. 2) Eye-level prairie views greet visitors. The lattice pergola yields dappled light reminiscent of savannah; open to the sky, elements and wind. 3) Often seen with his grandchildren in tow, former congressman Neal Smith holds rigid goldenrod. 4) Where invasive canary reed grass once grew, cardinal flower and great blue lobelia flourish in the highly diverse sedge meadow near the savannah trail.



Open prairie yawns to the sky just beyond a modest brown welcome sign 25 miles east of Des Moines. It's as if the land, too, is awakening from a sleepy drive past bean and cornfields along Highway 163 to the Neal Smith National Wildlife Refuge and Prairie Learning Center.

And in a sense, it is. Naturalists and biologists are re-creating—almost from scratch—the landscape that was here more than a century ago. Think of it as an ecological do-over.

Here, among these gentle gradations of green and splashy purple prairie clover, black-eyed Susans, and grey-headed coneflowers, a habitat is reborn, nurtured by the loving hands of naturalists and volunteers, shaped by grazing elk and bison.

**PRAIRIE FROM SCRATCH**

In 1990, United States Representative Neal Smith pushed legislation through Congress to establish a refuge up to 8,600 acres in size.

“We’re essentially rebuilding an entire ecosystem,” says Pauline Drobney, a biologist at the refuge from those first days. “Nothing of this scale and scope has been tried ever before.”

To understand the magnitude of the project, walk the blacktopped stretch of the Tallgrass Trail that begins just outside the prairie-style visitor center with hands-on exhibits. Two decades ago, the trail was nothing but farm field. Now, you’ll be treated to subtle prairie pleasures. A nesting owl peers from a cottonwood tree. A regal fritillary butterfly—a prairie-dependent species recently re-introduced here—drunkenly bobs past wild indigo, wild quinine, obedient plant. Skunk tracks dot a creekside. A brown-headed cowbird stalks grazing buffalo.

These rare moments of beauty are as close as we may ever get to the settlers of the 1840s. To recreate the scene as it was then, refuge planners used its earliest documentation—writings of 19th-century government surveyors.

“It’s a mosaic of natural communities,” says Drobney. “Prairie, oak savanna, sedge meadow. We wanted the highest degree of ecological integrity we could get. What should’ve been here is what we had to put back.”

Volunteers and refuge workers gathered seeds from local prairie remnants in the 38-county area—Iowa’s southern lobe. They tracked down some 2,000 sites using word of mouth, aerial photos, topographical





A soft focus gives an almost dream-like quality to this image, taken before this herd was removed from the refuge after blood tests showed traces of domestic cattle genes. The bison created a new herd with the Meskwaki tribe in Tama and the Spirit Lake tribe in North Dakota. Two bison went to Jester Park, operated by the Polk County Conservation Board. In mid-December, a 39-head replacement herd of genetically pure bison were trucked in from Montana's National Bison Range, says Neal Smith National Wildlife Refuge manager Nancy Gilbertson.

Once, 40 million bison roamed the nation. Large railroad companies paid commercial hide hunters who ruthlessly slaughtered bison to near extinction by the mid-1880s. A few hundred survived, some saved by far-sighted ranchers. Over time, bison were cross-bred with cattle. Today, bison free of cattle genes are spread across federal refuges. "We want to make sure those genes aren't lost at some point if something would happen to other herds," says Gilbertson.

Moving the animals is no easy feat. It's a grumpy 36-hour truck ride from northwest Montana to Prairie City, IA. At 8:30 p.m., in the dark, the bison were freed, except one stubborn female, who stayed overnight in the trailer. Still refusing to leave by morning, rope was placed over her horns to gently pull her out with a truck. However, the rope remained, and after two days, she was darted to safely remove it. "She's had quite an experience, but she is fine. They've made themselves at home," says Gilbertson.

# LOST IN IOWA



maps—anything that would yield a few clues.

“Some [remnants] were the size of this desk, some were acres,” says Drobney.

Once the volunteers located the sites, they improvised collection using vintage equipment such as a Kentucky bluegrass stripper and an old Allis Chalmers 1954 combine specially designed to harvest seed. (The refuge now uses a modern combine with a rice head.)

Those specimens became the initial plantings. On a blustery day in May 1992, refuge employees and volunteers mixed seed with sand and hand-tossed it on a four-acre area—a far cry from the Vicon spreader they use now.

“We had a band playing for that first primal planting,” says Drobney. “We danced that seed right into the ground.”

## **A BIG JOB**

The cool, shady path of the Savanna Trail is dappled with sun. Oak trees throw out their limbs horizontal to the earth, and bumblebees hum from flower to flower.

As this oak savanna is under restoration, native shade plants seem almost shy in their return. Jack-in-the-pulpit. Green dragons. Pale Indian plantain. The little clematis vine of leather flower. A charming bluebell, pleasantly fragrant, beckoning for admiration.

They are among the 200 species of plants and flowers taking hold once again on this land. Through their stories, the refuge aims to emulate early ecology, produce research about ecological restoration, and encourage education and outreach.

That last part is the biggie.

“The fate of prairies rests on the shoulders of decision-makers, locals and taxpayers,” says Drobney. “But how can you value something that you’ve never touched or experienced? Something that’s never even been part of your culture?”

Drobney remembers when the refuge was under great scrutiny, as Iowans questioned another Neal Smith project after the flooding of Red Rock and Saylorville. Others worried about removing so much land from the tax base.

Still, it seems reviving the land changes those who walk these trails.

“I think there’s an innate need for us to relate with natural lands,” she says. “People get fired-up when they see these places. It ignites in most of our visitors a passion for protecting the place they live.”

And here in Iowa, perhaps that’s the most important mission of all. 🐾

## MAKE IT A DAYTRIP OF A LIFETIME

- Bring a hat, sunscreen and water. Budget at least an hour for the learning center and two for hiking.
- There is currently no local dining. Bring a picnic and drive to Thomas Mitchell Park a few miles west on Highway 163. Massive oaks shade the picnic tables. A fine fishing pond is perfect for beginners.
- When you get home, log on to [www.tallgrass.org](http://www.tallgrass.org). Friends of the refuge post volunteer opportunities and adult-education classes such as prairie-plant propagation and butterfly identification. Every second Saturday, show up at the refuge at 9 a.m. to volunteer.

## INTERVIEW WITH U.S. CONGRESSMAN NEAL SMITH

*In the wake of the 1970s energy crisis, Iowa Power and Light Company (now MidAmerican Energy), purchased farmland around Prairie City to build a nuclear power plant. When plans were scrapped, Congress appropriated funds to establish the refuge.*

*We asked former U.S. Rep. Smith about his namesake project, and Iowa's environmental future.*

**Q.** *How is the refuge doing, in terms of your original vision?*

**A.** I think it's doing great. I won't live long enough to see it fully established. It'll take 100 years or more for that to happen. The species don't come back fast. I want them to get prairie chickens and jackrabbits out there. It's time to do that now.

**Q.** *You were a true leader in Iowa conservation efforts. Do you see anyone in government following in your footsteps?*

**A.** Not only do I not see that, but it would be almost impossible to do. Environmental laws won't permit it. It takes longer than anyone serves in Congress to get things done now. In one night, I wrote the language to go into a bill to establish that refuge. In three days time, it was passed in the House and the Senate. There's no way that could happen now. You have to go through environmental studies and committees and subcommittees ...

**Q.** *So what can Iowans do to protect the land?*

**A.** Groups of individuals need to continue talking (about conservation efforts) to their representatives and senators—keep it in front of them. ... It's not like politicians don't want to get these things done. It's just not as high on their priority list as it was with me.

**Q.** *What sort of projects would you like to see happen in Iowa next?*

**A.** We need to take the boundaries of the Des Moines River Greenbelt, and within that area, develop it to get as many of the species back that were originally here. And establish the trails so people can see it. I established the Neal Smith Trail (in the metro area along the Des Moines River), and there's 11 miles of trail at Red Rock. Someday, a long time from now, those need to be connected. Some of that will have to be a DOT project, because some of the trail will have to be alongside the road like they have in Europe. But it needs to be done. You just work on those kinds of things to make the Des Moines River Greenbelt a great asset for people to live here and be here.



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1) Savannah edge, dominated by fire-resistant burr oak. 2 & 7) Family bison herd encircle calves in time of danger. Young bulls stay herded, but elders leave periodically. 3) Trails afford hikes for all ages. The two mile tallgrass trail is paved. 4 & 5) "Sit, be patient and watch. Slow down, get out of the car and you'll start seeing and understanding things," says Drobney. Coyote feed on rabbits, rodents and keep prairie bird predators in check by preying on raccoons. 6) Grant Wood-like view into 800-acre bison and elk area. 8 & 11) For every foot of vegetation, 10 feet are underground. 9) Close view of what's outside; 17 refuge elk. 10) Drobney in sedge meadow with cardinal flowers.