Once upon a time, in not so distant a past, tallgrass prairie covered parts of 14 states in the Midwest, including about 85% of Iowa. Tall grasses, with stalks up to 10 feet high and roots up to 12 feet below the surface, covered much of the landscape, with wildflowers such as prairie violet, pale purple coneflower, false sunflower, and white prairie clover adding a medley of colors. There would be bison, elk, and deer grazing on the grass, which stimulated the growth of the grass and many other prairie plants.

Native Americans would set fires in early spring, late summer and fall. No, not to destroy the prairie, but to attract grazers and browsers to fresh growth, aid in hunting, and clear campsite areas, and crop planting sites. The fire actually helped sustain the prairie plants; otherwise, trees would shade out the grass and other fire-adaptive plants on the prairie. It also reduced the danger of wildfire.

The arrival of the European settlers changed everything. What had been a major feature of the landscape for 5,000 to 8,000 years was virtually decimated in about 150 years, between 1800 and 1930. Now, according to the US Fish and Wildlife Service, less than 0.1% of the original prairie remains in Iowa.

All is not lost, however. Not yet. There are silver linings in the cloud and they are getting brighter — slowly but surely — as more and more initiatives, both public and private, are undertaken to bring back native prairies “yard by yard,” as one journalist wrote a few years back.

The Tallgrass Prairie Center at UNI has been a model for such initiatives nationally and internationally for its relentless work on and advocacy for “progressive, ecological approaches utilizing native vegetation to provide environmental, economic, and aesthetic benefits for the public good.”

The center began its journey in 1999, with its founder Professor Daryl Smith at the helm; it was called the Native Roadside Vegetation Center then.

“There was an unmet need in Iowa and the Midwest for a center that focused on tallgrass prairie activities and programs,” says Dr. Smith. “There were prairie related activities going on elsewhere in the state, but the activities at UNI focused specifically on tallgrass prairie. The presence of the center provided a tallgrass prairie resource and focal point for the state and upper Midwest.”

The center also brought under the same umbrella three programs that he had been involved in and were his responsibility.

“I had been involved with research and management involving prairie ecology and prairie restoration since 1972 and had oversight responsibility for two related programs, roadside vegetation management (started in 1988 to provide assistance to Iowa counties) and Natural Selections (Iowa Ecotype started in 1991),” Dr. Smith adds.

“UNI had become involved in initiating and coordinating many statewide prairie activities. I co-initiated the Iowa Prairie Heritage Week and provided public educational materials for it. The biennial Iowa Prairie Conference was initiated at UNI in the mid-1980s. I was coordinating these conferences and also hosted the North American Prairie Conference in 1990 (450 participants).”

In 2006, the center was renamed “to more accurately reflect its mission, programs, and activities.”

Its three flagship programs—Integrated Roadside Vegetation Management (IRVM), Research and Restoration, and Natural Selections—continue to broaden their scope and coverage.

“Integrated roadside vegetation management is an ecological approach to right-of-way management,” says Kristine Nemec, the IRVM program manager at the center. “It includes judicious use of herbicides, spot mowing, prescribed burning, mechanical tree and brush removal, and the planting of native vegetation in the right-of-way.”
Since “IRVM is voluntary for counties,” increasing public awareness of “the benefits of having native plants in roadside ditches” has been key to “encouraging more counties to adopt IRVM practices,” Nemec points out.

“Over 25,000 acres of county roadsides have been seeded with native plant seed mixes in the last 25 years,” she adds. “Currently, 38 counties have roadside managers who implement IRVM.”

The Research and Restoration Program continues to provide better understanding of prairie reconstruction, restoration, and management through sustained research as well as development of application methods and tools.

The Iowa Prairie Seed Calculator, for example, has been developed to help create custom seed mixes, taking into consideration such things as seeding method, planting time, and planting site conditions (location within Iowa, soil moisture conditions and erosion potential).

The Natural Selection Program works with state, federal, private and commercial enterprises that collect, increase, certify, and market seed derived from remnant populations of native prairie species.

The Center has had a “positive impact on the number, size, and quality of prairie reconstruction throughout the tallgrass prairie region,” and will continue to assist and support the hard-working managers of Iowa’s county roadsides, as well as rural and urban landowners and natural resource agencies,” says its director, Professor Laura Jackson.

“The first twenty years of the Center’s existence has been about making people aware of the incredible beauty and diversity of tallgrass prairie at the time of European settlement, and how it was almost completely lost,” she says.

“The next twenty years will be increasingly about how essential tallgrass prairie is to the functioning of this ecosystem and a sustainable society, and we will begin to re-build the prairie ecosystem processes that have been lost through annual row-crop agriculture and urbanization,” she adds.

Dr. Jackson sees students playing a key role in prairie reconstruction.

“We employ UNI students from across campus, giving them hands-on learning opportunities, and collaborate with faculty in the UNI Biology Department as well as across the U.S,” she says.

“We will train many students to serve UNI and the local community through informative videos and guides, a useful website for homeowners, and a restoration and management seminar series that brings together town and gown.”

She also expects the Center’s “national reputation in restoration ecology to attract students from across Iowa and the US to become a part of what we do.”

Such engagement of students “not only in scientific research but also in implementing what we know in the real world,” as Professor Jackson indicates, ultimately makes the silver lining in the clouds over the tallgrass prairie even brighter.