

Restoring a Piece of the Prairie in Suburban Nebraska

By KRISTINE NEMEC

Photos by
BOBBI AND STEVE OLSON

I FIRST BECAME ENCHANTED WITH PRAIRIES while reading the *Little House on the Prairie* books as a young girl in Illinois. The openness of the Great Plains embodied freedom and beauty to me. I could picture the wide blue sky, the wind whispering through the tall prairie grasses, flowers swaying gracefully. After I moved to Nebraska and saw my first prairie at Homestead National Monument, near Beatrice, I was hooked.

When I was studying to become an ecologist in college, I was surprised to learn how little of my favorite ecosystem remains – the tallgrass prairie is one of the most endangered ecosystems in the United States. I became interested in ecological restoration, which is helping the recovery of an ecosystem that has been degraded or destroyed. Using the principles of ecological restoration, I have restored part of my yard in suburban Bellevue, transforming a pansy and petunia flowerbed into a small replica of the tallgrass prairie that once blanketed eastern Nebraska. Although simplified, the process I used to create a prairie garden is similar to

the process ecologists use to restore terrestrial ecosystems such as wetlands and prairies.

First, I picked a reference ecosystem, that is, a natural prairie site that had never been plowed and could be a model for my mini-prairie. Nearby roadside prairie remnants would be a good example, with native plant species adapted to local soil types and precipitation levels. But ecologists prefer to emulate ecosystems as they were before European settlement. So I also looked through botany books to find out what plant species historically existed in the area near my home in east-central Nebraska, before the prairie was whittled away into postage stamp pieces from which some species are now absent.

Using these resources, I created a list of potential species, then narrowed the list by choosing plants that provide different ecosystem functions. For example, I included some nitrogen-fixing species like leadplant that turn nitrogen in the soil into a form that is usable by plants. Twenty species made the final list, a decent number for the small area I would plant.

The first spring, I dug up about 100 square feet of bare soil, sprinkled the seeds, and occasionally watered the plot. Initially, I spent a lot of time weeding because the prairie grasses were putting their energy into developing deep roots and grew slowly above



Wildflowers including black-eyed Susans (yellow upper left), garden phlox (pink in the middle), and others.

ground. However, during the second year the grasses took off and many of the flowers bloomed. I expanded the garden by planting some potted native flowers. More insects visited – metallic green dragonflies, squat red ladybugs, and a palette of butterflies. By the third year, toads had come and grew plump feasting on the insects. In the spring, sparrows rustled through the mini-prairie, picking out wisps of grass for their nests, and in the fall American goldfinches perched on purple cone-flowers. Now, after its fourth year, my prairie garden is resplendent with an array of wildlife, and I rarely need to weed or water it.

It is not as ecologically valuable as natural prairies. Conservationists would much rather preserve large ecosystems that have developed over hundreds of years – and which can accommodate a wide variety of species – than try to replicate nature in small plots. But my prairie garden is better than a few pansies and petunias.

In my yard, restoration meant rec-



Indian blanket flower



Kristine and John Nemeč in their front yard mini-prairie that Kristine planted. Even a small area holds a great diversity of native grasses and flowers. Below, grayhead prairie coneflower and, bottom, purple coneflower.



reating part of an ecosystem that had been destroyed, but restoration can also mean healing a degraded natural ecosystem. For example, fire rejuvenates prairies by recycling dead plants and causing live plants to grow taller and produce more seed. Fire also prevents trees from growing, important because few prairie plants can grow in the shade of trees. Historically, prairie fires were started either by Native Americans or by lightning, but since European settlement fires have been suppressed in most of the natural prairie that is left. So ecologists restore degraded natural prairies by burning them. In larger

prairies, they also reintroduce bison, because grazing was another integral part of the prairie, increasing plant growth and diversity.

Whether used to recover a destroyed or degraded ecosystem, ecological restoration is ultimately about redemption. As preeminent biologist E.O. Wilson has said, "There can be no purpose more enspiriting than to begin the age of restoration, reweaving the wondrous diversity of life that still surrounds us." 🐾

About the author – Kristine Nemeč is an ecologist with the U.S. Army Corps of Engineers. She lives in Bellevue.