



Brian Burkholder, left, and Leland Searles inspect a prairie remnant in northwest Scott County.

NSP Photos by Mark Ridolfi

Ditches hold trove of prairie remnants

Roadside survey aims to restore native grasses on roadsides

By Mark Ridolfi
NSP Assistant Editor

Heavy sedge blades dip beneath the weight of seed over a Scott County native prairie already dense with compass plants, Canada anemone, Virginia mountain mint, prairie blazingstar and purple cornflowers.

Leland Searles marvels at this native prairie remnant in a roadside ditch at 10th Avenue and 308th Street, just a stroll from the Cedar County border.

“This is probably the most diverse spot. Cut after cut has really great stuff. It’s a three-mile stretch of prairie remnant, one of the coolest stretches with 50-some natives from dry to wet prairie.”

Searles is amazed at the amount of native vegetation he’s identified while under contract this summer with Scott County to catalogue prairie plants. Last summer, he inventoried ditches along paved roads. This summer, he’s on the county’s gravel roads and finding more native prairie plant remnants than he expected.

“Here’s some New Jersey tea. I missed that before,” Searles said, scrutinizing the roadside. It’s the first part of a long-term plan to reintroduce deep-rooted native plants to county roadsides as an alternative to the annual spraying and cutting.

County supervisors authorized the two-year study and hired Brian Burkholder as integrated roadside vegetation specialist. County engineer Jon Burgstrum and a roadside vegetation citizens’ committee believe native grasses can provide better, cheaper and longer-term stabilization to roadsides than the spraying, cutting and bulldozing tactics used for a century.

Together, they are building a web-accessible database Burkholder will use to develop more effective, less invasive ditch management techniques. The public will use it to find these native prairie stands and integrate those native plants into their own landscaping.

“This becomes a living resource,” Searles said. “When the survey is completed, you can ID types of wetland or prairie. That goes to plant distribution, then go from that

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Images of Searles and Burkholder and their finds on roadside surveys are displayed over a copy of the early 19th century Scott County map they use to help find prairie remnants.

Prairie: Restoration should reduce roadside spraying

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to reconstruct native vegetation. It literally becomes a road map to native vegetation of the county."

And more.

"This will give you an idea of what it was like hundreds of years ago," Burkholder said.

"Thousands of years ago, actually," Searles added.

What was here in the beginning?

Searles takes a long view. He describes a Scott County terrain influenced by four factors over many millennia. First came glaciers, which leveled some areas and left the flat black soil layer which initially supported prairie grasses and now produces record-setting bean and corn harvests.

Next came the meandering Mississippi River, leaving a wake of fertile ground in its ever-changing path.

The past two centuries saw human hands carve roads, farm fields and homesteads through the county in early attempts to stabilize the landscape.

The past century has seen modern agriculture displace grasslands, in part, by hastening runoff to streams and rivers. That makes life tough for native species relegated to narrow roadside margins.

Burgstrum said those roadsides old enough natives to cull seed banks that can propagate broader prairies throughout the county. Searles' 2016 inventory along paved roads cost \$7,046.50. This year's research along unpaved roads is contracted not to exceed \$10,534.24. Burgstrum said good weather and Searles' schedule should make this year's final costs similar to 2016's.

Searles cruises the dirt road in his Toyota Highlander jammed with reference books, a GPS system and iPad.

"This is a resource-rich vehicle," he said.

A dog-eared Newcombe's Wildflower Guide, rests on the dash. Nearby is a Manual of Vascular Plants of the Northeastern U.S. and Adjacent Canada. "This is my King James Bible," Searles said.

Searles cruises the gravel roads with binoculars and note pads, stopping where he sees natives or suspects they might remain. Then he tromps in waders through ditches and wetlands, calling out plants in a mix of Latin and common names.

"*Pycnanthemum virginianum*," he says, plucking a leaf from Virginia mountain mint and popping it in his mouth. "Very fresh. It can burn your mouth a little."

He identifies the seeds on heavy sedges, heavy enough to bend the tall grass then drop nearby in the autumn to sprout in spring. He differentiates them from smooth cone sedge, (*Carex laeviconica*) with seedpods that float to promulgate the species much further.

Other grasses have burs to catch on grazing animals.

Confined livestock feeding severely limits the seed dispersion by grazing, inhibiting the spread of many species. So this project will let Burkholder know where he needs to reintroduce native plants, which species can compete and the seed blends that can reestablish a dense ground cover less hospitable to invasive, non-native species.

"I'll also be plotting where we sprayed and what product amounts were used, so next year, I'll know what works and what doesn't," Burkholder explained.

"Brian's job will be planting ditches," Searles said. He also will be harvesting native grass seeds. "They're very expensive to buy," he added.

"But they're everywhere on our roadsides," Burkholder finished.

hometown of Lamoni, Iowa. But his boyhood fascination with nature led him to countless field guides. "A lot of it was just getting the books and having lots of questions," he said.

Now he consults for cities, counties and business customers about prairie grasses, stream restoration and other outdoor land management practices. Learn more and contact him through eewardsolutionsllc.com.

Citizens committee leads roadside work

Burkholder's work will be guided by a roadside vegetation advisory group. That group helped develop a 38-page plan adopted by county supervisors in April 2016.

The plan "restores and reconstructs native vegetation in county right-of-way to produce cost-effective solution to roadside weed and erosion control ... This includes all of the procedures that go into restoring or reconstructing native vegetation effectively.

Founding committee members included Thomas Behne, Joyce and Tony Singh, Brian Stineman, Becky Bray, Kathy Wine, Judith Lee, Brian Ritter, Don Wooten, Curtis Lundy, Cal Werner, Jan McClurg, Kristine Nemecek, Heidi Woeber and County Engineer Jon Burgstrum and County Conservation Director Roger Kean.

The group consults with the University of Northern Iowa Tallgrass Prairie Center, which helps guide similar plans in Iowa counties.



Leland Searles "resource rich" Toyota Highlander is packed with reference books, and an iPad to identify the plants he is inventorying on Scott County gravel roads.

So far, Searles has identified 242 species of native plants among the 300-some species he's identified. That includes about 90 exotic, or non-native species that can crowd out prairie grasses.

The pair are waging a battle recognized more than a century ago by the county's first settlers, said Bob Bryant, who sits on Scott County's Roadside Vegetation Steering Committee. Bryant is a retired Clinton County Conservation director, who operated Scott County's Wapsi Environmental Education Center. His studies of native plants included reading a German-language Scott County history published at the end of the 19th century.

"Basically, they said we cleared so much of the land, we lost so much of our wildlife. We've lost all these areas. It happened so fast before we realized what we were doing, and now it's too late," Bryant said. "I would give anything if we had the kind of prairie that was left when they wrote that."

Instead, Searles and Burkholder find orange-colored daylilies thick in Scott County ditches.

The daylilies and plume grasses arrived in farm-home and acreage landscaping, which Searles regards as more of a cultural influence than biological. Searles was educated as a cultural anthropologist. Human behavior has far more influence on the landscape than each plant species.

"The English estate look is one example," he said. Most farmhouses are surrounded by mowed lawns and non-native decorative gardens, modeled after a British standard. "Five acres of manicured lawn could be turned into 4.5 acres of prairie grass," with only a half-acre of lawn, Searles said.

For wetlands, he advises button bush (*Cephalanthus occidentalis*) and broadleaf arrowhead (*Sagittaria latifolia*), two hardy native plants he prefers over the plume, pampas and other non-native grasses marketed by commercial landscapers.

"I'd like to see button bush in detention ponds all over the cities. It's a water-smart weed," Searles said.

Burkholder inspired by prairie restoration

Brian Burkholder's introduction to prairie restoration came from the city of Davenport. He started in the sewer department, then moved to natural resources, where spraying and weed cutting was the focus of his job. Then he was asked to help the city establish native prairie in Sunderbruch Park.



"That changed everything," he said.

He credits Davenport's Natural Resources Compliance officer, Amy Johansson, for sparking his interest in native species. "I changed my own yard over. Mine is the house with all the natives on Central Park Avenue."

Searles makes career out of nature restoration

Leland Searles said his fascination with wildlife arose from, "growing up in a family with no sports and no social life as a pre-teen or teen." He earned a degree in cultural anthropology from Graceland University in his

Happy 60th Birthday to this guy ...

