

RENAISSANCE

(in progress)

Healing the *Beautiful Land*

Iowa is one of the most environmentally altered states in the union. But we're also getting really good at restoring problem areas into paradises.

by SUZANNE KELSEY

Iowa was once prairie, savanna, woodland, marshes, wetlands, and waterways. Ninety-two percent of the state is now farmed.

We're proud that Iowa holds one-third of the nation's best farmland. But because so much of our state *is* devoted to agriculture, we especially treasure the natural areas that remain. And when polluted or degraded land gets restored, we celebrate.

We've had lots of reasons to do so lately. From border to border, Iowa is home to spectacular reclamation projects. They show that repairing even severe ecological damage is not only possible, it's practical. These "reverse alterations" are gorgeous. And they're not only healing to the land — they're restorative to us when we spend time there.

Here are four transformed places you'll want to visit.

Davenport's Nahant Marsh, a former EPA Superfund site, is now a model for other wetlands restorations — and a beautiful urban oasis.



PHOTO BY JULIE MALAKE

Wetlands such as Nahant Marsh have an ecological benefit disproportionate to their size: They host migrating wildlife, filter water, break down pollution, trap sediment, and mitigate flooding.

Nahant Marsh

Walk slowly when you approach the camouflaged bird blind along Nahant Marsh. Otherwise, dozens of Canadian geese may swim away from you in one grand choreographed swoop.

Be ready to see nature at its finest. Last July hundreds of pelicans descended upon this 265-acre preserve in southwest Davenport to gobble up Mississippi River carp washed in by flooding “like they were fishing in a barrel,” says Brian Ritter, director of the Nahant Marsh Education Center since 2007.

Last fall thousands of migrating red-winged blackbirds swirled in a huge cloud above the marsh. When they descended, “there was practically one black-and-red bird for every cattail,” Ritter says.

More animals and plants exist per acre in a healthy wetland than in any other habitat. The word “abundant” comes to mind.

Just 20 years ago, what was abundant at Nahant was lead. Between 1969 and 1995, the area was used for target practice by a hunters’ club. By the mid-’90s,

waterfowl there were dying of lead poisoning, thanks to an astounding 240 tons of lead shot that had settled in the marsh bottom. A single handful of mud could yield more than 100 lead pellets.

Industrial chemicals, fertilizer runoff, and just plain dumping also fouled the marsh: People had tossed everything from motorcycles to refrigerators to ATM machines into the water.

In Iowa’s past, wetlands bordering rivers attracted clouds of migratory waterfowl, acted as safety valves for river flooding, and filtered and broke down harmful nitrogen and phosphorus fertilizer runoff.

Today, most Iowa wetlands have been drained for farmland. Those that have not been, says Ritter, “tend to be wastelands.”

But at Nahant Marsh, residents and organizations pitched in for the save. They include the U.S. Fish and Wildlife Service, the Iowa Department of Natural Resources, River Action, the Quad City Audubon Society, the Iowa Natural Heritage Foundation, and the City of Davenport. The Environmental Protection

Agency (EPA) declared the marsh a Superfund site and began a \$2 million cleanup.

In 1999 EPA workers drained the marsh and excavated “a monstrous pile” of contaminated soil, says Ritter, “two stories high and 300 feet long.” They treated it with chemicals to render the lead insoluble and trucked it to a landfill. They graded and smoothed the remaining ground and planted grasses.

Marsh staff and volunteers use controlled fires to manage prairies and remove invasives so sedges, cattails, and other native plants can thrive and filter the water. Now there are hiking trails along the marsh, a blind from which visitors can view birds, and a dock for education purposes. Ten thousand visitors annually attend educational programs there.

Waterfowl using the Mississippi River flyway have returned in droves. “We’ve seen 151 species of birds,” says Ritter. “Half of them nest here. You see northern shovelers, coots, Canada geese, snow geese, bitterns, great blue heron — even Sandhill cranes.” Last year the first Blanding’s turtle hatchling — a threatened species here — was discovered in more than a decade.

The turnaround was so successful that researchers are using it as a blueprint for wetland restoration practices elsewhere. Ritter would like to see marshes restored along all of Iowa’s major waterways.

The clang of train signals east of the marsh and the sounds of semis crossing the Mississippi on Interstate 280 are a constant reminder to nature that humankind is near.

But the successful restoration of Nahant Marsh shows we’re learning how to successfully invite nature back to the places that need it most. In the process, we’re creating a map for others to follow.

WHEN YOU GO

Nahant Marsh
4220 S. Wapello Ave., Davenport
563-323-5196
nahantmarsh.org

Trails: sunrise to sunset

Education Center: Monday–Friday, 8 a.m. to 4:30 p.m.;
Saturday, 9 a.m. to noon



PHOTOS BY JULIE MALAKE

Twenty years ago wildlife in the marsh was dying of lead poisoning. Today more than 151 species can be seen there. Half are permanent residents; the rest are migrating waterfowl. A family of mallard ducklings, *top*, finds lots to eat in the newly clean marsh. Otters play on the wetland’s bank, *middle*. A migrating pelican cruises the marsh while egrets look on, *bottom*.



PHOTOS BY DAN WEEKS

Visitors who rent these rustic vacation cabins at Hitchcock Nature Center are astounded to learn that the picturesque camping area had been a junkyard.

Hitchcock Nature Center

This place, 15 miles north of Council Bluffs, should be on every Iowan's bucket list. The 1,200-acre preserve is on the southern stretches of the national treasure known as the Loess Hills, a minimountain range of glacial silt that runs along the state's western edge.

Climb the 45-foot observation tower for a panoramic view. Take a 3-D tour in the Lodge exhibit gallery. Hike 10 miles of trails woven through woodlands and some of the largest native prairie remnants in Iowa. And while you're marveling at summer butterflies or watching eagles migrate in November, count Hitchcock as an Iowa blessing. It very nearly became a garbage dump.

In the late 1980s an out-of-state developer bought the old YMCA camp on 300 acres of what is now Hitchcock. Then he bulldozed 60 acres of trees and loess soil to make room for trainloads of waste from as far away as New Jersey.

Fortunately, he went bankrupt before he could put his plan into effect. Then, fast-acting community

members bought 508 acres of the land from the developer with funds from the Iowa Natural Heritage Foundation and Iowa's Resource and Enhancement and Protection (REAP) program.

Hitchcock Nature Center was born. By the time Chad Graeve was hired as Pottawattamie County Head Ranger in 1998, it was 700 acres and growing. But a 22-acre private junkyard stood out like an unsightly island in the expanded preserve. "We knew it would be painful," says Graeve, "but if we had the opportunity to acquire that ground, we should do that and clean it up."

After the owner died, the county bought the parcel and agreed to pay for the cleanup if the junkyard become a campground.

Hitchcock's mission is to help protect the globally significant Loess Hills landform. Cement pads for RVs, shower houses, septic lines, turf grass — it would all permanently change the natural habitat.

But the habitat had already been changed, and Graeve and his team decided a campsite was a lot better than a junkyard. They salvaged items of value and



hauled trash to the county landfill. They converted road cuts, which had been bulldozed to accommodate dump trucks, into hiking paths.

The new campground has three cabins, room for 18 RVs, a shower house with flush toilets, shelters, and two tent-camping areas with pit toilets. Graeve says every time they dig so much as a posthole for a fence, they hit more buried junk. But you'd never know it: The setting is idyllic and increasingly popular. While the use of other campgrounds tapers off after Labor Day, Hitchcock still welcomes campers arriving through October to admire the brilliant fall colors.

Historically, the Loess Hills were open grassland or woodland maintained by grazing herds of bison and elk and frequent fires. "Then our culture moved in 150 years ago and began suppressing fires, kicking out the Native Americans, and killing the bison and elk," says Graeve. "Trees took over and shaded out plants that held the soil."

Graeve and his team are developing healthier woodlands, nursing about 150 acres of remnant prairie



Careful planning allowed the nature center to avoid further disturbance of the Loess Hills site by using existing roads, *left* and *above*, as vehicle access routes and hiking trails. The campground is especially popular in fall when the Loess Hills foliage is in full color.

back to health, and reconstructing another 140 acres of prairie. Graeve envisions eventually expanding the Center to 2,200 acres, complete with herds of bison and elk.

"People get overwhelmed by the experiences they have here in nature," says Graeve. "It's a great escape, a great release. It's renewing."

WHEN YOU GO

Hitchcock Nature Center
27792 Ski Hill Loop, Honey Creek
712-545-3283
pottcoconservation.com/parks-and-habitat-area/hitchcock-nature-center

Park: 6 a.m. to 10 p.m., year-round

Lodge: March–November, Tuesday–Saturday, 9 a.m. to 5 p.m.; Sunday, 1 to 4 p.m.

December–February, Friday–Saturday, 9 a.m. to 5 p.m.; Sunday, 1 to 4 p.m.

Call for holiday hours



Rockford is one of few places in the country where anyone can hunt — and take home — a handful of Devonian-era fossils, *far left*.

The former brick and tile quarry combines badlandslike terrain with sparkling ponds and lush wetlands, *left*.

PHOTOS BY DAN WEEKS

Fossil and Prairie Park Preserve

Twenty miles east of Mason City and just west of Rockford is one of Iowa’s most spectacular and unexpected landscapes. Get out of your car in the parking lot, walk a few paces, and you’re standing at the rim of a weathered crater of multicolored clay reminiscent of South Dakota’s badlands. Incongruously nestled in the crater’s bottom is a cerulean pond with water as aquamarine as the Caribbean.

A short walk away, you traverse a moonscape of bricks and tiles with distorted, Salvador Dali-like shapes. A bit farther, you come to the picturesque, overgrown ruins of three huge brick and tile kilns that look for all the world like marooned, prehistoric spaceships.

Oh, yes — and the whole landscape is littered with the remains of brachiopods, cephalopods, and corals, remnants from 375 million years ago when warm shallow seas covered Iowa.

It’s one of the few places in the country where you can pick up fossils up and take them home with you. Commercial hunting is prohibited, but the average visitor walks away with a handful.

Welcome to Floyd County Fossil and Prairie Park. In a bizarre twist on the usual environmental preservation narrative, it was created from an abandoned brick and drainage-tile quarry after the native prairie had been strip-mined for its underlying blue shale.

Like Hitchcock Nature Center, this park was on its way to becoming a landfill in the 1980s because of its natural clay lining. But after a public outcry, Floyd County purchased the lands with the first competitive

REAP grant. After more donations and additions, the park now encompasses 402 acres.

“It’s not very often people get to explore such a large chunk of ground,” says Heidi Reams, naturalist for Floyd County Conservation. “And there’s such a variety of types of habitats. People don’t think of this part of Iowa as having hills, but we have hills here and such unique vegetation with the native prairies.”

In addition to the quarry and kilns, the park includes 60 acres of remnant prairie that has never been turned by a plow. Creeping juniper, a rare plant in Iowa, grows here, along with purple coneflowers and the brilliant orange butterfly milkweed. Deer, turkeys, eagles, and migrating birds flourish in the grass wetlands and along the Winnebago River, on the north side of the property. And the kilns stand like picturesque monuments to another time. You can spend hours there enjoying it all.

Reams likes to point out the trees and grasses that are taking over the quarry, growing around the railings and the beehive kilns that were used to fire the bricks and tiles. “The students see how nature takes it back and ‘fixes things’ after man is done.”

WHEN YOU GO

Fossil and Prairie Park Reserve and Center
1227 215th St., Rockford
641-756-3490
fossilcenter.com

Park: sunrise to sunset

Visitors center: Memorial Day through Labor Day,
1 to 4 p.m. daily

May, September, October: Saturday–Sunday, 1 to 4 p.m.
and by appointment

Thomas Mitchell Park

This popular park is an Iowa gem. Its 175 acres include Camp Creek, an oak- and hickory-filled woodland ridge with a spectacular spring wildflower display, mushrooms, and woodland birds commonly not seen elsewhere; a nature trail system used by hikers, birders, and mushroom hunters; prairie; and a six-acre pond. Campgrounds, shelters, playgrounds, and the pond attract more than 100,000 visitors per year.

The problem was that the six-acre, 1970s-era pond was dying: By 2007, an algae bloom had removed oxygen from the water and killed the fish, and a steady accumulation of sediment had filled it in. The result: a murky, mucky puddle.

Agricultural runoff wasn’t the problem, says Polk County Conservation Natural Resources Manager Mark Dungan. Neighboring farmers had practiced healthy conservation by putting some areas into pasture and reestablishing waterways. Ironically, most of the destructive sediment was from the park’s own woodlands.

A healthy woodland has an overstory of trees such as oaks and hickories and a groundcovering of plants such as May apple, ginger, and hepatica. The foliage of the understory between the groundcover and the canopy breaks up raindrops, and its roots help hold soil in place, reducing erosion (it also puts on a beautiful woodland flower show in the spring). But light-blocking invasives had colonized this forest, weakening the understory and allowing rainfall to wash soil into the pond.

Dungan and his team cut, pulled out, killed, and burned off the invasives. They opened the canopy, allowing light in so native oak, hickory, hackberry, and Kentucky coffee trees — along with a healthy understory — to thrive. They planted native prairie grasses and forbs (native plants that do not include grasses) on 10 acres west of the pond and built basins to collect any sediment. Then they drained the pond, removed the silt, and added spawning beds and fishing piers.

They had a lot of public input and help from local citizens, the National Resource Conservation Service, the Iowa Department of Natural Resources, the Water



PHOTO BY MARK DAVITT

A clean, clear stream and a restored six-acre pond beckons families and fishermen to Mitchellville’s Thomas Mitchell Park.

and Land Legacy (a bond referendum passed by Polk County voters in 2012 to improve Polk County watersheds), the Watershed Improvement Review Board, and Living Land and Waters.

Total project cost: around \$500,000. Result: Mallards now glide on a waterway that glitters like polished silver — an idyllic pond that will last at least 100 more years. Dungan is modest, but proud. “We created a nice water feature that is beginning to provide some good habitat,” he says. “By this spring, the pond should provide the size fish anglers want to catch.” **I**

WHEN YOU GO

Thomas Mitchell Park
4250 NE 108th St., Mitchellville
515-967-4889
mycountyparks.com/county/Polk/Park/Thomas-Mitchell

Summer: 6:30 a.m. to 10:30 p.m.

Winter: sunrise to sunset

Campground: April 1–November 30.

Campground shower houses: mid-April through mid-October

Walk-in tent camping: year-round

Suzanne Kelsey is a freelance writer based in Iowa City and a frequent contributor to The Iowan.