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Ledges State Park Review

by William L. Rogers

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Sandstone cliffs one hundred feet high and steep rolling hills don't generally come to mind when describing the Iowa terrain. But they're here, just south of Boone, in Ledges State Park.

These uncharacteristic features are the legacy of the last glacial visit in this section of Iowa. Rivers of melted ice flowed from under a retreating wall of ice almost one mile high cutting through the park's sandstone beds. Add a few thousand years of ecological diversity and you get the greened, flowered valleys and hills of Pea's Creek and the Des Moines River.

Those rivers of glacial runoff also delivered seeds and plant material carried within the glacier when it originally advanced from the North. This process succeeded in making Ledges State Park the southern-most active location for the incidence of Reindeer Lichen on the planet. This fragile, pale green lichen carpets select north-facing slopes of the hills surrounding Pea's Creek, accumulating several inches of depth when undisturbed. Too often though, visitors to the park walk through areas kept in low growth by the lichen and mosses. The slightest damage to the lichen causes serious harm and significant areas of lichen growth are lost every year.

"Keeping the visitors on the trails is one of our biggest problems," says Mark Peter, Ledges State Park Manager. "Small plants, like the Reindeer Lichen, are so fragile that they break and suffer a lot of damage if they're disturbed even a little." The park has thirteen miles of hiking trails over all types of terrain. But in among the trees, the forest floor is low enough to allow some passage. Marc explains that a large part of the park is very fragile for one reason or another. Since sandstone is the geologic understructure of this area, nearly everywhere you go you'll find damage to the park's sandstone outcroppings or ledges. Sandstone is a very soft material. Once the crusty patina on the outside surface is broken, the soft inside weathers away quickly. Added stress from human presence accelerates the process. But weathering by wind and rain is a potent and enduring destructive force.

Unusual examples of these properties can be found along the low walls of Pea's Creek in the valley below Reindeer Ridge. Large, tubular formations of sandstone, slightly harder in composition than the surrounding material, jut out of the cliff face over the creek. "People ask all the time if they're petrified trees," says Mark. These formations are the result of the way the sand and other materials were deposited. Three developmental stages of *concretions*, as they are known, are represented here, though a potential prequel to the first exposure of a jutting column may be evident.

When the concretion has been alternately exposed and broken under its own weight until the last of it falls from the cliff face, the softer sandstone behind weathers faster than the encrusted cliff. Wind and rain open a depression and a cave is formed. Other areas of erosive damage to the sandstone walls are less spectacular. "Over there you can see some of the advertising that was done here a long time ago," says Mark. "Most of them were painted but you can still see *E. Brown Ear Remedy* near the bottom there from when it was carved into the wall before this became a park."

Between 1910 and 1924, billboard-style advertising space was sold here. The advertiser would paint their ad directly onto the sandstone wall. The deteriorating paint would dissolve the

protective crust of the sandstone, causing excessive weathering with every rainfall or flood. Once the protective surface patina was broken, E. Brown's carved letters have worn away faster than the cliff face and are still legible after eighty years. Eighty years from now, E. Brown's Ear Remedy ad may have fallen into the creek resulting from the damage to the walls caused by "I love Terry" and other contemporary graffiti.

As a watershed, the area encompassed by Ledges has all the environmental concerns of most of the state with the added burden of downstream deposition via the Des Moines River and an abundance of small feeder creeks. According to the [1998 Impaired Waters List](#), compiled collaboratively by the EPA and the Iowa Department of Natural resources, the Des Moines River at the city of Des Moines exceeds state guidelines for maximum nitrate levels. While the Ledges area is not included on the list, the proximity of polluted waters signals caution before the problem spreads upstream.

Still in ecological recovery since the flood of 1993, the park has been well restored. The Pea's Creek valley is no longer under the twelve feet of silt deposited from the floodwaters. Sixty-three thousand cubic yards of silt from the '93 flood were removed from the lower canyon area to make it useable again. And more than one thousand trees have been damaged by four months of deep water that remained. As the park began to emerge, flood-prone buildings too low in the valley were relocated to higher ground. One of those buildings, built by the Civilian Conservation Corp of the Great Depression, was catalogued stone-by-stone and photographically. It was then moved to its new location and reassembled using the numbered stones and the photographs to make certain that each rock was positioned precisely as it was originally placed by the CCC. That historic building is now located in the picnic grounds just South of the confluence of Pea's Creek and the Des Moines River.

At the extreme South end of the park, find the parking lot next to the road and take the walk to Lost Lake. Halfway to the lake you'll find a panoramic view of the Des Moines River Valley to the North and South. The river has been reduced to unusually low levels resulting from drought conditions over several past years. The view from the hundred foot cliffs for which the park is named overlooks the entire valley and provides a rich landscape foreground for the dusty, red sunsets common to the planting season.

Also on this path, you'll find a rock bridge installed by the CCC and a well-groomed interpretive trail through the woods to the lake. Like the river, the lake has taken a beating from the dry conditions. Without some relief, the lake may finish drying up. This is still a premium place for birding though. Even if the lake dries, this site will still produce enough mosquitoes and like foods to attract a variety of birds. Most of the trails in the park include steep climbs and descents, but the Lost Lake Trail is generally flat and in compliance with the American Disabilities Act. The trail is well groomed and almost wide enough for two wheel chairs to pass.

The only roadway in the park is a loop that links all the campgrounds and picnic areas and will take you near, usually within sight of, the park's principal points of interest. The North half of the park is generally inaccessible. Though one hiking trail does explore the further reaches of Pea's Creek by way of a steep hill to the creek and back again.

Ledges also holds the honor and obligations of the first successful native prairie restoration in Iowa. Seeds for native flora are gathered from federally protected native grasslands and

planted in state protected areas that demonstrate a good possibility of success. Virgin prairies at the Walnut Creek Natural Wildlife Refuge and Kelso and Steele prairies contributed the

seeds to restore twelve acres of Ledges. This area now closely resembles the ecotype that dominated Iowa and most of the central plains two hundred years ago. Ledges continues their commitment to a program of harvesting and expanding native prairie within the park. Another 26 acres is in progress toward full restoration and will mature in three to five years.

This watershed of ecological diversity attracts wildlife from all over the region. On your way to the park, take note of the increasing numbers of bird species you'll see in the area immediately surrounding the park. Kestrels hunt the fields above the park; pheasant roosters strut the roads between fields and cackle in the canyons; while turkey vultures cruise the updrafts around the hills. Kingfishers race through Pea's Creek Valley working the stream, and flights of White Pelicans lumber north through blue skies.

This state park is a jewel for outdoors folks. Camping facilities range from clean and modern handicap accessible campgrounds to slightly more primitive hike-in sites. Trail runners will find a serious workout from valleys to ridges and everyone will find friendly, helpful staff available around the clock. Last year Ledges had almost a half-million visitors and twenty-four thousand campers, so plan any overnight stay in advance. Reservations are not taken, but your chances for getting a campsite improve if you arrive, or at least pay for your site Thursday. By Friday local campers can sometimes fill the park.

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