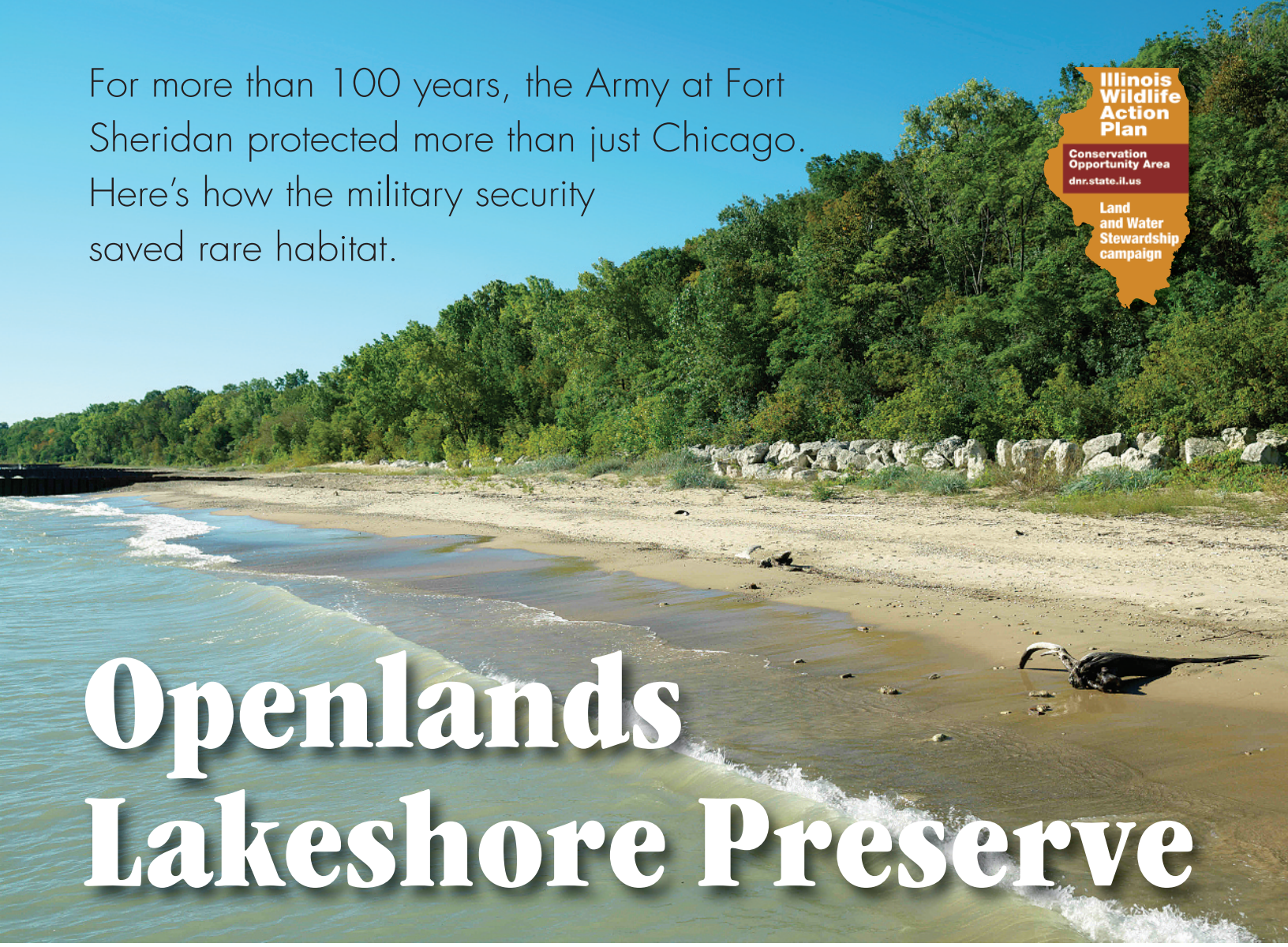
For more than 100 years, the Army at Fort Sheridan protected more than just Chicago. Here's how the military security saved rare habitat.



Openlands Lakeshore Preserve

Story By Arthur Melville Pearson
Photos Courtesy Openlands

In the late 19th century, merchant princes Marshall Field, George Pullman, Phillip Armour and other members of the Commercial Club persuaded the United States government to establish a military base along Chicago's lakefront, 25 miles north of downtown. The idea was to maintain a standing army within a half-day march of protecting the city's business interests in the face of recurring and sometimes violent labor unrest. Only once—during the Pullman strike of 1894—were troops called into action on the domestic front. But over the course of the 105-year history of Fort Sheridan, the Army inadvertently protected something else—one of the rarest and highest quality natural areas in the entire state of Illinois. Right in its own backyard.

Decommissioned in 1993, the former Fort Sheridan lies between the north shore communities of Lake Forest and Highland Park. Geologically, it sits within the Lake Border Moraines Bluff Coast—a thin sliver of lakefront land characterized by high bluffs and steep, forested ravines. Unique in the world,

The 1-mile stretch of Lake Michigan shoreline now preserved as the Openlands Lakeshore Preserve provides spectacular, year-round recreational opportunities.

(Photo courtesy Mark Baldwin.)

Located within the Lake Border Moraines Bluff Coast, the lakeshore preserve contains high bluffs, forested ravines and the beach.

according to botanist Gerould Wilhelm, co-author of "Plants of the Chicago Region," the bluff coast boasts a particularly rich diversity of plant life. One survey places the number of plant species at 367.

This botanical largesse is all the more remarkable given the inherent fragility of bluffs and ravines. The wave and weather action of Lake Michigan is a constant assault on the clay bluffs, which can lead to major erosion. Since 1872, the bluffs at Lake Bluff, for instance, have receded an average of 267 feet.

The ravines are evidence of another kind of erosion initiated by glacial-era waters moving from the uplands down to the lake level. Before human development of the north shore, most of its 45 or so ravines had fairly stabilized. However, the steepness of the ravines—some dropping 100 feet in less than a mile—renders them highly susceptible to stormwater runoff, which can dislodge soils and strip away entire plant communities.

While the Army owned and operated Fort Sheridan, it can hardly be said it was a good environmental steward. Of the six ravines on site, they used one as a landfill. In the bottom of another—known as Bartlett Ravine—they paved a road. The others were largely ignored. Ironically, it just may be the ravine with the road that remained in the best condition. As the land around Fort Sheridan filled with residential communities, stormwater was diverted into the ravines, which caused huge amounts of erosion. In Bartlett Ravine, water was channeled into concrete gutters and thence into storm sewers below the road, thereby protecting vegetation on the 45 degree slopes. The bluffs and beach contains six state-threatened or endangered plant species and

Bartlett Ravine has an overall Floristic Quality Index—before restoration—of 53.3. (FQI is a statistical method developed by Wilhelm and Floyd Swink to help determine the species richness of natural areas. Those areas with an FQI above 50 are generally considered to be of very high quality.)

Since closure of the base was first proposed, the nonprofit group Openlands advocated for the preservation of its remaining natural areas. Since 1963, Openlands has been at the forefront of many conservation and open space efforts throughout northeastern Illinois, including the establishment of Midewin National Tallgrass Prairie, the Illinois and Michigan Canal National Heritage Corridor and the Illinois Prairie Path. Through its land preservation arm, it has provided bridge financing to help municipalities and other nonprofit organizations acquire and preserve key natural areas. But never had it acquired and held any land until Rep. Mark Kirk, who authored the legislation that allowed Fort Sheridan to be partially redeveloped and partially set aside as a nature preserve, made them an offer they couldn't refuse: "Either you…take it, or it becomes a gated community."

Despite the paved road constructed in Bartlett Ravine, this ravine remains in the best condition of the six on the property.

Marram grass (*Ammophila breviligulata*)

(Photos courtesy Carol Freeman, www.carolfreemanphotography.com.)

ground juniper (*Juniperus communis*)

The unique plant community within the preserve includes several Illinois endangered and threatened species.

Taking title to Bartlett Ravine and its adjacent bluffs and beachfront, at no cost, was the easy part. The price tag for restoring the site was $4 million, plus an additional $8.5 million for trails, outreach and education programs, and an endowment. To date, major contributions, including $4 million from the Grand Victoria Foundation and $2 million from the Hamill Family Foundation, has helped Openlands raise $9.6 million toward its $12.5 million goal.

Guided by a management plan developed by Graef, Inc. and Conservation Design Forum, Openlands has undertaken an extensive restoration. After clearing the site of refuse, telephone poles, barbed wire and gravel, the next order of business was removing invasive species. This involved cutting down every single non-native woody plant, including buckthorn, Norway maple, black locust and honeysuckle; and thinning native species that tend to be aggressive if unchecked, i.e. sugar maple, linden and green ash. This action, along with controlled burns, opened up the canopy and understory, bringing more sunlight to the forest floor, which in turn encouraged the growth of the native forbs and grasses seeded along the ravine slopes.

For additional information on the Openlands Lakeshore Preserve, visit openlands.org or phone (312) 863-6250.

Among the many best practices Openlands has employed in its restoration effort is the use of a special mulch to help anchor the seed and soil. Some restoration efforts utilize a mesh fabric overlaid with straw to keep seeded areas in place, but there is evidence that mesh can trap and kill birds and amphibians. Hydro mulch, which poses no threat to wildlife, is tacky and remains in place even in heavy rains.

Because only a handful of the area's ravines are accessible to the public, Openlands plans to establish trails in its Openlands Lakeshore Preserve. But not just any trails. They will be engineered, through grading and the establishment of rain gardens, so that they capture and hold water, allowing it to percolate slowly into the soil rather than spill over the bluffs and erode the ravines.

Robert Megquier, director of Land Preservation at Openlands, also is working with adjacent landowners to institute a number of best practices to further check erosive runoff. The U.S. Navy, which has retained acreage near the preserve to build housing for troops stationed at the nearby Great Lakes Naval Station, has constructed retention basins to slow the flow of water to the ravine. And individual homeowners in the new town Fort Sheridan, consisting of new homes plus repurposed troop barracks and officers quarters, have been

seaside spurge (*Chamaesyce polygonifolia*)

responsive to the idea of using rain barrels and planting their own rain gardens to protect the delicate ravine system.

For Megquier, such outreach is critical not only to protect the preserve, but also Lake Michigan. "Every drop of water that goes from a backyard," he pointed out, "down the slope and into the lake carries pollution and sediment. We want to let nature filter runoff naturally and release clean water into the lake as groundwater. That's our goal. That's our mantra."

If the combined efforts to reduce runoff are successful, there may come a time when the road through Bartlett Ravine could be removed. Until such time, it provides for an easy stroll from bluff to mile-long beach, through a lush, ice-age ravine that also is a modern-day model of environmental stewardship.

Arthur Melville Pearson is a freelance writer residing in Chicago.