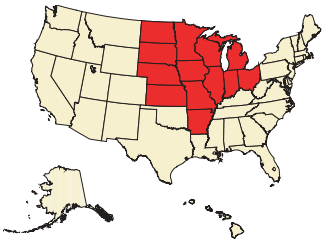
by Dan Licht

Endangered Species in Midwestern Parks



Black-footed ferret
Photo by M. R. Matchett/USFWS

Along with such celebrated species as the black-footed ferret *(Mustela nigripes)* and the gray wolf *(Canis lupus)*, a variety of important but lesser known endangered and threatened animals and plants occur within the Midwest Region of the National Park Service. They can be found in a rich assemblage of habitats from rivers to caves, savannas, wetlands, prairies, lakeshores, and forests.

The Midwest Region, for example, contains several riverine parks that support rare mussels. Sensitive to turbidity and toxic chemicals, these mollusks act as barometers for the health of the ecosystems upon which our society and economy depend. Freshwater mussels are the most rapidly declining animal group in the United States. St. Croix National Scenic Riverway, which traverses western Wisconsin and the Wisconsin/Minnesota border, alone is home to 40 mussel species. It is one of the most diverse assemblages in the world and includes one of the few remaining populations of the endangered Higgins' eye pearlymussel *(Lampsilis higginsi)* and the world's only reproducing population of the endangered winged-mapleleaf mussel *(Quadrula fragosa)*. Threats to these species are numerous, including the potential invasion of their habitat by the exotic zebra mussel *(Dreissena polymorpha)*. To respond to this threat, park staff work in cooperation with the U.S. Fish and Wildlife Service to protect these native "pearls."

Another lesser known aquatic organism is the endangered Topeka shiner *(Notropis topeka)*, a small fish historically found in streams in the central and eastern Great Plains. Decades of harmful land use practices have degraded water quality in much of the shiner's historic habitat, leaving only a few remnant populations. The shiner is found at the recently established Tallgrass Prairie National Preserve in eastern Kansas. The Preserve will improve habitat for the Topeka shiner through management programs that reduce or eliminate sedimentation, pesticides, and harmful fish species not native to the site.

The Buffalo National River in the Arkansas Ozarks has already taken action to protect caves for the benefit of summer and winter colonies of the endangered Indiana bat *(Myotis sodalis)*, gray bat *(Myotis grisescens)*, and Ozark big-eared bat *(Corynorhinus townsendii ingens)*. One cave supported an estimated 172,500 gray bats in early 2001, making it the largest bat hibernation cave in Arkansas. Bat conservation at the park also includes the restoration and protection of abandoned mines.

Indiana Dunes National Lakeshore is actively restoring habitat for the endangered Karner blue butterfly *(Lycaeides melissa samuelis)*. The primary food of Karner blue larvae is wild lupine *(Lupinus perennis)*, which requires open to partially shaded areas such as oak savanna to survive. Decades of fire suppression in the heavily populated area of southern Lake Michigan have resulted in succession from oak savanna habitat to closed-canopy forest. This has caused the decline of the lupine and, ultimately, the Karner blue butterfly. The park staff has used mechanical controls, herbicides, and burning to restore natural savanna conditions. Because the degradation had been severe over a long period, park personnel planted locally collected lupine seeds to expedite restoration.

The threatened western prairie fringed orchid *(Platanthera praeclara)* was documented at Pipestone National Monument, Minnesota, in 1985. Intensive long-term monitoring is a critical component of orchid management, since the plant exists in fire-evolved prairie habitats that require regular burns. Nonnative plants threaten the existence of the orchid by degrading the native prairies at Pipestone. The park is using well-timed prescribed burns to promote orchid populations and reduce the spread of nonnative plants. Following these burns, over 125 orchids were counted flowering during 2000, which was well above the previous counts that never exceeded 55 in other recent years.

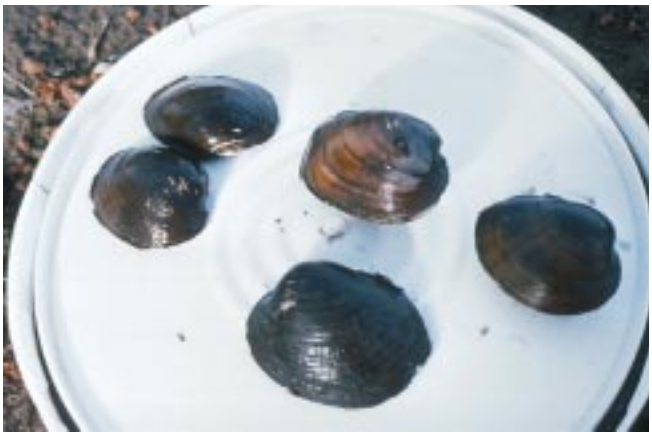
Like the orchid, invasive nonnative plants also threaten the Pitcher's thistle *(Cirsium pitcheri)*. However, instead of occurring in lush tallgrass prairie vegetation, this species' habitat is the sandy beaches and dunes of Lake Michigan. Sleeping Bear National Lakeshore in Michigan protects one of the largest remaining populations. The park has initiated a study to determine whether nonnative plants affect the germination and seedling establishment of the thistle.

Sleeping Bear National Lakeshore also is home to the endangered population of the piping plover *(Charadrius melodus)*, a small shorebird that nests on Lake Michigan's sandy beaches. The park provides habitat for 8 of the 30 pairs recorded in the Great Lakes region during 2000. Educating the public is a major component of the park's management program. Park staff, student interns, Student Conservation Association biological assistants, and volunteers are all involved in the education effort.

Conservation education takes place at visitor centers, through the media, and in the field. Under the watchful eye of park staff and their assistants, the park allows visitors to view the birds through spotting scopes from a distance that does not disturb the birds or affect their survival and behavior. Being able to view the plovers gives visitors a greater appreciation for this rare species.

Although generally small in size, the Midwest Region's national parks provide important habitat for a large number of endangered and threatened species. These parks also foster public awareness and support for the conservation of regional biodiversity.

Dan Licht is a Regional Wildlife Biologist and T&E Coordinator--Animals for the NPS Midwest Region and is currently stationed at Badlands National Park, South Dakota.



Higgins' eye pearlymussel
Photo by Tom Strekal

Western prairie fringed orchid
Photo by Martin Bowles/USFWS