

SHOWCASE SPECIES: MISSOURI

UPPER MISSOURI PIPING PLOVER

The Issue

As with the interior least tern, loss of river habitat to dam construction, annual operation of the dams and channelization are the main threats to the piping plover along the Missouri River from the headwaters in Montana through the Dakotas.

Natural History

Typical shorebirds, piping plovers have sand-colored backs and crowns contrasting with white underbellies. Breeding birds bear a single black breast band, a black bar across the forehead, bright orange legs and a bright orange bill tipped with black. In winter, the birds lose the black bands, the legs fade to pale yellow and the beaks turn mostly black. Adults weigh 1.5 to 2 ounces and are about 7 inches long from beak to tail tip, with a wingspan of 15 inches.

The piping plover ranges along the Atlantic and Gulf coasts, the Great Lakes and the Northern Great Plains. In the last area, they nest in south-central Canada, across the border in the Dakotas, and in parts of Kansas and Oklahoma. Along the Upper Missouri, they nest on open, sparsely vegetated sand or gravel beaches near alkali wetlands and, like least terns, on beaches, sandbars and islands of the major river systems. They winter along the more southern Atlantic coasts, on the Gulf Coast and on Caribbean beaches.

The plovers arrive on breeding grounds from mid-March to mid-May and stay there for up to four months. On nesting grounds, they scrape out shallow depressions that they line with light-colored pebbles and shell fragments, against which the mottled eggs are well camouflaged. Eggs hatch within a month, and the young can fly about 30 days after hatching.



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Prior to dam construction, sandbars and shorelines were scoured clean of vegetation during seasonal high water flow, providing piping plovers with the nesting habitat they favor. In recent decades, dams have limited the high, fast flow needed to maintain the plover's sandbar habitat. As a result, wide river channels punctuated with scattered sand bars have been turned into narrower, forested corridors. Moreover, dam managers keep water at unnaturally high levels during part or all of breeding season, inundating nesting areas.

With loss of habitat, plover numbers have dwindled persistently in recent years.

Listing

The U.S. Fish and Wildlife Service in 1986 listed the Northern Great Plains population of the piping plover as threatened.

Management

Piping plovers, along with least terns, are among a handful of species that serve as indicators of habitat health. The U.S. Army Corps of Engineers, which manages dams along the Upper Missouri, during the past three years has launched its Missouri River project, a restoration program presently being funded to the tune of about \$30 million a year. The project is designed to restore Missouri habitat not only along the upper reaches of the river but also along the lower portions, which start roughly at Sioux City, Iowa, and end 750 miles downstream at St. Louis, Missouri. The project, which ranks in size with the magnum effort to restore the Florida Everglades, is in its initial stages. Planners hope restoration will revive native fish popula-

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tions and recreate 20,000 of the 100,000 acres of Lower Missouri shallow-water habitat lost to agricultural and water development. Presently, the Upper Missouri supports a \$100-million recreational industry that is likely to increase in size when native sport fish, such as sauger and paddlefish, return as the river is restored. Restoration also is likely to support a remunerative recreational industry along the Lower Missouri.

One sign of successful Missouri restoration will be recovery of the piping plover, as well as other indicator species such as the least tern and pallid sturgeon.

If these species are returned to healthy numbers, then other jeopardized species, such as sicklefin chub and sturgeon chub, also will be positioned to recover at least a portion of past numbers.

The piping plover and other Upper Missouri River species received a boost in 1997, when unusually high water flow from dense snow-pack melt around the headwaters restored nesting habitat. An upward trend has continued: six years ago, the Northern Great Plains population stood at about 3,000 birds; a 2006 census tallied 4,700.

Funding

Funding from all government sources for piping plover recovery nationwide, exclusive of the Great Lakes, ranks the species at 58 out of 1,311 species, according to the U.S. Fish and Wildlife Service fiscal year 2004 report (the most recent available) to Congress, *Federal and State Endangered and Threatened Species Expenditures*. Total recovery funding for the bird, outside of the Great Lakes area, from all government sources that year was about \$3.5 million, with \$496,000 coming through the Service.

The key to the species' future recovery lies in the U.S. Army Corps of Engineers Missouri River project. Until recently, the project received funding only on the order of about \$2 million to \$3 million yearly, but in 2003 funding skyrocketed, reaching into the \$30-million range. During the next fiscal year, it is likely to reach \$55 million.



Because the piping plover is managed as an indicator species for Missouri River restoration, funding of the bird's recovery is likely to be substantially increased. However, this money will come from the Corps rather than from Fish and Wildlife Service budgets. "Now that money for piping plover recovery is starting to flow in as part of the river restoration project, the future for the bird is growing brighter," says John Kostyack, director of Wildlife Conservation Campaigns at the National Wildlife Federation. "There are many more threatened and endangered species that would benefit from habitat restoration. Only full, fair funding for recovery will save listed species and restore healthy ecosystems."

Local Contacts

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Other Threats

Loss of river habitat to dam construction, annual operation of the dams and channelization remain persistent threats to the piping plover along the Missouri River, but these threats may be mitigated as the Army Corps of Engineers progresses on its river restoration project. See page 13 for *Threats from Global Warming*.