

by Chuck Davis

# A Partnership to Grow Plovers on the Plains



Photo by Dr. Fritz Knopf

The first explorers to cross the “Great American Desert,” the area we now call the high plains, observed large flocks of mountain plovers (*Charadrius montanus*). These birds laid their eggs on the ground in prairie dog towns and other short-grass prairie habitat heavily grazed by enormous herds of bison. Today, cattle and sheep have replaced bison on the grasslands of eastern Colorado and Wyoming, and large areas of former prairie have been converted to crop production.

In 1999, the Fish and Wildlife Service proposed to list the mountain plover as a threatened species. Some data, such as the Service’s Breeding Bird Survey and the annual Audubon Christmas bird counts, suggested plover populations on the nesting grounds and wintering areas in central and southern California were declining. Research by U.S. Geological Survey scientist Dr. Fritz Knopf in the 1990s revealed that mountain plovers were nesting on cultivated crop fields in eastern Colorado, and other studies revealed that some plover nests were lost when those fields were cultivated for weed control or spring planting.

The Service’s proposed listing identified the loss of nests on cultivated fields as one of the causes of the plover’s population decline. The Service, Colorado State University, and the Colorado Division of Wildlife (DOW) funded further studies, in cooperation with the Colorado Farm Bureau, and Knopf began investigating the extent of nesting losses. The partnership’s goal was to identify agricultural practices that could improve nesting success. Those practices could be encouraged through conserva-

tion measures included in a special rule under section 4(d) of the Endangered Species Act if the bird was listed. The plover already has some protection under the Migratory Bird Treaty Act, so the Farm Bureau members who participated in the study were hopeful that the research would provide feasible measures to reduce plover losses, thereby reducing the producers’ legal vulnerability for direct take of the species during normal farming activities.

Knopf’s data, compiled during the first three nesting seasons, revealed that nesting success on grasslands was approximately the same as the success on cultivated fields. Predators, such as coyotes, swift foxes, and skunks, are a major problem for ground nesting birds. These predators rarely venture into large cultivated fields because their prey base is not normally found in plowed furrows and sparse vegetation. Nests lost to cultivation machinery resulted in similar fledging success in both habitats.

Knopf’s observations also indicated that some types of farm implements were less likely to result in nest loss, and some producers would avoid running

equipment over plover nests if they saw birds flush from the eggs. If there was a way to increase the nest success on cultivated fields, farmers could actually “grow” plovers on crop land. What if we could survey and flag plover nests before the producers worked the fields?

Knopf discussed this idea with Ken Morgan, Conservation Director with the Colorado Farm Bureau, who soon would assume a new job as Private Lands Coordinator with the Colorado DOW. Both men had a hunch that the producers on the high plains would consider allowing access to surveyors and then gladly guide their farm equipment around flagged plover nests.

Knopf next met with Ralph Morgenweck, the Service’s “Mountain and Plains” Regional Director, who was highly receptive to the idea. The Service’s regional office staff drafted a memorandum of understanding that could be signed with individual landowners. Participating producers would notify the DOW through a toll-free telephone number at least 72 hours before cultivating their fields during the spring plover nesting season. The Colorado Bird Observatory, under contract with the Colorado DOW, would survey the fields with all-terrain vehicles, using techniques developed by Knopf’s field researchers. Plover nests would be

flagged and, as long as producers did not cultivate within two feet of the flagged nests, Service and Colorado DOW law enforcement personnel would not refer cases of accidental take of plovers or their nests for prosecution.

In September 2003, the Service withdrew its proposal to list the mountain plover under the Endangered Species Act. New research indicated that the plover populations on the breeding grounds in Colorado and Wyoming were larger and more widespread than originally believed, and the downward population trend for the birds described in the proposed listing rule was not statistically valid. However, the withdrawal of the listing proposal did not stop the partners from pursuing conservation measures for the plover.

The 2004 nesting season is the first opportunity for widespread use of the memorandum of understanding concept. All of the stakeholders hope that small orange flags whipping in the breeze will mark the growth of plover populations on the eastern Colorado plains.

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**Dr. Knopf (left) and Larry Nelson of the Colorado Division of Wildlife band a mountain plover**  
*Photo by Sandy Nelson*