

California Mountain Plover Census

On January 24, 1998, staff from the Department of Fish and Game (DFG) Bird and Mammal Conservation Program and a corps of skilled volunteers participated in a one day survey of the wintering population of Mountain Plovers (*Charadrius montanus*) in California. The primary objective of the survey was to detect gross population changes by comparing the information gathered in 1998 to results of a similar survey conducted in 1994. A second objective was to examine distribution and habitat use by wintering plovers. The project represents another step in the effort by DFG, the National Audubon Society (NAS), the CVBC and others to utilize a pool of amateur and professional ornithologists and bird enthusiasts to conduct large scale, volunteer surveys of declining or otherwise sensitive bird species.

The Mountain Plover breeds east of the Rocky Mountains from Montana south to central New Mexico, western Texas and western Oklahoma. The main breeding areas are in northern Montana, Colorado and northern Nebraska. The Pawnee National Grasslands (Weld County, Colorado) is a stronghold for breeding Mountain Plovers with recent estimates of about 1,200 breeding birds. The species winters in central and southern California, southern Arizona, southern Texas, and northern Mexico, with main wintering areas in the Central and Imperial valleys of California. Large, post-breeding flocks of plovers depart the breeding grounds in Colorado after mid-August (Graul 1972). Although occasional individuals or small groups arrive in California before September, the major arrival of wintering populations occurs from September through November. Wintering flocks depart California from February to mid-March and birds arrive on the Colorado breeding grounds in late March (Graul 1972).

A preliminary analysis of Christmas Bird Count data suggest that about 80% of the Mountain Plover population winters in California. During winter, plovers congregate in valley bottoms in heavily grazed, burned or fallow agricultural lands and are typically associated with sparse, short vegetation.

The number and distribution of wintering birds in California has decreased dramatically since the 1800s. Loss of habitat in many Great Plains states and changes in agricultural practices in California have resulted in significant population declines. Breeding Bird Survey data from 1966 to 1993 indicate an annual rate of decline of 3.7% which translates into a two-thirds decrease in the population over the twenty-five-year period (Knopf and Rupert 1996). Knopf (1996) estimated the 1995 population to be 8,000-10,000 individuals.

The 1998 survey resulted in detection of 2,663 birds at 31 sites in 11 California counties. Forty five primary and an estimated 70 secondary

observers logged about 220 person hours during the survey. Flock sizes ranged from 4 to 250 individuals (mean=85.6, median=90) with the two largest flocks (250 birds in each) detected in Imperial and Yolo counties. Central Valley birds accounted for 22.6% (603) of all birds detected during the 1998 census. A similar one-day survey in 1994 resulted in detection of an estimated 3,346 birds at 25 sites in 9 California counties (NAS, unpublished data) with the two largest flocks (1128 and 388 birds) detected in Imperial County. This survey involved 10 primary and an estimated 85 secondary observers. Central Valley birds accounted for 15.9% (549) of all birds detected during the 1994 census.

Observers noted that despite the availability of apparently suitable habitat, plovers were absent from some historic locations or present in reduced numbers. This is particularly significant in light of recent declines noted on the short-grass prairie breeding grounds. Apparent and documented declines such as these led to preparation and submission of a petition to list the Mountain Plover as a federally threatened or endangered species. The U.S. Fish and Wildlife Service has been gathering information on plover distribution, population threats and factors associated with the decline, and is expected to render a decision on listing in July 1998.

The DFG and CVBC continue to gather information on the distribution and abundance of Mountain Plovers, with an eye towards actively monitoring the wintering populations and formulating conservation measures to stabilize the population. However, the role of pesticides and other potential threats, including threats within the breeding range, are still not fully understood. Please report Mountain Plover sightings or related information to Kevin Hunting, Department of Fish and Game, at khunting@compuserve.com or Leo Edson, Central Valley Bird Club, at EdsonL@edaw.com.

LITERATURE CITED

- Graul, W. D. 1972. Breeding biology of the Mountain Plover (*Charadrius montanus*), 1969-1972. Grassland Biome, U. S. Intl. Biol. Program Tech. Rept. No. 199. 15 pp.
- Knopf, F.L. and J.R. Rupert. 1996. Productivity and Movements of Mountain Plovers breeding in Colorado. Wilson Bull. 108: 28-35.
- Knopf, F.L. 1996. Mountain Plover (*Charadrius montanus*). The Birds of North America, No. 211 (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, PA, and The American Ornithologists' Union, Washington, D.C.

Kevin Hunting, Dept. of Fish and Game, 1416 9th Street, Sacramento, CA 95814