

Mountain Plover (*Charadrius montanus*)

Legal Status

Federal: None

State: Species of Special Concern



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Global and State Conservation Status: G2S2: Global rank, G2 = Imperiled: At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors; State rank, Same as global ranks but only for the range of taxa within California.

Recovery Plan: None

Species Description and Life History

Mountain plovers (*Charadrius montanus*) are short to medium-distance migrants that nest primarily in the western Great Plains of the United States and winter in California, Arizona, New Mexico and northern Mexico (Knopf and Wunder 2006). Mountain plovers are plainly-plumaged, brown and white plovers smaller than the black-bellied plovers (*Pluvialis squatarola*) but slightly larger than the killdeers (*Charadrius vociferus*)—two closely related, similar species often found in mountain plover wintering habitats in California.

Seasonal Patterns

In California, mountain plovers arrive on their wintering grounds in agricultural fields and pasturelands in California from November through December, although occasional migrants are found in September and October and most remain through March (Hunting and Edson 2008).

Reproduction

This species does not nest in the Plan area or anywhere in California (Knopf 1996).

Home Range/Territory Size

Mountain plovers are only territorial on their breeding grounds. On their wintering grounds, they usually assemble into loose flocks in plowed agricultural fields or heavily-grazed pastures. They are highly mobile during this period and may move long distances in search of productive foraging and roosting areas (Knopf 1996).

Foraging Behavior and Diet

A diet study of the Pixley National Wildlife Refuge and Carrizo Plain, Kern County, wintering populations found that stomach contents consisted of a variety of insects and arachnids, especially beetles (Coleoptera), ants (Hymenoptera), web-spinners (Embiidina), and butterfly and moth caterpillars (Lepidoptera). The same study found no significant differences between the diets of males versus females (Knopf 1998).

Habitat Requirements and Ecology

The wintering habitat of mountain plovers in the Central Valley has been described as pastureland nearly devoid of vegetation (Stoner 1942), sparsely vegetated fields (Manolis and Tangren 1975), grazed grasslands and disked fields (Hunting *et al.* 2001, Hunting and Edson 2008). They have been documented tracking young growth of grasses and forbs following fire or disking (Knopf and Rupert 1995). Burned or recently tilled grasslands are especially attractive to wintering plovers (Knopf and Wunder 2006). In the Imperial Valley, they prefer alfalfa fields that have been harvested and grazed by domestic sheep (Knopf and Wunder 2006). During the breeding season mountain plovers occupy flat to very low sloped terrain of <5% slope (Graul 1975), and also occur on very low slopes on the wintering grounds.

Species Distribution and Population Trends

Distribution

Mountain plovers are restricted to breeding in the xeric, western Great Plains from southernmost Alberta to central New Mexico, the Davis Mountains in west Texas, and in Nuevo Leon, Mexico (Knopf and Wunder 2006). This species winters primarily in grasslands and plowed agricultural fields in the southwestern United States and northern Mexico (Knopf and Wunder 2006).

In California, mountain plovers winter in isolated sites in the Central Valley and adjacent valleys, as well as the Lower Colorado River Valley, the Imperial Valley, and western Riverside County (Knopf and Wunder 2006, Edson and Hunting 1999, Hunting and Edson 2008). California is the only state/province where this species is considered “common” during the winter (Knopf and Wunder 2006). However, throughout its Central Valley range, it has a spotty distribution and is considered from accidental to rare-and-local based upon recent records from 1970 to 1999 (Edson and Hunting 1999). Currently the Central Valley wintering population is concentrated in two main areas including Colusa, Yolo, and Solano counties and from Stanislaus County south to Kern County; with the main populations in Yolo and Kings counties (Hunting and Edson 2008).

Population Trends

Declines in numbers of the mountain plover have been reported in the Central Valley (Wunder and Knopf 2003, Edson and Hunting 1999; Hunting and Edson 2008). The only

counties with wintering flocks up to 100-300 birds are Colusa, Yolo, Solano, and Kings counties, compared to flocks up to 1100 birds as recently as the early 1990s (Hunting and Edson 2008). However, it is difficult to measure declines and population levels due to the lack of systematic, survey coverage of the abundant potential habitat within the Central Valley (Edson and Hunting 1999) as well as due to flock movements during the winter months (Knopf and Rupert 1995).

Distribution and Population Trends in the Plan Area

Mountain plovers are regular, but uncommon, winter visitors to Yolo County. In many years, flocks of up to about one-hundred birds can be observed in recently-plowed agricultural fields near Woodland and Davis, especially along County Roads 16, 25, 27, and 102 (E8, aka “Poleline Road”), and in unflooded portions of the Yolo Bypass.

Threats to the Species and Other Conservation Issues

The conversion of grasslands to orchards and other agricultural types unsuitable for habitat is a primary threat to the mountain plover. Effects from exposure to pesticides and other toxins are not clearly understood. However, organochlorine residues in 40 birds collected in 1991–1992 in Imperial, San Luis Obispo, and Tulare counties, CA, ranged from 1.0 to 10.0 parts per million (ppm) for DDE (high levels for an upland species) and from 0 to 0.36 ppm for DDT (Knopf and Wunder 2006).

Significant data gaps relating to many aspects of the Sacramento Valley/Delta wintering ecology of the mountain plover exist. Data gaps include sources of mortality including effects of pesticides, site fidelity and movements on their wintering grounds, as well as winter diet and foraging ecology. Many large grassland and agricultural areas in Dunnigan Hills and Central Valley that apparently represent suitable habitat for mountain plovers appear to be unoccupied. In addition, factors determining local population fluctuations and movements need to be fully understood to guide effective management actions to increase and stabilize local wintering populations of this species.

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