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U.S. DEPARTMENT OF THE INTERIOR
GRAND JUNCTION CO. STATE

COMMENT REGARDING:
DEPARTMENT OF THE INTERIOR PROPOSAL TO LIST
THE MOUNTAIN PLOVER AS A THREATENED SPECIES

Charles R. Preston

21 June 1999

As with many past proposals concerning other species, the lack of definitive current population estimates and trends is frustrating. Mountain Plover (*Charadrius montanus*)-specific surveys employing a standardized protocol are needed to more clearly evaluate populations on breeding and overwintering grounds across the range of the species.

Nonetheless, the information currently available from the Breeding Bird Survey and scattered, independent studies provides compelling circumstantial evidence that the Mountain Plover has experienced a significant overall population decline in recent history. Furthermore, enough published and unpublished information exists to assess general habitat requirements of the Mountain Plover, and to assert with reasonable certainty that preferred Mountain Plover habitat is threatened with denigration by human activities.

There is no evidence that suggests that the Mountain Plover is in immediate danger of extinction, and listing the species as endangered is not warranted at this time. But because of its historical decline and current threats to appropriate habitat, the action to list the Mountain Plover as threatened is warranted. I strongly concur with the U. S. Fish & Wildlife Service that designation of critical habitat is not supported biologically, and could prove counterproductive in other ways. The Mountain Plover evolved in a dynamic prairie ecosystem, and was dependent on highly mobile herbivores to create and maintain appropriate habitat conditions; these conditions no doubt varied temporally as well as spatially.

The most appropriate strategy to reverse the decline of the Mountain Plover is to reverse the decline of the system in which the species evolved. In this regard, prairie dogs (*Cynomys* spp.) are the most significant components remaining of the western grasslands in North America. To preserve the Mountain Plover without maintaining the essence of a functioning grassland ecosystem is akin to growing hair on a corpse.

Finally, the Service, and other agencies charged with managing wildlife resources, should be strongly encouraged to proactively engage extractive industry, agriculture, and urban development interests to identify opportunities for voluntary cooperation in preventing further declines and enhancing recovery in Mountain Plover populations.


Charles R. Preston

21 June 1999
Date

Draper Museum of Natural History
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IOWA STATE UNIVERSITY

OF SCIENCE AND TECHNOLOGY

4 June 1999

Mr. Robert Leachman
Ecological Services
U.S. Fish and Wildlife Service
764 Horizon Drive South, Annex A
Grand Junction, CO 81506-3946

Dear Mr. Leachman:

Thank you for the opportunity to review the proposed rule of 16 Feb 1999 to list the Mountain Plover as a Threatened Species. I first became familiar with the Mountain Plover in the early 1980s when I did a thorough review of the literature on the species. Starting in 1992, and in at least three years subsequent to that, I have spent time on the nesting grounds of this species in northern Montana, visiting numerous prairie dog towns where the birds were nesting.

I have read over the proposed rule of 16 Feb 1999 to list the Mountain Plover as a Threatened Species and offer the following comments. The review of background information on current status, habitat needs, factors affecting its abundance, and other topics appears to be thorough. The discussion of the effect of various human activities on Mountain Plovers, both on their breeding and wintering grounds appears to be thorough and covers all of the possible threats to the species that I am aware of. Based on the information presented in this review of information, the proposed listing as a Threatened species seems to be appropriate at this time. It is clear that the populations of this species have declined considerably in the past 30 years, and that habitat loss due to a number of factors including changing agricultural practices, urbanization, and others have probably been important in these declines. Fortunately there have been a several studies of this species that provide some clues to possible factors affecting its numbers.

I noted with interest that no critical habitat was designated in the proposed rule. Based on where this species currently is found, this seemed to be an appropriate action, at least for the present. It would be difficult to designate specific areas as critical habitat and most

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potential negative effects on the species could probably be negated through section 7 regulations.

One question I did have was how some of the rules on farming practices will affect the plovers. Specifically, on page 7599, column 3, #2, you indicate that normal farming practices outside of the nesting season would not be considered a violation of section 9. I assume that this means that during the breeding season, such activities could be considered a violation. I am most familiar with Mountain Plovers in Montana where nearly all nesting birds are found on prairie dog towns and at most would be affected by grazing which is probably beneficial to the species (and is covered under #5). Few Mountain Plovers are found on land affected by other agricultural practices. However, I wonder if by having this rule, landowners will react negatively to the whole listing process. It is a tough call but at least in the areas where I am familiar with the species (northern Montana), I wonder if any gains from #2 would be greatly negated by causing great concern among private landowners.

The following are a few minor comments I had on the proposed rule. I have numbered each of these in the text:

- 1 (p. 7587, also p. 7591)--The Breeding Bird Survey was started in 1966 but that year was only established east of the Mississippi. In 1967 and 1968 it was extended to states west of the Mississippi.
2. (p. 7587)--what dimensions are you referring to? body length?
3. (p. 7588)--picky but you mean flock size ranges, not averages.
4. (p. 7592)--Wheatland
5. (p. 7595)--The genus for Shrikes is Lanius

Thank you for the opportunity to comment on this set of proposed rules. The Mountain Plover certainly seems to be a species that is worthy of careful consideration for listing as a Threatened Species.

Sincerely,



James J. Dinsmore
Professor of Animal Ecology



United States Department of the Interior

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June 21, 1999

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Ecological Services
 GRAND JUNCTION CO 81056

Dear Mr. Leachman:

In response to your request, I provide here review comments on the February 16, 1999, proposal (64 FR 7587) to list the mountain plover, *Charadrius montanus*, as a threatened species under the Endangered Species Act. This is a very well prepared and scientifically sound proposal that makes a strong case for a species at risk. Some specific comments are as follows:

The Breeding Bird Survey (BBS) provides the most quantitative assessment of population change in the species and is therefore an important component of the status assessment. Because BBS routes are distributed in a stratified, random design, they are amenable to conventional statistical analysis. Statistical analysis of long-term, regional trends in BBS data for a species is based on a weighted averaging of long-term trends from individual BBS routes. Hence, the commonest reason for a significant decline at the regional level is that the number of individual routes showing long-term declines is significantly greater than would be expected by chance. Therefore a significant decline is usually indicative of a geographically widespread population phenomenon. The significant ($.05 > P > .01$) BBS analyses over a 25-year period (1966-91) and 130-year period (1966-1996) are quite convincing evidence for a widespread decrease in mountain plover populations since 1966. The magnitude of the decrease is estimated at about 60%, with 95% confidence limits ranging from -19% to -77%, for the 30-year period.

Analyses of more recent time periods (not mentioned in the proposal) yield equivocal (statistically non-significant) results. Rapid conversion of prairie to agriculture in the late 1960's followed by a cessation (or lower rate) of habitat loss in subsequent years could account for the difference between long-term trends and shorter-term trends. The proposal does not indicate if such a pattern occurred. It is important to recognize, however, that the lack of statistically significant population declines within more recent time periods does not necessarily indicate that populations have stabilized. Low rates of decline are less likely to be detected than higher rates, especially given the relatively small number of routes on which plovers are counted. The proposal presents evidence that conversion of natural grassland to agriculture persists and that birds nesting in cultivated areas are almost certain to suffer lower recruitment rates than birds nesting in natural sites. If this is the case, it is likely that the plover populations are continuing to decrease, but at a lower rate than in the 1960's.


Knopf estimated a total population of only 8-10,000 birds, based on extrapolations from winter surveys. The sum of the State-specific estimates of breeding populations is on the order of 12,000 birds. These estimates are based on a wide variety of methodologies and considerable guesswork. However, even if both are underestimates, it is apparent that the current population is very small by avian standards. In the absence of any threats, such a small population may not warrant concern. But, given the past and present exposure to adverse habitat modifications, and given the potential exposure of wintering flocks in California to toxic chemicals, the species would appear to warrant special attention and conservation measures.

The proposal documents in detail the loss and degradation of suitable habitat for mountain plovers in recent decades. In terms of population impact, deterioration of breeding habitat is of greatest concern (however the loss of 96% of the favored wintering habitat in the San Joaquin valley is very noteworthy, as the birds are forced to move to altered habitats that are impacted by chemical applications). The proposal notes correctly that some government agricultural and grazing policies and programs (e.g., promotion of uniform grass cover and control of prairie dogs) continue to reduce the quality and quantity of habitat for mountain plovers and presumably other species dependent upon shortgrass prairie systems. Clearly some policies need to be revisited. A more holistic approach to managing shortgrass prairie systems may be desirable. Should the species be listed, a habitat conservation plan (HCP) approach, as suggested in the proposal, may be the best mechanism for achieving assurances of shortgrass habitat viability with minimal impact on competing land use interests. The proposal presents clear arguments for why "critical habitat" designation would not be a productive strategy.

Of the five criteria identified in the proposal for listing a species as endangered or threatened, "the present or threatened destruction, modification, or curtailment of its habitat or range" would appear to be a sufficient condition for listing the species as threatened. The other factors, either individually or cumulatively, are probably insufficient to justify such an action. Exposure to toxic chemicals is potentially an important direct or indirect factor, but the evidence of a current problem is weak. I don't know if anyone has attempted a population and habitat viability analysis (PHVA) for the mountain plover. I would expect such an exercise would demonstrate a trajectory toward extinction. It would be instructive, however, to see what time-lines for extinction would be under alternative land modification scenarios, based on a PHVA.

On the whole, this proposal presents a thorough, accurate, and well documented account of the requirements, population history, and current status of both the mountain plover and its habitats throughout its annual range. A compelling case is made for past population declines. Existing evidence supports the contention that the species total population is very small and widely dispersed through a system of habitats vulnerable to degradation and conversion to agriculture. Only one study is cited that presents hard data on rates of nest loss among birds nesting in agricultural situations. However the argument that cultivated fields are population "sinks" for this species is totally persuasive. Given present land use trends and a dearth of regulatory incentives for stabilizing detrimental influences on the plover's habitat, this species will probably proceed slowly toward extinction if additional protective measures are not implemented.

Sincerely,


Marshall Howe, Chief
Monitoring Program