

Subject: FW: Gray Wolf Petition (California Endangered Species Act) - Status Review for California
Attachments: CFW.doc; ATT00001.htm

From: Bob <rwayne@ucla.edu>

Date: November 20, 2013, 10:23:49 AM PST

To: "Loft, Eric@Wildlife" <Eric.Loft@wildlife.ca.gov>

Subject: Re: Gray Wolf Petition (California Endangered Species Act) - Status Review for California

Dear Eric,

I attach some comments, but I have to admit that I am not sure how useful they will be to you and your staff. I thought this report would deal with delisting questions, rather than only the status, which is a little hypothetical at this point since they are no wolves in California and historical information is scant and sketchy. The preliminary genetic data we have suggests only that the Mexican wolf was present in Southern California, and that other historic California haplotypes are similar to Canadian and Rocky Mountain wolves. The perhaps less expected finding is the presence of BC coastal wolf haplotypes in historic wolves from Oregon and in the present-day population in Washington State. I think this form does not fall under the current DPS (they are sometimes called "rain wolves" and live in coastal rainforest environments from Vancouver Island to Southeast Alaska and differ from inland Rocky Mountain wolves). This wolf variety perhaps deserves recognition as taxon of special concern. Something to think about given the chance of lawsuits from environmental organizations. We are working on getting our new genetic findings submitted for publication so they will be more directly useful to you. Please let me know if I can help in other ways.

Best regards,

Bob

On Oct 18, 2013, at 12:12 PM, Loft, Eric@Wildlife wrote:

Dear Dr. Wayne,

Thanks for your tentative agreement to review the subject document attached here (WORD document plus PDF of appendix/figures). Please review the attached letter (PDF) describing our intent, purpose, and request of you as a reviewer. I understand that plans may change and you may not be able to review the document for us. If that is the case please let me know as soon as practical. Otherwise, thank you very much in advance for your expertise and insight regarding the document.

Please contact me by email or telephone if you have any questions/concerns about this effort.

Sincerely,

Eric

Eric R. Loft, Ph.D, Chief
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From: Bob [<mailto:rwayne@ucla.edu>]
Sent: Thursday, September 26, 2013 11:17 AM
To: Loft, Eric@Wildlife
Subject: Re: Gray Wolf Petition (California Endangered Species Act) - Status Review for California

Dear Eric,

I would be happy to help.

Bob Wayne
UCLA

On Sep 26, 2013, at 2:03 PM, "Loft, Eric@Wildlife" <Eric.Loft@wildlife.ca.gov> wrote:

Review of “A Status Review of the Gray Wolf (*Canis lupus*) in California”

In this status report, the taxonomy, natural history and ecology of wolves is reviewed with a focus on California and the Pacific Northwest. The report also discusses some of the problems and challenges with wolf restoration in California. In general, this is an accurate summary, although it is plagued by the lack of historical information about wolves in California and therefore must be used cautiously for management. Moreover, there is over reliance on information from early wolf research and in places, the report should be updated with newer information from more recent research on Yellowstone wolves which has more similarity to the future situation in California.

Specific points:

1. Systematics. A problem with the systematics of Pacific Coast wolves is that the taxonomy is dated and most treatments derive from the original morphologic work done by Goldman (1944) over 80 years ago. The definition of appropriate conservation units for conservation, especially for highly mobile species such as the gray wolf, has advanced considerably since then (e.g. Funk et al., 2012; Crandall et al., 2000; Moritz, 1994). Even recent treatments such as Chambers et al. (2012) merely reviews past studies and attempts to develop a consensus of historical taxonomic treatments. For conservation units, such as the DPS, definitions need to be based on the most current scientific thinking. There is abundant literature largely ignored by Chambers et al. suggesting wolf populations are structured by ecology and identifies West Pacific Coast, central Rockies and Mexican wolf genetic units (Fig. 1; Geffen et al., 2004; Carmichael et al., 2007; Musiani et al., 2007; Munoz-Fuentes et al., 2009; vonHoldt et al., 2011). Moreover, the taxonomic conclusions of the Chambers et al. paper are

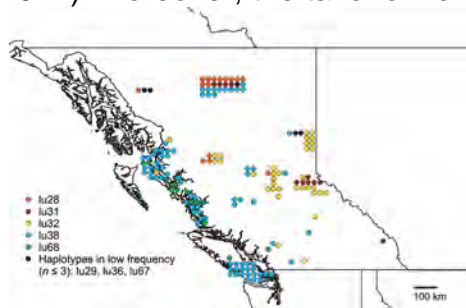


Figure 1. Distribution of the coastal haplotype in BC wolves indicated by the blue colored dots.

controversial, at least in my opinion and there are very few morphologically based systematists left that study taxonomy below the species level in carnivores. Nowak was among the last from the morphological tradition who studied wolf taxonomy, and the tools and phenetic approach he used date to the 1960s.

Genetic data largely do not support past wolf subspecies definitions and hence any conclusions made from the historical morphologically based taxonomy are tenuous

at best.

Our preliminary genetic analysis of historic specimens from the West Coast suggests at least the Mexican wolf and Rocky Mountain wolf existed historically in California, although this is based on a small sample size. Both the Rocky Mountain wolf and Coastal wolf haplotypes are currently found in the extant Washington and Oregon population, representing migration from Idaho

and British Columbia. Historically, we have identified three individuals with Coastal haplotypes in historic specimens from Oregon, suggesting the present of the Coastal wolf there before extirpation, and the likelihood that they existed in California and Washington given the dispersal abilities of wolves and the presence of suitable habitat at that time. If the goal of restoration is to return past patterns of diversity to the US Pacific coast, the re-established wolf population in California should contain contributions from all three entities. Finally, of these three entities, only the Rocky Mountain wolf is part of the western DPS, the Mexican wolf is a listed entity and the coastal BC wolves have not been formally considered under the current USFWS wolf delisting plan.

2. Factors affecting the ability of the gray wolf to survive and reproduce.

This is good list. However, I think dog-wolf interactions (including predation and hybridization) needs to be discussed as well. I think the California model for wolves may be closer to that in Italy, where limited abundance of natural game and high human densities have brought wolves in close contact with humans. This human contact is enhanced by the presence of livestock, carcasses or garbage. Hybridization has been common in Italy with the formation of mixed packs. The extent of hybridization will depend on the size of the wolf population and their distribution in California.

3. Prey availability and competition. Here and elsewhere, the affect of gray wolves is viewed as largely negative. This view is somewhat contradicted by a body of recent evidence showing ecosystem benefits to wolf reintroduction, the so-called trophic cascade. For example, new evidence suggests bears actually benefit from wolves through the increased number of carcasses, as do ravens and other carnivores (Ripple et al., 2013). The diminished grazing pressure by ungulates resulting from wolf predation allows the regrowth of trees, and restoration of historical habitats. Wolves also change the trophic structure of the carnivore community, reducing the abundance of coyotes, which are a major predator of livestock and allow smaller carnivores, such as red foxes, to increase in number. The report needs to incorporate and comment on this literature. I think it is a critical void in the current treatment, and biologists such Chris Wilmer at UCSC could be consulted.

I am uncertain why the authors of the report believe there is not sufficient prey density of deer to support wolves. This needs to be clarified.

4. Small population size. There are two distinct models for wolves in California, one passive and the other proactive. The first is the current situation, where a wolf or two may visit infrequently, but packs are not readily established because the habitat is not suitable, mortality is high, or the number of migrants is so low that individuals cannot find mates. This may become more likely if Oregon strongly limits their wolf populations and will entail genetic loss through small population size, inbreeding and low levels of gene flow. The second is that wolves are established in greater number, perhaps assisted by translocation from

Oregon, into areas of abundant game and low conflict. This is more like the Yellowstone model where 34 wolves were translocated from sites in Canada. Wolves that migrate naturally in California could perhaps be moved to these pre-designated areas to enhance genetic diversity. The latter model takes a proactive stance and attempts to manage the recolonization of wolves to reduce conflict and enhance success. In contrast, the former passive model may increase the potential for conflict and establishment of wolves in inappropriate areas.

5. Disease. Mange is potentially a greater concern than mentioned since it is now devastating the wolf population in Yellowstone. One potential threat that is not mentioned is anticoagulant poisoning that is a problem for coyotes and bobcats statewide and has even killed mountain lions in Los Angeles.

6. Over-exploitation. Successful restoration of wolves in California will likely result in a managed hunt as it has in other states. However, there is very little treatment of this issue in the report. If hunting is not allowed because of public pressure as for the mountain lion, it will likely be a problem for management. I would think the State would like to consider this problem in the report more thoroughly.

7. Wolf conservation and management. Until the state develops a plan for the wolf, it is hard to comment on this section.

8. Summary of key findings. The number of wolves that could be supported. I am surprised that some rough estimation of wolf abundance historically in California was not attempted. If there are 4000-6000 mountains today, wouldn't we expect the historic number of wolves to be at least that large?

References

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