



American
Society of
Mammalogists



Society for Conservation Biology

July 31, 2014

Honorable Dan Ashe,
Director, U.S. Fish and Wildlife Service
1849 C Street N.W.
Washington, D.C. 20240

RE: Listing Determination for the Wolverine

Dear Director Ashe,

On behalf of the Society for Conservation Biology's North America Section (SCB-NA)¹, and the American Society of Mammalogists (ASM)², we are writing you to communicate our concern about recent events involving the listing determination for the wolverine (*Gulo gulo luscus*). SCB-NA and ASM have a long history of involvement in carnivore science and conservation, as well as in issues relating to scientific integrity in implementation of the Endangered Species Act³. The recent memo⁴ from the Regional Director of the FWS Mountain-Prairie Region regarding listing of the wolverine raises concerns in both these areas.

The wolverine, the largest terrestrial member of the mustelid family, forms an important component of the group of species associated with the rapidly diminishing subnivean habitat of the United States⁵. As such, the wolverine may serve as an umbrella species for a much larger group of taxa that share the wolverine's habitat and are also threatened by the same factors. The species was petitioned for listing as threatened under the Endangered Species Act (ESA) in 2000. In December 2010, in

¹ The Society for Conservation Biology (SCB) is an international professional organization whose mission is to advance the science and practice of conserving the Earth's biological diversity, support dissemination of conservation science, and increase application of science to management and policy.

² The American Society of Mammalogists (ASM) was established in 1919 for the purpose of promoting interest in the study of mammals worldwide. ASM has long provided information for public policy, education and resources management, and we strongly support the conservation and responsible use of wild mammals based on current, sound, and accurate scientific knowledge.

³ See <http://www.conbio.org/policy> and <http://www.mammalsociety.org/committees/conservation> respectively.

⁴ Walsh, N. E. Memo of May 30, 2014: Wolverine final listing determination recommendation. USDI Mountain-Prairie Region, Denver, CO.

⁵ Pauli, J., B. Zuckerberg, J. P. Whiteman, and W. Porter. 2013. The subnivium: a deteriorating seasonal refugium. *Frontiers in Ecology and the Environment* 11: 260–267.

response to litigation, the FWS completed a 12-month determination that, based on the best available science, the species warranted protection under the ESA, but listing was precluded due to higher funding priorities. In response to litigation challenging the Service's expansive use of the "warranted but precluded" designation, the FWS agreed to make a final determination as to whether to protect the wolverine by the end of 2014.

In February 2013, the US Fish and Wildlife Service proposed listing of the wolverine as threatened, based on the best available science assembled by Service biologists. At that time, ASM submitted comments that concurred with the Service's proposed listing and interpretation of available information⁶. This proposed listing was then subject to two stages of independent peer review. In February 2013, a group of 7 experts considered the science behind the proposed listing. Five of the 7 reviewers supported the conclusion that the proposed listing was logical and supported by the available evidence. In April 2014, a 9-member science panel convened by the FWS concluded unanimously that the scientific conclusions in the proposed listing regarding threats to the species from climate change were well supported.

The ESA specifies that listing determinations shall be based solely on best available scientific and commercial data. The Department of Interior's 2011 Scientific and Scholarly Integrity Policy⁷ also mandates that the FWS use the best available science in agency policy decisions. On the basis of the two scientific peer reviews and the conclusions of FWS scientists, the Assistant Regional Director of the Mountain-Prairie Region recommended listing of the species as threatened in May 2014. However, on May 30, 2014, the Regional Director of the Mountain-Prairie Region overruled this recommendation. The Regional Director explained her conclusion by characterizing the evidence of threats to wolverine from loss of snow cover under future climates as "speculative". This conclusion was not based on new scientific data, but rather on the Regional Director's ad hoc interpretation of a non-binding legal opinion⁸ (termed the M-Opinion) regarding the "foreseeable future" clause in the ESA's definition of a threatened species.

The May 30 memo is problematic for several reasons. Notably, the M-Opinion defines the "foreseeable future" as extending as far into the future as predictions based on best available data can provide a reasonable degree of confidence. This does not preclude use of predictive modeling approaches that are well-supported in the scientific literature, such as those used to project future effects of climate change on snow cover, and of loss of habitat components such as snow cover on species dependent on or limited by these factors⁹. In the case of the wolverine, the best available science

⁶ ASM. 2013. Comments to the US Fish and Wildlife Service regarding proposed listing of the wolverine.

⁷ US Department of the Interior. 2011. Policy on Integrity of Scientific and Scholarly Activities. Available at <http://www.doi.gov/scientificintegrity/index.cfm>.

⁸ US Department of the Interior. 2009. The meaning of "Foreseeable Future" in Section 3(20) of the Endangered Species Act. Memorandum M-37021. Office of the Solicitor, USDI, Washington, D.C.

⁹ Brodie, J.F., and E. Post. 2010. Nonlinear responses of wolverine populations to declining winter snowpack. *Population Ecology* 52:279-287.

Copeland, J.P., K.S. McKelvey, K.B. Aubry, A. Landa, J. Persson, R.M. Inman, J. Krebs, E. Lofroth, H. Golden, J.R. Squires, A. Magoun, M.K. Schwartz, J. Wilmot, C.L. Copeland, R.E. Yates, I. Kojola, and R. May. 2010. The bioclimatic envelope of the wolverine (*Gulo gulo*): do climatic constraints limit its geographic distribution? *Canadian Journal of Zoology* 88:233-246.

McKelvey, K.S., J.P. Copeland, M.K. Schwartz, J.S. Littell, K.B. Aubry, J.R. Squires, S.A. Parks, M.M. Elsner, and G.S.

necessarily incorporates results from predictive modeling. The May 30 memo interprets the M-Opinion to require data – specifically “experimental evidence” -- that in all likelihood would be impractical or impossible to obtain for a rare free-living mammal. The memo thus represents an arbitrarily narrow interpretation of the M-Opinion that, if generally applied, would substantially limit the ability of science to inform listing determinations.

In this respect, the Regional Director’s interpretation of the M-Opinion resembles past legislative proposals such as the 2004 “Sound Science for Endangered Species Act Planning Act” (H.R. 1662) that would have limited the use of predictive models in listing determinations. These proposals were not enacted, in part because they ran counter to recommendations from the National Research Council (NRC). Specifically, in its report entitled “Science and the Endangered Species Act”¹⁰, the NRC recommended **greater** use of predictive modeling techniques such as population viability analysis in ESA decision-making.

In overriding the conclusions of staff scientists and two independent peer review panels, the May 30 memo demonstrates a serious flaw in the FWS’s listing determination process and continues a troubling pattern of disregard for best available science that has characterized other recent FWS listing and delisting determinations¹¹. In order to demonstrate the Service’s commitment to scientific integrity in the implementation of the Endangered Species Act, the Society for Conservation Biology’s North America Section and the American Society of Mammalogists urge your agency to reconsider the determination made in the May 30 memo that listing of the wolverine as threatened is not warranted. We believe that this decision is inconsistent with both the best available science and the language of the statute. If you believe that further external review of the relevant science is warranted, both SCB-NA and ASM are willing to assist in that review.

Mauger. 2011. Climate change predicted to shift wolverine distributions, connectivity, and dispersal corridors. *Ecological Applications* 21:2882-2897.

Schwartz, M.K., J.P. Copeland, N.J. Anderson, J.R. Squires, R.M. Inman, K.S. McKelvey, K.L. Pilgrim, L.P. Waits, and S.A. Cushman. 2009. Wolverine gene flow across a narrow climatic niche. *Ecology* 90:3222-3232.

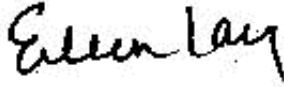
¹⁰ National Research Council. 1995. *Science and the Endangered Species Act*. National Academies Press, Washington, DC.

¹¹ For example, an independent scientific peer review panel concluded in February 2014 that the FWS delisting proposal for the gray wolf (*Canis lupus*) was not based on best available science (National Center for Ecological Analysis and Synthesis. 2014. *Review of Proposed Rule Regarding Status of the Wolf Under the Endangered Species Act*. NCEAS, Santa Barbara, CA.).

Respectfully submitted,




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Bradley Bergstrom, ASM Conservation Committee Chair

cc: The Honorable Sally Jewell
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