Vijay Patil

[vppatil@alaska.edu](mailto:vppatil@alaska.edu)

Department of Biology and Wildlife

University of Alaska Fairbanks

Fairbanks, AK, USA, 99775

January 28, 2014

To the editor,

We are pleased to submit our manuscript: “Ecological, evolutionary and social constraints on reproductive effort: a reassessment of biennial breeding by hoary marmots”, for publication in PloS One . This manuscript examines the selective pressures governing a rare and poorly understood life history strategy, biennial breeding, and contributes to our understanding of the interrelationships between environment, social behaviors, and life history in arctic and alpine wildlife. Previous work on this phenomenon has focused on animals with low reproductive rates, intense parental investment and high juvenile survival, but the persistence of biennial breeding behavior in species whose reproductive success is less certain has remained a mystery. Our work shows that putative biennial breeding species may have less conservative breeding strategies than previously believed, and that the evidence for this behavior needs to be reexamined on a broader scale. This manuscript also provides novel demographic information about a rarely studied North American marmot species. Therefore this work will also facilitate future studies of the genus *Marmota*, a group which is uniquely suited as a model for population-level studies of interactions between climate, behavior, and life history.

The material contained within this manuscript has not been published or is being considered for publication elsewhere. There is no overlap with other articles published or in review elsewhere. All trapping procedures were approved by the University of Alberta Biosciences Animal Policy and Welfare Committee. All authors have contributed to the study and know that the manuscript has been submitted for publication. We are aware of no conflicts of interest that may arise during the peer review process.

Thank you for your consideration.

Sincerely,

Vijay Patil