

NEW METHODS FOR MONITORING MOUNTAIN GOAT POPULATIONS (POSTER)

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Estimating the distribution and abundance of wildlife populations is a critical component to the conservation of wild species. Precise estimates of these parameters enable biologists to productively manage and preserve the animal populations they oversee. Methods for monitoring high density species populations are frequently and continuously being improved upon. However, identifying effective methods for monitoring low density species populations (e.g. mountain lions, wolves, mountain goats, and wolverine) has proved challenging due to small population sizes and difficulty of access to low density species habitat. Current approaches for surveying low density species (e.g. aerial surveys, baited camera traps, DNA sampling) often provide insufficient information and application of statistical models to these data can be complex. In this study, and in partnership with Idaho Department of Fish and Game, I will test disparate non-invasive, ground-based methods for monitoring mountain goat (*Oreamnos americanus*) populations in Idaho, USA. This project will compare and contrast findings from three field and analytical methods: camera trapping techniques, single-observer ground surveys, and double-observer ground surveys. Here, I describe the field methods and statistical models being tested and developed in research project. Additionally, I will present findings from the first field season (June-August 2018) of testing these three methods. By improving occupancy and abundance estimates for mountain goat populations, biologists can begin to make smarter conservation decisions around mountain goat management.