

A Portable Structure for Identifying Individual Wolverines and Lynx Using Integrated Cameras and Hair Snags (Oral and Poster Presentation)

Kalon Baughan, Wild Ideas, LLC, Helmsville, MT

Bret Davis*, Wild Ideas, LLC, Helena, MT

Philip Ramsey, MPG Ranch LLC, Florence, MT

Kristy Pilgrim, Rocky Mountain Research Station, USFS, Missoula, MT

Scott Jackson, US Forest Service, Missoula, MT

Michael Schwartz, Rocky Mountain Research Station, US Forest Service, Missoula, MT

Mikaela Howie, Wildlife Inventory Services & Enrichment (WISE), LLC, Bozeman, MT

*Indicates Presenter

**Indicates Student Presentation

We tested and modified the system design of camera and hair snag (C&H) monitoring stations developed by Audrey Magoun to identify individual wolverines (Magoun et al. 2011). Our methods were applied to focal species wolverine (*Gulo gulo*) and Canada lynx (*Lynx canadensis*) individuals in western Montana. Our objectives were to (1) test and adapt the Magoun methodology to fit our study area and research goals and enhance overall data capture, (2) evaluate the cost-effectiveness of the method while targeting the maximum number of recovered individual genotypes of focal species and limiting the number of analyzed genetic samples by integrating photographic analysis with the selection of the set of genetic samples for analysis, (3) experiment with the Magoun methodology as it could apply to Canada lynx, and (4) demonstrate the use of efficient individual identification (ID) to monitor health, behavior, and reproduction of focal species. We deployed 16 C&H stations across a 325 mi² study area over 4 consecutive years and successfully identified 10 wolverine individuals (8 M, 2 F) and 4 Canada lynx individuals (3 M, 1 F). Our use of photographic analysis for individual identification and sex determination of the 14 focal species individuals was 100% consistent with genetic analysis of linked hair samples. C&H stations provide a cost-effective and less invasive technique for detecting and monitoring individual rare meso-carnivores in remote mountainous habitats.