

Montana Furbearer Monitoring - A Cyclical Approach to Track Species Occupancy and Spatial Distribution

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The state of Montana offers a diverse array of wildlife species including a long list of furbearers. Montana Fish, Wildlife and Parks (FWP) actively monitors a number of these species on a 5-year cycle to keep track of population level changes in occupancy and overall spatial distribution. Since 2016, FWP has deployed over 604 camera stations to monitor Canada lynx (*Lynx canadensis*), fisher (*Pekania pennanti*), marten (*Martes caurina*), swift fox (*Vulpes velox*), and wolverines (*Gulo gulo*) using a nested grid design based on the species average female home range size. These ongoing efforts are a part of the WAFWA multi-species forest carnivore monitoring program conducted at a multi-state scale. We use single-species, single-season occupancy modelling while considering modelled species habitat and other spatial features to estimate over-winter (Dec 1 – April 31) occupancy and detection probabilities. The results of these projects help Montana, Idaho, Wyoming, and Washington effectively delineate and prioritize areas for future research, conservation, and management efforts in hopes for maintaining the distribution of these species across all suitable habitats.