



Webinar presented by the U.S. Forest Service and the
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Assessing surveying methodologies to address information gaps for forest carnivores in the Pacific States



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Abstract: In partnership with government agencies and industrial land owners, we surveyed a vast landscape in Oregon and Washington in under two years, targeting coastal Pacific marten (*Martes caurina humboldtensis*) and fisher (*Pekania pennanti*) - both petitioned for listing under the Endangered Species Act. Obtaining reliable estimates of distribution, population size, and habitat use of rare, wide-ranging mammals is often the first step in species conservation. A wide range of protocols have been applied in the western United States for carnivores, however, most are targeted at a single species, potentially failing to detect multiple species of interest. Recent research suggests a single method, such as just using remote camera surveys, may fail to detect a species when it is in fact present. In actively managed landscapes, reliable data on rare species is often an urgent conservation challenge because land managers may have obligations to conserve rare species for ethical, ecological, or legal reasons. We used remote cameras and scent detection dog teams to assess distribution and identify potential populations, and we combined remote cameras, live-trapping, GPS telemetry, and spatial mark-resight models to rapidly assess density and land use of one isolated population of each species. Preliminary results suggest that survey methodology can affect detections, and thus apparent results. Our data combined with recent literature suggest careful consideration is needed for carnivore monitoring using non-invasive survey methods.

In addition to fisher and marten, we detected 26 other species, and have evidence to suggest some carnivores were more likely to be detected at non-baited trail cameras. Although both species were not federally listed, extant populations may experience threats such as habitat fragmentation and loss, disease, road mortalities, and poisoning, and also be subject to legal trapping in the case of the marten. These wide ranging carnivores would benefit from a strategic multi-agency strategy focused on applied research, management, and restoration across land ownerships. The combination of results from these projects taking place through 2018 are expected to assist partners with best practices to: (1) conduct efficient survey techniques for wide-ranging elusive species, and (2) understand the scope to which these data could inform management actions.