PREDICTING HABITAT SUITABILITY FOR DUSKY GROUSE IN MONTANA (POSTER)

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Dusky grouse (*Dendragapus obscurus*), are a forest grouse species found throughout western Montana. Despite being a game species, there has been inconsistent monitoring and few surveys in recent years limiting effective management and knowledge of their ecology in Montana. Previous research indicates that dusky grouse use several different habitat types including conifer forest in the winter and shrub/steppe and grassland communities along the edge of coniferous forests during the breeding season. Our objective was to create a state-wide map predicting relative suitability for dusky grouse occurrence that could be used to identify locations for future surveys. We obtained dusky grouse observations collected during April-June, 2009-2018 from the Integrated Monitoring in Bird Conservation (IMBCR) program and extracted habitat information for detected/not-detected locations using remotely-sensed data. We evaluated relative habitat use with resource selection functions calibrated using generalized linear mixed models. Candidate models representing hypothesized relationships among grouse detections/non-detections and habitat conditions (e.g. forest type and coverage, relative elevation, distance to road) were compared using multi-model inference based on information theory. Preliminary results indicate that relative use for dusky grouse was higher in areas with higher proportions of mixed conifer forest, especially areas with higher proportions of douglas fir and that relative use was lower in grasslands and decreased as the distance to the edge of conifer forest increased.