
****ASSESSING HABITAT QUALITY FOR FOUR GRASSLAND SONGBIRD SPECIES OF CONCERN IN NORTHERN MIXED-GRASS PRAIRIE (Poster)**

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During the past 40 years grassland bird populations have declined faster than any other avian guild in North America. In northern Montana, four species are experiencing dramatic population declines, Baird's sparrow (*Ammodramus bairdii*), Sprague's pipit (*Anthus spragueii*), chestnut-collared longspur (*Calcarius ornatus*), and McCown's longspur (*Rynchophanes mccownii*). In 2017, we began a 2-year field study to evaluate abundance, nest density, and nest survival of these species in relation to local vegetative conditions with the goal of identifying important breeding season habitat conditions to inform species and land management. We conducted fixed-radius point-counts at 50 sites to estimate local abundance, rope drag surveys to estimate nest density and vegetation surveys to estimate vegetation structure and community across grassland habitats in Phillips County, MT. Discovered nests

were monitored to estimate daily nest survival. Habitat conditions including vegetation composition and structure and herbaceous biomass were assessed at both the nest-site and plot scale. We will present preliminary information from our first year of study including effects of local and plot-level vegetation conditions on nest survival for our focal species, effects of vegetation composition and structure on local bird abundance and nest density, and the functional relationships among abundance, nest density, and nest survival of sentinel grassland birds in northern mixed-grass prairie habitat. Initial models suggest that abundance is influenced by visual obstruction, grass cover, slope, and shrub cover, and nest density was influenced by visual obstruction, grass cover, and shrub cover.