
****ASSESSING HABITAT QUALITY FOR FOUR GRASSLAND SONGBIRD SPECIES OF CONCERN IN NORTHERN PHILIPS COUNTY MONTANA (POSTER)**

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Over the last 40 years, grassland bird populations have declined faster than any other avian guild in North America. In northern Montana, four species are experiencing particularly dramatic population decline, Baird's Sparrow (*Ammodramus bairdii*), Sprague's Pipit (*Anthus spragueii*), Chestnut-collared Longspur (*Calcarius ornatus*), and McCown's Longspur

(*Rynchophanes mccownii*), all four are classified as species of concern in Montana. The primary threat to grassland birds is thought to be habitat degradation and fragmentation due to conversion of native prairie to farmland, energy development, and exurban development. The majority of the remaining native prairie is maintained for cattle grazing, either on private ranches or on public land that is then leased out to private ranchers. Informed management on native prairie has the potential to maximize habitat value for vulnerable species, however, currently we are still lacking the necessary information to design management strategies. Previous studies have attempted to describe quality habitat for grassland songbirds, defining quality, as conditions supporting a high density of adults successfully producing offspring. However these studies typically focus at the individual nest scale, habitat quality definitions at a scale useful to management are still poorly described. This study will attempt to fill this gap in knowledge, its objectives are 1) evaluate how local and pasture-level vegetation conditions affect nest survival for our focal species, 2) evaluate the effects of vegetation composition and structure on bird abundance and nest density, and 3) Evaluate the functional relationships among abundance, nest density, and nest survival.