

Public Abstract

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Title:Survival, habitat use, and movement of resident and translocated greater prairie-chickens

Few rigorous studies have evaluated translocation as a management tool, despite frequent use of the technique in conservation settings. We used radiotelemetry to compare survival, habitat use, and movements among 58 resident and 54 translocated greater prairie-chickens (*Tympanuchus cupido*) between March and August, 2010 and 2011 within a landscape structured after the Partners in Flight Bird Conservation Area Model (PIF model). Results indicated lower survival in translocated prairie-chickens than in residents, and in agricultural and private grassland habitats than in core protected prairie habitats. Habitat use did not differ between resident and translocated birds and a ranking of habitat preference indicated that birds preferred prairie, agriculture, private grassland and wooded habitats sequentially. We also found that fences and trees reduced the amount of useable space within prairie, as birds avoided areas near these features. Post-translocation movements of birds were exploratory, search oriented, and substantially larger and more frequent than those of resident birds. Our research illustrates that the survival and movement of recently translocated birds differs from resident birds. Our results also question the efficacy of the PIF model for prairie-chickens, as birds preferred core prairie habitats over other habitats within the landscape and they also experienced lower survival outside of these core areas.