

Abstract

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SEX-RELATED DISPERSAL IN THE MOUNTAIN PLOVER (*CHARADRIUS MONTANUS*)

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The rapid multi-clutch mating system of the Mountain Plover (*Charadrius montanus*) provides an opportunity to examine sex differences in natal, within-year, and between-year breeding dispersal. We used nest locations over a 14-year period from a population of plovers breeding on prairie dog colonies in Montana to examine sex-related patterns in natal and within-year breeding dispersal. Additionally, we modeled between-year dispersal distances in relation to sex, previous nest fate, and the occurrence of sylvatic plague in the colonies. We also modeled successive nest fate using dispersal distance and these same covariates. We found no evidence of sex differences in distances moved during natal dispersal (mean = 13.0 km for 16 males; mean = 10.2 km for 22 females) or within-year breeding dispersal (mean = 2.8 km for 22 males; mean = 3.0 km for 26 females). The mean dispersal distance was 2.7 km ($n = 115$, $SE = 0.60$) for males nesting in consecutive years and 4.3 km ($n = 87$, $SE = 0.87$) for females. On average, birds that were previously successful moved 3.0 km ($n = 149$, $SE = 0.55$) while unsuccessful birds moved 4.6 km ($n = 53$, $SE = 1.18$). Previous nest fate was the only factor that had a strong effect on between-year breeding dispersal. None of the effects tested was suitable for predicting subsequent nest fate. Our work provides a better understanding of dispersal in an uncommon shorebird, additional insight into a novel mating system, and a basis for testing theories of avian dispersal.