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Abstracts

SHORT COMMUNICATIONS

MONITORING LOW DENSITY AVIAN POPULATIONS: AN EXAMPLE USING MOUNTAIN PLOVERS

VICTORIA J. DREITZ^{1,4}, PAUL M. LUKACS², AND FRITZ L. KNOPF³

¹Colorado State University, Colorado Natural Heritage Program, 8002 Campus Delivery, Fort Collins, CO 80523

²Colorado Cooperative Fish and Wildlife Research Unit, Department of Fishery and Wildlife Biology, 1484 Campus Delivery, Colorado State University, Fort Collins, CO 80523

³U.S. Geological Survey, Fort Collins Science Center, 2150 Centre Ave., Building C, Fort Collins, CO 80526

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⁴Present address: Colorado Division of Wildlife, 317 West Prospect Road, Fort Collins, CO 80526. E-mail: Victoria.Dreitz@state.co.us

Abstract. Declines in avian populations highlight a need for rigorous, broad-scale monitoring programs to document trends in avian populations that occur in low densities across expansive landscapes. Accounting for the spatial variation and variation in detection probability inherent to monitoring programs is thought to be effort-intensive and time-consuming. We determined the feasibility of the analytical method developed by Royle and Nichols (2003), which uses presence-absence (detection-nondetection) field data, to estimate abundance of Mountain Plovers per sampling unit in agricultural fields, grassland, and prairie dog habitat in eastern Colorado. Field methods were easy to implement and results suggest that the analytical method provides valuable insight into population patterning among habitats. Mountain Plover abundance was highest in prairie dog habitat, slightly lower in agricultural fields, and substantially lower in grassland. These results provided valuable insight to focus future research into Mountain Plover ecology and conservation.

Key words: abundance, *Charadrius montanus*, detection probability, estimation, monitoring, Mountain Plover.