

SHORT COMMUNICATIONS

CONFLICTING TEMPORAL CHANGES IN THE FREQUENCY AND INTENSITY OF COWBIRD PARASITISM ON FOUR COMMON HOSTS IN ONTARIO OVER 130 YEARS

CELIA M. MCLAREN, TODD J. UNDERWOOD¹, AND SPENCER G. SEALY

Department of Zoology, University of Manitoba, Winnipeg, Manitoba R3T 2N2, Canada

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¹Corresponding author. Present address: Department of Biology, Kutztown University, Kutztown, PA 19530. E-mail: underwoo@kutztown.edu

Abstract. We tested the hypothesis proposed by Friedmann (1963) that multiple parasitism (nests with more than one parasitic egg) by Brown-headed Cowbirds (*Molothrus ater*) is a recent phenomenon associated with increased densities of cowbirds. We used Ontario Nest Records Scheme data to quantify frequencies of parasitism and multiple parasitism on four common host species over the last 130 years. Frequency of multiple parasitism significantly increased over all decades only in Chipping Sparrows (*Spizella passerina*). We also analyzed data separately before and after 1970 because at about this time cowbird abundance began to stabilize and then decline. Pre-1970, multiple parasitism significantly increased on Chipping Sparrows and Song Sparrows (*Melospiza melodia*), but neither had significant trends post-1970. There were no significant trends in multiple parasitism on Red-eyed Vireos (*Vireo olivaceus*) or Northern Cardinals (*Cardinalis cardinalis*). For all time periods analyzed, there were no significant trends in overall frequency of parasitism on any species. Our results provide limited support for the hypothesis that temporal variation in parasitism patterns has followed changes in cowbird density over the past century.

Key words: brood parasitism, Brown-headed Cowbird, *Molothrus ater*, multiple parasitism, parasitism frequency, range expansion.