

Iowa Ornithologists Union Progress Report for 2021 Field Season

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Project: My own worst enemy: Do Prothonotary Warblers act to benefit the Brown-headed Cowbird in parasitizing their nests?

The Iowa Ornithologists' Union contributed \$940 to this project that was used to purchase nest box mounted camera systems. Data was collected during the months of May through July at Nahant Marsh in Davenport, IA and Princeton Wildlife Management Area in Princeton, IA. Funding for nest boxes was obtained through the Western Prairie Audubon Society and a system of nest boxes was erected at both study sites. During the 2021 field season Prothonotary Warbler (*Protonotaria citrea*) nests were monitored throughout the season. Observational data was collected at 14 nests and video monitoring data was collected at 18 nests. A total of 2913 hours of video was collected and analyzed.

Experiments were conducted in which an egg, either a warbler's own egg or a Brown-headed Cowbird (*Molothrus ater*) egg, was moved to the nest rim. The nest was monitored to determine whether these eggs would be retrieved back into the nest. This experiment confirmed that warblers are able to retrieve displaced eggs, both their own and those of The Brown-headed Cowbird, albeit at low frequencies. Insufficient data was obtained to determine if there is a significant difference in the frequencies at which these eggs are retrieved. Retrieval experiments were conducted to determine the cues warblers may use in their decision to retrieve an egg. Model eggs painted brown were used to test for color discrimination and wooden cylinders matching warbler eggs in color and spotting pattern were used to test for shape discrimination. Neither of these objects were retrieved into the nest. Brown model eggs remained on the nest rim

throughout incubation and wooden cylinders were ejected from the nest boxes completely in all cases, however, sample sizes for both trials were very low ($n = 1$ and $n = 3$ respectively).

An additional field season during the year 2022 is required to obtain a sufficient sample size for each trial. Additional nest boxes will be obtained to expand both field sites prior to the 2022 field season. Data will be collected during the months of May through July. Following the 2022 field season, data will be analyzed and a manuscript will be sent for review in the months following.