

AVIAN USE OF ROADSIDE HABITAT AND IMPLICATIONS FOR CATTAIL MANAGEMENT

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Introduction

Studies on cattail management have demonstrated that a reduction of cattail cover and density in wetlands results in a decrease in blackbird use and, in some cases, an increase in use by waterfowl and other birds (Linz 1994, Linz 1996, Solberg 1989). If not protected, sunflower fields adjacent to wetland habitat can suffer over 90% damage. One area of possible high productivity for blackbirds, especially redwings, is roadside wetland habitat. Roadside rights-of-way provide a unique management option because there is no need to contact multiple landowners for permission to manage wetland vegetation. Prior to manipulation of roadside habitat, data on avian use, both blackbird and non-blackbird, of this habitat is necessary in order to develop proper management strategies. Thus, the major objective of this study was to determine avian use of roadside habitat.

Methods

Thirty quarter sections located in the Southern Drift Plains of North Dakota were sampled. Roadside habitat along two one-half mile transects bordering these quarter sections was surveyed in order to assess avian use. The species, number, and location of birds within the quarter sections were recorded. In addition, nest surveys were conducted to provide an index of breeding bird use of this roadside habitat. Finally, roadside habitat was surveyed; data were collected on cattail stand length, cattail density, water depth, and inter-cattail stand distances.

Results

A total of 1206 birds representing 38 different species was observed within these transects. Of these 1206 birds, 805 were blackbird species while the remaining 401 birds represented non-blackbirds (Figure 1). Nest searchers located 496 nests, and 181 of these nests, represented by 10 species, contained eggs and/or young and were designated as active. Of the active nests, 164 were blackbird nests, and 158 of these nests were from red-winged blackbirds (Figures 2 and 3). Habitat surveys of 90 cattail stands within the transects yielded a total of 13,582 linear meters of cattail, or approximately 28% of the total roadside habitat within these 30 quarter sections. In terms of species richness, the greatest diversity of observed birds occurred in non-cattail areas (Figure 4).

Conclusions

In terms of avian use and nesting, blackbirds, especially redwings, are the dominant bird species using roadside cattail. With proper management of roadside habitat, potential effects on non-blackbirds can be minimized, and nesting habitat for blackbirds can be reduced. A loss in nesting habitat will likely result in fewer blackbirds and a subsequent reduction in sunflower damage.

Acknowledgments

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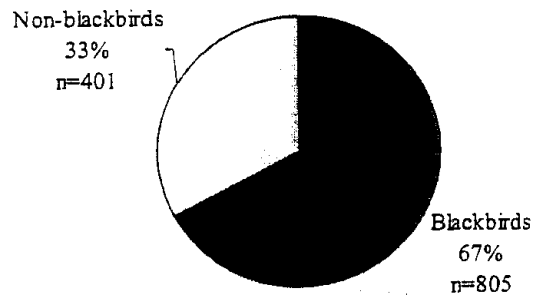


Figure 1. Comparison of blackbird and non-blackbird use of roadside habitat.

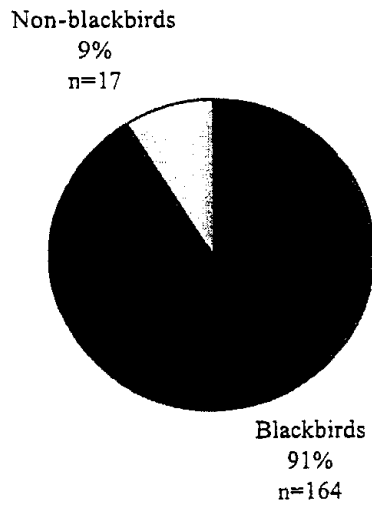


Figure 2. Numbers of nests occurring in roadside habitat.

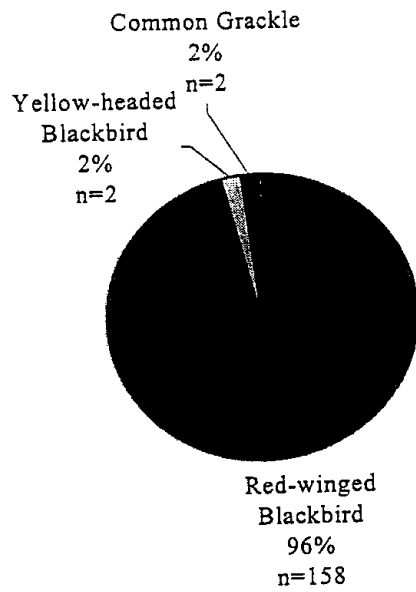


Figure 3. A comparison between blackbird species nest numbers in roadside habitat.

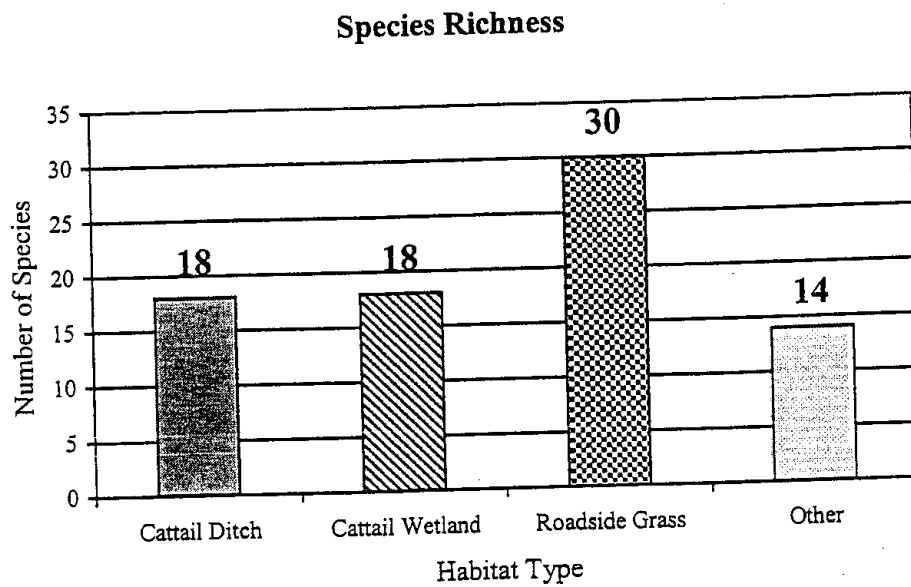


Figure 4. Species richness in different roadside habitats.

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The 2001 Sunflower Research Workshop, sponsored by the National Sunflower Association, took place on January 17 and 18, 2002, at the Ramada Plaza Suites, Fargo, ND. The workshop was very well attended and received by public and private researchers from the United States and Canada, as well as other interested parties.

This volume contains nearly all the presentations given at the 2001 workshop. Some of the papers are summarized or abstract form.

The National Sunflower Association would like to extend its appreciation to those presenting papers/posters at this annual Sunflower Research Workshop and to those who participated by their

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Questions regarding these proceedings may be directed to the National Sunflower Association, 4023 State Street, Bismarck, ND 58503.

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