

Assessment of Midwestern Golf Courses as Breeding Habitat for the Red-headed Woodpecker

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Objectives:

1. Identify habitat and landscape features of golf courses used by Red-headed Woodpeckers.
2. Examine nesting success on golf courses and identify microhabitat and landscape features associated with nest fate.
3. Compare nest microhabitat, nest success, and foraging behavior of woodpeckers both on and off golf courses.
4. Develop and distribute a set of management prescriptions to create and/or maintain Red-headed Woodpecker habitat on Midwestern golf courses.

Start Date: 2001

Project Duration: 2 years

Total Funding: \$35,952

Red-headed Woodpeckers were once common in farmland and open woodland of the central and eastern U.S. and southern Canada, but have shown strong declines throughout their North American range during recent decades. Contributing to its decline are factors such as forest expansion in the northeastern U.S., loss of orchards, fire suppression, decline of oak-savannah habitat, "clean" farming practices, and the removal of dead limbs and trees in urban areas.

Despite population declines, conservation of Red-headed Woodpeckers holds much promise because the habitats used by these birds are structurally similar to some human-dominated habitats. Red-headed Woodpeckers occur within a variety of open deciduous woodlands with large oak trees, low tree density, open understory, and availability of dead limbs and/or snags. Thus, scattered large trees and open lawn areas typical of many golf courses can provide breeding habitat.

Given their attractiveness, conspicuousness, and recent population declines, Red-headed Woodpeckers can also be an excellent visible symbol of wildlife conservation on golf courses of some Midwestern states.

From May through August in 2002 and 2003, 100 private and public golf courses in Ohio were censused for Red-headed Woodpeckers using transects and playback recordings. When woodpeckers were detected, we conducted additional observations to locate and monitor nests and study foraging behavior. A range of habitat characteristics throughout the golf course and immediately surrounding nest trees were measured.



Scattered large trees and open lawn areas typical of many golf courses have potential to provide breeding habitat for red-headed woodpeckers.

In 2003, we located 10 nests off golf courses and matched these with 10 nests found on courses, and compared nest habitat characteristics, nest success, and foraging behavior of woodpeckers associated with nests. Landscape characteristics, such as golf course area and land uses in the adjacent landscape (e.g., urban, agriculture, forest), will be assessed from satellite imagery.

A total of 158 Red-headed Woodpeckers were detected at 26 of 106 courses censused during the study. Most birds occurred on courses in the northeast and northwest regions of Ohio. We located 63 active woodpecker nests and extensively monitored 26 nests.

Success of 10 matched-pair nests

(i.e., 20 nests) was high both on golf courses (70% successful) and off courses (80% successful). Foraging data (228 observations) were collected over 80 individual woodpeckers, both on and off golf courses. Analysis of foraging behavior, habitat, and landscape relationships is in progress.

This study of Red-headed Woodpeckers on golf courses will have several important consequences for wildlife conservation efforts. By recommending specific and appropriate management prescriptions, we hope to ensure the continued suitability of Red-headed Woodpecker habitat on used golf courses and enhance habitat on non-used courses.

In addition, because this project will identify habitat features important to Red-headed Woodpeckers in human-dominated landscapes, our recommendations should be applicable to urban/suburban areas, especially cemeteries, parks, and schools.

Summary Points

- 158 individual Red-headed Woodpeckers occurred on 25% of 100 golf courses surveyed in 2002 and 2003.
- Breeding frequently occurred on golf courses.
- Success of 20 monitored nests was high, both on and off courses (70% and 80% respectively).
- We will determine important habitat and landscape features associated with golf course use and successful reproduction by Red-headed Woodpeckers.
- This research will generate management prescriptions that should enhance, maintain, or create suitable breeding habitat for Red-headed Woodpeckers on golf courses.