

Pilot Project to Assess Red-shouldered Hawk Nest Productivity in Managed Forest Stands in Southern Wisconsin utilizing Citizen Scientists

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Project Summary

Our pilot project aimed to assess the feasibility of utilizing citizen scientists to locate and monitor state Threatened Red-shouldered Hawk nests throughout the breeding season and report the findings.



Figure 1. Red-shouldered Hawk nestling. Photo by J. Limburg

Volunteer Involvement

Six volunteers participated in this effort with each having various bird or hawk identification skills. Department of Natural Resources biologists provided volunteers with educational materials and field training. Field training included information on locating active hawk nests, differentiating different nest structures, and determining nesting activity. Volunteers provided detailed activity reports from the site visits



Figure 3. Volunteer monitor Paul Smith at Red-shouldered Hawk nest site in April. Photo by R. Staffen

Results

1. A Red-shouldered Hawk Nest Monitoring Protocol was developed and tested in the field.
2. Nest Productivity Data: Occupied territories were noted at 6 of 7 nests monitored or 86% of historical nesting sites visited. Active nests with young detected were identified at 2 of 7 nests or 29% of nests monitored.
3. Nesting Phenology: Two active Red-shouldered Hawk nests were successfully monitored throughout the course of the nesting cycle. The mean estimated fledging date of 6/30 was calculated for two nests on the Kettle Moraine State Forest – North Unit.

Conclusion

To continue this monitoring project, it would be critical to retain citizen scientists from previous years and select sites with minimal flood potential. With the finalized protocol and sound phenological data in place, and a more robust sample size, Red-shouldered Hawk nest monitoring with volunteer scientists could be a beneficial means of assessing forest management effects on the nest productivity of this state Threatened bird.

Acknowledgments

We would like to thank Owen Boyle and the Citizen-based Monitoring Committee for providing funding for this project.



Project Objectives:

1. Develop and Test a Red-shouldered Hawk Nest Monitoring Protocol
2. Establish Baseline Nesting Productivity Data for a Subset of Red-shouldered Hawk Nests at Two Managed Properties in Southern Wisconsin
3. Document Nesting Phenology of Red-shouldered Hawk at Two Locations in Southern Wisconsin
4. Assess Feasibility of Monitoring the Nesting Cycle of Red-shouldered Hawks with Citizen Scientists.

Methods

Citizen scientists made a minimum of three visits to each nesting area within three of four monitoring periods. The visits were timed to determine occupancy and nesting status during the courtship, incubation, nestling, and fledging periods.



Figure 2. Incubating female Red-shouldered Hawk. Photo by J. Limburg.