SOUTHEAST REGION UPLAND BIRD STUDY

Study II: The Effects of Russian Olive Removal on Nest Success of Ground Nesting Birds

Job 1: Implement study plan.

July 1, 1996 through June 30, 1997

By:

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PROGRESS REPORT
STATE WILDLIFE RESEARCH

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PERIOD COVERED: July 1, 1996 to June 30, 1997

SUBPROJECT: Southeast Region Upland Bird Study
STUDY TITLE: The Effects of Russian Olive Removal on Nest Success of Ground Nesting Birds

ABSTRACT

Russian olive trees (Elaeagnus angustifolia) were removed from ½ of the Sterling Wildlife Management Area (SWMA) located in southeastern Idaho. This process was completed to determine if removal of this tree species as nest sites for black-billed magpies (Pica pica) (a potential duck nest predator) would increase duck nest success on the treated area. Duck nest searches resulted in the discovery of 263 nests, over ½ of which were those of mallards (Anas platyrhynchos). Duck nest success on the treatment area was nearly 3 times higher than that which occurred on the control area, 9.9% and 3.7%, respectively. Percentage of duck nests destroyed by avian predators did not differ when results between the 2 areas were compared, nearly 33% for each area. Over twice as many magpie nests were found in the control area (72) as in the treatment area (31). Distribution and density of nests did not change in the control area, but did change in the treatment area. All magpie nests in the control area were built in Russian olive trees and experienced an overall fledgling nest success of 72%, but 31 nests were primarily built in big sagebrush (Artemisia tridentata) on the treatment area and had 52% fledgling nest success. Results obtained from artificial nests with timers indicate that 2/3 of the predated nests were destroyed during daylight hours, which implies that the majority of nests were destroyed by magpies. Artificial nests marked with willows were destroyed at the same percentage as those nests not marked with willows. This indicates that duck nest predators were not using willow sticks as cues to locate marked nests. Cameras located at artificial nests photographed magpies, striped skunks (Mephitis mephitis), and raccoons (Procyon lotor), verifying the existence of these nest predators on the SWMA. Data gathered 1 year after Russian olive trees were removed from a portion of the SWMA indicate this technique alone may not be sufficient to increase duck nest success to the 30% objective level that is desired for the SWMA. However, more time may have to elapse before a substantial increase concerning duck nest success is realized as a result of Russian olive tree removal. Data from the final field season have been analyzed and the final completion report in the form of a master’s thesis is being prepared. The final report will be submitted during FY98.
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