



Patuxent Wildlife Research Center Science Brief for Resource Managers

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Survival of American Woodcock (*Scolopax minor*) during fall migration

Description:

The American woodcock (*Scolopax minor*) is a popular game bird in much of eastern North America (U.S. Department of the Interior [USDI] 1990). The woodcock population has declined between 1968-2000 at an annual rate of 2.3% in the Eastern region and 1.6% in the Central region (Kelley 2000). Most estimates of annual survival of woodcock were based on analysis of band recoveries (Sheldon 1956, Martin et al. 1969, Krohn et al. 1974, Dwyer and Nichols 1982, Dwyer et al. 1988). Dwyer and Nichols (1982) estimated annual survival of woodcock banded in the Eastern region to be 0.354 for the period 1967-74. Using this annual estimate and the composite estimate from the 3 telemetry studies of 0.471, Longcore et al. (1996) estimated that survival during the fall hunting and migration period would have to be 0.853 if the annual survival estimate is correct. It seems unreasonable to believe that survival during hunting and migration would be higher than during the spring and winter periods. Scientists for USGS are currently analyzing data to estimate survival of woodcock during the fall hunting period. However, estimates for the migration period, a period when substantial mortality could occur are unknown. Because the cost of banding adequate samples of woodcock is prohibitive, few woodcock are banded annually. Migration corridors along the Atlantic coast, such as, Cape May, NJ and Cape Charles, VA are well known. Most information about migration during fall is based on recovery of bands and hunters' observations of large groups of "flight" birds in covers that previously held few birds. There is little specific information to indicate the speed of migration and Mendall and Aldous (1943) described it as "leisurely". Recovery of locally banded birds provided some evidence of how long local birds remain on breeding areas, but only 2 studies (Coon et al 1976 and Sepik and Derleth 1993) used radio telemetry to determine when woodcock began migration, but samples sizes were small. Evidence of

differential migration chronology by age and sex is equivocal, but there are no estimates of mortality during this critical period. Except for information from band recoveries, there are no data on how long migration takes. We will use telemetry to determine how long local birds remain on breeding areas, relate weather variables to the timing of migration, and estimate survival of woodcock during migration from the Northeast to the mid-Atlantic states.

Progress to Date:

Woodcock were captured and radio-marked at 3 sites in Maine during September and October, 2001 and 2002. Receiver recording systems were set up at 4 – 6 sites in New Jersey from the northern part of the state to Cape May and at 1 site on the Eastern Shore of Virginia. Recording systems were maintained through December. A computer program has been developed to read tapes. Tapes are being processed and analyzed.

Management Implications:

Information obtained from this study will be used by USFWS to better manage woodcock populations by providing accurate survival estimates and by identifying peak migration periods.

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