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SEXUAL SEGREGATION IN AMERICAN WOODCOCK, *PHILOHELA MINOR*, DURING SPRING MIGRATION

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ABSTRACT

Male woodcock initiate migration in advance of females during spring. In Tennessee, males comprised 72% of 88 woodcock collected during 14-28 February, 1978.

INTRODUCTION

It is generally accepted that male American woodcock (*Philohela minor*) initiate their spring migration in advance of females, yet few data are available to document that supposition. Glasgow (1958) found that females remain later than males on their wintering areas in Louisiana. Kletzly (1976) noted that females usually arrive later than males on the breeding grounds in West Virginia. Owen (1977) commented without elaboration that, "... males migrate first." Sheldon (1967), however, stated that, "There is no positive evidence that females arrive later than males, . . ." This study was undertaken to quantify the sex ratio of the woodcock population during the initial phase of spring migration through Tennessee.

METHODS

Woodcock examined in this study were collected throughout Tennessee by shooting. All were harvested during the second phase of Tennessee's legal woodcock hunting season, which extends from 1-28 February. Sex was verified by inspection of the gonads, and the sex ratio obtained was subjected to a Chi-square goodness of fit test. Significance was accepted at the 0.05 level.

RESULTS AND DISCUSSION

Of 88 woodcock collected between 14-18 February 1978, 63 (72%) were males. This preponderance of males and paucity of females was significantly different (Chi-square = 16.4; $P < 0.001$) from the expected 50:50 sex ratio. That this difference was indeed real is strengthened by Sheldon's (1967) report that there is no apparent sexual difference in

vulnerability of woodcock to shooting. In fact, our analysis may be somewhat conservative, since several studies (Mendall and Aldous, 1943; Sheldon, 1967; Liscinsky, 1972) have demonstrated that females outnumber males in this species. Krohn and Clark (1977), however, found the sex ratio in Maine woodcock to be approximately even.

Woodcock do not normally winter in Tennessee, particularly in very cold winters such as 1977-1978. President's Island, Shelby County, Tennessee was searched intensively by 3 persons using pointing bird dogs during early February 1978; no woodcock were observed, though hunters frequently find them there during mild winters. Areas in Coffee County, Henderson County and Hardin County which are extensively used by migrating woodcock also were searched, but contained no woodcock. Thus, we believe the birds in our sample represented the vanguard of the spring migration, and that our data substantiate that a sexual difference exists in the onset of migration, with males leaving wintering areas in advance of the females.

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