

BREEDING ECOLOGY OF THE SWAMP SPARROW (MELOSPIZA  
GEORGIANA) IN A SOUTHERN RHODE

ISLAND PEATLAND

BY

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A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE DEGREE OF  
MASTER OF SCIENCE

IN

ANIMAL SCIENCE

UNIVERSITY OF RHODE ISLAND

1979

## ABSTRACT

The breeding ecology of the swamp sparrow (Melospiza georgiana) was studied in a 14-ha bog-fen-swamp complex in Richmond, Rhode Island, during the 1977 breeding season. The territories of 24 color-banded males were delineated by plotting the locations of singing males on a 30-m grid. The height and species of songposts and the heights of singing males were described during 625 observations. Intensive vegetation sampling produced estimates of percent cover for each plant community in each territory and at each nest site. The density of vegetation immediately surrounding each nest was determined and measurements of nest dimensions and the position of nests in the vegetation were recorded. Territories ranged in size from 0.03 to 0.61 ha ( $\bar{x}=0.17$  ha). Shifts of territory boundaries by males were common throughout the breeding season, often as a result of changes in the activity spaces of females. Three males were bigamously mated. Red maple (Acer rubrum) and Atlantic white cedar (Chamaecyparis thyoides) comprised 45% and 44% respectively, of the songposts used. Plant community groups that occurred most frequently in the 24 territories were: medium shrubs (21),

tall shrubs (16), sedges (15) and evergreen forest (15). Medium shrub communities also provided the principal cover at 20 of the 36 nest sites. Water, sedge and evergreen forest communities were common at nest sites as well. Shrubs were present at all nest sites and helped support 33 nests; their mean density immediately surrounding the nest was 205 stems/m<sup>2</sup>. The mean density of sedges at 34 nests was 346 stems/m<sup>2</sup>. Most nests were placed in low vegetation within 30 cm of the substrate. The clutch size for 24 nests ranged from 2 to 5 eggs and averaged 3.5 eggs.