

Sum-45  
46

10 Sps - 24  
House Wren  
Yellowthroat  
Nashville Warbler  
Baltimore Oriole  
N. Waterthrush

Eastern MT  
Black Hill = 39  
Western  
MT-Id: 64, 65

MIS-57

MIS-57

POPULATION TRENDS OF  
SONGBIRDS IN WESTERN NORTH AMERICA

By

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4-Chipp Sp - may be  
declining due to  
new bird parasites

Vesper Sparrow - increasing  
BNCO - increasing

Matt  
29.

Brush  
26  
29  
45  
48

Approved by

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Chairman, Board of Examiners

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Dean, Graduate School

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Date

Raige, L. Christine, M.S. 1990

Wildlife Biology

Population trends of songbirds in western North America.

Director: Richard Hutto

Long-term U.S. Fish and Wildlife Service Breeding Bird Survey data were analyzed to determine (1) population trends of long-distance neotropical migrants and northern residents, and (2) whether ecological groupings of birds could be distinguished on the basis of their population trends. Data from 1966 to 1985 revealed no major differences between migrants and residents, nor among groups of long-distance migrants that use different habitat types in winter. The only breeding habitat groups that showed negative mean trends were northern residents of grassland and chaparral habitats. Five migrant species show consistent trends across their breeding ranges that are possibly indicative of changes on wintering grounds. Thirty seven species of migrants display a mosaic of trends across the western region, which suggests response to local conditions on breeding ranges. There is no evidence that western neotropical migrants are declining as a group. Significant western region declines in 19 species of western songbirds and the majority of species in the Pacific Northwest deserve further investigation.

No consistency was found in groupings of species based on either long-term trends or year-to-year patterns of population change within physiographic regions. The high degree of variability in population trends among species suggests that trends cannot be inferred from one species to another. The lumping of species into groups (e.g. guilds) for the purpose of management will not be an effective short-cut for monitoring individual species, at least not through "normal" variation in populations.

## CHAPTER II

### POPULATION TRENDS IN WESTERN NEOTROPICAL MIGRANTS

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ABSTRACT: I used U.S. Fish and Wildlife Service Breeding Bird Survey data to examine long-term population trends of western land birds. Trend data were broken down by long-distance neotropical migrants, winter residents, habitat groups, taxonomic groups, and physiographic regions. There were no statistical differences between migrants and residents, nor among winter or breeding habitat groups for long-distance migrants. Maps of migrant species' trends by physiographic region show five species with consistent trends across all regions, possibly indicative of changes on wintering grounds. Thirty-seven species of migrants display a mosaic of trends, which suggests response to local conditions on breeding ranges. In summary, there is no evidence that western neotropical migrants are declining as a group. Further investigation is in order for 18 resident and migrant species significantly declining across the Western Region, and 16 species locally declining in the Southern Pacific Rainforest physiographic region.