## COMPARISON OF SUMMER, WINTER AND MIGRATING ACTIVITIES OF SEVERAL WARBLER SPECIES

Richard L. Hutto
Department of Biology
University of California, Los Angeles
Project Number 201

Post-breeding activity of four warbler species (Yellow, Wilson's, Yellowthroat and Audubon's) was studied during August of 1974 at the Jackson Hole Biological Research Station. The resultant data will be used in a comparison with data to be collected this year in the wintering area of these species and during their spring migration period. These data include information on habitat selection and feeding behavior of each of the species.

It was found that, for each warbler species, the feeding behaviors and foraging heights are strikingly similar to those reported in Cody's 1974 monograph (Competition and the Structure of Bird Communities) for the same species during the breeding season. Toward the end of the month, shifts in foraging heights did occur, however. These shifts are most interesting and probably represent adjustments to changes in the competitive regime rather than responses to some other factor. For example, shifts to lower heights were observed in Yellow Warblers after the chickadees invaded the willow habitat later in the month and when the Yellow and Wilson's Warblers had begun to depart for the winter, pronounced shifts to higher vegetation occurred in the Yellowthroats. This sort of information is central to the question of relative importance of habitat and competitive changes causing behavioral changes in these birds during migration and in their wintering grounds.