A COMPARISON OF FOREST EDGE AND FOREST INTERIOR SPECIES USING AUTOMATED ACOUSTIC MONITORING

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Abstract: Among the greatest challenges to confront society in the 21st Century are climate change and habitat alteration. Human activity can intensely modify landscapes by altering the nature of habitats (i.e., land use change) by cutting forest for agricultural crops or by fragmenting extant habitat types (e.g., creating small patches of once expansive forest). These changes to the landscape influence the abundance and distribution of organisms. Many birds are sensitive to habitat change and fragmentation. Consequently, changes in bird populations can be an indication of future environmental problems because these species help control agricultural pests, pollinate flowers, and disperse seeds. Habitat associations of birds are often defined in relation to the use of various successional stages of forests. Edge species are associated with early-successional habitats and areas where forest and other habitat types converge. Interior species may avoid the edge of a forest patch because habitat characteristics (vegetation structure, microclimate) differ from those found in closed canopy mature forests. We take advantage of the altered and fragmented habitats in Connecticut to explore the extent to which birds respond to differences between forest interiors and forest on the edge of human dominated habitats.

Keywords: Acoustic monitoring, bird populations, habitat fragmentation, edge species, interior species.

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