

Vanessa Chen, Neuroscience

University: Amherst College

Year in School: Senior

Hometown: Temple City, California

Faculty Mentor: Dr. Paul Porneluzi, Central Methodist University

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Wood thrush abundance and habitat preference among three forest management regions in the Ozark Forest

Vanessa Chen and Paul Porneluzi

Habitat loss and forest fragmentation are vital issues in the scientific and political arena. The Missouri Ozark Forest Ecosystem Project (MOFEP) investigates forest management techniques including uneven-aged and even-aged management and their affects on local flora and fauna. Many neotropical migratory birds species, which are suffering from recent population declines, use the Missouri Ozarks as summer breeding grounds; therefore, evaluation of forest management affect on bird populations is vital. In a short-term analysis of five years pre-harvest and three years post harvest data, Gram et al. (2003) found the density of five mature-forest species (Acadian Flycatcher, Kentucky Warbler, Ovenbird, Red-eyed Vireo, Wood Thrush, Worm-eating Warbler) to decline after tree harvest. However, during post harvest years, Wood Thrush (*Hylocichla mustelina*) density increased significantly in even-aged plots relative to no harvest control plots, suggesting that forest management techniques may have created a suitable secondary habitat for this species. To test the hypothesis that Wood Thrush were using a secondary habitat created by even-aged management, 10 x 10m plots within known Wood Thrush territories were characterized by the number of understory, sub-canopy and overstory trees present. Results show Wood Thrush territory to consistently include a higher density of understory and subcanopy trees near streams in lowland deciduous forest compared to random 10 x 10m forest plots. Though Wood Thrush habitat was characteristically similar across treatment groups, the number of subcanopy and understory trees differed significantly. This data and other recent post harvest may imply that Wood Thrush were not utilizing even-aged managed forest as a secondary habitat.