

Lynn, S. 1996. Bird use of cottonwood-willow patches in the lower Colorado River Valley. M.S. thesis. University of Arizona. 114 pp.

Neotropical migratory birds and riparian forests have decreased in abundance over the past century. Decreases in bird populations have been linked to forest fragmentation. I surveyed birds and monitored nesting success of Bell's Vireos (*Vireo bellii*) and Yellow-breasted Chats (*Icteria virens*) in a range of cottonwood/willow patch sizes and densities in the lower Colorado River valley to determine whether bird abundances, species richness, and reproductive success were related to cottonwood/willow patch size and/or tree density. Results suggest that neotropical migrants responded to patch size and tree density more than did resident birds. Results of breeding analyses suggest that small patches may be ecological sinks. Analyses excluding large patches indicated a threshold between 13 and 160 hectares at which bird abundances stopped increasing with increasing patch size. This study demonstrated that neotropical migratory birds use small patches; however, large, dense patches are required for persistence of breeding populations.