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# Habitat Edge and Nest Predation in House Wrens

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Poster Presentation 9

HABITAT EDGE AND NEST PREDATION IN HOUSE WRENS

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Nest predation is a strong selection pressure upon many avian species. While habitat edges are popular breeding sites for many bird species, predation rates are generally higher on edges compared to interior habitat sites. The role of this "edge effect" has become more important in the midwestern United States as woodland fragmentation has increased, and it has been implicated as a possible factor in the decreasing populations of many woodland breeding birds. The conservation of woodland bird species depends upon understanding the factors affecting their population declines, which this study attempts to address. Nest predation rates of House Wrens (Troglodytes aedon) were documented from May-September, 1982-1994 in 585 nest boxes in central Illinois. The study site consisted of 108 ha of deciduous forest surrounded by cultivated fields. The two major categories of nest predation were by other birds (mostly by other House Wrens) and snakes, and by Raccoons (Procyon lotor). There was a significant year effect on nest predation rates in both categories, but there was no significant relationship between nest predation rates and distance from habitat edges. Larger broods (i.e. number of nestlings) had significantly higher Raccoon nest predation rates than smaller broods. Edge type did not significantly affect apparent avian and snake nest predation rates, but nests along riverine habitat edges suffered significantly higher Raccoon nest predation rates than nests located along either abrupt or gradual habitat edges. The patterns of nest predation documented in this study may have important management implications for other woodland nesting birds.