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NEST PREDATION ON HOUSE WRENS

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Predation is the strongest selection pressure placed on most avian species. Birds can potentially manipulate several variables, such as nest-site selection, brood size, and clutch size, in an attempt to decrease the frequency of predation and increase their fitness. The main focus of this study is to determine the effect of habitat edges (i.e. edge effects) on nest predation in a population of House Wrens (*Troglodytes aedon*) which breeds in nest boxes. Although the House Wren is not an endangered species, the patterns of edge effects are increasingly important in the conservation of bird species whose populations are threatened by habitat fragmentation. This study includes data on nest predation involving 585 nest boxes from 1983-1994. Our results showed no significant edge effect, but we did find a significant variation in the effect of the type of edge (abrupt vs. tapering vs. riverine). We also found the major predators were raccoons (*Procyon lotor*) and other House Wrens. Predation by other House Wrens was significantly higher along abrupt edges than tapered and riverine edges. While raccoon predation was significantly higher along riverine edges than abrupt and tapered edges. We also found that predation rates did not significantly differ between brood sizes, clutch sizes, and upland vs. floodplain habitats. A possible reason we found no significant edge effect is that the study area may be too small, and, in effect, the whole study area is subject to the edge effect. This conclusion would mean that a larger forest than our 108 ha. study area would be needed to reduce the edge effect on woodland avian species. Since edge type is significant, as long as the edge transition was gradual between the forest and the other habitat, predation rates would likely be diminished.