Invertebrate populations fluctuate throughout the breeding period in central Illinois forests (Kendeigh 1979). When food is abundant, parents may be able to compensate for missed feeding opportunities caused by increased predation risk, but as food supply declines, the effects of increased predation risk may become realized through reductions in nestling mass and subsequently nestling survivability. Food is generally thought to be limiting for this House Wren population during the late season (C.F. Thompson pers. comm.); therefore, one would have expected to see effects of increased predation risk during the 1990 late season. However, House Wrens may have been able to compensate for missed feeding opportunities during this period because brood sizes were smaller during the late season of 1990 compared to the other seasons of this study (Kruskal-Wallis X? approximation = 30.297, df = 2, p= 0.0001; Median brood size- [upper and lower quartiles] 1990 early season, 6 [8-5]; 1990 late season, 5 [8-4], 1991 early season, 6 [7-5]).

Additional food added to nests attracted Blue Jays and their presence may have indirectly reduced the number of nestling House Wrens that survived to nest-leaving during one season and mean relative brood mass in another. House Wrens were never observed to enter nestboxes while Blue Jays were present at the feeders. Adults spent time calling and attacking when jays were present; therefore, time and energy that could have been devoted to caring for offspring was expended in nest defense. The reduction of brood mass and number of young fledged did not occur after Blue Jays were excluded from the supplement (after the 1991 early season). This suggests that increased predation risk may be responsible for reducing mean brood mass and the number of House Wrens surviving to nest leaving in two of the three breeding seasons observed. Furthermore, these results suggest that the risk of predation alone can influence reproductive success by limiting the ability of parents to care for offspring.

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