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Parental Investment in the House Wren (*Troglodytes aedon*)

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The parental investment hypothesis of resource utilization (Trivers 1972) states that a parent will maximize his or her lifetime reproductive fitness by using the most energy and time efficient method available in the process of reproduction. According to the parental investment hypothesis, if the parents and offspring are subjected to food shortages, the feeding activity of both parents will be necessary to maximize their reproductive success. In contrast, in a polygynous avian species such as the House Wren (*Troglodytes aedon*), if food is abundant during the nestling stage, the male should increase his reproductive success by seeking out extra-pair copulations or acquiring another mate.

The parental investment hypothesis was tested in House Wrens by simultaneously manipulating the brood size (the number of offspring in a nest) and the food availability to simulate conditions of food shortage and surplus. House Wren broods were manipulated to one of five treatments by adding or subtracting nestlings from the brood, and by the addition of a supplemental food source. Nestwatches were conducted on the experimental nests to determine adult feeding behavior and to determine the extent to which supplemental food was utilized.