

BRIEF COMMUNICATIONS

THERMAL IMAGING OF HOUSE SPARROW NESTLINGS: THE EFFECT OF BEGGING BEHAVIOR AND NESTLING RANK

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Abstract. We used infrared imaging to test whether the energetic cost of begging is observable in changes in body surface temperature (T_s) of young House Sparrow nestlings (*Passer domesticus*), and whether T_s is affected by nestling rank. Begging had a mixed effect on T_s , increasing it slightly at first, but decreasing it when hungry nestlings begged more vigorously. This mixed effect may result from heat production being quickly offset when begging posture and movement enhance heat loss through the skin, and suggests that the energetic cost of begging cannot be inferred from thermal imaging. The analysis of T_s in relation to nestling rank showed that although low-ranked nestlings maintained lower T_s than their larger siblings, their T_s was higher than expected for their body mass. This suggests that nestlings of a lower rank may gain heat from their larger, more developed nestmates.

Key words: nestling begging, infrared thermal imaging, body surface temperature, thermoregulation, *Passer domesticus*.