

**FECAL MASS OF NESTLING EASTERN BLUEBIRDS
(*SIALIA SIALIS*) DECREASES IN RESPONSE TO
INCREASING NEST BOX TEMPERATURE**

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Abstract: Fecal sacs were collected from nestling eastern bluebirds (*Sialia sialis*) reared in wooden nest boxes to evaluate nestling response to changes in nest box temperature. Samples were collected at approximately 8 a.m. and 3 p.m. during June and July 2009. Samples were weighed, dried at 121° C for 24 hours, and re-weighed after drying. Nest box temperatures were recorded at each sampling occasion using a hand-held infrared thermometer. Mean morning and afternoon nest box temperatures were significantly different; morning temperature mean was 24.3° C (range 16.38 - 28.7 ° C) and afternoon temperature mean was 33.8° C (range 27.12 - 38.77 ° C). Both wet and dry fecal mass decreased with increasing nest box temperature. For most of the fecal sacs collected in the afternoon, the difference between wet fecal mass and dry fecal mass was less for nest boxes having a 10° C or greater difference between morning and afternoon temperatures than for nest boxes with a less than 10° C difference.

**HOME RANGE SIZE AND HABITAT USE BY LONG-
TAILED MANAKINS (*CHIROXIPHIA LINEARIS*) IN CLOUD
FOREST ECOSYSTEMS OF
COSTA RICA**

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Abstract: Home range size and habitat use by many nearctic migrants and North American breeding birds have been well studied; however, far less is known about many neotropical resident birds. We examined home range size and habitat use by Long-tailed Manakins (*Chiroxiphia linearis*) in cloud forest ecosystems in Costa Rica. Home ranges were quantified using three different