The Condor 94:265–275

TEMPORAL VARIATION IN POINT COUNTS OF BIRDS IN A LOWLAND WET FOREST IN COSTA RICA[1]

JOHN G. BLAKE
Department of Biology, University of Missouri–St. Louis, 8001 Natural Bridge Road, St. Louis, MO 63121

Abstract. Hourly variation in bird activity can influence census results but has not been well studied in tropical habitats. I examined hourly variation in numbers of birds detected during 10 min point counts in a tropical wet forest site in Costa Rica. Counts started one-half hour before and continued for 4.5 hr after sunrise. Counts were conducted along three routes (20 points each on two routes; 11 points on one route) in primary forest during early (January), middle (March), and late (April) dry season of 1991, prior to the main breeding season (May–June) for most species. Total numbers of individuals and species detected per point declined significantly from early to late morning. Birds of forest understory declined markedly during the first hour; detections of canopy birds, by contrast, tended to increase from the first to second or third hour, before declining. Hourly variation was more pronounced, overall, later in the dry season. Individual species differed in patterns of detection during the morning. Results indicate that point counts in this forest should be restricted to the first three hours of the morning.

Key words: Abundance, census technique; hourly variation; point count; seasonal variation; tropical forest.