Public Abstract
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Life history strategies of many birds in the Neotropics remain poorly known. In particular, details on the seasonal movements of individuals and populations within the Neotropics remain largely unknown, including short-distance movements along elevational gradients, known as altitudinal or elevational migration. Here I provide the first community-level assessment of avian elevational migration in South America. I used point counts, mist netting, focal observations of a mid-elevation mixed species flock to document the phenology and elevational movements of birds along a 2.7 km elevational gradient in Manu National Park, southeastern Peru. Breeding for most species started with the onset of the rainy season in September and peaked in November, while molt peaked in February. The timing of elevational migration varied. Using multiple field methods and analyses, I classified 55 species as elevational migrants and 169 as residents. Insectivores were more likely to be resident, while other foraging guilds were more likely to be migratory. Migrants molted more quickly than residents. The most abundant species during the dry season in the mid-elevation mixed-species flock were elevational migrants, suggesting a possible relationship between elevational migration and mixed-species flocking. The percentage of elevational migrants along the entire elevational gradient was higher than at Central American sites of similar latitude in the northern hemisphere, affirming a north-south geographic pattern of an increasing percentage of elevational migrants in bird communities. My results fill in an information gap on bird migration in the South America and provide a method of quantifying distributions along environmental gradients that can be applied to other taxa and gradients. Effective conservation of Andean ecosystems should include protection of complete elevational gradients, particularly given the uncertainties associated with future climate change.