Habitat selection of endemic birds in temperate forests in a biodiversity "Hotspot"

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Aim of study: Our objective was to find habitat associations at a microhabitat level for two endemic birds in a Chilean temperate forest (biodiversity "hotspots"), in order to integrate biodiversity into forest planning. Area of study: Nahuelbuta Range, Chile. Material and methods: The two birds studied were Scelorchilus rubecula (Chucao Tapaculo) and Scytalopus magellanicus (Magellanic Tapaculo), both belonging to the Rhinocryptidae family. Presence or absence of the two species was sampled in 57 census spots. Habitat was categorized according to presence/absence results. We assessed the influence of abiotic variables (altitude, exposure, slope) and vegetation structure (percentage of understory cover, number of strata) using a statistical cluster analysis. Main results: The two bird species selected the habitat. Most frequent presence was detected at a range of 600-1100 masl, but Magellanic Tapaculo was associated to more protected sites in terms of vegetation structure (50-75% for understory cover and 2-3 strata). Slope was the most relevant abiotic variable in habitat selection due to its linkage to vegetation traits in this area. Research highlights: Our results can help managers to integrate biodiversity (endemic fauna species) into forest planning by preserving certain traits of the vegetation as part of a habitat (at a microhabitat level) selected by the fauna species. That planning should be implemented with both an adequate wood harvesting cuts system and specific silvicultural treatments.

Vegetation structure