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NOTAS DE CAMPO/FIELD NOTES

GRAY-BREASTED MOUNTAIN-TOUCAN *Andigena hypoglauca*, FIRST NEST RECORD

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Gray-breasted Mountain-Toucan *Andigena hypoglauca* is a charismatic species of the high, central-Andean forests of Colombia, Ecuador and Peru (Short & Kirwan, 2020). *Andigena hypoglauca* presents a fairly continuous distribution from the central cordillera in central Colombia, south along the eastern slope of southern Colombia and Ecuador to northern Peru, and after a substantial gap in the Huancabamba depression its distribution extends southeastwards to the Cordillera Vilcanota (Short & Kirwan, 2020). This species is listed as Near threatened globally (BirdLife International, 2022) and Vulnerable in Ecuador (Freile *et al*., 2019) because its population is suspected to be declining moderately rapidly owing to habitat loss (Birdlife International, 2022). In Ecuador it is rare to locally uncommon in canopy and borders of temperate forest on the east slope of the Andes, with some records on the western Andes in the provinces of Azuay and El Oro (Ridgely & Greenfield, 2001; eBird 2023). It occurs mostly at 2200–3300 m a.s.l., primarily replacing Black-billed Mountain-Toucan *A. nigrirostris* at higher elevations, but with some exceptional records at lower elevations (Ridgely & Greenfield, 2001).

Although *A. hypoglauca* is readily detected by its far-ranging calls, it is usually quiet and inconspicuous (Short & Kirwan, 2020), which may explain why its reproduction is so poorly known. Breeding activities are reported between December–February in Colombia, and between June–November in Ecuador and Peru, but no information exists on breeding behavior, nests or eggs (Short & Kirwan, 2020). Among the *Andigena* toucans, Plate-billed Mountain-Toucan *A. laminirostris* is the better-known species in regards to nesting and breeding (Beltrán, 1994), while Hooded Mountain-Toucan *A. cucullata* and Black-billed Mountain-Toucan *A. nigrirostris* remain poorly studied, with no detailed descriptions on nests, eggs or nestlings (Short & Kirwan, 2020).

On 7 February 2022, while walking the main trail around Laguna Llaviuco, 16 km west-northwest of Cuenca, Ecuador (-2.8417, -79.1435), C. A. Vogt observed an active pair in the canopy and sub-canopy of elfin cloud forest. It was soon evident that the pair was nesting when an adult was observed peering into the nest cavity (Fig. 1A) and then entered it briefly showing its protruding tail (Fig. 1B). The toucan remained hidden in the nest for about 1 min and then flew out suddenly. During this brief observation, the other individual of the pair remained relatively quiet *c*. 20 m distant, higher in the canopy. The nest tree was not identified, but it was decaying judging by the proliferation of bracket fungi along the trunk. The tree was located *c*. 15 m north of the trail on a slope of 20–25 ° at 3170 m a.s.l., on the east-north-east side of Laguna Llaviuco. The nest cavity was situated approximately 12 m above ground on the south side of the tree. We estimated the diameter of the nest cavity using the bill depth of the individual perched with its head protruding from the nest hole. A mean bill length of 93 mm (see Haffer, 1974) was used to calculate a bill depth of 32 mm. Using this as a yardstick yielded a vertical diameter of the nest cavity of *c*. 14 mm.

On 13 February 2022, X. Bravo and P. A. Molina visited the same nest and observed an individual entering the nest cavity. This individual remained inside the cavity for 15 min on one occasion and 18 min on another occasion (Molina, 2022). On 5 March 2022, XB and PAM observed two individuals entering the nest with fruit

of *Hedyosmum* sp. (Chloranthaceae) (Fig. 1C) and *Persea caerulea* (Lauraceae) (Fig. 1D). The photos show two individuals with different bill dimensions indicative of male and female, suggesting biparental nestling care (Fig. 1E, 1F). On 23 March, part of the trunk containing the nest was found on the ground.

The fact that this nesting record occurred in February, contrary to previous breeding records in June-November for Ecuador (Short & Kirwan, 2020), may reflect that the species breed during the rainy season in the western Andean slope, which occurs between October and April around Cuenca (Jørgensen & León-Yánez, 1999), while on the eastern slope in Ecuador, where most of the *A. hypoglauca* population is found, the rainy season is April-July (Armijos *et al*., 2013). In Huánuco, eastern Peru, where the rainy season is October-March, a fledgling was recorded in November (Fjeldså & Krabbe, 1990), and males in breeding condition were recorded in January-February in the central Andes of Colombia, in Puracé Natural Park (Hilty & Brown, 1986) where the rainy season is November-May.

The Llaviuco valley in Cajas National Park protects a significant amount of upper montane evergreen forest dominated by *Weinmannia fagaroides* (Cunoniaceae) and *Ocotea heterochroma* (Lauraceae) trees (Municipio de Cuenca, 2007) and has a good number of recent records of *A. hypoglauca* (eBird, 2023). The species appears to be a year-round resident, with records for all months except April, June and December (eBird, 2023). The adjacent Mazán valley has eBird records for all months except May and September. It remains to be determined if *A. hypoglauca* wanders extensively as its congener *A. laminirostris* (Short & Kirwan, 2020). Further research on this species' distribution and life history, particularly reproduction, is needed.

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Figure 1: Gray-breasted Mountain-Toucan *Andigena hypoglauca* nest, February 2022, Llaviuco, Cajas National Park. (A) Adult peering into tree cavity (Charles A. Vogt); (B) adult entering the nest with tail protruding (Charles A. Vogt); (C) Adult with *Hedyosmum* sp. fruit on its bill (Xavier Bravo); (D) Adult with *Persea caerulea* fruit on its bill (Xavier Bravo); (E) and (F) Adults in the nest with different bill dimensions (Xavier Bravo).