

## NOTA/NOTE

First records of Koepcke's Screech-Owl *Megascops koepckeae* (Aves: Strigidae) in EcuadorLeonardo Ordóñez-Delgado<sup>1,2\*</sup>, Juan Freile<sup>3</sup>

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Primeros registros del Autillo de Koepcke *Megascops koepckeae* (Aves: Strigidae) en Ecuador

## Resumen

El recientemente descrito Autillo de Koepcke *Megascops koepckeae* se había registrado, hasta hace poco, únicamente en el norte y centro de los Andes de Perú. Presentamos los primeros registros de *M. koepckeae* en Ecuador, provenientes de la ciudad de Loja. Estos registros amplían su área de distribución conocida en al menos 90 km al norte del registro más septentrional de Perú, y proporcionan nuevos elementos sobre la elección de hábitat de la especie y su distribución espacial en relación con el Autillo Peruano *M. roboratus*.

**Palabras clave:** Andes, Autillo de Koepcke, distribución, Loja, registros, Strigidae.

## Abstract

The recently described Koepcke's Screech-Owl *Megascops koepckeae* was only known, until recently, from the northern and central Andes of Peru. We present the first records of *M. koepckeae* in Ecuador, from the city of Loja. Our records extend its known range by at least 90 km northwards from the northernmost record in Peru, and provide new insights into the species' habitat selection and spatial distribution in relation to the Peruvian Screech-Owl *M. roboratus*.

**Keywords:** Andes, distribution record, Koepcke's Screech-Owl, Loja, Strigidae

Koepcke's Screech-Owl *Megascops koepckeae* is an uncommon, mid-sized owl (König *et al.*, 2010), initially described as a subspecies of Tropical Screech-Owl *M. choliba* (Hekstra, 1982). To date, it is considered endemic to Peru, distributed on the western Andean slopes and in some intermontane Andean valleys between 6°–14° latitude, mostly above 2200 m (Schulenberg *et al.*, 2010; Fjeldså *et al.*, 2012), with a few extralimital records from the Pacific lowlands down to 200 m (Ugarte-Lewis, 2013). It occupies montane forests, *Polylepis* woodland, *Eucalyptus* spp. woodlots, and dry intermontane valleys dominated by scrubby patches of *Eriotheca vargasii*, *Ficus cuatrecasiana*, and *Schinus molle* (Holt *et al.*, 2018a). Information on its natural history is very scarce (König *et al.*, 2010). In this paper, we present the first records of *M. koepckeae* in Ecuador (Freile & Restall, 2018) and briefly discuss its geographic and spatial distribution (Fig. 1).

## FIELD OBSERVATIONS

On 8 February 2018, P. Székely audio-recorded an unknown screech-owl in a small woodlot of *Eucalyptus globulus* near the campus of Universidad Técnica Particular de Loja (UTPL) (-3.985666, -79.200005; 2092 m a.s.l.), using an Olympus LS-11 Linear PCM Recorder and a RODE NTG2 condenser shotgun microphone. His audio-recordings were later identified as *M. koepckeae* by Juan Freile (hereafter JF), and were uploaded to Xeno-Canto (XC415274, XC415275; Székely, 2018).



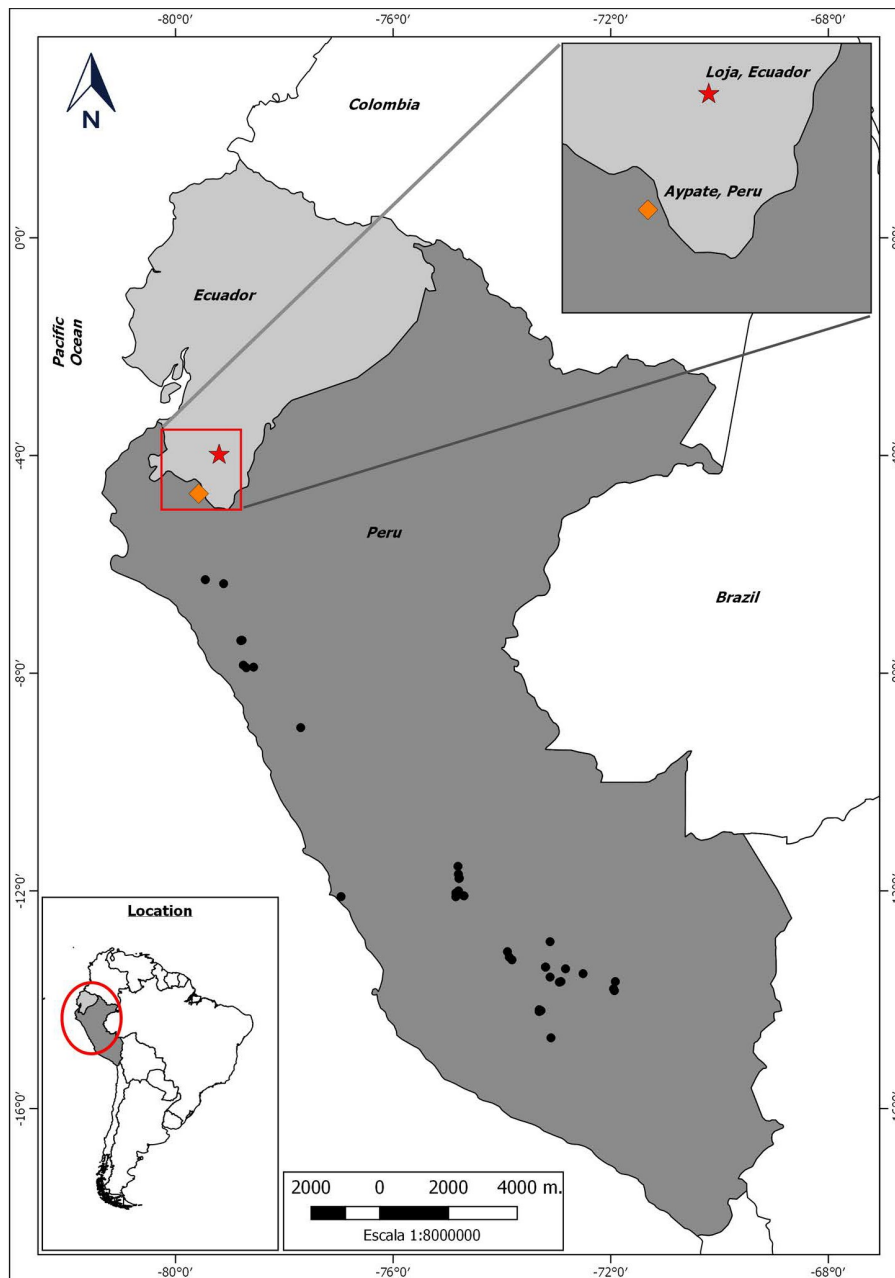


Figure 1: Distribution of Koepcke's Screech-Owl *Megascops koepckee*. Black circles: localities with documented records in Xeno-Canto ([www.xeno-canto.org](http://www.xeno-canto.org)), GBIF ([www.gbif.org](http://www.gbif.org)) and Fjeldså *et al.* (2012); Orange diamond: Aypate, Ayabaca province, Peru (Saldaña *et al.*, 2016); Red star: first record in Ecuador.

On 02 May 2018, Leonardo Ordóñez-Delgado (hereafter, LOD) and JF used sample XC67492 (Lane, 2004) to search for the screech-owls recorded by P. Székely. Playback trials lasted *c.* 10 min, in four spots throughout UTPL campus, including the same woodlot where first found in February 2018. Two individuals of *M. koepckee* were heard and seen at the UTPL campus (-3.987000, -79.199615), *c.* 200 m south of the site were originally found, confirming that a resident pair lives in the area. This locality corresponds to a small woodlot of *Eucalyptus globulus*, *Tecoma stans*, *Cupressus* sp., *Nerium oleander*, *Inga* sp., *Hibiscus rosa-sinensis* and other tree and shrub species. After 10 min of playback, a single individual responded loudly and aggressively (XC417124; Ordóñez-Delgado, 2018), approaching the sound source and perching on a nearly bare *Eucalyptus* branch, *c.* 4 m from the ground and 5 m from the observers. It remained perched and vocalizing for at least 15 min. A second individual, presumably a female, since *Megascops* species tend to move in pairs (Marshal *et al.*, 1991, Krabbe, 2018), vocalized from *c.* 10 m away, but remained out of sight. Audio-recordings of this pair were deposited at Xeno-Canto (XC413423, XC413424, XC413425; Ordóñez-Delgado, 2018).

On 18 May 2018, M. Castel used sample XC4113424 (Ordóñez-Delgado, 2018) to search for *M. koepckeae* in El Madrigal Reserve (-4.040830, -79.175940; 2285 m a.s.l.), 6.5 linear km SSE of the UTPL campus. El Madrigal harbors a 306-ha remnant of native bushland and montane forest dominated by *Alnus acuminata*, *Oreocallis grandiflora*, *Clusia alata*, *Roupala loxensis*, *Oreopanax rosei*, *Cedrela montana*, and *Schefflera acuminata*, amongst other plant species. One individual was located after a single playback trial; it swiftly approached the observers and remained around, restlessly switching perches and constantly vocalizing, for c. 15 min (Fig. 2).



Figure 2: Koepcke's Screech-Owl *Megascops koepckeae* in El Madrigal Reserve, southeast Loja, Ecuador (Veronica Nelson).

On 13 June 2018, R. Cisneros mist-netted one individual while monitoring bats in Quebrada Minas, east of Loja city (-4.003996, -79.187551, 2108 m a.s.l.), a site also dominated by *Eucalyptus* trees. A photograph of this individual was deposited at the audiovisual archive of Museo de Vertebrados UTPL (M-UTPL).

A few additional photographic records, first assigned to Peruvian Screech-Owl *M. roboratus*, were obtained between 2014–2017 at the UTPL campus and surroundings. One nestling was found next to a *Phoenix canariensis* palm, raised in captivity and released by LOD between February and October 2014. Another individual was photographed and released in December 2015, after crashing against a house window. Photos of these individuals are archived at M-UTPL.

## IDENTIFICATION

Species identification was based on vocalizations (Fjeldså *et al.*, 2012; Holt *et al.*, 2018a). Vocalizations audio-recorded lasted 2–2.6 s, with 8–10 s pauses, and were repeated for c. 10 min. Each bout was composed of 9–16 ascending notes, with emphasis on the two next-to-last notes, and a longer last note. After playback, the species uttered a different song, with higher-frequency initial notes followed by 5–6 double notes (XC417124; Ordóñez-Delgado, 2018).

Visual identification, using morphology and plumage, is difficult in the genus *Megascops* (Fjeldsá *et al.*, 2012; Camacho-Varela, 2014; Krabbe, 2018), more so in closely related species (Camacho-Varela, 2014). Differences in size and plumage can be subtle, even across *Megascops* species in different clades, such as *M. koepckeae* and *M. roboratus* (Dantas *et al.*, 2015). These species are very similar in plumage, but *M. koepckeae* is larger (24 vs. 19–22 cm; Holt *et al.*, 2018b), lacks a white nuchal collar, and has its ventral herringbone pattern more pronounced, contrasting against a paler buffy-white background (Schulenberg *et al.*, 2010, Holt *et al.*, 2018a; Fig. 2). *Megascops roboratus* has been recorded in the Vilcabamba valley, 25 km south of Loja (-3.251833, -79.230, 1516 m a.s.l.; Garrigues, 2007), making it interesting to understand the spatial distribution and ecological segregation of these two species in the Loja valley.

## DISCUSSION

As reported for Peru, we initially found *M. koepckeae* in *Eucalyptus*-dominated woodland with an open understory and low tree density, within the altitudinal range known for the species (Holt *et al.*, 2018a). Our second locality, however, was a humid montane forest dominated by alder *Alnus acuminata* and other Andean trees. Habitat selection and other aspects of the species' natural history will be published elsewhere. Our records in Ecuador extend the known distribution of *M. koepckeae* to the north, 90 km from the northernmost record in Peru (Complejo Arqueológico Aypate, Ayabaca province; -4.699674, -79.573050; 2691 m a.s.l.; Saldaña *et al.*, 2016). It is noteworthy that this species has remained undetected in an urban area and its immediate surroundings. A dearth of nocturnal ornithological work might be the simplest explanation, but we cannot rule out a potential spread from its regular range in Peru, considering that the species seemingly occupies a broad range of habitats, including being fairly tolerant of anthropogenic habitats. Furthermore, it seems likely that the species might occur in other localities in the area between Aypate and Loja. Additional searches may reveal that the species is more widespread and common in the southern Andes of Ecuador, at least within the Loja Province.

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