

Documenting the rare rufous morph of the Tropical Screech-Owl, *Megascops choliba* (Aves: Strigidae) in the southern Sub-Andean and Bolivian Chaco

Registro del raro morfo rojizo del sumurucucu *Megascops choliba* (Aves: Strigidae) en el sur del subandino y chaco boliviano

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The Tropical Screech-Owl (*Megascops choliba*) is one of the most widely distributed owls in South America, principally in lowlands and subtropical Andean slopes from Venezuela to center Argentina (Fjeldså & Krabbe 1990, del Hoyo *et al.* 1999). Similar to other owls within the *Megascops* genus, this species is characterized by its small to medium size, with a wingspan that can reach up to 50 cm and a weight of up to 120 g (Enríquez *et al.* 2017).

The species is highly variable in plumage patterns with eleven subspecies recorded, four in northern South America (*crucigerus*, *duidae*, *luctisomus*, *margaritae*) (del Hoyo *et al.* 1999, Restall *et al.* 2007), three in center South America (*alticolus*, *roboratus*, *koepckeii*) (Fjeldså & Krabbe 1990), and four in southern South America (*aliluco*, *choliba*, *suturutus*, *wetmorei*), with the last three ones occurring in Bolivia (Hennessey *et al.* 2003, Méndez 2015). The plumage is highly variable throughout its distribution (Herzog *et al.* 2016), recognizing five nominal morphs: gray, dark, brown, cinnamon and rufous (Rodríguez-Mata *et al.* 2006). This owl is distinguished from other small Andean owls by a combination of short ear-tufts, white spots on scapulars, pale gray to brownish (but never rufous) facial discs distinctly outlined in black (except in very rufous birds), and yellow eyes (not shiny). Eyebrows, throat, and incomplete nuchal collar are whitish. The general coloration is gray or slightly fulvous, intricately mottled, spotted and streaked with black. Wings and tail dusky brown banded with cinnamon-buff. Underparts white to ochraceous with black “herringbone” marks. Juveniles with down-feather plumage are cinnamon-buff densely mottled with thin dusky bars, and with a pale “mask” edged black (Fjeldså & Krabbe 1990, Schulenberg *et al.* 2010).

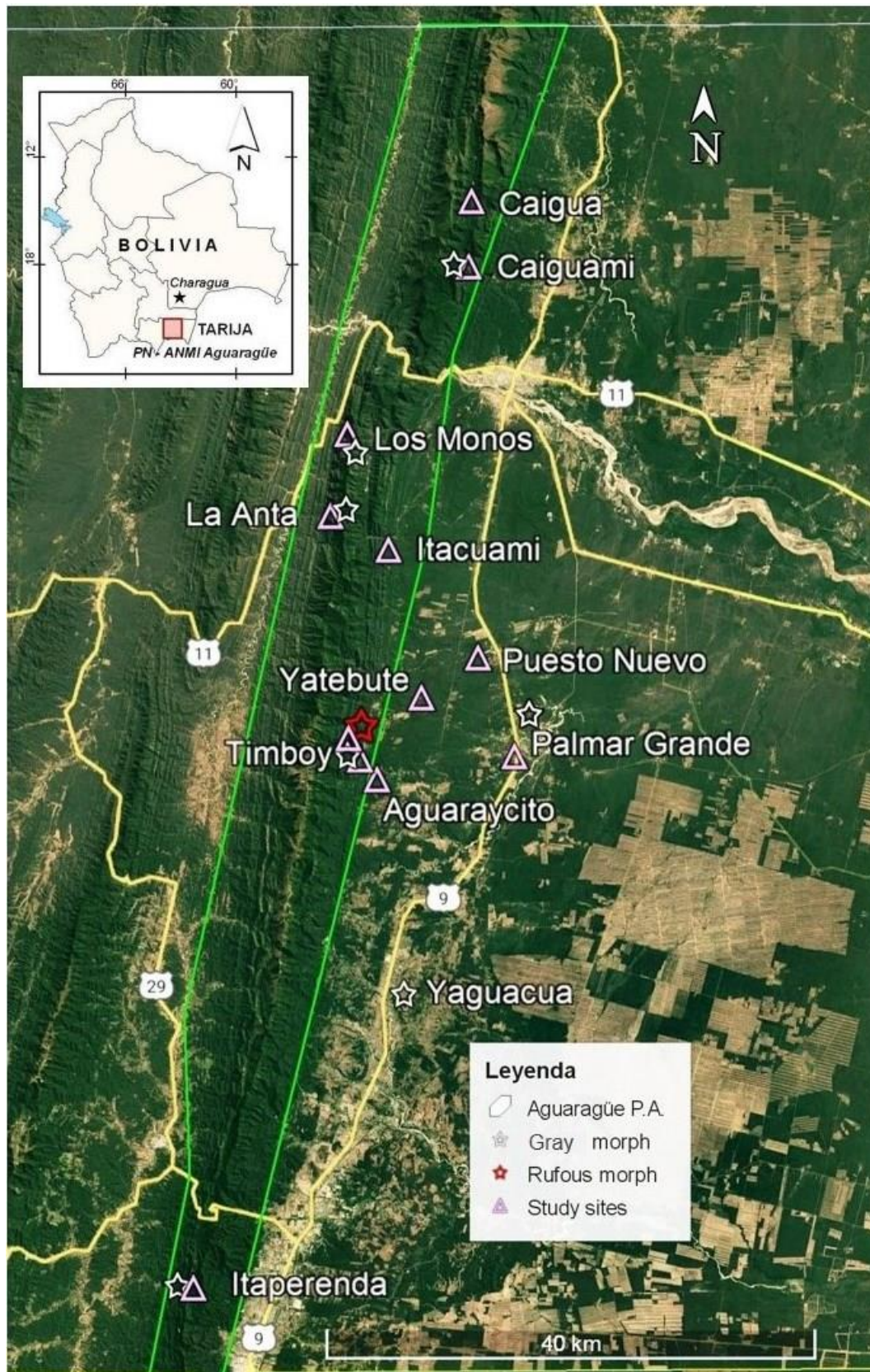


Figure 1. Records of Tropical Screech-Owl (*Megascops choliba*) in PN-ANMI Serranía del Aguaragüe, included one record (inset map) in Charagua, southern Bolivia.

In Bolivia, *Megascops choliba* occurs in almost all departments except Oruro and Potosí, inhabiting a variety of forested habitats, even urban parks, along the lowlands and the Eastern Andean slopes (Herzog *et al.* 2016). Its distribution covers more than 40% of the country's territory, occupying seven ecoregions (Southwest of the Amazon, Cerrado, Beni and Pantanal savannas, Chiquitania, Yungas, Boliviano-tucumano and Chaco) and vegetation types such as tropical lowland evergreen forest, flooded tropical evergreen forest, river-edge forest, tropical deciduous forest, gallery forest and secondary forest (Méndez 2015). Given the variety of habitats used and plumage morphs exhibited by *Megascops choliba*, the objective of this work is to document the presence of gray and rufous color morphs in the southern Sub-Andean and Bolivian Chaco.

In southern Bolivia, the avifauna of the Serranía del Aguaragüe National Park and Natural Area of Integrated Management (hereafter PN-ANMI Aguaragüe) was studied between 2001-2006 and *Megascops choliba* was recorded in six localities (Timboy, Itaperenda, Caiguami, Itacuami, Quebrada La Anta and Los Monos) and surroundings areas (Yaguacua, Palmar Grande) where it was considered common (see coordinates in Martínez *et al.* 2011) (Figure 1). On several occasions, it was observed on the edges of the Chaco-Serrano (or dry montane) forest between 850-1,600 m and its vocalizations were detected immediately after sunset or before dawn. Its call is a short whistling trill followed by 2-3 sharp notes accentuated at the end: "ou-ou-ou-ou-ou-ou-OUC-OUC", similar to that described in Hilty & Brown (2001) and Schulenberg *et al.* (2010). At the foot of the montane forest and pedemontano forest (450-850 m), the Chaco forests of alluvial plains continue between 400-450 m to the eastern limit of the park. In this habitat, *M. choliba* was also detected through songs and observed directly. All visual records of the species in PN-ANMI Aguaragüe (Martínez *et al.* 2011) and surroundings areas, showed individuals with plumage of the gray nominal morph in relation to Rodríguez-Mata *et al.* (2006) and Herzog *et al.* (2016).

On 15 February 2015, a gray morph of *Megascops choliba* (Figure 1) was observed and photographed in Charagua (19°47'31"S, 63°12'02"W, 735 m), Santa Cruz Department, in a Chaco forest of alluvial plains. This dry forest with tree species such as *Aspidosperma quebracho-blanco*, *Browningia caineana* and *Schinopsis cornuta* is similar to the forest in PN-ANMI Aguaragüe, and extends into Kaa-Iya del Gran Chaco National Park and Natural Area of Integrated Management (hereafter PN-ANMI Kaa-Iya) where this owl has also been recorded (Guerrero & Arambiza 2001). Our record of Charagua is similar to observations (including photographs) in Tierras Nuevas and five other localities in the western part of PN-ANMI Kaa-Iya; where it was considered common (Miserendino 1998 a, b). The gray morph is also found in the *Megascops choliba* records (including photographs) in the Chiquitano forest and the Bolivian Pantanal (Reichle *et al.* 2003).

On 27 August 2019, during research for the PN-AMI Aguaragüe Management Plan, we registered *Megascops choliba* in the eastern extreme of the protected area, Timboy locality (21°32'S, 63°35'W, 770 m), Villa Montes Municipality, Tarija Department. This individual had the plumage of the reddish or rufous morph (Figure 2), consistent with that described in the literature (de la Peña & Rumboll 1998, Ridgely & Greenfield 2001,

Rodríguez-Mata *et al.* 2006, Restall *et al.* 2007, Schulenberg *et al.* 2010, Camacho-Varela 2014, de la Peña 2015, Herzog *et al.* 2016): Crown streaked black on pale form, upperparts irregularly streaked and barred blackish, spotted white, white spots down scapulars and patch on coverts, face framed with black, underparts streaked and iris yellow. In northern South America, *M.c. crucigerus* has considerable variation within reddish or rufous morphs (light brown, rufous and deep rufous) (Restall *et al.* 2007). The rufous morph of *Megascops choliba* can be confused with the Rufescent Screech-Owl (*Megascops ingens*), but the latter usually does not have black lateral edges on the facial disc. However, in the case of the rufous morph of *Megascops ingens*, which has a black lateral edge on the facial disc, the ocular iris will be brown but never yellow as in *Megascops choliba* (Rodríguez-Mata *et al.* 2006). These data confirm that at least two morphs of plumage (gray and rufous) exist in the PN-ANMI Aguaragüe and Bolivian Chaco. Camacho-Varela (2014) indicates that the rufous morph in *Megascops choliba* is very rare in Costa Rica, as it was also found in Ecuador (Ridgely & Greenfield 2001) and Paraguay (Smith 2021). We reviewed the photographic database of wikiaves: <https://www.wikiaves.com.br/midias.php?t=s&s=10513> and of the Lab of Ornithology: <http://www.ebird.org> (eBird 2025) and we concluded that gray individuals are the most common, followed by brown ones, while the rufous individuals are the rarest, as stated by Smith (2021). This is supported by the single rufous individual we recorded among many gray ones in PN-ANMI Aguaragüe, which makes this area even more valuable for the study of the species' natural history and conservation in southern Bolivia.



Figure 2. The typical gray morph Tropical Screech-Owl (*Megascops choliba*), recorded in Charagua, Santa Cruz Department, Bolivia (Photo: Omar Martínez).



Figure 3. A rufous morph Tropical Screech-Owl (*Megascops choliba*) recorded in the Timboy locality, PN-ANMI Serranía del Aguaragüe, Department of Tarija, Bolivia. (Photo: Luis Acosta).

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