

Noteworthy bird records from the Tamá massif and adjacent areas, Norte de Santander, Colombia

Registros notables de aves del macizo Tamá y alrededores, Norte de Santander, Colombia

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Abstract

The Tamá massif straddles the Colombia-Venezuela border on the east slope of the East Andes. Rugged topography and recent political unrest have limited ornithological work in the area, particularly at lower elevations. We made multiple excursions to Tamá in 2017–2020, visiting elevations of 900–3400 m. We recorded several species that are unknown or poorly known on the east slope of the northeastern Andes in Colombia, including *Heliangelus mavors*, *Coeligena bonapartei*, *Sternoclyta cyanopectus*, *Aulacorhynchus sulcatus*, *Thamnophilus unicolor*, *Formicarius rufipectus*, *Grallaricula ferrugineipectus*, and *Thripadectes virgaticeps*. Additional noteworthy observations included records of *Pauxi pauxi* and *Tephrophilus wetmorei*.

Key words: Andes, biogeography, cloud forest, paramo

Resumen

El macizo de Tamá se extiende a ambos lados de la frontera entre Colombia y Venezuela, en la vertiente oriental de los Andes orientales. La topografía escabrosa y la inestabilidad política han limitado trabajos de campo en la zona, especialmente en elevaciones bajas. Hicimos múltiples excursiones a Tamá entre 2017–2020, visitando elevaciones de 900–3400 m. Registramos varias especies que se conocen muy poco en la vertiente oriental de los Andes nororientales en Colombia, como *Heliangelus mavors*, *Coeligena bonapartei*, *Sternoclyta cyanopectus*, *Aulacorhynchus sulcatus*, *Thamnophilus unicolor*, *Formicarius rufipectus*, *Grallaricula ferrugineipectus*, y *Thripadectes virgaticeps*. Otras observaciones notables incluyeron registros de *Pauxi pauxi* y *Tephrophilus wetmorei*.

Palabras clave: Andes, biogeografía, bosque nublado, páramo

Introduction

The Tamá massif (hereafter Tamá) is a large mountain on the Colombia-Venezuela border in the states of Norte de Santander, Colombia and Apure and Táchira, Venezuela. National parks in both countries harbor forest and paramo habitats spanning the full elevational gradient from roughly 300–3600 m. To the northeast, the low-lying Táchira depression isolates Tamá from Venezuela's Sierra Nevada de Mérida. To the west, high ridges above 2600 m connect Tamá to Colombia's northeastern Andes. To the south, the

low-elevation forests of Tamá are contiguous with those of Colombia's northeastern Andes on the Cocuy massif. Thus, Tamá is biogeographically a part of the east slope of Colombia's East Andes (Cuervo 2013).

Nevertheless, Tamá harbors populations of multiple bird species that are undetected on adjacent portions of the East Andes, including apparently isolated populations of *Grallaria chthonia*, *Grallaricula cucullata*, *Thripadectes virgaticeps*, *Tephrophilus wetmorei*, and possibly *Odontophorus columbianus* (Leal *et al.* 2011,

Greeney 2018, Carroll *et al.* 2020, Remsen Jr. & de Juana 2020). A few additional species such as *Aulacorhynchus sulcatus* and *Orochelidon flavipes* reach Tamá from the Venezuelan side but remain unknown from adjacent Colombia.

Ornithological fieldwork on Tamá began at least as early as 1911 with the collections of Wilfred Osgood and Stanley Jewett (Cory 1913, 1916) and continued in the 1940s and 1950s with the collecting expeditions of Enrique Riera, Ramón Urbano, and Ventura Barnés (Phelps & Gilliard 1941, Phelps & Phelps, Jr. 1954, 1956a, 1956b, 1957, 1958, 1960, Wetmore & Phelps 1956, Zimmer & Phelps 1944). In 1959, Kjell von Sneidern collected in lowlands and foothills immediately adjacent to Tamá (Blake 1961). More recent fieldwork included expeditions by Mauricio Álvarez-Rebolledo in 1999 and by Andrés M. Cuervo in 2008 and 2009 (Cuervo 2013), observations by Tamá National Park staff (Leal *et al.* 2011), and multiple recent visits by Jhonathan Miranda to the Venezuelan side (Miranda & Kvarnäck 2017, Miranda *et al.* 2019). Nearby, Setina *et al.* (2012) studied *Pauxi pauxi* at 800-1200 m at a site south of the Margua river and therefore just off of the main Tamá massif.

We visited multiple locations on and near the Tamá massif between 2017 and 2020 (Fig. 1). In April 2019, one of us (JBS) surveyed birds on Tamá at elevations ranging from 900-3300 m as part of a collaboration between the Humboldt Institute, the Norwegian University of Life Sciences, and Tamá National Park. We conducted point counts and opportunistic observations for ten days at San Alberto (900-2100 m; 7.22°N, 72.32°W), four days at Asiria-Belén (2650-3200 m; 7.30°N, 72.37°W), and four days at Orocué (2400-3400 m; 7.40°N, 72.45°W). At San Alberto, we visited four habitats: tall primary forest in the extremely steep ravine of the Talco river at 900-1000 m, with shorter, epiphyte-laden forest and

forest edge at 1350-1400 m, tall primary and mature secondary forest on mountain ridges and steep slopes at 1650-2100 m, and cattle pastures interspersed with forest fragments and coffee and banana cultivations at 1100-1800 m. At Asiria-Belén, we visited primary forest with extensive *Chusquea* bamboo at 2850-2950 m, sub-paramo at 3000-3200 m, and cattle pastures at 2700-2900 m. At Orocué we visited primary forest at 2500-2650 m, cattle pastures at 2450-2550 m, and high-elevation forest and paramo in a brief excursion up to 3300 m.

From 2017 to 2020, AP made four visits to Tamá and nearby portions of the Colombian Andes to observe, photograph, and record birds. In May 2017, we spent four days at Cubugón (7.05°N, 72.18°W) at elevations of 400-900 m on the flank of the East Andes just south of Tamá. This locality corresponds to the "Río Cobugón" collecting localities of Kjell von Sneidern as described by Blake (1961). This site was dominated by pastures and cultivations (banana and cacao) with some remnant native forest. In May 2019, we spent two days at Orocué (see above). In October 2019 and January 2020, we visited elevations of 2600-3300 m at Páramo de Tierra Negra, located adjacent to Tamá near the town of Pamplona (7.35°N, 72.62°W). This is the site of the bifurcation between the high spine of the East Andes and the highest ridge that branches towards Tamá. We visited secondary forest, elfin forest, and sub-paramo that supports a "frailejón" of the genus *Libanothamnus* (Sánchez Montaña & Gelviz Gelvez 2004).

Noteworthy species.- We provide accounts for 12 species that are noteworthy for the paucity of additional records in adjacent Colombia. All documentation is archived in Xeno Canto ("XC" followed by a catalog number) or the Macaulay Library ("ML" followed by a catalog number), and some of this documentation is reproduced here

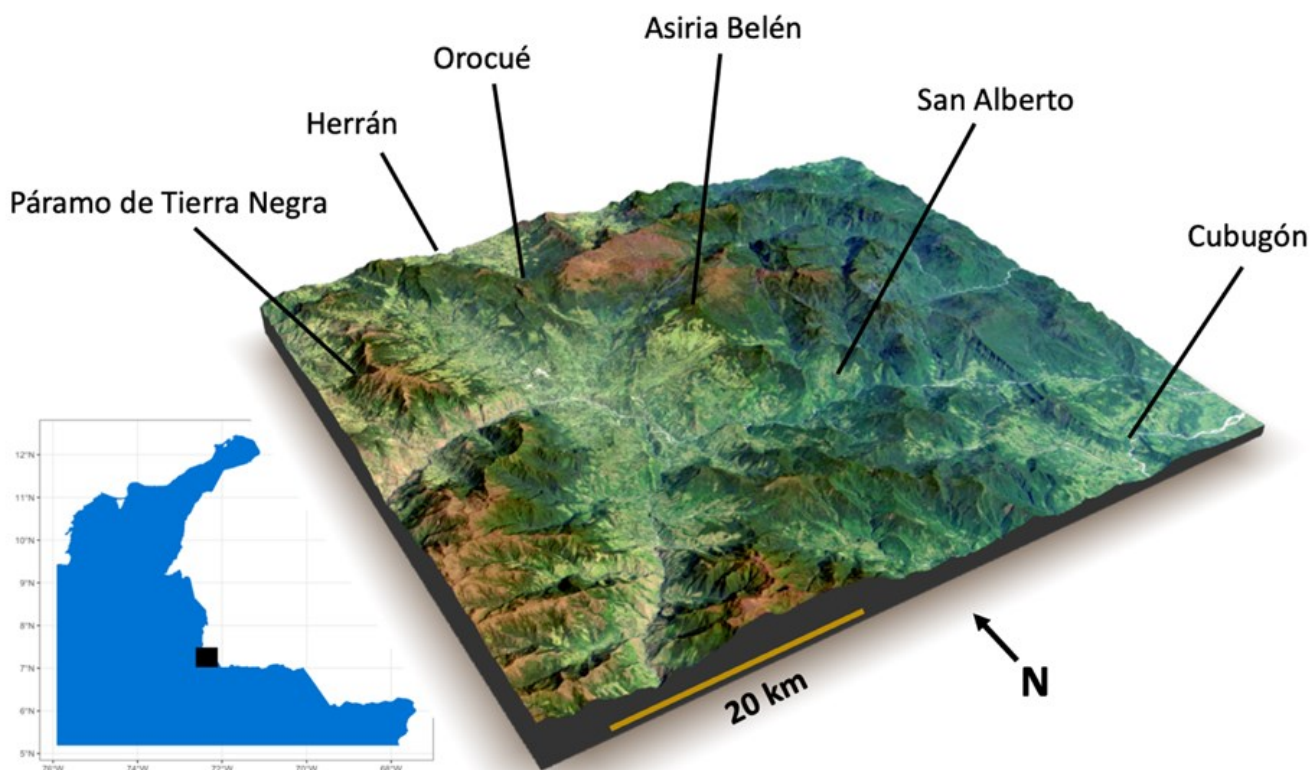


Figure 1. Map of study region with localities of noteworthy records. The map is oriented to view the Tamá massif from the southwestern (Colombian) side, looking towards the northeast and into Venezuela.

(Fig. 2). In discussing related records, we sometimes mention eBird submissions ("S" followed by a catalog number; eBird 2021) or additional material from the Macaulay Library, for which we provide the last name of the observer followed by the catalog number.

***Pauxi pauxi* (Helmeted Curassow).**— JBS recorded the booming song of this species on 12 April 2019 (XC482373) and heard additional individuals on 10 and 14 April 2019 in the ravine forest at 900–1000 m at San Alberto. The audio recordings are entirely consistent with this species, which is the only booming curassow that occurs in the vicinity of Tamá. This population is well known and occasionally hunted by the residents of San Alberto. Although we visited this area during the pre-dawn, we detected booming only from mid-morning through mid-afternoon, generally shortly before or after rain showers. Residents of

San Alberto indicated that this curassow is more vocal in December. The noisy rapids of the Talco river made it difficult to detect and count distant birds, but we unambiguously heard at least two individuals (possibly as many as four). In the same vicinity, we found a pile of feathers from a dead individual. The resident of the house nearest the ravine expressed confidence that nobody had recently hunted this species, and the cause of death could not be determined. To our knowledge recent Colombian records for this species exist only from Tamá, the buffer zone of Tamá National Park at 800–1200 m (Setina *et al.* 2012), foothills of Catatumbo Barí National Park (Avenidaño 2012), and the eastern flank of the Cocuy massif at 960 m (Acevedo-Charry 2017). At San Alberto, only a narrow tongue of primary forest remains on the steep slopes above the Talco river, protected by the extreme topography, but connected to more extensive

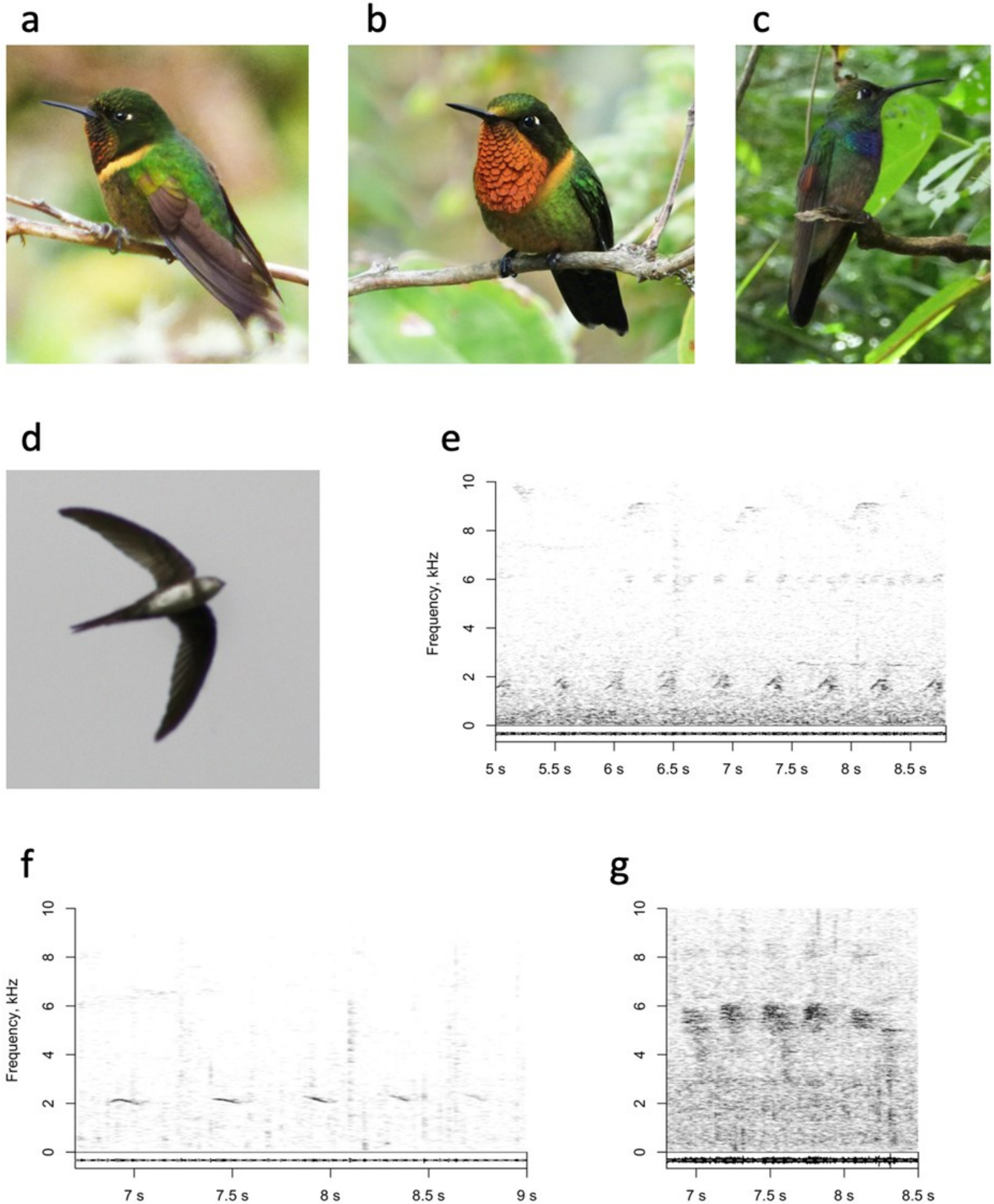


Figure 2. Documentation for selected records **a.** *Heliangelus mavors* at Orocué **b.** *Heliangelus mavors* at Páramo de Tierra Negra **c.** *Sternoclyta cyanopectus* at Cubugón **d.** *Tachornis* sp. at Herrán **e.** *Aulacorhynchus sulcatus* (continuous series near 2 kilohertz; part of a much longer series) at San Alberto **f.** *Thamnophilus unicolor* at San Alberto **g.** *Thripadectes virgaticeps* at San Alberto. All photographs taken by AP, all audio by JBS. Spectrograms were prepared using the Soundgen package in R (Anikin 2019). The x-axes of the spectrograms give the timings relative to the associated full recordings archived at Xeno Canto (see main text).

forest downstream along the Margua river. The topography affords these birds some protection not only from deforestation, but also from ongoing hunting pressure (Lizcano & Setina 2007).

***Dromococcyx pavoninus* (Pavonine Cuckoo).**- JBS voice-recorded this species on 10 April 2019 at San Alberto (XC512610) and heard additional individuals on 11 and 13 April 2019. The voice-recording was obtained in primary ravine forest with old landslides at 1100 m. The other records were of distant birds heard downslope from the rim of the ravine, and the extreme topography precludes ascribing accurate elevations to these additional records. This species is an expected component of the avifauna at Tamá, but there are few records from this region of Colombia, and it was unrecorded during recent fieldwork at appropriate elevations on the adjacent Cocuy massif (Acevedo-Charry 2017).

***Heliangelus mavors* (Orange-throated Sunangel).**- AP photographed this species on 04 May 2019 at Orocué (Fig. 2a, ML197151141) and on 02 January 2020 at Páramo de Tierra Negra (Fig. 2b, ML363553421), and additionally observed the species at Páramo de Tierra Negra on 19 October 2019. Although Hilty & Brown (1986) state that this species is present in Colombia, only three locations are given, two of which appear to actually be located in Venezuela. The third involves a 1977 sight record at Lago de Tota which we view as unconfirmed. We are unaware of additional recent records in Colombia. The Natural History Museum in London holds several old specimens of *H. mavors* with imprecise or unknown collecting dates and localities given as "Colombia" or in one case "North Colombia."

***Sternoclyta cyanopectus* (Violet-chested Hummingbird).**- AP photographed this species on 23 May 2017 at Cubugon near a small forest

strip among banana cultivations (Fig. 2c, ML198032811). The only previous Colombian records of this Venezuelan near-endemic are specimens collected in 1999 at 1100 m, near the southern part of Tamá National Park at Vereda El Diamante (Córdoba-Córdoba & Echeverry-Galvis 2006). JBS fleetingly observed a hummingbird that was possibly this species in similar habitat at San Alberto.

***Tachornis* sp.**- AP photographed a swift with a long, forked tail and a clear breastband at Herrán (1950 m), adjacent to the Orocué sector of Tamá National Park, on 05 May 2019 (Fig. 2d, ML275148921). The bird was observed in flight near the edge of downtown Herrán over cultivated areas. Some references (*e.g.*, Hilty & Brown 1986) suggest that the clear breast-band is consistent with *T. furcata* (Pygmy Swift). However, consultation with experts yielded contrasting opinions about the bird's identity. Experts in reviewing photos of flying birds agree that the dark breast-band is not a photographic artifact and is best explained by a bird that genuinely showed a clear and contrasting dark breast band (*pers. comm.* M. Iloff). Observers familiar primarily with *T. squamata* (Fork-tailed Palm-Swift), including JBS, felt that this bird is obviously atypical for that species (*pers. comm.* FG Stiles, O Acevedo-Charry). However, observers familiar with *T. furcata* in life reported that contrary to many field guides, *T. furcata* does not show a clear contrasting breast band, and that this image is therefore atypical for that species as well, and perhaps unidentifiable (*pers. comm.* T. Ryan, D. Ascanio, J. Avendaño). The very limited specimen material available for *T. furcata* appears to bear out this position (Fig. 3). Of particular interest is the fact that a similar breast-banded appearance was apparently a feature noted in support of the identification of two 2011 sight records ascribed to *T. furcata* from the Araucan foothills of Colombia (Acevedo-Charry 2017). Thus, it seems

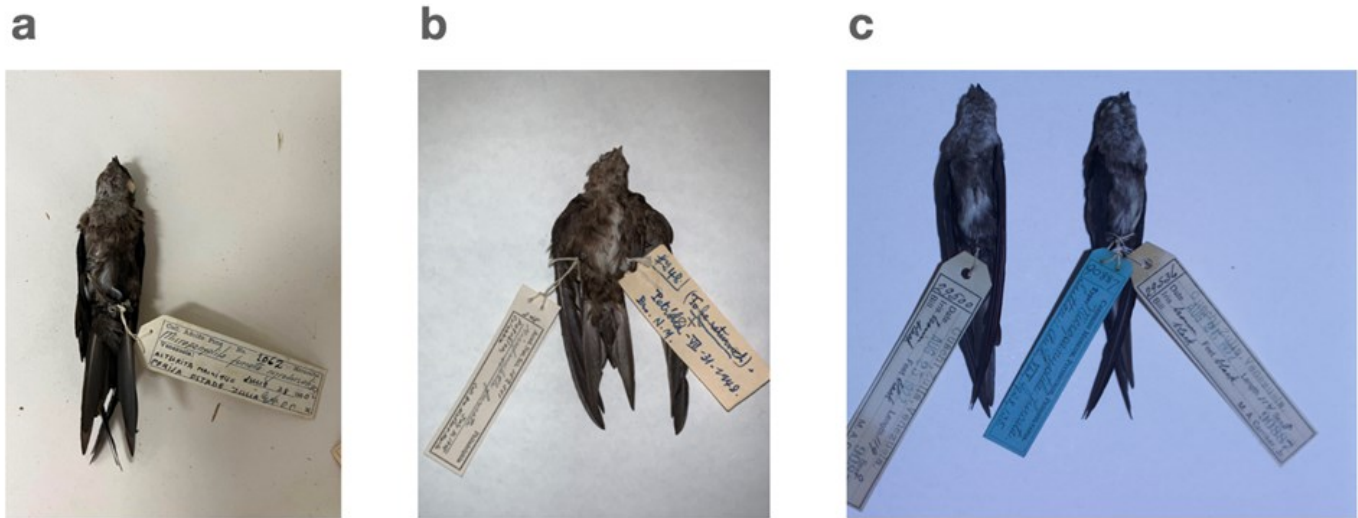


Figure 3. Images of all specimens of adult *T. furcata* listed in VertNet (A) AMNH specimen #781689 (subspecies *nigrodorsalis*) from Zulia, Venezuela, credit Augie Kramer (B) ANSP ORN specimen #157551 (subspecies *furcata*) from Petrolea, Colombia, credit Nate Rice (C) CM Birds specimen #P90851 and #P90887 (subspecies presumably *nigrodorsalis*) both from Guachi, Zulia, Venezuela, credit Steve Rogers/Carnegie Museum of Natural History.

possible that a poorly documented population of breast-banded *Tachornis* inhabits the area around the Tamá and Cocuy massifs. We are aware of only a handful previous Colombian records of *T. furcata*: a nesting individual collected in 1948 at Petrólea in the Catatumbo lowlands (Bond 1956), three sight records in 2005 near downtown Tibú, also in the Catatumbo lowlands (Avendaño 2012), a nearby sight record in 2015 (Romero S28576373), and the aforementioned sight records in 2011 from 810 m in the Araucan foothills (Acevedo-Charry 2017). To our knowledge there are no previous photographs of the species in Colombia. We note that Venezuelan records include a 1987 sight record from Las Delicias, only a few km from Herrán (Fazio S27766190).

***Coeligena bonapartei* (Golden-bellied Starfrontlet).**- JBS clearly saw one male individual on 21 and 22 April 2019 at 2900 m at Asiria-Belén but was unable to obtain documentation. Ayerbe-Quiñones (2018) does not map this species from the east slope of the East Andes, but the species was previously reported from Tamá without

details (Florez, S71499935). Unfortunately, our observations were insufficient to determine the subspecies. Some authorities split the nominate *bonapartei* of the Colombian East Andes and *eos* of the Sierra Nevada de Mérida (Palacios 2020). The former is unknown from Venezuela; the latter unknown from Colombia.

***Aulacorhynchus sulcatus* (Groove-billed Toucanet).**- JBS voice-recorded one individual (Fig. 2e, XC629476) on 12 and 14 April 2019 at 10:00 from the ravine forest at San Alberto. Although the bird was not observed visually, the fast and high-pitched yelping quality of the vocalization eliminates *A. albivitta*. Multiple reports of this species exist from the Venezuelan side of the Tamá massif (e.g, Miranda S31042919), but this is apparently the first Colombian record away from the Serranía del Perijá and Sierra Nevada de Santa Marta.

***Thamnophilus unicolor* (Uniform Antshrike).**- JBS voice-recorded two individuals on 15 and 17 April 2019 from primary forest at 1850 and 2050 m above San Alberto (Fig. 2f, XC511592). This

species occurs on nearby portions of the west slope of the Eastern Andes (Donegan *et al.* 2007) but we are unaware of previous east-slope records north of the vicinity of Yopal (240 km to the south), and the species remains unrecorded in Venezuela. It is unclear whether the population on Tamá is geographically isolated or whether additional populations exist at appropriate elevations on the poorly surveyed east slope of the northeastern Andes in Colombia.

***Formicarius rufipectus* (Rufous-breasted Antthrush).**- JBS voice-recorded 1-2 individuals on 15-17 April 2019 from forest at 1850 m above San Alberto (XC511844). While this species is regularly recorded on the Venezuelan side of Tamá, and although both MacMullan (2018) and Ayerbe Quiñones (2018) map this species from the vicinity of Tamá, we have been unable to locate details of additional Colombian records from this vicinity. The expected subspecies here is apparently *lasallei*, but we have been unable to ascertain the basis for this expectation (Krabbe & Schulenberg 2020).

***Grallaricula ferrugineipectus* (Rusty-breasted Antpitta).**- JBS voice-recorded one individual on 12 and 14 April (XC654954) from disturbed forest at 1400 m near San Alberto. This species is rarely reported and apparently local in Colombia's East Andes but has been previously recorded on the east slope of the Andes in Norte de Santander (Greeney 2018).

***Thripadectes virgaticeps* (Streak-capped Treehunter).**- JBS voice-recorded one individual on 18 April 2019 from primary forest at 1650 m above San Alberto (figure 2g, XC512609). This record is presumably referable to the subspecies *tachirensis*, whose type locality is on the Venezuelan side of the Tamá massif (Phelps & Phelps Jr. 1958), and which was previously unrecorded in Colombia. In Colombia, the

nearest known populations belong to the subspecies *magdalenae* on the west slope of the East Andes.

***Ochthoeca frontalis* (Crowned Chat-Tyrant).**- JBS clearly heard one individual on 21 April 2019 from primary forest near 2800 m at Asiria-Belén. This record came shortly after the first Venezuelan record, also from the Tamá massif (Miranda *et al.* 2019).

***Tephrophilus wetmorei* (Masked Mountain-Tanager).**- JBS and H.S. Meneses saw and voice-recorded two individuals traveling together with one *Iridosornis rufivertex* on 29 April 2019 from sub-paramo at 3150 m above Orocué (XC482372). This species was previously reported from similar habitat at Asiria-Belén (Leal *et al.* 2011), but this is the first record from the Orocué sector of the park. Five months later, the first Venezuelan record was obtained approximately 2 km to the northeast (Miranda *et al.* 2019). The population on Tamá occupies a bioclimatic space that differs from this species' core range in the central and southern Andes (Acevedo-Charry & Coral Jaramillo 2017).

Discussion

Of the records presented here, *Thamnophilus unicolor* is seemingly a first for the Tamá massif. *Aulacorhynchus sulcatus* and *Thripadectes virgaticeps* are new for the Colombian side of Tamá and are not known from adjacent portions of the East Andes. At least two species reported from the Venezuelan side, *Odontophorus columbianus* and *Grallaria chthonia*, have yet to be reported anywhere in Colombia. The sustained string of recent detections of regionally unknown species (Miranda & Kvarnäck 2017, Miranda *et al.* 2019, present manuscript) highlights the potential for novel ornithological discovery on both sides of the Tamá massif. Of interest, our records of

Thamnophilus unicolor and *Thripadectes virgaticeps* highlight the incomplete knowledge of bird distributions in precisely the elevational band where *O. columbianus* and *G. chthonia* might be expected to occur. Likewise, *T. unicolor* and *C. bonapartei bonapartei* (assuming that our records involve the nominate form) are currently undocumented in Venezuela but very likely occur there.

Of the roughly ten species on Tamá that are not known from adjacent portions of the northeastern Andes, all but *Tephrophilus wetmorei* typically have lower elevational limits below 2600 m, the elevation at which Tamá connects to the main Andean massif. The east slope of the northeastern Andes remains poorly surveyed, and it is not yet clear whether Tamá populations are true geographic isolates or whether undetected adjacent populations exist, particularly on the eastern slopes of the Cocuy massif. Recent fieldwork documented multiple range extensions from the Araucan foothills below Cocuy, and more surprises will doubtless be found there with further fieldwork, especially at montane elevations that have not been visited recently (Acevedo-Charry 2017). One mystery that is especially ripe for further exploration is the status and identity of *Tachornis* swifts showing clear breast bands in the vicinity of Tamá and Cocuy.

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