Notes on the behaviour, habitat and conservation of Urich's Tyrannulet *Phyllomyias urichi*, a north-east Venezuelan endemic

David Ascanio and Mark Sokol†

Received 16 November 2020; final revision accepted 18 February 2021
Cotinga 43 (2021): 71–75
published online 5 July 2021

El Atrapamoscas Verdoso *Phyllomyias urichi* es un pequeño tiránido localizado en los macizos de Bergantín y Caripe, en la serranía del Turimiquire, que es parte de la cordillera de la Costa Oriental de Venezuela. En julio 2005 se visitaron dos áreas del macizo Bergantín. En la primera, Quebrada Bonita, se muestrearon tres localidades en 2 km del camino que conduce desde El Merey, estado Anzoátegui, con presencia de borde de bosque, vegetación secundaria y siembra de café de sombra. En la segunda, Finca Agua Fría, se muestreó un transecto de 7 km en la carretera El Corocillo–El Tinaco. Se reprodujeron vocalizaciones de Atrapamoscas de Reiser *P. reiseri* y Atrapamoscas de Sclater *P. sclateri* cada 20 minutos. Igualmente, se reprodujo el canto de Pavita Ferrugínea *Glaucidium brasilianum* para incentivar la aproximación de aves diurnas. En quebrada Bonita se registraron dos bandadas mixtas, cada una con un individuo de *P. urichi*. En sombra, el plumaje de la corona era grisácea mientras que en contacto con la luz solar parecía similar a la espalda olivácea. Las dos barras alares amarillas conspicuas representaron la marca de campo diagnóstica, además de la mandíbula de color carne con la punta oscura. Se observaron activamente en el estrato medio del borde de bosque y, cuando se posaban de forma horizontal, se notó que la cola quedaba levantada y las alas ligeramente caídas. En ambas bandadas mixtas *P. urichi* se aproximó a la reproducción del canto del *P. sclateri* aunque no vocalizó. Igualmente, se aproximó a la reproducción del canto de *G. brasilianum*. Notamos que la extracción de madera era la amenaza principal, seguida por monocultivos. Debido a que estas localidades están ubicadas en la vertiente sur de la serranía del Turimiquire, se sugiere un estudio más extenso en la vertiente norte de la misma. Se recomienda un nombre común español alternativo al actual.

Urich's Tyrannulet *Phyllomyias urichi* is a small tyrannid, known only from a narrow elevational band (900–1,100 m), with all specimens from the Macizos Bergantín and Caripe in the Serranía del Turimiquire[20], part of the Cordillera de la Costa Oriental, in the states of Anzoátegui, Monagas and Sucre, north-east Venezuela (Fig. 1). More recently, these mountains have been referred to as the Macizo del Turimiquire[14]. Until 1970, they were inhabited by small communities cultivating shade coffee, but population growth[11] including immigration from the neighbouring lowlands has resulted in land-use changes, large clearings, extensive burned fields and a much-reduced forested area.

Following a checkered taxonomic history, *P. urichi* is now usually accorded specific status[2,4]. At present, it is considered Endangered with an estimated population of 600–1,700 adults[6] or 1,000–2,500 individuals[15]. Stotz *et al.*[18] were first to set its conservation priority as high, although they treated it as a subspecies of Greenish Tyrannulet *P. virescens*. Cardoso da Silva[2] advocated species status for *P. urichi*, followed by Stattersfield & Capper[16], who listed it as Endangered and estimated its range to cover 1,080 km^2 with a declining population of fewer than 10,000 individuals. The treatment recommended by Cardoso da Silva[2] has been followed by several subsequent authors[1,4,5,13].

In July 2005, we visited two areas on Macizo Bergantín, with the aim of noting the field marks, observing the behaviour and making sound-recordings of the unknown vocalisations[5] of *P. urichi*, as well as evaluating the state of the remaining habitat.

Study sites and Methods

Quebrada Bonita (10º05'N 64º17'W), Anzoátegui state, is a loose settlement scattered amidst extensive shade-coffee plantations, above 900 m elevation. Access was by trail from El Merey, c.9 km from Bergantín. We visited this site on 20–21 July 2005. The first reference to ornithological work in this area is from November 1941, when *P. urichi* was collected during an expedition led by F. Benedetti with R. Urbano and E. Espitia for the Colección Ornitológica Phelps (COP), Caracas.

Finca Agua Fría in El Tinaco (10º05'N 63º43'W) is another settlement, above 1,100 m, in the state of Sucre near the border with Monagas, but accessed from San Antonio de Capayacuar, Monagas. Crops such as banana and pineapple had replaced shade coffee. On 24–25 July 2005 we surveyed the 7-km stretch of road between El Corocillo and El Tinaco, at 600–1,200 m. At the time of this survey, these

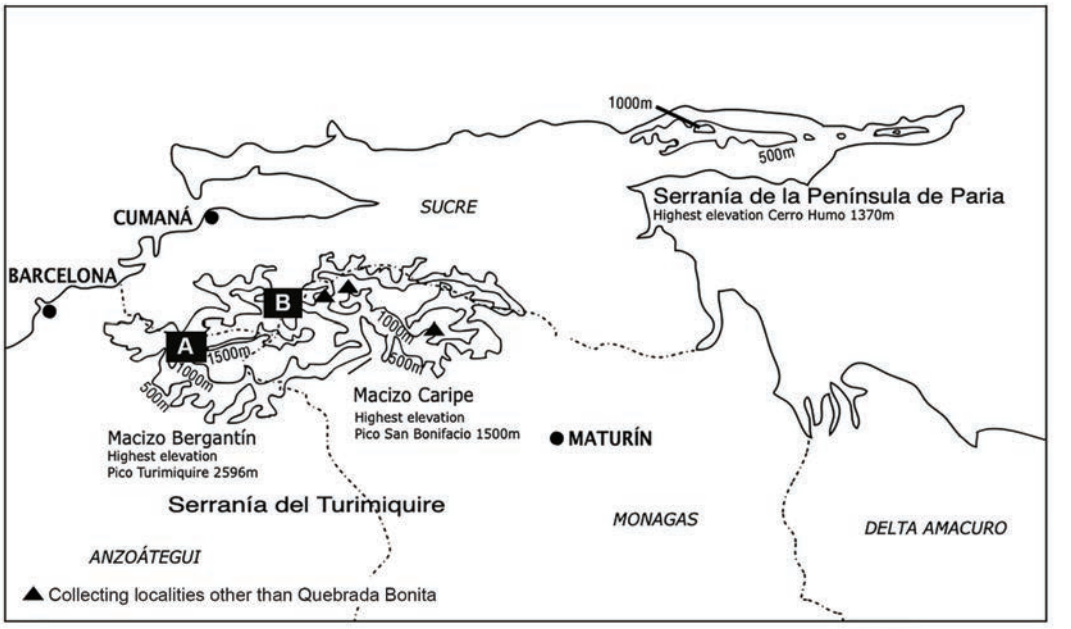

Figure 1. Cordillera de la Costa Oriental, showing both massifs (Macizo Turimiquire and Macizo Bergantín) in the Serranía del Turimiquire, along with Serranía de la Península de Paria, north-east Venezuela. Our study sites are indicated: (A) Quebrada Bonita, Anzoátegui; (B) Finca Agua Fría, El Tinaco, Sucre.

mountains were partially denuded, the result of continuous slash-and-burn, a practice commenced by the local people. No previous reference exists to ornithological exploration in the area and we are unaware of any subsequent work, but it was chosen for its proximity to Macizo Caripe, where the type specimen was collected.

At Quebrada Bonita we selected 2 km of the main trail mentioned above as a transect. This is presumably the same trail used by Benedetti, as the specimens were taken close to the settlement. We selected three sites, determined by the presence of edge habitat, or a clearing contiguous to second growth. The first (a) was the westernmost and beside a 0.5-ha clearing, at 950 m; the second (b), with shade-grown coffee and second growth, along the trail c.400 m east of the first, at 1,070 m; and the third (c) was the easternmost, beside a 2-ha clearing with a subsistence farm surrounded by second growth, at 1,000 m.

MS spent the afternoon of 20 July and the morning of 21 July at site (a); DA was stationed at both (a) and (b) on the first afternoon, and at site (b) most of the following morning. DA also briefly visited site (c) on both days. We used playback every c.20 minutes of the voices of Reiser's Tyrannulet *P. reiseri* and then Sclater's Tyrannulet *P. sclateri*. The recording of *P. reiseri* was made by MS at Parque Nacional Cavernas do Peruaçu, north of Januária, Minas Gerais, Brazil, in June 2004, and that of *P. sclateri* by MS at Aguas Calientes, below Machu Picchu, Peru, in January 2002. DA also used playback of Ferruginous Pygmy Owl *Glaucidium brasilianum* as a tool to stimulate bird activity. Given time constraints, no pre-determined survey protocol was used to detect our focal species.

Specimens deposited in COP were studied against our field notes and observations (see Appendix 2).

Results

Following dawn, single mixed-species feeding flocks were encountered at sites (a) and (b), both of which contained a single *P. urichi* (Fig. 2). No flocks were noted at site (c). The appearance of both birds varied similarly, depending on the light. In the shade, the crown appeared greyish, in contrast to a brownish or even dark brown back, but in direct sunlight the crown seemed concolorous with a pale olive back. The underparts always appeared pale yellow. The prominent wingbars are yellowish (the most diagnostic field mark). Also of note was a distinctive, if diffuse, supraloral streak and flesh-coloured mandible with a dark tip. Except for the bold wingbars, the species, with its weak contrast between head, mantle and wings, has an overall resemblance to some *Setophaga* warblers in non-breeding plumage.

Both birds were foraging, moving almost continuously while searching for insects on dead

leaves, live foliage, and twigs and branches c.4–6 m above ground, away from dark or dense canopy vegetation. No sally-strikes to branches were observed. When foraging, their tails were usually held cocked; perched (horizontally) their wings tended to droop slightly. We found that the combination of these behaviours along with the key plumage marks were useful identification aids. Both individuals were in the midstorey, with mixed-species flocks that remained >40 minutes in forest edge with an open understorey and abutting shade coffee.

In both flocks, *P. urichi* reacted by approaching us after playback of the voice of *P. sclateri* but paid little attention to the *P. reiseri* recording. The individuals temporarily left the feeding flocks and approached the source of playback. Although neither *P. urichi* vocalised, their reaction to the voice of *P. sclateri* was noteworthy. As far as we are aware, the voice of *P. urichi* remains unknown[1]. Playback of *Glaucidium brasilianum* at site (b) solicited distress behaviour from 21 species, including *P. urichi*. The species performing distress behaviour in response to playback of *G. brasilianum* are highlighted in Appendix 1. In addition, checklists of the species reported in this survey were uploaded to eBird (https://ebird.org/checklist/S79707993; https://ebird.org/checklist/S75755435).

Discussion

Concerning field marks useful for identification, aside from the conspicuous wingbars, we draw attention to the contrasting flesh-coloured mandible and dark tip. Unsurprisingly, the latter seems to have gone unnoticed and Fitzpatrick[4] is the only author to have previously noted the paler mandible. The variation in plumage colour, depending on the amount of sunlight, underlines the need for caution in visual identification.

Among tyrannids with which *P. urichi* might be confused, Hilty[5] drew attention to the following species: Forest Elaenia *Myiopagis gaimardii*, which has a (not always visible) coronal stripe, a greyish face, whitish throat and lacks bold wingbars; Yellow-olive Flycatcher *Tolmomyias sulphurescens* is larger with a distinctive broad-based bill, pale throat and different wing pattern; Sooty-headed Tyrannulet *Phyllomyias griseiceps* lacks wingbars; Yellow-crowned Tyrannulet *Tyrannulus elatus* also has a coronal stripe, short black bill, and different face, throat and breast patterns; and Golden-faced Tyrannulet *Zimmerius chrysops*, which lacks wingbars. There are also significant behavioural differences, but we consider that reliable identification of *P. urichi* demands attention to both behavioral and plumage field marks together. Two of the other three species mentioned by Hilty[5] are rarely seen in the area, namely Southern Beardless Tyrannulet *Camptostoma obsoletum* (stockier, crest bushier and proportionately shorter tail) and Pale-tipped Inezia *Inezia caudata* (pale loral streak gives a spectacled appearance and has whitish not yellow wingbars). The third, Yellow-margined Flycatcher *Tolmomyias assimilis* is allopatric with *P. urichi* and has a broad-based bill and narrower wingbars. Likewise, a species not yet reported in the area that could be confused with *P. urichi* is Rough-legged Tyrannulet *P. burmeisteri*. It has a proportionately shorter tail (usually not cocked), thinner wingbars, all-pinkish/orange mandible and a greyish cap that is visible in all light conditions.

The continually cocked tail when foraging, and horizontal posture with drooped wings when more stationary have not previously been mentioned in the literature, but are important field marks. This, however, is not surprising as these characters are a trademark of several species of *Phyllomyias*. As

Figure 2. Record photograph of Urich's Tyrannulet *Phyllomyias urichi*, Quebrada Bonita, Anzoátegui, north-east Venezuela, July 2005 (D. Ascanio)

Figure 3. Denuded slopes on Macizo Bergantín with Pico Turimiquire in the background, north-east Venezuela, July 2005 (D. Ascanio)

pointed out by Kirwan *et al.*[8] *P. reiseri*, however, does not cock its tail as frequently as some of its close relatives. Although Fitzpatrick[4] stated that *Phyllomyias* are treetop-dwellers and Stotz *et al.*[18] considered *P. urichi* a canopy species, both individuals we observed were in the midstorey, in agreement with a sight record from Cerro Humo, Parque Nacional Península de Paria, in February 1993[7] (not 1995, as erroneously stated in the paper), and another by J. del Hoyo & D. Muller also there in January 1999 (J. del Hoyo pers. comm.). These are the only other encounters with the species known to us since the first specimens were collected.

Habitat and conservation

Published data agree on the threats to this species we identified (see Fig. 3). Clearance for agriculture and pasture, repeated uncontrolled burning (with fires sometimes lasting for weeks or even months), removal of understory for coffee, and conversion to commercial crops and plantations (sun coffee, mangos, bananas, oranges and lemons) are all important[6,9,14–17] and all were noted at the time of the survey, even within protected areas such as Parque Nacional El Guácharo, where the Cerro Negro sector is now largely deforested. As of 2005, nothing had been done to preserve the species' habitat.

We believe illegal logging to be of serious concern, and we would add recent commercial crops such as plantain and guanabana to the list noted by others, which results in complete forest clearance. Because most of the southern Serranía del Turimiquire is now denuded, clearly Quebrada Bonita has become one of the few, if not the only, location on Macizo Bergantín where the tyrannulet might survive on that side of the massif. Although Quebrada Bonita is within the Zona Protectora del Turimiquire[12], wherein 540,000 ha lie at 400–2,600 m elevation, agricultural practices are unregulated and illegal cutting was continuing during the survey. With the understorey of humid subtropical forest and second growth apparently primary habitat for *P. urichi* (F. Benedetti's unpublished notes held at COP record 'the vegetation [as] dense, thick and covered by premontane forest'), the coffee plantations at Quebrada Bonita, because they couple economic revenue with some habitat preservation, could be an important lifeline for the species. These plantations lie adjacent to or within primary and secondary forest, and possess at least a partial understorey. The traditional shade coffee here is far less invasive than in many other areas, protected or otherwise, where the understorey is essentially destroyed.

For reasons noted above, *P. urichi* is probably extinct around El Tinaco. Although our surveys suggested a grim future for the species, we must emphasise that our work was focused on just two locations on the south side of the mountains. A comprehensive search, especially of the northern side, is needed to fully assess the conservation status of the species and its habitat.

Conservation priorities at our study sites agree with those listed by Rodríguez *et al.*[14]. We consider the following essential based on our observations: (a) identifying any remnants of pristine forest that may harbour populations of *P. urichi* on the south side of both massifs; (b) encouraging local communities to protect any patches of forest via less destructive management of plots already used for agriculture (supported by a programme of certification to provide financial benefits); and (c) identifying potential areas for reforestation between existing habitat, to diminish forest fragmentation. We suggest that all population estimates be considered hypothetical until this is done.

Spanish name

The English name Urich's Tyrannulet, coined by Cory & Hellmayr[3], has been in constant use. No Spanish name has attained popularity. The first to be introduced, Atrapamoscas Verdoso, given by Meyer de Schauensee & Phelps[10], was maintained by Verea *et al.*[19], but Hilty[5] used Atrapamoscas de Paria, and in the *Handbook of the birds of the world* it was called Mosquerito de Paria[4]. Finally, in the second edition of the *Libro Rojo de la fauna venezolana*[15] it was called Atrapamoscas de Caripe. To emphasise the need to protect the region as a whole, DA suggests the name Atrapamoscas del Turimiquire.

Acknowledgements

We thank Margarita Martínez and Miguel Lentino for their advice and access to materials housed at the Colección Ornitológica Phelps, Caracas. Elaine Langlois and Robin Restall offered comments on the developing text. A. Carvajal, A. J. Fuentes, P. Polanco, M. Romero, G. Araguayán and F. Acosta assisted with field logistics. Special thanks to the Marín family, for their support and assistance at El Tinaco. DA expresses his gratitude to the anonymous reviewers for important comments and recommendations. The manuscript was originally prepared in 2005 but, for personal reasons, DA was unable to complete the paper in response to the editor's recommendations. As DA resumed some of the ornithological work that was pending publication, this paper was of special significance given that MS is no longer with us. DA dedicates this contribution to his memory. Mark was a passionate birdwatcher and his trips to the Neotropics helped to rediscover, or bring to light aspects of the natural history of, many obscure taxa.

References

1. Ascanio, D., Rodríguez, G. & Restall, R. (2017) *Birds of Venezuela*. London, UK: Christopher Helm.
2. Cardoso da Silva, J. M. (1996) New data support the specific status of Reiser's Tyrannulet, a central Brazilian endemic. *Brit. Bull. Orn. Club* 116: 109–113.
3. Cory, C. B. & Hellmayr, C. E. (1927) Catalogue of birds of the Americas and the adjacent islands, 5. *Publ. Field Mus. Nat. Hist. Zool. Ser.* 13(5).
4. Fitzpatrick, J. W. (2004) Family Tyrannidae (tyrant-flycatchers). In: del Hoyo, J., Elliott, A. & Christie, D. A. (eds.) *Handbook of the birds of the world*, 9. Barcelona: Lynx Edicions.
5. Hilty, S. L. (2003) *Birds of Venezuela*. Princeton, NJ: Princeton University Press.
6. IUCN (2020) The IUCN list of threatened species. Version 2020-2. https://www.iucnredlist.org.
7. Kirwan, G. M. & Sharpe, C. J. (1999) Range extensions and notes of the status of little-known species from Venezuela. *Bull. Brit. Orn. Club* 119: 38–47.
8. Kirwan, G. M., Mazar Barnett, J. & Minns, J. (2001) Significant ornithological observations from the Rio São Francisco Valley, Minas Gerais, Brazil, with notes on conservation and biogeography. *Ararajuba* 9: 145–161.
9. Lentino, M. & Esclasans, D. (2005) Áreas Importantes para la Conservación de las Aves de Venezuela. In: Boyla, K. & Estrada, A. (eds.) *Áreas Importantes para la Conservación de las Aves en los Andes tropicales: sitios prioritarios para la conservación de la biodiversidad*. Quito: BirdLife International (Serie de Conservación 14)
10. Meyer de Schauensee, R. & Phelps, W. H. (1978) *A guide to the birds of Venezuela*. Princeton, NJ: Princeton University Press.
11. Ministerio de Fomento, Oficina del censo general (1958) *Octavo censo general de población*. Caracas: Ministerio de Fomento.
12. Ministerio del Ambiente y de los Recursos Naturales (1992) *Áreas naturales protegidas de Venezuela*. Caracas: Ministerio del Ambiente y de los Recursos Naturales.
13. Restall, R., Rodner, C. & Lentino, M. (2006) *Birds of northern South America*. London, UK: Christopher Helm.
14. Rodríguez, J. P., Rojas-Suárez, F. & Hernández, D. G. (eds.) (2010) *Libro Rojo de los ecosistemas terrestres de Venezuela*. Primera edn. Caracas: Provita, Compañías Shell de Venezuela y Lenovo Venezuela.
15. Sharpe, C. J. (2015) Atrapamoscas de Caripe *Phyllomyias urichi*. In: Rodríguez, J. P., García-Rawlins, A. & Rojas-Suárez, F. (eds.) *Libro Rojo de la fauna venezolana*. Quarta edn. Caracas: Provita y Fundación Empresas Polar. http://wikieva.org.ve/index.php/Phyllomyias_urichi.
16. Stattersfield, A. J. & Capper, D. R. (2000) *Threatened birds of the world*. Barcelona: Lynx Edicions & Cambridge, UK: Birdlife International.
17. Stattersfield, A. J., Crosby, M. J., Long, A. J. & Wege, D. C. (1998) *Endemic Bird Areas of the world: priorities for biodiversity conservation*. Cambridge, UK: BirdLife International.
18. Stotz, D. F., Fitzpatrick, J., Parker, T. A. & Moskovits, D. (1996) *Neotropical birds: ecology and conservation*. Chicago: University of Chicago Press.
19. Verea, C., Rodríguez, G. A., Ascanio, D., Solórzano, A., Sainz-Borgo, C., Alcocer, D. & González-Bruzual, L. G. (2019) *Los nombres comunes de las aves de Venezuela*. Quinta edn. Caracas: Unión Venezolana de Ornitólogos.
20. Vila, P. (1960) *Geografía de Venezuela*, 1. Caracas: Ministerio de Educación.

David Ascanio
Colección Ornitológica Phelps, Bulevar de Sabana Grande, Edificio Gran Sabana, Piso 3, C.P. 1050, Apartado Postal 2009, Caracas, Venezuela. E-mail: david@abtbirds.com.

Mark Sokol†

Appendix 1. Species in mixed-flocks attended by Urich's Tyrannulet *Phyllomyias urichi* in north-east Venezuela.

White-tailed Sabrewing *Campylopterus ensipennis*, Plain-brown Woodcreeper *Dendrocincla fuliginosa*, Cocoa Woodcreeper *Xiphorhynchus susurrans*, Streak-headed Woodcreeper *Lepidocolaptes souleyetii,* Plain Xenops *Xenops minutus*, Crested Spinetail *Cranioleuca subcristata*, Slaty-capped Flycatcher *Leptopogon superciliaris*, Yellow-olive Flycatcher *Tolmomyias sulphurescens*, Forest Elaenia *Myiopagis gaimardii*, Sooty-headed Tyrannulet *Phyllomyias griseiceps*, Golden-faced Tyrannulet *Zimmerius chrysops*, Dusky-capped Flycatcher *Myiarchus tuberculifer*, Boat-billed Flycatcher *Megarynchus pitangua*, Tropical Kingbird *Tyrannus melancholicus*, Golden-fronted Greenlet *Pachysylvia aurantiifrons*, Brown-capped Vireo *Vireo leucophrys*, Rufous-breasted Wren *Pheugopedius rutilus*, Tropical Parula *Setophaga pitiayumi*, Blue-grey Tanager *Thraupis episcopus* and Bananaquit *Coereba flaveola*.

Appendix 2. Material pertaining to Urich's Tyrannulet *Phyllomyias urichi* examined at Colección Ornitológica Phelps (COP), Caracas.

COP 15599 (male, Quebrada Bonita, Bergantín, Anzoátegui, 950 m); COP 15600 (male, Quebrada Bonita, Bergantín, Anzoátegui, 1,000 m); COP 15601 (unsexed, Quebrada Bonita, Bergantín, Anzoátegui, 1,000 m); COP 15602 (female, Quebrada Bonita, Bergantín, Anzoátegui, 1,000 m); COP 23077 (male, Caripe, Monagas, 900 m); COP 23078 (female, Caripe, Monagas, 1,100 m); COP 23079 (female, Caripe, Monagas, 900 m).