

First record of Thick-billed Seed-finch (*Sporophila funerea*) for Peru and noteworthy bird records for the west slope of the Peruvian Andes in Tumbes department

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ABSTRACT

During several visits from 2010 to 2020 to Cerros de Amotape National Park (CANP), and neighboring areas in the extreme northwest Peru, we recorded a new bird species for Peru: *Sporophila funerea*. We also recorded seven new species for the west slope of the Peruvian Andes (*Leptodon cayanensis*, *Rostrhamus sociabilis*, *Geotrygon montana*, *Crotophaga ani*, *Florisuga mellivora*, *Pheucticus ludovicianus*, and *Chlorophanes spiza*) and the first observation of *Thraupis palmarum* for the western Peruvian Andes. These species were recorded in semi-deciduous and evergreen forests near the El Caucho and Campo Verde localities, and in dry forest around the city of Tumbes.

KEYWORDS: Dry forest, evergreen forest, range expansion, Tumbesian center of endemism

RESUMEN

Durante varias visitas al Parque Nacional Cerros de Amotape y alrededores, en el extremo noroeste del Perú entre los años 2010 y 2020, registramos una nueva especie de ave para el Perú: *Sporophila funerea*; siete nuevas especies para el oeste de los Andes peruanos (*Leptodon cayanensis*, *Rostrhamus sociabilis*, *Geotrygon montana*, *Crotophaga ani*, *Florisuga mellivora*, *Pheucticus ludovicianus* y *Chlorophanes spiza*); y la primera observación de *Thraupis palmarum* para los Andes occidentales peruanos. Las especies fueron registradas en los bosques semi-caducifolios y siempreverdes cerca de las localidades de El Caucho y Campo Verde y en los bosques secos ubicados alrededor de la ciudad de Tumbes.

PALABRAS CLAVE: bosque seco, bosque siempreverde, centro de endemismo tumbesino, extensión de rango

INTRODUCTION

Northwestern Peru it is located within the Tumbesian Center of Endemism (hereafter Tumbesian region), which is adjacent to the Choco rainforest to the north, the arid coastal plain of central Peru to the south, and the equatorial Pacific Ocean and Andes to the west and east, respectively (Cracraft 1985). This region is considered a conservation hotspot due to the high number of endemic species and the severity of human impact (Stattersfield *et al.* 1998, Myers *et al.* 2000).

The Tumbesian region is dominated by dry scrub and dry forests; however, due to its geographical position and varied topography, this region has a great variety of climates and habitats, and experiences a north-south gradient in precipitation (Best & Kessler 1995). Large-scale weather patterns are modified locally by topographic factors producing varied environmental conditions at smaller spatial scales that range from thorny shrubland to evergreen forest with increasing precipitation and altitude (Best & Kessler 1995). Thus, the vegetation of this region is extremely diverse, resulting in a varied mosaic of habitats caused by small changes in precipitation patterns. (Sánchez *et al.* 2012).

The Parque Nacional Cerros de Amotape (Cerros de Amotape National Park, CANP), was created in 1975 and protects 151 561 hectares of dry, semi-deciduous, and evergreen forests in extreme northwestern Peru (SERNANP 2012). Together with three adjacent protected areas – Coto de Caza El Angolo (65 000 ha), Reserva Nacional de Tumbes (19 266 ha), and Área de Conservación Regional Angostura-Faical (8 794 ha) – they protect the largest (244 622 ha) remaining tract of these forest types in the entire Tumbesian region.

In July 2017, January 2018, and from February to December 2019, we visited different areas within the CANP and its buffer zone, as part of a research project that seeks to understand the responses of dry forest birds to climate change. From 6 km southeast of Pampas de Hospital, and along the access trails to the El Caucho and Campo Verde localities (Fig. 1 & 2), we conducted 2520 10-minute bird point counts in 120 locations, and 8640 net-hours at 12 banding stations, placed between 100 m to 800 m in elevation to measure bird community turnover along a moisture gradient.

In this report, we also include anecdotal observations from 2010 to 2014, and 2020 that were made when the authors were surveying birds close to the city of Tumbes and within the CANP and its buffer zone. Localities that are listed in the text are also summarized in Table 1. In this note, we report *Sporophila funerea* as a new species for Peru, and seven new species not previously known from the western Peruvian Andes. These records extend their range limits to the south across the equatorial Peruvian Pacific slope.

Species were identified using Schulenberg *et al.* (2010), Ridgely & Greenfield (2001) and Sibley (2014). Species accounts are arranged taxonomically according to Plenge (2020).

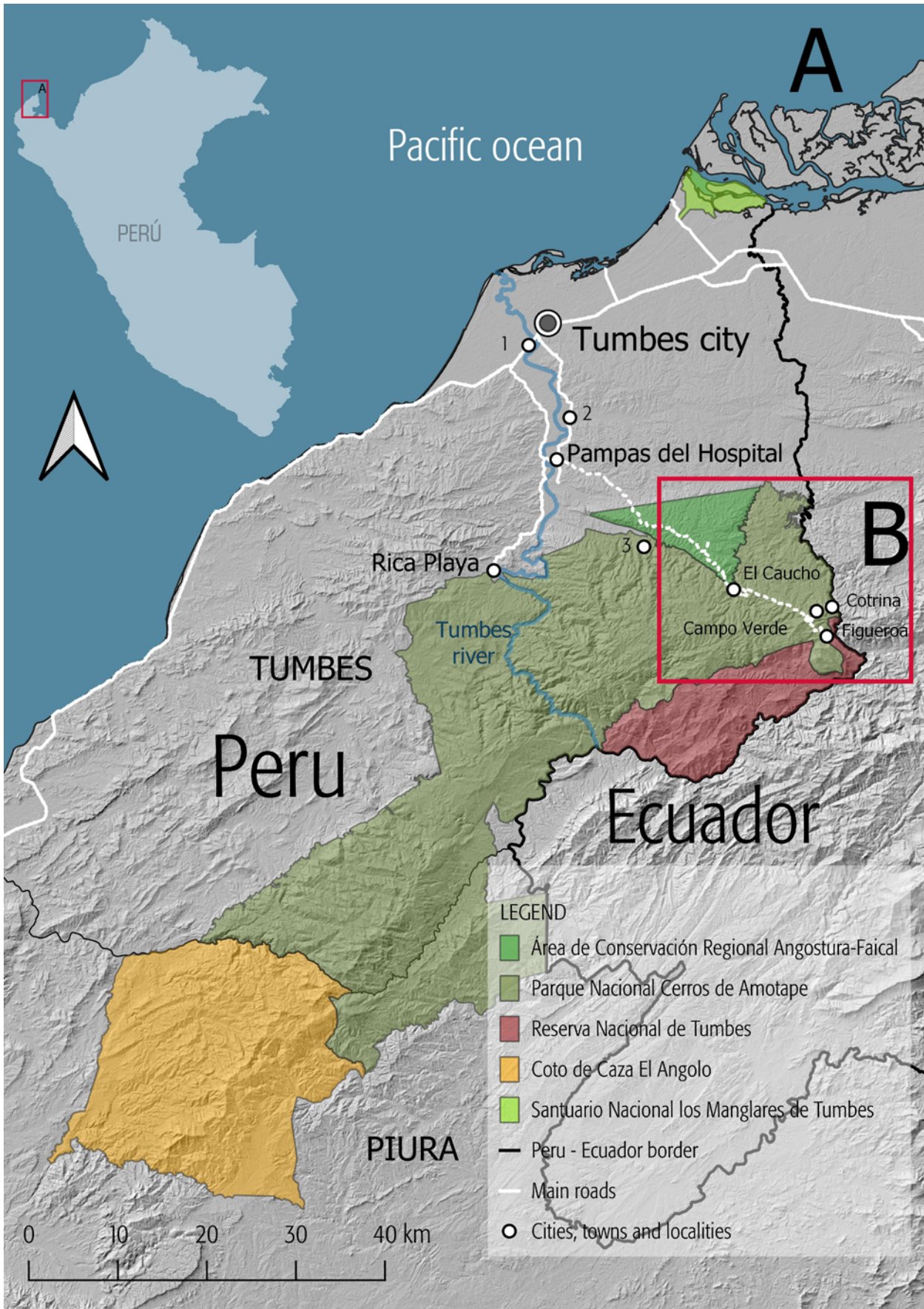


Figure 1. Map of the localities where the records come from: 1: Outskirts of Tumbes city; 2: Cerro Blanco; 3: Quebrada Angostura; B. Enlarged area on Figure 2.



Figure 2. Map of the localities where the records come from. Enlarged area from Figure 1.

Locality	Coordinates	Altitude (m)	Protected area
Outskirts of Tumbes city	3°34'39.38"S/80°28'1.21"W	10	N
Cerro Blanco	3°39'1.83"S/80°25'32.22"W	15	N
Quebrada Angostura	3°46'50"S/80°21'3"W	250	CANP
Crossroads to El Tututmo	3°47'6.78"S/ 80°17'23.24"W	382	ACRAF
El Caucho Police Station	3°49'03.3"S/80°16'07.1"W	420	CANP
El Caucho Biological Station	3°49'25.6"S/80°15'37.0"W	356	CANP
Pozo del Pato	3°50'20.78"S/ 80°12'16.78"W	710	CANP
Crossroads to Campo Verde and Figueroa	3°51'18.49"S/ 80°10'59.77"W	862	CANP
Campo Verde	3°50'43.7"S/80°10'35.3"W	738	CANP

Table 1. Localities mentioned in the text, with coordinates and altitude. They are arranged north to south. On the column "Protected area": N: None, CANP: Cerros de Amotape National Park; ACRAF: Área de Conservación Regional Angostura-Faical.

SPECIES ACCOUNTS

Gray-headed Kite (*Leptodon cayanensis*)

On January 1, 2018, at the crossroads to Campo Verde and Figueroa, we saw an adult flying over the canopy of the evergreen forest. It was identified by its long, rounded wings, long black-and-white barred tail, and its striking black underwing coverts contrasting with the white chest and abdomen. On September 6 and 7, 2019, at the crossroads to El Tutumo, we saw another individual flying and vocalizing over the canopy of semi-deciduous forest. On November 23 and 24, 2019, in Campo Verde and Pozo del Pato respectively, we captured and photographed two adult birds in an understory mist-net in evergreen forest (Fig. 3).



Figura 3. *Leptodon cayanensis* at Campo Verde. November 23, 2019 (Photo: R. Pérez Purizaca).

L. cayanensis is widely distributed in the Neotropics from Yucatán in southern Mexico to northern Argentina and southern Brazil.

It mostly inhabits humid forests, although it also uses gallery forests, edges, and altered and fragmented habitats (Bierregaard *et al.* 2020). In Peru, it has only been recorded in the Amazon basin, east of the Andes below 600 m (Schulenberg *et al.* 2010). The southernmost documented record in the western Andes is in southwest El Oro province (eBird 2020), Ecuador, c. 35 km north from our observation.

Snail Kite (*Rostrhamus sociabilis*)

On January 22, 2020, we observed and photographed an individual of *R. sociabilis* soaring in the outskirts of Tumbes city, 1.5 km SW of the city center (Fig. 4). The main habitat was dry scrub, with rice paddies dominating the area. We could not determine the sex of this individual, but it was identified as a juvenile *R. sociabilis* due to its silhouette, with broad and rounded wings, and hooked bill, and its overall brownish color.

R. sociabilis occurs throughout the tropics and subtropics of the Americas (Reichert *et al.* 2020). It inhabits flooded open marshes where it feeds almost exclusively on apple snails (*Pomacea spp.*). According to Schulenberg *et al.* (2010), there are no records of this species on the west slope of the Andes in Peru. However, in Ecuador it is locally fairly common in the lowlands of the southwest in freshwater marshes and adjacent rice fields (Ridgely & Greenfield 2001). These habitats are similar to those where we recorded the species.



Figura 4. *Rostrhamus sociabilis* on the outskirts of Tumbes city. January 22, 2020 (Photo: F. Angulo).

Ruddy Quail-Dove (*Geotrygon montana*)

On March 29, 2019, in Campo Verde, we mist-netted and banded a male *G. montana* in the understory of evergreen forest. It was identified as *G. montana* by its reddish beak, red periocular ring and legs, pink face, and prominent cinnamon malar line (Fig. 5).



Figura 5. *Geotrygon montana* at Campo Verde. March 29, 2019 (Photo: R. Pérez Purizaca).

G. montana is widespread in the lowlands of the Neotropics, ranging from northern Mexico to the south and west of the Andes in Ecuador, and east of the Andes to Brazil, southern Bolivia, and northeastern Argentina (Kuecker *et al.* 2020). This

species primarily occurs in the understory of lowland evergreen forest, but also in tall second growth, semi-deciduous forests and in coffee and cacao plantations (Kuecker *et al.* 2020). In Peru, it is uncommon to fairly common in Amazonia, up to 1750 m (Schulenberg *et al.* 2010).

There is a suspected record for the western Andes in northern Peru (Lambayeque), at the Laquipampa Wildlife Refuge, 300 km south of the CANP, where one individual was kept as a pet. The origin of this individual is unclear; it is possible that it was traded in a local market (Angulo *et al.* 2012). In Ecuador, the southernmost documented record for *G. montana* is at the Jama-Coaque reserve, in Manabí, Ecuador (eBird 2020). There are several non-documented records at the Buenaventura Reserve south of the province of El Oro, Ecuador, 50 km north of our record (eBird 2020).

Smooth-billed Ani (*Crotophaga ani*)

On September 17, 2014, we observed and photographed an adult individual (sex not determined) of *C. ani*, in the town of Cerro Blanco (Fig. 6). The main habitat type was dry scrub, in an area dominated by rice paddies. The individual was alone and was identified as a *C. ani* by its smooth bill that separates it from *C. sulcirostris*, a species that is common in the area (F. Angulo pers. obs.).

C. ani is a widespread resident of scrub and forest clearings from the Caribbean region and Costa Rica south to Uruguay and northern Argentina (Quinn & Startek-Foote 2020). According to Schulenberg *et al.* (2010), there are no records of this species on the west slope of the Andes in Peru and there is very limited overlap with *C. sulcirostris* in the middle Marañón valley. In western Ecuador, *C. ani* is not found in the arid regions where *C. sulcirostris* occurs. However, in southern Ecuador (El Oro and

Loja provinces) there are records of *C. ani* as far south as the Puyango canton where it overlaps with *C. sulcirostris* (Ridgely & Greenfield 2001).



Figura 6. *Crotophaga ani* in Cerro Blanco, Tumbes. September 17, 2014 (Photo: F. Angulo).

White-necked Jacobin (*Florisuga mellivora*)

On July 25, 2017, in semi-deciduous forest at El Caucho police station, we observed an adult male and a female *F. mellivora* feeding on the nectar of the flowers of an African tulip tree (Fig. 7). These individuals were foraging with several individuals of *Chalybura buffonii*, *Thalurania colombica*, *Amazilia amazilia*, and *Juliamyia juliae*. The male was identified by its bright blue head, neck and chest, conspicuous white line on the nape, and bright green flanks contrasting with the white abdomen.

F. mellivora is a widely distributed species in the Neotropics, where it ranges from southern Mexico to central Bolivia. It inhabits the canopy of forest interior and forest edges of humid forests, secondary forests, and coffee and cocoa plantations (Stiles *et al.* 2020). In Peru, it is common in the Amazon basin, east of the Andes, up to 1600 m (Schulenberg *et al.* 2010). The southernmost documented record of this species in Ecuador is from the Buenaventura

Reserve in El Oro province (eBird 2020), approximately 50 km north of the site we recorded this species.



Figura 7. *Florisuga mellivora* at the police station of El Caucho. July 25, 2017 (Photo: J. Novoa).

Rose-breasted Grosbeak (*Pheucticus ludovicianus*)

On October 29, 2010, we mist-netted an adult female *P. ludovicianus* in a dense dry forest at Quebrada Angostura (Fig. 8). The bird was identified as an adult female because of its heavy, light-colored bill, broad whitish superciliary, striped breast, and yellowish wing linings.

P. ludovicianus in Peru is a very rare boreal migrant, known from a few records on the east slope of the Andes from the border with Ecuador south to Cuzco, with all records below 2500 m (Schulenberg *et al.* 2010). The first record in Peru was in the Chanchamayo area in Junín department (Meyer de Schauensee 1966), but it is unclear whether this author refers to a specimen or a sight record. There is an unpublished record from Cacazú (Pasco) in the Field Museum of Natural History collection (FMNH 299341) that was collected on November 15, 1973, by P. Hocking and J. F. Lopez. There is also a sight record from the Kosñipata valley, department of Cusco, in November or December 1981 (T. Schulenberg pers. com).

This is the first record for the species on west slope of the Andes in Peru. Given that

this record was in late October, it might indicate that some individuals pass through the CANP during migration. All records in Peru, including ours, are from females or immature males (Schulenberg *et al.* 2010). In Ecuador the species is reported as rare to uncommon from October to March, mostly below 2000 m on both slopes of the Andes, with most of the records from western Ecuador as far south as Vilcabamba, in Loja province (Ridgely & Greenfield 2001), approximately 140 km southeast of our observation.



Figura 8. *Pheucticus ludovicianus* at Quebrada Angostura. October 29, 2010 (Photo: F. Angulo).

Thick-billed Seed-finch (*Sporophila funerea*)

On December 3, 2019, 2 km NW of Pozo del Pato, in the CANP, we saw a female *S. funerea* amid secondary vegetation in evergreen forest (Fig. 9). It was identified as an *S. funerea* by its relatively small size, completely brown coloration, massive dark beak, and the presence of white in the under-wing coverts. That same day, S. Sánchez, a birding guide, heard it vocalizing close to the place we observed it. Two days later, we mist-netted and banded an adult male (Fig. 10) in the evergreen forest of Campo Verde, at 4.5 km from the site of the first observation. It was identified by its

bright black color, white wing patch, and white under-wing coverts.

S. funerea is distributed from southeastern Mexico to western Colombia and Ecuador. The species typically inhabits humid forest edges, fields with tall grass and scattered shrubs, and secondary forests. *S. funerea* is usually found in shrubby and grassy areas and is more arboreal than other seed-finches (Rising 2020). Our observations are the first records of this species for Peru, since is not listed on the List of the Birds of Peru (Plenge 2020). The southernmost documented record of this species is from the Buenaventura Reserve in the El Oro province, in southern Ecuador (eBird 2020) c. 50 km north of our observations.



Figura 9. Female *Sporophila funerea* at 2 km NW of Pozo del Pato. December 3, 2019 (Photo: D. García Olaechea).



Figura 10. Male *Sporophila funerea* at Campo Verde. December 5, 2019 (Photo: C. Siguas Gonzales)

Green Honeycreeper (*Chlorophanes spiza*)

On September 8, 2019, on the trail between the El Caucho Biological Station and the El Caucho Police Station, we saw a male Green Honeycreeper foraging among the flowers and fruits of a Balsa tree (*Ochroma pyramidale*). It was identified as a *C. spiza* by its bright green plumage contrasting with its black head and yellow beak. Later, in the same morning, we saw another adult male with a juvenile performing what we suspect was a food begging display. These last two birds were in a mixed-species flock composed of *Sittasomus griseicapillus*, *Dendrocincla fuliginosa*, *Lepidocolaptes souleyetii*, *Pachysilvia decurtata*, *Vireo chivi*, *Poliophtila plumbea*, *Euphonia laniirostris*, *Setophaga pitiayumi*, *Tachyphonus luctuosus*, and *Rhodospingus cruentus*. All these were in the canopy of semi-deciduous forest. Previously, in July 2018 and August 2019, R. Piana and C. Devenish, and J. Schmitt and G. Bravo (pers. comm.), observed one and three individuals of this species, respectively (Fig. 11). Both observations occurred in the same area as our records.

C. spiza is widely distributed in the Neotropics, from Mexico to Bolivia and northern Argentina. It inhabits the canopy and edges of humid forest and secondary vegetation (Zamudio & Burns 2020). In Peru, it is quite common in the Amazon basin up to 1600 m (Schulenberg *et al.* 2010). The southernmost documented record of this species on the western slope of the Andes is from the Buenaventura Reserve (eBird 2020), in the El Oro province, south Ecuador, c. 50 km north of our observations.

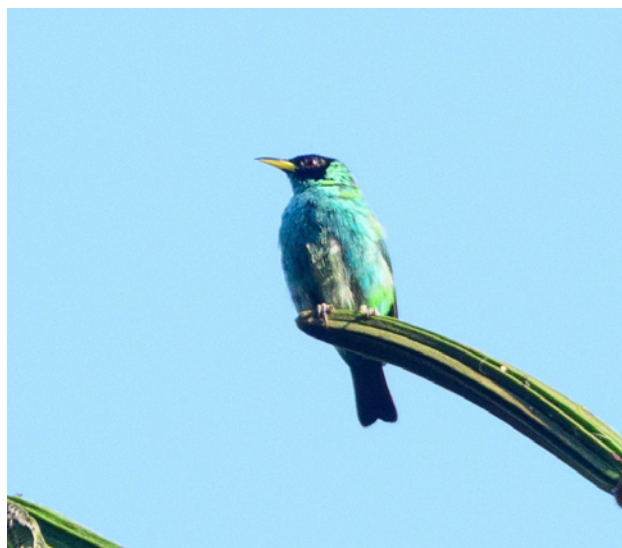


Figura 11. Male *Chlorophanes spiza* at El Caucho Biological Station. August 31, 2019 (Photo: Jonathan Schmitt)

Palm Tanager (*Thraupis palmarum*)

On March 18 and 19, 2013, along the trail from Campo Verde to Cotrina, we saw two individuals of *T. palmarum* that were identified by their general olive coloration, thick, black beak, and light wing coverts contrasting with the black primary and secondary wing feathers.

T. palmarum is distributed from southern Nicaragua to northwestern Argentina and southern Brazil. The species inhabits the canopy of humid and secondary forests and is generally associated with palm trees. In Peru, the species is very common in the Amazon basin and it is found up to 1600 m (Schulenberg *et al.* 2010). This record is the first for the species west of the Andes in Peru, and it has been observed in later years in the same area at least five times (eBird 2020). More recently, the species has been recorded in montane forest close to the town of Canchaque in the department of Piura, approximately 180 km southeast from our observation (Saldaña *et al.* 2016).

DISCUSSION

Wiedenfeld *et al.* (1985) and Parker *et al.* (1995) in the late 1970s and mid-1980s, respectively, completed the first bird inventories around the localities of El Caucho and Campo Verde inside the CANP. This area then remained unsurveyed for almost 15 years until researchers and birdwatchers started revisiting it in the year 2000. To date there are ten published articles and reports (Whiffin & Sadgrove 2000, Walker 2002, Piana *et al.* 2006, Mischler 2006, Have 2009, Piana *et al.* 2010, Sánchez *et al.* 2012, Noblecilla 2015, Olaya-Preciado 2018, Comité de Registros de Aves Peruanas 2019), that, together with this note, add 32 new species for the area. Of these species, 14 are new for the country, and 18 are new to the west slope of the Peruvian Andes.

In western South America, all the species we include in this report, except for *R. sociabilis* and *P. ludovicianus*, occur in the southern portion of the Choco rainforest, and adjacent Tumbesian region (Stattersfield *et al.* 1998). The presence of these species in the Tumbes department might be explained, in combination with other factors (e.g., intensive land-use change in western Ecuador; Rivas *et al.* 2020), by changes in precipitation regimes in northwestern Peru and southwestern Ecuador (Marengo *et al.* 2010). For example, from 1965 to 2011, precipitation in the Tumbes department has increased by 20%, and it is projected to increase another 15% by 2030 (Martínez & Céspedes 2017). These observed changes in rainfall in the region have resulted in more humid conditions in extreme northwestern Peru, and could be promoting the southward expansion of these species' ranges.

Further research is needed in this region to better understand what mechanisms are driving these recent range expansions, and

what further changes in bird community composition are expected in the future. Moreover, addressing the impacts of climate change on highly threatened ecosystems such as the Tumbesian region should be a research priority so more precise conservation strategies can be implemented here.

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