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A NEW SPECIES OF THE GENUS *PRISTIMANTIS* (ANURA: CRAUGASTORIDAE) FROM SOUTHWESTERN COLOMBIA

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Abstract: A new species of *Pristimantis* from Pasto, Departamento de Nariño, Colombia, is described. This new species is phenetically similar to *Pristimantis racemus*, *P. obmutescens, P. ortizi* and *P. thymelensis*; from which it can be distinguished by external morphology and distinctive coloration pattern. It remains evident that southwestern Colombia is one of the least studied regions in the country, with numerous taxonomic novelties.

Key words: *Pristimantis orcesi* species-group, Amphibia, taxonomy, systematics, Municipio de Pasto, Departamento de Nariño.

Resumen: J.J. Mueses-Cisneros, I.V. Perdomo-Castillo y B. Cepeda-Quilindo. "Una nueva especie del género *Pristimantis* (Anura: Craugastoridae) del suroccidente de Colombia". Se describe una nueva especie de *Pristimantis* del municipio de Pasto, Departamento de Nariño, Colombia, fenéticamente similar a *Pristimantis racemus*, *P. obmutescens, P. ortizi* y *P. thymelensis*; de las cuales puede ser fácilmente distinguida por su morfología externa y patrón distintivo de coloración. Se evidencia que el suroccidente de Colombia sigue siendo una de las regiones menos estudiadas del país, con numerosas novedades taxonómicas.

Palabras clave: Grupo de especies *Pristimantis orcesi*, Amphibia, taxonomy, systematics, Municipio de Pasto, Departamento de Nariño.

INTRODUCTION

The *Pristimantis orcesi* species-group was recognized by Lynch (1981) for a series of paramo frogs from Colombia and Ecuador. It is characterized by the presence of an anteriorly exposed frontoparietal fontanelle (Lynch *et al.* 1996, Guayasamin 2004a), small to medium-sized (SVL in females to 36 mm), robust bodies, narrow heads, short snouts, and moderately short limbs. Finger I shorter than Finger II; Toe V much longer thanToe III, extending to the distal edge of the distal subarticular tubercle on Toe IV. Digital discs expanded. Tympanic annulus and membrane differentiated (absent in *P. thymelensis*). Cranial crests absent, except weakly developed in *P. thymelensis*. Vomerine teeth present (absent in *P. orcesi*), and vocal slits present (Hedges *et al.* 2008).

This group currently contains eight species (Hedges *et al.* 2008): *P. huicundo* (Guayasamin *et al.* 2004) from the montane forest and paramo in the Andes of northern Ecuador at elevations of 3229–3700 m; *P. obmutescens* (Lynch 1980) from paramos between departamentos Cauca and Huila, Colombia; *P. orcesi* (Lynch 1972) from paramos to the north and east of Guaranda, and to the west of Quito, Ecuador, at elevations between 3160-3800 m; *P. ortizi* (Guayasamin *et al.* 2004) from high altitudes in the Cordillera Oriental in northeastern Ecuador; *P. racemus* (Lynch 1980) from the high-altitude along the Cordillera Central between departamentos del Valle del Cauca and Quindío-Tolima border; *P. simoteriscus* (Lynch *et al.* 1996) from the paramos of the central and southern Cordillera Central of Colombia; *P. simoterus* (Lynch 1980) from Northern and northeastern flanks of Cordillera Central at elevation of 3200-4100 m, departments of Caldas, Risaralda, and Tolima, Colombia at elevations between 2700-4350 m; and *P. thymelensis* (Lynch 1972) from paramos in southern Colombia and northern Ecuador, at elevations between 3310-4150 m.

Explorations at Reserva Natural Privada Castelví, Corregimiento de El Encano, Municipio de Pasto, Departamento Nariño in September 2005, revealed seven specimens of a putative undescribed species assignable to the *Pristimantis orcesi* species-group; however, only two of these specimens were adults, so the species was not described at that time. In latter dates (December

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2006, January 2007, March 2011, December 2011, February 2012, June 2012) an adequate number of specimens were found at this locality and nearby areas, and they were used for appropriate comparisons, which provided evidence that this population belong to a new species that we describe herein.

MATERIALS AND METHODS

Specimens were euthanized in the field by immersion in chloretone, fixed in 10% formalin, and preserved in 70% ethanol, as suggested by Simmons (2002). The format for the description follows standards established by Lynch and Duellman (1997) and diagnostic characters of Duellman and Lehr (2009). The following abbreviations are used: EN (eye to nostril distance), HW (greatest head width), IOD (interorbital distance), SVL (snout–vent length), and JJM: field numbers of Jonh Jairo Mueses-Cisneros. Morphological measurements were taken as described in Guayasamin (2004b). Measurements, taken with digital calipers under a microscope by the senior author and rounded to the nearest 0.1 mm. Means are reported ± one standard error. Sexual maturity was determined by the presence of eggs or convoluted oviducts in females and by the presence of vocal slits and internally by the condition of the gonads in males. The occurrence of the exposed frontoparietal fontanelle was determined by direct examination after incision and removal of the skull skin and by X-ray images acquired with a Thermo Kevex x-ray machine, Model PXS5-925EA-LV with the following settings: max volt: 80 Kv, max power: 8 Watts, and max current: 0,18 mA. The specimens are housed in the herpetological collection of the Universidad de Nariño, Pasto, Colombia (PSO-CZ).

TAXONOMIC RESULTS

***Pristimantis farisorum* sp.nov.**
(Figs. 1, 2)

Holotype. PSO-CZ 1975, adult female collected by J.J. Mueses-Cisneros, I.V. Perdomo-Castillo and Belisario Cepeda-Quilindo on 17 February 2012.

FIG. 1. *Pristimantis farisorum* sp. nov. Dorsolateral view of Holotype, PSO-CZ 1975, adult female, 41.6mm, SVL. Photo by Jonh Jairo Mueses-Cisneros.

Pristimantis farisorum *sp. nov. Vista dorsolateral del Holotipo, PSO-CZ 1975, hembra adulta, 41.6mm, LRC. Foto por Jonh Jairo Mueses-Cisneros.*

Type locality. COLOMBIA, Departamento de Nariño, Municipio de Pasto, corregimiento El Encano, Vereda El Socorro, Reserva Natural Privada Castelví (01º10'40.5"N 77º08'52.1"W), 3074m.

Paratypes. All from COLOMBIA, Departamento de Nariño, Municipio de Pasto, Corregimiento de El Encano. (Adult females): Same locality data as holotype: PSO-CZ 366, collected by J.J. Mueses-Cisneros and Belisario Cepeda-Quilindo on 20 September 2005; PSO-CZ 1914, collected by J.J. Mueses-Cisneros and Belisario Cepeda-Quilindo on 14 January 2007; PSO-CZ 1917, collected by Belisario Cepeda-Quilindo on 21 December 2006; Vereda Santa Teresita, Reserva Natural Encanto Andino (1°04'46.48"N, 77°07'8.38"W), 2780 m: PSO-CZ 1920 collected by Edna Calpa 20 March 2011; PSO-CZ 1976 collected by Raúl Harvey Legarda on 4 June 2012. (Adult males): Same locality data as holotype: PSO-CZ 367, collected by J.J. Mueses-Cisneros and Belisario Cepeda-Quilindo on 20 September 2005; PSO-CZ 1915, collected by J.J. Mueses-Cisneros and Belisario Cepeda-Quilindo on 14 January 2007; PSO-CZ 1917, collected by J.J. Mueses-Cisneros, I.V. Perdomo-Castillo and Belisario Cepeda-Quilindo on 17 February 2012; Vereda Santa Teresita, Reserva Natural Encanto Andino (1°04'46.48"N 77°07'8.38"W), PSO-CZ 1919, collected by Edna Calpa on 21 December 2011.

Referred specimens. (Juveniles and Subadult). Same locality data as holotype: PSO-CZ 368, 370–371, 376, 381, collected by J.J.

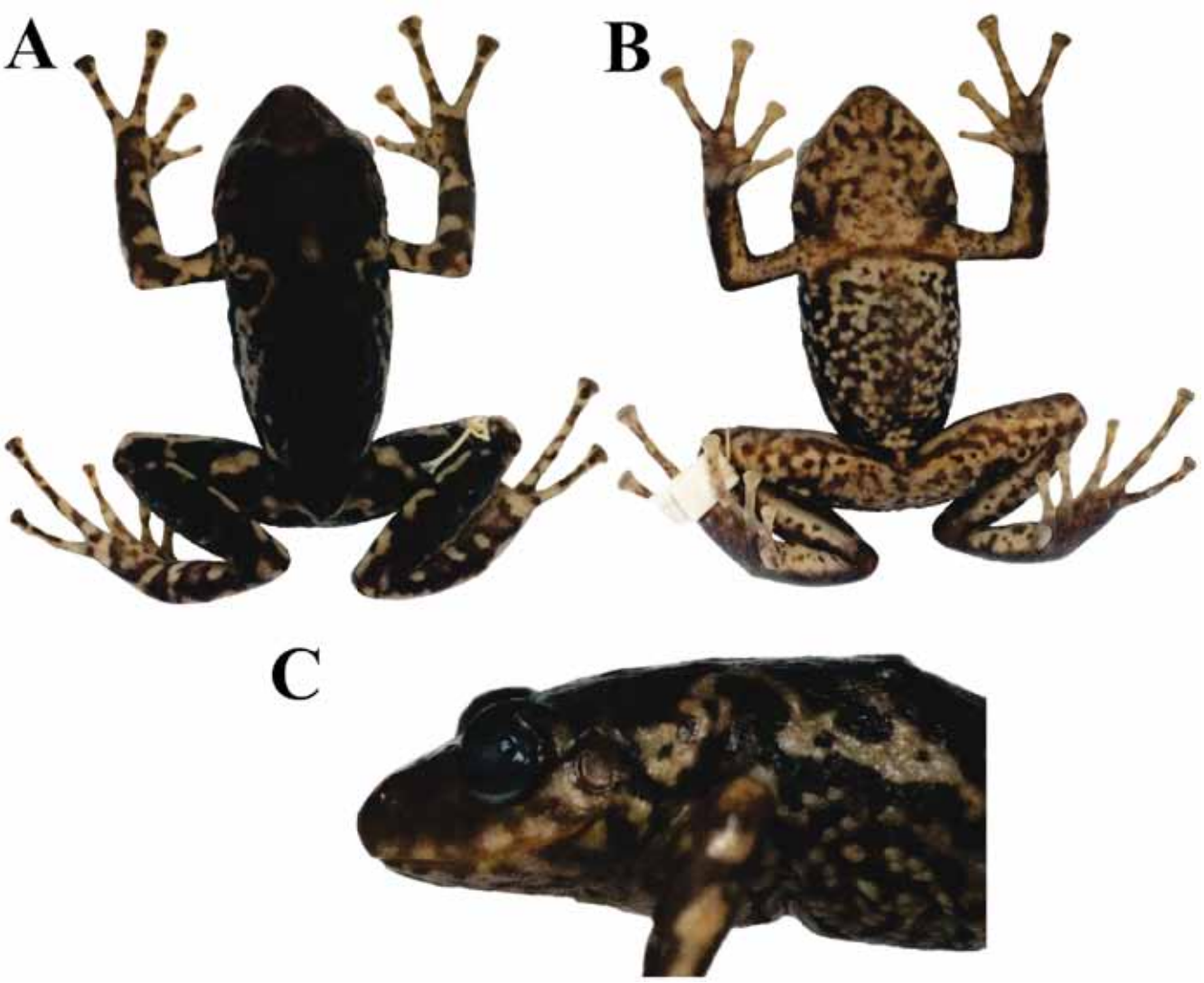

FIG. 2. Dorsal view (**A**), ventral view (**B**), and lateral view of head (**C**) of *Pristimantis farisorum* sp.nov., in ethanol 70%. Holotype, PSO-CZ 1975, adult female, 41.6mm, SVL. Photos by Jonh Jairo Mueses-Cisneros.

*Vista dorsal (**A**), ventral (**B**), y lateral de la cabeza (**C**) de* Pristimantis farisorum *sp.nov., en etanol al 70%. Holotipo, PSO-CZ 1975, hembra adulta, 41.6mm, LRC. Fotos por Jonh Jairo Mueses-Cisneros.*

Mueses-Cisneros and Belisario Cepeda-Quilindo on 20 September 2005; PSO-CZ 1916, collected by J.J. Mueses-Cisneros and Belisario Cepeda-Quilindo on 14 January 2007; PSO-CZ 1918, collected by Belisario Cepeda-Quilindo on 21 December 2006; PSO-CZ 1978–80, collected by J. J. Mueses-Cisneros, I.V. Perdomo-Castillo and Belisario Cepeda-Quilindo on 17 February 2012.

Diagnosis. 1) Dorsal skin granular, large flat warts on flanks and lower back, ventral skin coarsely areolate; dorsolateral folds absent; 2) tympanum distinct, oval, 34.0–45.7% eye length; 3) snout subacuminate in dorsal view, round in lateral profile; canthus rostralis straight; 4) IOD near 1.5 broader than upper eyelid, without tubercles; cranial crests absent; no tubercles on eyelid; 5) dentigerous processes of vomers prominent, oblique and moderately separated from each other; 6) males with vocal slits and subgular vocal sac, nuptial pads absent; 7) Finger I shorter than second; fingers II–IV bearing expanded discs and large ventral pads; pads of Finger III broader than tympanum; 8) fingers lacking lateral fringes; 9) no distinct ulnar tubercles; 10) inner tarsal surface bearing one tubercle, poorly defined; outer edge of tarsus without tubercles; no prominent heel tubercles; 11) elongated inner metatarsal tubercle, 2–3 times size of rounded outer; numerous supernumerary plantar tubercles, poorly defined; 12) toes bearing narrow lateral fringes, not webbed; toe pads expanded, smaller than those of fingers; Toe V much longer than III; 13) dorsum dark brown to black; with irregulars and elongated orange markings, mainly on dorsolateral region, flanks, lower back, shanks and thighs; limbs, fingers and toes barred with dark brown and orange; ventrally dark brown with irregular brown-gray stains. Iris brown-black; 14) adults moderated-sized, SVL 28.8–31.3 mm ($\bar{x}$= 29.6 ± 1.4, n = 4) in males, 38.4–42.3 mm ($\bar{x}$ = 40.3 ± 1.7, n =6) in females.

Comparisons with similar species. *Pristimantis farisorum* is similar to *P. racemus*, *P. obmutescens*, *P. ortizi* and *P. thymelensis*, all members of the *P. orcesi* species-group (Guayasamin 2004a, Hedges *et al.* 2008). *Pristimantis farisorum* differs from all of them by its unique, distinctive coloration pattern (flanks with irregular and elongated orange markings) (Fig. 1); and fingers lacking lateral fringes (fingers bearing prominent, fleshy and thick lateral fringes in *P. racemus*, *P. obmutescens*, *P. ortizi* and *P. thymelensis*). Additionally, *Pristimantis farisorum* differs from *P. racemus*, *P. obmutescens* and *P. ortizi* by having snout subacuminate in dorsal view (rounded in *P. racemus*, *P. obmutescens* and *P. ortizi*); from *P. racemus* and *P. obmutescens* by having a subgular vocal sac and vocal slits (lacking in *P. racemus* and *P. obmutescens*); from *P. racemus* and *P. ortizi* differs by having toes bearing narrow lateral fringes, no fleshy (toes with fleshy lateral fringes in *P. racemus* and *P. ortizi*); from *P. racemus*, *P. ortizi* and *P. thymelensis* differs by its larger body size [SVL 25.2–30.2 ($\bar{x}$ =26.9, n= 17) in males and 29.9–37.9 ($\bar{x}$ =34.4, n=16) in females of *P. racemus*; SVL 18.1–24.7 mm ($\bar{x}$ =21.6, n=19) in males and 24.3–29.2 mm SVL ($\bar{x}$ =26.7, n =7) in females of *P. ortizi*; SVL 21.4–25.1 mm in males and 28.0–33.5 mm in females of *P. thymelensis*]; from *Pristimantis obmutescens* and *P. thymelensis* differs by having the tympanum visible (concealed beneath skin in *P.*

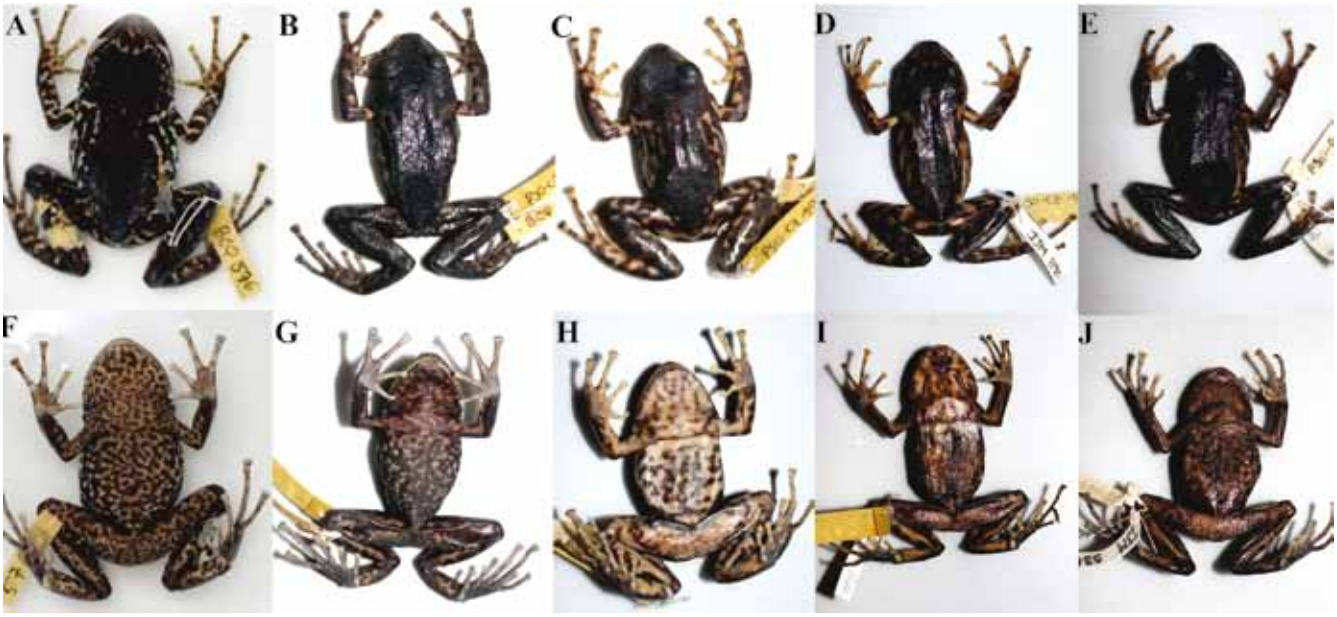

FIG. 3. Color variation in alcohol, in adult females of *Pristimantis farisorum* sp. nov. A and F (PSO-CZ 1976); B and G (PSO-CZ 1920); C and H (PSO-CZ 1917); D and I (PSO-CZ 1914); E and J (PSO-CZ 366).Photos:Belisario Cepeda-Quilindo; except A and F, by Jonh Jairo Mueses-Cisneros.

Variación de la coloración en alcohol, en hembras adultas de Pristimantis farisorum *sp. nov. A y F (PSO-CZ 1976); B y G (PSO-CZ 1920); C y H (PSO-CZ 1917); D e I (PSO-CZ 1914); E y J (PSO-CZ 366). Fotos: Belisario Cepeda-Quilindo; excepto A y F, por Jonh Jairo Mueses-Cisneros.*

obmutescens and *P. thymelensis*). Finally it differs from *P. ortizi* by having the dentigerous processes of vomers prominent (vomerine teeth absent or reduced and difficult to see in *P. ortizi*); from *P. racemus* by lacking paravertebral folds (sinuous paravertebral folds sometimes evident in *P. racemus*); from *P. thymelensis* by having skin of dorsum granulated (areolated in *P. thymelensis*) and lacking ridges paravertebral (present in *P. thymelensis*).

Etymology. The specific name recognizes Dick and Marilyn Faris, in gratitude for their enormous contribution towards conservation and because of the support to JJM's work and the research carried out by him and his team (Fundación para la Investigación en Biodiversidad Amazónica- FIBA). Their contribution is helping us conserve and increase our knowledge of the amphibian fauna from southern Colombia and has allowed us to discover several new species such as this one.

Description. The proportions are based on four adult males and six adult females. Head wider than body in males and females subadult, narrower than body or as broad as body in adult females; head slightly wider than long; HW in males 41.6–43.8% ($\bar{x}$= 43.9 ± 0.9) of the SVL, 38.0–40.6% ($\bar{x}$ = 39.6 ± 1.1) in females; snout subacuminate in dorsal view, rounded in lateral profile; nostril protuberant; directed dorsolaterally; EN 83.5–90.0% ($\bar{x}$ = 86.7 ± 3.1) of the eye diameter in males, 85.4–90.4% ($\bar{x}$ = 87.6 ± 2.3) in females; canthus rostralis evident, straight; loreal region concave; lips not flared; interorbital region wider than upper eyelid; upper eyelid width 78.9–85.3% ($\bar{x}$ = 81.6 ± 2.7) IOD in males and 72.6–79.2% ($\bar{x}$ = 75.4 ± 3.0) in females; upper eyelid lacking tubercles; cranial crests absent; supratympanic fold swollen, obscuring upper edge of tympanum; tympanum small, oval; tympanum length 40.0–45.7% ($\bar{x}$ = 41.8 ± 2.7) eye length in males and 34.0–39.6% ($\bar{x}$ = 36.9 ± 1.9) in females.

Choanae rounded, not concealed by palatal shelf of maxillary arch; dentigerous processes of vomers prominent, oblique and moderately separated from each other, median and posterior to choanae, each bearing row of 4–7 teeth; tongue oval, notched posteriorly; 2/3 of its extension adherent to floor of mouth; males with vocal slits and subgular vocal sac; long vocal slits, lateral to tongue.

Dorsum granulated, skin of flank and lower back bearing large flat warts, limbs with some low granules; skin of venter coarsely areolate; discoidal folds absent; dorsolateral and postorbital folds absent; cloacal region with some scattered warts; 3–4 ulnar tubercles present, poorly defined.

Hands in males 33.0–35.1% ($\bar{x}$ = 33.9 ± 0.9) of SVL, 32.1–36.3% ($\bar{x}$ = 34.7 ± 1.6) of SVL in females; palmar tubercle bifid, each prolongation of this as long as length of thenar tubercle; supernumerary palmar tubercles present, low and poorly defined; subarticular tubercles large and prominent, rounded to oval; fingers lacking narrow lateral fringes; with 3–4 ulnar tubercles poorly defined;

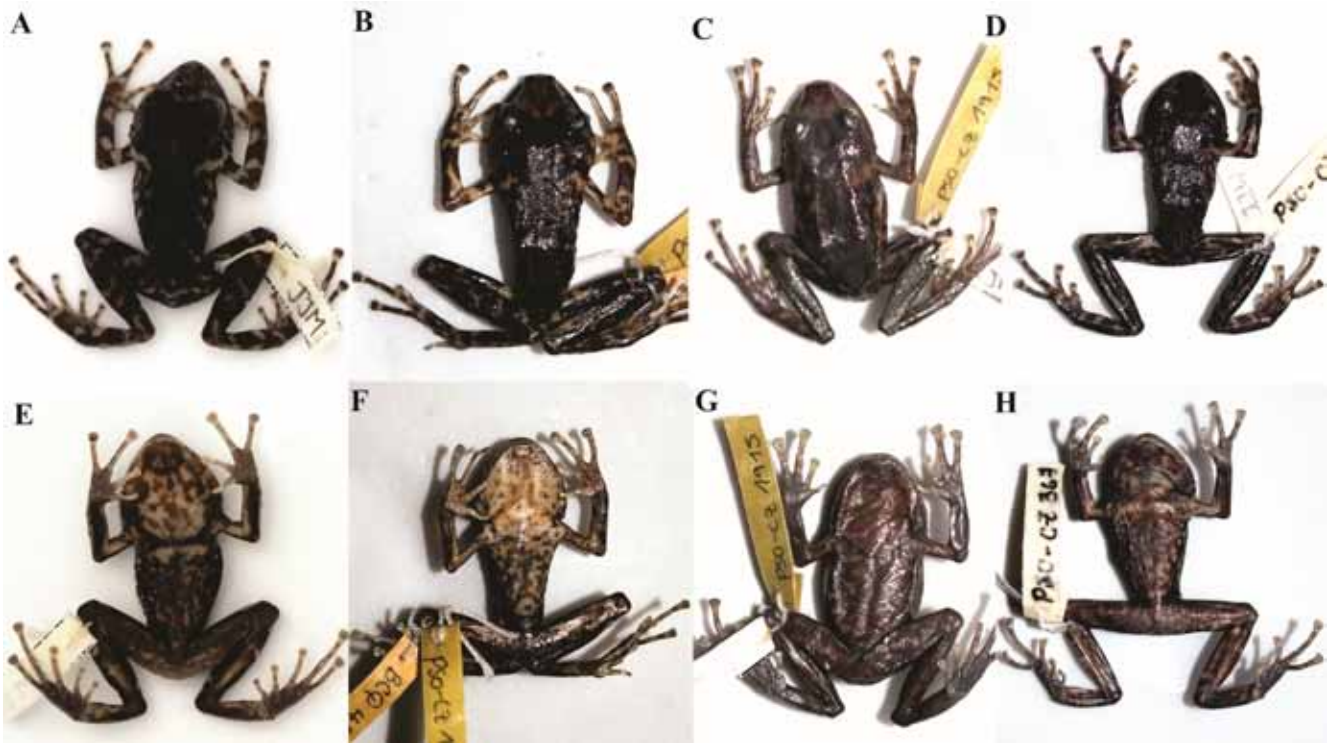

FIG. 4. Color variation in alcohol, in adult males of *Pristimantis farisorum* sp. nov. A and E (PSO-CZ 1977); B and F (PSO-CZ 1919); C and G (PSO-CZ 1915); D and H (PSO-CZ 367). Photos: Belisario Cepeda-Quilindo; except A and E, by Jonh Jairo Mueses-Cisneros.

Variación de la coloración en alcohol, en machos adultos de Pristimantis farisorum *sp. nov. A y E (PSO-CZ 1977); B y F (PSO-CZ 1919); C y G (PSO-CZ 1915); D y H (PSO-CZ 367). Fotos: Belisario Cepeda-Quilindo; excepto A y E, por Jonh Jairo Mueses-Cisneros.*

discs on all fingers, rounded on Finger I, extensively expanded on Fingers II–IV; disc of Finger III larger than tympanum (tympanum diameter in males 82.9–88.9% ($\bar{x}$ = 87.0 ± 2.9) of disc of Finger III, 72.7–84.4% ($\bar{x}$ = 77.5 ± 4.6) of disc of Finger III in females); discs on fingers expanded, bearing large ventral pads; Finger I shorter than II; males without nuptial pad.

Foot in males 52.1–53.0% ($\bar{x}$ = 52.6 ± 0.4) SVL, 50.4–56.3% ($\bar{x}$ = 52.5 ± 2.3) in females; inner tarsal fold absent, inner tarsal surface bearing one tubercle, poorly defined; outer edge of tarsus without tubercles; knee and heel without prominent tubercles; inner metatarsal tubercle elongated, near 2–3 times size of rounded outer; supernumerary plantar tubercles numerous, poorly defined; subarticular tubercles large and prominent, rounded to oval; toes lacking narrow lateral fringes; no webbing; discs on all toes, discs of toes II–V expanded, larger than those of fingers; Toe V much longer that Toe III; tip of Toe V reaches to the distal border of the distal subarticular tubercle of Toe IV (condition C; Lynch and Duellman 1997).

Color in alcohol. Dorsum dark brown with irregulars and elongated cream markings, mainly on cephalic and body flanks (Fig. 2C), dorsolateral region, interorbital region, shanks and thighs; limbs, fingers and toes barred with dark brown and cream (Fig. 2A), ventrally with dark brown and cream reticulations, which can vary being predominantly dark brown as in most specimens, or predominantly cream as in some specimens (Figs. 3–4); with a dark brown mark forming a "><"-shaped pattern on the chest (Fig. 2B), which can vary in intensity (Figs. 3–4). Some specimens, especially males (Fig. 4) have a dark brown spot on the tip of the chin.

Color in life. Dorsum dark brown to black with irregular, elongated, orange markings, mainly on dorsolateral region, flanks, lower back, shanks and thighs; limbs, fingers and toes barred with dark brown and orange; ventrally dark brown with irregular brown-gray stains. Iris brown-black (Fig. 1).

Measurements of holotype (in mm).SVL 41.6 ; HW 16.7; head length 16.3; IOD 4.8; upper eyelid width 3.8; internarial distance 4.0; tympanum diameter 1.8; eye diameter 4.9; eye–nare distance 4.2; nare–snout distance 1.5; shank length 21.9; foot length 22.0; hand length 15.1.

Measurements of type series. SeeTable 1.

Natural history. All the specimens were collected at night on vegetation (0.3–2 m above the ground) along small paths inside the forest. During intensive searches in February 2012, we did not find additional specimens in the relict forest from the type locality where the specimens were found in 2005 (field notes JJM, 2012).

TABLE 1. Measurements (in mm) of the type series of *Pristimantis farisorum* sp.nov. Range of measurement (mean ± standard deviation).
TABLA 1. Medidas (en mm) de la serie típica de Pristimantis farisorum *sp.nov. Rango de medidas (media ± desviación estándar).*

	Males (n = 4)	Females (n = 6)
SVL	28.8 – 31.3 (29.4 ± 1.2)	38.4 – 42.3 (40.8 ± 1.5)
Head width	12.5 – 13.0 (12.6 ± 0.3)	15.5 – 16.7 (16.2± 0.5)
Head length	11.6 – 12.4 (12.0 ± 0.4)	14.8 – 16.3 (15.6 ± 0.6)
Interorbital distance	3.4 – 3.6 (3.5 ± 0.1)	4.6 – 4.9 (4.8 ± 0.1)
Upper–eyelid width	2.8 – 2.9 (2.9 ± 0.1)	3.5 – 3.9 (3.6 ± 0.2)
Internarial distance	3.1 – 3.3 (3.2 ± 0.1)	3.5 – 4.1 (3.7 ± 0.3)
Tympanum diameter	1.4 – 1.6 (1.5 ± 0.1)	1.6 – 1.9 (1.8 ± 0.1)
Eye diameter	3.5 – 4.0 (3.6 ± 0.2)	4.5 – 4.9 (4.7 ± 0.2)
Eye–nare distance	3.0 – 3.3 (3.1 ± 0.1)	4.0 – 4.3 (4.2 ± 0.1)
Nare–snout distance	0.9 – 1.4 (1.0 ± 0.2)	1.1 – 1.7 (1.4 ± 0.2)
Shank length	16.1 – 17.4 (16.7 ± 0.5)	19.9 – 22.4 (21.5 ± 0.9)
Foot length	15.0 – 16.6 (15.5 ± 0.7)	20.6 – 22.0 (21.4 ± 0.5)
Hand length	9.5 – 10.6 (10.0 ± 0.5)	13.1 – 15.2 (14.2 ± 0.9)

Explorations in September 2005 yielded seven specimens (two adults); in December 2006 we found two specimens (one adult); three specimens (two adults) in January 2007; one adult in March 2011 and December 2011; and finally five specimens (two adults) in February 2012 and one adult in June 2012, for a total of 20 individuals known. Preliminary observations would suggest that deforestation, transformed for cattle raising and cultivated land, and the installation of electric lines may likely be a threat to forests at the type locality; however, we suggest the species to be listed as Data Deficient (DD) since there is still very little knowledge about its extent of occurrence, area of occupancy, status and ecological requirements.

Distribution. Known from El Encano, Nariño, both localities are in the Nudo de los Pastos region, Andes of southern Colombia, at elevations between 2780–3100 m. (Fig. 5). Due to the environmental conditions, geographical location and altitude, the region where *P. farisorum* is distributed is classified as tropical lower montane wet forest following Holdridge's life zone system (Holdridge 1967) with a bio-temperature of 12 °C and average annual rainfall of 2000 mm.

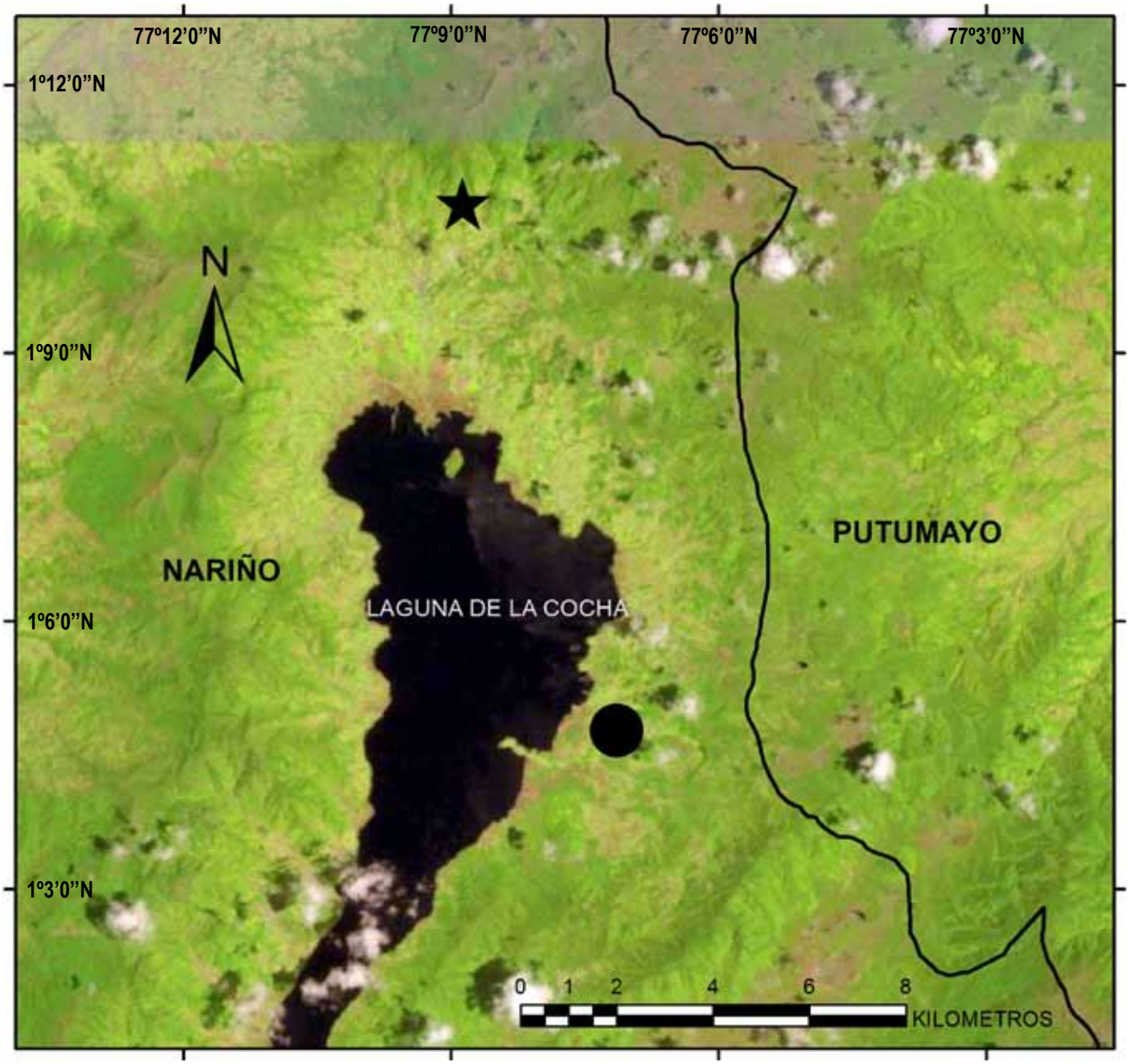

FIG. 5. Map of Southwestern Colombia illustrating the distribution of *Pristimantis farisorum* sp. nov. Star: Type locality; Black circle to the East of La Cocha Lagoon: Reserva Natural Encanto Andino.

Mapa del Suroccidente de Colombia indicando la distribución de Pristimantis farisorum *sp. nov. Estrella: Localidad típica; Círculo negro al Este de Laguna de La Cocha: Reserva Natural Encanto Andino.*

The vegetation is represented by Andean forest fragments with trees about 15 meters high and some patches of naturally regenerating vegetation. According to the vegetation cover and altitude we can identify the following ecosystems: Andean forest, subpáramo and páramo, including low or atypical páramo.

Remarks. Despite efforts made to date, Nariño, in southern Colombia, remains one of the least studied Departments of the country, being the amphibian fauna of the Reserva Natural Biotopo Selva Húmeda (Mueses-Cisneros and Moreno-Quintero 2012) of Barbacoas, Nariño, the only local amphibian fauna published to date. This work, together with the seminal contributions of Lynch and Duellman (1980), Lynch (1981), Lynch (1984), Duellman and Burrowes (1989), Lynch and Burrowes (1990), Salaman (1994), Lynch and Suárez-Mayorga (2004), Murillo-Pacheco *et al.* (2005), Rojas-R. and Gutiérrez-C. (2006); Mueses-Cisneros *et al.* (2007), Mueses-Cisneros *et al.* (2008), Mueses-Cisneros and Anganoy-Criollo (2008), Mueses-Cisneros (2009) and Coloma *et al.* (2010) are the contributions to the knowledge and understanding of the rich batrachofauna of Nariño.

Just in the last five years, six new amphibian species from Nariño have been described: *Epipedobates narinensis* by Mueses-Cisneros *et al.* (2008); *Hyloscirtus tigrinus* by Mueses-Cisneros and Anganoy-Criollo (2008); *Rhaebo andinophrynoides* by Mueses-Cisneros (2009); *Atelopus ardila* by Coloma *et al.* (2010); *Atelopus patuso* by Coloma *et al.* (2010); and now *Pristimantis farisorum* (this study). We have recently detected several new taxa and are in the process of completing their descriptions, thus adding several newly described or to be described species for the region of southwestern Colombia and Nariño specifically, confirming that this region is one of the least studied regions from the country.

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