

A new species of *Phalotris* (Serpentes, Colubridae, Elapomorhini) from Paraguay

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Abstract

A new species of *Phalotris* from the *nasutus* group, *Phalotris shawnella* sp. nov., is described. It can be distinguished from the other members of the group by having the following combination of characters: 1) fifth supralabial in contact with parietal, 2) vertebral stripe present, 3) yellowish nuchal collar (2 or 3 dorsal scales long), 4) dull reddish color of head, 5) broad, solidly or near solidly dark, lateral bands, 6) red-orange ventral scales lightly and irregularly spotted with black mainly on the posterior half of the body and 7) a bilobed, extremely asymmetrical hemipenis, with enlarged, curved, lateral spines. The species is only known from a recent specimen collected in the Cerrado zone of northeastern Paraguay at Rancho Laguna Blanca, San Pedro department, and two photographic records of live specimens from this and an additional locality. Limited ecological data based on observations of a captive individual, and a wild record, are provided, and a conservation assessment is performed for this extremely limited range Paraguayan endemic snake.

Key Words

endemic, hemipenis, *Phalotris nasutus*, *Phalotris shawnella* sp. nov.

Resumen

Se presenta la descripción de una nueva especie de *Phalotris* del grupo *nasutus*, *Phalotris shawnella* sp. nov. puede ser diferenciada de otros miembros del grupo por tener la siguiente combinación de caracteres: 1) quinta supralabial en contacto con la parietal, 2) presencia de una estría vertebral oscura, 3) collar nuchal amarillento (de 2 ó 3 escamas de ancho), 4) coloración rojiza en la cabeza, 5) ancha faja lateral muy oscura o bastante oscura, 6) escamas ventrales rojo-anaranjadas e irregularmente salpicadas de negro principalmente en la parte posterior del cuerpo, y 7) hemipenes bilobados, extremadamente asimétricos, con espinas laterales agrandadas y curvas. La especie se la conoce únicamente de un ejemplar colectado en el Cerrado en el noreste de Paraguay en el Rancho Laguna Blanca, departamento de San Pedro, además de dos registros fotográficos de ejemplares vivos, uno de esta misma localidad y otro de una localidad adicional. Se proveen datos ecológicos limitados, en base a observaciones de un ejemplar en cautiverio, y otro en la naturaleza, así como una propuesta de evaluación del estado de conservación para este endemismo de Paraguay de rango extremadamente limitado.

Palabras claves

endémico, hemipene, *Phalotris nasutus*, *Phalotris shawnella* sp. nov.

Introduction

The genus *Phalotris* Cope, 1862 is a group of small to medium-sized, semi-fossorial snakes, distributed largely in open areas of Brazil, Bolivia, Paraguay, Uruguay, and Argentina (Ferrarezzi 1993). Though Cope (1862) described the genus, it was treated as a synonym of *Elapomorphus* Wiegmann, 1843 by most authors for over a century, until its revalidation by Ferrarezzi (1993) who considered it a monophyletic group close to *Apostolepis* Cope, 1862. More recently, Grazziotin et al. (2012) using five mitochondrial and three nuclear gene sequences showed *Phalotris* as the most primitive genus within the Elapomorphini, although this conclusion was only weakly supported.

The genus is poorly represented in museum collections, but 14 species are currently recognized separated into three species groups (Ferrarezzi 1993): the *tricolor* group of five species (Jansen and Köhler 2008), the *bilineatus* group with four species (Puerto and Ferrarezzi 1993; Cacciali and Cabral 2015) and the *nasutus* group which includes five species (Moura et al. 2013). Following Entiauspe-Neto et al. (2021) we do not recognize the recently-described *P. cerradensis* Silveira, 2020 of this latter group as a valid species.

Two synapomorphies distinguish the *nasutus* group: a pointed snout with prominent rostral shield; and fusion between the second and third series of temporal plates (sometimes on only one side of the head) (Ferrarezzi 1993; Moura et al. 2013). The five known species all occur in the Cerrado region of central South America: *Phalotris concolor* Ferrarezzi, 1993, *Phalotris labiomaculatus* Lema, 2002, *Phalotris lativittatus* Ferrarezzi, 1993, *Phalotris nasutus* (Gomes, 1915), and *Phalotris nigrilatus* Ferrarezzi, 1993.

The only species of the *nasutus* group currently recorded from Paraguay is the endangered endemic *P. nigrilatus*. This species was described from a single female specimen (FML 709) collected at “Carumbé”, in the Paraguayan department of San Pedro, in 1973. The redescription of this species, including a description of the hemipenes, by Cacciali et al. (2007), was based on two further specimens (MNHN[M] 89 and 91) from “Primavera”, also San Pedro department (as the holotype), that were collected in 1957. Subsequently, additional specimens of *P. nigrilatus* that had been collected at the latter locality between 1954 and 1959 (NHM 1955.1.5.99, 1955.1.6.2–3, 1956.1.3.48–51, 1956.1.16.39–40, 1958.1.2.31, 1960.1.3.5–8, 1962.110) were also located (Cacciali et al. 2016). Cacciali et al. (2020) summarized the morphological data of these specimens, providing images of the first live specimen and discussing variation in pholidosis of the species.

During field work at Rancho Laguna Blanca (San Pedro department, northeastern Paraguay) (Fig. 1) two specimens of a *Phalotris nasutus* group snake were captured, that exhibited intermediate characters between *P. nigrilatus* and *P. lativittatus* (the latter not previously recorded in Paraguay). With the photographing of



Figure 1. Known localities for *Phalotris shawnella* sp. nov. in San Pedro department, Paraguay Square: type locality. Circle: additional locality at Colonia Volendam.

an additional specimen at a second locality (Colonia Volendam, San Pedro department) we undertook an extensive revision of specimens and the literature, and it became apparent that the differences were consistent and clear enough to indicate species level differentiation. Here we describe this as a new species of *Phalotris* of the *nasutus* group.

Materials and methods

Measurements of cephalic scales were taken on the left side of the body with dial callipers (accurate to 0.1 mm) and body lengths were measured with millimeter tape. Body lengths include snout-vent length (SVL) and tail length (TL). Descriptions of coloration are provided for live and fixed specimens. Ventral scale counts follow Dowling (1951). Dorsal scale counts and terminology follow Peters (1964), recording reduction. For supralabial counts, numbers in parentheses are those scales that contact the orbit and, likewise for infralabial counts, the numbers in parentheses are the scales in contact with the chin shields. First and second rows of temporals were counted. Paired structures are presented in right/left orientation. The right hemipenis of the specimen was everted directly after euthanizing, and hemipenial terminology follows Zaher (1999). We follow Ferrarezzi (1993) for the designation of the groups. Behavioral data were collected from observations on a specimen kept briefly in captivity.

Geographic and morphological data used for comparisons with other species within the *nasutus* group were extracted from Ferrarezzi (1993) for *P. nasutus*, Ferrarezzi (1993) and Silveira Vasconcelos and Gomes dos Santos (2009) for *P. lativittatus*, Moura

et al. (2013) for *P. concolor*, and Hamdan et al. (2013) for *P. labiomaculatus*. A list of examined specimens of *P. nigrilatus* and *P. multipunctatus* is provided in Appendix 1. Museum codes in the appendix are as follows: NHM Natural History Museum, London, UK; CZPLT Colección Zoológica Para La Tierra, Pilar, Paraguay. Given that information on *P. labiomaculatus* is not provided for specific specimens, we used pholidosis traits of this species for comparison of ranges but not for correlations. Morphological data were used to explore the variation in ventral and subcaudal scales among the species in the group.

Geographic baseline data (high resolution elevation maps) were taken from Consortium for Spatial Information (CGIAR-CSI), based on SRTM30 images (30 seconds resolution), available at www.diva-gis.org/gdata (Jarvis et al. 2008). Ecoregion definition was based on Olson et al. (2001). GIS processing was performed in Quantum GIS 3.12.0.

Results

Phalotris shawnella sp. nov.

<http://zoobank.org/253E6610-D61C-49B7-B79F-0625C8FB72A5>

Type locality. Rancho Laguna Blanca, Departamento San Pedro, Paraguay (Fig. 1).

Holotype. CZPLT-H-594; adult male; collected during digging on 3 January 2014 (J-P. Brouard); Rancho Laguna Blanca, 23°48'43"S, 56°17'49"W (WGS 84), 204 masl, San Pedro department. Specimen complete but damaged during collection, being severed approximately at mid-body (Fig. 2).

Diagnosis. *Phalotris shawnella* sp. nov. is assigned to the *nasutus* group on account of the pointed snout with prominent rostral shield and the fusion of the second and third temporal plates (Fig. 3A). The new species can be distinguished from all other members of the *nasutus* group by the combination of the following characters: 1) fifth supralabial in contact with parietal, 2) vertebral stripe present, 3) yellowish nuchal collar (2 or 3 dorsal scales long), 4) dull reddish color of head in adults, 5) broad, solidly or near solidly dark lateral bands, 6) red-orange ventral scales lightly and irregularly spotted with black, mainly on the posterior half of the body, and 7) a bilobed, extremely asymmetrical hemipenis, with enlarged, curved, lateral spines.

Phalotris shawnella sp. nov. is differentiated from the individual members of the *nasutus* group and the only species known to occur sympatrically with it (*P. multipunctatus*) as follows. (The characteristics of *Phalotris shawnella* sp. nov. are given first, followed by the comparison species in parentheses):

Phalotris nasutus Gomes, 1915: 1) broad black lateral bands running the length of the body (absent in *P. nasutus* or present vestigially on the posterior part of the body only); 2) supralabial concolorous with head (supralabials

paler than head); 3) ventral coloration red-orange with blackish smudges on the lateral part of the ventral scales, and scattered larger irregular black blotches (ventral immaculate pink); 4) ventral scales 185 in the male (ventrals in males < 182); 5) hemipenis bilobed and greatly asymmetrical (hemipenis only slightly asymmetrical).

Phalotris lativittatus Ferrarezzi, 1993. Superficially closest to this species within the *nasutus* group, which shows little variation in appearance across the large range and specimen series available (H. Braz in litt.). It can be reliably distinguished from *P. shawnella* sp. nov. with the following characters: 1) Supralabials uniformly brownish red (supralabials pale in *P. lativittatus*); 2) infralabials uniformly grey (infralabials with some dark markings); 3) scattered dark spots along the sides of the ventral scales (uniform pale ventral scales); 4) broad lateral band solid or nearly solid (lateral band with broad pale scale edges along entire length); 5) small spines at the lower part of the hemipenis (larger spines all along the body of the hemipenis).

Phalotris nigrilatus Ferrarezzi, 1993. Geographically, this is the only species that approaches *P. shawnella* sp. nov. within the *nasutus* group and is the only species with which it shares two key characters: a solid dark lateral band and dark markings on the ventral scales. *Phalotris nigrilatus* is otherwise phenotypically strikingly different and the significant specimen series now available indicates that it is morphologically very conservative (Cacciali et al. 2020). 1) Presence of clear pale collar (absence of collar in *P. nigrilatus*); 2) Ventral dark markings irregular, diffuse and widely-spaced, mainly on the posterior half of the body (ventral dark markings dense and typically regular, at the edges of each ventral scale and along the entire underside); 3) Chinshields pale contrasting with dark infralabials (chinshields dark, not contrasting with infralabials); 4) Head brick red dorsally with brownish suffusions in adult (head black in adult); 5) thin spines on the hemipenis (thick spines).

Phalotris concolor Ferrarezzi, 1993: 1) fifth supralabial in contact with parietal (separated in *P. concolor*); 2) presence of broad dark lateral band (lateral coloration uniformly red); 3) indistinct black vertebral line (dorsal coloration uniformly red); 4) ventral scales 185 in the male (212 ventral scales in the only male known).

Phalotris labiomaculatus Lema, 2002. 1) Supralabials uniformly brownish-red, concolorous with rest of head (spotted black and white supralabials in *P. labiomaculatus*); 2) wide dark lateral band (body coloration uniformly orange with no dark lateral band); 3) yellow nuchal collar 2–3 scales wide (white nuchal collar 3–4 scales wide); 4) dark vertebral line present (no vertebral line); 5) irregular dark spots on the ventral scales (uniformly white ventral scales).

Phalotris multipunctatus Puerto & Ferrarezzi, 1993. This is the only species of *Phalotris* known to occur sympatrically with *P. shawnella*. 1) Scales of broad lateral bands lacking white spotted pattern (scales of broad lateral bands with white tips giving spotted pattern



Figure 2. Dorsal (left) and ventral (right) overviews of the holotype of *P. shawnella* sp. nov. The specimen was accidentally severed during collection. Scale bar: 2 cm. (Photograph by Jeremy Dickens).

in *P. multipunctatus*); 2) red-orange ventral scales lightly and irregularly spotted with black, mainly on the posterior half of the body (ventral scales black with broad white posterior edges forming banded pattern); 3) head brick red (in adult) or black (in juvenile) lacking any white spotting (head black with profuse white spotting); 4) infralabials uniform (each infralabial with a single large white medial spot); 5) longitudinal dark mid-dorsal stripe present (longitudinal dark mid-dorsal stripe absent).

Description of holotype. An adult male in two pieces, SVL 260 + 140 (=400) mm; TL 65 mm (16.25% of SVL); one preocular, two postoculars; temporals 0+1/0+1; loreal absent; supralabials 6(2–3)/6(2–3), fifth supralabial broadly contacts parietal; infralabials 7(1–5)/7(1–5), 1st to 4th contacting the anterior pair of chinshields and 4th to 5th contacting the posterior pair of chinshields;

posterior chinshields longer and thinner than anterior chinshields; dorsal scale rows 15-15-15; scales smooth lacking apical pits; 185 ventrals; anal plate divided; 35 paired subcaudals. Yellow nuchal collar two to three scales wide and posterior black collar one to two scales wide. Slight trace of incomplete anterior black collar, most evident laterally. Rostral prominent and wider than it is long (1.9 × 2.6 mm); nasal complete, twice as long as greatest width (2.2 × 1.1 mm), contacting the rostral anteriorly, the 1st and 2nd supralabial ventrally, the preocular posteriorly, and the internasal and frontal dorsally; paired internasals slightly wider than they are long (1.4 × 2.2 mm); the second temporal longer than wide (3.1 × 1.4 mm); preocular longer than wide (1.3 × 0.9 mm), contacting 2nd supralabial; two postoculars as long as wide (approximately 0.6 × 0.6 mm), the lower



Figure 3. Coloration in life of *P. shawnella* sp. nov. **A.** Detail of the head of the holotype (CZPLT-H-594); **B.** Dorsolateral view of the holotype; **C.** Juvenile topotype specimen, kept in captivity and which later escaped; **D.** Live specimen photographed at Colonia Volendam. (A–C photographed by Jean-Paul Brouard, D photographed by Marko Fast).

postocular contacting the 3rd to 5th supralabials and only slightly smaller than the upper; single prefrontal twice as wide as long (2.3×4.2 mm); supraocular twice as long as wide (2.2×1.2 mm); frontals slightly longer than they are wide (3.6×2.8 mm); paired parietals twice as long as wide (6.0×3.1 mm). No differences in shape in right/left sides. Eye diameter 1.1 mm.

Hemipenis morphology. Semicalyculate and semicapitate (Fig. 4). Long, slender and bilobed, distinctly asymmetrical (right lobe -from asulcate view- 2/3 shorter), with enlarged, curved, lateral spines (13 to 15 large spines on each side). Sulcus furcation located in basal third and branches centrolinear. Note that right lobe (from asulcate view) is not fully everted, missing ca. 1 mm.

Color in life. Head brick red dorsally, with slightly darker suffusions, and uniformly brownish red on supralabials; red-orange ventrally with a greyish tinge to the first three infralabials, and whitish chin shields. A single row of scales on the posterior part of the dorsal surface of the head shows traces of a faint black anterior collar, mainly laterally. A broad yellow collar fades laterally and is followed by a thinner black collar (Fig. 3B). Neither collar is visible ventrally. Body coloration brick red dorsally, with a faint trace of a thin black vertebral line formed by a small dark spot anteriorly on each vertebral scale connected by a thinner black streak along the center of the scale that is variably conspicuous along the length of the body and fades out upon reaching the tail. Broad

black (to brownish-black) lateral lines running the length of the body from the posterior black collar to the tip of the tail. Lateral bands uniformly 3–3.5 scales wide over the entire length of the body, narrowing only slightly to 2 scales width on the tail. Ventrally red-orange, the edges of some of the ventral scales with small black, diffuse blotches (more prominent on the posterior ventral scales). Medial parts of the ventral scales are largely uniform apart from a very small number of often large black smudges, irregularly dispersed on the midbody region.

Color in preservative. Head fades to dull brownish (Fig. 2). Yellow collar to pinkish white. Black lateral and vertebral lines dark blackish-brown. Brick red of dorsum fades to brownish. Ventrally, the coloration is creamy-white, slightly yellower medially on the ventral scales and towards the tail, whiter laterally on the ventral scales and towards the head.

Variation. Described on the basis of an individual captured (on 9 December 2013) close to the collection locality of the holotype, which was photographed (Fig. 3C) and which later escaped. This individual was smaller and presumed to be juvenile female (weight 7 g), SVL 250 mm, TL 20 mm. It initially showed extensive black coloration on the head, broadly suffused with brick red dorsally, but the red areas became more prominent over its few months in captivity – a possible ontogenic change. The yellow nuchal collar was broader (3 to 4 scales wide) and paler, being creamy yellow as opposed to orange-yellow. The



Figure 4. Hemipenis of *P. shawnella* showing the asulcate (left) and sulcate (right) views. Gray bar = 3 mm. (Photograph by Paul Smith).

posterior black nuchal collar was absent dorsally, with the black mid-dorsal line forming a broad, smudgy spot covering an entire scale where it contacted the yellow nuchal collar, and bordered either side by a single orange scale between it and the black lateral bands. Dorsally, it was a deeper red, and ventrally it was a deeper orange-red, than the holotype. Dorsals 15-15-15, ventrals 197, subcaudals 26 (divided), temporals 0+1/0+1. Additional images of the known specimens are stored in FigShare (<https://doi.org/10.6084/m9.figshare.c.5804246.v1>).

Etymology. The species name is a combination of the first names of two remarkable young people who were born around the same time as Fundación Para La Tierra, and who inspired its founders to work towards the study and conservation of the Paraguayan fauna, so that one day they might inherit a better world: Shawn Ariel Smith Fernández and Ella Bethany Atkinson. The epithet is not Latin, is invariable (word in apposition) and is made up of elements of both of their names.

Ecology. The holotype was collected by day in Cerradón forest on a sandy substrate, close to disturbed bushy Cerrado and within 500 m of a lake shore (Fig. 5). The topotype (juvenile female) was kept in captivity for ecological observations, but unfortunately later escaped. Nine days after capture (on 18 December 2013) it was offered a Gymnophthalmid lizard (*Vanzosaura rubricauda*) with 0.7 g mass and 55 mm total length, which it had consumed by the following day. On 22 December 2013 it was offered another *V. rubricauda*, of similar size, and by the next day the tail of the lizard was missing; it later consumed the rest of the lizard on 25 December 2013. Two days later, the snake drank water.

A third individual showing the clear diagnostic characters of this species (Fig. 3D) was photographed in leaf litter 500 m outside of the settlement of Colonia Volendam (24°16'28.6"S, 57°01'25.3"W), San Pedro department (Fig. 1) by Marko Fast on 10 March 2019, at 13:36 h, in a small patch (0.29 km²) of degraded Cerradón forest. When encountered, the



Figure 5. Collection locality of holotype, Rancho Laguna Blanca, San Pedro department, Paraguay. (Photograph by Para La Tierra).

individual had both the head and tail hidden under the leaf litter. The specimen did not show any aggressive behavior, and was released after being photographed.

Discussion

Phalotris shawnella sp. nov. is a distinctive new species of *Phalotris* and is only the second member of the genus to show dark mottling on the ventral side – a character previously considered to be an autapomorphy of *P. nigrilatus* (Cacciali et al. 2007). In fact, with the discovery that the rostral and prefrontal scale contact is a variable character (Cacciali et al. 2020), the only

remaining autapomorphies of *P. nigrilatus* are the black head and the lack of a nuchal collar. *Phalotris shawnella* sp. nov. has less dark and less regular black pigmentation on the belly than *P. nigrilatus*, suggesting that it is perhaps a transitional form between this last species and the other members of the *nasutus* group. Indeed, *P. shawnella* sp. nov. is, in many ways, morphologically intermediate between *P. nigrilatus* and *P. lativittatus*. All three species (*P. lativittatus*, *P. shawnella* sp. nov., and *P. nigrilatus*) also have a low number of ventral scales when compared to other *Phalotris*, with only *P. nasutus* having less. Both *P. lativittatus* and *P. nigrilatus* are known from respectable specimen series that show they are both morphologically conservative and show minimal

variation (H. Braz pers. com.; Cacciali et al. 2020), whilst the three known examples of *P. shawnella* sp. nov. also share the same consistent diagnostic characteristics at both localities at which they have been recorded.

The *nasutus* group has not been the subject of any recent phylogenetic assessment, perhaps because of the relative scarcity of available specimens. The closest approach using molecular datasets, rendered a monophyletic clade that included *P. nasutus* and *P. lativittatus*, as separate from sampled members of the *tricolor* and *bilineatus* groups (Grazziotin et al. 2012; Figueroa et al. 2016). Ferrarezzi (1993) proposed a phylogenetic hypothesis based on morphology (mostly coloration patterns), and presented a cladogram, with *P. nigrilatus* as the most derived taxon, and *P. concolor* as the basal member of the *nasutus* group. Using the same traits, and including the new species described after Ferrarezzi (1993), we are able to complement that hypothesis (Fig. 6). Thus, we consider *P. labiomaculatus* to be a sister clade to the group of species exhibiting loss of the 1st temporal scale. *P. shawnella* sp. nov., together with *P. nigrilatus*, are the most derived members of this phylogeny.

P. shawnella sp. nov. is somewhat morphologically intermediate between *P. nigrilatus* and *P. lativittatus*, however hybridization between these two species can be conclusively ruled out. *P. nigrilatus* and *P. lativittatus* exhibit widely allopatric ranges, while the occurrence of three individuals showing characters of the new species at two different localities at which neither of these putative “parent species” has ever been recorded stretches plausibility. It is important to add that the coloration of *P. nigrilatus* and *P. shawnella* sp. nov. is apparently rather constant (Cacciali et al. 2020). Molecular genetic analyses will be required to reveal whether these two Paraguayan taxa are relicts of a wider ancestral distribution of the group. Currently GenBank has genetic sequences for only two species in the *nasutus* group (*Phalotris nasutus* and *P. lativittatus*), thus efforts still need to be made to collect tissue samples from the remaining species. Unfortunately, snakes are among the least sampled animals, and data on genetics is missing not only within the genus *Phalotris*, but also for most of the Paraguayan snakes (Cacciali et al. 2019).

The two known localities for *P. shawnella* sp. nov. (Laguna Blanca and Colonia Volendam) are separated by just 90.5 km, indicating an extremely restricted global range within a single Paraguayan department. Given that this is potentially a forest species and that the area in which it is known to occur is an agricultural matrix undergoing constant alteration, we suggest that this Paraguayan endemic snake is in need of urgent conservation action. A designation of Endangered (B1a,b,iii) fits the available data, this being a species with an estimated occurrence of less than 5000 km² and with a severely fragmented range that is known to exist at less than 5 localities and with a continuing decline inferred from the extent and quality of the habitat. Rancho Laguna Blanca, where the holotype was collected, was formerly officially protected (for a period of five years) as a Reserva Natural (Natural

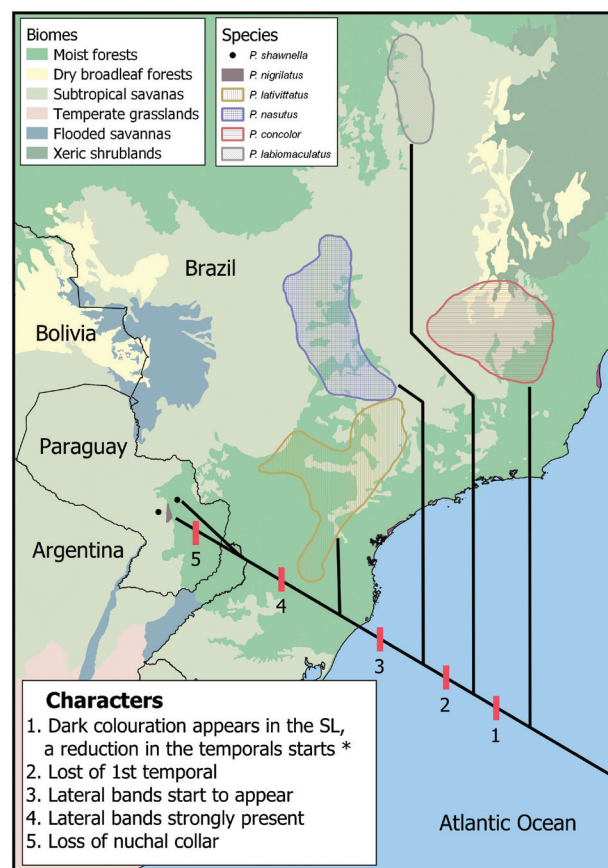


Figure 6. Suggested hypothesis of phylogenetic relationships among species within the *Phalotris nasutus* group, based on a first proposal by Ferrarezzi (1993). This hypothesis shows a probable change in characters during evolution. *Note that the reduction of 1st temporals is visible in *P. labiomaculatus* where the 1st temporal is rather small or absent in some specimens (Hamdan et al. 2013). Base map: biomes of the world, according to Olson et al. (2001)

Reserve) and given its high herpetological diversity it was recognized as the first Paraguayan Important Area for the Conservation of Amphibians and Reptiles (Smith et al. 2016). However, the property no longer counts with official protection and is currently for sale.

Phalotris nigrilatus and *P. shawnella* sp. nov. are two endangered (Cacciali et al. 2020), endemic Paraguayan snakes with extremely isolated ranges within San Pedro department. Additional field surveys are urgently required to improve our understanding of the ecological requirements of both taxa so that effective conservation measures can be implemented.

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Appendix 1

Examined specimens

Phalotris nigrilatus (11): PARAGUAY, SAN PEDRO DEPARTMENT: Colonia Primavera (NHM 1955.1.5.99, 1955.1.6.2–3, 1956.1.3.48, 1956.1.16.39–40, 1958.1.3.30, 1960.1.3.5–8).

Phalotris multipunctatus (2): Rancho Laguna Blanca (CZPLT 1138, 1145).

Phalotris shawnella sp. nov. (3): Rancho Laguna Blanca (CZPLT 594), one live topotype from Rancho Laguna Blanca and photographs of a third individual from Colonia Volendam.

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