

Three New *Atractus* (Serpentes: Dipsadidae) from the Andes of Colombia

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Three new species of *Atractus* are described from the northern Cordillera Central of Colombia. The new species, previously confused with older names, are easily distinguished from any currently recognized *Atractus* by unique combinations of morphological characters. Additionally, we provide comments on the *Atractus* diversity and distribution pattern in the Colombian Andes.

Se describen tres nuevas especies de *Atractus* del norte de la Cordillera Central de Colombia. Las nuevas especies, previamente confundidas con nombres antiguos, son fácilmente distinguidas de cualquier *Atractus* hoy reconocida por exhibir una combinación exclusiva de caracteres morfológicos. Adicionalmente, proveemos comentarios sobre la diversidad y el patrón de distribución de *Atractus* en los Andes colombianos.

MEMBERS of the cryptozoic snake genus *Atractus* are widely distributed, occurring from Panama to Argentina along the Andes, in tropical forests and open habitats (Peters and Orejas-Miranda, 1970; Giraudo and Scrocchi, 2000; Myers, 2003). This genus currently comprises approximately 120 species, most of them exhibiting restricted distributions or local endemism (Passos, 2008; Passos and Fernandes, 2008; Prudente and Passos, 2008). The taxonomic status of many species is confused and few revisions have been completed (Savage, 1960; Roze, 1961; Hoogmoed, 1980). *Atractus* diversity is high in the Andes, particularly in Colombia, but few comprehensive comparative works on those species have been published (Savage, 1960; Myers and Schargel, 2006; Passos and Arredondo, 2009).

The Colombian Andes are divided into three mountain ranges above 2°N: an accreted arc (Cordillera Occidental) and the ancient and modern fold-thrust belt (Cordilleras Central and Oriental). The Cauca-Patia graben separates Cordilleras Occidental and Central, and the Magdalena Valley divides the Cordilleras Central and Oriental (Gregory-Wodzicki, 2000). The Central Cordillera extends 1000 km on a north–south axis from Serrania San Lucas (Bolívar department) to Nudo de Almaquer (Nariño department), with mean elevations above 3000 m and volcanoes up to 5000 m. Additionally, the most important Colombian hydrographic systems (Magdalena, Cauca, and Patia rivers) have their sources in this Cordillera (Instituto Geográfico Agustín Codazzi, 1992). In the course of the revision of the genus *Atractus*, we found three new taxa from Cordillera Central, previously confused with *A. badius*, *A. lehmanni*, and *A. punctiventris*, that we describe here.

MATERIALS AND METHODS

Variation in meristic, morphometric, dentition, and hemipenis characters was assessed in samples from northern South America. Terminology for *Atractus* cephalic shields follows Savage (1960). Ventral scale counts follow Dowling (1951). The condition for the loreal scale follows Passos et al. (2007). Hemipenis terminology follows Dowling and Savage (1960), Myers and Campbell (1981), and Zaher (1999). Techniques for hemipenis preparation follow Pesantes (1994) and Myers and Cadle (2003). Sex was determined by observing the presence or absence of hemipenis through a ventral incision at the base of the tail. Measurements were taken with a dial caliper to the nearest 0.1 mm under stereoscope, except for snout–vent (SVL) and caudal lengths (CL), which were taken with a flexible ruler to the nearest millimeter. As segmental counts are known to be sexually dimorphic in *Atractus* (Savage, 1960; Passos et al., 2005), we employed an analysis of variance (ANOVA) to assess levels of sexual dimorphism in the new species. Assumptions of normality and homoscedasticity were evaluated using Kolmogorov-Smirnov and Levene's test, respectively (Zar, 1999). In cases where characters showed insufficient variation to justify these assumptions, non-parametric tests (Mann-Whitney U-test) were performed (Zar, 1999). Bilateral asymmetry is reported as left/right.

Atractus nasutus, new species

Figure 1, Table 1

Holotype.—CSJ 561, male, Colombia, Antioquia department, San Pedro municipality, Vereda La Lana, 06°26'52"N, 75°36'26"W, ca. 2600 m, 1954, Hermano Daniel.

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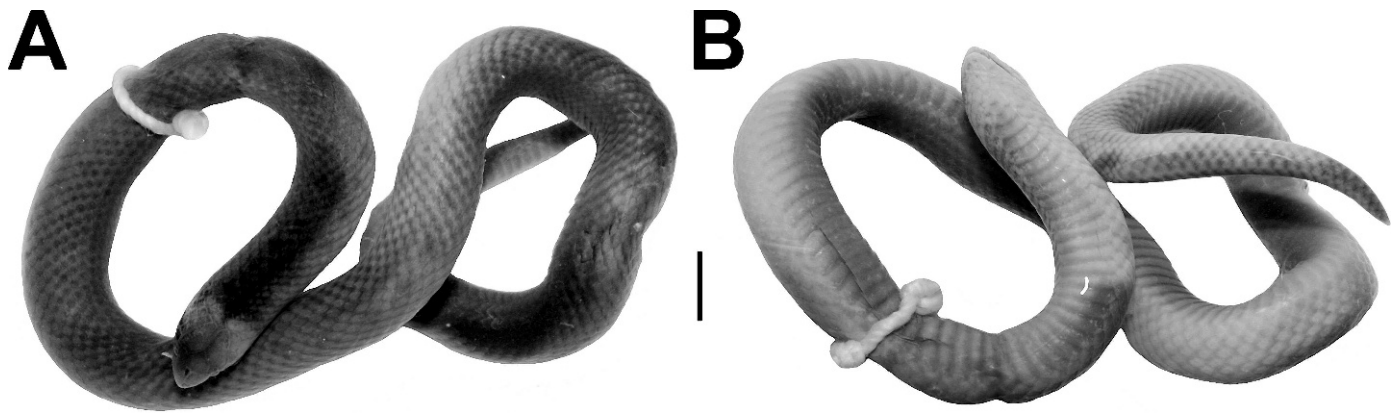


Fig. 1. Dorsal (A) and ventral (B) views of holotype of *Atractus nasutus* (CSJ 561). Scale = 5 mm.

Diagnosis.—*Atractus nasutus* is distinguished from all congeners by the following: 17/17/17 smooth dorsal scale rows; two postoculars; long loreal; 1+2 temporals; seven supralabials, third and fourth contacting orbit; seven infralabials, first four contacting chinshields; 12 maxillary teeth, lacking diastema; three or four gular scale rows; four preventrals; 130 ventrals in the single male; 23 subcaudals; reddish brown dorsum, except by a light occipital band; creamish brown venter; small body size (single male with 176 mm SVL); moderate tail size (13.1% SVL); slightly bilobed, semicapitate, and semicalyculate hemipenis (Table 1).

Among all congeners, *Atractus nasutus* shares only with *A. lasallei* and *A. lehmanni* the following suite of characters: 17 dorsal scale rows; seven upper and lower labials, first four contacting chinshields; generally four preventrals; 23–28 subcaudals in males; small to moderate tail size; long, robust, and acuminate caudal spine; reddish brown dorsum, with a light occipital band or blotches; brown pigmentation on venter. *Atractus nasutus* differs from both by having a distinctly acuminate snout, 12 maxillary teeth, 130 ventrals, large and complete occipital band, and a semicalyculate hemipenis (vs. truncate snout and 7–9 maxillary teeth in both species; 154–167 ventrals in males of *A. lasallei* and 139–155 in males of *A. lehmanni*; no occipital band in *A. lasallei* and narrow and incomplete occipital band in *A. lehmanni*; bicalyculate hemipenis in both species).

Description.—Male; SVL 176 mm, CL 23 mm (13.1% SVL); body diameter 4.1 mm (2.3% SVL); head length 6.9 mm (3.9% SVL); head width 4.1 mm (60% head length); nuchal constriction indistinct; head arched in lateral view, subtriangular in dorsal view; snout acuminate in lateral and dorsal views; interorbital distance 3.1 mm; rostro-orbital distance 2.2 mm (70% interorbital distance); naso-orbital distance 1.7 mm; rostral sub-triangular, width 1.1 mm, height 0.5 mm, not visible in dorsal view; internasal length 0.7 mm, width 0.4 mm; internasal suture sinistral with respect to prefrontal suture; prefrontal length 1.1 mm, width 1.5 mm; supraocular sub-rectangular in dorsal view, length 0.8 mm, width 0.3 mm; frontal pentagonal in dorsal view, length 2.1 mm, width 2.2 mm; parietal length 3.0 mm, width 1.5 mm; nasal divided; nostril restricted to prenasal, diameter smaller than pupil; prenasal height 0.5 mm, about twice as high as long; postnasal height 0.5 mm, as high as long; loreal length 1.1 mm, width 0.3 mm, contacting second and third supralabials; eye

diameter 0.8 mm; pupil sub-elliptical; two postoculars with similar size; temporals 1+2; anterior temporal about twice as long as high; upper posterior temporal elongate, length 2.6 mm, width 0.5 mm; supralabials seven, third and fourth contacting orbit; first supralabial smallest, second higher than first and slightly smaller than third; sixth supralabial highest, seventh supralabial longest; symphyisial semicircular, width 0.9 mm, length 0.2 mm; infralabials seven, first three contacting chinshields; first pair of supralabials in contact behind symphyisial, preventing symphyisial/chinshields contact; chinshield length 2.2 mm, width 0.8 mm; gular scale rows 3/4; ventrals 130; subcaudals 23; dorsal scale rows 17/17/17, smooth; dorsals lacking apical pits, supranal tubercles, keels; caudal spine moderate, conical, robust, slightly acuminate.

Maxilla.—Arched in dorsal view, lacking diastema; teeth 12, large, robust at base and narrower at apices, angular in cross section, curved posteriorly, narrowly spaced.

Color in preservative.—Color pattern mostly faded; dorsum of head brown, except for snout region (rostral and internasals) and large occipital band cream white; occipital band extends from middle of parietals to second dorsal scale rows; background of head brown, except for ventral margin of supralabials, snout, temporal, and occipital regions cream-white; mental region cream-white, with diffuse brown dots; preventrals pale brown; venter and tail pale brown; dorsum of body uniform reddish brown.

Hemipenis.—Retracted organ bifurcate, extends to level of seventh subcaudal, slightly bilobed, semicapitate, semicalyculate; lobes barely distinct, restricted to distal portion of capitulum; lobes clavate, with flattened apical portion; lobes and capitulum uniformly covered with well defined spinulate calyces; spinules progressively replaced by papillae toward tip of lobes; capitulum with irregular calyces not constituting defined transversal flounces in both sides of organ; asulcate side of capitulum with concentrate calyces, forming two well marked lobular crests on lobe corners; capitular crotch indistinct on sulcate side, well marked on asulcate side of hemipenis; capitulum located just above sulcus division, similar size to hemipenial body; sulcus spermaticus divided at middle of hemipenis, branches with centrifugal orientation, running to tip of lobes; sulcus margins stout and large below sulcus bifurcation, narrower along lobes; sulcus edges bordered with spinules throughout length; hemipenial body

Table 1. Selected Diagnostic Characters for *Atractus* from the Western Cordillera Central and Magdalena Valley of Colombia. Data for *Atractus attenuatus* are based on Myers and Schargel (2006). Data for *A. obesus* incorporate those from Marx (1960). Where appropriate, values indicate mean \pm standard deviation, and range. Abbreviations for dorsal color pattern are as follows: 1 = beige ground color with irregular black vertebral line connected to black paravertebral blotches; 2 = dark brown ground color with cream-white transversal blotches; 3 = reddish brown ground color with four black longitudinal stripes; 4 = beige to pale brown ground color with paired black dots or irregular transversal blotches; 5 = dorsum uniformly reddish brown; 6 = reddish brown ground color with black transversal bands; 7 = black ground color uniformly scattered with small cream-yellow dots.

Species	Sex (n)	Dorsal scales	Ventral scales	Subcaudal scales	Supralabial scales	Infralabial scales	Maxillary teeth	CL/SVL ratio	Hemipenis	Dorsal color pattern
<i>A. andinus</i>	♀ (1)	17	174	38	7	7	7	—	—	1
<i>A. attenuatus</i>	♂ (1)	17	178	48	7	7	10	13.6	Moderately bilobed, semicapitate, semicalyculate	1
<i>A. biseriatus</i>	♂ (1) ♀ (2)	15	152 148–151	30 18–21	7	7–8	9–10	14 9.1–10.1	Moderately bilobed, semicapitate, semicalyculate	2
<i>A. loveridgei</i>	♂ (9) ♀ (10)	17	$\bar{x} = 150.9 \pm 1$ 150–153 $\bar{x} = 159.4 \pm 4.4$ 150–165	$\bar{x} = 25.8 \pm 1.1$ 24–27 $\bar{x} = 16.8 \pm 1.4$ 14–19	$\bar{x} = 7.4 \pm 0.5$ 7–8	$\bar{x} = 7.1 \pm 0.3$ 7–8	$\bar{x} = 7.1 \pm 0.5$ 6–9	12.3–14.1 7.1–9.6	Moderately bilobed, semicapitate, semicalyculate	3
<i>A. manizalensis</i>	♂ (8) ♀ (16)	15	$\bar{x} = 142.7 \pm 2.2$ 139–145 $\bar{x} = 147.9 \pm 2.9$ 143–154	$\bar{x} = 19.9 \pm 1.6$ 17–23 $\bar{x} = 19.8 \pm 2.0$ 14–22	$\bar{x} = 7.1 \pm 0.2$ 7–8	$\bar{x} = 7.4 \pm 0.5$ 7–8	$\bar{x} = 10 \pm 0.5$ 9–11	10.5–15.9 8–10.5	Moderately bilobed, semicapitate, semicalyculate	4
<i>A. nasutus</i>	♂ (1)	17	130	23	7	7	12	13.1	Slightly bilobed, semicapitate, semicalyculate	5
<i>A. nicefori</i>	♂ (8) ♀ (10)	15	$\bar{x} = 143.6 \pm 1.8$ 141–147 $\bar{x} = 148.6 \pm 3.8$ 144–153	$\bar{x} = 28.5 \pm 1.8$ 25–34 $\bar{x} = 21 \pm 2.4$ 19–26	$\bar{x} = 7.2 \pm 1.1$ 7–8	$\bar{x} = 7.6 \pm 1.2$ 7–8	$\bar{x} = 9.7 \pm 1.5$ 9–11	12.9–15.7 9.4–11.1	Moderately bilobed, semicapitate, semicalyculate	4
<i>A. obesus</i>	♂ (1) ♀ (2)	17	164 171–183	35 26–30	7	7	7	17 11.1–13.5	Moderately bilobed, non-capitate and calyculate	6
<i>A. oculotemporalis</i>	♀ (1)	15	149	27	7	6–7	11	11.4	—	4
<i>A. paiza</i>	♂ (12) ♀ (11)	15	$\bar{x} = 174.4 \pm 6.9$ 166–181 $\bar{x} = 174.4 \pm 6.9$ 166–181	$\bar{x} = 174.4 \pm 6.9$ 166–181 $\bar{x} = 174.4 \pm 6.9$ 166–181	$\bar{x} = 7 \pm 0.1$ 6–7	$\bar{x} = 6.9 \pm 0.2$ 6–7	$\bar{x} = 7.8 \pm 0.3$ 7–8	11.7–15.1 9.2–11	Moderately bilobed, bicapitate, bicalyculate	7
<i>A. sanguineus</i>	♂ (5)	17	$\bar{x} = 174.4 \pm 6.9$ 166–181	$\bar{x} = 45.4 \pm 3.9$ 42–51	7	7	$\bar{x} = 7 \pm 0.7$ 6–8	16.7–22.7	Moderately bilobed, semicapitate, semicalyculate	1
<i>A. titanicus</i>	♀ (1) ♂ (3) ♀ (2)	17	174–181 $\bar{x} = 54.7 \pm 2.5$ 152–157 160–162	29–38 $\bar{x} = 26.2 \pm 4.3$ 21–30 18–29	7	7	$\bar{x} = 7.6 \pm 0.5$ 7–8	13.5 11.3–14.9 7.8–9.2	Moderately bilobed, semicapitate, semicalyculate	6

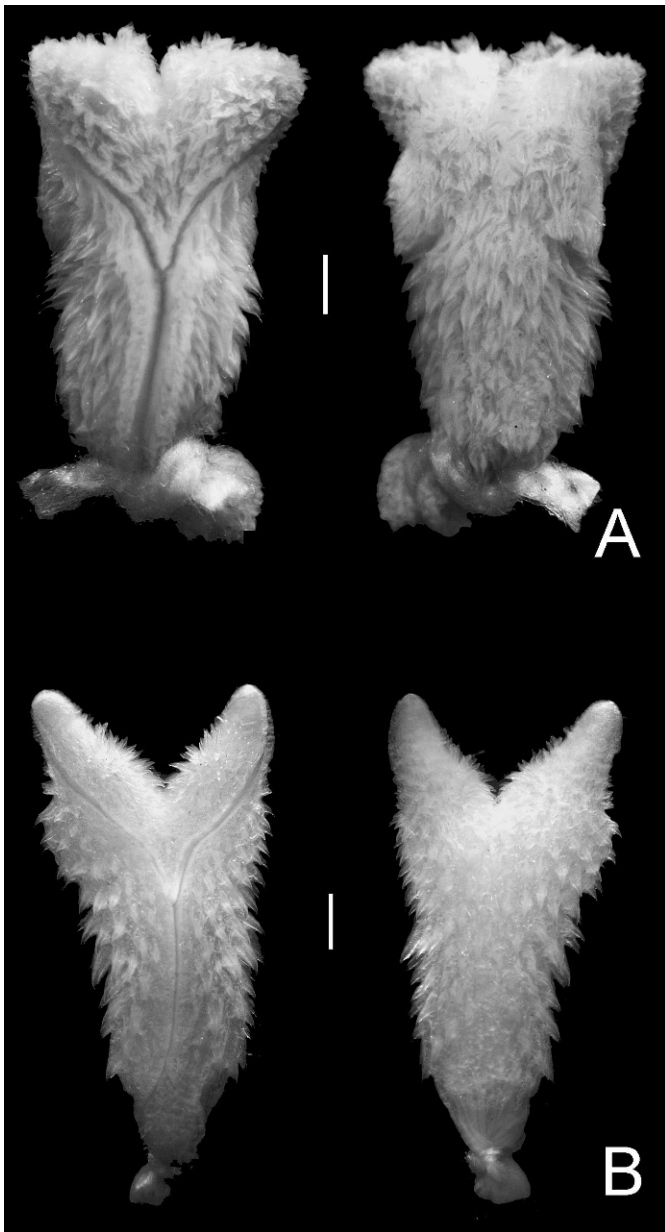


Fig. 2. Sulcate (right) and asulcate (left) sides of the hemipenis of (A) *Atractus nasutus* (CSJ 561) and (B) *Atractus paisa* (MHUA 14236). Scale = 2 mm.

sub-cylindrical, uniformly scattered with moderate hooked spines; spines concentrated on distal and lateral portions of asulcate and sulcate sides of organ, respectively; basal portion of hemipenial body slightly narrower than lobular portion; naked pocket restricted to most basal region of organ; proximal portion of hemipenis with longitudinal plicae and irregular spinules (Fig. 2A).

Distribution and ecology.—Known only from the locality of Vereda La Lana, municipality of San Pedro in the Antioquia department, Colombia. *Atractus nasutus* probably inhabits cloud forest above 2000 m elevation (Fig. 3).

Remarks.—The holotype of *Atractus nasutus* was confused with *A. lehmanni* in the CSJ collection. Although it is possible that *A. lehmanni* occurs in the southern portion of the Cauca Valley (Passos, 2008), *A. nasutus* can be easily diagnosed from it.

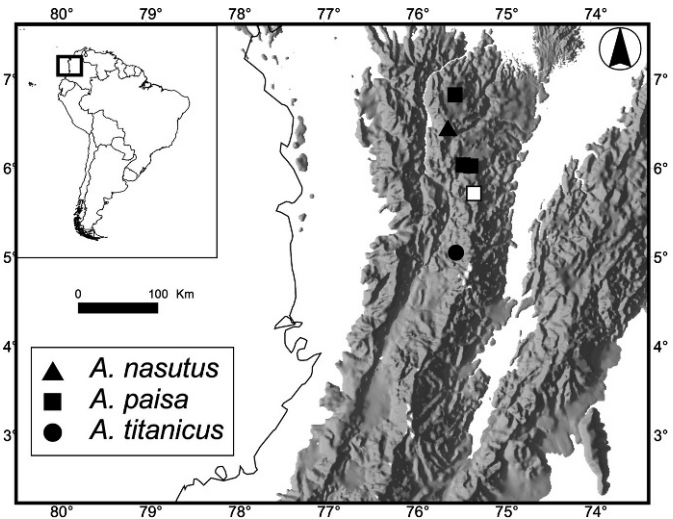


Fig. 3. Geographic distribution of *Atractus nasutus*, *A. paisa*, and *A. titanicus*. The open symbol represents the sympatric record for *A. paisa* and *A. titanicus* from Sonsón municipality.

Etymology.—The specific epithet “*nasutus*” is a Latin adjective meaning prominent snout region (=large-nosed). This word is used here in allusion to the acuminate snout of the new species.

***Atractus paisa*, new species**

Figures 4–6, Table 1

Atractus punctiventris.—Amaral, 1937:236 (in part).

Holotype.—ICN 10698, female, Colombia, Antioquia department, Sonsón municipality, 05°43'N, 75°19'W, Vereda San Francisco, 2600 m, 31 March 1996, A. Hincapié.

Paratypes.—All ($n = 26$) from Antioquia department of Colombia: ICN 2910 (male), Sonsón municipality, Paramo (2630 m) on La Dorada road, 06°49'N, 75°32'W, 15 August 1978, P. Ruiz and P. Bernal; ICN 2911 (male), Sonsón municipality, 2220 m, 14 August 1978, P. Ruiz and P. Bernal; ICN 10712 (male), La Ceja municipality, 06°42'N, 75°46'W, ca. 2300 m, 21 July 1981, P. Bernal; MHUA 14222, 14226, 14235–36, 14238–54, 14261, 14274 (eight males and ten females), La Union municipality, Vereda La Madera, Sayonara flower Culture, 06°01'12"N, 75°20'49"W, ca. 2500–2550 m, 6 June–16 September 2003, A. Higueta and J. M. Daza.

Diagnosis.—*Atractus paisa* is distinguished from all congeners by the following: 15/15/15 smooth dorsal scale rows; two postoculars; moderate loreal; 1+2 temporals; seven supralabials, third and fourth contacting orbit; generally seven infralabials, first four contacting chinshields; eight to eleven maxillary teeth; generally four gular scale rows; three to six prefrontals; 158–165 ventrals in females and 153–162 in males; 19–22 subcaudals in females and 25–31 in males; black dorsum with several creamish white irregular dots sometimes arranged on linear series; cream-white venter with large black blotches generally forming a midventral stripe; moderate body size, females reaching 401 mm and males 351 mm; short to moderate tail size in females (9.2–11% SVL) and moderate in (11.7–15.1% SVL) males; moderate bilobed, slightly semicarpitate, and bicalyculate hemipenis (Table 1).



Fig. 4. Paratype of *Atractus paisa* (MHUA 14274, female) in life. SVL 401 mm, 40 mm. Photograph by J. M. Daza.

Among all congeners, *Atractus paisa* and *A. duboisi* (Passos et al. [in press] resurrect this species) share the following: 15 dorsal scale rows, generally four infralabials contacting chinshields, black blotched dorsal color pattern with yellow-cream dots, black pigmented venter with (generally) a midventral stripe. *Atractus paisa* differs from *A. duboisi* by having six to seven supralabials, eight to eleven maxillary teeth, three postdiastemal teeth, bicapitate and bicalyculate hemipenis (vs. generally eight supralabials, seven maxillary teeth, two postdiastemal teeth and semicapitate and semicalyculate hemipenis). Additionally, the new species occurs parapatrically with respect to a possible close relative, *Atractus lasallei*. Both species share the following suite of characters: 153–167 ventrals in males and 158–172 in females; more than 30 subcaudals in males and more than 25 in females; seven supralabials; seven infralabials; first four infralabials contacting chinshields; generally eight maxillary teeth; three postdiastemal teeth; cream snout; pale spots on dorsum; heavily pigmented venter; long, robust, and acuminate caudal spine. *Atractus paisa* can be diagnosed from *A. lasallei* by the

presence of 15 dorsal scale rows, yellow-cream dots on the dorsum, and a venter with black blotches, forming a midventral stripe (vs. 17 dorsal scale rows, dorsum with three series of white-bordered black dots, uniform black venter or diffusely pigmented, never forming lines or stripes).

Description.—Female; SVL 359 mm, CL 33 mm (9.2% SVL); body diameter 8.6 mm (2.4% SVL); head length 11.0 mm (3.1% SVL); head width 6.0 mm (54% head length); interorbital distance 4.1 mm; rostro-orbital distance 2.7 mm (70% interorbital distance); naso-orbital distance 2.3 mm; nuchal constriction indistinct; head flattened in lateral view, round in dorsal view; snout truncate in lateral view, round in dorsal view; rostral sub-triangular, width 1.7 mm, height 0.8 mm, slightly visible in dorsal view; internasal width 0.6 mm, length 0.8 mm; internasal suture sinistral with respect to prefrontal suture; prefrontal length 2.0 mm, width 1.8 mm; supraocular sub-rectangular in dorsal view, length 1.7 mm, width 1.0 mm; frontal sub-triangular in dorsal view, length 2.8 mm, width 2.4 mm;

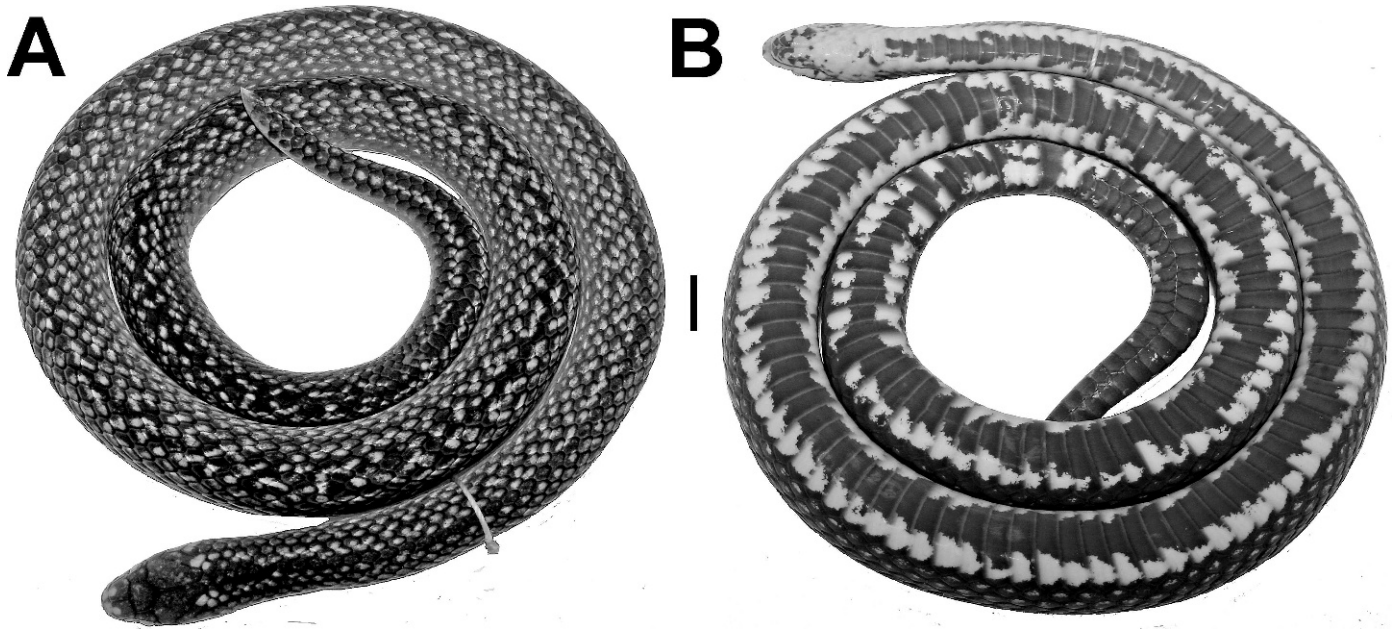


Fig. 5. Paratype of *Atractus paisa* (MHUA 14236). Scale = 5 mm.

parietal length 4.5 mm, width 2.5 mm; nasal divided; nostril restricted to prenasal; prenasal height 0.4 mm, twice as high as long; postnasal height 0.6 mm, length 0.4 mm; loreal length 1.6 mm, height 0.3 mm, contacting second and third supralabial; eye diameter 1.5 mm; pupil round; postoculars two, height 0.4 mm, of similar size; upper postocular slightly longer (0.5 mm) than lower; temporals 1+2; first temporal length 1.5 mm, height 0.6 mm; upper posterior temporal elongate (length 3.8 mm), approximately five times as long as wide; supralabials seven, third and fourth contacting orbit; second supralabial higher than first and smaller than third; sixth supralabial highest, seventh supralabial longest; symphyseal sub-triangular, width 1.5 mm, length 0.5 mm; six infralabials 7/6, 3/2, respectively, contacting chinshields; first pair in contact behind symphyseal, preventing symphyseal/chinshield contact; chinshield length 3.0 mm, width 1.0 mm wide; gular scale rows 4/3; dorsal scale rows 15/15/15; dorsals smooth, lacking apical pits, supranal tubercles, keels; eight dorsal scales rows in the level of second subcaudal; four prefrontals; 165 ventrals; subcaudals 27/26; caudal spine long, robust, conical, acuminate.

Maxilla.—Arched in dorsal view, with five to eight prediastemal and three postdiastemal teeth; prediastemal teeth large, robust at base, narrower at apices, angular in cross section, curved posteriorly; first three prediastemal teeth tightly spaced, remaining prediastemal teeth moderately spaced; maxillary diastema short; postdiastemal teeth smaller than posterior prediastemal ones; lateral process of maxilla poorly developed, lacking posterior projection.

Color in preservative.—Dorsum of head black, except for cream-white dots on snout (rostral, internasals, and anterior portion of prefrontals); background of head black, above upper margin of supralabials; temporal region with cream irregular blotches; ventral edges of supralabials cream-white; mental region with cream-white ground color; black blotches on symphyseal, anterior portions of first four infralabials and chinshields; mental region uniform black in some individu-

als; prefrontals black; ventral ground color cream-white with rectangular black bars; black bars forming discontinuous midventral wide stripe; in some individuals venter is mostly cream-white; tail generally black, with little or no cream; tail occasionally variegate with cream-white and black spots; dorsal ground color black, generally with two cream-yellow round blotches (1–2 scale lengths) on neck; dorsum of body varies from uniform black to black with scattered diffuse cream-yellow dots (one scale or less wide); pale dots arranged in longitudinal series mainly at vertebral line.

Color in life.—Cephalic blotches, ventral margin of supralabials, mental region, and dorsal pale dots yellow; paraventral region and underside of tail cream-white (Fig. 5).

Hemipenis.—(Everted organs $n = 5$) Retracted organ bifurcates at eighth subcaudal, extends to level of tenth subcaudal. Hemipenis moderately bilobed, slightly bicapitate, bicalyculate; lobes restricted to distal portion of hemipenial body; lobes of equivalent size, attenuate, and oriented centrifugally; basal portion of lobes covered with small to moderately curved spines; lobes with shallow medial depression in basal region of calyculate portion; apical portion of lobes covered with small spinulate calyces; calyces lacking transversal walls and constituting well marked small flounces; intersulcar region with scattered moderate spines; lobes slightly smaller on asulcate and equivalent on sulcate side compared to hemipenial body; hemipenial body with scattered hooked spines; large spines concentrated on lateral portion of sulcate and medial portion of asulcate side; distal portion of hemipenial body on asulcate side with weak capitular crotch; capitular crotch located at level of bifurcation of sulcus spermaticus; sulcus spermaticus divided at middle of hemipenis; branches centrifugally orientated, extending to tip of lobes; sulcus spermaticus margins stout and narrower below sulcus division, and moderately enlarged above bifurcation; basal portion of hemipenial body sub-cylindrical, with similar sized lobular portion; naked pocket restricted to proximal-most portion of hemipenial body; basal portion of hemipenis with longitudinal plicae and disperse spinules (Fig. 2B).

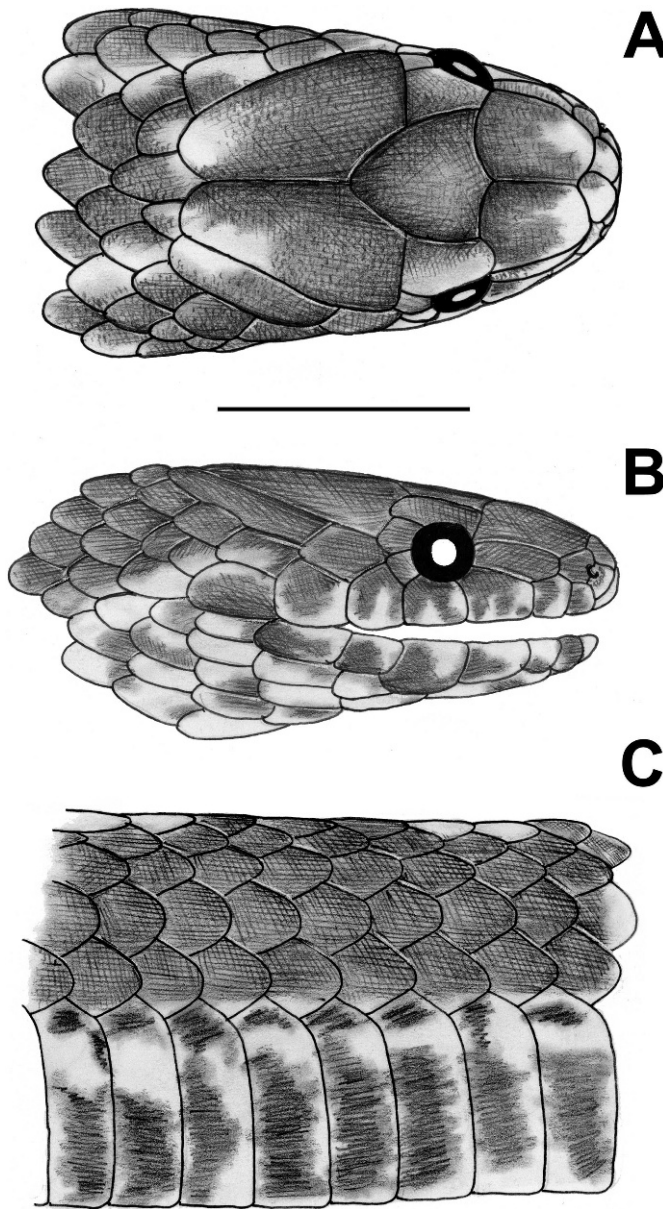


Fig. 6. Dorsal (A) and lateral (B) views of the head and lateral (C) view of the body of the holotype of *Atractus paisa* (ICN 10698). Scale = 5 mm.

Meristic and morphometric variation.—Largest male 351 mm SVL, 53 mm CL; largest female 401 mm SVL, 40 mm CL; tail 11.7–15.1% (\bar{x} = 13.8; SD = 1.2; n = 11) SVL in males and 9.2–11% (\bar{x} = 10.2; SD = 0.5; n = 11) SVL in females; body diameter 2.7–8.4 mm (\bar{x} = 4.1; SD = 1.8; n = 21); ventrals in males 153–162 (\bar{x} = 158.3; SD = 3; n = 12); ventrals in females 158–165 (\bar{x} = 162.1; SD = 2.1; n = 11); subcaudals in males 25–31 (\bar{x} = 27.2; SD = 2.1; n = 12); subcaudals in females 19–22 (\bar{x} = 20.8; SD = 1.1; n = 11); supralabials 6 (n = 1 side) or 7 (n = 45 sides); infralabials 6 (n = 2 sides) or 7 (n = 44 sides); infralabials contacting chinshields 3 (n = 4 sides) or 4 (n = 42 sides); gular scale rows 2 (n = 2 sides), 3 (n = 12 sides), or 4 (n = 32 sides); prefrontals 3 (n = 4), 4 (n = 15), 5 (n = 3), or 6 (n = 1); dorsal scale rows in the level of second subcaudal 7–10 (\bar{x} = 8.6; SD = 0.6; n = 46 sides); maxillary teeth 7 (n = 2 sides) or 8 (n = 44 sides); retracted hemipenis extends from eighth to tenth subcaudal (n = 3); anal glands of females extend from fifth to sixth subcaudal (n = 5).

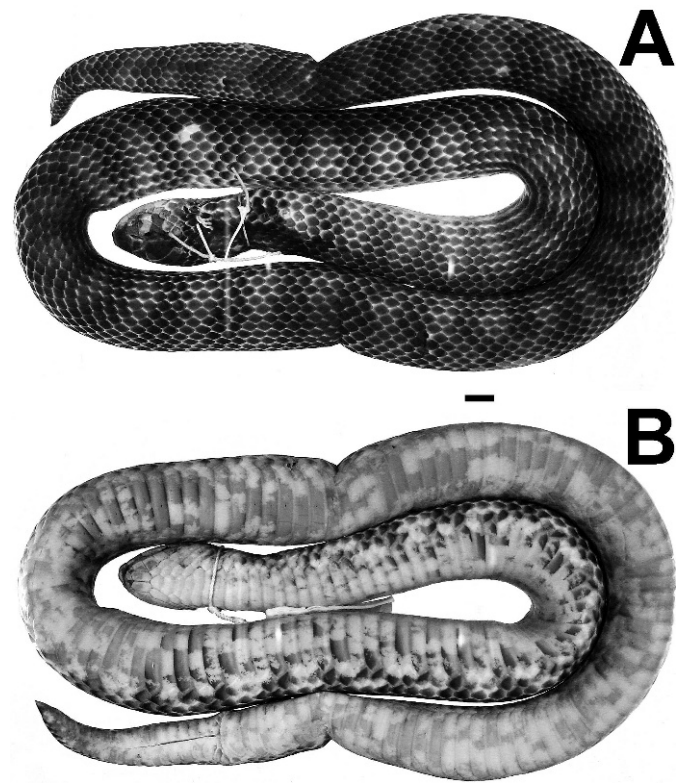


Fig. 7. Holotype of *Atractus titanicus* (ICN 10697). Scale = 5 mm.

Distribution and ecology.—Northern Cordillera Central of Colombia, from Sonsón to La Unión municipalities in Antioquia department. *Atractus paisa* inhabits cloud forest from 2100–2600 m elevation (Fig. 3).

Remarks.—Amaral (1937) referred to specimens of *Atractus paisa* as *A. punctiventris* based on a specimen from Sonsón (specimen not identified at MLS collection). The new species differs from that species by having three postdiastemal teeth, a black dorsum uniformly scattered with pale dots, and a midventral large black stripe (vs. two postdiastemal teeth, dorsum beige with transversal dark brown large blotches, and narrow midventral line). Furthermore, whereas *A. punctiventris* is known only from the Amazon piedmont of Cordillera Oriental below 400 m elevation (Amaral, 1933 “1932”), *A. paisa* is restricted to northern portion of Cordillera Central, Valle del Cauca Department above 2000 m.

Etymology.—The specific epithet, to be treated as an indeclinable word, is a Spanish substantive “*paisa*” used in Colombia to mean “the countryman from Antioquia Department.” It alludes to the distribution of the new species and honors the inhabitants of the Antioquia Department.

***Atractus titanicus*, new species**

Figures 7–8, Table 1

Atractus badius.—Amaral, 1931:87 (in part.).

Atractus badius.—Amaral, 1932:67 (in part.).

Atractus badius.—Pérez-Santos and Morenno, 1988:68 (part.).

Holotype.—Female, ICN 10697, Colombia, Antioquia department, Sonsón municipality, 05°43'N, 75°19'W, Quebrada San Andrés, ca. 2400 m, 5 March 1996.

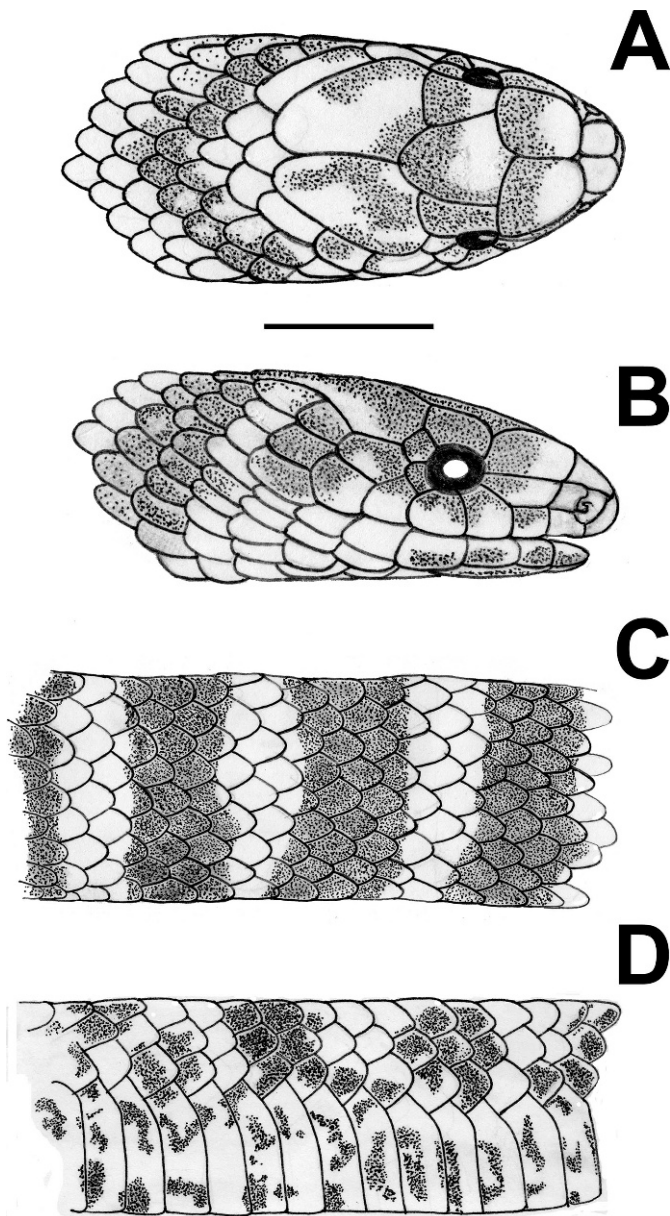


Fig. 8. Dorsal (A) and lateral (B) views of the head and dorsal (C) and lateral (D) views of the body of the holotype of *Atractus titanicus* (ICN 10697). Scale = 5 mm.

Paratypes.—All ($n = 4$) from Cordillera Central of Colombia: MLS 134, MLS 146, female and male, respectively, Antioquia department, Sonsón municipality; MLS 147, male, Caldas department, Villamaria municipality, 05°03'N, 75°31'W, ca. 1850 m; ICN 5676, male, Caldas department, 38 km eastern from Tuluá municipality, 04°05'N, 76°12'W, J. D. Lynch.

Diagnosis.—*Atractus titanicus* is distinguished from all congeners by the following: 17/17/17 smooth dorsal scale rows; two postoculars; long loreal; generally 1+2 temporals; seven supralabials, third and fourth contacting orbit; seven infralabials, first four contacting chinshields; seven or eight maxillary teeth; three or four gular scale rows; four prefrontals; 160–162 ventrals in females and 152–157 in males; 18–19 subcaudals in females and 21–30 in males; banded color pattern, with alternate dark and light dorsal rings (three scales wide); venter with cream-white ground color uniformly spotted by diffuse dark brown dots; large

body size, females reaching 680 mm and males 545 mm; small tail size in females (7.8–9.2% SVL) and moderate (11.3–14.9% SVL) in males (Table 1).

Among all congeners, *A. titanicus* shares exclusively with *A. obesus* a suite of characters including 17 dorsal scale rows, seven upper and lower labials, body diameter greater than 10 mm, maximum SVL above 600 mm, seven or eight maxillary teeth, and dorsal color pattern with alternate light and dark wide bands. The new species can be diagnosed from *A. obesus* by having 160–162 ventrals in females, four infralabials in contact with chinshields, dorsal bands never forming dyads, and venter with dark brown dots (vs. 171–183 ventrals in females, three infralabials contacting chinshields, dorsal bands forming dyads [black/yellow/black], and complete rings crossing venter).

Description.—Female; SVL 433 mm; CL 40 mm (9.2% SVL); head length 17.2 mm (4% SVL); body diameter 13.9 (3.2% SVL); head width 10 mm (58% head length); interorbital distance 5.8 mm; rostro-orbital distance 4.2 mm (70% interocular distance); naso-rostral distance 3.8 mm; nuchal constriction indistinct; head slightly arched in lateral view, snout slightly acuminate in lateral view, round in dorsal view; rostral sub-triangular in frontal view, width 3.0 mm, height 1.4 mm, not visible in dorsal view; internasal length 1.3 mm, width 1.0 mm; internasal suture sinistral with respect to prefrontal suture; prefrontal length 3.2 mm, as long as wide; supraocular sub-rectangular in dorsal view, length 2.4 mm, width 1.9 mm; frontal sub-triangular, length 3.5 mm, as long as wide; parietal length 6.1 mm, width 4.3 mm; nasal divided, nostril between prenasal and postnasal; prenasal height 1.4 mm, length 0.8 mm; postnasal height 1.4 mm, length 0.8 mm; loreal length 3 mm, width 0.9 mm, contacting second, third, and fourth supralabial; eye diameter 2.1 mm; pupil round; two postoculars with similar heights; upper postocular slightly longer (1.2 mm) than lower; temporals 1+2; anterior temporal length 2.3 mm, width 1.2 mm; upper posterior temporal elongate, length 5.4 mm, width 2.0 mm; supralabials seven, third and fourth contacting orbit; second supralabial higher than first and lower than third; supralabial six supralabial tallest; supralabial seven longest; symphyisial sub-triangular, width 1.8 mm, length 0.8 mm; infralabials seven, first four contacting chinshields; first pair in contact behind symphyisial, preventing symphyisial/chinshields contact; chinshields twice as long as wide; gular scale rows 4/3; prefrontals four; ventrals 162; subcaudals 19; dorsal scale rows 17/17/17; dorsals smooth, lacking apical pits, supranal tubercles, keels; dorsal scale rows at level of second subcaudal 8; anal gland extends to the level of fifth subcaudal; caudal spine moderate, conical, narrow, acuminate.

Maxilla.—Arched in dorsal view, with five or six prediastemal and two or three postdiastemal teeth; prediastemal teeth large, robust at base, narrower at apices, angular in cross section, curved posteriorly; first three prediastemal teeth moderately spaced, third to fifth well spaced, decreasing posteriorly in size; diastema moderate; postdiastemal teeth smaller than posterior prediastemal ones; lateral process of maxilla well developed and lacking posterior projection.

Color in preservative.—Dorsum and head mostly black; head with cream and reddish brown variegated blotches; light blotches on rostral, internasals, nasals, loreal, anterior

portions of prefrontals, and parietals; temporal and occipital regions predominantly reddish brown; supralabials predominantly cream-white; mental region with cream-white ground color and black blotches above symphyseal, first four infralabials, and anterior portion of chinshields; prementals cream-white; ventral ground color cream-white, with irregular black spots anteriorly; tail predominantly cream, with black spots on lateral portion of subcaudals; dorsal ground color of body reddish brown, with 36–40 black bands (2–3 scales long) extending to paraventral region; dark bands equivalent to reddish brown interspaces; 36–41 reddish brown interspaces; dark bands in contact medially, forming zigzag pattern on paravertebral region; paraventral region with irregular black dots above interspaces, occasionally connected to dark bands dorsally; dorsum of tail with 4–5 black bands reaching lateral margins of subcaudals.

Meristic and morphometric variation.—Largest male SVL 545 mm, CL 75 mm; largest female SVL 680 mm, CL 53 mm; tail 11.3–14.9% (\bar{x} = 13.3; SD = 1.8; n = 3) SVL in males, 7.8–9.2% (n = 2) SVL in females; 6.5–16.3 mm body diameter; ventrals in males 152–157 (\bar{x} = 154.7; SD = 2.5; n = 3) and females 160–162 (n = 2); subcaudals in males 21–30 (\bar{x} = 26.2; SD = 4.3; n = 3), 18–19 (n = 2) in females; gular scale rows 3 (n = 3 sides) or 4 (n = 5 sides); temporals 1+2 (n = 8 sides) or 2+2 (n = 2 sides); dorsal scale rows at the level of second subcaudal 8 (n = 1 side), 9 (n = 6 sides), or 10 (n = 3 sides); maxillary teeth 7 (n = 2 sides) or 8 (n = 3 sides); retracted hemipenis extending to the level of tenth subcaudal.

Distribution and ecology.—Western versant of Central Cordillera of Colombia, from Sonsón in the Antioquia department to eastern Tuluá in the Valle del Cauca department. *Atractus titanicus* inhabits Andean Forest from 1800–2400 m elevation (Fig. 3).

Remarks.—Two paratypes were identified previously as *Atractus badius* (Amaral, 1931, 1932). The study of this material (formerly ILS 20 and ILS 44, now MLS 134 and MLS 147) and three more specimens has revealed them to be distinct from *A. badius* (*sensu* Hoogmoed, 1980). *Atractus titanicus* can be diagnosed from *A. badius* by having four infralabials contacting chinshields, 21–30 subcaudals in males and 18–19 in females, seven or eight maxillary teeth, two or three postdiastemal teeth, and lacking dorsal bands forming dyads (vs. generally three infralabials contacting chinshields, 33–50 subcaudals in males and 35–48 in females; six or seven maxillary teeth, one postdiastemal tooth, dorsal bands forming dyads in *A. badius*).

Relatively large body size, banded color pattern, and similar numbers of ventrals may have led previous authors (Amaral, 1931, 1932; Pérez-Santos and Moreno, 1988) to confuse the new species with *A. badius*. In fact, most banded species with 17 dorsal scale rows were associated with *A. badius* later (Hoogmoed, 1980), and there are five *Atractus* species, other than *A. obesus*, attaining 500 mm SVL (male and females specimens) and having color pattern composed by wide bands or blotches (e.g., *A. depressiocelus*, *A. gigas*, *A. major*, *A. torquatus*, *A. trihedrurus*). The new species differs from all of them, however, by the presence of three postdiastemal teeth.

Etymology.—The specific epithet “*titanicus*” is an adjective derived from the Greek name Titan, son of Uranus and Gaea

who symbolize strong power and large size. The word alludes to the large body size of *Atractus titanicus* compared to other congeners.

DISCUSSION

Approximately half (ca. 60) of all *Atractus* species occur in the Andes, with most endemic species restricted to one side of the mountain range or in intra-Andean Valleys of Colombia (ca. 40 taxa; Passos, 2008). The greatest *Atractus* diversity occurs in the northern Colombian Andes (Pérez-Santos and Moreno, 1988), particularly the highlands of the northern portions of Cauca River Valley above 2000 meters elevation (ca. 20 taxa; Passos, 2008), which is consistent with the pattern seen in other groups (Lynch, 1976, 1986; Lynch and Suárez-Mayorga, 2002), and appears to be related to Andean uplift (Lynch, 1986). As is the case with many Andean herpetofaunal elements (e.g., *Anolis*, *Centrolene*, *Cryptobatrachus*, *Eleutherodactylus*, *Saphenophis*, and *Synophis*; Lynch, 1976, 1981, 1986; Lynch and Suárez-Mayorga, 2002), *Atractus* diversity strongly decreases with the latitude towards Andean highlands south of the Huancabamba depression and with the longitude towards rainforest and savanna lowlands. Despite many names that are likely to represent synonyms, we think the species diversity of the Colombian cordilleras remains underestimated (Passos, 2008).

MATERIAL EXAMINED

Institutional abbreviations are as listed at <http://www.asih.org/codons.pdf>, except the following institutions that had acronym alterations or were not included in these sources: Venezuela—Colección de Vertebrados de la Universidad de Los Andes (CVULA), Mérida; Museo de Historia Natural, Fundación La Salle (MHNLS), Caracas D.C.; Colección Herpetologica del Laboratório de Biogeografia de la Universidad de Los Andes (ULABG), Mérida; Colombia—Colección Herpetologica de la Universidad de Quindío (UQC), Arménia, Quindío; Colección Zoológica de la Universidad de Tolima (CZUT-R), Ibagué, Tolima; Instituto Alexander Von Humboldt (IAvH), Villa de Leyva, Boyacá; Instituto de Ciencias Naturales, Universidad Nacional de Colombia (ICN), Bogotá D.C.; Museo de Herpetología Universidad de Antioquia (MHUA), Medellín, Antioquia; Museo de Zoología de la Universidad Javeriana (MUJ), Bogotá D.C.; Museo de Historia Natural de Universidad Industrial de Santander (UIS), Bucaramanga, Santander; Ecuador—Museo de Zoología, Pontificia Universidad Católica de Ecuador (QCAZ), Quito; Peru—Museo de Historia Natural de la Universidad Mayor de San Marcos (MHNSM), Lima; Museo de Historia Natural de Universidad Nacional de Arequipa (MUSA), Arequipa; Brazil—Instituto Butantan (IBSP), São Paulo, SP. The cited specimens correspond to all trans-Andean species of *Atractus* examined.

Atractus andinus: CSJ 516 (holotype; formerly CSJ 231), Colombia, Antioquia, Andes.

Atractus biseriatus: MLS 145 (holotype), Colombia, Caldas, Villamaria.

Atractus bocourti: Peru: NHM 1946.1.2.24 (holotype), MHNSM 2801, Huánuco, Acomayo; MHNSM 20041–43, Chaglla; MHNSM 20036, Huancapallac; MHNSM 3001, 3064, Molino-Panao, Pachitea; MHNSM 20044, Panao.

Atractus boulengerii: UV 6591, Colombia, Valle Del Cauca, Anchicayá, Bajo Anchicayá.

Atractus carrioni: EPN 8673–74, QCAZ 793, 1081–82, 1217–19, 2100, Ecuador, Loja, Loja; QCAZ 6445–46, Jardín Botánico; QCAZ 6550, Yangana; QCAZ 6533–34, Río Molacatus.

Atractus clarki: Colombia: MHUA 14000, Antioquia, Anorí; MLS 1213, Chocó, Andagoya; MLS 1214, Istmina; ICN 10826, Valle del Cauca, Restrepo.

Atractus crassicaudatus: Colombia: IBSP 2443, ICN 8505, 8508–25, 8922–25, MLS 139, 152, 156, 293, 2640, MUJ 92, 355, without locality; ICN 10693, Boyacá, Badohondo; ICN 10709, Belén; MLS 2577, Chiquinquirá; MLS 2578–79, Coper; ICN 10700–07, Duitama; ICN 10627, MUJ 315–22, 398–99, 509, Garagoa; IAvH 864–65, Guayatá; IAvH 1059, ICN 2608–11, 2831–33, Pajarito; IAvH 1880, Pesca; IAvH 799, Río Tectino; MLS 282, 2751–52, Sogomoso; MUJ 04, Tunja; MLS 2243, Ventaquemada; IAvH 2172–73, 3039, 3189, 4788, 4811–20, 4852, 4878, 4889, 4892–93, 4912, 4960, 4976, ICN 2792, 8332–33, 9016–19, 9027, MLS 2021, 2564–65, 2918–20, Villa de Leyva; MUJ 05, Zetaquirá; MUJ 482, Cundinamarca, without locality; MLS 169, Aguadita; IAvH 4749, ICN 10626, Albán; IAvH 129, 204, 2478, ICN 1394–426, 1455, 1460–61, 2588, 2623, 2633, 2641, 3377, 4217, 4240, 6209, 6236, 6340, 6449, 6490–91, 6504–05, 6509, 7100, 7102, 8260, 10806, IBSP 226, 7216–17, 10164–67, 42945, MLS 153, 164–65, 167, 172, 178, 2546, 2607–09, 2614–15, 2617, 2644–45, MUJ 03, 07, 09–10, 17, 22, 24, 151, 180, 206–09, 211, 400, 609–10, 692, Bogotá D.C.; MLS 265, 2805–13, Arrachal; ICN 6336, 6577–79, 6580–81, 10692, Cerro de Suba, La Conejera; MLS 2386, Codazzi; MLS 2964–65, San Joaquín; IAvH 4964, Santana; IAvH 500, Cajicá; ICN 7101, MLS 2373–77, 2382–83, 2600, 2622–23, 2830–93, 2900–08, 2935–36, MLS without number, MUJ 18, 477, Chia; MLS 163, 185, Cogua; MUJ 164, Cota; MUJ 264, 461–62, Facatativa; MUJ 25, Fontinbón; MUJ 16, 20–21, Fuquené; MLS 2634, MUJ 92, Fusagasuga; ICN 8261, Guachancipá; MLS 2263, Guachetá; MUJ 01, Guaduas; MLS 2626, MUJ 203–05, 215, Guasca; MUJ 298, La Calera; MLS 157, La Unión; MLS 2568–70, 2653, 2921–22, 2927, 2931, Machetá; ICN 1453–54, 1456, 1458–59, Mosquera; IAvH 3815, ICN 859, 1277, 1457, Laguna Herrera; ICN 7041, Nemocón; MLS 154, 2611–12, 2616, 2923–30, MUJ 550, Pacho; ICN 485–86, MLS 2602–04, Pasca; ICN 4477, Quetame; IAvH 08, Represa del Sisga; MLS 26, Reserva Carpanta; IAvH 3038–39, MLS 150–51, 200, San Antonio del Tequendamá; MLS 2571, Sesquilá; MLS 175–76, 295, Sibaté; MLS 2624, Sopo; MUJ 214, 649, Suesca; MLS 168, Sumapaz; MLS 283–84, 288, 292, 1860–63, 2493–94, Sutatenza; MLS 1898, Tabio; MUJ 142, Tausa; MUJ 12, 19, Tena; MLS 160, 177, 2709–10, Une; MLS 2378–79, 2381, 2894–99, MUJ 13, Usaquén; ICN 2816, MLS 299, Villapinzón; IAvH 1587, Villeta; MLS 06, Meta, Cañon La Curia; IAvH 967, Lomalinda; MUJ 212, Santander, without locality; MLS 162, Bolívar; MLS 2246–48, Jesús María; MLS 2629, Puente Nacional; MLS 2630, Santa Rita; ICN 6500, MUJ 15, locality probably in error, Meta, Puerto Lopez.

Atractus duboisi: Ecuador: EPN four not cataloged specimens, QCAZ 2797, Napo, without locality; QCAZ 1234–1241, 2103, 2759, 4110, 4156, Baeza; EPN 1281–89, 3121, Cantón Quijos; EPN 6875, QCAZ 3707–08, 3290, Cordillera de Guacamayos; QCAZ 906, 2098, 2106–07, 2759, 2798–2806, 5469, Cosanga; QCAZ 4195, 4201, Baeza-Quito road; QCAZ 2104, Río Hollin, Loreto road; QCAZ 3347–3350, 6593–95, Las Palmas.

Atractus dunni: Ecuador: QCAZ 219, 2884, without locality; IBSP 54328, Cotopaxi, without locality; QCAZ 1092,

Galapagos; QCAZ 163, 240–47, 670, 1077, 1231–33, 1685–86, 2108–10, San Francisco de Las Pampas; QCAZ 4036, Reserva Otonga, Cañon Signos; EPN not cataloged, El Oro, Buenaventura; QCAZ 1219, Loja, Olmedo; QCAZ 2094, Pichincha, CERG; USNM 32127–28, Chiriboqua; QCAZ 4151, Mindo; QCAZ 638, Nanegalito; QCAZ 872, 1667, 2102, 2111, Tandayapa; EPN 8703, locality probably in error, Piso Tropical Oriental; EPN 8733, locality probably in error, Pastaza, Río Bobonaza.

Atractus emigdioi: Venezuela: MHNLS 9299, Lara: Moran, La Palma, Páramo El Jábon; ULABG 3791, Trujillo, Boconó, Valera-Trujillo Road; MHNLS 16209, Parque Nacional Guaramacal; ULABG 4473, Trujillo.

Atractus eriki: Venezuela: CVULA 6117, Táchira; ULABG 6710 (paratype), Trujillo, Escuche; ULABG 6694 (paratype), Trujillo; ULABG 6693 (holotype), Valera; MBUCV not cataloged, ZULIA, Sierra de Perijá.

Atractus erythromelas: Venezuela: MHNLS 902, Mérida, Libertador; NHM 1.716–17 (paratypes of *A. erythromelas*), Mérida; MHNLS 276–78, 630, 902, Mucurubá.

Atractus gigas: Ecuador: QCAZ 01, Cotopoxi, Chiribogua; QCAZ 2099, Palmeras; QCAZ 3266, Reserva Otonga; QCAZ 175, 179, 443, 647, 662, San Francisco de Las Pampas; EPN 8706, locality probably in error, Piso Tropical Oriental.

Atractus indistinctus: MLS 166 (holotype), MLS 261–62, 264, 2695–96, Colombia, Norte de Santander, Ocaña.

Atractus iridescens: Colombia: CSJ 563, Antioquia, San Pedro de Arama; IAvH 4539, Chocó, Nuquí; MLS 1212, Río San Juan; ICN 10901–02, Nariño, Barbaças, El Diviso, Vereda Berlin, Reserva Natural Biotopo Selva Húmeda.

Atractus lancinii: Venezuela: EBRG 590, Aragua, Cumboto road; EBRG 198–99, 291, 407–08, 698, Maracay-Ocumare road; EBRG 699, 4338, Parque Nacional Pittien, Estación Biológica Rancho Grande; MHNLS 1750, Carabobo, Barbula; MBUCV 2043a, 2043b, 2044b, MHNLS 11417–18, 11797, Distrito Capital, Caracas, Parque Nacional El Ávila, Canales del Naigata; MHNLS 3145, Cerro Naigata; MBUCV 2044a, La Guaira; MHNLS 6848, Miranda, Guacaipuro; MHNLS 2086, 12684, San Antonio de Los Altos; MHNLS 15150, 16788, El Amarillo; EBRG 1982, San Diego de Los Altos; EBRG 4088, Santenejas; MHNLS 6381, Yaracuy, Nirgua, Santa Teresa.

Atractus lasallei: Colombia: MLS 301, without locality; ICN 19621, Antioquia, Bello; MHUA 14060, Bello, San Felix; ICN 10622, Belmira; MHUA 14112, El Retiro; MLS 2129, Guarne; ICN 10713, La Ceja; ICN 10714, Marinilla; ICN 10618–20, MHUA 14383, MLS 2944, Medellín; ICN 1085, Medellín, Las Palmas; MHUA 14003, Medellín, San Cristobal; MHUA 14194, 14221, 114368, MLS 2217, Medellín, Santa Helena; IAvH 970, 1008, 10012–13, 1933, 4857, MLS 204–06, 219, 223, 1782, 2829, 2946, 2958, Medellín, Piedras Blancas; MHUA 14028, 14086, Medellín, San Antonio de Prado; MLS 2077, 2210, Rionegro; IBSP 5315 (holotype), MLS 202–03, 207–09, 280, 1765, 1781, 1783, 1842–43, 1856, 1878, 1941, 2356, 2939, 2941, ICN 10628–31, San Pedro; MLS 2412, 2955, San Pedro, La Lana; MLS 1902–04, 1946, Santa Rosa de Osos; MLS 230, Santo Domingo; ICN 10697, MLS 135, Sonsón; MLS 303, locality probably in error, Jericó.

Atractus lehmanni: Colombia: ICN 1794, 2590, 2613, 10635–36, MLS 1919, Cauca, Popayán; MLS 2593, Río Molina; MLS 2595, 2681, Silvia; MHUA 1407, Valle Del Cauca, Sevilla.

Atractus loveridgei: Colombia: CSJ 566, Antioquia, Jardín; IBSP 7202, 8908, 8916, 10126, MLS 213–16, 218, 220–22, 224–25, 1205, Jericó; MLS 2355, locality probably in error, San Pedro.

Atractus manizalensis: Colombia: IAvH 3309–10, MLS 294, Caldas, Manizales; MLS 2216, Pacorá; MLS 227 (holotype), MLS 228 (paratype), MLS 146, 2461, 1999, Villamaria; MLS 173, 226, 1777, 1779–80, 2716, Salamina; UQC 01, 05, 08, three specimens UQC not cataloged, Quindío, Armenia.

Atractus matthewi: Venezuela: EBRG 3952–54 (paratypes of *A. matthewi*), EBRG 4453 (holotype of *A. nororientalis*), EBRG 4454 (paratype of *A. nororientalis*), MNRJ 8127, Anzoategui, Macizo de Turimiquire, Cerro El Guamal; MBUCV 1669, Monagas, Caripe; EBRG 3793, Sucre, Serranía de Turimiquire.

Atractus melanogaster: Colombia: MLS 296, Caldas, without locality; MLS 235, 237, Pensilvania; ICN 10029–34, Tolima, Cajamarca, Vereda La Palma; CZUT-R 117, Ibagué, Ibanasca; CZUT-R 10, Pastales; CZUT-R 09, Toche.

Atractus melas: Colombia: MLS 2537, Chocó, Quibdó; UV 8533, Valle del Cauca.

Atractus michelae: Venezuela: ULABG 2672 (holotype), Mérida, Canagua, Pueblos del Sur; CVULA 4445 (paratype), CVULA 2918, Táchira, Uribante, Caparo.

Atractus mijaresi: Venezuela: ULABG 4697 (holotype), Mérida, Mucurubá, Rangel.

Atractus modestus: Ecuador: NHM 1946.1.6.30 (holotype), western Ecuador; QCAZ 1167, Azuay, Molleturo; QCAZ 002, 201–03, 641, 1216, 2100, Cotopaxi, San Francisco de Las Pampas; QCAZ 6548, Pilaló; QCAZ 2013, Morona-Santiago, Plan de Milagro; QCAZ 1134, Pichincha, without locality.

Atractus multicinctus: Colombia: ICN 7075, Valle del Cauca, Buenaventura, Queremal; USNM 151723, road to Buenaventura.

Atractus nebularis: Colombia: ICN 10807–10, Cesar, Valledupar, Nabusímaque; ICN 5663–65 paratypes, Magdalena, Montes, Cuchilla, Hierbabuena; ICN 10625, Santa Marta, above San Lorenzo Station; ICN 2756 (holotype), ICN 2757–67 (paratypes), Sierra de San Lorenzo.

Atractus nicefori: Colombia: MLS 2940, Antioquia, Jardín; MLS 229, MLS 231–33, 239–40, 275, 279, 297, 302, 2635–37, Jericó; MUJ 02–03, Támesis.

Atractus nigricaudus: Peru: MHNSM 19175, 19180, 19183, 19194, Pasco, Huáchon, Pugmaray; MHNSM 17761, Oxapampa, San Alberto; MHNSM 18108, 18113, 18192–93, 19047–48, Paucartambo, Agomarca; MHNSM 17811–12, 17825–27, 17842–44, 17854, 17862, 17867–68, 18015, 18101, 18103, 18050, 18105, 18575, Aquimarca; MHNSM 18051–54, Mayabamba; MHNSM 18107, 18427–30, Santa Isabel; MHNSM 18571, Taurapau; MHNSM 18609–10, 19046, Uchuhuerta.

Atractus nigriventris: Colombia: MLS 234 (holotype), Boyacá, Chita.

Atractus obesus: Colombia: ICN 2934, Valle Del Cauca, Cali, Parque Nacional Natural Los Farallones.

Atractus obtusirostris: Colombia: CZUT-R 12, Tolima, Ibagué, Pastales; CZUT-R 11, Toche; ICN 2722, 6497, Icononzo; ICN 5669–71, Juntas; ZMH-R 4428 (syntype), Río Combeyma.

Atractus ochrosetrus: Venezuela: ULABG 4698 (holotype), Mérida, Tovar; ULABG 4696 (paratype), Tovar-Guaraque road.

Atractus oculotemporalis: Colombia: IBSP 6390 (holotype), Antioquia, Jericó.

Atractus pamplonensis: Colombia: MHNLS not cataloged, Norte de Santander, Bochalema; MLS 2338–39, Chinacotá; MLS 273–74, 248, 287, 300, Chitagá, Chucarima; MHUA 14163–64, Cutilla; MLS 1920, El Diamante; ICN 10715–18,

Labateca; MLS 248, La Donjuana; MLS 277, Ocaña; IBSP 9192 (holotype), IBSP 9190–91, 9040, 9021 (paratypes), MLS 241–44, 247, 250–52, 276, 2001–02, 2364, 2369–71, 2458–60, 2688–2694, 2711–15, 2753–69, MLS without number, ICN 10719–24, Pamplona; MLS 249, 253, 2700–03, Toledo.

Atractus paucidens: Ecuador: MZUSP 7703, USNM 232725–26, Pichincha, Santo Domingo de Los Colorados; EPN 8729–32, Finca La Esperanza.

Atractus roulei: Ecuador: QCAZ 6256, Azuay, Hierba Mala; USNM 33861, Chimborazo.

Atractus sanctaemartae: IAvH 2290, Magdalena, Ciudad Perdida; ICN 10711, San Sebastián de Rábago; IAvH 8302, locality in error, Huila, Acevedo, Parque Nacional Nacional Cueva de los Guacharos.

Atractus sanguineus: Colombia: MLS 2513, Antioquia, Porce; CSJ 518, San Pedro; CSJ 517 (holotype; formerly CSJ 232), MLS 1784–85, Yarumal; MHUA 1432, Yolombo.

Atractus tamaensis: Venezuela: MHNLS 8307 (holotype), MHNLS 8301, 8303–06 (paratypes), Táchira, Junin, Betania. *Atractus taphorni*: Venezuela: IBSP 25785, without locality; CVULA 1838, Mérida, El Chorotal, La Azulita road; CVULA 6417, La Carbonera; ULABG 3909, Libertador.

Atractus trivittatus: Colombia: MLS 258 (holotype), 286, Boyacá, Chita; MLS 257, 290, 2638–39, 2706–07, Casanare, La Salina; MLS 269, Norte de Santander, Arboledas; MLS 137, Gramalote; MLS 245–46, La Donjuana.

Atractus variegatus: Colombia: MLS 2484–85, Boyacá, Boavita; MLS 260 holotype, MLS 217, 259, 267, 272, 278, 281, 2266, 2268–69, 2271–73, 2697, La Uvita.

Atractus ventrimaculatus: Venezuela: ULABG 2409, Mérida, Betania; ULABG 6701–02, La Princesa; MHNLS 897–901, Libertador, El Valle; NHM 1946.1.5.15 (holotype), Mérida; MBUCV 2016, La Mucus, Parque Nacional Sierra Nevada; EBRG 4052, Pico Humbo.

Atractus cf. vertebralis: Peru: MHNSM 3100, Cusco, Urubamba, Machu-Pichu; MHNSM 2849, Huancavelica, Tayacaya.

Atractus vertebrolineatus: Colombia: MLS 184 (holotype), Norte de Santander, Ocaña.

Atractus vittatus: Venezuela: IBSP 41082, Aragua, without locality; EBRG 700, 2959, 4059, 4092, Colonia Tavor, El Limón road; MBUCV 703, Distrito Capital, Caracas; MBUCV 415, El Junquito-Colonia Tavor road; MHNLS 5159, El Limón, Las Aguaitas.

Atractus wagleri: Colombia: UIS-R 71, Santander, Florida Blanca; UIS-R 281, Piedecuesta, Guatigurá, Vereda Viricute; MHUA 14504, San Vicente de Chucurí.

Atractus werneri: Colombia: MLS 144, 289, 483, without locality; IAvH 4327, Cundinamarca, El Colégio; ICN 2727, MLS 2329, 2334, 2345–44, 2427, 2514, 2518, 2523, 2563, 2914–16, 2932–34, MUJ 92, Fusagasugá; MLS 161, La Mesa; IAvH 2068, La Vega; ICN 5738, 10696, San Francisco; IAvH 3014, MLS 1915–16, 2118, 2020, Santandercito; ICN 2612, MLS 236, 238, Sasaima; IAvH 145, 823–24, ICN 7268, Silvania; IAvH 17, Vereda Santa Rita.

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