

Description of two new species from Venezuela in the highly diverse dipsadine genus *Atractus* (Serpentes: Colubridae)

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Abstract. Two new species of *Atractus* are described from Venezuela uplands and highlands on two northern Andean cordilleras. *Atractus acheronius*, known only from Sierra de Perijá, can be distinguished from congeners by having 17 dorsal scale rows, presence of preocular scales, seven upper and lower labials, seven maxillary teeth, 166 ventrals in the single female, 23 subcaudals, dorsum brown with small dark brown dots, large body size, huge body diameter, and small tail size. *Atractus multidentatus*, known only from north versant of the Cordillera de Mérida, can be distinguished from congeners by having 17 dorsal scale rows, eight upper and lower labials, 18 maxillary teeth, 153 ventrals in the single female, nine subcaudals, dorsum reddish brown with five longitudinal dark brown stripes, small body size, small body diameter, and small tail size. Additionally, a discussion concerning the species description of *Atractus* based on unique specimens is provided.

Keywords: Andean *Atractus*, Cordillera de Mérida, Sierra de Perijá, taxonomy.

Introduction

The fossorial dipsadine snake genus *Atractus* Wagler is distributed widely in the Neotropical region, occurring from Panama to Argentina (Giraudo and Scrocchi, 2000; Myers, 2003). *Atractus* is the most diverse Alethinophidian snake genus in the world having about 120 valid species, most of them known only from their type specimens and/or localities (Passos, 2008).

Currently the taxonomic status of several species still puzzled, and there are numerous misidentified specimens in most of herpetological collections (Passos, Fernandes and Zanella, 2005; Passos, Cisneros-Heredia and Salazar-V, 2007; Passos, Fernandes and Borges-Nojosa, 2007). In the course of taxonomic revision of Venezuelan species of *Atractus*, we found two distinctive specimens could no match to any previously known species on the genus. There-

fore, the aim of this paper is to describe these new species, and comment on recent *Atractus* description based on unique type specimens.

Materials and methods

Specimens examined are housed in the following institutions: Venezuela – Colección de Vertebrados de la Universidad de Los Andes (CVULA), Mérida; Museo de Biología de la Universidad Central de Venezuela (MBUCV), Caracas D.F.; Museo de Historia Natural La Salle (MHNSL), Caracas D.C.; Colección Herpetologica del Laboratorio de Biogeografía de la Universidad de Los Andes (ULABG), Mérida; Colombia – Colégio San José (CSJ), Medellín, Antioquia; Colección Herpetologica de la Universidad de Quindío (UQC), Armênia, 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 Historia Natural de la Universidad de Antioquia (MHUA), Medellín, Antioquia; Museo de la Universidad La Salle (MLS), Bogotá D.C.; Museo de Zoología de la Universidad Javeriana (MUJ), Bogotá, D.C.; Museo de Historia Natural de Universidad Industrial de Santander (UIS), Bucaramanga, Santander; Colección Herpetológica de la Universidad del Valle (UV-C), Cali, Valle del Cauca; Ecuador – Escuela Politécnica Nacional (EPN), Quito; 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; Museo Nacional da Universidade Federal do Rio de Janeiro (MNRJ); Museo de Zoologia da Universidade de São Paulo

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(MZUSP); England – Natural History Museum (NHM), London. The specimens are listed on the Appendix and correspond to all trans-Andean species of *Atractus* examined. Additional cis-Andean *Atractus* examined are found in (Prudente and Passos, 2008; Passos et al., in press).

The observed characters are from meristics, morphometrics, and dentition characters. Terminology for *Atractus* cephalic shields follows Savage (1960), whereas the method of counting ventral scales follows Dowling (1951). The condition for loreal scale follows Passos, Fernandes and Borges-Nojosa (2007). Sex was determined by the presence or absence of hemipenes through a ventral incision at the base of the tail. Measurements were taken with an analogical caliper to the nearest 0.1 millimeter under stereoscope, except for snout-vent (SVL) and caudal lengths (CL), which were taken with a flexible ruler to the nearest millimeter.

Atractus acheronius sp. nov. (figs 1 and 2)

Atractus sp. Alemán (1953); La Región de Perijá y sus Habitantes, Sociedad de Ciencias Naturales La Salle (Caracas).

Holotype

Adult female, MHNLS 398 (cited erroneously as MHNSL 1760 by Alemán, 1953), from upper Río Negro Valley (2200-2400 m), Sierra de Perijá, municipality of Machiques de Perijá (09°52'N, 72°48'W), state of Zulia, Venezuela, collected on 1950 by C. Alemán.

Diagnosis

Atractus acheronius distinguished from all congeners by the following combination of characters: (1) 17/17/17 dorsal scale rows smooth; (2) two postoculars; (3) long loreal; (4) temporals 1 + 2; (5) seven supralabials, third and fourth contacting orbit; (6) six to seven infralabials, first three contacting chinshields; (7) seven maxillary teeth; (8) three gular scale rows; (9) one preventral; (10) 166 ventrals in the single female; (11) 23 subcaudals; (12) dorsum brown with small dark brown sparse dots; (13) venter cream with dark brown blotches concentrate anteriorly; (14) large body size, with single female attain 536 mm SVL; (15) small tail size (9.7% of SVL).

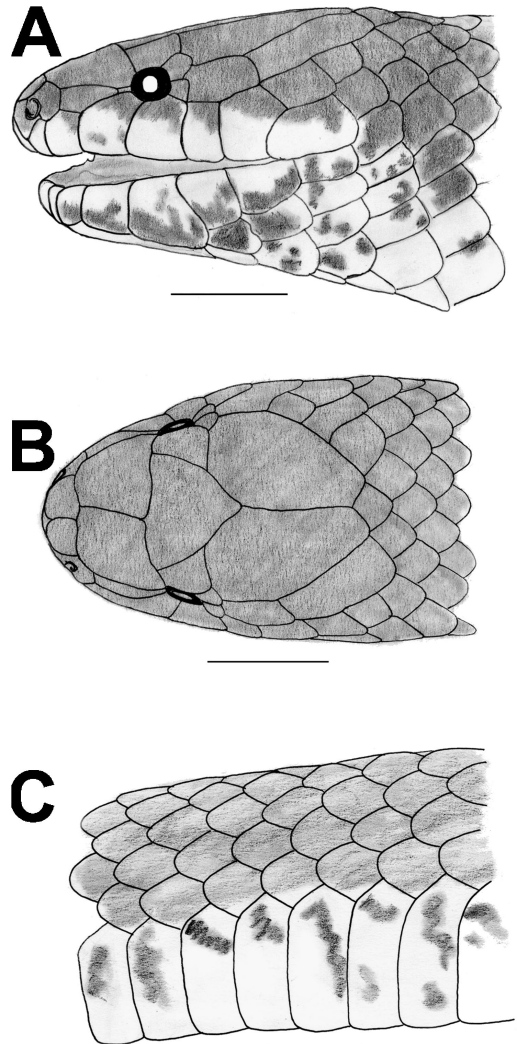


Figure 1. Dorsal (A) and lateral (B) views of head and lateral (C) view of midbody of the holotype of *Atractus acheronius* (MHNLS 398). Scale = 5 mm.

Comparisons

Among all congeners, *Atractus acheronius* shared only with *A. favae* (sensu Hoogmoed, 1980) and *A. paucidens* along genus the occurrence of preoculars preventing loreal and orbit contact. The new species easily differ from both by having body size diameter above 10 mm, tail size below 10% of SVL, and 23 subcaudals in the single female (vs. body diameter below 5 mm, tail size above 15% of SVL, and subcaudals above 35 on females from both species).

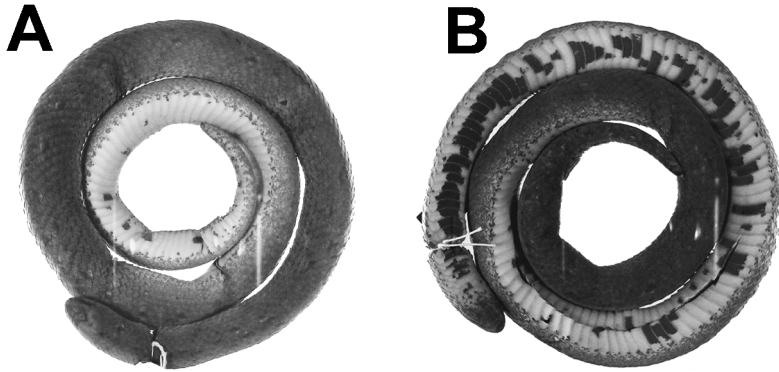


Figure 2. Dorsal (A) and ventral (B) views of the body of holotype of *Atractus acheronius* (MHNS 398).

Description of the holotype

Adult female, SVL 536 mm, CL 52 mm (9.6% of SVL); body diameter 12.3 mm (2.3% of SVL); head length 18.7 mm (3.5% of SVL); head width 9.6 mm (51% head length); interorbital distance 6.9 mm; rostro-orbital distance 5.7 mm (80% interorbital distance); nasorbital distance 4.5 mm; cervical constriction indistinct; head flattened in lateral view, round in dorsal view; snout truncate in lateral view, round in dorsal view; *canthus rostralis* well marked in lateral view; rostral sub-triangular in frontal view, 3.3 mm long, 1.8 mm high, barely visible in dorsal view; internasal 2.0 mm long, 1.5 mm wide; internasal suture sinister with respect to prefrontal suture; prefrontal 3.3 mm long, 4.1 mm wide; supraocular sub-trapezoidal in dorsal view, 2.4 mm long, 1.6 mm wide; frontal sub-triangular in dorsal view, 4.4 mm long, 4.9 mm wide; parietal 6.9 mm long, 4.1 mm wide; nasal divided, nostril restricted to prenasal; prenasal 1.7 mm high, 0.8 mm long; postnasal 1.6 mm high, 1.1 mm long; loreal 3.0 length, 1.0 mm high, contacting second and third supralabials; preoculars 0.5 mm long, about twice as long as wide, preventing orbit/loreal contact; eye diameter 1.9 mm, pupil round; two postoculars similar in size; upper postocular 1.2 mm long, 0.9 mm high, slightly longer than lower postocular; temporals 1 + 2; first temporal 2.7 mm long, 1.7 mm high; upper posterior temporal elongate on the

left side, 5.4 mm long, 1.6 mm wide; seven supralabials, third and fourth contacting orbit; second supralabial higher than first and smaller than third; sixth supralabial higher and seventh longer than remaining supralabials; symphyisial sub-triangular, 2.3 mm wide, 0.9 mm long; six (left side) and seven (right side) infralabials, first three and four in contact with chinshields respectively; chinshields 4.9 mm long, 2.3 mm wide; three gular scale rows; one preventral; 166 ventrals; 23 subcaudals; 17/17/17 smooth dorsal scale rows; dorsals lacking apical pits, supranal tubercles, and keels; nine or ten dorsal scale rows on the level of second subcaudal; caudal spine moderate, conical, robust, and rhomboidal; maxilla arched in dorsal view, with four or five prediastemal and two postdiastemal teeth; prediastemal teeth large, similar in size, moderately spaced, curved posteriorly, robust at the base, slightly narrower on the apices, angular in cross section; maxillary diastema long; postdiastemal teeth half sized of prediastemal ones; lateral process of maxilla absent.

Colour in preservative

Dorsal ground colour of head brown, with barely distinct beige blotches disposed in "V" form above parietals; background of head uniformly brown to mid portion of supralabials; ventral margin of supralabials cream; mental region mostly brown; preventrals cream, with irregular dark brown dots; ventral ground colour creamish white, with dark brown bars collapsed

anteriorly on the mid portion of ventral scales; lateral edges of ventrals creamish white on the anterior portion of body; ventral blotches decreasing in size and intensity posteriorly; ventral blotches becoming isolated round dots at posterior third of body; paraventral margins with reduced invasion of brown pigment along the body; ventral ground colour of tail creamish white, with feet disperse dark brown dots; dorsal ground colour of body brown, with black dots at paravertebral region; black dots indistinct anteriorly and well evident on the mid and posterior regions of body.

Distribution

Known only from the locality of upper Río Negro Valley, municipality of Machiques de Perijá, Sierra de Perijá, State of Zulia, Venezuela. *Atractus acheronius* occur along Andean forest at 2200-2400 m elevation.

Etymology

The specific epithet “*acheronius*” is derived from Acheron River of the Greek mythology. According to the old Greek myth Acheron was tributary of the Styx River, in which the boatman Charon crossing the earth souls into infernal regions. The word *acheronius* is used herein in allusion to the type locality (= Black River in English) as well as in reference to the secretive habits of the new species.

Remarks

Alemán (1953) cited the specimen herein described as *Atractus* sp. Barros (2000) referred to this specimen as a putative new species differing from *A. turikensis* (species also described from Sierra de Perijá) by having largest body size. In fact, *Atractus acheronius* occurs parapatrically with *A. indistinctus* (new Venezuelan record, P. Passos unpubl. data) and *A. turikensis* (Barros, 2000) in the Sierra de Perijá. However, the new species can be distinguished easily from both by having SVL above 500 mm, body diameter above 10 mm, preocular scales,

and dorsal colour pattern almost uniform brown (vs. SVL below 500 mm, body diameter below 10 mm, preocular absents, and dorsal colour pattern with irregular vertebral stripe and paravertebral blotches).

On the basis of similarity characters only, *Atractus acheronius* appear to be close relative of *A. nicefori*, sharing a body diameter above 10 mm, generally three gular scale rows, small tail size in females, dorsal colour pattern almost brown covered by small dark dots, and venter creamish white with dark brown spots. Nevertheless, *A. acheronius* differs from it by having 17 dorsal scale rows, seven maxillary teeth, 166 ventrals in the single female, and SVL above 500 mm (vs. 15 dorsal scale rows, nine or ten maxillary teeth, 144-154 ventrals in females, and snout-vent length below 500 mm).

Atractus multidentatus sp. nov. (figs 3 and 4)

Holotype

Adult female, CVULA 7080, from quebrada El Paraiso, La Vega (8°32'N, 71°14'W, ca. 1000 m), State of Mérida, Venezuela, collected by R. Alarcón.

Diagnosis

Atractus multidentatus distinguished from all congeners by the following combination of characters: (1) 17/17/17 dorsal scale rows smooth; (2) two postoculars; (3) long loreal; (4) temporals 1 + 2; (5) eight supralabials, fourth and fifth contacting orbit; (6) eight infralabials, first four contacting chinshields; (7) 18 maxillary teeth; (8) three gular scale rows; (9) four preventrals; (10) 153 ventrals in the single female; (11) nine subcaudals; (12) dorsum reddish brown, with five longitudinal dark brown stripes; (13) venter cream with little dark brown irregular blotches; (14) small body size, single female attain 160 mm SVL; (15) small tail size (7.5% of SVL).

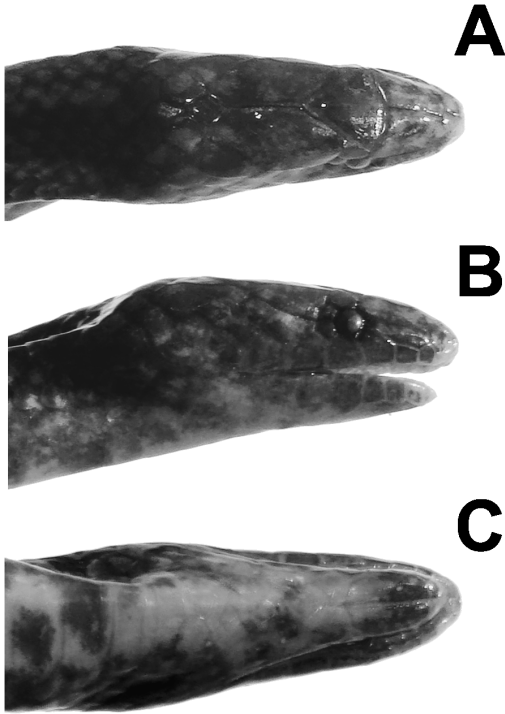


Figure 3. Dorsal (A), lateral (B), and ventral (C) views of the head of holotype of *Atractus multidentatus* (CVULA 7080).



Figure 4. General view of the body of holotype of *Atractus multidentatus* (CVULA 7080).

Comparisons

Among all congeners, *Atractus multidentatus* share only with *A. heliobelluomini* a high number of maxillary teeth above 15 and a low number of subcaudals. The new species differs from

A. heliobelluomini by having 17 dorsal scale rows, dorsal colour pattern with five longitudinal stripes, eight upper and lower labials, two postoculars, 18 maxillary teeth, and 153 ventrals (vs. 15 dorsal scale rows, three longitudinal stripes, seven upper and lower labials, 21-22 maxillary teeth, and 118 ventrals).

Description of the holotype

Adult female, SVL 160 mm, CL 12 mm (7.5% of SVL); diameter of body 7.3 mm (4.5% of SVL); cervical constrict evident; head arched in lateral view, sub-triangular in dorsal view; snout truncate in lateral view, round in dorsal view; rostral sub-triangular in frontal view, 1.1 mm wide, 0.7 mm high, slightly visible in dorsal view; internasal 1.0 mm long, 0.8 mm wide; internasal suture sinister with respect to prefrontal suture; prefrontal 2.2 mm long, 1.6 mm wide; supraocular sub-rectangular in dorsal view, about twice as long as wide; frontal sub-triangular in dorsal view, 2.4 mm long, 2.6 mm wide; parietal 4.2 mm long, 2.0 mm wide; nasal divided, nostril located between prenasal and postnasal; prenasal about twice as high as long; postnasal about twice as high as long; loreal 2.0 mm long, 0.9 mm wide, contacting second, third, and fourth supralabials; pupil sub-elliptical; two postoculars with similar size; temporals 1 + 2; first temporal about twice as long as high; upper posterior temporal elongate, 2.6 mm long, 0.9 mm wide, entire on left and divided on right side; eight supralabials, fourth and fifth contacting orbit; second supralabial higher than first and similar in size to third one; second and third supralabials smaller than fourth; seventh higher and eighth longer than remaining supralabials; symphyisial semicircular, three times as wide as long; eight infralabials, first four contacting chinshields; first pair of supralabials in contact behind symphyisial, preventing symphyisial/chinshields contact; three gular scale rows; four prefrontals; 153 ventrals; nine subcaudals; 17/17/17 smooth dorsal scale rows; dorsals lacking apical pits, supranal tubercles, and keels; nine (left side)

and ten (right side) dorsal scale rows on the level of second subcaudal; caudal spine moderate, robust, conical, rhomboidal; maxilla arched in dorsal view, with 18 maxillary teeth lacking diastema; teeth large, similar in size, little spaced, curved posteriorly, angular in cross section, slightly robust at the base, and narrower on the apices.

Colour in preservative

Dorsum of head dark reddish brown, except for irregular reddish blotches above rostral, internasals, and prefrontals; background of head uniform dark reddish brown; symphyseal, anterior portion of chinshields, and first two pairs of infralabials cream, remaining infralabials and posterior chinshields reddish brown; gular region and preventrals cream with spaced dark brown dots; venter and tail with creamish white ground colour, covered by a feel irregular dark brown blotches; ventral blotches well spaced along venter and tail; dorsal ground colour reddish brown, with centre of dorsal scales light and lateral edges dark reddish; dorsum with five longitudinal stripes dark brown; first stripes (mid scale width) covered dorsal edges of the first scale rows, second stripes (one scale width) covered fourth dorsal scale rows, and vertebral line (one scale width); ventral margin of first dorsal scale rows cream.

Distribution

Known only from the locality of La Vega in the north versant of Cordillera de Mérida. *Atractus multidentatus* probably inhabit plant formation composed with semi deciduous Andean forest nearly 1000 m elevation.

Etymology

The specific epithet “multidentatus” is formed by union of the prefix multi (= large number) with the adjective dentatus (= toothed). This name is used here in allusion to the large number of maxillary teeth displayed by *Atractus multidentatus*.

Remarks

Despite *Atractus multidentatus* shares with *A. heliobelluomini* an unusual combination of characters on the genus (see above), the latter species is known only from western Amazon forest. *Atractus multidentatus* appear also to be a close relative to *A. emigdioi* (Passos, 2008). Both species shares eventually a similar range of ventral scales, eight upper and lower labial scales, higher number of maxillary teeth, small tail size, and striped dorsal pattern. However, the new species strongly differ from *A. emigdioi* by having only nine subcaudals, 18 maxillary teeth lacking diastema, five dorsal stripes, and venter mostly cream (vs. 17-21 subcaudals in females, six to nine prediastemal teeth and three postdiastemal ones, three dorsal stripes, and venter mostly dark brown).

Discussion

The *Atractus* taxonomy has been characterized earlier by several species description based on unique type specimens (Hallowell, 1845; Cope, 1868; Boulenger, 1894, 1898, 1905; Peracca, 1896; Amaral, 1930, 1931, 1935; Prado, 1940, 1941, 1944, 1945; Savage, 1955; Roze, 1961), when additional material expended many years to be properly identified (Hoogmoed, 1980; Fernandes and Argôlo, 1999; Myers, 2003; Cisneros-Heredia, 2005; Passos, Cisneros-Heredia and Salazar-V, 2007; Passos and Arredondo, 2009). Despite of improvements on the fieldwork and facilities to examine specimen collections in the past 50 years, the actual scenario have not much change and many species still named on the basis of single individuals (Myers, 2003; Silva, 2004; Esqueda and La Marca, 2005; Jorge da Silva et al., 2005; Myers and Schargel, 2006; Myers and Donnelly, 2008; Passos and Fernandes, 2008).

Some authors have advocated that apparent rarity of most *Atractus* species was due to their secretive habits or endemism (Savage, 1960; Schargel and García-Pérez, 2002; Myers, 2003;

Myers and Schargel, 2006). Passos, Cisneros-Heredia and Salazar-V (2007) pointed out that study of museum specimen's revealed several *Atractus* species to be common rather than rare within certain distributional range. Nevertheless, sometimes the scarcity of regional collections (e.g., *A. turikensis*), rapid habitats disturb (e.g., *A. altagratiae*), and apparently strict endemic taxa (e.g., *A. duidensis*) difficult achieve of species samples (Passos, 2008). In those cases, the analysis of a large series from putative close relative and/or sister species of a given new taxon could be crucial to guarantee a robust diagnosis and comparison of the contemplate species.

Although *Atractus acheronius* and *A. multidentatus* are herein described on the basis of single specimens, we have extensively compared them with all previous recognized species of *Atractus* within a revisionary context of the genus (Passos, 2008; see also the appendix of the present paper and those from Passos et al., in press and Prudente and Passos, 2008). This procedure permitted us to evaluate the characters variation of close related taxa and diminished possibility of naming anomalous individual from a given poorly known species. Finally, we strongly recommend authors working with *Atractus* in provide fine comparisons, at least, with closely related species in the absence of additional material of a putative new taxa.

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Appendix

Specimens examined

Atractus andinus: Colombia, Antioquia, without locality: (CSJ 231 holotype).

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

Atractus bocourti: Peru, Huánuco, Acomayo: (NHM 1946. 1.2.24 holotype, MHNSM 2801), Chaglla: (MHNSM 20041-43), Huancapallac: (MHNSM 20036), Molino-Panao, Pachitea: (MHNSM 3001, 3064), Panao: (MHNSM 20044).

Atractus boulengerii: Colombia, Valle Del Cauca, Anchicayá, Baixo Anchicayá: (UV-C 6591).

Atractus carrioni: Ecuador, Loja, Loja: (EPN 8673-74, QCAZ 793, 1081-82, 1217-19, 2100), Jardin Botanico: (QCAZ 6445-46), Yangana: (QCAZ 6550), Rio Molacatus: (QCAZ 6533-34).

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

Atractus crassicaudatus: Colombia, without locality: (IBSP 2443, ICN 8505, 8508-25, 8922-25, MLS 139, 152, 156, 293, 2640, MUJ 92, 355); Boyacá, Badohondo: (ICN 10693), Belen: (ICN 10709), Chiquinquirá: (MLS 2577), Coper: (MLS 2578-79), Duitama: (ICN 10700-07), Garagoa: (ICN 10627, MUJ 315-22, 398-99, 509), Guayatá: (IAvH 864-65), Pajarito: (IAvH 1059, ICN 2608-11, 2831-33), Pesca: (IAvH 1880), Rio Tectino: (IAvH 799), Sogomoso: (MLS 282, 2751-52), Tunja: (MUJ 04), Ventaquemada: (MLS 2243), Villa de Leyva: (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), Zetaquirá: (MUJ 05); Cundinamarca, without locality: (MUJ 482), Aguadita: (MLS 169), Albán: (IAvH 4749, ICN 10626), Bogotá: (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), Arrachal: (MLS 265, 2805-13), Cerro de Suba, La Conejera: (ICN 6336, 6577-79, 6580-81, 10692), Codazzi: (MLS 2386), San Joaquín: (MLS 2964-65), Santana: (IAvH 4964), Cajicá: (IAvH 500), Chia: (ICN 7101, MLS 2373-77, 2382-83, 2600, 2622-23, 2830-93, 2900-08, 2935-36, MLS without number, MUJ 18, 477), Cogua: (MLS 163, 185), Cota: (MUJ 164), Facatativa: (MUJ 264, 461-62), Fontinbón: (MUJ 25), Fuquené: (MUJ 16, 20-21), Fusagasuga: (MLS 2634, MUJ 92), Guachancipá: (ICN 8261), Guachetá: (MLS 2263), Guaduas: (MUJ 01), Guasca (MLS 2626, MUJ 203-05, 215), La Calera: (MUJ 298), La Unión: (MLS 157), Machetá: (MLS 2568-70, 2653, 2921-22, 2927, 2931), Mosquera: (ICN 1453-54, 1456, 1458-59), Laguna Herrera: (IAvH 3815, ICN 859, 1277, 1457), Nemocón: (ICN 7041), Pacho: (MLS 154, 2611-12, 2616, 2923-30, MUJ 550), Pasca: (ICN 485-86, MLS 2602-04), Quetame: (ICN 4477), Represa del Sigga: (IAvH 08), Reserva Carpanta: (MLS 26), San Antonio del Tequendama: (IAvH 3038-39, MLS 150-51, 200), Sesquilá: (MLS 2571), Sibaté: (MLS 175-76, 295), Sopo: (MLS 2624), Suesca: (MUJ 214, 649), Sumapaz: (MLS 168), Sutatenza: (MLS 283-84, 288, 292, 1860-63, 2493-94), Tabio: (MLS 1898), Tausa (MUJ 142), Tena: (MUJ 12, 19), Une: (MLS 160, 177, 2709-10), Usaquén: (MLS 2378-79, 2381, 2894-99, MUJ 13), Villapinzón: (ICN 2816, MLS 299), Villeta: (IAvH 1587); Meta, Cañon La Curia: (MLS 06), Lomalinda: (IAvH 967); Santander, without locality: (MUJ 212), Bolívar: (MLS 162), Jesús María: (MLS 2246-48), Puente Nacional: (MLS 2629), Santa Rita: (MLS 2630). Locality probably in error: Meta, Puerto Lopez: (ICN 6500, MUJ 15).

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

Atractus dumni: Ecuador, without locality: (QCAZ 219, 2884); Cotopaxi: without locality (IBSP 54328), Galapagos: (QCAZ 1092), San Francisco de Las Pampas: (QCAZ 163, 240-47, 670, 1077, 1231-33, 1685-86, 2108-10), Reserva Otonga, Cañon Signos: (QCAZ 4036); El Oro, Buenaventura: (EPN not cataloged); Loja: Olmedo: (QCAZ 1219); Pichincha, CERG: (QCAZ 2094), Chiriboqua: (32127-28), Mindo: (QCAZ 4151), Nanegalito: (QCAZ 638), Tandayapa: (QCAZ 872, 1667, 2102, 2111). Localities probably in error: Piso Tropical Oriental: (EPN 8703); Pastaza: Rio Bobonaza: (EPN 8733).

Atractus emigdioi: Venezuela, Lara: Morán, La Palma, Páramo El Jábon: (MHNLS 9299); Trujillo, Boconó,

Valera-Trujillo road: (ULABG 3791), Parque Nacional Guaramacal: (MHNLS 16209), Trujillo: (ULABG 4473).

Atractus eriki: Venezuela, Táchira: (CVULA 6117); Trujillo: Escuque: (ULABG 6710 paratype), Trujillo: (ULABG 6694 paratype), Valera: (ULABG 6693 holotype).

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

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

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

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

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

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

Atractus themanni: Colombia, Cauca, Popayán: (ICN 1794, 2590, 2613, 10635-36, MLS 1919), Rio Molina: (MLS 2593), Silvia: (MLS 2595, 2681); Valle Del Cauca, Sevilla: (MHUA 1407).

Atractus loveridgei: Colombia, Antioquia, Jardin: (CSJ 566), Jericó: (IBSP 7202, 8908, 8916, 10126, MLS 213-16,

218, 220-22, 224-25, 1205). Locality probably in error San Pedro: (MLS 2355).

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

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

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

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

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

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

Atractus modestus: Ecuador, western Ecuador (NHM 1946. 1.6.30, holotype); Azuay, Molleturo: (QCAZ 1167); Cotopaxi, San Francisco de Las Pampas: (QCAZ 002, 201-03, 641, 1216, 2100), Pilaló: (QCAZ 6548); Morona-Santiago, Plan de Milagro: (QCAZ 2013); Pichincha, without locality: (QCAZ 1134).

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

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

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

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

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

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

Atractus obtusirostris: Colombia, Tolima, Ibagué, Pastales: (CZUT-R 12), Toche: (CZUT-R 11), Icononzo: (ICN 2722,

6497), Juntas: (ICN 5669-71), Rio Combeyma: (ZMH-R 4428 syntype).

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

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

Atractus pamplonensis: Colombia, Norte de Santander, Bochalema: (MHNLS not cataloged), Chinacotá: (MLS 2338-39), Chitagá, Chucarima: (MLS 273-74, 248, 287, 300), Cutilla: (MHUA 14163-64), El Diamante: (MLS 1920), Labateca: (ICN 10715-18), La Donjuana: (MLS 248), Ocaña: (MLS 277), Pamplona: (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), Toledo: (MLS 249, 253, 2700-03).

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

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

Atractus sanctaemartae: Magdalena, Ciudad Perdida: (IAVH 2290), San Sebastián de Rábago: (ICN 10711). Locality in error, Huila, Acevedo, Parque Natural Nacional Cueva de los Guacharos: (IAVH 8302).

Atractus sanguineus: Colombia, Antioquia, Parce: (MLS 2513), San Pedro: (CSJ 518), Yarumal: (CSJ 517 holotype, MLS 1784-85), Yolombo: (MHUA 1432).

Atractus tamaensis: Venezuela, Táchira, Junín, Betania: (MHNLS 8307 holotype, MHNLS 8301, 8303-06 paratypes).

Atractus taphorni: Venezuela, without locality: (IBSP 25785); Mérida, El Chorotal: La Azulita road: (CVULA 1838), La Carbonera: (CVULA 6417), Libertador: (ULABG 3909).

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

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

Atractus ventrimaculatus: Venezuela, Mérida, Betania: (ULABG 2409), La Princesa: (ULABG 6701-02), Libertador, El Valle: (MHNLS 897-901), Mérida: (NHM 1946. 1.5.15 holotype), La Mucuy, Parque Nacional Sierra Nevada: (MBUCV 2016), Pico Humboldt: (EBRG 4052).

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

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

Atractus vittatus: Venezuela, Aragua, without locality: (IBSP 41082), Colonia Tovar- Hacienda El Limón road:

(EBRG 700, 2959, 4059, 4092); Distrito Capital, Caracas: (MBUCV 703), El Junquito-Colonia Tovar road: (MBUCV 415), Hacienda El Limón: Las Aguaitas: (MHNLS 5159).

Atractus wagleri: Colombia, Santander, Floridablanca: (UIS-R 71), Piedecuesta, Guatigurá: Vereda Viricute: (UIS-R 281), San Vicente de Chucuri: (MHUA 14504).

Atractus weneri: Colombia, without locality: (MLS 144, 289, 483); Cundinamarca, El Colégio: (IAvH 4327), Fusagasugá: (ICN 2727, MLS 2329, 2334, 2345-44, 2427,

2514, 2518, 2523, 2563, 2914-16, 2932-34, MUJ 92), La Mesa: (MLS 161), La Vega: (IAvH 2068), San Francisco: (ICN 5738, 10696), Santandercito: (IAvH 3014, MLS 1915-16, 2118, 2020), Sasaima: (ICN 2612, MLS 236, 238), Silvania: (IAvH 145, 823-24, ICN 7268), Vereda Santa Rita: (IAvH 17).

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