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Rediscovery and redescription of the Andean earth-snake *Atractus wagleri* (Reptilia: Serpentes: Colubridae)

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Abstract

Atractus wagleri was described based on a single specimen from Humbo, Department of Boyacá on the western Cordillera Oriental of Colombia, and since its original description there is no further record for the species. In the course of examination of Colombian collections the holotype of the *Atractus wagleri* could not be found and it is probable that it was lost, but we found three additional specimens of this poorly known snake from localities relatively close to the type locality. In this paper, we describe these specimens, and report data on meristics, morphometrics, and hemipenial variation for the species.

Key words: *Atractus wagleri*, Colombia, Cordillera Oriental, hemipenis, taxonomy

Introduction

The fossorial colubrid snake genus *Atractus* Wagler is distributed widely in the Neotropical region, occurring from Panama to Argentina (Giraudo & Scrocchi, 2000; Myers, 2003). *Atractus* is the most diverse Alethino-phidian snake genus, with nearly 120 valid species, most of them known only from their type localities (Passos, 2008). The taxonomic status of several species remains unclear and there are many misidentified specimens in many herpetological collections (Passos et al., 2005; Passos et al., 2007a, b; Passos & Fernandes, 2008). The trans-Andean *Atractus wagleri* was described by Prado (1945) based on a single specimen from Humbo in Boyacá Department of Colombia, and since its original description, there are no further records for the species. While examining Colombian collections, we found three specimens of *A. wagleri* from localities close to the type locality that we report herein.

Our aim in this study is to provide a new description of *Atractus wagleri* on the basis of new specimens found in the field and already present in herpetological collections, reporting data on meristics, morphometrics, and hemipenis variation for the species. In addition, we provide a new diagnosis, and comparisons between *A. wagleri* and congeners occurring parapatrically in the Cordilleras Central (*A. sanguineus*) and Oriental (*A. crassicaudatus*).

Material and methods

We examined *Atractus* specimens in the following collections: USA—United States National Museum (USNM), Smithsonian Institution, Washington D.C. Venezuela—Colección de Vertebrados de la Universidad

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de Los Andes (CV-ULA), Mérida; Museo de Biología de la Universidad Central de Venezuela (MBUCV), Caracas D. C.; Museo de Historia Natural, Fundación La Salle (MHNLS), Caracas D.C.; Colección Herpetológica del Laboratório de Biogeografia de la Universidad de Los Andes (ULABG), Mérida. Colombia—Colégio San José (CSJ), Medellín, Antioquia; Colección Herpetológica de la Universidad de Quíndio (UQC), Armenia, Quíndio; 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 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—Escola 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; Museu de Zoologia da Universidade de São Paulo (MZUSP) São Paulo, SP. England—The Natural History Museum (NHM), London. Germany—Zoologisches Museum für Hamburg (ZMH), Hamburg. Specimens and localities are listed in Appendix and correspond to all trans-Andean species of *Atractus* examined.

Terminology for *Atractus* cephalic shields follows Savage (1960) and ventral scale counts follow Dowling (1951). Nomenclature regarding the loreal condition follows Passos et al. (2007b). Terminology for hemipenis description follows Dowling and Savage (1960), as augmented by Myers and Campbell (1981) and Zaher (1999). The hemipenes were examined in the everted condition, and when necessary they were everted using the techniques described by Pesantes (1994). 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 analogue caliper to the nearest 0.1 mm under a stereoscope, except for snout-vent length (SVL) and caudal length (CL), which were taken with a flexible ruler to the nearest 1 mm.

Atractus wagleri

(Figures 1–4)

Atractus wagleri Prado, 1945; Ciencia (Mexico): 6:61.

Holotype: Female, MLS 228, from Humbo (05°36'N, 74°16'W, ca. 1000 m), Boyacá Department of Colombia, collected on 1948 by Hermanos of La Salle order. Presumed lost (see discussion).

Diagnosis: *Atractus wagleri* is distinguished from all congeners by the combination of the following characters: (1) 17/17/17 smooth dorsal scale rows; (2) two postoculars; (3) loreal long; (4) temporals 1+2; (5) seven supralabials, third and fourth contacting orbit; (6) seven infralabials, first three contacting chinshields; (7) six or seven maxillary teeth; (8) generally four gular scale rows; (9) four or five preventrals; (10) 174–180 ventrals in females, 157–174 in males; (11) 43–44 subcaudals in females, 46–56 in males; (12) dorsal ground colour in preservative cream-red with an irregular vertebral black stripe connected to lateral black blotches, constituting complete bands anteriorly and decreasing in size posteriorly; (13) venter black with paraventral region cream; (14) moderate body size, females reaching 437 mm SVL and males 445 mm SVL; (15) moderate tail length in females (13.6–15.3% SVL) and long in male (21.61% SVL); (16) hemipenis moderately bilobed, semicapitate, and semicalyculate.

Comparisons: Among all congeners, *Atractus wagleri* occur parapatrically and shared a suite combination of characters with *A. sanguineus*: 17 dorsal scale rows, more than 170 ventrals in both sexes, more than 40 subcaudals in males, seven upper and lower labials, first three infralabials contacting chinshields, seven or

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eight maxillary teeth, long tail in males, dorsum with blotches decreasing in size posteriorly, and venter generally most black. *Atractus wagleri* differs from *A. sanguineus* in having 43–44 subcaudals in females and paravertebral blotches constituting bands anteriorly (vs. 29–38 subcaudals in females and paravertebral blotches never forming bands, except for occasionally a black collar on neck, anteriorly). The only other species of *Atractus* occurring parapatrically with *A. wagleri* at Cordillera Oriental of Colombia is *A. crassicaudatus*. *Atractus wagleri* can be easily distinguished from *A. crassicaudatus* by having 174–180 ventrals in females, 43–44 subcaudals in females and 46–56 in males, and tail 21.61% SVL in males, 13.6–15.3% SVL in females (vs. 147–170 ventrals in females; 21–33 subcaudals in males and 14–26 in females; tail 11.0–17.1% SVL in males, 8.0–13.7% in females).



FIGURES 1–2. Dorsal (1) and ventral (2) views of *Atractus wagleri* (MHUA 14504) from San Vicenti de Chucurí. SVL 445 mm, CL 96 mm.

Description (based on 3 new specimens; 2 males, 1 female): Head twice as long as wide, flattened in lateral view, round in dorsal view; snout truncate in lateral view, round in dorsal view; rostral subtriangular in frontal view, broader than high, little visible in dorsal view; internasal as long as wide; internasal suture sinistral with respect to prefrontal suture; prefrontal longer than wide; supraocular subtrapezoidal, slightly longer than wide; frontal subpentagonal, broader than long; parietal about twice as long as wide; nasal divided; nostril located between prenasal and postnasal; prenasal twice as high as long; postnasal about twice as high as long, higher than prenasal; loreal long, contacting second and third supralabials; pupil round; two postoculars of similar length; upper postocular about twice as high as lower postocular; temporals 1+2; anterior temporal twice as long as high; upper posterior temporal elongate, three times as long as wide; seven supralabials, third and fourth contacting orbit; second supralabial higher than first and smaller than third; third higher and seventh longer than remaining supralabials; symphysis subtriangular, four times broader than long; seven infralabials, first three contacting chinshields; first pair of infralabials in contact behind symphysis, preventing symphysis/chinshields contact; chinshields three times as long as wide; three or four gular scale rows; four or five preventrals; 17/17/17 smooth dorsal scale rows; dorsals lacking apical pits, supra-anal tubercles, and keels; caudal spine short, robust, and rhomboid.

Maxillary arch: Arched in dorsal view, with four or five prediastemal and two or three postdiastemal teeth; prediastemal teeth large, curved downward, decreasing gradually in size posteriorly, angular in cross section, robust at base, and narrower at apices; maxillary diastema short; postdiastemal teeth slightly smaller than last prediastemal tooth.

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Colour pattern in preservative: Dorsum of head black, covered with small beige dots above internasals, nasals, loreal, and prefrontals; background of head black to dorsal margins of supralabials; black descending postocular stripe reaching dorsal edge of sixth and anterior ventral margin of seventh supralabial; temporal region pigmented with irregular beige spots; median region of supralabials cream-white, except for sixth and seventh scales; mental region cream-white, occasionally with disperse black dots; preventrals uniformly cream; venter predominantly cream-white with irregular black dots for first 15 ventrals; venter becomes uniformly black before 15th ventral, except for lateral margin of scales uniformly cream-white; tail black with lateral portion of subcaudals cream-white; dorsal ground colour of body black anteriorly, with cream-white complete transverse bands (one scale long), alternated on flanks; black interspaces (three to four scales long), reaching paraventral region; pale transverse bands of opposite sides connected middorsally only anteriorly, up to a point level with 20th ventral; pale transverse bands increase in size at midbody (two scales long), with black interspaces reducing gradually in size, restricted to paravertebral region (two scales long); posterior to midbody region, dorsal ground colour becomes cream-red with black vertebral line (two scales wide), breaking up to form black paravertebral blotches; flanks with round black blotches (two scales long) at the level of third and fourth scale rows; paraventral region with irregular small black blotches, constituting a barely defined lateral stripe above first two dorsal scale rows; paraventral blotches occasionally connected to paravertebral ones (Figs. 1–2).



FIGURE 3. General view of *Atractus wagleri* (MHUA 14504) in life.

Colour pattern in life: Dorsum of head black with yellow dots above internasals, nasals, loreal, prefrontal, and temporal region; ventral margin of supralabials yellow; mental region and venter anteriorly cream-

yellow; lateral margin of ventrals cream-yellow and remaining belly uniformly black; dorsum of body black anteriorly, with yellow transverse bands; bands gradually change to reddish orange in the median third and uniformly red at posterior region of body; vertebral line and paravertebral blotches black; flanks and paraventral region with cream-red ground colour, covered with irregular black blotches (Fig. 3).

Hemipenis (Fig. 4; everted organs $n = 2$): Organ moderately bilobed, semicapitate, and semicalyculate; lobes distinct and restricted to distal portion of capitulum; lobes cylindrical with round, laterally projecting apices; lateral projections oriented centrifugally, clearly distinct from proximal region of lobes; lobes and capitulum uniformly covered with spinulate calyces; calyces progressively replaced by papillae toward tips of lobes; lobes with calyces losing vertical walls and constituting spinulate transverse flounces; transverse flounces well defined on lateral portion of asulcate side of hemipenis; asulcate side of capitulum with barely conspicuous lobular crests; capitular crotch well marked on both sides of hemipenis; capitulum similar in size to hemipenial body, located at the level of sulcus spermaticus bifurcation; sulcus spermaticus bifurcates in the mid portion of the organ; branches of sulcus spermaticus centrifugal, reaching lobe apices; margins of sulcus spermaticus stout and narrow along hemipenial body, and moderately expanded in the capitular region; hemipenial body subcylindrical, covered with moderate hooked spines; basal naked pocket restricted to basal portion of hemipenial body; proximal portion of hemipenis with longitudinal plicae and disperse spinules.

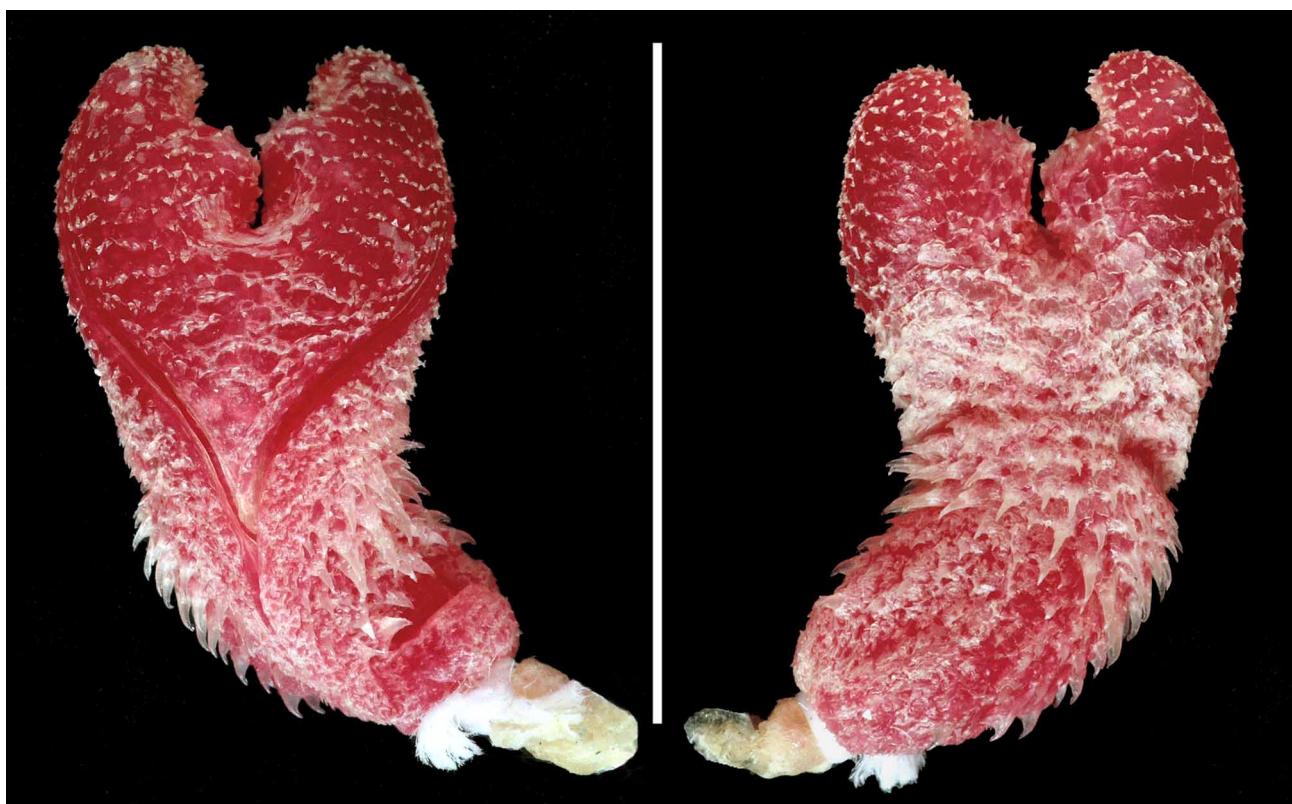


FIGURE 4. Sulcate (left) and asulcate (right) views of the hemipenis of *Atractus wagleri* (MHUA 14504). Scale = 10mm.

Variation (3 new specimens plus Prado's data on female holotype): Largest male SVL 445 mm, CL 96 mm; largest female SVL 437 mm, CL 67 mm; tail 21.6% SVL in male, 13.6–15.3% ($n = 2$) SVL in females; 157–174 ($n = 2$) ventrals in males, 174–180 ($n = 2$) in females; 45–56 ($n = 2$) subcaudals in males, 43–44 ($n = 2$) in females; 3 ($n = 1$ side) or 4 ($n = 5$ sides) gular scale rows; 4 ($n = 2$) or 5 ($n = 1$) preventrals; 8 ($n = 4$ sides) or 9 ($n = 2$ side) dorsal scale rows in the level of second subcaudal; 6 ($n = 2$ sides) or 7 ($n = 4$ sides) maxillary teeth; 4.5–9.0 mm midbody diameter.

Distribution: Western versant of Cordillera Oriental of Colombia, from Floridablanca ($07^{\circ}03'53''N$, $73^{\circ}05'23''W$) in Santander Department to Humbo ($05^{\circ}36'N$, $74^{\circ}16'W$) in Boyacá Department. *Atractus wagleri* has been found in sub-Andean Tropical Forest at elevations of 740–1200 m (Fig. 5).

Remarks: Prado (1945) cited the type locality of *A. wagleri* as Humbo (Boyacá), Colombia. Subsequently, some authors cited Muzo as the proper type locality of the species (Medem, 1965; Pérez-Santos & Moreno, 1998). This contradiction is probably because Humbo ($05^{\circ}36'N$, $74^{\circ}16'W$) was a small town included originally in the boundaries of Muzo ($05^{\circ}32'N$, $74^{\circ}06'$) municipality. However, the municipality of Muzo was redefined and now does not contain Humbo, which is located instead within Quípama ($05^{\circ}31'N$, $74^{\circ}11'W$) municipality (J. Lynch, pers. comm.).

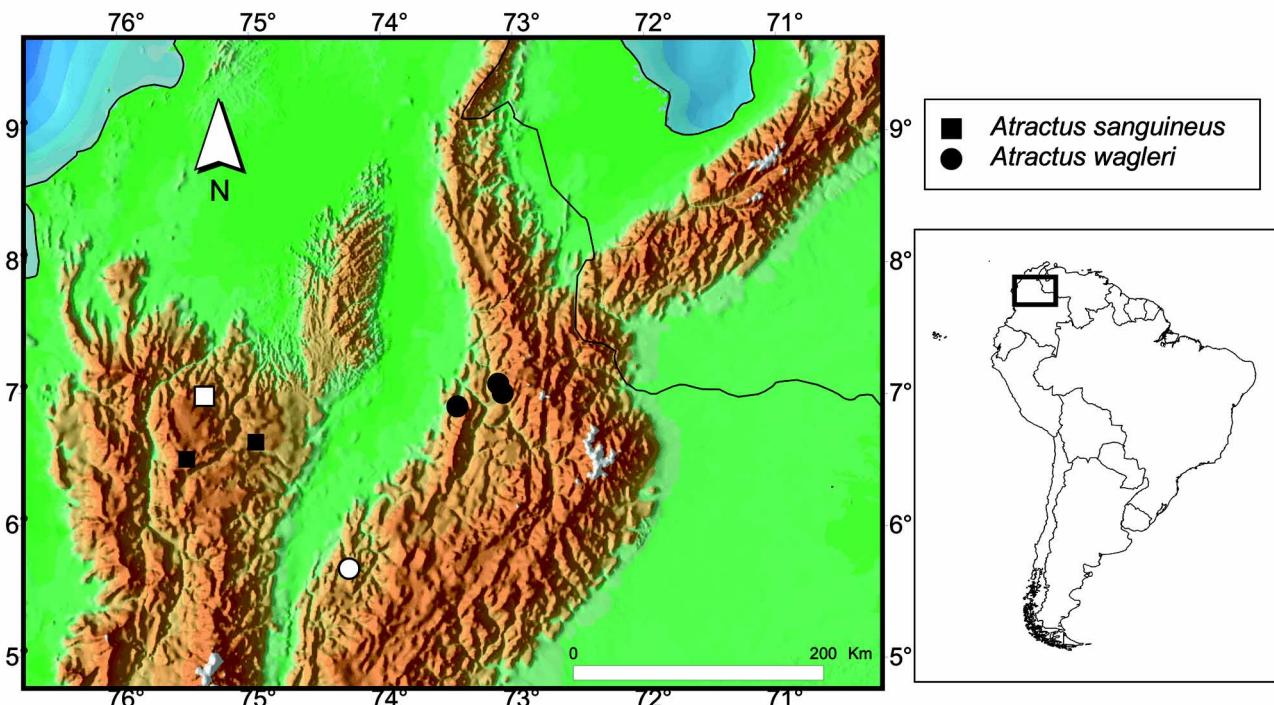


FIGURE 5. Geographical distribution of *Atractus sanguineus* and *Atractus wagleri*. Open symbols correspond to respective type localities of the species.

Discussion

Prado (1945) described *Atractus wagleri* based on a specimen from Humbo in the Boyacá Department of Colombia, distinguishing it from *Atractus sanguineus* Prado, 1944 by having a rostral slightly broader than high, frontal as long as wide, loreal twice as long as wide, and distinct colour pattern. Unfortunately, the holotype of *A. wagleri* could not be found in the course of our complete examination of the MLS *Atractus* collection, and probably has been lost during a fire at Universidad La Salle in 1948 (A. Rodriguez, pers. comm.).

We report here three additional specimens of *A. wagleri* from localities geographically close to the type locality (Fig. 5). Although cephalic characters earlier employed by Prado (1945) to diagnose it from *A. sanguineus* falls into the range of variation of the former species, based on our sample of both taxa there are differences in the colour pattern and number of subcaudal scales which guarantee specific recognition of *A. wagleri* (see above). These differences are based on small and geographic located samples for the two taxa. However, each species seems to be restricted to a distinct Colombian Cordillera, with the Magdalena Valley operating as a putative barrier separating them (Fig. 5). Nonetheless, the discovery of new material of both species in the Magdalena Valley might require the re-evaluation of the taxonomic status of *Atractus wagleri*.

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Appendix I: Specimens examined.

Atractus andinus: Colombia, Antioquia, Andes: (formerly CSJ 231, now CSJ 516 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), Taruco: (USNM 120809).

Atractus boulengerii: Colombia, Valle Del Cauca, Anchicayá, Bajo 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, Anorí: (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), Belén: (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), Sogamoso: (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), Fontibón: (MUJ 25), Fuqueré: (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 Union: (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 Sisga: (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), Usoquén: (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 dunnii: 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), Chiribiquete: (32127–28), Mindo: (QCAZ 4151), Nanegalito: (QCAZ 638), Tandayapa: (QCAZ 872, 1667, 2102, 2111). Localities probably in error: Piso Tropical Oriental: (EPN 8703); Pastaza: Río Bobonaza: (EPN 8733).

Atractus emigdiosi: Venezuela, Lara: Moran, La Palma, Páramo El Jábón: (MHNLS 9299); Trujillo, Boconó, Valera-Trujillo road: (ULABG 3791), Parque Nacional Guaramacal: (MHNLS 16209), Trujillo: (ULABG 4473).

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

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, Chiribiquete: (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).

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- Atractus iridescens*: Colombia: Antioquia: San Pedro de Arama: (CSJ 563); Chocó, Nuqui: (IAvH 4539), Rio San Juan: (MLS 1212); Nariño, Barbacoas, El Diviso, Vereda Berlin, Reserva Natural Biotopo Selva Húmeda: (ICN 10901–02).
- Atractus lancingii*: Venezuela, Aragua, Cumboto road: (EBRG 590), Maracay-Ocumare road: (EBRG 198–99, 291, 407–08, 698), Parque Nacional Pittien, Estación Biológica Rancho Grande: (EBRG 699, 4338); Carabobo, Barbula: (MHNLS 1750); Distrito Capital, Caracas, Parque Nacional El Ávila, Canales del Naigata: (MBUCV 2043a,b, 2044b, MHNLS 11417–18, 11797), Cerro Naigata: (MHNLS 3145), La Guaira: (MBUCV 2044a); Miranda, Guaicaipuro: (MHNLS 6848), San Antonio de Los Altos: (MHNLS 2086, 12684), El Amarillo: (MHNLS 15150, 16788), San Diego de Los Altos: (EBRG 1982), Santenejas: (EBRG 4088); Yaracuy, Nirgua, Santa Teresa: (MHNLS 6381).
- Atractus lasallei*: Colombia, without locality: (MLS 301); Antioquia, Bello: (ICN 19621), Bello, San Felix: (MHUA 14060), Belmira: (ICN 10622), El Retiro: (MHUA 14112), Guarne: (MLS 2129), La Ceja: (ICN 10713), Marinilla: (ICN 10714), Medellín: (ICN 10618–20, MHUA 14383, MLS 2944), Medellín, Las Palmas: (ICN 1085), Medellín, San Cristobal: (MHUA 14003), Medellín, Santa Helena: (MHUA 14194, 14221, 114368, MLS 2217), Medellín, Piedras Blancas: (IAvH 970, 1008, 10012–13, 1933, 4857, MLS 204–06, 219, 223, 1782, 2829, 2946, 2958), Medellín, San Antonio de Prado: (MHUA 14028, 14086), Rionegro: (MLS 2077, 2210), 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), San Pedro, La Lana: (MLS 2412, 2955), Santa Rosa de Osos: (MLS 1902–04, 1946), Santo Domingo: (MLS 230), Sonsón: (ICN 10697, MLS 135). Locality probably in error, Jericó: (MLS 303).
- Atractus lehmanni*: Colombia, Cauca, Popayán: (ICN 1794, 2590, 2613, 10635–36, MLS 1919), Los dos Brazos: (USNM 151633), 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 catalogued).
- Atractus matthewi*: Venezuela, Anzoategui, 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, Quibdo: (MLS 2537); Valle del Cauca: (UV-C 8533).
- Atractus michelae*: Venezuela, Mérida, Canagua, Pueblos del Sur: (ULABG 2672 holotype) Táchira, Uribante, Caparo: (CV-ULA 4445 paratype, CV-ULA 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, road to Buenaventura: (USNM 151723); Buenaventura, Queremal: (ICN 7075).
- Atractus nebularis*: Colombia, Cesar, Valledupar, Nabusímaque: (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, Jardin: (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), Aquimarcá: (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 Nacional Natural 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 catalogued), Chinacotá: (MLS 2338–39), Chitagá, Chucarima: (MLS 273–74, 248, 287, 300), Cutilla: (MHUA 14163–64), El Diamante: (MLS

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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, Finca La Esperanza: (EPN 8729–32, MZUSP 7703, USNM 232725); locality in error, Pastaza, Río Bobonaza: (USNM 232726).

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

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

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

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

Atractus taphorni: Venezuela, without locality: (IBSP 25785); Mérida, El Chorotal: La Azulita road: (CV-ULA 1838), La Carbonera: (CV-ULA 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 Mucus, Parque Nacional Sierra Nevada: (MBUCV 2016), Pico Humbo: (EBRG 4052).

Atractus cf. vertebralis: Peru, Cusco, Urubamba, Machu-Pichu: (MHNSM 3100), Puerto Libre, Apurimac River Valley: (USNM 538480); Huancavelica, Tayacaya: (MHNSM 2849).

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

Atractus vittatus: Venezuela, Aragua, without locality: (IBSP 41082), Colonia Tavor: El Limón road: (EBRG 700, 2959, 4059, 4092); Distrito Capital, Caracas: (MBUCV 703), El Junquito-Colonia Tavor road: (MBUCV 415), 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 werneri: Colombia, without locality: (MLS 144, 289, 483); Cundinamarca, El Colegio: (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).