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Review of *Sesioctonus* Viereck (Hymenoptera: Braconidae: Agathidinae) from Colombia with descriptions of five new species

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ABSTRACT

As part of an extensive survey of Colombian arthropods, the species of *Sesioctonus* from Colombia are reviewed. Nine new Colombian species records for *Sesioctonus* are reported, including five new species that are described here. The species identified are *Sesioctonus diazi* Briceño, *S. galeos* Briceño, *S. theskelos* Briceño, *S. grandis* Briceño, *S. boliviensis* Briceño, *Sesioctonus longinoi* n.sp., *Sesioctonus philipi* n.sp., *Sesioctonus torresi* n.sp., *Sesioctonus stephaniai* n.sp., and *Sesioctonus susanai* n.sp. Including the species reported here, eleven species of *Sesioctonus* are recorded from Colombia. A revised key to all known species of *Sesioctonus* is presented.

Key words: Taxonomy, revision, Braconidae, Hymenoptera, parasitic Hymenoptera, fauna

INTRODUCTION

Briceño (2003) recently revised the species of *Sesioctonus* and included 26 species of which only three were from Colombia, i.e., *Sesioctonus ariasi* Briceño, *S. armandoi* Briceño and *S. chaconi* Briceño (Briceño, 2003). Here we describe five new species from Colombia and present distributional records for an additional four species that are reported for the first time from Colombia.

For the last six years, Fernando Fernandez (Universidad Naciónal de Colombia) and the senior author (MJS) have coordinated a large collecting effort in Colombia in which Malaise traps were run in 31 national parks throughout the country. Four thousand five hundred and forty two Malaise trap samples have been sorted, each of which represents a two-week collection interval. From these, only 22 specimens of *Sesioctonus* have been collected. It is not clear that individuals are rare, but they are rarely collected by both Mal-

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aise traps and sweeping. For full reference to Colombian collection sites, and distribution maps of species of *Sesioctonus* in Colombia, see www.uky.edu/~mjshar0. Most specimens of *Sesioctonus* have been collected from November through March, between 0 and 2000 meters above sea level, and almost all have been collected in Malaise traps. Interestingly, most of the new species from Colombia were collected above 2,000 meters, and one species, *S. philipi*, was collected at 3,350m.

There is little information about the biology of members of *Sesioctonus*. Members of this genus, like all known agathidines, are parasitoids of Lepidoptera larvae (Sharkey, 1988; 1997). *Sesioctonus parathyridis* Viereck is the only species with biological data; it is a larval parasitoid of *Parathyris perspicilla* Stall, (Lepidoptera: Arctiidae) (Viereck, 1912, 1914).

METHODS

Morphological terminology follows that of Sharkey and Wharton (1997). All figures in this paper refer to those in Briceño (2003) except for those figures followed by a letter, e.g., Fig. 1a. The species descriptions are of the holotypes with variation given in parenthesis. Images were taken using an automontage© photographic system on a Leica MZ 16 stereomicroscope.

Museum Acronyms

IAvH: Instituto Alexander von Humbolt, Villa de Leyva, Colombia.
UCOB: Museo Entomológico “José M. Osorio”, Universidad Centroccidental “Lisandro Alvarado”, Tarabana, Lara. Venezuela.
HIC: Hymenoptera Institute Collection, Department of Entomology, University of Kentucky, Lexington, KY. USA.
MIUP: Museo de Invertebrados G. B. Fairchild, Estafeta Universitaria 0824, Universidad de Panama, Panama, Panama.

RESULTS & DISCUSSION

Diagnosis

Members of Sesioctonus are restricted to the Neotropical realm of the New World and may be distinguished from all other agathidine braconids with the following combination of characters: Mesoscutum smooth, lacking notauli; tarsal claws simple, lacking a basal claw; hind coxal cavities open, sharing a common opening with the metasomal foramen.

Key to *Sesioctonus* species of the world

1 Occipital tubercles present (Figs. 16–18) 2
- Occipital tubercles absent (Figs. 19) 15
2(1) Epicnemial carina straight medially or absent, not indented at midline, between forecoxae (Figs. 4, 23) 3
- Epicnemial carina bilobed medially, (indented at midline, between forecoxae) (Figs. 3, 22) 5
3(2) Epicnemial carina complete laterally (Figs. 3, 22) ..... *garciai* Briceño
- Epicnemial carina incomplete or absent laterally (Fig. 23) 4
4(3) Face with median longitudinal carina (Fig. 13) ..... *acrolophus* Briceño
- Face without median longitudinal carina (similar to Figs. 12, 14) .... *analogus* Briceño
5(2) Midcoxa not completely melanic, color variable 6
- Midcoxa completely melanic 8
6(5) Fore wing banded from base: yellow, black, yellow, black ..... *chaconi* Briceño
- Fore wing infuscate (melanic) 7
7(6) Fore tibia with spines; mid femur yellowish orange ..... *peruviensis* Briceño
- Fore tibia without spines; mid femur melanic ..... *longinoi* n.sp. (part)
8(5) Longitudinal carina(e) of scutellar depression present and wings banded from base: yellow, black, yellow, black..... *venezuelensis* Briceño
- Longitudinal carina(e) of scutellar depression absent and/or wings not banded.... 9
9(8) Mesoscutum black; median areola of metanotum with longitudinal rugosities (Fig. 29); median tergite of first metasomal segment without pair of lateral longitudinal carinae (similar to Fig. 34); fore wing (RS+M)a vein complete (Fig. 10a)..... ..... *kompsos* Briceño
- Mesoscutum yellowish orange; or if black then not combining other characters 10
10(9) Mesoscutum melanic 11
Mesoscutum yellowish orange 12
11(10) Fore wing infuscate with large hyaline spot; metasoma reddish brown except last few segments melanic..... *brasiliensis* Briceño
- Fore wing either infuscate without hyaline spot or hyaline basally, infuscate apically; metasoma yellowish orange..... *dichromus* Briceño
12(10) Median longitudinal carina of propodeum present and complete .... *ariasi* Briceño
Median longitudinal carina of propodeum absent or incomplete 13
13(12) Subpronope triangular, three sides almost equal (Fig. 1); fore wing 3RSa vein absent (Fig. 10)..... *boliviensis* Briceño
- Subpronope more oval-shaped, weak triangle with vertical sides longer than dorsal side (Fig. 2); fore wing 3RSa vein present (Fig. 9)..... 14
14(13) Wings banded from base: yellow, black, yellow, black..... *diazi* Briceño
- Wings infuscate (melanic) ..... *longinoi* n.sp. (part)
15(1) Occiput excavated (similar to Figs. 16–18)..... *eumenetes* Briceño

- Occiput not excavated (Fig. 19)..... 16
16(15) Interantennal space without sharp longitudinal keel 17
- Interantennal space with sharp longitudinal keel (Fig. 11)..... 31
17(16) Basal sterna of metasoma chalk-white 18
- Basal sterna of metasoma not chalk-white, rather melanic or yellowish orange.. 20
18(17) Head orange (Fig. 1d)..... *susanai* n. sp.
- Head black 19
19(18) Fore and hind coxa pale yellow (Fig. 1b)..... *S. stephaniai* n.sp.
- Fore and hind coxa melanic (Fig. 1a)..... *S. philipi* n.sp.
20(17) Median areola of metanotum with lateral carinae meeting posteriorly (Figs. 25, 26) 21
- Median areola of metanotum with lateral carinae absent or, if present, not meeting posteriorly (Figs. 27, 28) 29
21(20) Epicnemial carina present (Figs. 3, 4) 22
- Epicnemial carina absent 26
22(21) Epicnemial carina complete laterally (Fig. 3)..... 23
- Epicnemial carina incomplete laterally (Fig. 4) 27
23(22) Hind tibia melanic..... *amazonensis* Briceño
- Hind tibia mostly yellowish orange 24
24(23) Propodeum with central areola absent 25
- Propodeum with central areola present..... *areolatus* Briceño
25(24) Antenna with more than 29 flagellomeres; interantennal space with rounded longitudinal keel (similar to Fig. 12); hind tibia yellowish orange in basal half, melanic apically .....*miyayensis* Briceño
- Antenna with less than 28 flagellomeres; interantennal space without longitudinal keel; hind tibia mostly yellowish orange, melanic apically..... *clavijoi* Briceño
26(21) Scutellar depression with longitudinal carinae; body color yellow, white, and black (Fig. 1c)..... *torresi n.sp.*
- Scutellar depression without longitudinal carinae; body color yellowish orange and black .....*ammosakron* Briceño
27 (22) Epicnemial carina straight medially (between forecoxae) (Fig. 4); body length less than 3mm .....*dominicus* Briceño
- Epicnemial carina bilobed medially (indented at midline, between forecoxae) (Fig. 3); body length more than 3mm..... 28
28(27) Fore wing (RS+M)a vein complete (Fig. 10a).....*armandoi* Briceño
- Fore wing (RS+M)a vein incomplete (Fig. 9a) ..... *biospleres* Briceño
29(20) Epicnemial carina present, complete or incomplete laterally (Figs. 3, 4) 30
- Epicnemial carina completely absent ..... *chrestos* Briceño
30(29) Fore wing banded, yellow, black, yellow, black; labial palpus 3-segmented .... *galeos* Briceño

- Fore wing infuscate; labial palpus 4-segmented..... *theskelos* Briceño

31(15) Third and fourth labial palpomeres not fused; first metasomal median tergite with depression posterad spiracle (Figs. 36, 37)..... *grandis* Briceño

- Third and fourth labial palpomeres fused, first metasomal median tergite with or without depression posterad spiracle 32

32(31) First metasomal median tergite with depression posterad spiracle (similar to Figs. 3, 36)..... *qui* Briceño

- First metasomal median tergite without depression posterad spiracle .... *parathyridis* Viereck

New Species Descriptions

***Sesioctonus longinoi* Sharkey and Briceño sp. n.**
FIG. 1f

Diagnosis. This is a difficult species to distinguish from other species. Many of the characters that are used in the key are variable within this species, e.g., (RS+M)a vein of fore wing varies from complete, to almost complete with a small break at midlength, to mostly absent; scutellar depression varies from smooth, lacking longitudinal carinae, to with weak longitudinal carinae; median areola of metanotum smooth to moderately rugose; and the median tergite of the first metasomal segment may be with or without a pair of lateral longitudinal carinae. The coloration of all included specimens is pale yellowish orange with black head, pronotum, and most leg segments. The occiput has tubercles and it is excavated. The hind tibia has many apical spines (18–22). Otherwise, most characters are variable and specimens must be taken through the key.

Notes: In the second author's revision (Briceño 2003), members of this species would mostly key to *S. diazi*, and two paratypes of *S. diazi* are included in the type series of *S. longinoi*. See discussion under *S. diazi*. The fact that *S. longinoi* is here split from the concept of *S. diazi* renders *S. diazi* rather uniform and easy to diagnose. *S. longinoi* is rather heterogeneous. Though the coloration of the included specimens is rather uniform, many characters, that are otherwise reliable to distinguish species of *Sesioctonus*, are variable within the species, as it is here delimited. There are also distributional anomalies that cast doubt on the validity of the species. Though most specimens have been collected in lowland areas, there are three paratypes captured at 1,450 meters in Costa Rica. No other species of *Sesioctonus* has such a wide altitudinal range. Though we doubt that all of the specimens in the type series constitute one species we have not been able to find any reliable suite of characters to make a better estimate. This is likely a rapidly evolving lineage with weak morphological indications of species status. More data are needed to arrive at a satisfactory answer, if there is one.

Description.

♀. *Length*. Length of body, excluding ovipositor, 7.3–8.0 mm.

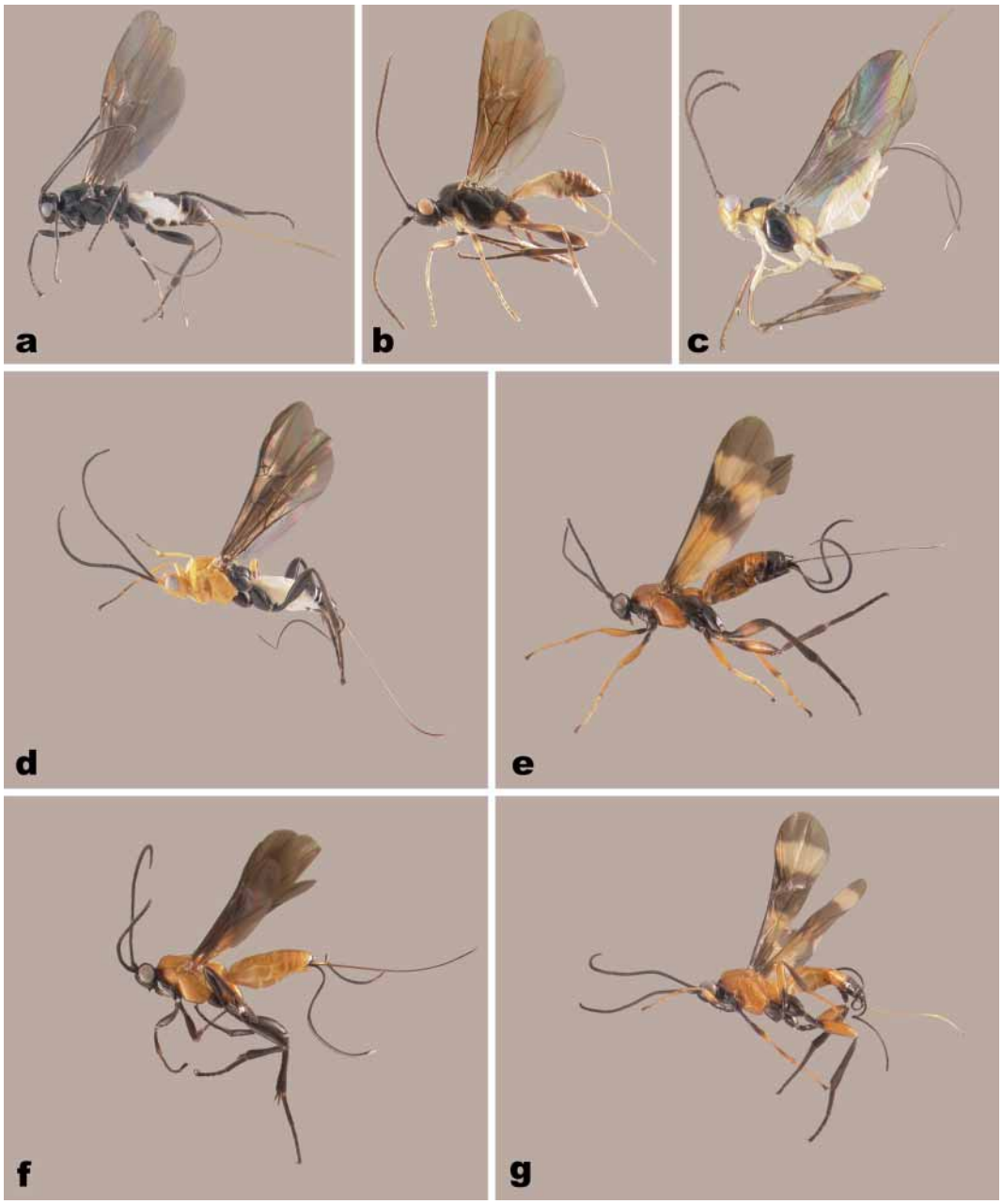

FIGURE 1. Lateral habitus photographs. 1a. *S. philipi;* 1b. *S. stephaniai;* 1c. *S. torresi;* 1d. *S. susanai;* 1e. *S. diazi*, color morph known only from the Amazonas area of Colombia; 1f. *S. longinoi;* 1g.*S. diazi*, color morph known from lowland regions from Costa Rica south to western Colombia.

Head. Antenna with 32 (29–33) flagellomeres. Interantennal space without sharp longitudinal keel. Antennal sockets not excavated. Face without median longitudinal carina. Gena not expanded posteroventrally. Occipital tubercles present. Occiput excavated, vertical surface of occiput starting immediately posterior to lateral ocelli (Fig. 16). Mandible

concave. Outer tooth of mandible longer than inner tooth. Maxillary palpus with 4 palpomeres. Third and fourth labial palpomeres fused. *Mesosoma*. Subpronope elongate. Scutellar depression smooth, lacking longitudinal carinae (some paratypes with weak longitudinal carinae). Scutellum convex. Median areola of metanotum smooth (moderately rugose in some paratypes), with median longitudinal carina posteriorly, and with lateral carinae present and meeting posteriorly (not meeting in many paratypes). Propodeum convex. Median longitudinal carina of propodeum present at anterior and posterior borders. Epicnemial carina sharp, complete, bilobed ventrally (Fig. 3). Fore tibial spines absent. Mid tibia with 10 (8–11) spines. Hind tibia with 20 (18–22) spines. Hind femur 3.4 times as long as wide. (RS+M)a vein of fore wing incomplete in holotype (varying across the species from complete, to with a small break, to mostly absent). 3RSa vein of fore wing present, 2nd submarginal cell of fore wing sessile. 2-1A vein of hind wing tubular. CUb vein of hind wing present but not tubular. Hind wing with 4 (4–5) hamuli. *Metasoma*. Median tergite of first metasomal segment with pair of weak lateral longitudinal carinae (relatively strong to very weak in the type series). First metasomal median tergite without depression posterad spiracle. Length : width ratio of first metasomal median tergite 0.94. Ovipositor length 7.7 mm.

Color. Yellowish-orange and black. Black as follows: Head black except apical maxillary palpomeres pale yellow, propleuron and anterior margin of pronotum, all legs except base of hind coxa, apical two metasomal terga, ovipositor sheath; wings evenly infuscate. (Variation: fore tarsus and apex of fore tibia pale yellowish orange; fore tibia orange basally; mid and hind coxa entirely yellowish orange to entirely black; hind femur mostly orange except basally; apical 1/8 of mid femur yellowish orange; metasoma entirely yellowish orange).

♂: Only one male specimen known. It is essentially as in the female (above) but has slightly more black color, i.e., metacoxa entirely black, metasomal terga 5 to apex black.

Etymology. Named after John (Jack) Longino, myrmecologist and coordinator of the ALAS (Arthropods of La Selva) biodiversity project, for his many contributions to neotropical natural history studies.

Material examined. Holotype. **COLOMBIA**.: Cauca, PNN Gorgona: ♀, Antigua Laguna, 2º58'N 78º11'W, 70m., Malaise, 30.xi–18.xii.2000, H. Torres Leg. M.1089, (IAvH).

Paratypes: ♀ , Alto el Mirador, 2º58'N 78º11'W, 180m., Malaise, 3–16.viii.2000, H. Torres Leg., M.587, (IAvH). ♀, Amazonas, PNN Amacayacu, Matamata, 3º41'S 70º15'W, 150m, Malaise 1, 17.ix–1.x.2001, D. Chota Leg, (IAvH). ♀, Mancora, 2º58'N 78º11'W, 60m., Malaise 3–18.i.2001, H. Torres Leg., M.1235, (IAvH). ♀, Mancora, 2º58'N 78º11'W, 60m., Malaise, 18.vii–3.viii.2000, H. Torres Leg., M.584, (IAvH). ♂, Mancora, 2º58'N 78º11'W, 60m., Malaise, 3–16.viii.2000, H. Torres Leg., M.586, (IAvH). 3♀, Valle del Cauca, PNN Farallones de Cali, Anchicaya, 3º26'N 76º48'W, 650m., Malaise, 19.xii–2.i.2001,14–28.viii.2001, and 31.x–13.xi.2001, S. Sarria Leg., M.2887, (IAvH, HIC).

PANAMA: ♀. P.N. Darien, Pirre, Est. Rancho Frio, 80m., 7–16.xi.2000, Canbra and Santos (MIUP).**COSTA RICA**: Heredia: ♀, Est. Biol. La Selva, 50–150m., 10º26'N 84º01'W, May 1993, INBio-OET (also paratype of *S. diazi*). ♀, Est. Biol. La Selva, 50–150m, 10º26'N 84º01'W, August 1993, INBio-OET (also a paratype of *S. diazi*). Puntarenas: 2♀, Buenos Aires, Estación Altamira, Sendero Los Gigantes. 1450m., Malaise, 4 ENE-3 FEB 2000, D. Rubí. L_S_331700_572200 #55201. (HIC, INBio). ♀, Buenos Aires, Estación Altamira, Sendero Los Gigantes, 1450m.,15 JUL–15 AGO, 2000. D. Rubí, Malaise, L_S_572200_331700 #57880 (INBio). ♀, Golfito, Estación Agujas 300m., 01–30 OCT, 2000, J. Azofeita, Malaise, L_S_526550_276750 #60078 (HIC). ♀, Golfito, P.N. Corcovado, Sendero a Sirena, 100m., 15 MAY-15 JUN 2000, J. Azofeifa, Malaise, L_S_276500_514200 #56671 (INBio). ♀, Golfito, P.N. Corcovado, Send. a Sirena, 100m., AGO 2000, J. Azofeifa, Malaise, L_S_514200_276500 #58151 (INBio). Limón: ♀, Valle de la Estrella, Reserva Biol. Hitoy Cerere, Sendero Toma de Agua, 100–140m., 17 NOV–17 DIC, 1999, F. Umaña, Malaise, L_S_184600_643400 #54940 (HIC). ♀, A.C.L.A.C, Central Res. Biol. Hitoy Cerere, Send. Toma de Agua, 100–140m., 17 FEB–17 MAR, 2000, F. Umaña, Malaise, L_N_184600_643400 #55287 (HIC). ♀, Cartago, P.N. Barbilla, R. Dantos, 0.400 Kms aguas arriba margen izq. 500–600m. 9 DIC 1999-8 ENE 2000, E. Rojas, Malaise, L_N_218100_593600 #54385 (HIC).

Distribution. From Colombia north to Costa Rica mostly in lowland wet forests, except for some specimens from Costa Rica that were captured at 1,450 meters.

***Sesioctonus torresi* Sharkey and Briceño sp. n.**
FIG. 1c

Diagnosis. Distinguished from all other known species of *Sesioctonus* by the following suite of characters. (RS+M)a vein of fore wing incomplete, 2nd submarginal cell of fore wing petiolate; coloration unique, Fig. 1c.

Description.

♀. *Length*. Length of body, excluding ovipositor, 4 mm.

Head. Antenna with 28 flagellomeres. Interantennal space lacking longitudinal keel. Antennal sockets not excavated. Face without median longitudinal carina. Gena not expanded posteroventrally. Occipital tubercles absent. Occiput not excavated. Mandible concave. Outer tooth of mandible longer than inner tooth. Maxillary palpus with 5 palpomeres. Third and fourth labial palpomeres not fused. *Mesosoma*. Subpronope elongate. Longitudinal carinae of scutellar depression absent. Scutellum convex. Median areola of metanotum smooth, without median longitudinal carina, and with lateral carinae present and meeting posteriorly. Propodeum convex, median longitudinal carina absent. Epicnemial carina absent. Suture between mesepisternum and mesepimeron depressed. Fore tibial spines absent. Mid tibia with 8–9 spines. Hind tibia with 12 spines. Hind femur 3.59

times as long as wide. (RS+M)a vein of fore wing incomplete. 3RSa vein of fore wing absent. 2nd submarginal cell petiolate. 2-1A vein of hind wing tubular. CUb vein of hind wing not tubular. Hind wing with 3 hamuli. *Metasoma*. Median tergite of first metasomal segment lacking pair of lateral longitudinal carinae. First metasomal median tergite without depression posterad spiracle. Length : width ratio of first metasomal median tergite 0.7. Ovipositor length 3.5 mm.

Color. Head yellowish orange except vertex and occiput melanic. Antenna melanic. Maxillary and labial palpomeres yellowish orange. Mesosoma melanic except pronotum, propleuron, metapleuron and propodeum yellowish orange. Fore leg yellowish orange. Mid leg yellowish orange except tibia and tarsus melanic. Hind leg with coxa yellowish orange except melanic dorsally, trochanter and trochantellus melanic, femur melanic in basal middle and yellowish orange in distal middle, tibia and tarsus melanic. Fore wing weakly infuscate, stigma melanic. Hind wing weakly infuscate. Metasoma yellowish orange but third segment with median tergite melanic in posterior quarter; fourth segment with median tergite melanic and fifth to eighth metasomal terga mostly yellowish orange but median tergites melanic centrally. Ovipositor sheath yellowish orange.

♂. Unkown.

Etymology. Named after the Reina brothers, Edwin and Miguel, who have spent the last six years diligently sorting insects from Malaise traps that have been running throughout Colombian national parks.

Material examined. *Holotype*. COLOMBIA: ♀, Magdalena, PNN Santa Marta, San Lorenzo, 10°48'N, 73°39'W, 2200m. Malaise trap. 9–24.vi.2000, J. Cantillo. (IAvH).

Paratype. COLOMBIA: ♀, Magdalena, PNN Santa Marta, San Lorenzo, 10°48'N, 73°39'W, 2200m. Malaise trap. 27.ii–14.iii.2001. J. Cantillo. Leg. m.1468, (HIC).

Distribution. Known only from the type locality in Colombia.

***Sesioctonus philipi* Sharkey and Briceño sp. n.**

FIG. 1a

Diagnosis. Distinguished from all other known species of *Sesioctonus* by the following suite of characters. (RS+M)a vein of fore wing complete, hind tibia with 8–10 spines; fore and mid coxae melanic; coloration unique Fig. 1a.

Description.

♀. *Length*. Length of body, excluding ovipositor, 4.1 mm.

Head. Antenna with 28 flagellomeres. Interantennal space without sharp longitudinal keel. Antennal sockets not excavated. Face without median longitudinal carina. Gena not expanded posteroventrally. Occipital tubercles absent. Occiput not excavated. Mandible concave. Outer tooth of mandible longer than inner tooth. Maxillary palpus with 5 palpomeres. Third and fourth labial palpomeres not fused. *Mesosoma*. Subpronope elongate.

Scutellar depression with strong median longitudinal carina and several weak lateral longitudinal carinae. Scutellum convex. Median areola of metanotum smooth, without rugosities, without median longitudinal carina, and lacking lateral carinae. Propodeum convex. Median longitudinal carina of propodeum absent. Epicnemial carina absent (a few rugae, that may be remnants of the carina, occur on the anterior margin of the mesopleuron). Fore tibial spines absent. Mid tibia with 4 spines. Hind tibia with 9 spines. Hind femur 3.4 times as long as wide. (RS+M)a vein of fore wing incomplete. 3RSa vein of fore wing absent. 2nd submarginal cell of fore wing petiolate. 2-1A vein of hind wing tubular. CUb vein of hind wing absent. Hind wing with 3 hamuli. *Metasoma*. Median tergite of first metasomal segment without pair of lateral longitudinal carinae. First metasomal median tergite without depression posterad spiracle. Length : width ratio of first metasomal median tergite 1.1. Ovipositor length 3.6 mm.

Color. Black except chalk-white as follows: metasomal segment 1 and parts of metasomal segments 2–5. Wings weakly infuscate.

♂. The sole male differs from the holotype female as follows: length 4.3 mm; two median longitudinal carina of propodeum present near posterior margin; mid tibia with 5 spines; hind tibia with 11 spines; mouthparts pale brown; first metasomal median tergite mostly melanic.

Note. Both specimens were collected at an altitude of 3,350 meters, increasing the altitudinal range of the genus by almost 1000 meters.

Etymology. Named after Philip Sharkey, son of the senior author.

Material examined. Holotype. ♀. COLOMBIA, Boyacá, SFF Iguaque Qda. Carrizal, 5º25'N 73º27'W, 3,350m., Malaise, 17.viii.2000–1.ix.2000, P. Reina Leg. M.520 (IAvH).

Paratype. COLOMBIA: ♂, same data as holotype, (HIC).

Distribution. Known only from the type locality.

Sesioctonus stephaniai **Sharkey and Briceño sp. n.**

FIG. 1b

Diagnosis. Distinguished from all other known species of *Sesioctonus* by the following suite of characters. (RS+M)a vein of fore wing complete, hind tibia with 8–10 spines; fore and mid coxae pale yellow; coloration unique Fig. 1b.

Description.

♀. *Length*. Length of body, excluding ovipositor, 4.2–4.4 mm.

Head. Flagellum broken after flagellomere 28 on holotype (paratype has complete, 26-segmented flagellum). Interantennal space without sharp longitudinal keel. Antennal sockets not excavated. Face without median longitudinal carina. Gena not expanded posteroventrally. Occipital tubercles absent. Occiput not excavated. Mandible concave. Outer tooth of mandible longer than inner tooth. Maxillary palpus with 5 palpomeres. Third and

fourth labial palpomeres not fused. *Mesosoma*. Subpronope elongate. Scutellar depression with 3 (1–3) longitudinal carinae. Scutellum convex. Median areola of metanotum with rugosities, without median longitudinal carina, and with lateral carinae present and meeting posteriorly (not meeting in paratype). Propodeum convex. Median longitudinal carina of propodeum absent. Epicnemial carina absent (a few rugae that may be remnants of the carina occur on the anterior margin of the mesopleuron). Fore tibial spines absent. Mid tibia with 5–6 spines. Hind tibia with 8–10 spines. Hind femur 3.6 (3.1 in paratype) times as long as wide. (RS+M)a vein of fore wing complete or with some weakness medially. 3RSa vein of fore wing absent. 2nd submarginal cell of fore wing sessile (petiolate in paratype). 2-1A vein of hind wing tubular. CUb vein of hind wing absent. Hind wing with 3 hamuli. *Metasoma*. Median tergite of first metasomal segment without pair of lateral longitudinal carinae. First metasomal median tergite without depression posterad spiracle. Length : width ratio of first metasomal median tergite 1.25. Ovipositor length 3.7 mm.

Color. Head black. Antenna melanic. Maxillary and labial palpomeres pale yellow. Mesosoma melanic. Fore leg pale yellow with scattered brown areas. Mid leg brownish except coxa and femur distolaterally pale yellow. Hind leg brownish with scattered pale yellow areas. Fore wing weakly infuscate, stigma melanic. Hind wing weakly infuscate. Metasoma with first and second terga pale yellow, remainder melanic; first and second sterna white, remainder melanic. (paratype with first and second terga melanic medially. Ovipositor sheath melanic.

♂. Unknown.

Etymology. Named after Stephania Sharkey, daughter of the senior author.

Material examined. *Holotype*. COLOMBIA.: ♀, Huila, PNN Guácharos, Cabaña Cedros, 1°37’N, 76°06’W, 2100 m, Malaise trap, 21.xii.2001–05.i.2002, C. Cortés. Leg. M2804. (IAvH).

Paratype. COLOMBIA. ♀, Boyacá, SFF Iguaque, Cabaña Mamarramos, 5º25'N 73º27'W, 2,855m., Malaise, 1–19.iv.–19.iv.2000, P. Reina Leg., M.23 (HIC).

Distribution. Known only from two, high altitude, localities in Colombia.

Sesioctonus susanai **Sharkey and Briceño sp. n.**

FIG. 1d

Diagnosis. Distinguished from all other known species of *Sesioctonus* by the following suite of characters: epicnemial carina absent; 2nd submarginal cell of fore wing sessile; coloration unique Fig. 1d.

Description.

♀. *Length*. Length of body, excluding ovipositor, 6.6 mm.

Head. Antenna with 30 flagellomeres. Interantennal space lacking longitudinal keel. Antennal sockets not excavated. Face without median longitudinal carina. Gena not

expanded posteroventrally. Occipital tubercles absent. Occiput not excavated. Mandible concave. Outer tooth of mandible longer than inner tooth. Maxillary palpus with 5 palpomeres. Third and fourth labial palpomeres not fused. *Mesosoma.* Subpronope small, tear-shaped. Longitudinal carinae of scutellar depression weakly indicated. Scutellum convex. Median areola of metanotum smooth, without median longitudinal carina, and without lateral carinae. Propodeum convex, median longitudinal carina absent. Epicnemial carina absent. Fore tibial spines absent. Mid tibia with 2 spines. Hind tibia with 6 spines. Hind femur 3.7 times as long as wide. (RS+M)a vein of fore wing incomplete. 3RSa vein of fore wing absent. 2nd submarginal cell sessile. 2-1A vein of hind wing tubular. CUb vein of hind wing absent. Hind wing with 3 hamuli. *Metasoma*. Median tergite of first metasomal segment lacking pair of lateral longitudinal carinae. First metasomal median tergite without depression posterad spiracle. Length : width ratio of first metasomal median tergite 1.7. Ovipositor length 6.9 mm.

Color. Head orange. Scape orange, remainder of antenna melanic. Maxillary and labial palpomeres orange. Mesosoma orange except scutellum, metanotum, metapleuron, and propodeum melanic. Fore leg orange, except tarsus partly melanic. Mid leg melanic except apex of femur, base of tibia and base or tarsus all orange. Hind leg melanic. Fore wing infuscate, stigma melanic. Hind wing infuscate. Metasomal median tergites 1 and 2, laterotergites and sterna 1–6 chalk-white; remainder of metasoma melanic. Ovipositor sheath melanic. (The specimen collected at 1930 m. has the mesopleuron mostly black with an orange tinge ventrally.)

♂. Unknown.

Etymology. Named after Susana Roibas, wife of the senior author.

Material examined. *Holotype*. COLOMBIA: ♀, Nariño, R.N. La Planada, Vía Hondón, 1º15'N 78º15'W 1930m, Malaise 16.viii.2000–2.ix.2000, G. Oliva Leg, M.917 (IAvH). *Paratypes*. COLOMBIA: ♀, Nariño, R.N. La Planada Parcela Permanente, 1º15'N 78º15'W, 1885m, Malaise, 16.viii–2.ix.2000. G. Oliva Leg. M.918 (HIC). ♀, Nariño, R.N. La Planada Vía Hondón, 1º15'N 78º15'W, 1930m, Malaise, 2.xi.–16.xi.2000, G. Oliva Leg. M.1411 (IAvH).

Distribution. Known only from R.N. La Planada, Colombia.

New Colombian Distribution Records

Sesioctonus armandoi Briceño

♀, Amazonas, PNN Amacayacu, Matamata, 3°23’S, 70°06’W, 150 m, Malaise trap, 29.v–06.vi.2000, A. Parente (HIC).

Sesioctonus diazi Briceño (Figs. 1e, 1g)

We do not feel confident with the species limits of this species as originally outlined in Briceño (2003). Variation in color and in morphological characteristics is significantly

greater than for other species. Figures 1e–g show three color patterns found in the species as it was previously delimited, and a fourth color pattern with fore wings that are pale yellow basally and infuscate distally is also included (Briceño 2003). Figure 1g is similar to the coloration of the holotype. There are no intermediates in wing color among the known specimens and the color morphs sometimes have sympatric distributions. Three morphological characters that are constant in other species show considerable variation in this species, i.e., the median areola of the metanotum may be with or without lateral carinae, and when present these may or may not meet distally; the first metasomal median tergite may or may not have distinct lateral longitudinal carinae; and vein (Rs+M)a varies from incomplete to complete and almost entirely tubular. Interestingly, the color characters are not consistent with the morphological variation. The evidence suggests that *S. diazi*, as formerly defined, is a conglomerate of two or more species, and therefore we restrict the concept of *S. diazi* to those specimens with banded wings. We place those with infuscate wings in a new species described above, *S. longinoi*. The lone specimen with fore wings that are pale yellow basally and infuscate distally is tentatively included in *S. diazi*.

♀, Putumayo, PNN La Paya Salao Grande, 0º1'S 74º56'W, 330m, Sweep, 22.ix.2001, D. Campos Leg. 2♀, Amazonas, PNN Amacayacu San Martín, 3º46'S 70º18'W, 150m, Malaise 2, 17–31.xii. and 15.x–5.xi.2001, D. Chota Leg. (HIC, IAvH). ♀, Amazonas, PNN, Amacayacu, Matamata, 3º41'S 70º15'W, 150m, Malaise, 25.viii–3.ix.2001, D. Chota Leg, (HIC). ♀, Amazonas, PNN Amacayacu, Lorena, 3º02.86'S 69º59.7'W 210m, Malaise, 1–15.ix.2001, Sharkey & Campos (HIC). ♀, Santander, Norte de Santander, Arboledas Siraveta, Finca de Tejas, vi–vii. 1985 (IavH).

Sesioctonus galeos Briceño

♀, Putumayo, PNN La Paya, Mamansoya Tierra Baja, 0º6'S 74º58'W 330m, Malaise, 22.ix.2001–26.ix.2001, R. Cobete Leg. M.2073, (HIC).

Sesioctonus grandis Briceño

Amazonas, PNN Amacayacu Matamata, 3º41'S 70º15'W 150m., Malaise 1, 19.xi–3.xii.2001, D. Chota Leg. M.2764 (HIC).

Sesioctonus theskelos Briceño

♀, Amazonas, PNN Amacayacu San Martín3º46'S 70º18'W 150m, Malaise 28.v–11.vi.2001. Parente Leg, (HIC).

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