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TRABAJOS ORIGINALES

Four new species of the *Aleiodes compressor* Herrich-Schäffer species-group (Hymenoptera: Braconidae: Rogadinae) from South America

Cuatro especies nuevas del grupo de especies *Aleiodes compressor* Herrich-Schäffer (Hymenoptera: Braconidae: Rogadinae) de Sudamérica

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Abstract

Four new species of the *Aleiodes compressor* (Herrich-Schäffer) species-group from the Neotropical Region are described and illustrated: *Aleiodes segakiato* sp. nov. and *A. lamasí* sp. nov. from Peru, *A. macro* sp. nov. from Argentina, and *A. palmito* sp. nov. from Mexico. With the addition of these new species, the *compressor* species-group has ten known species; two from Old World, two from Nearctic Region, and six from Neotropical Region. In addition to the descriptions of the new species, a key to known species is presented, and a new distribution record for *A. mantiqueirensis* Shimbori, Shaw and Penteado-Dias from Ecuador is reported.

Keywords: Insecta; taxonomy; biodiversity; parasitoid; Neotropical.

Resumen

Cuatro especies nuevas del grupo de especies *Aleiodes compressor* (Herrich-Schäffer) de la Región Neotropical son descritas e ilustradas: *Aleiodes segakiato* sp. nov. y *A. lamasí* sp. nov. de Perú, *A. macro* sp. nov. de Argentina y *A. palmito* sp. nov. de México. Con la incorporación de las especies nuevas, el grupo de especies *compressor* tiene diez especies conocidas, dos de ellas son del viejo mundo, dos de la Región Neártica y seis de la Región Neotropical. Además de la descripción de las especies nuevas, se presenta una clave de especies y se reporta el nuevo registro de distribución de *A. mantiqueirensis* Shimbori, Shaw y Penteado-Dias en Ecuador.

Palabras claves: Insecta; taxonomía; biodiversidad parasitoide; Neotropical.

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Aleiodes macro sp. nov. - <http://zoobank.org/urn:lsid:zoobank.org:act:C38621B6-CAE3-4703-BF66-407D97AD7E5A>

Aleiodes palmito sp. nov. - <http://zoobank.org/urn:lsid:zoobank.org:act:171AF118-F1B6-4192-9E01-9CB1CCD1A1CA>

Aleiodes segakiato sp. nov. - <http://zoobank.org/urn:lsid:zoobank.org:act:441ADBE2-27AF-4461-AB00-0F8A642A29BF>

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LS, EMS and SRS realized the new species description. SRS confirmed the new species. LS and EMS take photographs. LS, EMS and SRS wrote the manuscript.

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Introduction

Aleiodes Wesmael 1838 (Hymenoptera, Braconidae) is a derived lineage of Rogadinae, with the highest number of species for any genus within the subfamily (Shaw et al. 1997). Since the last publication on neotropical *Aleiodes* (Shimbori et al. 2016), there are 102 species described for this Region, still being somewhat less than the 143 species known from Nearctic Region (Yu et al. 2012, Shimbori et al. 2015). The subdivision of this highly diverse genus into 18 different species-groups (Shaw et al. 1997, Fortier & Shaw 1999), and the subsequent series of taxonomic revisions for most of these groups from Nearctic Region (Shaw et al. 1997, 1998a, 1998b, 2006, 2013, Marsh & Shaw 1998, 1999, 2001, 2003, Fortier 2009), provided a practical framework for taxonomy research on these insects. Despite the necessity of revising the limits and evolutionary relations of some groups (Townsend & Shaw 2009, Zaldivar-Riverón et al. 2008), this framework is still important, especially for highly diverse and poorly known neotropical fauna, as exemplified by the recent revision of the *compressor* species-group (Shimbori et al. 2015), and another works on neotropical *Aleiodes* (Townsend & Shaw 2009, Shimbori & Pentado-Dias 2011, Shimbori & Shaw 2014, Shimbori et al. 2016).

The *compressor* species-group is a small, monophyletic group (Fortier & Shaw 1999), with only six species described until now. Some species are known to attack concealed or semi-concealed lepidopteran hosts such as geometrid and notodontid (Shaw 1994; Marsh & Shaw 2003); however, biology of neotropical species is unknown. Here we present descriptions of four new neotropical species and an extended key to species of the *compressor* species-group modified from Shimbori et al. (2015).

Methods

Type specimens of the newly described species are deposited at the Departamento de Entomología, Museo de Historia Natural, Universidad Nacional Mayor de San Marcos, Lima, Peru (MUSM), The University of Wyoming Insect Museum, University of Wyoming, Laramie, Wyoming, USA (UWIM), and the Canadian National Collection, Toronto, Canada (CNC).

For recognition of the subfamily Rogadinae see van Achterberg (1993) and Sharkey (1997). The definition of *Aleiodes* follows that of van Achterberg (1991) and Shaw (1993). Species-group definitions follow Shaw et al. (1997), Fortier and Shaw (1999), and Townsend and Shaw (2009). Terminology follows Sharkey and Wharton (1997), and Shaw et al. (1997). Microsculpture terminology follows that of Harris (1979). Wing vein terminology follows the system adopted by Sharkey and Wharton (1997). Figures in this paper that are followed by the letter 'S' refer to those in Shimbori et al. (2015).

Images were captured with a 3 MP Leica video camera and a Leica M205C stereomicroscope running Leica Application Suite (LAS) software (Leica Microsystems GmbH, Wetzlar, Hesse, Germany), and focus-stacked using the same software. Some minor adjustments in images and plate preparation were performed in Adobe Photoshop version CS6 (Adobe Systems Inc., San Jose, California, United States of America).

Key to New World species of *Aleiodes* in the *compressor* species-group (females)

1. Terga 3 – 6 entirely orange (Fig. 10S); length of first metasomal tergum about twice as long as apical width (as in fig. 8 of Marsh and Shaw 2003) **2**
- Terga 3 – 6 with brown to dark brown markings or entirely dark brown; length of first metasomal tergum at most 1.4x its apical width **3**
- 2(1). Occipital carina incomplete, widely weakened at vertex; ocell-ocular distance 0.75 – 0.85x shorter than diameter of lateral ocellus; terga 4 – 7 granular-coriaceous (Fig. 11S); 6.0 – 7.0 mm long
***A. palmatus* Walley**
- Occipital carina complete; ocell-ocular distance about 0.5x shorter than diameter of lateral ocellus (Fig. 7); terga 4 – 7 smooth and shiny larger species, body length about 2 cm
***A. macro* sp. nov.**
- 3(1). Head honey yellow to orange with black stemmaticum; hind tibia mostly dark brown or yellow, without dark bands **4**
- Head dark brown with pale yellow to light brown gena; hind tibia yellow with two dark brown bands (Fig. 5S) or apically brown (Fig. 1) **7**
- 4(3). Stigma bicolored, mostly brown with base and apex yellow (Fig. 7S); antenna mostly honey brown, weakly darkened toward apex **5**
- Stigma all dark brown; antenna dark brown to black (Fig. 1S) **6**
- 5(4). Ovipositor sheaths wide and rounded (Fig. 17); ocell-ocular distance distinctly longer than diameter of lateral ocellus (Fig. 13)
***A. palmito* sp. nov.**
- Ovipositor sheaths narrower (Fig. 7S); ocell-ocular distance slightly shorter than diameter of lateral ocellus (Fig. 8S)
***A. palmatoides* Marsh and Shaw**
- 6(4). Propodeum and metasomal T1 pale yellow (Fig. 3S); ocelli small, ocell-ocular distance 2x longer than diameter of lateral ocellus (Fig. 2S)
***A. mantiqueirensis* Shimbori, Shaw and Pentado-Dias**
- Propodeum and metasomal T1 dark brown (Fig. 22); ocelli moderate sized, ocell-ocular distance less than 1.5x diameter of lateral ocellus (Fig. 19)
***A. segakiato* sp. nov.**
- 7(3). Propodeum and most of metasomal T1 dark brown; T1 about as long as apical width ***A. marinoni* Shimbori, Shaw and Pentado-Dias**
- Propodeum and metasomal T1 orangish yellow; T1 1.8x longer than its apical width (Fig. 4)
***A. lamasi* sp. nov.**

Taxonomic treatment

Aleiodes compressor (Herrich-Schäffer) species-group

Included species.- *Aleiodes compressor* (Herrich-Schäffer) (Europe); *A. aligarhensis* (Quadri) (India, Spain, Chad); *A. palmatus* (Walley) (North America – Canada and United States of America); *A. palmatoides* Marsh and Shaw (United States of America – Virginia and North Carolina); *A. marinonii* Shimbori, Shaw and Pentado-Dias (Brazil); *A. mantiqueirensis* Shimbori, Shaw and Pentado-Dias (Brazil, Ecuador); *A. lamasi* new species (Peru), *A. segakiato* new species (Peru), *A. macro* new species (Argentina); *A. palmito* new species (Mexico).

Diagnosis.- Species in this group are characterized by the more or less laterally compressed metasomal apex of females, with T4 – 7 always visible, and T1 nearly parallel sided; ovipositor and sheaths are relatively long and thick, with the sheaths rounded or lanceolate; antenna short with most flagellomeres only slightly longer than wide, antenna shorter than body, about as long as or shorter than forewing; forewing vein 1CUB more than 2 times longer than 1CUa, vein 1cua slightly inclivous,

and vein M+CU more or less sinuate; hindwing with wing vein RS sinuate, marginal cell narrowest at middle, vein m-cu mostly present and interstitial to just antefurcal, vein M+CU a little longer than 1M; apex of hind tibia without modified comb of setae. Males of the known species lack most of the diagnostic characters (e.g. short antenna and laterally compressed metasomal apex), therefore can be only assigned to this group in association with conspecific females.

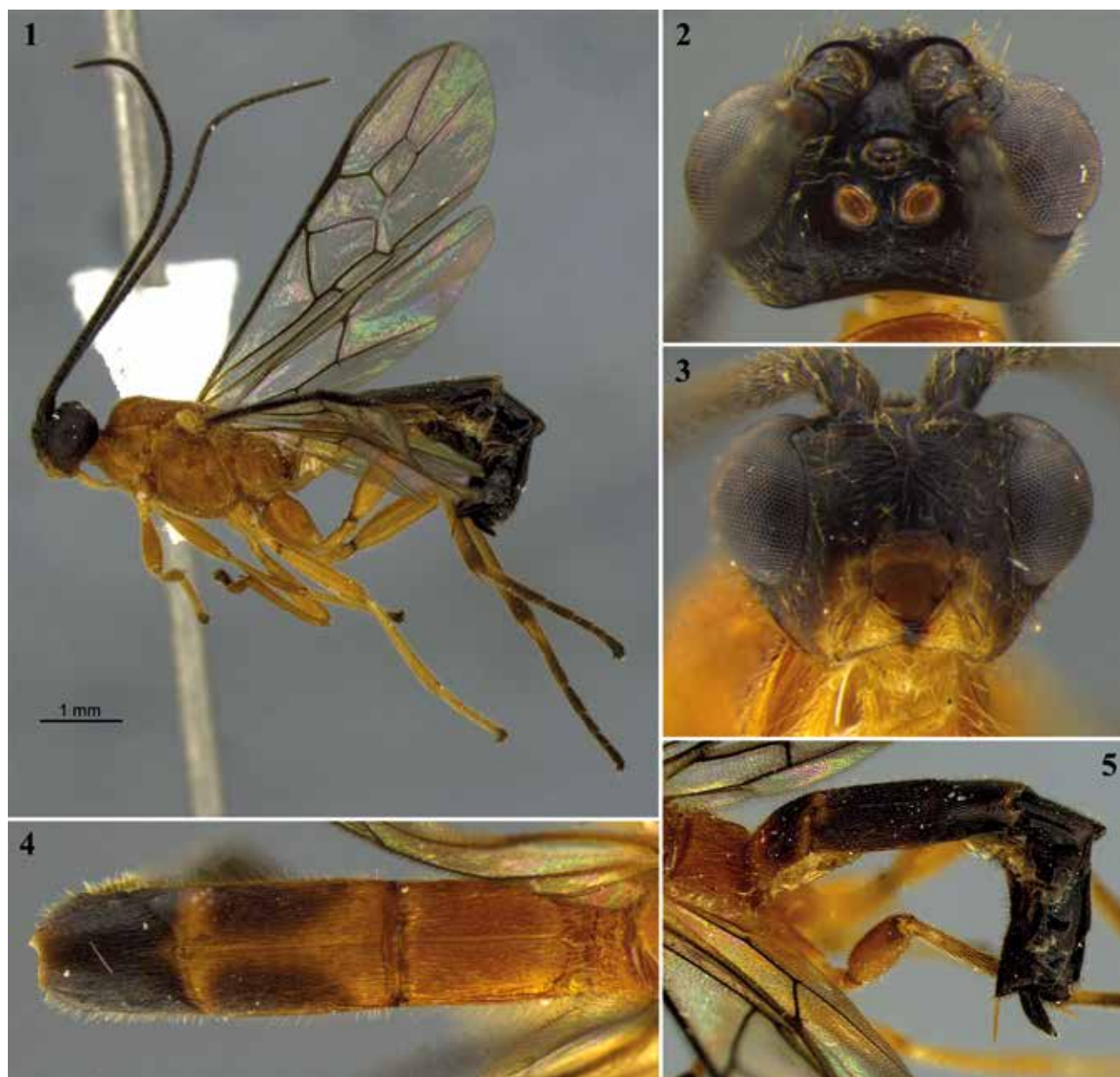
***Aleiodes lamasi* Sulca, Shimbori and Shaw, sp. nov.**

(Figs. 1 – 5)

Holotype. – ♀, top label: PERU: CU, Tono, Cosñipata valley, Izquierda al hito o pacal 2, 802m, 12°57'48.1"S/71°32'06", xii.2007, Malaise trap 15, C. Castillo (MUSM).

Paratypes. – ♀, top label: PERU: CU, Cosñipata valley, ca. P.V. Tono, 13.xii.2007, 12°57'48"S/71°32'06", 862m, Malaise trap 15, C. Castillo (MUSM). ♀, top label: PERU: CU, Cosñipata valley, ca. P.V. Tono, xii.2007, 12°57'48"S/71°32'06", 862m, Malaise trap 15, C. Castillo (UWIM). – ♀, top label: PERU: PU, Sandia, San Pedro de Putina Punco, P.N. Bahuaja Sonene, 13°23'29.4"S/69°29'00.1", 322m, 11 – 24.ix.2011. E. Guillermo y E. Rázuri (MUSM).

Diagnosis. – Ocell-ocular distance about as long as diameter of lateral ocellus; occipital carina complete; head color dark brown except mandibles, clypeus, oral space, labial palps, maxillary palps, ventral 1/3 of occiput orangish yellow; metasoma only slightly laterally compressed from apical T3, color of metasomal terga dark brown except basal 2/5 of T1 honey yellow. Propodeum granulate coriaceous basally, rugose coriaceous apically, with median propodeal carina present but incomplete posteriorly.



Figures 1 – 5. Details of *Aleiodes lamasi* sp. nov. (1) habitus, (2) head, dorsal (3) head, frontal, (4) metasomal terga 1 – 3, dorsal (5) metasoma, lateral.

Description.- Holotype, female. Body length: 7.5 mm; antenna length: 5.8 mm; forewing length: 5.7 mm.

Color (Fig. 1).- Antenna black. Head dark brown except mandibles, clypeus, oral space, labial palps, maxillary palps, ventral 1/3 of occiput orangish yellow. Mesosoma orangish yellow. Ovipositor sheaths black. Metasoma dark brown dorsally except basal 2/5 of T1, ventrally dark brown except first sternum honey yellow. Wings hyaline with dark brown veins and stigma. Legs: fore and mid legs orangish yellow except 5th tarsomere and claws dark brown; hind leg: orangish yellow slightly darkened except tibia apical 1/5 and tarsi dark brown.

Head (Fig. 2).- Antenna 47 segmented; malar space about as long as basal width of mandible, and approximately 0.5x compound eye height; occipital carina complete and well define at vertex, ventrally touching the hypostomal carina; oral space small and circular, diameter about equal to basal width of mandible; clypeus slightly swollen (Fig. 3); ocell-ocular distance about equal to diameter of lateral ocellus; maxillary palp not swollen; head surface sculpturing finely granulate, but occiput smooth and shining.

Mesosoma.- Sculpturing finely granulate; pronotum with few wrinkles dorso-laterally; notauli weak anteriorly, absent posteriorly; mesoscutum with some longitudinal wrinkles on mid-posterior depressed area; propodeum granulate coriaceous basally, rugose coriaceous apically, and some diverging wrinkles laterally, with mid-longitudinal carina complete.

Wings.- Fore wing: stigma about 5x longer than high; vein r 1.1x vein 2RS and 1.25x vein RS+Mb, and 0.9x vein m-cu; vein 3RSa about 0.5x vein 3RSb, and 0.8x vein 2M; vein 1CUa 1.7x vein 1cu-a; vein 1Cub 2.5x vein 1CUa; vein 1M virtually straight, only very slightly curved at basal half. Hind wing: m-cu indicated as short pigmented vein interstitial to vein r-m; vein M+CU about 1.8x 1M; vein r-m 2.5x vein 1M; vein RS faint, slightly curved at middle.

Legs.- Tarsal claws not pectinate; hind basitarsus 2.4x length of inner apical spur of hind tibia.

Metasoma (Fig. 5).- T1 parallel sided; T1, T2 and basal 1/2 of T3 granulate striate, longitudinal carina present along this sculpturing, remainder visible terga granular (Fig. 4). Ovipositor sheaths about 0.6x length of hind basitarsus, lanceolate apex.

Variation.- Body length 8.33 – 9.31 mm; otherwise as holotype.

Male.- Unknown.

Comments.- The color pattern of this new species is quite similar to *A. marinonii*, differing in the color of propodeum and T1, which is mostly dark brown in *A. marinonii*, as compared with orange in *A. lamasi* sp. nov. The antenna is relatively shorter in *A. marinonii*, with 31 antennomeres, as compared with 47 in *A. lamasi* sp. nov. The shape of ovipositor sheaths apex in both species are also different: round in *A. marionni* whereas lanceolate in *A. lamasi*.

Etymology.- This species is named after Dr. Gerardo Lamas, a prominent Peruvian entomologist.

Distribution.- Known only from Peru (Cusco, Puno).

***Aleiodes macro* Sulca, Shimbori and Shaw, sp. nov.**

(Figs. 6 – 11)

Holotype.- ♀, top label: ARGENTINA: Entre Ríos, Feb. '62 [ii.1962], Pronunciamento (UWIM).

Diagnosis.- Ocell-ocular distance about 0.5x lateral ocellus; occipital carina complete; head orangish yellow except mandibles tips, ocellar triangle and occipital carina dark brown; metasoma laterally compressed from apical T3, color of metasomal terga orangish yellow dorsally, ventrally honey yellow. Propodeum granulate anteriorly with wrinkles posteriorly, mid-longitudinal carina complete.

Description.- Female: Body length 18.62 mm; antenna length 9.8+ mm; fore wing length 10.8 mm.

Color (Fig. 6).- Entire body honey brown to bronze except ocellar triangle, mandibles tips and occipital carina dark brown. Antenna black with dorsal scape honey yellow. Wings tinged yellowish veins honey yellow, parastigma honey yellow, stigma dark brown. Legs honey yellow except 5th tarsomere and claws brown. Ovipositor sheaths black. Metasoma orangish yellow dorsally, ventrally honey yellow.

Head (Fig. 7).- Antenna broken, 62 segmented, flagellomeres compact, about as long as wide to slightly shorter; malar space about 0.4x basal width of mandible, and approximately 0.3x compound eye height; occipital carina complete and well define at vertex, ventrally touching the hypostomal carina. Oral space small and circular, diameter about 0.7x basal width of mandible; clypeus slightly swollen; ocell-ocular distance about 0.5x diameter of lateral ocellus (Fig. 9); maxillary palp not swollen; head surface sculpturing finely granulate, but occiput smooth and shining.

Mesosoma (Fig. 11).- Sculpturing coarsely granulate; notauli well defined, deep posteriorly and meeting on depressed area; mesopleuron and metapleuron granulate; propodeum granulate anteriorly with wrinkles posteriorly, mid-longitudinal carina complete.

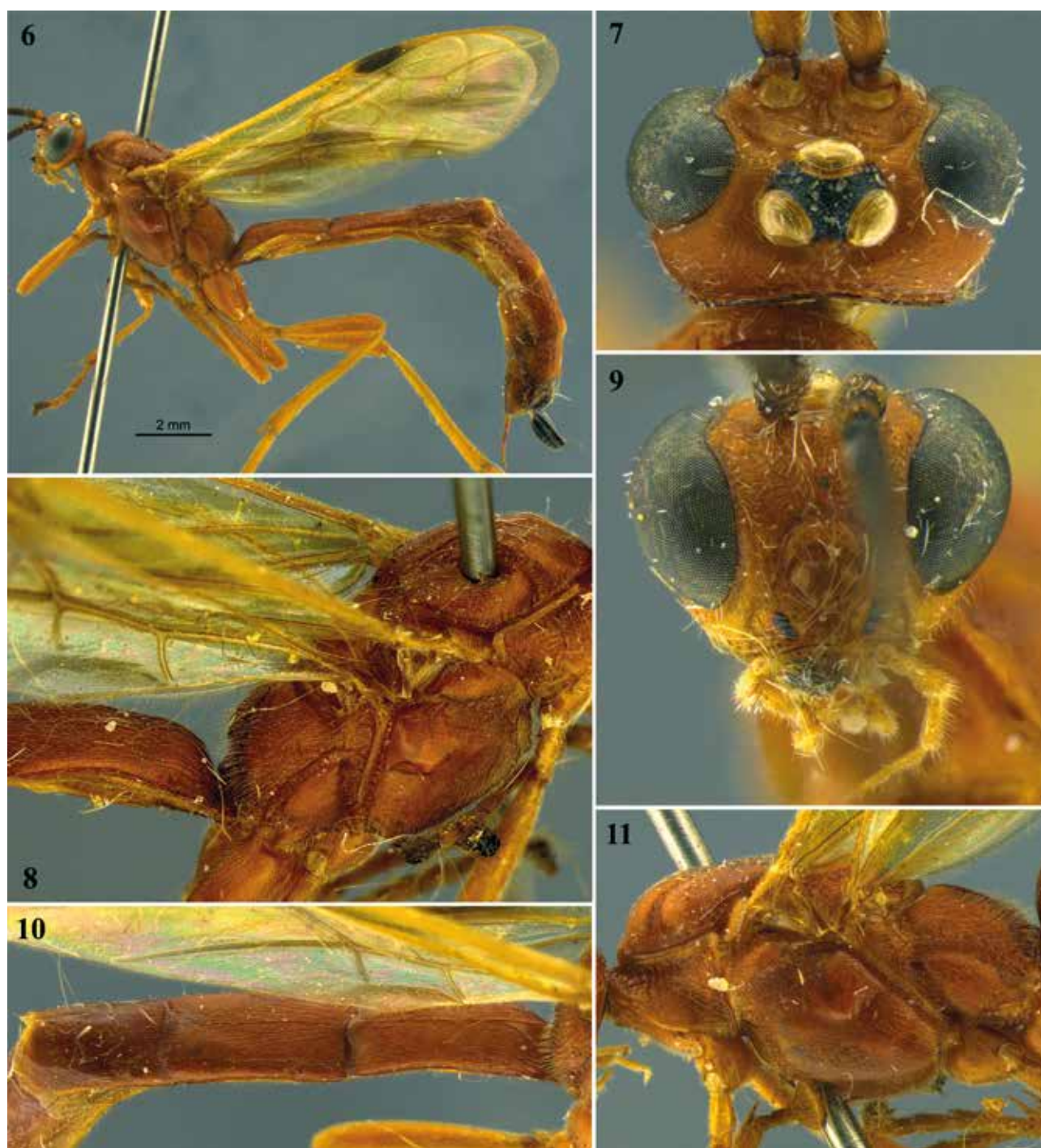
Wings.- Fore wing: stigma about 3.4x longer than high; vein r 0.88x vein 2RS and as long as vein RS+Mb, and 0.7x vein m-cu; vein 3RSa about 0.5x vein 3RSb, and 0.94x vein 2M; vein 1CUa 0.5x vein 1cu-a; vein 1Cub 4.5x vein 1CUa; vein 1M slightly curved at basal half. Hind wing: m-cu indicated as short pigmented vein just antefurcal to vein r-m; vein M+CU about 1.7x 1M; vein r-m 0.85x vein 1M; vein RS distinct and strongly sinuate at middle.

Legs.- Tarsal claw not pectinate; hind basitarsus 3.6x length of inner apical spur of hind tibia.

Metasoma (Fig. 10).- T1 parallel sided; T1, T2 and basal 1/3 of T3 granulate striate, longitudinal carina present along T1 and T2. Ovipositor sheaths about 1.1x length of hind basitarsus, lanceolate apex.

Male.- Unknown.

Comments.- *Aleiodes macro* sp. nov. resembles *A. palmatus* in having the body color entirely orange, and the petiole long and narrow, about twice as long as apical width and nearly parallel sided. This new species is easily distinguished by the extremely long body, measuring almost 2 cm, but ranging from 0.4 – 0.7 cm in other species in the *compressor* group.



Figures 6 – 11. Details of *Aleiodes macro* sp. nov. (6) habitus (7) head, dorsal (8) mesosoma, lateral and metasomal terga 1, lateral (9) head, frontal (10) metasomal terga 1 – 3, dorsal (11) mesosoma, lateral.

Etymology.- The specific name is from the Greek *macro* meaning large, a reference to the unusual large size of this species.

Distribution.- Known only from the type locality in Argentina.

***Aleiodes palmito* Shimbori and Shaw sp. nov.**

(Figs. 12 – 17)

Holotype.- ♀, top label: MEXICO: Sinaloa, 4 1/2 mi. W El Palmito, 6500', 20 July 1964, W.R. Mason (CNC).

Paratypes.- 3 males, MEXICO, Durango, 10 mi. W El Salto, 9000', J.E.H. Martin: 2 males 9.VI.1964; 1 male, 4.VII.1964 (CNC).

Diagnosis.- Ocell-ocular distance distinctly longer than diameter of lateral ocellus; occipital carina complete; body mostly honey yellow with faint brown regions on propodeum and T1; ovipositor sheaths wide and rounded.

Description.- Female: body length 4.9 mm; antenna length 3.0 mm; fore wing length 3.5 mm.



Figures 12 – 17. Details of *Aleiodes palmito* sp. nov. (12) habitus, (13) head, dorsal (14) mesosoma, lateral (15) head, frontal (16) metasomal tergo 1 – 4, dorsal (17) metasomal tergo 2 – 7 and ovipositor sheaths, lateral.

Color (Fig. 12).- Honey yellow; propodeum and base of T1 light brown; stemmaticum black; palpi light yellow; antenna mostly honey yellow, darkening toward brown apex. Ovipositor sheaths light reddish brown basally to dark brown apically. Wings hyaline with light brown veins, stigma faint light brown with basal 1/4 and apical tip yellow.

Head (Fig. 13).- Antenna 29 segmented; malar space 1.25x basal width of mandible, and 0.4x compound eye height; occipital carina complete and well defined at vertex, ventrally touching the hypostomal carina. Oral space circular, about as long as basal width of mandible; clypeus slightly swollen (Fig. 15); ocell-ocular distance 1.3x diameter of lateral ocellus; maxillary palpi not swollen; head surface sculpturing finely granulate, occiput smooth and shining.

Mesosoma (Fig. 14).- Sculpturing finely granulate; pronotum laterally and subalar groove on mesopleuron weakly rugose; notauli weak anteriorly, posteriorly meeting a weakly rugose area; propodeum granulate anteriorly with wrinkles posteriorly, mid-longitudinal carina complete.

Wings.- Fore wing: stigma about 3x longer than high; vein r 0.67x vein 2RS, as long as vein RS+Mb, and 0.6x vein m-cu; vein 3RSa about 0.4x vein 3RSb, and 0.86x vein 2M; vein 1CUa 2.2x vein 1cu-a; vein 1CUB 2.4x vein 1CUa; vein 1M slightly curved at basal half. Hind wing: m-cu very weakly indicated, just antefurcal to vein r-m; vein M+CU 1.4x vein 1M; vein r-m 0.8x vein 1M; vein RS quite faint, strongly sinuate at middle.

Legs.- Tarsal claw not pectinate; hind basitarsus 4.3x length of inner apical spur of hind tibia.

Metasoma (Fig. 16).- T1 1.2x longer than apical width, apical width 1.3x basal width; T1T2 and most of T3 basally costate, longitudinal carina present along T1 and T2. Ovipositor sheaths 0.8x length of hind basitarsus, extremely wide and rounded (Fig. 17).

Male.- Body length 3.6 – 3.8 mm; antenna 3.8 – 3.9 mm; forewing 3.6 – 3.8 mm. Antenna with 35 segments. Males differ from female in having antenna, body and forewing with about the same length; metasoma relatively narrower; antenna with more and longer segments (35 vs. 29 in females), flagellomeres about two times longer than wide; and metasomal T4 – 7 darker.

Comments.- The new species is very similar to *A. palmatoides*, differing from it by the diameter of ocelli, being smaller than the ocelli-ocular distance in *A. palmato* sp. nov., as compared with larger than ocelli-ocular distance in *A. palmatoides*. *Aleiodes palmato* also has very wide and rounded ovipositor sheaths, being about two times wider than in *A. palmatoides*. Color pattern in both species is quite similar, but the brown markings on the body are fainter in *A. palmato*. Additionally, *A. palmato* female has fewer antennomeres (29) than *A. palmatoides* (33 – 35).

Etymology.- The species was named after the locality El Palmito, in Mexico.

Distribution.- Known only from Durango and Sinaola, Mexico.

***Aleiodes segakiato* Sulca, Shimbori and Shaw, sp. nov.**

(Figs. 18 – 23)

Holotype.- ♀, top label: PERU: CUSCO, La Convención, Echarate, C. Segakiato, 11°45'38.6"S/73°14'57.7"W, 908m, 27.ii.2011, M. Alvarado & E. Rázuri (MUSM).

Paratype.- ♀, top label: PERU: CUSCO, La Convención, Echarate, C. Segakiato, 11°45'38.6"S/73°14'57.7"W, 908m, 28.ii.2011, M. Alvarado & E. Rázuri (UWIM).

Diagnosis.- Ocell-ocular distance about 1.42x diameter of lateral ocellus; occipital carina complete; head color mostly orange yellow except ocular triangle dark brown; metasoma only slightly laterally compressed from apical T3, color of metasomal terga dark brown with a pale yellow mid-longitudinal spot on T1 – T4. Propodeum rugulose costate with median propodeal carina present and some diverging wrinkles laterally.

Description.- Holotype, female. Body length: 4.7 mm; antenna length: 3.0 mm; fore wing length: 3.5 mm.

Color (Fig. 18).- Antenna black. Head orangish yellow, ocular triangle and tips of mandibles dark brown; pronotum orangish yellow. Mesosoma mostly orangish yellow except metanotum and propodeum dark brown. Ovipositor sheaths dark black. Metasoma dark brown with a pale yellow midlongitudinal spot on T1–T4 dorsally, ventrally honey yellow. Wings hyaline with dark brown veins and stigma. Legs mostly honey yellow except dark brown at extreme apex of tibia; fore and mid femur dark brown, hind femur basal 2/11 honey yellow and apical 9/11 dark brown; tarsi light brown.

Head (Fig. 19).- Antenna 30 segmented; malar space about as long as basal width of mandible, and approximately 0.5x compound eye height; occipital carina complete and well define at vertex, ventrally touching the hypostomal carina; oral space small and circular, diameter about equal to basal width of mandible (Fig. 21); clypeus slightly swollen; ocell-ocular distance about 1.4x diameter of lateral ocellus; maxillary palp not swollen; head surface sculpturing finely granulate, but occiput smooth and shining.

Mesosoma (Fig. 23).- Sculpturing mostly granular coriaceous; notauli weak, shallow and smooth; mesopleuron granular coriaceous; metapleuron with wrinkles posteriorly; propodeum rugose-coriaceous, with mid-longitudinal carina complete and some diverging wrinkles laterally.

Wings.- Fore wing: stigma about 4x longer than high; vein r as long as vein 2RS and vein RS+Mb, and 0.8 as long as vein m-cu; vein 3RSa about 0.4x vein 3RSb, and slightly length than vein 2M; vein 1CUa as long as vein 1cu-a; vein 1CUB 3.5x vein 1CUa; vein 1M moderately curved at basal half. Hind wing: m-cu indicated as short pigmented vein just antefurcal to vein r-m; vein M+CU about 1.3x 1M; vein r-m 1.6x vein 1M; vein RS faint, strongly curved at middle.

Legs.- Tarsal claw not pectinate; hind basitarsus 2.5x longer than inner apical spur of hind tibia; hind coxa slightly striate dorsally, weak rugosity ventrally.

Metasoma (Fig. 20).- T1 apical 0.7x wider than basal (Fig. 22); T1, T2 and basal 1/2 of T3 granulate striate, longitudinal carina present along this sculpturing, remainder visible terga granular. Ovipositor sheaths thick and apex round, about 0.8x length of hind basitarsus.

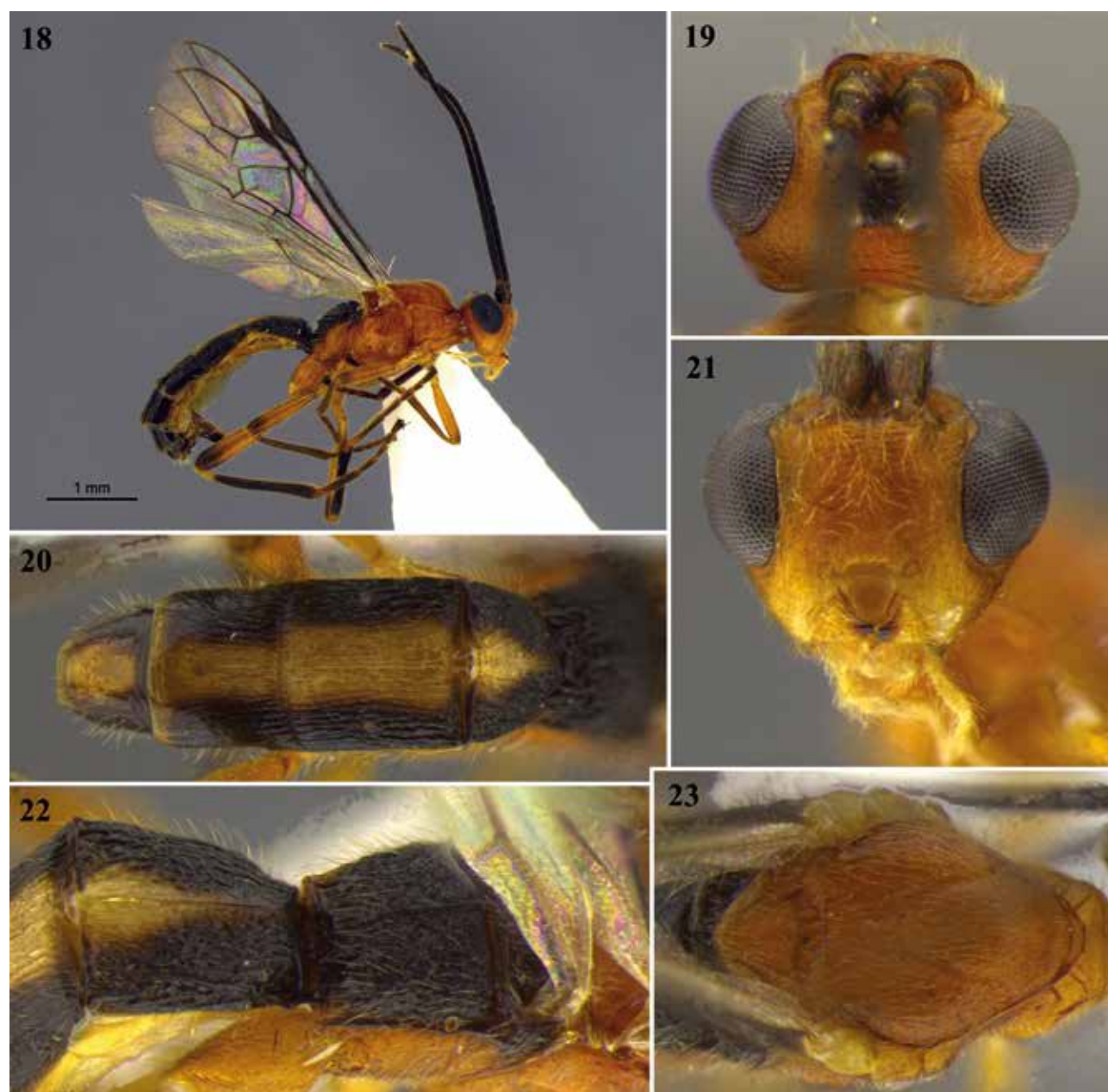
Variation.- Body length (female): 4.6 – 4.7 mm; antenna length: 2.9 – 3.3 mm; fore wing length: 3.3 – 3.5 mm. One paratype with pale yellow spot on T5.

Male.- Unknown.

Comments.- This new species is very similar to *A. mantiqueirensis*, differing from it in the ocelli-ocular distance, being about 1.4 times longer than the diameter of an ocellus in *A. segakiato* sp. nov, while about 2.0 times in *A. mantiqueirensis*. Both species have the occipital carina complete, but it is well defined at the vertex in *A. segakiato* sp. nov. whereas it is weak in *A. mantiqueirensis*.

Etymology.- Named after the type locality.

Distribution.- Peru (Cusco).



Figures 18 – 23. Details of *Aleiodes segakiato* sp. nov. (18) habitus, (19) head, dorsal (20) metasomal tergo 1 – 4, (21) head, frontal, (22) propodeum and metasomal terga 1, dorsal, (23) mesonotum, dorsal.

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Material examined: Female, ECUADOR: Napo Province, Huahua, Sumaco, KM45 on Hollin-Loretto Road, 15. XII.1989, Malaise Trap, M.J. Wasbauer & H. Real (CNC)

Comments.- The specimen from Ecuador is virtually identical to the type specimens from Brazil, including the same number of antennal segments, 29. The only difference found when compared with the type series was in the color of propleuron, which is completely orange in the Ecuadorian specimen, as compared with mostly black in the Brazilian specimens.

Distribution.- Recorded from Brazil and Ecuador.

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