Amaru, a new genus of Arctiini (Lepidoptera, Erebidae), with the description of a new species from the Amazon of Peru.

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Abstract

Amaru, a new genus of Arctiini: Phaegopterina, is described from "*leucoplaga* Hampson, 1905 group" species, formally located within the genus *Trichromia* Hübner. A new species, *Amaru knoxorum* **sp. n.** is described from the Amazon of Peru and a new combination, *Amaru leucoplaga* (Hampson 1905) is proposed.

Key words: New combination, *Neritos*, Phaegopterina, taxonomy, *Trichromia*.

Introduction

The neotropical genus *Trichromia* Hübner ([1819]) has a convoluted history. Toulgoët (1991) synonymized the following genera with *Trichromia*: *Paranerita* Hampson, 1901, *Neritos* Walker, 1855, and *Parevia* Hampson, 1901; mentioning that a group of species, *N. leucoplaga* Hampson and *P. postflavida* Toulgoët hardly follow the definition of the genus. Their status remained unsolved until Watson and Goodger (1986) transferred them to the genus *Neritos*. Years later Toulgoët (1997) moved both species to *Trichromia.* Vincent and Laguerre (2014) mentioned the same synonyms as Toulgoët (1991). Recently Grados (2018) stated the genus as such is likely to be polyphyletic, making a discussion of the related genera. There are no phylogenetic studies of the genera *Trichromia* that support what was considered by Toulgoët (1991) and Vincent and Laguerre (2014). It is most likely, due to the diversity of forms, coloring patterns and external and internal morphology, that the genus *Trichromia* is polyphyletic. Currently, both species are considered as *Trichromia* (Vincent and Laguerre 2014)

Differences in colour pattern, wing venation, and morphology of the genital capsule, suggest both species presented in this work are not congeneric of *Trichromia* or any of its synonyms. This work presents a new genus for science and a new species from the Amazon of Peru.

The specimens for the present work have been collected as part of our studies in Systematics and Biogeography of the Neotropical Arctiinae, through some trips to the Amazonian Cusco and Madre de Dios; other samples have been obtained by daily collections from guests at the Refugio Amazonas Lodge (ARA), located on the right bank of the Tambopata River (Madre de Dios, Peru), as part of the Citizen Science program, with the mutual collaboration between the Natural History Museum (MUSM) and Rainforest Expeditions.

Materials and methods

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The specimens discussed in this work have been collected with light traps, using in some cases mercury vapour bulb and in others, mixed light bulb. The specimens were placed in killing jars containing either ethyl acetate or butyl acetate.

The entomological collections revised for the preparation of this work were the following:

FZE Collection of Michael Boppré at the Professur für Forstzoologie und Entomologie, Albert-Ludwigs-Universität, Freiburg, Germany.

MNHP Muséum Nationale d'Histoire Naturelle, Paris, France.

MUSM Museo de Historia Natural, Universidad Nacional Mayor de San Marcos, Lima, Perú.

NHMUK Natural History Museum United Kingdom, London, United Kingdom.

USNM United States National Museum, Smithsonian Institution, USA.

All specimens studied are deposited in the MUSM, unless another collection is mentioned.

The terminology for venation follows Comstock and Needham (1898, 1899), Miller (1970), Wootton (1979), and Common (1990); for genitalia follows Kuznetsov (1967) and Klots (1970).

The notation used in the information provided in the type labels is as follows: we use semicolons (;) to separate information from the different labels and the ascending bar (/) to separate the annotations in different lines in the same label.

Amaru Grados, new genus

Differential diagnosis: it is characterized for presenting elongated forewings, hindwings wider than long. The males present: on the ventral side of the forewings with an invagination, elliptical and elongated located proximal to Cu_2-1A, bearing elongated creamy androconial scales; the costal margin of the hindwings lobed; the tegumen presents, laterally at the distal end, sclerotized prolongations, this prolongations turned towards the middle axis and presenting dentitions; uncus spatulate with distal end finishing in two lateral projections; rectangular valvae.

Type species: *Amaru knoxorum* Grados. *Amaru* is treated as a masculine noun.

Etymology: Amaru is a Quechua word that refers to a pre-Columbian mythological creature which had part of the body of a large ophidian, worshiped by the Andean civilizations (Lira and Mejía 2008; Rosas 2005).

Description: Small head, covered with ochre or brown ochre scales, palps recurved upwards, reaching the middle part of the frontoclypeus. Third palpomere small. Antennae bipectinated in the proximal part, the remaining filiform.

Elongated forewings, brown ochre to pale ochre, with a certain dark hue over the veins. The males have a bulging, elliptical and elongated area proximal to CuA_2-(1A+2A); with a postdiscal area lighter than the background of the wing; On the ventral surface with an invaginated, elliptical and elongated area in the proximal part of Cu_2-1A, with elongated, piliform androconial scales; R_1 and R_2 present from the anterior end of the discal cell, joining R_1 at the middle of the vein; with an accessory cell (areole) in the conjunction of R_{2+3+4} and R_5. Hindwings short, wider than long, and lobed in the costal margin; Sc and Rs not reaching the wing margin and the M_2 absent.

The male genitalia is characterized by the sclerotized tegumen, wide towards the anterior part and becoming somewhat narrower towards the posterior part; posterior margin straight; at the lateral parts of the posterior margin, sclerotized and arched prolongations towards the middle axis, with the presence of dentitions. Uncus sclerotized and spatulate; with two projections present in the distal part. Rectangular valves with the distal margin rough and denticulate. Juxta elongated and wide at its base. Transtilla thin, transversally wider than the juxta. Female genitalia is characterized for having the eighth tergite uniformly little sclerotized. Ostium and antrum in central position. Cervix bursae membranous. Corpus bursae membranous and oval. Presence of a medium signum. Anal papillae well developed, wider at the ventral part, with setae present on the whole area, denser on the dorsal surface; in side view, its height larger than its width. Posterior apophysis larger than the anterior one.

Amaru knoxorum **sp. n.**
(Figs. 1–14)

Differential diagnosis: Frontoclypeus, vertex and postgena yellow. Antennae bipectinated. Scape and pedicel yellow. Flagellum pale brown ochre. Patagia, tegula, mesoscutum, mesoscutellum, metascutum and metascutellum pale brown ochre. Patagia and mesoscutum present yellow scales on the anterior surface. Elongated forewings, pale brown ochre, with a faint bright ochre reflection and dark shades on the veins.

Description of adult

Male (Fig.1–2). Forewing extension 14–16 mm (n=35).

Head: Proboscis light brown. Frontoclypeus, vertex and postgena yellow. Palpi recurved towards the head, reaching the middle part of frontoclypeus. First palpomere yellow; second palpomere of the same size as the first, with yellow scales on the proximal half and pale brown ochre scales on the distal; third palpomere small and pale brown ochre. Ocellus black. Antennal alveolus yeloow. Antenna bipectinated. Scape and pedicel yellow. Flagellum pale brown ochre. Rami developed to somewhere more than half of the flagellum. The first two external proximal rami notoriously smaller than the internal ones. Rami more developed at the central area of the first half of the flagellum, twice the width of the flagellum. From this point, the rami decrease in size out to about more than half of the flagellum, from where the flagellum becomes filiform.

Thorax: Patagia, tegula, mesoscutum, mesoscutellum, metascutum and metascutellum pale brown ochre. Patagia and mesoscutum with presence of yellow scales on the anterior surface. Pleura creamy white. First pair of legs with yellow coxae; the other segments pale brown ochre on its external side and the internal side whitish. Epiphysis light brown. Second and third pair of legs pale brown ochre on its external side and whitish on its internal side. Tibial spurs creamy white. Tympanic organ present on the katepisternum, covered with creamy white scales.

Forewing (dorsal): Elongated, pale brown ochre; a faint bright ochre reflection and dark shades on the veins. A bulging, elliptical and elongated area in the proximal part of CuA_2-(1A+2A) (Fig. 11–12). A postdiscal area lighter than the rest of the wing, formed by the following: a small area from the proximal part of R_5-M_1 and the proximal halves of M_1-M_2, M_2-M_3 and M_3-CuA_1.

The R_1 and R_2 are born near the anterior part of the discal cell, to join almost at the middle of the path of R_1. They present an accessory cell (areole), due to the presence of a vein that joins the R_{2+3+4} and the R_5. M_1 is born from the upper angle of the discal cell. M_3 and Cu_1 are born separated from almost the inferior angle of the discal cell. 3A very small, observed only near the base of the wing (Fig. 13).

Forewing (ventral): Pale brown ochre. The proximal half creamy white, involving the third proximal part of the discal cell. Costal cell creamy white up to the middle of the wing. Postdiscal area is formed by: a very small area of the proximal part of R_5-M_1; the proximal halves M_1-M_2, M_2-M_3 and M_3-CuA_1. It is lighter than the rest of the wing and this difference is more accentuated than in dorsal view, (Fig. 11-12). An elliptical elongated and invaginated area, in the proximal part of CuA_2-1A, with elongated creamy androconial scales.

Hindwing (dorsal): Pale brown ochre, short, wider than long. Lobed at the costal margin, covering up to a third of the wing. The costal cell, reaching up to the anterior half of the discal cell, lustrous and shiny. Presence of creamy white scales on the inner margin.

Hindwing (ventral): Costal margin brown ochre from close to the base. The lobed area creamy white. Anal cell creamy white. Rest of the surface pale brown ochre. The Sc and Rs do not reach the wing margin, the latter arising, together with M_1 from the upper angle of the discal cell. M_2 absent. M_3 and CuA_1 join before reaching the lower angle of the discal cell (Fig. 14).

Abdomen: Pale brown ochre, with piliform scales present on the dorsal surface of the first four tergites. The posterior edges of the tergites I-IV creamy white; the edges of the V-VII tergites, yellow. The third distal part of the last tergite, yellow. Sternites II-VI creamy white; the last two yellow.

Male genitalia (Fig. 5–8) (Genitalia # JGA 810): Tegumen sclerotized, with the anterior margin leaving the free space somewhat acuminate; wide towards the front part; of parallel sides in the middle part; becoming narrower towards the posterior part; straight posterior margin; from the lateral parts of the posterior margin, sclerotized and arched prolongations

towards the middle axis, with dentitions on the external surface of the first proximal quarter and the presence of spinous structures in the distal half. Union of tegumen and uncus sclerotized. Uncus sclerotized and spatulate. At the distal half wider than the basal half, to thin down at the middle part and widen again at the distal third, ending in two lateral sclerotized projections, being sharp and strongly sclerotized at each end; presence of a central invagination in the posterior edge; presence of setae of same size as its width. Valvae rectangular and somewhat sclerotized, the proximal half 1.5 times wider than the distal half. The distal half rectangular, with a sclerotized area in the basal half (of the internal part), not reaching the ventral margin; with a laminar and rounded evagination, arising from the ventral part, projecting towards the distal part without reaching the end, ending subdorsally, presenting setae in its entire margin. Posterior margin of the valvae rough and denticulated. Juxta elongated, wide at its base, with the anterior margin cordate, narrowing at the middle part, to widen towards the distal part; with a small spinous, subdistal projection on the ventral surface, posterior margin invaginated in a half moon. Transtilla narrow, transversally four times wider than the juxta, with lateral helical prolongations directed towards the posterior part. Aedeagus elongated, somewhat arched and sclerotized, almost the same size as the genital capsule. Caecum penis rounded. Vesica small, with small spicules in the central part; the other parts membranous and smooth.

Female: (Fig. 3–4). Forewing extension (14–16 mm) (n=13). Wing and body colour pattern similar to the male, differing in the following: rami of the antennae small in the two thirds of the proximal region; the remaining filiform. The anterior wing does not present a lighter postdiscal area as it is seen in the males. They do not present the area where piliform androconial scales are located. Hindwing is triangular and somewhat elongated. The frenulum comprises four bristles.

Female genitalia (Fig. 9–10) (Genitalia # JGA 812): Eighth tergite sclerotized. Ostium and antrum in central position, the latter somewhat sclerotized. Slightly sclerotized antevaginal lamella. Ductus bursae sclerotized, wide and flattened. Cervix bursae membranous. Corpus bursae membranous and oval. A medium signum in the ventral and proximal part. Ductus seminalis emerges from the latero-ventral surface of Cervix bursae. Anal papillae well developed, wider in the ventral part, with setae present on the whole area, more concentrated on the dorsal surface. Posterior apophyses four times larger than the anterior ones.

Type material: HOLOTYPE male (Fig. 1–2): **PERU**. Madre de Dios: Albergue Refugio Amazonas, 12°52'30"S, 69°24'35"W, 231m, 21.x.2016, J. Grados & D. Couceiro. PARATYPES. **PERU. LORETO**: 1♀, Río Curaray, Campamento Paiche, 01°29'25"S, 75°23'53"W, 200m, 01.iii.2008, W. Yawuarcani; 1♂, Qda. Rumiyacu, Campamento Dorado, 01°48'09"S, 75°29'14"W, 230m, 23.ii.2008, W. Yawuarcani (GENITALIA #811–JGA); 1♂, Coconilla, 02°42'S, 75°06'W, 160m, 18.vii.2003, J.J. Ramírez; 1♂, ídem except, 19.vii.2003; 1♂, Z.R. Allpahuayo-Mishana, Agua Blanca, 03°56'S, 73°28'W, 130m, 11.viii.2004, J.J. Ramírez;1♂, Alto río Contaya, 07°16'S, 74°42'W, 16.x.2008, J.J. Ramírez. **UCAYALI**: 1♂, Inamapuya, 08°44'33"S, 74°06'15.9"W, 135m, 11-12.vii.2008, M. Alvarado. **HUANUCO**: 1♂, Puerto Inca, 09°23'S, 74°28'W, 180m, 13-15.xi.2009, V.V.

Izersky leg.; 1♂, Estación Biológica Panguana, 09°38'36"S, 74°54'55"W, 260m, 17-18.vii.2008, J. Grados. CUSCO: 1♂, Cashiriari, 11°52'S, 72°39'W, 690m, 04.xii.1997, J. Grados. **MADRE DE DIOS**: 1♂, 3 km NO Albergue Cusco Amazónico, Río Madre de Dios, 12°31'20.20"S, 69°03'44.85"W, 182m, 28-29.iii.2009, L. Figueroa; 1♀, ídem except, 12°31'20"S, 69°03'44"W, 28-29.iii.2009 (GENITALIA #812-JGA); 1♀, ídem except, 19-20.vii.2009, M. Alvarado; 1♂, CICRA, Río Los Amigos, 12°33'S, 70°06'W, 280m, 14.i.2007, A. Asenjo; 1♂, ídem except, 21.i.2007; 1♂, Albergue Posada Amazonas, 12°47'S, 69°14'W, 300m, 04.v.2003, A. Lescano; 1♂, ídem except, 21.v.2003; 1♂, 1♀, ídem except, 25.vi.2003; 1♂, ídem except, 26.vi.2003; 1♀, ídem except, 30.vi.2003; 1♂, 1♀, ídem except, Albergue Posada Amazonas (La Torre), 13.xii.2003; 1♀, Posada Amazonas, 12°48'17"S, 69°17'35"W, 280m, 01.x.2004, T. McCabe; 1♂, Tambopata Preserve Explores'Inn, 12°51'S, 69°18'W, 200m, 05.xii.1996, J. Grados leg.; 2♂, ídem except, 07.xii.1996; 1♂, ídem except, 10.xii.1996; 1♂, ídem except, 13.xii.1996, C. Snyder, A. Brower & S. Rab-Green; 2♀, Albergue Refugio Amazonas, 12°52'30"S, 69°24'35"W, 231m, 19.viii.2016, D. Couceiro; 1♂, ídem except, 06.x.2016; 2♂, ídem except, 21.x.2016, J. Grados & D. Couceiro; 2♂, ídem except, 22.x.2016; 1♂, ídem except, 22.x.2016 (GENITALIA #810-JGA); 1♂, Albergue Refugio Amazonas, 12°52'30"S, 69°24'35"W, 231m, 24.vi.2017, D. Couceiro; 1♂, ídem except, 17.xi.2016 (VBC #205 JGA-MUSM); 1♀,ídem except,(VBC #207 JGA-MUSM); 1♀, ídem except, 03.vii.2017; 1♂, ídem except, 21.viii.2017 (VBC #446 JGA- MUSM); 1♂, ídem except, 22.viii.2017, James and Katie Knox; 1♂, ídem except, 16.ix.2017 (VBC #524 JGA-MUSM); 1♂, Albergue Refugio Amazonas, 12°52'30"S, 69°24'35"W, 231m, 21.ix.2017, D. Couceiro; 1♂, ídem except, 23.ix.2017; 2♀, Río Alto Madre de Dios, nr. Atalaya, 12°53'S, 71°22'W, 587m, 19.ii.2007, P. Centeno; 1♂, Pampas del Heath, 12°57'08"S, 68°54'32"W, 200m, 28.xi.-14.xii.2011, E. Huamaní; 1♂, Tambopata Research Center, 13°08'S, 69°36'W, 300m, 15.v.2001, J. Grados; 1♂, ídem except, 11.ii.2004; 1♀, ídem except, 15.ii.2004; 1♂, Puerto Maldonado, 15.x.1983, C.V. Covell Jr.

Etymology: The name is a latinised noun in genitive plural, dedicated to James and Katie Knox, who were the first to collect specimens at Refugio Amazonas Lodge.

Distribution: Known so far in the Peruvian Amazon. It is likely to occur in the Amazon of Brazil, Ecuador and Colombia.

Comments: The species is very similar to *A. leucoplaga*, with which it certainly has been confused on many occasions. The species *A. knoxorum* presents pale brown ochre wings and regarding to the male genitalia, it presents sclerotized prolongations arched towards the middle axis at the lateral parts of the posterior margin of the tegumen, but not as pronounced as in *A. leucoplaga*. *A knoxorum* present dentitions on the external surface of the first proximal quarter.

Amaru leucoplaga (Hampson, 1905) new combination
(Figs 15–26)

Differential diagnosis: Frontoclypeus brown ochre with lateral margins pale yellow. Vertex and postgena yellow. Scape and pedicel brown ochre in the frontal area and pale yellow in the posterior area. Flagellum brown ochre. Patagia, tegula, mesoscutum and

mesoscutellum brown ochre. Metascutum and metascutellum with cream and brown ochre piliform scales. Forewings brown ochre, elongated, with bright yellow reflections and with a slight dark shade on the veins.

Adult redescription.

Male (Fig. 15–18). Forewing extension (19–20 mm) (n=3).

Head: Proboscis light brown. Frontoclypeus brown ochre with lateral margins pale yellow. Vertex and postgena yellow. Palpi recurved towards the head, reaching the middle part of the frontoclypeus. First palpomere yellow; second palpomere pale brown ochre, with yellow scales on the internal area (towards the head); third palpomere small and brown ochre. Ocellus black and antennal alveolus creamy. Antennae bipectinated. Scape and pedicel brown ochre at the frontal area and pale yellow at the posterior area. Flagellum brown ochre. Rami developed up to some more than half of the flagellum. Rami more developed at the central area of the first half of the flagellum, being twice the width of the latter; from this point, rami decrease in size until some more than half of the flagellum, from where the latter becomes filiform.

Thorax: Patagia, tegula, mesoscutum and mesoscutellum brown ochre. Metascutum and metascutellum with cream and brown ochre piliform scales. Coxae of the first pair of legs yellow; the other segments brown ochre on their external side and its internal side, whitish. Epiphysis light brown. Second pair of legs pale brown ochre on their external side and its internal side, whitish. Tibial spurs creamy white. Third pair of legs same as the second pair. Presence of tympanic organ on the katepisternum, covered with creamy white scales.

Forewing (dorsal): Brown ochre, elongated, with bright yellow reflections and a slight dark shade on the veins. With a bulging, elliptical and elongated area at the proximal part of CuA_2-(1A+2A). A postdiscal area lighter than the rest of the wing, consisting of the following: a small area of the proximal part of R_5-M_1, the proximal halves of M_1-M_2, M_2-M_3 and M_3-CuA_1 and, a very faintly light area in the central part of CuA_1-CuA_2.

Forewing (ventral): Brown ochre with the proximal half creamy yellow, compromising the proximal third of the discal cell. Creamy yellow costal cell, extending up to three-quarters of the length of the wings. Postdiscal area creamy yellow, lighter than the rest of the wing; being this difference more accentuated than in dorsal view; formed by: a very small area of the proximal part of R_5-M_1; the proximal halves of M_1-M_2, M_2-M_3 and M_3-CuA_1. Around this lighter spot, the scales have a slight bluish shade. An invaginated area, elliptical and elongated in the proximal part of CuA_2-(1A+2A), with androconial piliform white scales.

Hindwing (dorsal): Brown ochre and rhomboidal shape, wider than long. Lobed in the costal margin, covering up to a third of the wing. Discal cell lustrous. Presence of a line creamy white scales near the internal margin.

Hindwing (ventral): From the costal margin to the middle of the disc cell, creamy yellow. Anal cell cream white. Rest of the surface ochre brown.

Abdomen: The first four tergites creamy with brown ochre piliform scales. The posterior edges of tergites IV-VII, yellow. The distal third of the last tergite and a faint central longitudinal line, yellow. Sternites II-VI, creamy white, VII-VIII yellow.

Male genitalia (Fig. 21–24) (Genitalia # JGA 865): Tegumen sclerotized, with the anterior margin forming an obtuse V shape, which turns into a narrow U shape toward the posterior part; wide towards the anterior part; somewhat sinusoidal in the middle part; becoming somewhat narrower towards the posterior part; posterior margin straight; from the lateral parts of the posterior margin, sclerotized and strongly arched extensions, expanding towards the sides and converging towards the middle axis, with dentitions present on the distal two thirds of the ventral surface. Joining of tegumen and uncus, sclerotized. Uncus sclerotized and spatulate. Presence of two lateral projections at the basal half. Distal half narrow at the base and becoming wider towards the distal part, ending in two sharp and strongly sclerotized lateral projections. Setae present on the dorsal surface of the distal half, as long as the width of the uncus. Valvae rectangular, wide and slightly sclerotized, the proximal part somewhat wider than the distal half. The distal part: rectangular, with a sclerotized area in the basal half, not reaching the ventral margin; with a laminar truncated evagination, which arises from the ventral part, projecting towards the posterior part, presenting setae at all its margin. The posterior margin of the valvae rough and denticulated. Juxta elongated, wide at its base, with the anterior margin cordate, narrowing down in the middle part, to widen towards the distal part; posterior margin invaginated in a half moon. Transtilla narrow, transversally four times wider than the juxta, with lateral helical prolongations directed towards the posterior part. Aedeagus elongated, somewhat arched and sclerotized, almost the same size as the genital capsule. Caecum penis rounded. Vesica small, with small spicules on the distal part; the other parts membranous and smooth.

Female: (Fig. 19–20). Forewing extension (14–16 mm) (n=1): Wing and body colour pattern similar to the male, differing in the following: rami small at the proximal half; the remaining filiform. The forewing does not present an area where androconial scales are located. The hindwing is triangular elongated. The frenulum comprises three bristles.

Female genitalia (Fig. 25–26) (Genitalia # JGA 866): Eighth tergite uniformly sclerotized. Ostium and antrum in central position, the latter somewhat sclerotized. Antevaginal lamella slightly sclerotized. Ductus bursae sclerotized, wide and flattened. Cervix bursae membranous. Corpus bursae membranous and oval. A medium signum near the central part of the ventral side. Ductus seminalis emerges from the latero-ventral surface of the Cervix bursae. Anal papillae well developed, wider in the ventral part, with setae present on the whole area, more concentrated on the dorsal surface; in side view, the height 5 times its width. Posterior apophyses twice as large as the anterior ones.

Examined material: Lectotype: Neritos / leucoplaga / type ♂. Hmpsm; 1905-14 /St. Laurent, / Maroni; Type; NHMUK 010094358. (NHMUK) [Examinado]. **Additional material**: FRENCH GUYANA: 2 ♂, Cayena, Patawa, 04°32'30"N, 52°09'00"W, 29.viii.2010, J. Cerda (GENITALIA #865, JGA-MUSM); 1 ♀, ídem except, 13.viii.2010 (GENITALIA #866, JGA-MUSM).

Distribution: Known for now of French Guiana.

Comments: The species was described with a male specimen from St. Laurent du Maroni (Cayenne, French Guiana) (Fig. 15–16), also indicating that a female specimen is found in the collection of W. Schaus (Hampson 1905), currently deposited at the Smithsonian Institution (USNM, USA). The information on the labels of the USNM specimen is as follows: St. Laurent, / Maroni; Collection WmSchaus; Neritos leucoplaga / Type ♀ Hampson; Type / No. 11100 / U.S.M.N.; Paralectype ♀ / Neritos leucoplaga / Hampson / Det. A. Watson 1967; 14 / A4; Genitalia Slide / By Watson / USNM 118234; Arctiidae / Genitalia slide / No. AW 114.

The record provided by Rothschild (1910:72) for the town of La Unión, Carabaya (Department of Puno, Peru), is surely *Amaru knoxorum*. Diverse expeditions carried out at different places of the Peruvian territory do not report up this moment that the species occurs in Peru (Grados unpublished data).

Discussion

The characters found common to both of these species lead us to place the two into the proposed new genus *Amaru.* A third undescribed species of the genus occurs in Central America, being known samples from Costa Rica, deposited in FZE. It is possible that the geographical distribution of this species can reach Esmeraldas (Ecuador), although it may probably be another species. A specimen from Esmeraldas (Ecuador) can be found in Piñas et al. (2000: plate 6, Fig. 43).

Many species of Arctiini have been described without being sure of their correct taxonomic position, classified by external similarities such as colour pattern, at the expense of objective studies of their characteristics, due to the limited morphological knowledge of the time, in several occasions placing them in genera that received all species that could not be classified in any other. A good example of this has been the case of the genus *Automolis* Hübner, [1819], which was revised by Watson (1975). Something similar has happened with the genera *Idalus* Walker, *Halysidota* Hübner, *Elysius* Walker, and *Trichromia* Hübner among others. A preliminary studies suggest could be polyphyletic (Grados unpublished data), needing to be revised.

One species very similar to those two from the genus *Amaru* was described by Toulgoët (1982): *Paranerita postflavida* (Fig. 27-28). The species was described with two names (different spellings), making the necessary corrections in another publication (Toulgoët 1983). The species was transferred years later to the genus *Neritos* Walker, 1855, by Watson and Goodger (1986). The habitus of the species is very similar to those two of *Amaru*. However, a more detailed analysis shows substantial differential characteristics such as venation of the fore and hind wings, the presence of different androconial organs, the shape of the posterior wings and the morphology of the genitalia of the males. These characters suggest that this species is not part of the *Amaru* genus. The description of the male of *N. postflavida* and the drawing of the genitalia can be found in Toulgoët (1982: 169).

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LEGENDS

FIGURES 1–4. *Amaru knoxorum* Grados, **sp. n**. **1**. Holotype male, dorsal. **2**. Holotype male, ventral. **3**. Paratype female, dorsal (Refugio Amazonas Lodge). **4**. Paratype female, ventral. Scales=5 mm.

FIGURES 5–8. Genitalia of *Amaru knoxorum* Grados, **sp. n**. Male (Genitalia # JGA–810). **5**. Dorsal view. **6**. Ventral view. **7**. Lateral view. **8**. Aedeagus. Scales=1 mm.

FIGURES 9–10. Genitalia of *Amaru knoxorum* Grados, **sp. n**. Female ((Genitalia # JGA–812). **9.** Ventral view. **10.** Lateral view. Scales= 1 mm.

FIGURES 11–12. Forewing of *Amaru knoxorum* Grados, **sp. n**. **11.** Ventral view of forewing**. 12.** Adroconial organ. Scale = 2 mm.

FIGURES 13–14. Venation of *Amaru knoxorum* Grados, **sp. n**. **13.** Forewing**. 14.** Hindwing. Scales= 2 mm.

FIGURES 15–16. Holotype of *Amaru leucoplaga* (Hampson). **11.** Ventral view**. 12.** Dorsal view.

FIGURES 17–20. *Amaru leucoplaga* (Hampson). **Fig. 17–18.** Male (Patawa, French Guyana). **17**. Dorsal view. **18**. Ventral view. **Fig. 19–20.** Female (Patawa, French Guyana). **19.** Dorsal view. **20.** Ventral view. Scales=5 mm.

FIGURES 21–24. Genitalia of *Amaru leucoplaga* (Hampson). Male (Genitalia # JGA–865). **21**. Dorsal view. **22**. Ventral view. **23**. Lateral view. **24**. Aedeagus. Scales=1 mm.

FIGURES 25–26. Genitalia of *Amaru leucoplaga* (Hampson). Female (Genitalia # JGA–866). **25.** Ventral view. **26**. Lateral view. Scales= 1 mm.

FIGURES 27–28. *Neritos postflavida* (Toulgoët, 1982). Male (French Guyana). **27**. Dorsal view. **28**. Ventral view. Scale= 5 mm.

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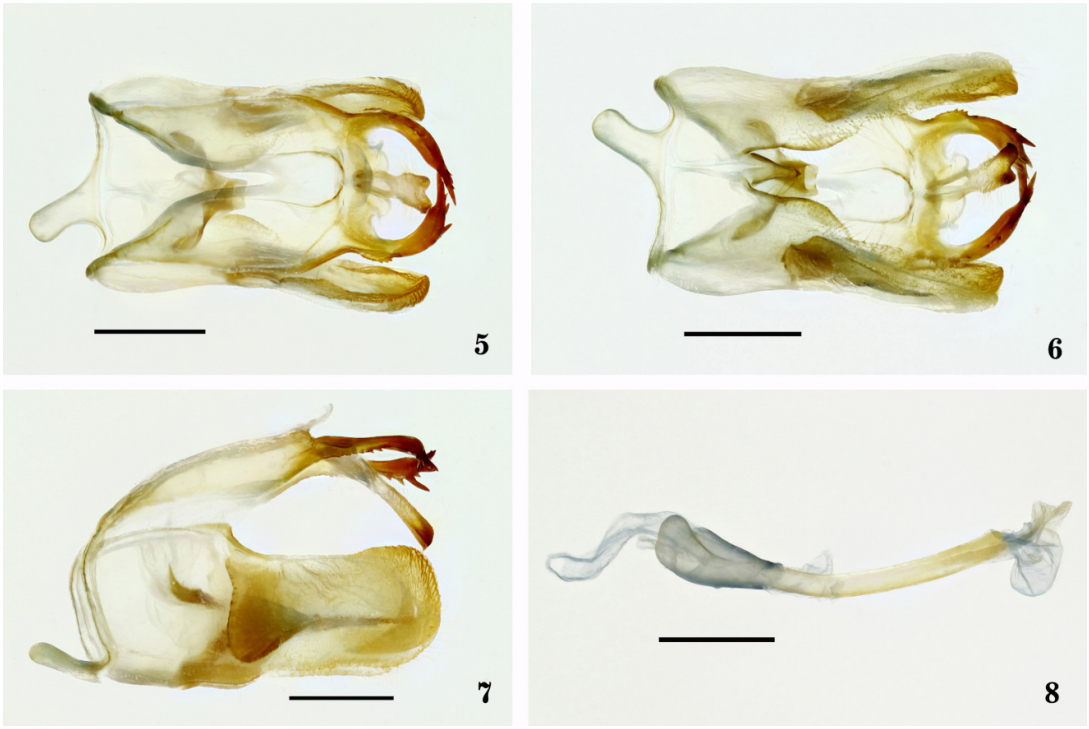

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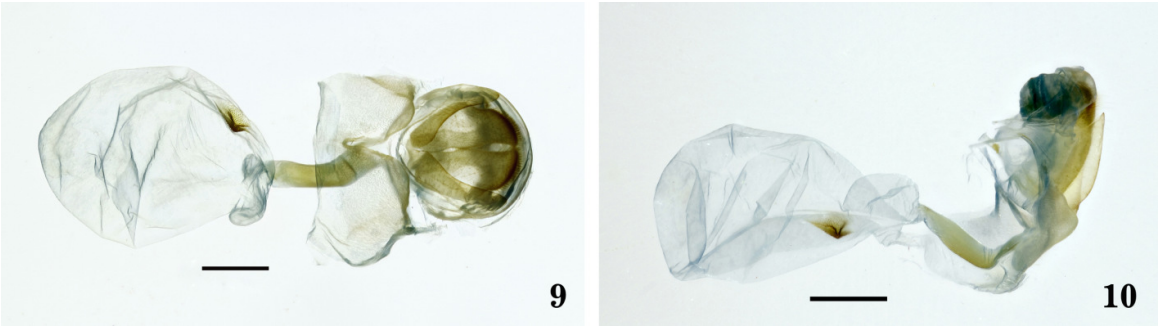

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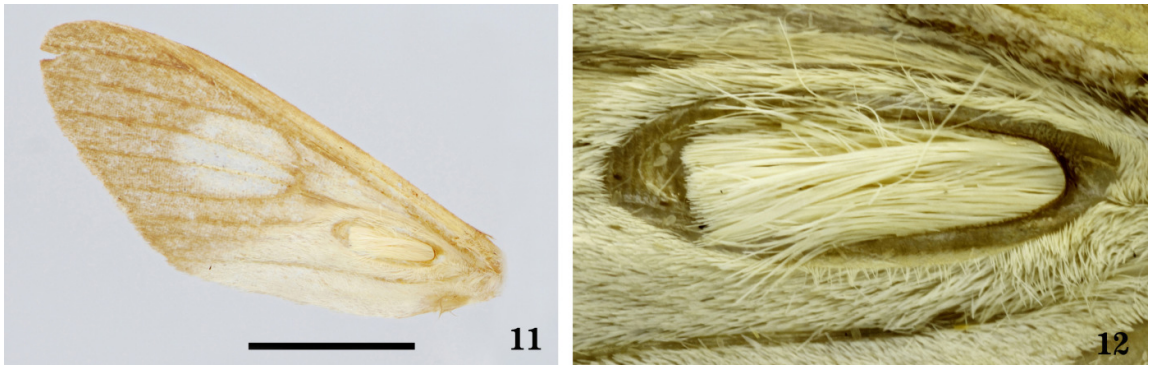

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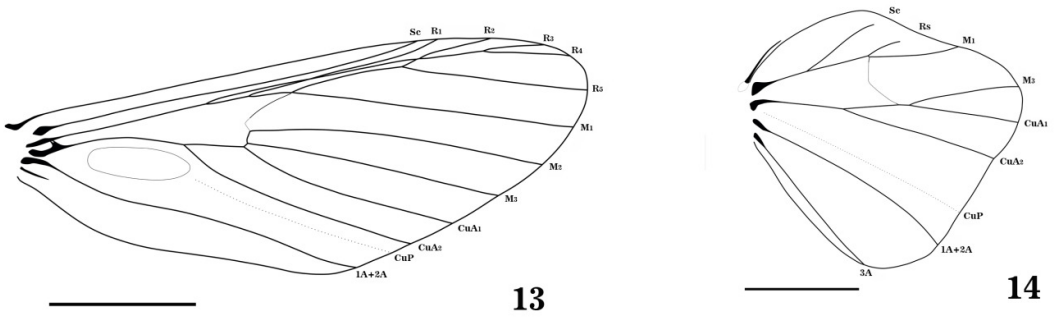

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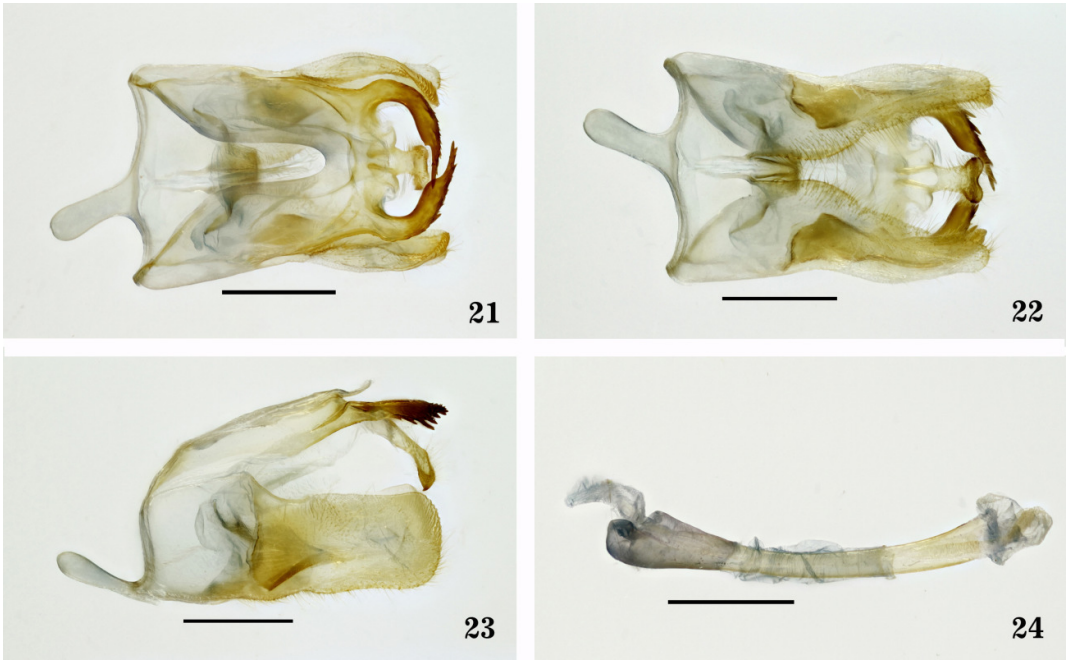

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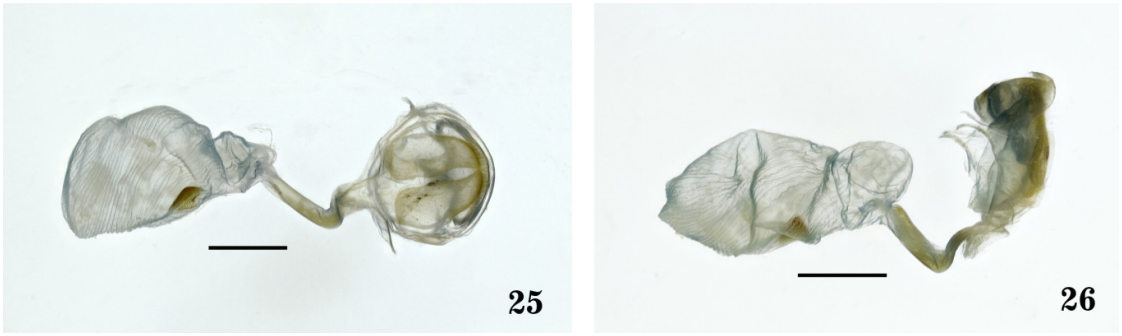

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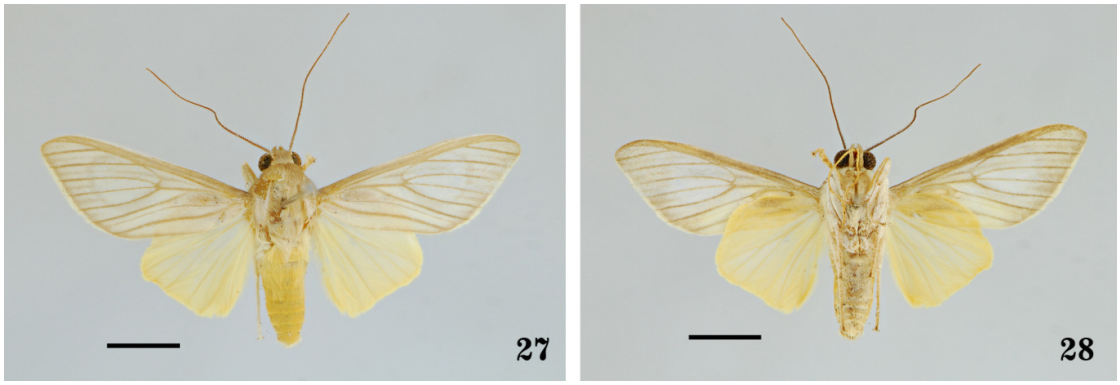

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