

***Yramea lynx* sp. nov. (Lepidoptera: Nymphalidae, Heliconiini) from the Andes of central Peru**

Gerardo Lamas ¹

Juan Grados ¹

SUMMARY

LAMAS G, GRADOS J. 2004. *Yramea lynx* sp. nov. (Lepidoptera: Nymphalidae, Heliconiini) from the Andes of central Peru. Rev. per. Ent. 44.- Se describe e ilustra la nueva especie *Yramea lynx*, conocida de los departamentos de Ancash, Huánuco, Pasco y Junín, en los altos Andes del Perú central.

Palabras clave: especie nueva, Perú, taxonomía, *Yramea*.

RESUMEN

LAMAS G, GRADOS J. 2004. *Yramea lynx* sp. nov. (Lepidoptera: Nymphalidae, Heliconiini) de los Andes centrales de Perú. Rev. per. Ent. 44.- The new species *Yramea lynx*, known from the departments of Ancash, Huánuco, Pasco and Junín, in the high Andes of central Peru, is described and illustrated herein.

Key words: new species, Peru, taxonomy, *Yramea*.

Introduction

The genus *Yramea* Reuss, 1920 (= *Chilargynnis* Bryk, 1944, a junior objective synonym) contains five valid South American species, distributed along the Andes of Peru, Bolivia, Chile and Argentina, spreading into the Patagonian flatlands, Tierra del Fuego and the Falkland (= Malvinas) Islands (LAMAS 2004). *Yramea* is regarded as a member of the Nymphalidae, Heliconiinae, Heliconiini, but its subtribal position within Heliconiini is still uncertain (HARVEY 1991). It is putatively related to the Old World genera *Kuekenthaliella* Reuss, 1921 and *Prokuekenthaliella* Reuss, 1927 (REUSS 1927), although some authors (e.g. ACKERY *et al.* 1995) regard all three as subjective synonyms of *Issoria* Hübner, [1819]. However, SHIRÔZU & SAIGUSA (1973), HARVEY (1991), and LAMAS (2004) consider *Yramea* a valid genus, separate from *Issoria*, the latter a member of subtribe Argynnina. Based on whether the proximal end of the aedeagus was open or closed, WARREN *et al.* (1946) divided 'Argynninae' into two tribes, namely 'Argynnidi' and 'Boloriidi', including *Yramea* among the former. On the other hand, based on comparative studies of male and female genitalia, SIMONSEN (pers. comm.) regards *Yramea* and *Boloria* Moore, 1900, as very closely related genera, and thus *Yramea* and *Boloria* would be included in subtribe Yrameina

Reuss, 1926 (of which Boloriidi Warren, dos Passos & Grey, 1946, would become a junior subjective synonym). Division of Heliconiini into two subtribes is supported by preliminary molecular evidence provided by AUBERT *et al.* (1996).

Yramea was very succinctly introduced as a new genus by REUSS (1920), in a footnote, claiming that its type species, *Papilio cytheris* Drury, 1773, exhibited androconial scales distributed along some forewing veins, morphologically unlike "any northern [i.e. holarctic] species". Further details were offered in two subsequent papers (REUSS 1921a, b), and partly illustrated in a third contribution (REUSS 1921c), including forewing venation, wing shape, androconial morphology, and male genitalia characters.

We describe herein a sixth South American species of *Yramea*, the most northerly distributed in the genus, which possesses the diagnostic generic characters given by REUSS (opp. cit.). All specimens are deposited in the Museo de Historia Natural, Universidad Nacional Mayor de San Marcos, Lima, Peru.

***Yramea lynx* sp. nov.**

(Figs. 1-7)

Diagnosis.- A small, dark *Yramea*, with pointed forewings, dark spots and thin bands on both wings above and below, hindwing slightly angulate at end of vein M₃, and wing veins heavily overlaid with white scales on the underside.

¹ Museo Nacional de Historia Natural, Universidad Nacional Mayor de San Marcos, Apartado 14-0434, Lima-14, Perú. E-mail: glamasm@unmsm.edu.pe

Male (figs. 1-2): Forewing length, 15-17 mm ($n = 10$). Most similar to *Y. inca*, differing by the much darker appearance of the wings above, with a slight purplish sheen (no sheen in *inca*); in several specimens the dark discal, postdiscal and submarginal spots are inconspicuous (always conspicuous in *inca*); forewing cilia pure white (mixed white and gray in *inca*); hindwing veins below heavily overlaid with white scales, extending on each side onto the wing membrane (white overlay restricted to the veins in *inca*). **Genitalia** (figs. 5-7): Uncus simple, long (longer than in *inca*), distal end non-bifid; saccus short; valva with dorsal process directed inwards, ending in two long points (three short points in *inca*); aedeagus short and broad.

Female (figs. 3-4): Forewing length, 15-17 mm ($n = 4$). Does not differ from male in size, wing shape or color pattern, except for secondary sexual characters.

Type material (all from PERU): **Holotype** ♂ (figs. 1-2), Ancash, Laguna Conococha, 3900m, 10°07'S, 77°17'W, 09 Jan 2002 (J. Grados). Paratypes: 5 ♂, 2 ♀, same data as holotype; 3 ♂, 1 ♀, Huánuco, Pachas, [3450m, 09°42'S, 76°46'W], 18, 23 Aug 1965 (P. Hocking); 1 ♂, Pasco, Cerro de Pasco, 4300m, [10°41'S, 76°16'W], Jun 1992 (M. Büche); 1 ♀, Junín, Yauli, Corpacancha, 4300m, 11°22'S, 76°13'W, 18 Jan 1997 (R. Acero).

Etymology.— A masculine noun in apposition, meaning a wildcat (*lynx*), and referring to the wing coloration, which resembles the pelage of a spotted cat, like that found in the rare and endangered Andean cat, *Oreailurus jacobita* (Cornalia, 1865), which might occur in the same locations as *Yramea lynx*.

Distribution: Apparently endemic to the high Andes of central Peru, above 3400m, in open grasslands. It may extend as far north as the Cordillera de Pelagatos in La Libertad, and as far south as the departments of Huancavelica and Ayacucho. Adults may fly throughout the year, as they have been collected both during the wet (January) and dry (June, August) seasons.

Hostplants. Unknown, but most probably one or more species of *Viola* (Violaceae). Candidate hosts are *Viola membranacea* W. Becker, *V. micranthella* Weddell, *V. pallascaensis* W. Becker, *V. pygmaea* Jussieu ex Poiret, and *V. replicata* W. Becker, all of which occur in Ancash (BRAKO & ZARUCCHI 1993).

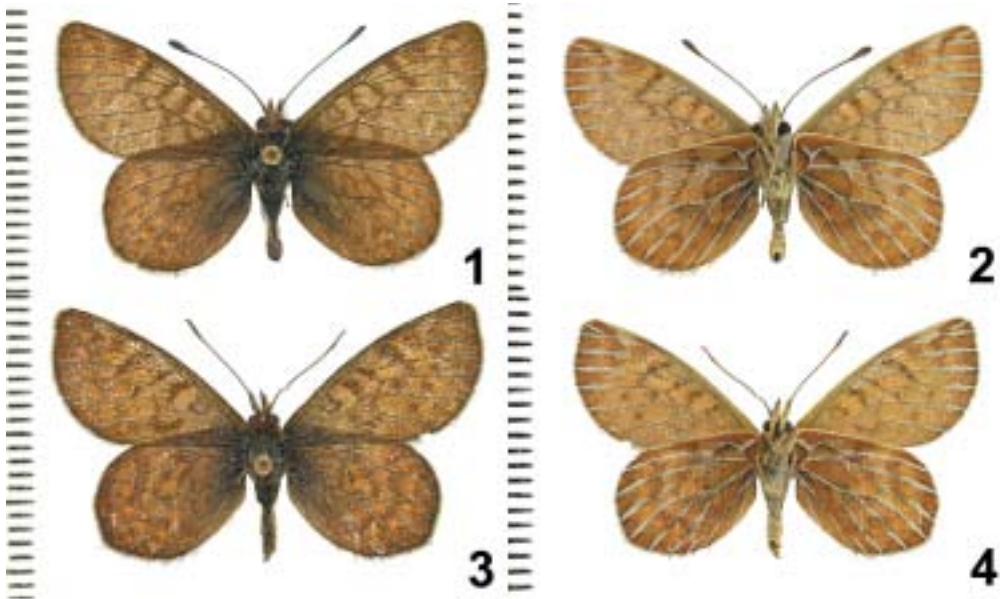
Remarks: Species of *Yramea* may be divided superficially into two groups, one with the wing veins below overlaid with white scales

(*inca* Staudinger, 1894, and *lynx*), the other without white overlay along veins (*cytheris*, *lathonioides* Blanchard, 1852, *modesta* Blanchard, 1852, and *sobrina* Weyermer, 1890). *Yramea inca* and *lynx* are closely related, but readily differentiated by the heavy white overlay of the wing veins below in the latter (light overlay in *inca*), and the longer uncus and deeply bifurcate dorsal process of the valva in *lynx* (shallowly trifurcate in *inca*). *Argynnis cora* Lehmann, 1913, is provisionally regarded as a subspecies of *inca* (LAMAS 2004), as females (and some males) of both share the red submarginal band on hindwing below (absent in *lynx*), though no males of the former have been available for genitalic examination (the holotype of *cora* has no abdomen). The specimens of *lynx* from Huánuco and Pasco are lighter in color, with more conspicuous dark spots on the wings above; as they were collected during the dry season, this lighter coloration may result from climatic influences, or represent subspecific differentiation (specimens from Ancash and Junín were collected in the western chain of the Andes, those from Huánuco and Pasco in the central chain). In the highly variable phenotype of *inca* (wing ground color light tawny to dark greenish-brown), differences in coloration do not seem to be correlated with the seasons or geography.

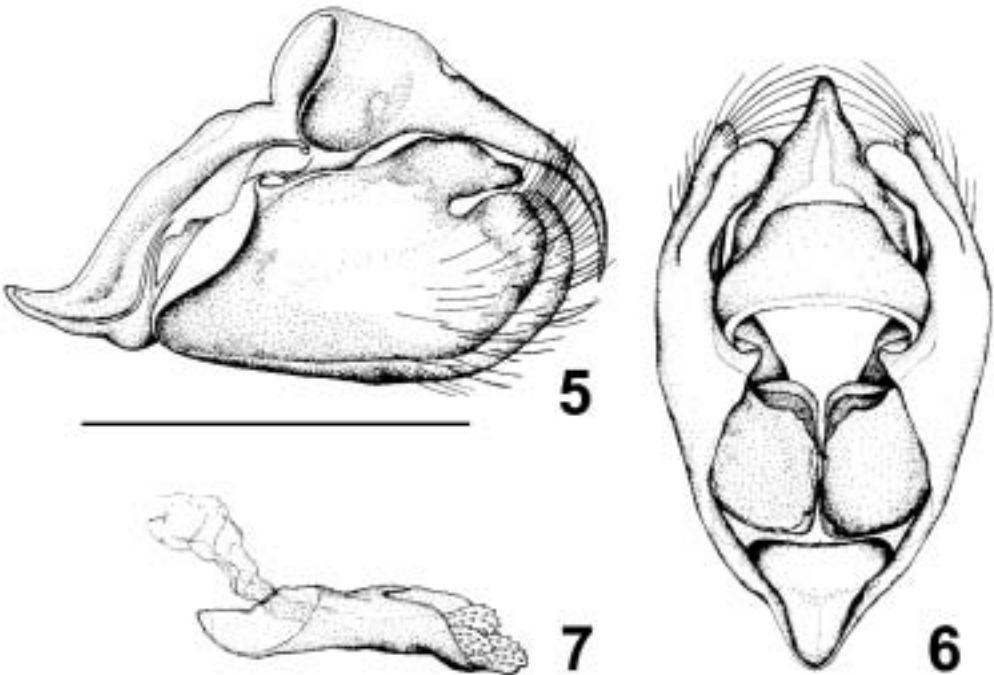
Acknowledgements.— We thank Peter Hocking, Michael Büche and Rosario Acero for providing specimens, and Marisa Ocrosopoma for the genitalia drawings.

Literature

- Ackery PR, Smith CR, Vane-Wright RI. 1995. Carcasson's African butterflies. An annotated catalogue of the Papilionoidea and Hesperioidea of the Afrotropical region. East Melbourne, CSIRO. xi + 803 pp.
- Aubert J, Barascud B, Descimon H, Michel F. 1996. Systématique moléculaire des Argynnes (Lepidoptera: Nymphalidae). C. R. Acad. Sci. Paris (Sci. Vie) 319: 647-651.
- Brako L, Zarucchi JL. 1993. Catalogue of the flowering plants and gymnosperms of Peru. St. Louis, Missouri Botanical Garden. xl + 1286 pp.
- Harvey DJ. 1991. Appendix B. Higher classification of the Nymphalidae, pp. 255-273. In: Nijhout HF, The development and evolution of butterfly wing patterns. Washington DC, Smithsonian Institution Press.
- Lamas G. 2004. Heliconiinae, pp. 261-274. In: Lamas G (Ed.), Checklist: Part 4A. Hesperioidea-Papilionoidea. In: Heppner JB (Ed.), Atlas of Neotropical Lepidoptera. Vol. 5A. Gainesville, Association for Tropical Lepidoptera/Scientific Publishers.
- Reuss T. 1920. Die Androconien von *Yramea cytheris*



FIGURES 1-4.- *Yramea lynx* sp. nov. 1-2. Male holotype, upperside (1) and underside (2); 3-4. Female paratype, upperside (3) and underside (4). Scale in mm.



FIGURES 5-7.- *Yramea lynx* sp. nov., male genitalia. 5. Side view, aedeagus removed; 6. Dorsal view, aedeagus removed; 7. Aedeagus, side view. Bar = 1 mm.

- Drury und die nächststehenden analogen Schuppenbildung bei *Dione* Hbn. und *Brenthis* Hbn. (Lep.). Entom. Mitt. 9(10/12): 192.
- Reuss T. 1921a. The androconia (plumulae) of *Yramea* (*Boloria*) *cytheris* (Drury), with comparative details new to science. Soc. entom. 36(1): 4.
- Reuss T. 1921b. *Yramea* nov. gen. A supplementary note to (*antea*): The androconial scales of *Yramea* (n.g.) *cytheris* (Drury). Soc. entom. 36(4): 15-16.
- Reuss T. 1921c. Neue Beiträge zur Artfrage, zur Variation und zur natürlichen Gruppierung der Dryadinae (Lep.). Entom. Mitt. 10(6): 186-191.
- Reuss T. 1927. Über Funktion der Sexualarmaturen bei Lepidopteren (Rhop.) und die resultierende Weiterentwicklung meines versuchten natürlichen Systems der Dryadinae T. R. D. entom. Zeitschr. 1926(5): 431-440.
- Shirôzu T, Saigusa T. 1973. A generic classification of the genus *Argynnis* and its allied genera (Lepidoptera: Nymphalidae). Sieboldia 4(3): 99-114.
- Warren BCS, dos Passos CF, Grey LP. 1946. Supplementary notes on the classification of Argynninae (Lepidoptera, Nymphalidae). Proc. r. entom. Soc. London (B) 15(5/6): 71-73.