

The identity of the nomen dubium *Penaincisalia patagonaevaga* Johnson, 1990 (Lepidoptera: Lycaenidae, Polyommatainae)

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Abstract. The holotype of *Penaincisalia patagonaevaga* Johnson, 1990 (type locality: Argentina, prov. Chubut, 40 km N of Rio Mayo) is a chimeric specimen as it is composed of parts belonging to two different species: the neotropical *Penaincisalia penai* Johnson, 1990 (forewings, genitalia) and the oriental *Orthomiella rantaziana* Wileman, 1910 (hindwings) or one of its relatives. For an unambiguous identity the hindwings are excluded from the holotype, resulting the new synonymy *P. penai* = *P. patagonaevaga*. The specimen is considered to be mislabelled because the genus *Penaincisalia* Johnson, 1990 (type species: *Thecla culminicola* Staudinger, 1894) is confined to the high Andean puna and is highly improbable that any of its representatives occurs in Patagonia.

Keywords. Chimera, *patagonaevaga* holotype, mislabelling, *Penaincisalia*, *Orthomiella*.

INTRODUCTION

Amongst Neotropical Lycaenidae chimeric holotypes posed several nomenclatural and taxonomic problems (see Robbins & Lamas 2002). Some of these problems could not be solved, because their holotype specimens were not available for study and remained to be clarified (Benyamini *et al.* 2020). In this paper we report on a case, when the holotype specimen has been successfully located, and the identity of the nominal taxon could be revised.

Penaincisalia patagonaevaga Johnson, 1990 a synonym of *P. penai* Johnson, 1990

(Figure 1)

Penaincisalia patagonaevaga Johnson, 1990: 117 Figs 3F (holotype recto, and verso photographic documentation in halftone), 6E (holotype genitalia drawing); Johnson 1992: 164, Figs 82 (holotype genitalia drawing), 177 (holotype recto and verso photo-

graphic documentation in halftone); Peña & Ugarte 1997: 224 (artistic image of holotype recto and verso in colour; Robbins 2004b: 122 (as *nomen dubium*). *Penaincisalia penai* Johnson, 1990: 118; Robbins 2004b: 122; Prieto 2008: 99. (= *P. patagonaevaga* Johnson, 1990, **syn. nov.**)

Remarks. According to the original description *P. patagonaevaga* was described on the basis of the holotype male, deposited in the “CECUC” (= Central Entomological Collection of the University of Chile), with data: “Argentina, 40 km N Rio Mayo, Chubut Prov. (Patagonia), 20 Nov 1966, nr 700 m, J. Herrera” (Johnson 1990, Fig. 1a-c). As the species has been illustrated in the book „Las Mariposas de Chile”, the holotype was certainly in the hands of one of the illustrators. The holotype specimen has been considered to be lost as the depositor “CECUC” does not exist and the specimen could not be located. Most probably this was one of the reasons, why the name has been regarded as *nomen dubium* by Robbins (2004b).

Very recently, the holotype of *P. patagonaevaga* has been found in the private collection of

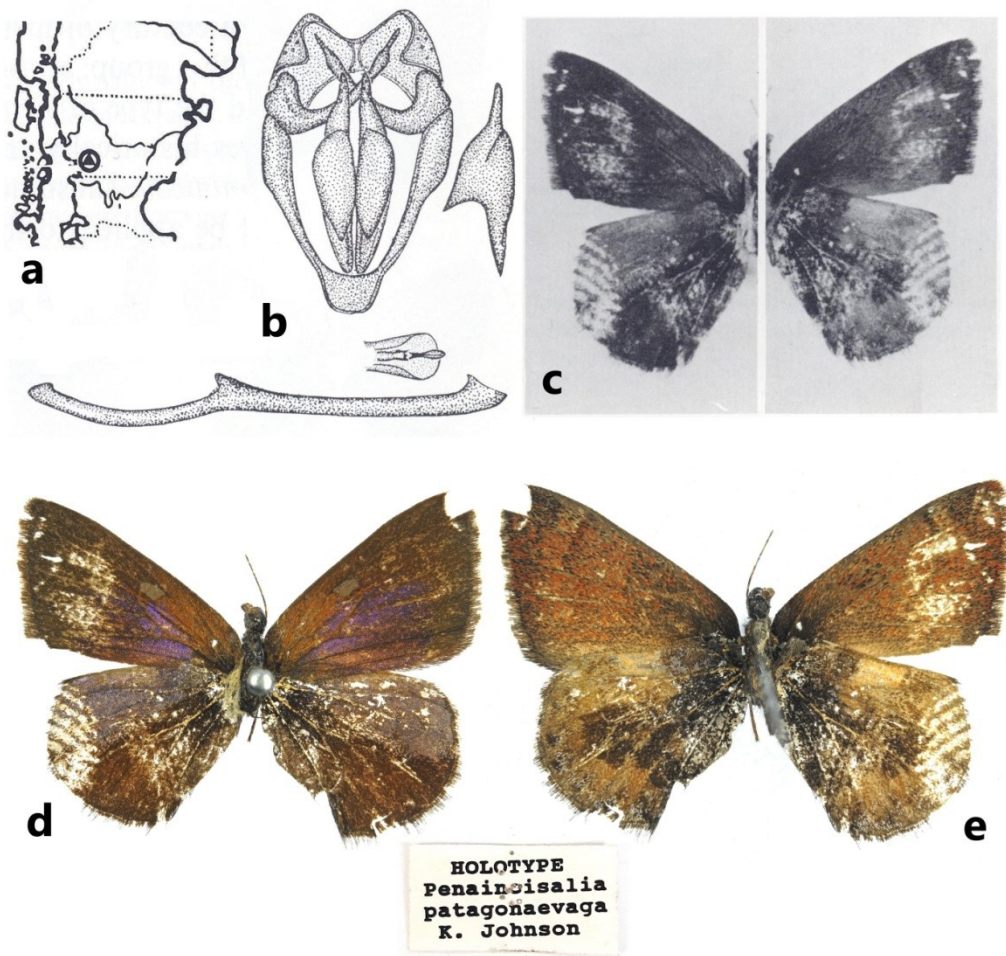


Figure 1. *Penaincisalia patagonaevaga* Johnson, 1990, holotype. Documentation of the original description (a–c): a = indication of the type locality (Chubut, Argentina); b = genitalia organ, c = dissected holotype specimen, left: recto, right: verso (forewing costa length = 22 mm). Documentation of the holotype specimen in colour (d–e; courtesy Marcelo Guerrero), d = recto, e = verso, and the type label (in middle).

Pedro Vidal, Santiago de Chile (ex collection Luis Peña). The specimen turned out to be a chimera as the forewings and the hindwings belong to different species (Figs. 1d–e): The dorsal surface of the forewing possess androconia typical for the *Penaincisalia* genus-group; there is a scent pad in the distal corner of the discal cell and a minute scent patch at the base of vein M3 (Bálint & Wojtusiak 2006, Prieto 2008). The rufous ventral wing surface colouration suggests that the forewings represent the species *P. penai* Johnson, 1990 (Prieto 2008). The dorsal surface of hindwing area between the costa and vein M3 has a structural blue colouration. This trait can be found

in certain calycopidine hairstreaks (cf. “*Thecla* (? *Calystryma*) *cissusa*” in d’Abrera 1995) but in *cissusa* the hindwing costa is slightly bent and the ventral surface of the wing has a simple typical hairstreak pattern with median line and tornal “*Thecla* spot”. The hindwings represent the species group of *Orthomiella rantaizana* Wileman, 1910, an oriental polyommata species (d’Abrera 1986: 637), which has hindwings identical with those of the *P. patagonaevaga* holotype: hindwing shape with straight costa, dorsal wingsurface colouration between costa and vein M3 is structural blue and ventral wing surface pattern with dark median maculation (see Fig. 2). The male

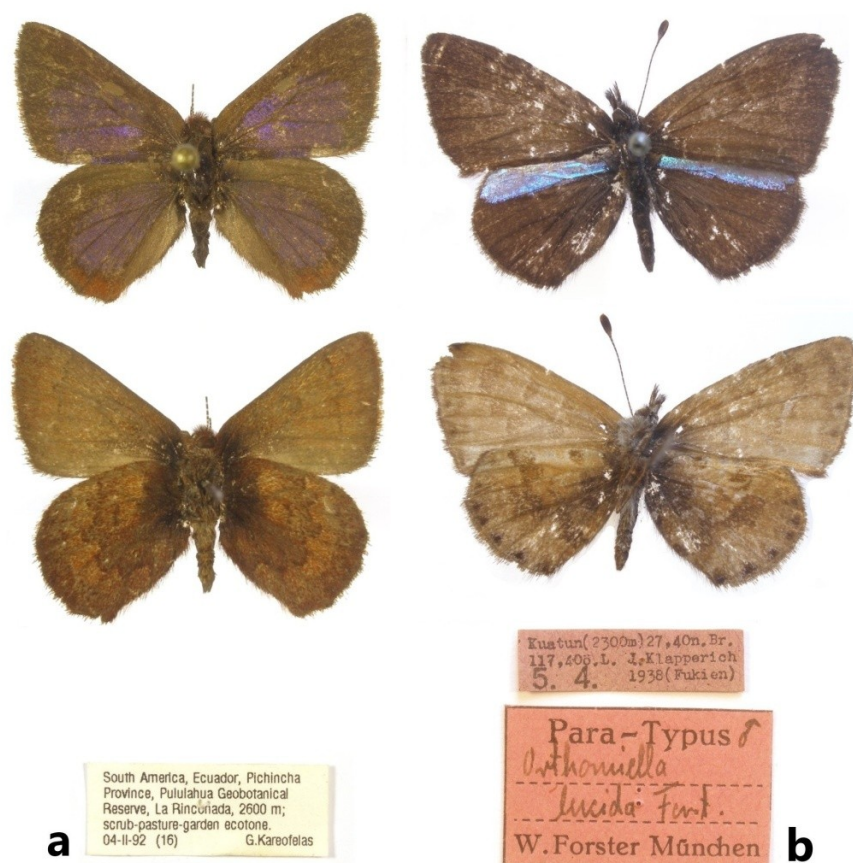


Figure 2. Hungarian Natural History Museum male specimens with their labels of lycaenid butterfly species composing the chimeric holotype *Penaincisalia patagonaevaga* Johnson, 1990: a = *Penaincisalia penai* Johnson, 1990; b = *Orthomiella lucida* Forster, 1942 (in same size; forewing costa length of *P. penai* = 12 mm).

genital organ appears to represent *P. penai* (Prieto 2008), so the dissected abdomen most probably belonged to the specimen provided the holotype forewings.

Under the Article 73.1.5. of the International Code of Zoological Nomenclature (1999), the hindwings of the holotype are excluded from the *P. patagonaevaga* holotype with the taxonomic purpose of best clarifying identification of the name; consequently *Penaincisalia patagonaevaga* Johnson, 1990 represents a **new synonym** of *Penaincisalia penai* Johnson, 1990,

DISCUSSION

Page priority. The species-group name *patagonaevaga* has page priority over *penai*. As First Reviewers we keep the latter name, because it

was listed in Robbins (2004b) as valid, while *patagonaevaga* was considered to be doubtful. Prieto (2008) followed Robbins, described and fully documented *Penaincisalia penai*.

Type locality. In the specimen's pin there is the characteristic holotype label of Kurt Johnson, that is usually a type-written tag (Fig. 1). However, the locality label, mentioned in the original description, is missing. The elfin hairstreaks *Penaincisalia* are typical species of the high Andean puna and distributed from Colombia via Ecuador, Peru and Bolivia to the Chilean-Argentina border (Prieto 2008, Bálint *et al.* 2019). It is highly improbable, that any of the representatives of the genus occurs in Patagonia. Therefore we consider the holotype of *P. patagonaevaga* also as mislabelled specimen, and the type locality to be erroneous.

Johnson's neotropical Lycaenidae type problems. Robbins and Lamas (2002) identified the problems induced by the Lycaenidae types of Kurt Johnson. They documented that seven holotypes were composed of parts belonging to more than one species (*Decussata colombiana* Johnson, Austin, Le Crom & Salazar, 1997; *Ignata illepida* Johnson, 1992; *Strymon andrewi* Johnson, & Matusik, 1988; *Strymon nivix* Johnson, Eisele & MacPherson, 1990; *Tmolus victoria* Johnson & Matusik, 1989; *Trochusinus elizabetha* Salazar, Vélez & Johnson, 1997; and *Zigirina minutia* Johnson & Adams, 1997). Problems regarding type locality and labelling of specimens representing Lycaenidae taxa described were documented in Prieto *et al.* (2016) or Benyamini *et al.* (2020). The case of *P. patagonaevaga* underlines again that all these problems are real and researchers working with Neotropical lycaenid butterflies has to be prepared to face them.

Another nomen nudum. As a closing remark we mention the nominal species *Penaincisalia planuma* Johnson, 1992, which was considered also as *nomen dubium* and transferred to Polyommatainae by Robbins (2004a). On the basis of available documentation it seems that this taxon is also a chimera composed from the same two species that constitute *P. patagonaevaga*: the forewings are *Orthomiella*, the hindwings are *Penaincisalia* (*cf.* Fig. 2). This hypothesis can be falsified or verified only via the examination of the *P. planuma* holotype which hitherto is considered to be lost.

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