

The hitherto unknown male of *Parides klagesi* (EHRMANN, 1904)

(Lepidoptera: Papilionidae)*

by

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Abstract: The male of *Parides klagesi* (EHRMANN, 1904) discovered in South Venezuela is described and its phylogenetic relationships discussed.

Introduction

Since its description the history of this species has long been controversial. EHRMANN (1904) described this species on the basis of a single female received from KLAGES who collected along the Suapure river. Later on, ROTHSCHILD & JORDAN (1906) reported on three females from Suapure, Caura river, apparently collected by KLAGES himself in the type locality. EHRMANN (1918) described the male which was considered a male of *P. neophilus ecbolius* (ROTHSCHILD & JORDAN, 1906) by HOLLAND (1927).

TALBOT (1934) on a single male with the vague data „Orinoco“ described the supposed male of *P. klagesi*. This specimen figured in D'ABRERA (1981: 15) is clearly a dwarf male specimen of *P. anchises* (L. 1758). The senior author, during a collecting trip in Venezuela in 1982-83, thanks to the useful informations of Prof. KEITH BROWN who collected one female in 1981, was able to collect one male which is described herein.

Description of the male (fig. 9-10).

External features: Head, antennae, palpi, tegulae and patagia black. Tibial spurs on posterior legs. Prothorax with a small red dot and red hair forming tufts at the articulation of the HWs on the underside. Abdomen black except a few red scales at the level of the 4-5 segment ventrally.

FWs upperside Length of FW 23 mm. Ground colour blackish brown, more densely scaled basally, so that all the veins are visible throughout especially on the post discal and apical areas. A small discal white band in S1b-S2. The patch in S2 is suffused with scales giving a „grayish“ appearance. Fringes black.

FWs underside: As upperside, the white band more regularly aligned by three spots, that in S1b 8-shaped.

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HWs upperside. Outer margin deeply scalloped with an acute projection in S4, 2 mm long. Ground colour black. A series of four pinkish spots S1b-S4. That in S1b triangular with basad apex, those in S2-S3 round, that in S4 small and well separated from the other ones. The anal fold filled with white hair. Fringes black.

HWs underside. A series of four pinkish spots, S1-S4, that in S1 elongated and shaped accordingly the sinuosity of the anal area. The other spots interrupted by the black veins. The spots in S2-S3 approx. of the same size and oblong, that in S4 small, round and displaced in the middle of the internervular space.

Genitalia (Fig. 1). Ninth tergite without lateral spurs as it is the case in many species of the *aeneas*-group. Uncus slender, slightly bended downward. Valvae subtriangular. Harpe knife-shaped with an acute basal projection. No teeth on both margins, the dorsal straight, the ventral slightly curved and the apex of the harpe is produced in a tip.

Aedeagus: In lateral view appears sand-glass-like, the two extremities produced laterally. Vesica without cornuti.

Field notes

The habitat where *P. klagesi* flies is located on the lower course of Rio Caroni, characterized by a semi deciduous forest, occasionally flooded, with clayey soil. Other butterflies observed in the same area are *P. neophilus parianus* (ROTHSCHILD & JORDAN), *P. sesostris* (CRAMER), *P. anchises cymochles* (DOUBLE-DAY), *Heliconius antiochus salvinii* DEWITZ, *Heliconius hecale clearei* HALL, *Danaus plexippus* (L.), *Lycorea pasinuntia* (STOLL), *Eueides lybia* (FABRICIUS), *Hypothyris euclea forbesi* FOX, *Nessaea batesii* (FELDER) etc.

The male of *P. klagesi* was flying slowly, approx. 0.50 m from the ground along a small track in the forest. Another male specimen was seen in the undergrowth, flying higher and disturbed by a male of *P. sesostris* perching on a leaf. *P. klagesi* was attacked and flew away. The forested area is extensive and not damaged but the biotope is very restricted. The male was collected 200 m far from the spot where BROWN in 1981 collected one female.

Discussion

The range of *P. klagesi* does not seem to be restricted to Venezuelan semideciduous forests of Imataca and Imeri refugia (sensu BROWN, 1975) but also in Brasil, where it is likely to occur in the Belem refuge. One female in the British Museum (Nat. Hist.) London, is labeled „Mts. Aureos, Maranham, T. Belt“ This is interesting because both Montes Aureos and Rio Suapure are areas characterized by low altitudes (<200 m) and low precipitation (2000 mm). In the impossibility of knowing the exact microhabitat where *P. klagesi* flies in Montes Aureos, it is however stimulating to note the affinity held by the Belem refuge with that of Roraima and this latter with Imataca (BROWN, 1982). It might be hypothesized that the present disjunct distribution is due to the extinction of the original con-

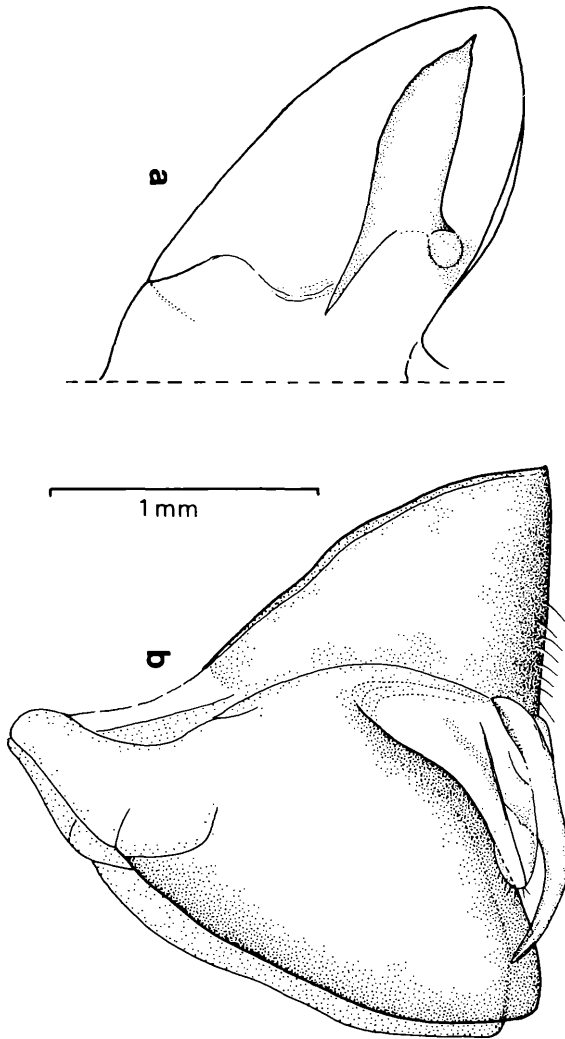


Fig. 1: Genitalia:
a) left valva in detail
b) lateral view of genitalia in toto

tinuous range happened during the Pleistocene. *P. klagesi* is now secondarily expanding from the two refugia. On account of the poorly collected areas, it cannot be discarded a priori that *P. klagesi* may be found in the intermediate zones.

The presence of white hair in the anal folds of the HWs, the absence of the lateral spurs on the tegumen, the subtriangular shape of the valvae, the simple harpe, the almost absence of sexual dimorphism, the overall pattern resembling that of the species of the *aeneas*-group, suggest that *P. klagesi* is for certain aspects more related to *P. orellana* (HEWITSON) and *P. tros* (FABRICIUS) than the other group of species including *P. vercingetorix* (OBERTHÜR) (= *Papilio coelus* BOISDUVAL, 1936 nec STOLL, 1781), *P. pizarro* (STAUDINGER), *P. quadratus* (STAUDINGER), *P. mithras* (GROSE-SMITH) and *P. hahneli* (STAUDINGER) on one side, *P. aeneas* (L.), *P. sesostris* (CRAMER) and *P. childrenae* (GRAY) on the other.

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References

- BROWN, K.S. Jr. (1975): Geographical patterns of evolution in neotropical Lepidoptera. Systematics and derivation of known and new Heliconini (Nymphalidae: Nymphalinae). - J. Ent. (B) 44: 201-242.
- BROWN, K.S., Jr. (1982): Paleoecology and regional patterns of evolution in neotropical forest butterflies. In G.T. PRANCE, (Éd.) Biological diversification in the Tropics, pp. 255-308. Columbia Univ. Press. New York.
- D'ABRERA, B. (1981): Butterflies of the Neotropical Region. Part I Papilionidae & Pieridae, Lansdowne Editions & E.W. Classey, Melbourne & Faringdon.
- EHRMANN, G.A. (1904): New forms of exotic Papilionidae. Ent. News 15: 214-215.
- EHRMANN, G.A. (1918): New exotic Papilios. - Lepidoptera 2: 82-84.
- HOLLAND, W.G. (1927): In HOLLAND, W.G. & A. AVINOFF. The Lepidoptera named by GEORGE A. EHRMANN. - Annls Carnegie Mus. 17: 299-364.
- ROTHSCHILD, W. & K. JORDAN (1906): The American Papilios. - Nov. Zool. 13: 411-744.
- TALBOT, G. (1934): New species and forms of Lepidoptera from South America. Bull. Hill Mus. 4: 189-197.