

Notes on the distribution of *Memphis montesino* Pyrcz, 1995 and *Memphis boliviana* (Druce, 1977) (Insecta: Lepidoptera): New country records and updated geographic distribution maps

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ABSTRACT: This paper provides two new distribution records from Guyana for *Memphis montesino* Pyrcz, 1995, extending the distribution of the species over 200 km westwards to lowland moist forests; and the first record for *Memphis boliviana* (Druce, 1977) from Argentina, extending its distribution over 500 km southwards.

Memphis montesino (Figures 1A and 1B) is a highly distinctive butterfly, unlikely to be confused with any other *Memphis* species in its area of occurrence (Pyrcz and Neild 1996). Only three specimens of *M. montesino* are known to date, from only two sites: the type location, Venezuela, Bolivar, Canaima National Park, Uoquén, 850 m, 5.III.1966 (holotype male) and 7.III.1966 (allotype female), both collected by Angel Pérez, and one paratype from Venezuela, Bolivar, 30km west of Santa Elena de Uairén, Rio Surukun, 1000 m, X.1989, collected by Francisco Romero (Pyrcz 1995). Further, two females of *M. montesino* were found in the United States National Museum, Smithsonian Institution. The specimens have the following labels: / Memphis sp./ Guyana/ Kaieteur Gorge/ 500' (ft) May-April 1993/ (BC-USNM052, 04°47' N, 59°17' W), and / GUYANA: MAZARUNI/ Middle Mazaruni, Enachu/ Cr. 250' 06°10' N, 60°02' W/ October 1992/ leg. S. Fratello/ (BC-USNM051).

Although Pyrcz and Neild (1996) stated that *M. montesino* is likely to occur in Guyana, the occurrence of *M. montesino* was expected in isolated forest patches in the highlands of the Pantepui region. All known records of *M. montesino* are from piedmont and highland forests at 850-1000 m in elevation. These new records extend the geographic distribution of *M. montesino* over 200 km westward to lowland moist forests at 80-150 m in elevation (Figure 2). The probable distribution of *M. montesino* is given by Pyrcz (1995): southern Canaima National Park area and along the boundary between Venezuela and Brazil. The second and third authors collected actively with bait traps in similar habitats in Brazil, not far from the Venezuelan border, in the Reserva Biológica Ilha de Maracá, and near Pacaraima, state of Roraima, Brazil. However, no specimens of *M. montesino* were collected, supporting Pyrcz's (1995) claim that *M. montesino* is either rare or a localized species. There is very little biological information about *M. montesino*, although males are known to come to the ground to feed on urine-soaked soil (F. Romero personal communication *apud* Pyrcz and

Neild (1996)). According to Pyrcz (1995), *M. montesino* is closely related to either *M. proserpina elara* (Godman and Salvin, 1897) or *M. ambrosia phoebe* (Druce, 1877), both placed by Comstock (1961) in the VIIIA or "*polycarmes*" species group.

The type location of *M. boliviana* (Druce, 1877) (Figures 1C and 1D) is given simply as "Bolivia" by Druce (1877) in its original description. Later, a number of locations in the Bolivian Yungas forests, Chiquitano dry forests (*sensu* Olson *et al.* 2001), and Peru (no exact location given) were provided by Comstock (1961), Witt (1977) and D'Abbrera (1988). Comstock (1961) quotes the occurrence of *M. boliviana* in the province of Salta given by Hayward (1951). However, the identification of this specimen was later rectified by Hayward (1973) as *M. moruus morpheus* (Staudinger, [1886]) in his last catalog of the butterflies of Argentina. It is not easy to be certain whether the specimen examined by Hayward (1951; 1973) was in fact *M. boliviana* or *M. moruus morpheus* given that the latter taxon is known to occur in the province of Salta (Comstock 1961; Hayward 1973).

A series of eight males of *M. boliviana* collected by Robert C. Eisele, deposited in the McGuire Center for Lepidoptera and Biodiversity, Florida Museum of Natural History, confirms the occurrence of *M. boliviana* in the province of Salta, extending the distribution of this species more than 500 km southward (Figure 3). The specimens have the following labels: /ARGENTINA Salta/ ([San Ramón de la Nueva] Oran) Agua Blanca/ to Angosto, Rt 19/ km 26.6 upper/ confl. of Rio/ Arrazayal, 650 m/ 14.VIII.1986 Leg. R/ Eisele 98S2/ (23°07' S, 64° 34' W).

The geographic distribution of *M. boliviana* in Argentina is probably correlated with the Yungas moist forests occurring in the provinces of Salta, Jujuy, Catamarca and Tucumán. These records are not totally unexpected, as a number of *Anaeni* species associated with mid-elevation forests throughout the Andes and lowland forest habitats in the western part of the Amazon Basin, such as *Fountainea*

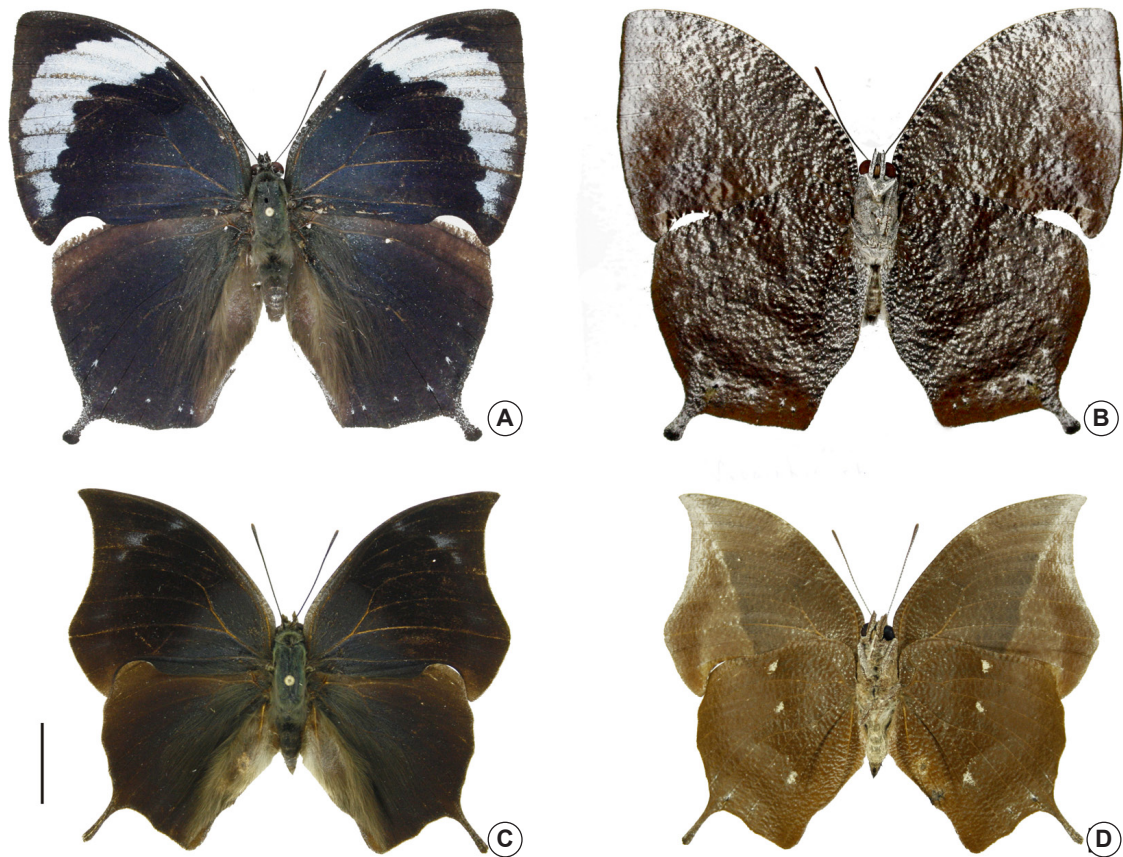


FIGURE 1. A-B. *Memphis montesino* Pyrcz, 1995 collected in Kaieteur Gorge, Potaro-Siparuni, Guyana, female. A – dorsal; B – ventral; C-D. *Memphis boliviana* (Druce, 1877) collected in San Ramón de la Nueva Orán, Salta, Argentina, male. C – dorsal; D – ventral. Scale bar = 1 cm.

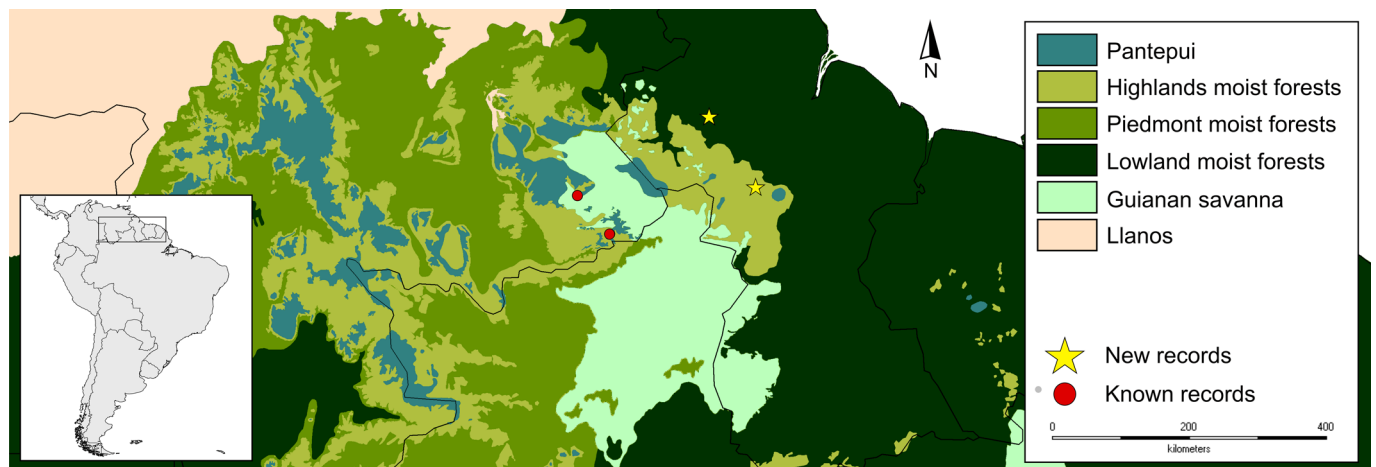


FIGURE 2. Known geographic distribution and associated ecoregions of *Memphis montesino* Pyrcz, 1995 (sensu Olson et al. 2001)

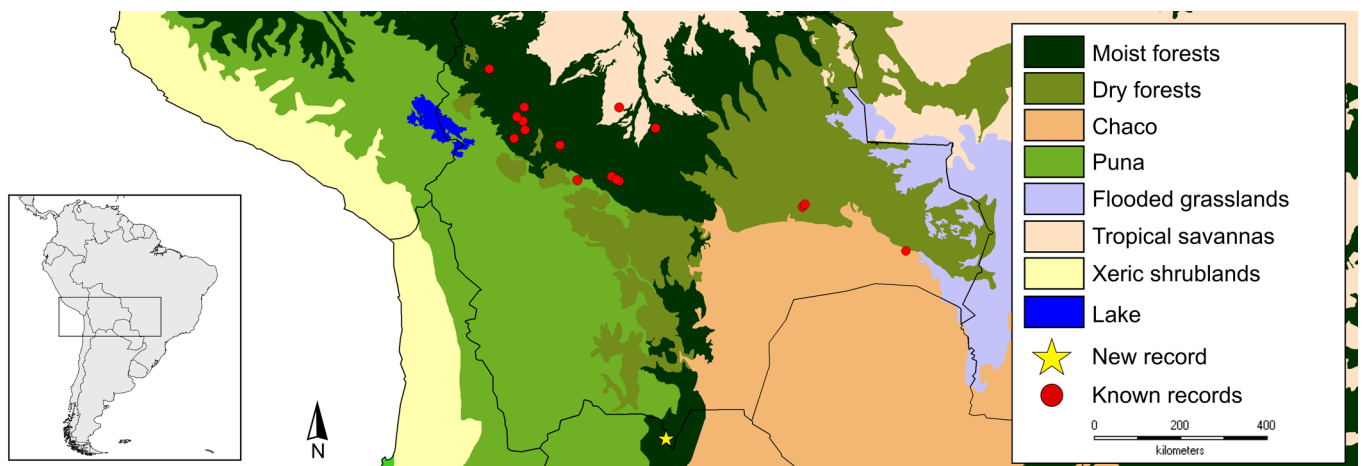


FIGURE 3. Known geographic distribution and associated ecoregions of *Memphis boliviana* (Druce, 1877) (sensu Olson et al. 2001).

nessus (Latreille, [1813]), *M. oenomais* (Boisduval, 1870), *M. moruus morpheus* and *M. acidalia memphis* (C. Felder and R. Felder, 1867) (Comstock 1961; Hayward 1973; E. O. Nuñez-Bustos, personal communication), are known to occur in at least some of the above cited provinces. Morphologically, the closest species to *M. boliviana* appears to be *M. cerealia* (Druce, 1877), both sharing similar environments in Peru (Comstock 1961). Based chiefly on wing pattern, Comstock (1961) placed *M. boliviana* and *M. cerealia* in the VIIID (or “*iphis*”) species group. However, both species morphologies are significantly dissimilar from the remaining six species also placed in the “*iphis*” species group, a homogeneous group associated with altitudes over 1500 m throughout the Andes (Comstock 1961; Pyrcz and Neild 1996).

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