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REDISCOVERY OF *PSEUDOTINEA CAPRINA* (LEPIDOPTERA, RIODINIDAE): REMARKS ON ITS DISTRIBUTION AND FIRST DESCRIPTION OF THE FEMALE

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Pseudotinea caprina (Hewitson, 1859) was described as *Calydna caprina* based on a single male specimen with type locality Brazil. Until now, only 3 more specimens (all males) had been known (Hall & Callaghan 2003), 2 from Castro, Parana, Brazil, deposited at The Natural History Museum, London, and 1 from Paineiras, Rio de Janeiro, Brazil, deposited at Coleção Entomológica Pe. Jesus Santiago Moure, Curitiba, Paraná, Brazil. *Pseudotinea* Hall & Callaghan, 2003 was proposed to include 5 species: *P. vulcanicus* (Callaghan & Salazar, 1997), *P. hemis* (Schaus, 1927) and *P. caprina* described in *Calydna* Doubleday, 1847, whereas *P. eiselei* Hall & Callaghan, 2003 and *P. gagarini* Hall & Callaghan, 2003 described in the same paper as the genus *Pseudotinea*. The authors also emphasized the rarity of specimens, not only for *P. caprina*, but also for all species of the genus, and suggested that an evaluation of the conservation status of its species would be worthwhile.

Until recently, the most recently collected specimen of *P. caprina* probably dates from before the 1950s, since its label lacks the date, and E. May (collector) ended his activities sometime around that decade. Since then, no other specimen has been collected despite a considerable collecting effort in its putative distribution. The females of *P. gagarini* and *P. caprina* were still unkown. Therefore, given the scarcity of information about *P. caprina*, the present work describes its first known female, adding new information and reviewing species distribution and its conservation status.

Description of Female of *Pseudotinea caprina*

Female description (Figs. 1 and 2): Forewing length 16.5 mm. Forewing shorter and rounder than in male. General pattern of coloration in both wings similar to male, except post-discal white spot about twice as wide and of a different, more angular shape when compared to male.

Genitalia: general appearance as described by Hall & Callaghan (2003) for *P. volcanicus*, *P. eiselei,* and *P. hemis*; asymmetric sterigma as in other species, but with post-vaginal lamella W-shaped, instead of U-shaped as described for other species; insertion of ductus bursae on sterigma less sclerotized than post-vaginal lamella; bursa copulatrix shorter with two lateral linear signa, and ductus bursae longer than other known species (Fig. 2).

Material Examined and Species Distribution

Lago Azul State Park, Campo Mourão, Paraná, Brazil, Mielke, Dolibaina, Carneiro & Maia, leg., 500-600m, 9-11-X-2010, DZ 21.469, 24°09'S, 52°32'W (1 female, Fig. 1); Paineiras, Tijuca National Park, Rio de Janeiro, Rio de Janeiro, Brazil, May leg., 500m, 22°95'S, 43°21'W (1 male); Departamento de Zoologia, Universidade Federal do Paraná, Curitiba, Paraná; Castro, Paraná, Brazil aprox. 24°79'S, 50°01'W (2 males not examined); The Natural History Museum, London, UK; Brazil, no data (1 male), Departamento de Zoologia, Universidade Federal do Paraná, Curitiba, Paraná.

Information about *Pseudotinea* species is still extremely rare in the literature and also in collections and museums. Hall & Callaghan (2003) reported 35 specimens (*P. volcanicus* - 21, *P. eiselei* - 1, *P. gagarini* – 6, *P. hemis* – 3, *P. caprina* - 4), while we have examined 9 additional specimens (*P. gagarini* – 4, *P. hemis* – 5) in the Departamento de Zoologia, Universidade Federal do Paraná. Furthermore, many of these specimens lack key label information, such as precise locality, elevation and date. The few known specimens of *P. caprina* represent this exact unfortunate situation. Castro, for example, was a larger city at the beginning of the 20th century than now, since then it has been divided into several other cities. At the beginning of the 20th century this whole area included many more vegetation types than are now extant. Thus, no association of a specimen with a vegetation type can be inferred from this locality information. Other specimens that have subsequently been recorded from the region and its surroundings also bear the label "Castro", e.g., *Orobrassolis latusoris* Penz & Simonsen, 2011; *Passova passova practa* Evans,

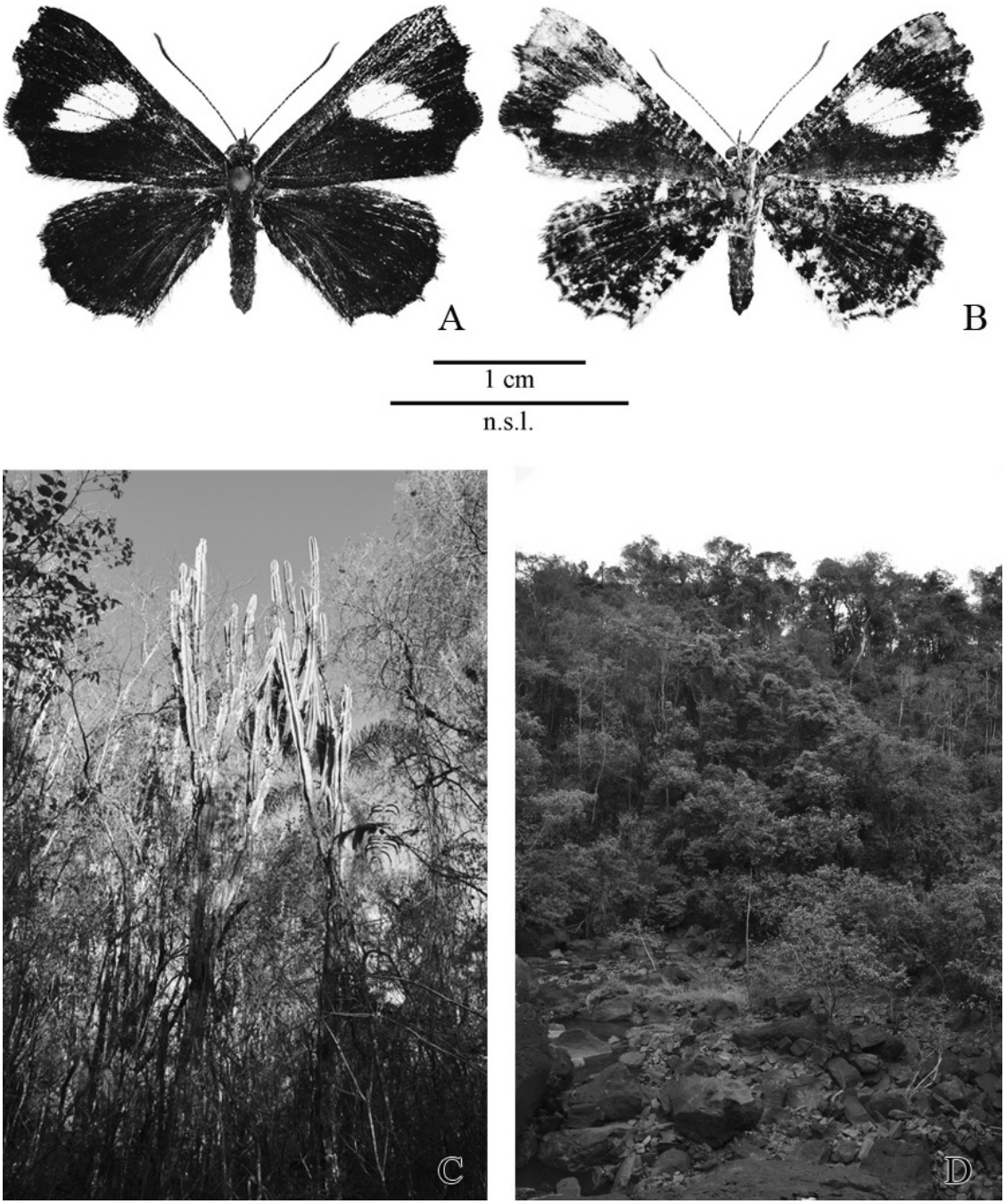

Fig. 1. *Pseudotinea caprina* (Hewitson, 1859) in dorsal (A) and ventral view (B), and Lago Azul State Park habitats, showing xeric elements inside semidecidual forest (C) and the place where the specimen was collected (D). n.s.l. means natural scale length. Note: See a color version of this figure online as supplementary material in Florida Entomologist 95(2) (2012) at http://purl.fcla.edu/fcla/entomologist/browse.

1951; *Ochropyge ruficauda* (Hayward, 1932). It seems possible that such specimens may either have been mislabeled, or that their populations have subsequently become extinct.

On the other hand, Paineiras is a well known location at the base of Christ the Redeemer statue (Corcovado), in Tijuca National Park, whose vegetation is dominated by dense ombrofilous forest,

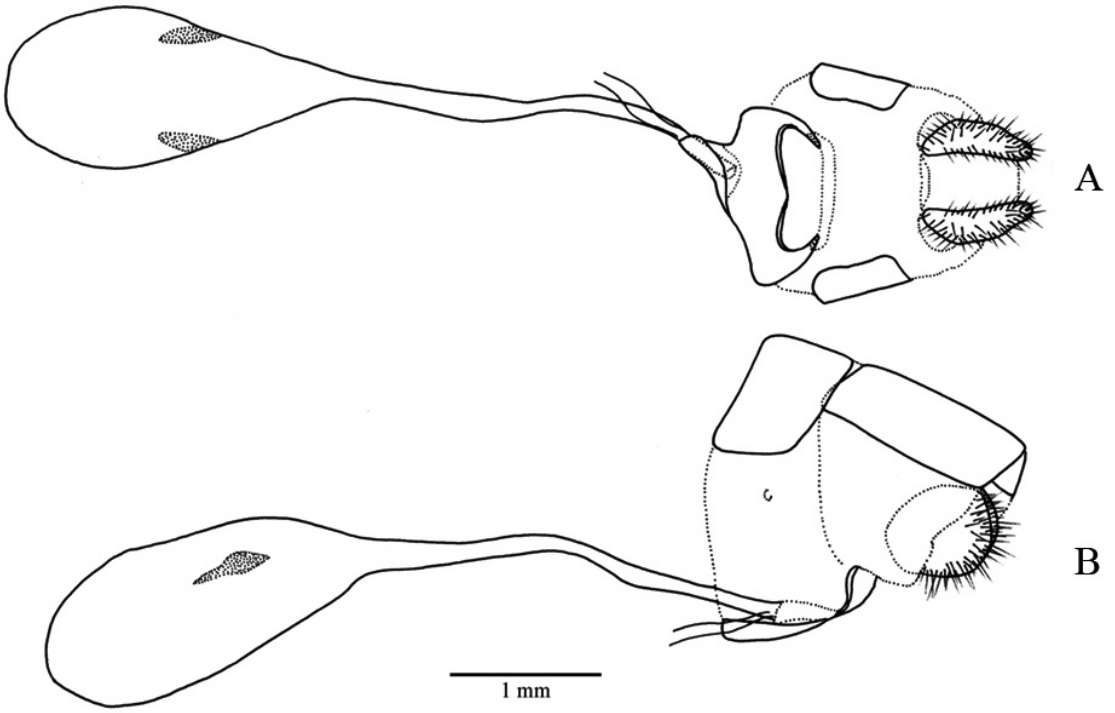

Fig. 2. Female genitalia of *Pseudotinea caprina* (Hewitson, 1859) in ventral (A) and lateral view (B).

where E. May collected thoroughly for approximately 30 years. Although one of most collected regions in Brazil, no other specimen has been found in the city of Rio de Janeiro or on the surrounding mountains.

The habitat where the only female was observed and collected represents an ecotone of 3 different vegetation types (semideciduous forest, araucaria forest and cerrado) with the addition of rock outcrop islands inside the park, which are mentioned as elements of cerrado/caatinga vegetation (Silva 2009). The specimen was collected approximately at 14:00 h, exactly above the Mourão River (above the rocks in Fig. 1C), 3 m above the ground in a place surrounded by both forest and xeric vegetation. Its host plant is still unknown (Hall & Callaghan, 2003). Therefore, it seems too early to identify the habitat of *P. caprina* or its distribution, and assessing its conservation status at this time seems highly problematic.

Summary

A new locality record for *Pseudotinea caprina* (Lepidoptera, Riodinidae) is reported, an important data point given the lack of records in the literature, museums and collections over the past 60 y. The female collected on 9-11-X-2010 at Lago Azul State Park, previously unknown, is described. A reliable evaluation of the conservation status of this species is currently impractical, because existing locality records are not reliable or contains imprecise information.

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