

# The taxonomic position of *Cabralia trifasciata* Moore, 1882 (Lepidoptera: Noctuidae, Noctuinae, Phosphilini)

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## Abstract

*Cabralia trifasciata* Moore, 1882 is transferred from the Ophiderinae (Erebidae), to the Noctuidae: Noctuinae, Phosphilini and *Cromobergia* Bourquin, 1937 (= *Cabralia* Moore, 1882), *Cucullia teichii* Berg, 1885, and *Speocropia similacis* Bourquin, 1937, syn. nov. are recognized as junior subjective synonyms of *Cabralia trifasciata* Moore, 1882.

**Keywords:** Lepidoptera, Noctuidae, Phosphilini, *Cabralia*, *Cromobergia*, *Speocropia*, synonymy, distribution, Neotropical.

## La ubicación taxonomica de *Cabralia trifasciata* Moore, 1882 (Lepidoptera: Noctuidae, Noctuinae, Phosphilini)

## Resumen

*Cabralia trifasciata* Moore, 1882 es transferida de Ophiderinae (Erebidae), hacia Noctuidae: Noctuinae, Phosphilini, y *Cromobergia* Bourquin, 1937 (= *Cabralia* Moore, 1882), y *Cucullia teichii* Berg, 1885, y *Speocropia similacis* Bourquin, 1937, syn. nov., son reconocidos como sinónimos subjetivos más recientes de *C. trifasciata* Moore, 1882.

**Palabras clave:** Lepidoptera, Noctuidae, Phosphilini, *Cabralia*, *Cromobergia*, *Speocropia*, sinonimia, distribución, Neotropical.

## Introduction

*Cabralia* Moore, 1882 (in Jones, 1882), was proposed as a monotypic genus, in the Glotullidae, to include *C. trifasciata* Moore, 1882, described on the base of a single male reared from a larva feeding on a “prickly climbing plant” by Jones, found near São Paulo, Brazil. A second species, *C. hudsoni* Schaus, 1933 was added to it, but transferred to *Rhosus* Walker (Agaristinae) (Becker, 2010). *C. trifasciata* has been described at least three times again, by Berg (1885), by Bourquin (1937), and by Kohler (1943) (see synonymy below). Illustrations to allow the identification are provided.

## Abbreviations

AMC	Alfred Moser Collection, São Leopoldo, Rio Grande do Sul, Brazil
CPAC	Centro de Pesquisa Agropecuária dos Cerrados, Empresa Brasileira de Pesquisa Agropecuária (EMBRAPA), Planaltina, DF, Brazil
DF	Distrito Federal, Brazil

GO	Goiás State, Brazil
g. s.	genitalia slide
HTC	Hubert Thöny Collection, Camacan, Bahia, Brazil
MA	Maranhão State, Brazil
MABR	Museo Argentino Bernardino Rivadavia, Buenos Aires, Argentina
MG	Minas Gerais State, Brazil
MT	Mato Grosso State, Brazil
NHMUK	The Natural History Museum, United Kingdom
PR	Paraná State, Brazil
RS	Rio Grande do Sul State, Brazil
SC	Santa Catarina State, Brazil
SP	São Paulo State, Brazil
VOB	Vitor O. Becker Collection, Reserva Serra Bonita, Camacan, Bahia, Brazil
ZSBS	Zoologische Sammlung des Bayerischen Staates, Munich, Germany

*Cabralia* Moore, 1882

*Cabralia* Moore, 1882, in Jones, 1882, *Proc. Lit. phil. Soc. Lpool.*, 36, 374

TS: *Cabralia trifasciata* Moore, 1882, *Proc. Lit. phil. Soc. Lpool.*, 36, 374, by monotypy

= *Cromobergia* Bourquin, 1937, *Revta. Soc. ent. Argent.*, 9, 67

TS: *Speocropia smilacis* Bourquin, 1937, *Revta. Soc. ent. Argent.*, 9, 67, by monotypy. **Syn. nov.**

= *Cromobergia* Köhler, 1943, *Revta. Soc. ent. Argent.*, 12, 30

TS: *Cucullia teichii* Berg, 1885, *An. Soc. cient. Argent.*, 19, 271, by original designation. A junior homonym of *Cromobergia* Bourquin, 1937. [Synonymized by Biezanko, Ruffinelli & Carbonell (1957), 62].

Remarks: *Cabralia* was described in the Glotullidae [=Noctuidae], and later included in the Ophiderinae [=Erebidae] by Nye (1975, p. 93) and by Poole (1989, p. 182). Both *Cromobergia* Bourquin and *Cromobergia* Köhler were described in the Acronyctinae (Noctuidae), and treated as such by Biezanko, Ruffinelli & Carbonell (1957, p. 62), and by Hayward (1969, p. 30), but treated as Ophiderinae [=Erebidae], by Nye (1975, p. 141) and by Poole (1989, p. 282), and finally as a Phosphilini by Keegan et al. (2021, p. 19), a tribe that also includes *Phosphila* Hübner, 1818 and *Speocropia* Hampson, 1908. As pointed out by Nye (1975, p. 141), *Cromobergia* originated from Köhler, but was unintentionally made available by Bourquin.

*Cabralia trifasciata* Moore, 1882 (Figures 1-4, 7)

*Cabralia trifasciata* Moore, 1882, in Jones, 1882, *Proc. Lit. phil. Soc. Lpool.*, 36, 374. Holotype ♂, BRAZIL: SP, São Paulo, III.1880 (Jones) (NHMUK) [examined].

= *Cucullia teichii* Berg, 1885, *An. Soc. cient. Argent.*, 19, 271. Syntypes, ARGENTINA: Buenos Aires, Las Conchas (MABR) [not examined]. [Synonymized by Biezanko, Ruffinelli & Carbonell (1957, p. 62)].

= *Speocropia smilacis* Bourquin, 1937, *Revta. Soc. ent. Argent.*, 9, 67. Syntypes ♂, ♀, ARGENTINA: Entre Rios, Concordia (MABR) ["Paratyloid" examined]. **Syn. nov.**

Diagnosis: Male (Figures 2, 4) FW length 10-15 mm (23 - 34 mm wingspan), female (Figure 3) 13 - 18 mm (30-40 mm wingspan). FW gray, with three broad, whitish fasciae, slightly dusted pink: first along costa, from base to before apex; second along termen, from apex to tornus; third connecting basal third of costa to termen, above tornus. HW white in males, broadly bordered gray along termen, with an irregular, diffuse mark at end of cell, in females.

Material examined (37 specimens, 2 g. s.): ARGENTINA: 1 specimen, Entre Rios, Concordia, 58°01'W - 31°22'S, I-III-1997 (Ruml) (ZSM); BRAZIL: 1 ♀, RS, Pelotas, 14-VI-1966 (Becker 2854) (VOB); 7 ♂♂, Morro Reuter, Faz. Padre Eterno, 29°01' 32"S - 50° 58'W, 500-600 m, 20-VI-1982, 20-IX-2004, 1-3-XI-2004, 21-22-VII-2006, 5-6-X-2007, 19-22-II-2009, 24-25-III-2012 (Moser) (AMC, UTC); 3 ♂♂, Encruzilhada do Sul, 30° 31,2'S - 55° 41,5'W, 300-500 m, 4-6-IX-2004, (Moser) (AMC); 1 ♂, SC, São Joaquim, 1400 m, 25-X-1995 (Becker 97911) (VOB); 1 ♂, 1 ♀, S. Bento do Sul, Serra

Rio Natal, 850 m, VIII-X-1998 (Thöny) (HTC); 1 ♀, Urubici, Santa Barbara, 28°08'S - 49°38'W, 1360 m 26-XII-1989 (Mielke & Joerke) (HTC); 1 ♂, PR, Curitiba, 920 m, g. s. 3674, 28-1975 (Becker 2932) (VOB); 1 specimen, Laranjeiras do Sul, 25°24'S - 52°25'W, 300 m, 5-VII-1994 (Pavlas) (ZSBS); 2 ♂♂, SP, São José do Barreiro, Bocaina, 22°43'S - 44°36'W, 1578 m, 15-III-02-IV-1990, g. s. 3126 (Thöny) (HTC); 1 ♂, MG, Dantas Marques, 18°20'S - 43°39'W, 1236 m, 24-X-1989 (Mielke & Joerke) (HTC); 1 ♂, 1 ♀, DF, Planaltina, 13°35'S - 42°42'W, 1100 m, 4-6-III-1978 (Becker 34629) (VOB); 1 ♀, GO, Ilha do Bananal, Rio Javará, 200 m 14-19-IX-1985 (Becker 64091) (VOB); 2 ♂♂, 1 ♀, MT, Poconé, 100 m, 1-7-XII-1997, 22-V-1998 (Becker 111137, 116573) (VOB); 2 ♂♂, 2 ♀♀, MA, Feira Nova, Faz. Retiro, S 07°00'S - 46°26'W, 480 m, 20-27-I-1990, 17-XI-1990, 29-30-XII-1990 (Mielke, Thöny) (HTC); PARAGUAY: 8 specimens, Alto Paraná, Ciudad del Este, 20-VII-8-IX-1994, 25°31'S, 54°37'W, 150 m, (Pavlas) (ZSBS).

Distribution (Figure 1): Uruguay, Argentina, Paraguay, South and southwest Brazil, north to the State of Maranhão. It has a wide distribution throughout the areas with open vegetations (the “Pampas”, the “Cerrado”, etc. of southern South America).

Remarks: Nye (1975, p. 93) mentions “Syntypes”, for *C. trifasciata*, with no indication of depository. However, Jones (1882) mentions that he had one larva, one pupa and one adult that emerged from it. The senior author found a single male specimen, in the MNHUK, bearing Jones’s and Moore’s labels, which certainly is the holotype. Hayward (1930) described the larva and later (Hayward, April 1937), in a lecture presented at a meeting in Mendoza, proposed the name *Speocropia smilacis* sp. nov., which was published only two years later (Hayward, 1939). Bourquin (December 1937) published a description of both the immatures and adults as *Cromobergia smilacis* Hayward, unintentionally making the name available. This description, including the illustrations, was published three times again by Bourquin (1941, 1942, 1944). Biezanko et al. (1957, p. 62) had already applied the senior synonym name, synonymizing *Cromobergia teichii* Berg under it, an action that apparently has been ignored by all subsequent authors.

Immatures and food-plants: All the descriptions mentioned above were based on specimens reared from caterpillars feeding on the leaves of the host plants. Jones (1882, p. 374) described the immatures, giving “a prickly climbing plant” as the hostplant. This description fits the morphology and behavior of *Smilax* spp. (Smilacaceae), climbing vines bearing strong, reversed thorns, that not only protect the plants against large herbivores, but provide support for the vines to climb up the surrounding vegetation. Berg (1985, p. 271) gave *Muehlenbeckia sagittifolia* (Polygonaceae), also climbing vines, as food plant, presumably a misidentification, as all the caterpillars found so far were always feeding on *Smilax* species. Both Hayward (1930, 1937, 1969) and Bourquin (1937, 1941, 1942, 1945) give *S. assumptionis* A. DC. (Smilacaceae) as food-plant, in Argentina. Biezanko et al. (1957) give *S. brasiliensis* Spreng., as the food-plant in Uruguay. The senior author (VOB) reared the larvae on the leaves of *Smilax* spp., common plants throughout the “Cerrado” biome, the Savannas of Central Brazil.

The larvae (Figure 7) are bright yellow, banded black, as well illustrated by Jones (1882, pl. 6, figure 20) and by Keegan et al. (2021, p. 18, figure 11B). As they are gregarious, sluggish and very conspicuous, they are either distasteful or mimic other distasteful or poison species, such those of *Danaus* spp. (Figure 5) (Nymphalidae) and of *Sorocaba anomala* Moore, 1882 [= *S. carmelitaria* (Guenée, [1858]) (Figure 6) (Apatelodidae), as suggested by Jones & Moore (1882, p. 354, 374, pl. 6, figures 1, 15, 20).

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