

## A NEW *AUTOMERELLA* FROM SOUTHEASTERN BRAZIL (LEPIDOPTERA: SATURNIIDAE: HEMILEUCINAE)

CLAUDE LEMAIRE<sup>1</sup> AND CARLOS G. C. MIELKE<sup>2</sup>

La Croix des Baux, F-84220 Gordes, France; and  
Caixa Postal 1206, 84 145-000, Carambeí, Paraná, Brazil

**ABSTRACT.**— *Automerella miersi* Lemaire & C. Mielke, n. sp., is described from the state of Santa Catarina in southeastern Brazil. It is known only from the female which differs from its closest relative, *Automerella flexuosa* (R. Felder and Rogenhofer) by its much smaller size and the hypertrophy of the discal spot of the forewing. The female holotype is illustrated in color, female genitalia are figured and taxonomic relationship is discussed.

**RESUME.**— *Automerella miersi* Lemaire et C. Mielke sp. n. est décrit de l'état de Santa Catarina au sud-est du Brésil. La femelle, seule connue, diffère de celle de l'espèce la plus proche, *Automerella flexuosa* (R. Felder et Rogenhofer) par sa taille très inférieure et par l'hypertrophie de la tache discocellulaire des ailes antérieures. L'holotype femelle est illustré en couleurs et l'armure génitale femelle est figurée; la position taxonomique de l'espèce nouvelle est indiquée.

**KEY WORDS:** Argentina, *Automerella miersi* n. sp., *Automeris*, distribution, genitalia, *Hyperchiria*, *Molippa*, Neotropical, South America, taxonomy.

*Automerella* was proposed as a subgenus of *Automeris* for *flexuosa* R. Felder and Rogenhofer (originally in *Hyperchiria*) by Michener (1949); a second species, *Automeris rubicunda* Schaus (a junior subjective synonym of *aurora* Maassen and Weyding) was included by Michener (1952) in *Automerella*; this was raised to full generic rank by Lemaire (1973). The most distinctive traits of the genus are the presence of very long lanceolate scales interspersed in the vestiture of the meso- and metathorax, the abdomen (at least in female) black, dorsally ringed with yellow or light gray, the anterior apical angle of hindwing strong and slightly produced, the costa of the hindwing straight or concave and the pericellular area usually pink. The lanceolate scales on the upperside of the thorax, the habitus and the structure of the male genitalia are suggestive of closer relationship with *Molippa* than with *Automeris*, although the larva of *A. flexuosa*, illustrated by Lemaire (1971: Pl 1, Fig. 1, 2), unexpectedly resembles those of some *Automeris* of the species-group of *A. cecrops* Boisduval (e.g., *Automeris naranja* Schaus).

*Automerella* species are endemic to southeastern Brazil with probably an extension of the range to adjacent Argentina.

### *Automerella miersi* Lemaire and C. Mielke, new sp.

**Diagnosis.**— This new species is by far the smallest of the genus; based on female phenotype, it is nearer *A. flexuosa* than *A. aurora*, with its most distinctive feature the very large dark brown discal spot of the forewing.

**Description.**— Wingspan: ♀ 45-47mm. Forewing length: ♀ 24-26 mm. **FEMALE** (Fig. 1-2): Antennae dark orange, shortly bidentate, each tooth provided with one or two apical bristles. Frons and labial palpi dark brown; thorax dark brown, dorsally interspersed with long yellowish lanceolate scales; legs dark brown, clothed with pinkish scales on the tarsi; abdomen black, dorsally banded with light gray, anal tuft light gray. **Forewing** (dorsal): moderately elongate, not apically produced; ground color brown, shaded with light gray, almost uniformly brown on the antemedial area; antemedial line whitish, extremely irregular; postmedial line dark brown, bordered proximally with white, distally with yellow, lunulate between the costa and M3, and from there slightly sinuate to outer two-thirds point of the inner margin; submarginal band dark brown, distally bordered with whitish and forming

1. Correspondant du Muséum national d'Histoire naturelle, Paris, France.  
2. Contribution No. 1072, Dept. de Zoologia, Universidade Federal do Paraná, Curitiba, Paraná, Brazil.



Fig. 1-2. *Automerella miersi* Lemaire and C. Mielke n. sp., holotype ♀: 1) dorsal surface; 2) ventral surface (wingspan: 49mm).

two distinct lobes between Cu1b and M3; discal spot very large, dark brown, distally broadly and irregularly lobed, narrowly surrounded with white; fringes black dotted with white at the ends of the veins; venation accented with yellow on the postmedial area. **Hindwing** (dorsal): costa moderately concave, apex strongly angulate, slightly produced; baso-medial area pink,

becoming dark grayish under the costa and along the anal margin; postmedial line black recurved toward the apex near the costa; submarginal band black, almost concolorous with the terminal area; pupil of the eyespot a small white dot, iris dark brown almost indistinct from the outer black ring; fringes whitish, intermixed with black. *Forewing* (ventral): dirty gray, with a shade of light gray; discal spot very large, black, suboval, the lobes of the corresponding discal spot of the forewing more or less showing through; there is a narrow white central streak; postmedial line black, tending to vanish between the costa and M1; submarginal band as above but less in contrast to the terminal area; fringes black with some white dots at the ends of the veins; venation accented with yellow on the distal half of the median area and on the postmedian area. *Hindwing* (ventral): ground color more uniformly dirty gray than on forewing; discal spot a tiny white streak (eyespot of upperside more or less showing through); postmedial line and submarginal band black, the former very irregular, very faint; fringes whitish. *Female genitalia* (Fig. 3): slightly smaller structure than in *A. flexuosa*; genital plate circumvaginal, bilobed, laterally connected to eighth tergum by a narrow sclerotized ribbon; ductus bursae membranous very short; corpus bursae narrow, about one and one-half as long as the anapophyses; ductus seminalis arising from right-hand side of base of bursa.

**Immature stages.**—Unknown.

**Types.**—*Holotype* ♀: BRAZIL.—*Santa Catarina*: Urubici, Morro da Igreja, 1250m, 29 Dec 1997 (H. Miers and C. Mielke) (Dept. Zoologia, Universidade Federal do Paraná, Curitiba, Paraná, Brazil).

*Paratypes*: 1 ♀, BRAZIL.—*Santa Catarina*: Urubici, Serra do Panelão, 1250m, 30 Dec 1997 (H. Miers and C. Mielke) (C. Mielke collection, Curitiba, Paraná, Brazil); 1 ♀, same data as holotype (C. Lemaire collection, Muséum national d'Histoire naturelle, Paris, France).

**Etymology.**—*Automerella miersi* is named for Herbert W. Miers who collected the type material with the junior author at Urubici, Santa Catarina.

**Distribution.**—The new species is known only from Urubici, near Lages and São Joaquim, Santa Catarina. It is very likely endemic to southeastern Brazil.

**Remarks.**—*Automerella miersi* can be very easily separated from the two previously known *Automerella*, especially from its most closely relative *A. flexuosa*, by the indicated above characters. Based on the non-collecting of males, there is a remote possibility that this species is diurnal.

#### LITERATURE CITED

##### Lemaire, C.

1971. Révision du genre *Automeris* Hübner et des genres voisins. Biogéographie, éthologie, morphologie, taxonomie (Lep. Attacidae). 1ère Partie. *Mém. Mus. Natl. Hist. Nat.* (Paris), (n.s.) (A. Zool.) 68:1-232.
1973. Liste synonymique des taxa du genre *Automeris* Hübner et des genres voisins (Lep. Saturniidae, Hemileucinae). *Bull. Soc. Ent. Fr.* (Paris), 78:68-77.

##### Michener, C. D.

1949. New genera and subgenera of Saturniidae (Lepidoptera). *J. Kansas Ent. Soc.* (Lawrence), 22:142-147.
1952. The Saturniidae of the Western Hemisphere: morphology, phylogeny, and classification. *Bull. Amer. Mus. Nat. Hist.* (New York), 98:335-502.

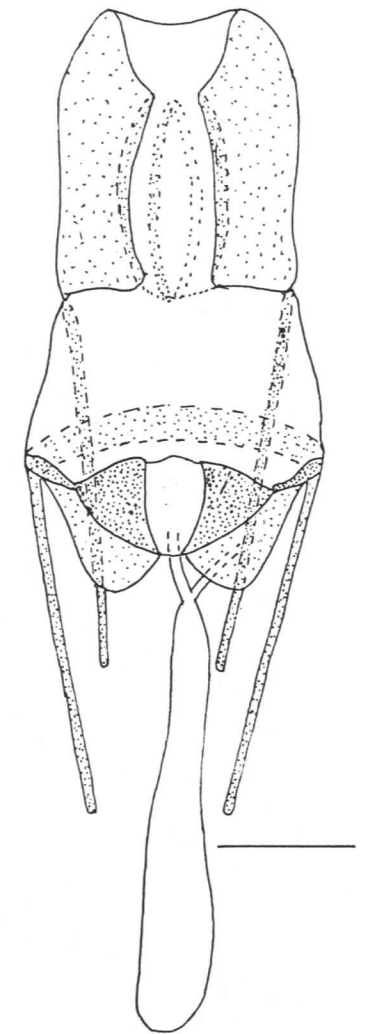


Fig. 3. *Automerella miersi* Lemaire and C. Mielke n. sp., female genitalia (ventral view) (scale = 1mm).