

## Description of a new *Automeris* species from Bolivia (Lepidoptera: Saturniidae, Hemileucinae)

Thibaud DECAËNS and Daniel HERBIN

Thibaud DECAËNS, Laboratoire d'Écologie, U.F.R. Sciences, Université de Rouen, F-76821 Mont Saint Aignan cedex, France; email: thibaud.decaens@univ-rouen.fr  
Daniel HERBIN, 28 Chemin du Moulin, F-31320 Péchabou, France; email: dherbin@ifrance.com

**Abstract:** A new species of *Automeris* is described from Bolivia. *A. lecourti* n. sp. is close to *A. granulosa* and *A. oberthurii*, and differs from these two species by its color, ornamentation and the structure of the male genitalia. *A. lecourti* is found at low and medium elevation mountain forest of the South of the Andean Cordillera. The holotype ♂ and allotype ♀ are deposited in Muséum National d'Histoire Naturelle, Paris, France.

**Key words:** Andes, Bolivia, *Automeris lecourti* n. sp., taxonomy, Neotropical entomofauna.

### Description d'une espèce nouvelle d'*Automeris* de Bolivie (Lepidoptera: Saturniidae, Hemileucinae)

**Résumé :** Un nouvel *Automeris* est décrit de Bolivie. *A. lecourti* n. sp. est proche de *A. granulosa* et *A. oberthurii*, et diffère de ces deux espèces par sa coloration, son ornementation et la structure des genitalia mâles. Cette espèce est un habitant des forêts sud andines de basse et moyenne altitudes. L'holotype ♂ et l'allotype ♀ sont déposés au Muséum d'Histoire Naturelle de Paris, France.

### Descripción de una nueva especie de *Automeris* de Bolivia (Lepidoptera: Saturniidae, Hemileucinae)

**Resumen:** Se describe en este artículo un nuevo *Automeris* del sur de Bolivia. *A. lecourti* n. sp. es cercano al *A. granulosa* y *A. oberthurii*, de los cuales difiere por su color, su ornamentación y la estructura de los genitalia machos. Esta especie se encuentra en bosque en el sur de la cordillera andina a elevación baja y media. El holotipo ♂ y el allotipo ♀ están depositados en el Muséum d'Histoire Naturelle de Paris, Francia.

### Beschreibung einer neuen *Automeris*-Art von Bolivien (Lepidoptera: Saturniidae, Hemileucinae)

**Zusammenfassung:** Eine neue *Automeris*-Art aus dem Süden Boliviens wird beschrieben: *A. lecourti* n. sp. Sie ist ähnlich *A. granulosa* und *A. oberthurii*, unterscheidet sich in der Färbung, der Flügelzeichnung und im männlichen Genitalapparat. Die Art findet sich in mittleren und tiefen Lagen von Bergwäldern im Süden der Andenkette. Holotypus ♂ und Allotypus ♀ befinden sich im Muséum National d'Histoire Naturelle, Paris, Frankreich.

## Introduction

The genus *Automeris* HÜBNER, [1819] groups together about one hundred of New World species distributed from Canada to south-eastern Argentina. Almost all of the described species belong to the tropical or subtropical fauna. They live in a great variety of biotopes, ranging from tropical rain forests to xerophytic formations, and in a wide range of altitudinal levels, from the sea level up to 4000 m.

The genus was described together with two other closely related genera, i.e. *Gamelia* HÜBNER, [1819] and *Hyperchiria* HÜBNER, [1819] (see history of the group in LEMAIRE 1971), to cover species initially classified by FABRICIUS (1775) and CRAMER (1775) within the genera *Bombyx* LINNAEUS, 1758 and *Phalaena Attacus* LINNAEUS, 1767, respectively. More recently, the discovery of numerous species led to the progressive partitioning of the genus into several genera, according to characters mostly linked to the structure of the genitalia (MICHENER 1949, 1952). LEMAIRE further described other new genera to place species previously included in the genus (LEMAIRE 1967, 1969), and divided the *Automeris* species into eight distinct groups plus a small number of isolated species (LEMAIRE 1971, 1973).

All the species belonging to *Automeris* and closely related genera are easily recognizable thanks to a common ornamentation of the dorsal side of both the fore and hind wings. Fore wings almost always present drab livery and a cryptic leaf-like pattern. Contrastingly, hind wings are generally brightly colored and present a large ocellus-like pattern.

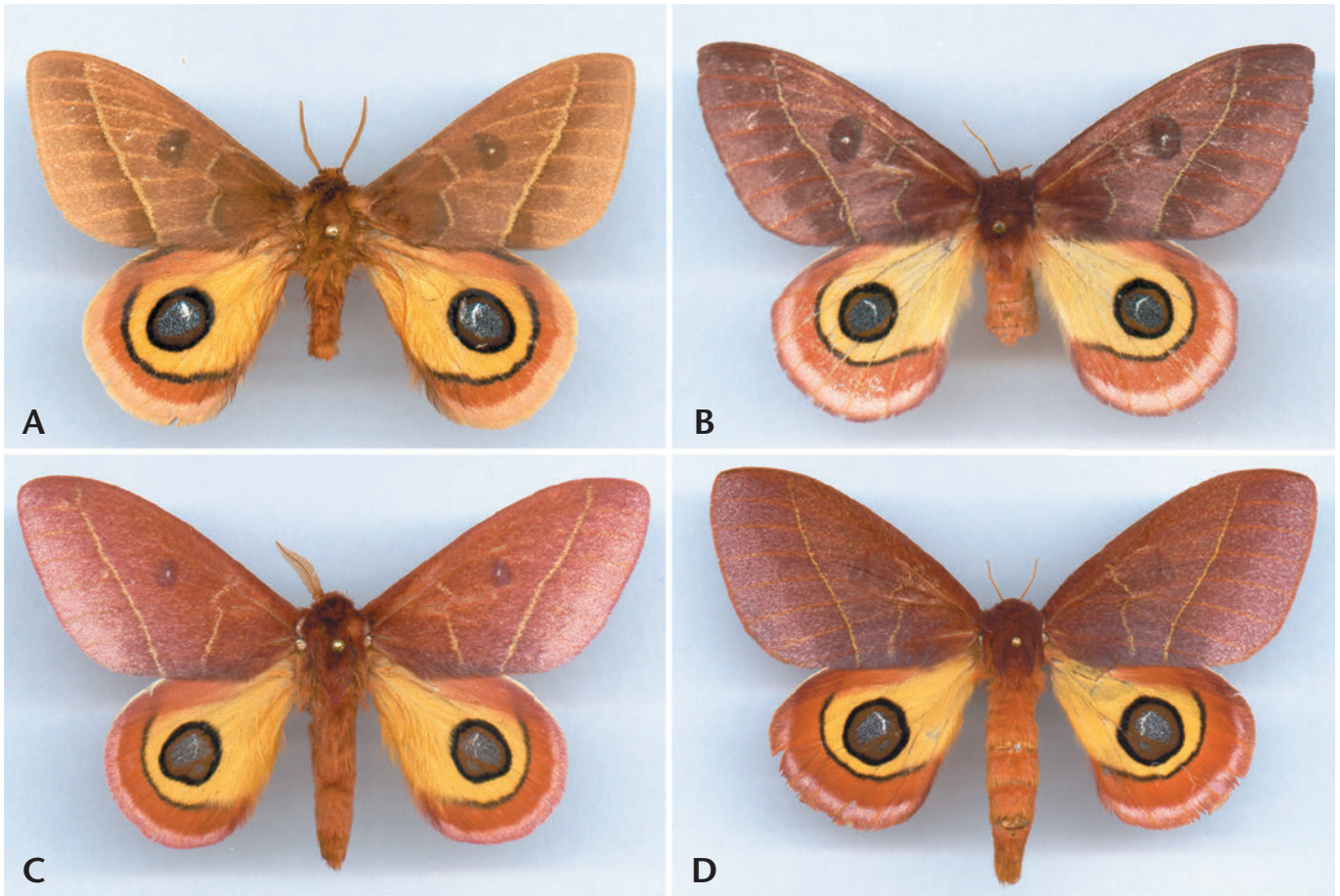
### *Automeris lecourti* n. sp.

**Holotype:** ♂, Bolivia, Santa Cruz Department, Rd. Vaca-Guzman-Camiri, 1615 m, xi. 1995, at UV light, leg. G. LECOURT, in coll. T. DECAËNS (genitalia prep. T. DECAËNS # 27).

**Paratypes** (8 ♂♂, 3 ♀♀), all Bolivia: Allotype ♀, Tarija Department, Rd. Villa Montes-Yacuiba, km 10, 410 m, iii. 1998, at UV light, leg. G. LECOURT, in coll. T. DECAËNS (genitalia prep. T. DECAËNS # 28). 4 ♂♂, Tarija Department, Rd. Villa Montes-Tarija, Km 20, 600 m, 7. ii. 1997, at UV light, leg. D. HERBIN & M. LAGUERRE, in coll. D. HERBIN; 1 ♂ same data, in coll. M. LAGUERRE. 2 ♂♂, 1 ♀, Chuquisaca Department, Rd. Padilla-Monteagudo, Km 82, 1300 m, 12. xi. 1998, at UV light, leg. D. HERBIN & M. LAGUERRE, in coll. D. HERBIN (♂♂ genitalia prep. D. HERBIN # H195 & H285). 1 ♂, Santa Cruz Department, Rd. Camiri-Santa Cruz de la Sierra, 640 m, 24. xi. 1995, at UV light, leg. G. LECOURT, in coll. D. HERBIN. 1 ♀, Santa Cruz Department, Rd. Valle Grande-Padilla, 1750 m, 9. xi. 1998, at UV light, leg. D. HERBIN & M. LAGUERRE, in coll. D. HERBIN.

**Type deposition:** Both the holotype and the allotype will be deposited in the Muséum National d'Histoire Naturelle, Paris (donation # 1059). A pair of paratype specimens will remain in the collection of the senior author, while the rest of the paratypes will remain in the collection of the junior author.

**Etymology:** This species is dedicated to our friend and colleague G. LECOURT, collector of the typical pair of this new species. This choice is motivated by the wish to recognize the value of his collecting efforts in Bolivia, which have significantly contributed to the knowledge of the entomofauna of this country.



**Plate 1:** *Automeris lecourti* n. sp. and *A. granulosa*. **Fig. A:** *A. lecourti*, holotype ♂ (wingspan 62 mm). **Fig. B:** *A. lecourti*, allotype ♀ (wingspan 69 mm). **Fig. C:** *A. granulosa* ♂ (wingspan 63 mm; Brazil, Mato Grosso, Rio Arinos, Diamantino, 3. x. 1995, leg. E. FURTADO, in coll. T. DECAËNS). **Fig. D:** *A. granulosa* ♀ (wingspan 83 mm; same data).

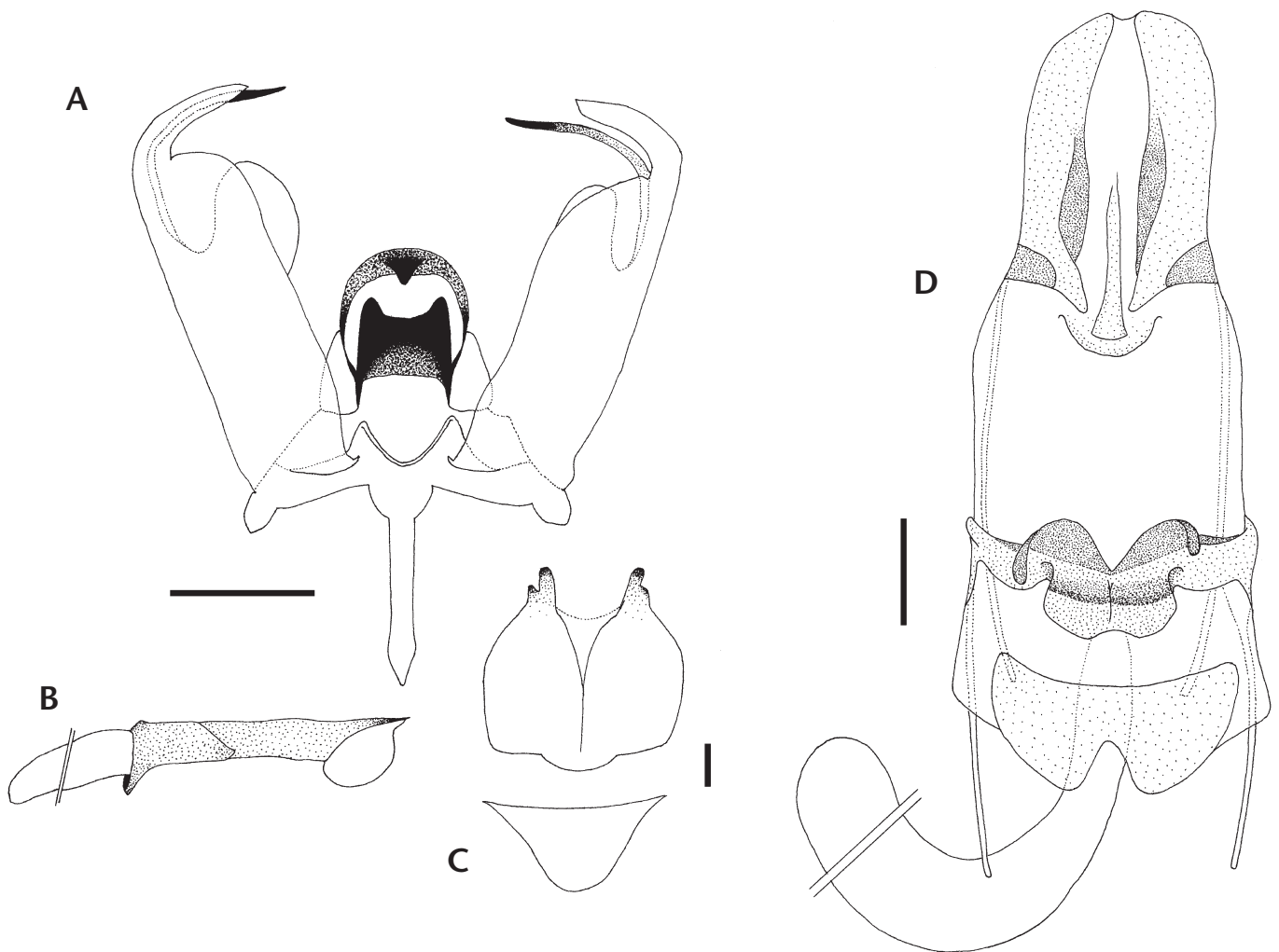
**Description:** Wingspan ♂♂ 52–62 mm, ♀♀ 69–72 mm.

♂ (Pl. 1): Head: Yellow brown, labial palpi of the same color. Antennae dull yellow. Body: Thorax and legs yellow brown. Abdomen reddish brown. Forewings: length 26 to 30 mm; elongated; rounded apex; convex edge, above background color yellow brown, largely suffused by yellow scales in both the median area and the marginal zone; both lines dark brown, bordered with a large shady yellow stripe in their facing edges, the outer one straight to sinuous and largely preapical (5–7 mm), the inner one clearly turned to the body above the costa; rounded discocellular spot dark yellow brown with a white point in its center. Underside pale yellow beige; dark brown outer line slightly marked; large rounded black discocellular spot marked in its center by a large white discal point. Hindwings: Periocellar area vivid yellow; large and black periocellar ring; iris dark brown, large and black pupil suffused by white scales; presence of a thin and curved white discocellular stroke. Underside as in forewings with a brighter zone corresponding to the basomedian area, also characterized by a black discocellular spot with a white point in its center.

♀ (Pl. 1): Head: General color and labial palpi reddish brown; antennae yellow brown. Body: Thorax brown

to black brown, legs, thorax underside and abdomen reddish brown. Forewings: length 34 to 38 mm; similar general shape and ornamentation as for the male; background color brown to dark brown, extensively suffused with pink scales in the median area and the marginal zone, lines thin and black, the outer largely preapical (7.5–8 mm), both bordered in their facing edges by two thin strips yellow and black, respectively; discocellular spot rounded and dark brown marked by a large white point in its center. Underside pink beige presenting the same ornamentation as for the male. Hindwings: Similar ornamentation as for the male but paler colors in general; identical ocellae; slightly larger submarginal strip. Underside as in forewings with the same brighter zone as for the male.

♂ **genitalia** (Pl. 2): Structure similar to those of *A. oberthurii* (BOISDUVAL, 1875) and *A. granulosa* CONTE, 1906. Posterior part of the uncus largely sclerotized with a ventral spine; valves relatively narrow terminated by a well developed apical process; saccus narrow; bulbus ejaculatorius about 10 times the length of the adaegus; the pair of slightly sclerotized lobes observed on the posterior edge of the 8th sternite of the holotype (Figure 2c) were not present on the genitalia of two paratypes.



**Plate 2:** *Automeris lecourti* n. sp. genitalia (scale: 1 mm). **Fig. A:** Holotype ♂, ventral view, aedeagus removed (genitalia prep. T. DECAËNS # 27). **Fig. B:** ♂ lateral view of aedeagus. **Fig. C:** ♂, posterior edge of the 8th sternite and tergite. **Fig. D:** Allotype ♀, ventral view (genitalia prep. T. DECAËNS # 28).

**♀ genitalia** (Pl. 2): Similar to those of *A. oberthurii* and *A. granulosa* as described in LEMAIRE (1973). Posterior apophysae larger than the anterior ones; genital plate midventrally enlarged and profoundly jagged on its anal edge; sharp antevaginal sclerification.

**Immature stages:** Unknown.

**Distribution:** *A. lecourti* is presently known from localities in southern Bolivia, in the Departments of Santa Cruz, Chuquisaca and Tarija. It seems to be an endemic of the South Andean faunistic region at low and medium elevation levels.

**Diagnosis:** This new species belongs to the group of *Automeris cecrops* (BOISDUVAL, 1875) with which it shares most of the main characteristics: reduced size, uncus with a ventral sclerotized spine, developed apical process of the valves. From a morphological point of view, it strongly resembles *A. granulosa* from which it can be easily distinguished by:

- The background colour of the ♂ forewings is yellowish brown with heterogeneous pattern instead of reddish brown with homogeneous pattern for *A. granulosa*.
- The background colour of the ♀ forewings is brown to dark brown instead of reddish brown for the ♀ of *A. granulosa*, and the contrast between the ♂ and ♀ colours much pronounced.
- The size of the black discocellular spots of the ventral wing side is constant between the hind and fore wings (i.e. 3 mm of diameter), whilst spots are larger in the hind wings than in the fore wings for *A. granulosa*.
- The inner line of the forewings on the dorsal side is clearly turned to the body above the costa while the contrary occurs for *A. granulosa*. This gives generally a larger gap between the inner and outer lines at the base for *A. lecourti*.
- ♂ genitalia (3 dissections observed) in general smaller than those of *A. granulosa* (1 dissection observed). Length of the bulbus ejaculatorius 10 times the size of the aedeagus, whereas it is 4.5 and 2-3 times larger for *A. granulosa* and *A. oberthurii*, respectively (C. LEMAIRE, personal communication). Saccus narrower than for *A. granulosa*.



## Acknowledgement

The authors want to thank Gilbert LECOURT for providing the type material of this previously undescribed species, Claude LEMAIRE for providing detailed genitalia drawings of the closely related species (i.e. *A. oberthurii* and *A. granulosa*), Frank MEISTER for providing an abdomen of *A. oberthurii* from Argentina for comparative examination, Michel LAGUERRE for his continuous collecting efforts, Kirby WOLFE for improvement of the English language, and an anonymous referee and Wolfgang A. NÄSSIG for helpful comments on a preliminary version of the manuscript.

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