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TWO NEW SPECIES OF SATYRINES FROM ECUADOR (LEPIDOPTERA: NYMPHALIDAE: SATYRINAE)

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ABSTRACT.– Two new species of Satyrinae are described from eastern Ecuador.

KEY WORDS.– Colombia, Euptychiini, ***Megeuptychia monopunctata*** n. sp., Neotropical, Peru, South America, ***Splendeuptychia toynei*** n. sp., taxonomy.

During the course of four years research on the taxonomy and biogeography of the Ecuadorian butterfly fauna, we have discovered a number of new species in several families. Here we describe two species of Satyrinae from the east Andean slope of Ecuador. We assign these species to genera described by Forster (1964).

Megeuptychia monopunctata Willmott & Hall, **new sp.**

Fig. 1a, 3a

Description.– MALE: forewing length 29mm. *Recto*: uniform, medium brown; two thin, dark brown marginal lines on the hindwing; one dark brown marginal line on the forewing. *Verso*: ground color medium brown, as on recto; forewing with four thin dark brown lines, one sub-discal, one post-discal, two marginal; sub-apical black ocellus, ringed with dark yellow/brown, with a white central spot, in M_2; three smaller, indistinct ocelli in Cu_2, Cu_1 and M_1. Hindwing with four thin dark brown lines, one sub-discal, one discal, two marginal; two sub-marginal, large, black ocelli, ringed with dark yellow/brown, with a single white central spot, in Cu_2 and M_2; one much smaller, similar ocellus at apex in M_1; two small, indistinct ocelli in Cu_1 and M_3. Labial palpi dark brown with lighter brown medial stripe. Eyes brown, sparsely hairy. Antennae medium brown. Thorax and abdomen recto dark brown, verso lighter brown. Genitalia (Fig. 3a): uncus long, thin and pointed.

FEMALE: not seen by the authors, but see discussion below.

Types.– *Holotype* ♂: ECUADOR.– Morona-Santiago Prov., Bomboiza, 850m, 26 Jul 93 (J. P. W. Hall). To be deposited in the Natural History Museum, London, England (BMNH). *Paratypes*: 1♂, same locality as holotype, 26 May 94 (J. P. W. Hall), deposited in the collection of the authors. 1♂, PERU.– Tarapoto, May-Aug 1885 (M. de Mathan) (BMNH).

Etymology.– This species is named for its distinctive, solitary, central white spot in the tornal ocellus.

Diagnosis.– This species is most similar to *Megeuptychia antonoe* (Cramer, 1775), illustrated in Fig. 1b, which was previously thought to be the only species in the genus. It is easily distinguished by a number of characters of both internal and external morphology. The verso ground color of *M. monopunctata* n. sp. is much darker and lacks a greyish tinge; the sub-discal and discal dark brown lines are thinner and lack the rufous coloring seen in *M. antonoe*. The hindwing ocelli of *M. monopunctata* are smaller, rounder, and, except for the apical ocellus, arranged in a straight line; the tornal ocellus has only a single central white spot, whereas there are two in *M. antonoe*. In the genitalia of *M. monopunctata* (Fig. 3b) the uncus is thinner and longer, and the tegumen is more rounded at the anterior dorsal edge. The differences in external morphology were found to be consistent after comparing a long series of *M. antonoe* in the BMNH with the three specimens of *M. monopunctata* seen by the authors. The genitalic differences proved to be consistent for two specimens examined of each species.

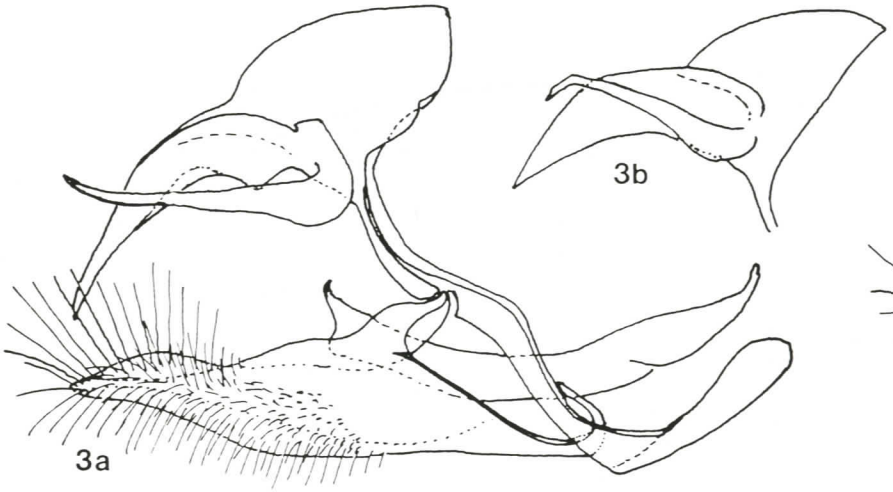
Discussion.– This species is placed in *Megeuptychia* due to its close affinities with *M. antonoe*, the type species for the genus. The holotype male was collected in recently logged tropical rainforest at the base of the Andes in southeast Ecuador, where it could be found flying with typical *M. antonoe*. A second specimen was collected at the same site, on 27 May 1994. Both specimens were attracted to traps baited with rotting fish, which is a feeding behavior also frequently observed in *M. antonoe*. The only other specimen seen by the authors was curated with *M. antonoe* in the BMNH, and was collected by M. de Mathan in Tarapoto, N.E. Peru, between May and August 1885. Dr. Gerardo Lamas (pers. comm.) also informs us that there are 2♂ and 1♀ of *M. monopunctata* in the collection of the Museo de Historia Natural, Lima, Peru, collected in the departments of Amazonas and Madre de Dios, Peru. It seems likely that this species is restricted to a narrow band along the base of the Andes in Peru and Ecuador, and thus has remained seldom collected, unlike the widely distributed *M. antonoe*.

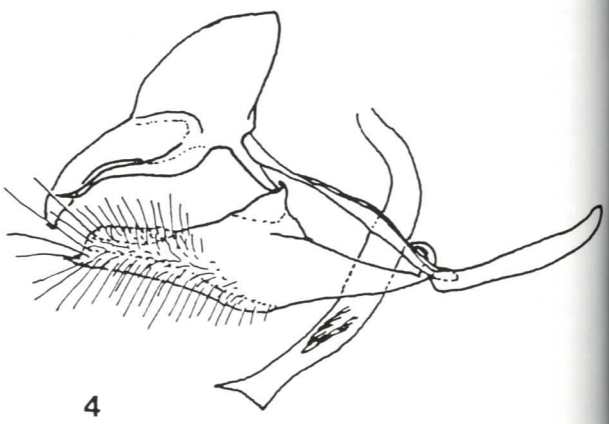
Splendeuptychia toynei Willmott & Hall, **new sp.**

Fig. 2a-b, 4

Description.– MALE: forewing length 22mm. *Recto*: ground color medium brown; forewing post-discal area from dorsum to just above M_3 white, discal area between dorsum and cell pale grey. Hindwing basal third pale grey; broad white discal area; sub-marginal area medium brown with indistinct black smudges between veins and two dark brown marginal lines. *Verso*: ground color medium brown, as on recto; fore-

Fig. 1-2. 1a. *Megeuptychia monopunctata* Willmott & Hall: holotype male, verso surface. 1b. *Megeuptychia antonoe* (Cramer, 1775), Ecuador: male, verso surface. 2. *Splendeuptychia toynei* Willmott & Hall: a). holotype male, recto surface; b). holotype male, verso surface.





Figs. 3-4. Male genitalia (lateral view): 3a. *Megeuptychia monopunctata* **n. sp.** 3b. *Megeuptychia antonoe* (Cramer, 1775) (uncus and tegumen). 4. *Splendeuptychia toynei* **n. sp.**

wing with a white post-discal band extending from dorsum to fade out just before the costa. Hindwing with white post-discal band beginning at costa, narrowing and fading towards tornus; two thin dark brown marginal lines parallel to wing margin, tinged rufous near tornus; six elongate, ovoid ocelli, extending from distal edge of white band to proximal marginal band, in spaces 1A+2A to M_1; each ocellus black distally, silver proximally, and entirely ringed with yellow; black area very reduced in ocelli in Cu_1 and M_3. Labial palpi recto white, verso brown. Eyes brown, sparsely hairy. Antennae medium brown, clubs lighter red/brown. Thorax and abdomen dark brown. Genitalia (Fig. 4): uncus blunt, hooked at the tip; tip of valvae with a short, pointed projection.

FEMALE: unknown.

Types.– *Holotype* ♂: ECUADOR.– Zamora-Chinchipe Prov., nr. Zamora, Río Bombuscara, 900-1200m, 29 April 92 (E. P. Toyne and J. N. Flanagan). To be deposited in the BMNH. *Paratypes*: 1♂, same data as holotype, in the collection of the authors.

Etymology.– This species is named for Elliott Paul Toyne, leader of the 1992 Parrots in Peril expedition which collected the holotype.

Diagnosis.– This species is most distinctive, bearing some external resemblance to *S. furina* (Hewitson, 1862). It is, however, easily distinguished from this and other species by the presence of a white band on the forewing, and by the conspicuous lack of the usual sub-discal and discal brown lines on the verso surface, observed in almost all Euptychiini.

Discussion.– The holotype was collected with a small series of males along a riverside trail in cloudforest habitat. D'Abrera (1988: 783) figures two male specimens from the BMNH as "*Euptychia* ?sp.", which may represent a subspecies of *S. toynei* n. sp., or possibly another undescribed species. These specimens are both from Colombia, with the following data: "Botero, Antioquia, 4000ft [1230m], July 1920, A. Hall" and "Bogota". This phenotype differs principally from *S. toynei* in possessing two rufous bands proximal to the white band on the verso surface.

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LITERATURE CITED

D'Abrera, B.

1988. *Butterflies of the Neotropical Region, Part V. Nymphalidae (conc.) and Satyridae*. Victoria, Australia: Hill House. Pp. 679-877.

Forster, W.

1964. Beiträge zur Kenntnis der Insecktenfauna Boliviens XIX. Lepidoptera III, Satyridae. *Veröff. Zool. Staatssamml. Münch.* (Munich), 8:51-188, pl 27-35, 264 f.