

New subspecies of Ithomiids from Venezuela

(Lepidoptera: Nymphalidae)

by

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Introduction

The biological species limit in many groups of Ithomiids is still under investigation in spite of the vast systematic and biological works done by several authors in the past. Venezuelan Ithomiid species show a wide array of differentiated populations with possible gene-flow from many geographical sources. In this context BROWN's refugia seem to be a plausible cause for this phenomenon (BROWN, 1977, 1979, 1987). Due to the variegated Venezuelan topography, variation and distribution of large number of species in many Venezuelan areas are still largely unknown.

During the last few years not many papers appeared concerning Venezuelan Ithomiids. Faunistic lists of species from the Cordillera de la Costa have been given by BAUMANN (1971) and from Rancho Grande by FOX & FOX (1947). MASTERS (1973a, 1973b) described two new taxa of the genus *Callithomia*. POOLE (1970) showed the mimetic interactions of Ithomiids found at Rancho Grande, PLISKE (1975) observed the courtship behaviour and use of chemicals by some males of Ithomiinae. NEGISHI (1971) gave a list of Ithomiids captured with *Heliotropium* plants.

Having acquired the Ithomiinae collection of DANIELE BAIOCCHI who was resident and collected from 1978 to 1983 in Venezuela, we had the opportunity to find, among other interesting butterflies, some Napeogenini which are hereafter described as new subspecies. The venezuelan populations of *Hypothyris fluonia* (HEWITSON, 1854), *Napeogenes stella* (HEWITSON, 1854), and *Hyaliris excelsa* (FELDER, 1862) were since a long time considered different from other nearby subspecies (BROWN, 1977, 1987). The new taxa are dedicated to K. S. BROWN, jr., to D. BAIOCCHI and to the Venezuelan province of Tachira where most of the specimens were collected.

Hypothyris fluonia baiocchii subsp. nov. (figs. 1–2)

Holotype ♂: Venezuela, Tachira, San Joaquin de Navay, 10 km S, 300 m, 15.VI.1981 leg. D. BAIOCCHI. in coll. T. RACHELI, Rome. To be deposited in a public Museum.

Paratypes: 8 ♂♂, 6 ♀♀. 1 ♂, Venezuela, Barinas, Barinitas 700–800 m, 15.VIII.1979; 1 ♂, same data, 15.–18.VIII.1979; 4 ♂♂, Venezuela, Tachira, San Joaquin de Navay, 10 km S, 300 m, VI.1981; 1 ♂, same data, 15.VI.1981; 1 ♂, same data, X.1981; 2 ♀♀, same data 15.VI.1981; 3 ♀♀, same data, VI.1979; 1 ♀, same data, X.1981. In coll. T. RACHELI, Rome.

Description

Length of FW ♂ 20 mm; ♀ 26 mm.

Similar to *H. fluonia rowena* (HEWITSON, 1857) from Amazonian Colombia where the comma-mark on the FW is more or less rectangular, not enlarged proximally, and placed entirely within space Cu1–Cu2. In *baiocchii* subsp. nov. the comma mark is longer and proximally rounded, with a triangular base on the distal margin. The yellow post median element in M3–Cu1 is thin and straight. Submarginal white dots like in *rowena*, namely almost invisible. Underside of FWs as upperside but with a row of round whitish dots placed between the spaces from R5–M1 to Cu1–Cu2. On the HWs the black discal area which in *rowena* is broad invading most of the wings, in the new subspecies is reduced to a black mark, leaving the brownish coloration to reach the anal margin. Underside of the HWs as upperside but with a row of five whitish dots placed on the black marginal edge. There is a trend in *rowena* ♀♀ to the fusion of the two black spots placed at the end of the cell of the FWs. This does not happen in *baiocchii* ♀♀.

Napeogenes stella browni **subspec. nov.** (figs. 3–4)

Holotype ♂: Venezuela, Tachira, San Juan de Colon, La Fria, 400 m, 25.IV.1982, leg. D. BAIOCCHI. In Coll. T. RACHELI, Rome. To be deposited in a Public Museum.

Paratypes: 16 ♂♂, 26 ♀♀. 2 ♂♂, El Tucuco, 420 m, 16.IV.1982; 1 ♂, same data, January 1983; 5 ♂♂ 4 ♀♀, Venezuela, Tachira, San Juan de Colon, La Fria, 400 m, 25.IV.1982, leg. D. BAIOCCHI; 3 ♂♂ 19 ♀♀, same data, 29.VIII.1982; 3 ♂♂ 1 ♀, same data, 25.IV.1982; 1 ♂, same data, 24.VII.1981; 1 ♀, same data, 17.IV.1982; 1 ♀ same data, 3.IX.1981; 1 ♂, Quebrada La Uraca ante de La Fria, 17.IV.1982. In coll. T. RACHELI, Rome.

Description

Length of FW ♂ 25 mm; ♀ 27 mm.

Similar to the *N. stella stella* (HEWITSON, 1854) from south Panama and Amazonian Colombia. It has the postmedian fascia transparent yellow and separated by the black veins. The black markings are lighter and the brownish yellow markings usually heavier than in *aster*. *N. stella browni* **subspec. nov.** has the brownish yellow coloration lighter and the yellow color of the marginal and costal spots more intense. In *stella* this coloration is hardly perceptible.

Hyaliris excelsa tachira **subspec. nov.** (figs. 5–6)

Holotype ♂: Venezuela, Tachira, Santa Ana 1100 m, 20.IV.1982, leg. D. BAIOCCHI. In coll. T. RACHELI, Rome. To be deposited in a public Museum.

Paratypes: 2 ♂♂, 1 ♀. 1 ♂, Venezuela, Tachira, Rio Frio 500 m, 21.IV.1982; 1 ♂, same data, 30.XII.1982; 1 ♀, Venezuela, Tachira, Santa Ana 1100 m, 20.IV.1982, leg. D. BAIOCCHI. In coll. T. RACHELI, Rome.

Description

Length of FW ♂ 40 mm; ♀ 41 mm.

Hyaliris excelsa (FELDER & FELDER, 1862) is mainly a cis-Andean species distributed from Costa Rica to SW Colombia and, possibly, NW Ecuador. Only in Venezuela and Colombia it crosses the Andes to reach the northernmost Amazonian areas usually above 500 m up to 1800 m. *H. excelsa tachira* **subspec. nov.** differs from all the other subspecies for the long brownish-yellow band of FWs from the base to the anal angle surrounding the spot in spaces Cu–Cu2 and A–Cu2. Therefore the black hindmarginal bar and the black cell band remain both separate. The costal spot is surrounded outwardly by a brownish streak.

This new taxon is similar to the nominotypical subspecies for the wide translucent-yellow stripe crossing the disc from apex to anal region of the HWs. The FWs show sometimes a transverse brownish band parallel to the anal margin along the cubital vein. In all the other subspecies the basal discal area is completely black. Males with large transparent band invading outer third of the cell of HWs, in the ♀ this band is reduced in size. Ssp. *decumana* (GODMAN & SALVIN, 1879) from Costa Rica has the HW entirely opaque brownish yellow or, if a wide translucent stripe crossing disc from apex to anal margin is present, this stripe is not translucent yellow but cream coloured.

References

- BAUMANN, H. (1974): Die Ithomiidae der Küstenkordillere in Nord-Venezuela (Lep. Rhopalocera). – Mitt. Münch. ent. Gesell. **64**: 40–61.
- BROWN, K. S. Jr. (1977): Centros de evolução, refúgios quaternários e conservação de patrimônios genéticos na região neotropical: padrões de deferenciação em Ithomiinae (Lepidoptera: Nymphalidae). – Acta amaz. **7**: 75–137



- BROWN, K. S. Jr. (1979): Ecología geográfica e evolução nas florestas neotropicais. – Universidad Estadual de Campinas, Campinas, XXXI + 265 + 120 pp.
- BROWN, K. S. Jr. (1987): Biogeography and evolution of neotropical butterflies. pp. 66–104. In Whitmore, T. C. & G. T. PRANCE (eds), Biogeography and quaternary history in Tropical America. – Clarendon Press, Oxford.
- FOX, R. M. & J. W. FOX (1947): Ithomiinae (Lepidoptera) of Rancho Grande, Venezuela, including two new species. – Zoologica **32**: 173–178.
- FOX, R. M. & H. G. REAL (1971): A monograph of the Ithomiidae (Lepidoptera). Part IV. The tribe Napeogenini Fox. – Mem. Amer. ent. Inst. **15**: [V] + 368 pp. 352 figs.
- MASTERS, J. H. (1973 a): A new *Callithomia* (*Leithomia*) from Amazonas, Venezuela. – J. Lep. Soc. **27**: 78–79.
- MASTERS, J. H. (1973 b): A new subspecies of *Callithomia hezia* from Zulia, Venezuela (Ithomiidae). – J. Lep. Soc. **27**: 80–83.
- NEGISHI, K. (1971): Butterflies collecting tour across Venezuela. II. Attracting Ithomiinae with a herb “Rabo de Alacran” in the vicinity of Caracas. – Yadoriga (68): 17–26.
- PLISKE, T. E. (1975): Courtship behaviour and use of chemical communication by males of certain species of Ithomiinae Butterflies (Nymphalidae: Lepidoptera). – Annls ent. Soc. Amer. **68**: 935–942.
- POOLE, R. W. (1970): Habitat preference of some species of a Mullerian-mimicry complex in northern Venezuela, and their effects on evolution of mimic-wing pattern. – J. New York ent. Soc. **78**: 121–129.

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