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THE BRAZILIAN GENUS, *FOETTERLEIA*, AND ITS SYSTEMATICS (LEPIDOPTERA: NYMPHALIDAE: SATYRINAE)

ANGEL L. VILORIA[1]

Centro de Ecología, Instituto Venezolana de Investigaciones Científicas (IVIC), Aptdo. 21827, Caracas 1020-A, Venezuela
aviloria@ivic.ve

ABSTRACT.– The pronophiline genus, *Foetterleia*, is redescribed and discussed, with one endemic Brazilian species.
RESUMEN.– Se redscribe y justifica un género pronofilíno, *Foetterleia*, para ubicar una especie endémica del Brasil.

KEY WORDS.– *Arhuaco*, Brazil, *Eteona*, *Foetterleia*, *Junea*, Neotropical, *Oxeoschistus*, *Pronophila*, *Pseudomaniola*, South America, taxonomy, *Thiemeia*.

The Brazilian genus, *Foetterleia*, is presented, as noted in my previous paper on Pronophilina in this issue (Viloria, 2007). The genus was already described in 2004 to make the name available for the new Neotropical butterfly catalog (Viloria, 2004). It is herein given a more detailed description.

FOETTERLEIA Viloria, 2004

[*Foetterleia* Viloria, 2003: 249] *nomen nudum* (synonymy given by Lamas *et al.*, 2004:209).
Foetterleia Viloria, 2004: 283-284.
Type species: *Pronophila schreineri* Foetterle, 1902.

Description.– Butterflies of medium size (Forewing lengths: males: 27-32mm, mean = 30.18mm, n = 11; females: 33-34mm, mean = 33.66mm, n = 3), not conspicuously sexually dimorphic. *Head*: Eyes hairy. Palpi 2.5 times as long as head. Antennae 2/5 of forewing costal length (about half costal length in *Pseudomaniola*), moderately clubbed. *Forewing*: subtriangular, apex and tornus rounded, outer margin uniformly convex and slightly sinuate. Hindwing suboval, outer margin moderately scalloped, slightly emarginate at M2. Postdiscal ocellar elements conspicuous in most cells on both surfaces of fore and hindwing. Forewing venation: Sc moderately inflated along basal third; R1 independent, originated at distal quarter of discal cell, R2 rising separately from other radials near extremity of discal cell, rest of radial veins (R3, R4 and R5) stalked from extremity of cell, R4 and R5 connate; medial and cubital veins all arising independently from cell; second vein of cell slightly inflated at base near Vogel's chordotonal organ; A2 independent, only slightly inflated near base; prominent recurrent veinlet within cell, continuous with origin of M2. *Hindwing*: venation with Hu present, diffusely broadened at extremity; Sc + R1, A2 and A3 independent; Rs, Medials and Cubitals all arising independently from cell as in typical members of the Pronophilina; cross-vein m1-m2 basally curving conspicuously into discal cell. *Male genitalia*: Tegumen very low-domed, barely differentiated from uncus; uncus arising at same level as tegumen, longer than the latter, robust and basally thick and strong, apically bent downwards; subunci short (about a third of uncus) but well developed, arising laterally from base of the uncus; vinculum thin but strong; saccus tubular, slightly longer than subunci; valvae semi-rectangular, slightly asymmetrical, broad at base, heavily processed along dorsal edge, two main processes visibles, one ampullar in middle position, finely serrate, the other apical, toothed; aedeagus relatively straight and symmetrical, as long as saccus + tegumen + uncus.

Etymology.– The name *Foetterleia* is dedicated to José G. Foetterle, the Brazilian naturalist who discovered the only known species of this genus.

Foetterleia schreineri (Foetterle, 1902), comb. nov.

Fig. 1 (adults male and female), 2 (male wing venation), 3 (male genitalia)

[*Daedalma foetterli* Staudinger, *in litt.*; Thieme, 1907: 160, synonymy given] *nomen nudum.*
Pronophila schreineri Foetterle, 1902: 634-637, pl. 16, fig. 3
Catargynnis lemur Thieme, 1907: 160-161, pl. 2, fig. 15.
Catargynnis schreineri (Foetterle); Zikán, 1928: 8; Hayward, 1958: 75, fig. 51 (genitalia).
Pseudomaniola schreineri (Foetterle); d'Abrera, 1988: 839, figs.

Material examined.– BRAZIL: 1 male, Sul de Minas, Passao Quatro, 11 Mar [19]21, J. F. Zikán, Joicey Bequest, Brit. Mus. 1934-120; 1 male, same data, 19 Feb [19]22; 1 female, Minas, Passao Quatro, Faz. dos Campos, 12 Nov 1916, J. F. Zikán; 1 female, Minas Geraes, 14 Mar 1927, Joicey Bequest, Brit. Mus. 1934-120; 1 female, Rio Grande do Sul, Joicey Bequest, Brit. Mus. 1934-120; 2 males, Serra da Mantequeira, 1500m, [Hoffmann], Brit. Mus. 1924-323; 2 males, same data, Joicey Bequest, Brit. Mus. 1934-120; 1 male, Brsl. Ex Musaeo Dris. Boisdusval, Ex Oberthür Coll., Brit. Mus. 1927-3; 1 male, Sul de Minas, 7 Mar [19]21, F. Shade, Joicey Bequest, Brit. Mus. 1934-120; 2 males, Estado Río, Campo Bello, 31 Jan [19]25, J. F. Zikán, Rothschild Bequest, Brit. Mus. 1939-1; 1 male, same data, 11 Feb [19]25; 1 male, Moromba, Itatiaya Mts., 1100m, 31 Jan 1925, J. F. Zikán, Rothschild Bequest, Brit. Mus. 1939-1 [the Natural History Museum, London, UK]; 2 males, (Rio de Janeiro), Petropolis, Foetterle [syntypes of *Catargynnis lemur* Thieme] [Zoologisches Museum Humboldt Universität, Berlin, Germany].
Distribution.– This species in only known in the mountains of Rio de Janeiro in Brazil, flying at middle elevations (1700-1900m recorded by Foetterle, 1902; 1100m as indicated by one male from Itatiaya Mountains).
Diagnostic discussion.– Although the superficial appearance of the single species, is strongly reminiscent of species of *Pseudomaniola* Röber, and some species of *Oxeoschistus* Butler (in particular the underside pattern), they are structurally very distinct. The venation in *Foetterleia* places it very close to another endemic Brazilian pronophiline genus, *Eteona* Doubleday (see e.g., fig. 83 in Hayward, 1953:56). *Pseudomaniola* has a recurrent veinlet within the cell, arising from the strong angle formed by the cross-vein m1-m2; this is absent in *Foetterleia*. Male genitalic differences are also evident: the tegumen in *Pseudomaniola* is moderately domed (dorsally convex), whereas the uncus emerges from a point below the uppermost convexity of the tegumen; there

1. Formerly, Biogeography & Conservation Laboratory, Department of Entomology, The Natural History Museum, Cromwell Road, London SW7 5BD, UK.

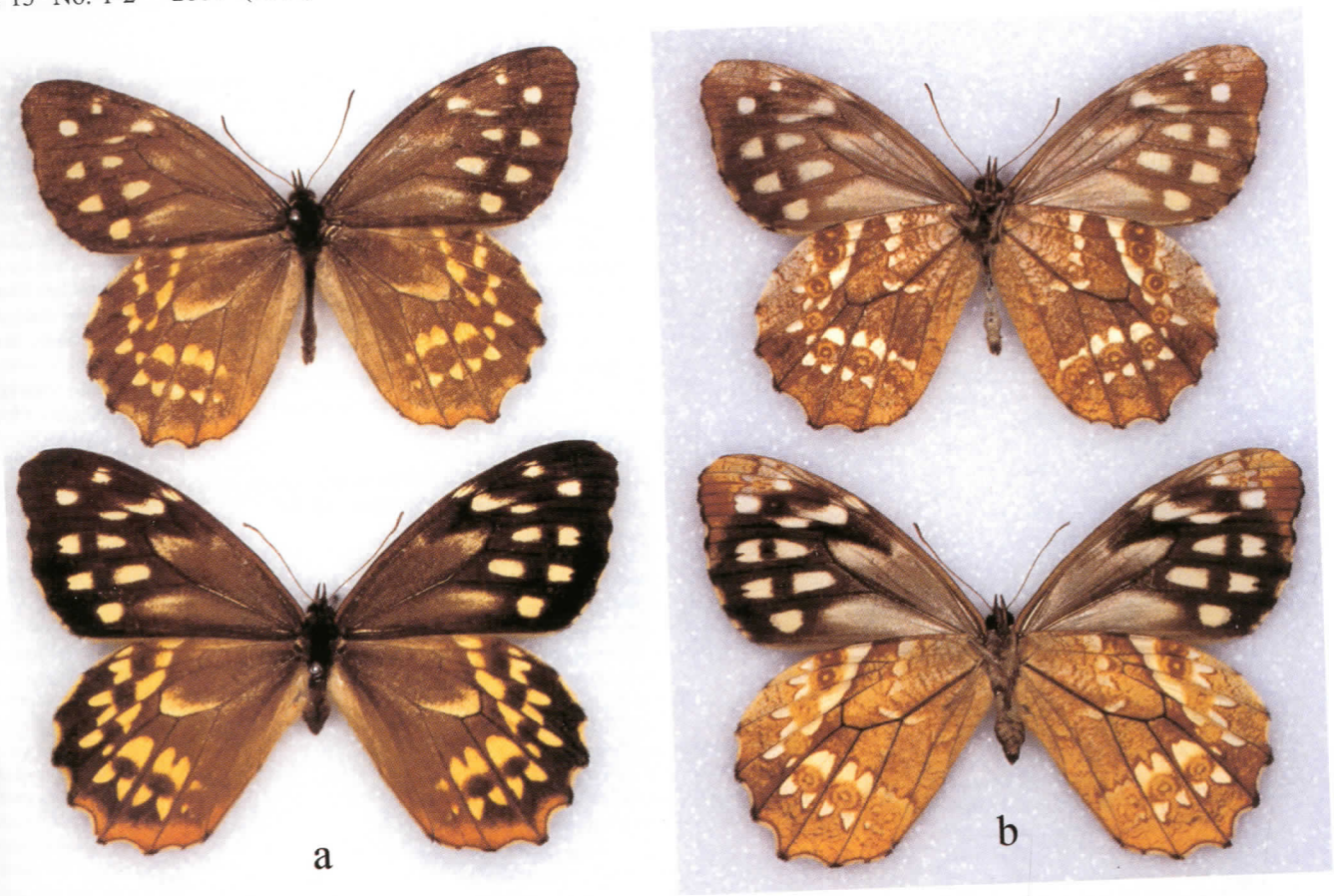

Fig. 1. **a.** *Foetterleia schreineri* (Foetterle); male (above) and female (below) uppersides. Male: Serra do Mantequeira, 1500m, 11 Aug [19]20, Hoffmann; female: Minas, Passa Quatro, Faz. dos Campos, 12 Nov 1916, J. F. Zikán (BMNH); **b.** Same specimens, undersides.

is also a marked uncal suture; these characters are totally absent in *Foetterleia*. Subunci arise laterally, and are in general far less developed in *Foetterleia* than in *Oxeoschistus* and *Pseudomaniola* (where they clearly emerge below the uncus). Valvae in *Foetterleia* are remarkably distinct, being extremely broad and more roughly ornamented when compared to either species of *Oxeoschistus* or *Pseudomaniola*. The aedeagus is always relatively shorter in the latter.

Wing shape in *Pseudomaniola* species is consistently distinct, the apical region being considerably emarginated and the apex itself somewhat truncated, while the hindwing is subtriangular, or when sub-oval it is notably shorter than the hindwing of *Foetterleia schreineri* (from base to the extremity of Cu2). The prevalence of a similar pattern of submarginal ocelli in both genera (as well as in *Oxeoschistus*, and to some degree in *Pronophila* Doubleday, *Thiemeia* Weymer, *Arhuaco* Adams & Bernard, and *Junea* Hemming) is most probably a true symplesiomorphy rather than morphological convergence. Ocellar patterns of this kind do not appear in the most speciose genera of the Andean Pronophilina.

There are some reasons based on geology and biogeography to believe that *Foetterleia* and *Pseudomaniola* had early and divergent origins, reflected in their current distributions (Viloria, 1998, Chap. 4). *Pseudomaniola* ranges along the Tropical Andes and Mesoamerica and the coastal Cordillera of Venezuela, but *Foetterleia* is restricted to the southeastern Brazilian highlands.

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REFERENCES

d'Abrera, B.
1988. *Butterflies of the Neotropical region. Part V. Nymphalidae (Conc.) & Satyridae*. Victoria: Hill House. Pp.680-877.

Foetterle, J. G.
1902. Descripção de Lepidopteros novos do Brazil. *Revta. Mus. Paulista* (São Paulo), 5:618-652, pl. 16.

Hayward, K. J.
1953. Satíridos argentinos (Lep. Rhop. Satyridae), I. Los géneros (excluídos *Euptychia* y *Neomaniola*). *Acta Zool. Lill.* (Tucumán), 13:5-66.
1958. Dibujos de los genitales masculinos de algunos satíridos neotropicales (Lep. Rhop. Satyridae). *Acta Zool. Lill.* (Tucumán), 16:61-81.

Lamas, G., A. L. Viloria, and T. W. Pyrcz
2004. Tribe Satyrini, Subtribe Pronophilina. *In* Lamas, G. (ed.), *Checklist: Part 4A. Hesperioidea - Papilionoidea. In* J. B. Heppner (ed.), *Atlas of Neotropical Lepidoptera*. Vol. 5A:206-215. Gainesville: Assoc. Trop. Lepid.

Thieme, O.
1907. Monographische Bearbeitung der Gattungen *Lasiophila* Felder, *Daedalma* Hew., *Catargynnis* Röber, *Oxeoschistus* Butl., *Pronophila* Westw., *Corades* Doubl. Hew. (Lepidoptera Rhopalocera. Satyridae.). Mit Begründung neuer Gattungen und einer Anzahl Neubeschreibungen. *Berl. Ent. Z.* (Berlin), 51:101-234, 3 pls.

Viloria, A. L.
1998. Studies on the Systematics and Biogeography of some Montane Satyrid Butterflies (Lepidoptera). Ph.D. diss., Kig's College and The Natural History Museum, London. 493 pp.
2003. Historical biogeography and the origins of the satyrine butterflies of the tropical Andes (Lepidoptera: Rhopalocera). *In* J. J. Morrone and J. E. Llorente (eds.), *Una Perspectiva Latinoamericana de la Biogeografía*, 247-261. Mexico City: Prensas Cienc., Fac. Cienc., UNAM.
2004. *Foetterleia* Viloria, new genus. *In* G. Lamas (ed.), Checklist: Part 4A. Hesperioidea - Papilionoidea. Appendix. *In* J. B. Heppner (ed.), *Atlas of Neotropical Lepidoptera*. Vol. 5A:283-284 Gainesville: Assoc. Trop. Lepid.
2007. The Pronophilina: Synopsis of their biology and systematics (Lepidoptera: Nymphalidae: Satyrinae). *Trop. Lepid.* (Gainesville), 15: 1-17 (2004).

Zikán, C. F.
1928. Die Macro-Lepidoptera des Itatiaya (Südabhang bei Campo-Bello). *Ent. Rundsch.* (Stuttgart), 45:7-8.

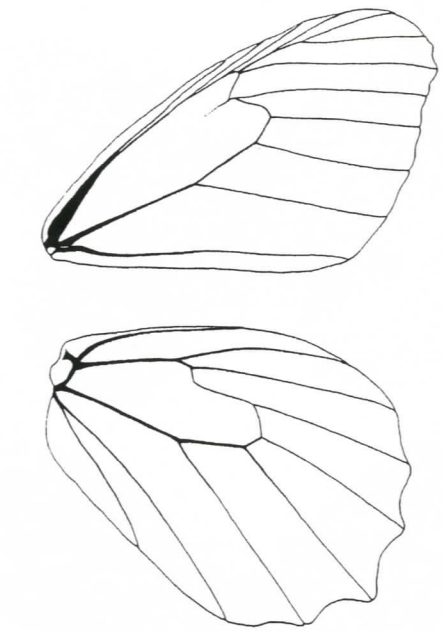

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Fig. 2-3. **2.** Wing venation of *Foetterleia* (male); **3.** Male genitalia of *Foetterleia schreineri*. Aedeagus and valvae have been removed from their original positions.