



## A survey of the Neotropical montane butterflies of the subtribe Pronophilina (Lepidoptera, Nymphalidae) in the Venezuelan Cordillera de la Costa

ANGEL L. VILORIA<sup>1</sup>, TOMASZ W. PYRCZ<sup>2</sup> & ANDRÉS ORELLANA<sup>3</sup>

<sup>1</sup>Centro de Ecología, Instituto Venezolano de Investigaciones Científicas, Apartado 20632, Caracas 1020-A, Venezuela.  
E-mail: aviloria@ivic.gob.ve

<sup>2</sup>Zoological Museum of the Jagiellonian University, Ingardena 6, 30-060 Kraków, Poland. E-mail: pyrcztomasz@hotmail.com

<sup>3</sup>Universidad Nacional Experimental del Táchira, Laboratorio de Zoología, Apartado Postal 15, Paramillo, San Cristóbal 5001, Táchira, Venezuela. E-mail: aorell@gmail.com

### Table of contents

Abstract .....	2
Resumen .....	2
Introduction .....	2
Study area .....	3
Material and methods .....	4
Species accounts .....	6
<i>Corades enyo enyo</i> Hewitson .....	6
<i>Corades medeba pittieri</i> Pyrcz & Viloría <b>n. ssp.</b> .....	7
<i>Corades pannonia pannonia</i> Hewitson .....	8
<i>Eretris encycla encycla</i> (C. & R. Felder) .....	9
<i>Eretris neocycla</i> Pyrcz & Viloría, <b>n. sp.</b> .....	9
<i>Lasiophila zapatoza zapatoza</i> Westwood .....	11
<i>Lymanopoda obsoleta</i> (Westwood) .....	11
<i>Lymanopoda caucana caucana</i> Weymer .....	12
<i>Mygona irmina</i> (Doubleday) .....	13
<i>Oxeoschistus puerta puerta</i> (Westwood) .....	13
<i>Panyapedaliodes panyasis</i> (Hewitson) .....	14
<i>Pedaliodes piletha piletha</i> (Hewitson) .....	14
<i>Pedaliodes piletha costae</i> Viloría & Pyrcz <b>n. ssp.</b> .....	15
<i>Pedaliodes manis ivica</i> Viloría & Pyrcz <b>n. ssp.</b> .....	16
<i>Pedaliodes manneja</i> Thieme .....	18
<i>Pedaliodes pisonia</i> (Hewitson) .....	19
<i>Pedaliodes plotina plotina</i> (Hewitson) .....	20
<i>Pedaliodes pryтанis</i> (Hewitson) .....	21
<i>Praepronophila perperna perperna</i> (Hewitson) .....	22
<i>Pronophila obscura</i> Butler (Figs. 29, 30) .....	23
<i>Pronophila thelebe</i> Doubleday .....	24
<i>Pseudomaniola phaselis phaselis</i> (Hewitson) .....	25
<i>Steroma bega bega</i> Westwood .....	26
<i>Thiemeia phoronea phoronea</i> (Doubleday) .....	26
<i>Manerebia mycalesoides</i> (C. & R. Felder) .....	27
Discussion .....	27
Acknowledgements .....	29
Literature .....	29

## Abstract

The fauna of montane satyrine butterflies of the subtribe Pronophilina (Lepidoptera: Nymphalidae) is surveyed in the Venezuelan Cordillera de la Costa, a long but relatively low range of mountains consisting of two parallel units, the northern and higher Serranía del Litoral and the southern, lower Serranía del Interior. The subtribe Pronophilina is briefly characterized. Twenty-three known species are listed and discussed. One new species, *Eretris neocyclus* n. sp., and three new subspecies, *Corades medeba pittieri* n. ssp., *Pedaliodes piletha costae* n. ssp. and *Pedaliodes manis ivica* n. ssp., are described. Ten lectotypes are designated. *Thiemeia phoronea obscurata* Krüger is reinstated as a valid subspecies, based on female characters. Faunal affinities and local endemism ratio are evaluated. Alpha-diversity is discussed and compared with that of other South American ranges. Two elevational species assemblages are identified, lower and upper, the latter confined to the Serranía del Litoral.

**Key words:** affinities, Andes, cloud forests, diversity, Pronophilina, Serranía del Interior, Serranía del Litoral, Turimiquire

## Resumen

Se ha investigado la fauna de mariposas satíridas de montaña pertenecientes a la subtribu Pronophilina (Lepidoptera: Nymphalidae) en la Cordillera de La Costa venezolana, un sistema montañoso largo pero relativamente bajo, el cual consiste de dos unidades que discurren paralelamente: la Serranía del Litoral, más alta y norteña, y la Serranía del Interior, que es más baja y sureña. Se caracteriza brevemente la subtribu Pronophilina. Se citan y discuten veintitrés especies conocidas en este sistema. Se describe una nueva especie, *Eretris neocyclus* n. sp., y tres nuevas subspecies, *Corades medeba pittieri* n. ssp., *Pedaliodes piletha costae* n. ssp. y *Pedaliodes manis ivica* n. ssp. Se designan diez lectotipos. Se reestablece la validez de *Thiemeia phoronea obscurata* Krüger, basado en los caracteres de la hembra. Se evalúan las afinidades faunísticas y la tasa de endemismo local. Se discute además la diversidad alfa en comparación con la de otras regiones montañosas suramericanas. Se identifican dos comunidades altitudinales de especies, inferior y superior, esta última restringida a la Serranía del Litoral.

**Palabras clave:** afinidades, Andes, bosques nublados, diversidad, Pronophilina, Serranía del Interior, Serranía del Litoral, Turimiquire

## Introduction

The butterflies surveyed here are mainly high elevation Satyrids restricted to the Neotropical region. Miller (1968) characterized this group as members of the tribe Pronophilini (Lepidoptera: Nymphalidae, Satyrinae). Harvey (1991) downranked this and other Neotropical Satyrinae tribes raised by Miller to the subtribal level. Pycz (1999a, b, 2004), Pycz & Viloría (1999) and Pycz & Wojtusiak (1999, 2002), among others, did not concur with that action, but pointed out that Harvey's revisional classification of the Nymphalidae (*sensu lato*) was mainly based on larval morphology data, which were then almost completely unknown for the pronophiline butterflies. Therefore, they could not be properly applied in this case. This situation has not changed much today. Despite some recent contributions (Pelz, 1997; Heredia & Viloría, 2003; Greeney et al., 2010), the immature stages of this group of satyrine butterflies remain largely undiscovered. Nevertheless, we follow herein the most recent systematic arrangement of the Neotropical Satyrinae proposed by Lamas *et al.* (2004), thus considering most of the butterflies herein studied, as belonging to the subtribe Pronophilina. The genus *Manerebia* Staudinger, previously considered as belonging to the tribe Pronophilini has recently been placed within the sub-tribe Erebiina (Lamas & Viloría, 2004) (see justifications in Viloría, 2007).

There are more than 550 recognized species of Pronophilina (Lamas *et al.*, 2004), 95% of which occur mainly in the Tropical Andes between Venezuela and northern Argentina (Pycz, 2004). They are the best-represented group of butterflies in terms of species richness and abundance in cloud forest habitats (Adams, 1985, 1986; Pycz & Wojtusiak, 1999, 2002). The most outstanding biogeographical feature of the Pronophilina is their altitudinal distribution pattern. Most species are distributed in well-defined and usually narrow bands of altitude (Adams, 1985, 1986; Raguso & Gloster, 1993; Pycz & Wojtusiak, 1999, 2002; Pycz, 2004; Pycz et al., 2009). Another notable feature of these butterflies is the high percentage of endemic