Zootaxa 2622: 1–41 (2010)
www.mapress.com/zootaxa/

Article

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

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

ANGEL L. VILORIA[1], TOMASZ W. PYRCZ[2] & ANDRÉS ORELLANA[3]

[1]*Centro de Ecología, Instituto Venezolano de Investigaciones Científicas, Apartado 20632, Caracas 1020-A, Venezuela. E-mail: aviloria@ivic.gob.ve*

[2]*Zoological Museum of the Jagiellonian University, Ingardena 6, 30-060 Kraków, Poland. E-mail: pyrcztomasz@hotmail.com*

[3]*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

Accepted by M. Toliver: 11 May 2010; published: 23 Sep. 2010

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 neocycla* **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 neocycla* **n. sp.**, y tres nuevas subespecies, *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. Pyrcz (1999a, b, 2004), Pyrcz & Viloria (1999) and Pyrcz & 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 & Viloria, 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 & Viloria, 2004) (see justifications in Viloria, 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 (Pyrcz, 2004). They are the best-represented group of butterflies in terms of species richness and abundance in cloud forest habitats (Adams, 1985, 1986; Pyrcz & 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; Pyrcz & Wojtusiak, 1999, 2002; Pyrcz, 2004; Pyrcz et al., 2009). Another notable feature of these butterflies is the high percentage of endemic

taxa found in all surveyed ranges. Endemism ratios within the group reach the highest levels in the most isolated parts of the northern Andes, especially in the Sierra Nevada de Santa Marta, the Cordillera de Mérida and the Sierra de Perij (Adams, 1985; Pyrcz, 2004).

This article is a follow-up to a series of monographs dedicated to the local faunas of pronophiline butterflies of the north Andean mountain ranges initiated by Adams & Bernard (1977) with a survey of the Colombian Sierra Nevada de Santa Marta. These authors continued with a similar study performed in the Serranía de Valledupar (a sector of the Sierra de Perij) on the Colombia-Venezuela border (Adams & Bernard, 1979), and another in the Venezuelan Cordillera de Mérida (Adams & Bernard, 1981). In fact, the latter referred only to the central part of that range, the Sierra Nevada and the Serranía de la Culata. The northern and southern parts of the Cordillera de Mérida harbour a partly different fauna, with an important number of endemic species, some of them discussed by Viloria (1994), Pyrcz & Wojtusiak (2002) and Viloria *et al*. (2003). Adams (1986) published a wide-scale review of the pronophilines of the three main Colombian mountain chains, the Eastern, Central and Western Cordilleras. This study was revised and complemented by Pyrcz (1999a, b), Pyrcz & Wojtusiak (1999) and Pyrcz & Viloria (1999). Pyrcz (2004) published a monograph of the Pronophilina (including the genus *Manerebia*) occurring in the highlands of Chachapoyas in northern Peru, and Pyrcz & Viloria (2007) continued the series with a survey of the Serranía de El Tamá, a mountain unit somewhat isolated of the northern tip of the Colombian Eastern Cordillera, just on the Colombia-Venezuela border.

One of the ranges of the northern part of South America so far lacking any monographic treatment of its pronophiline fauna is the Venezuelan Cordillera de la Costa. This is rather surprising, considering that it is one of the more easily accessible ranges in the continent, and the earliest source of Neotropical montane butterflies for European collections. It is also the type locality of several widespread species of the Pronophilina (Viloria *et al*., 2001). Some information about the satyrine fauna of the Cordillera de la Costa appeared in the album "The Butterflies of Venezuela" (Raymond, 1982), including 16 illustrated species of Pronophilina. Recent works dealing with the Pronophilina of the coastal region of Venezuela are one paper by Viloria & Camacho (1999), which is concerned mainly with the description of three new taxa from the Serranía del Turimiquire, and includes a discussion of the status of *Corades enyo enyo*. Another paper by Viloria *et al.* (2001) deals with historical aspects of lepidopterology in the coastal range and discusses the taxonomic status of *Pedaliodes pisonia* (Hewitson), and one by Pyrcz & Fratello (2005) discusses some species occurring in the Cordillera de la Costa and provides an updated number of species known from this range.

Study area

In a wide sense, the coastal range of Venezuela extends approximately 720 km in an east-west direction along the northern (Caribbean) coast of this country. It includes two units – one comprising the western Serranía del Litoral and the parallel Serranía del Interior – and the other one formed by the eastern Serranía del Turimiquire and the mountains of the Península de Paria, opposite to the island of Trinidad. The two units are separated by a vast area of lowlands and hills called the depression of Unare (ca. 10°N, 65°W) with a minimum contact elevation at 250 m. The western end of the Cordillera de la Costa is in the State of Yaracuy where the depression of Yaracuy forms a natural separation from the south-westerly adjacent Cordillera de Mérida and the Sierra de Aroa, part of the Andes (see map, Fig. 64).

This study is exclusively concerned with the western unit, to which the name Cordillera de la Costa is most commonly restricted. The easternmost unit harbours an endemic fauna, which even if related to that of the Cordillera de la Costa, is currently poorly known. It requires extensive study before reaching a level of knowledge allowing a monographic treatment (Viloria & Camacho, 1999).

The two parallel east-west mountain chains, a northern Serranía del Litoral, and a southerly adjacent and lower Serranía del Interior, are separated by the valleys of Caracas and El Tuy, and the lower basin of the Lake Valencia. The highest elevation of the Cordillera de la Costa is Pico Naiguatá (2765 m) located just north of

Caracas, followed by the Silla de Caracas (2640 m) situated in the same area. Pico Codazzi (2426 m) and Pico La Mesa (2400 m) are situated to the north of the city of Maracay. The highest elevation of the Serranía del Interior, is the Cerro Platillón (1930 m), followed by Guatopo (1800 m).

The orogeny that led to the formation of the Cordillera de la Costa started 80 Ma. It was eventually formed by strong tectonic movements during the Tertiary (60 Ma). This range is therefore considerably older than the Andes whose orogenesis started 30 Ma (Gregory-Wodzicki, 2000). Another, more recent process, some 12 Ma, determined the lifting of the Serranía del Interior (Vivas, 1992).

The vegetation types covering the Cordillera de la Costa show a characteristic altitudinal zonation throughout the range (Beebe and Crane 1947; Schäfer 1952; Steyermark & Huber, 1978). Mangrove and palm forests are found on the coastline wherever it is not formed by steep rocky slopes emerging abruptly from the sea. The lowermost slopes (ca. <200 m) are covered with a dense, 3–8 m high thorn scrub dominated by columnar cacti, spiny shrubs, low sclerophyllous shrubs and some understory herbs. Semi-deciduous lower montane forest occupies the slopes from ca. 300–600 m. Its understory is dense with frequent lianas. From 600–800 to 900 m evergreen transition forests form a narrow belt between the lower montane semi-deciduous and upper montane cloud forests. The understory is dominated by shrubs together with large colonies of giant herbs belonging to Musaceae, Araceae and Marantaceae, and ferns (Huber, 1986). Montane forests, the most species-rich plant communities in the entire Cordillera de la Costa, extend from 1000 m up. The most characteristic floristic elements are palms, very frequent in the canopy and in the understory. They grow solitarily (*Dictyocarium* sp., *Socratea* sp., *Geonoma* spp.) or in large clumps (*Hyospathe elegans* Martius, *Catoblastus praemorsus* Wendl., *Bactris* sp.). The epiphytes, mainly ferns, orchids, and bromeliads are also abundant (Vareschi, 1986). Terrestrial ferns, including arboreal forms, and bamboo of the genus *Chusquea* Kunth., host plants of the pronophiline butterflies (Schultze, 1929; DeVries, 1987; Heredia & Viloria, 2003; Pyrcz, 2004), are particularly abundant and diverse in the cloud forests above 2000 m. An open scrub vegetation covers the highest peaks of the range. Its physiognomy resembles in some instances the subparamo belt of the Andes, with which it shares some significant species, such as *Libanothamnus neriifolius* Ernst. This espeletioid composite dominates the open scrub. In the upper montane scrub an irregular but often rather dense herbaceous layer is present, in which some Andean affinities can be detected (Huber, 1986). Phytogeographically, the flora of the Cordillera de la Costa shows strong relationships to the Mesoamerican and Caribbean floristic regions, and to a lesser degree, to the northern Andean flora. It probably contains some 10% endemic taxa (Huber, *op. cit.*).

Material and methods

Species discrimination. Through our long term research on the systematics of Neotropical Satyrinae, we have fundamentally used the morphological concept of species. Taxa were discriminated on the specific and subspecific level on differences in the external morphology and male genitalia. As far as external morphology is concerned, such primary characters were used as the shape, color and scaling of antennae, length, hairiness and the color of the labial palps, eye coloration, leg coloration and hairiness, androconial scales of the forewing dorsum disposition and shape, mostly applicable to the genus *Pedaliodes* Butler. Color pattern remains the source of primary value in the taxonomy of diurnal Lepidoptera, for it plays a major role in intraspecific recognition and sexual isolation. Given considerable individual variation in the color pattern of the taxa studied, large series were compared whenever possible. Male genitalia proved an extremely valuable taxonomic character, and for this group of butterflies there is currently much more knowledge on the comparative morphology of male genitalic structures than that of females. Primary sclerites were examined and compared, such as uncus, gnathi, subscaphium and superuncus (the latter two exclusive of *Lymanopoda* Westwood), valvae, particularly their dorsal sculpture, saccus and aedeagus. Male genital dissections were made with a warm solution of 10% KOH and preserved in glycerol. Photographs of adults were taken with a digital camera, Olympus E-500. Macro photographs were taken with an Olympus Camedia camera mounted on a binocular Olympus SZX9 microscope.

Material examined. The oldest available montane satyrine butterflies from the Cordillera de la Costa (CC) were collected around 1843 by Karl Moritz, a German explorer established in Venezuela. Moritz collected several species of Satyrinae and even applied working names to them (for more on that issue, see: Viloria *et al.*, 2001). Some of these taxa, i. e., *Corades auriga* and *Corades ichthya*, were later described by the German naturalist Herrich-Schäffer [1858], who unfortunately ignored or overlooked the fact that the same species were described some years earlier with different names by the British lepidopterist William Chapman Hewitson. Two valid names derive from specimens collected by Moritz: *Eretris encycla* C. & R. Felder (1867) and *Manerebia mycalesoides* C. & R. Felder (1867). But we cannot rule out the possibility that some of the butterflies originally obtained by Moritz eventually reached the hands of English lepidopterists, at an early date, via the Felders' collection. A good representation of the Mortiz material was examined in the Museum of Zoology of the Humboldt University (ZMHU), in Berlin.

Most species of montane satyrines occurring in the Cordillera de la Costa were described by British entomologists, Hewitson ([1849], 1850, 1862), Doubleday [1849], Westwood [1851], and Butler (1867, 1868, 1870), based on specimens captured in the vicinity of Caracas by an English professional collector, Dyson. Their type specimens were examined in The Natural History Museum, London (BMNH). Type specimens of the species described by C. & R. Felder (1867) and Herrich-Schäffer [1856, 1858] were also examined in the BMNH.

The syntypes of Thieme's species, *Pedaliodes cestia* and *Eretris rubricaria* (Thieme, 1905, 1907), both considered herein as junior synonyms, could not be traced. They are missing, together with a notable proportion of his collection of types. Twenty species occurring in the Cordillera de la Costa were described through the first decade of the 20th century. All of them were illustrated and discussed by Weymer (1912) in Adalbert Seitz's catalogue. Incidentally, the type of *Lymanopoda caucana* Weymer (1912) could not be located by us.

Lectotypes and paralectotypes of the species of *Pedaliodes* and related genera herein designated (all in the BMNH) were appropriately identified by rectangular red and yellow labels respectively (10x22mm), bearing the designation date of 1997 by A. Viloria.

The bulk of the material examined for the present work was acquired by the authors and other collectors during the last two decades, and it comes mostly from the Serranía del Litoral. The primary source of CC pronophilines are the surroundings of the locality of Colonia Tovar situated at 1700–1900 m in the central part of the SL. There are numerous fairly accessible trails north of Colonia Tovar crossing the ridge at 2100–2300 m and descending to the Caribbean coast across large portions of well preserved forests. The main trails sampled in the area of Colonia Tovar are: Los Colonos-Naranjal, Puerto Inca, Cuesta de Puerto Maya and Capachal road. Another important source of recent material is the Avila National Park situated north of Caracas. The most frequently sampled areas are: Los Venados road, Pico Humboldt, El Paraíso and Naiguatá. Another sampled locality situated north-west of Caracas is Altos de Pipe (1600–1700 m). The third heavily sampled area is the Henri Pittier National Park situated north of Maracay, mostly along the two main roads crossing the Cordillera, the road Maracay-Choroní, and the road Maracay-Ocumare de la Costa, especially around Rancho Grande, the renowned field station administered by the Universidad Central de Venezuela, from which a nearby trail climbs up to 2000 m at the Pico Guacamaya. One area situated in the extreme western part of the Serranía del Litoral was also sampled, the Cerro San Isidro (Cerro de Paja). The Serranía del Interior (SI) was sampled to a lesser degree. Comparative material comes mostly from several localities situated south of the locality of La Victoria, such as Tiara, Tasajera, Villa de Cura. A well sampled locality is the Cerro Platillón, the highest summit of the SI reaching 1930 m. Additionally, some data come from the Guatopo National Park situated in the eastern part of the SI. Sampling in the Colonia Tovar area took place throughout the year, other localities, especially in the SI, were sampled mostly at the end of the rainy season (October-December).

The material examined is deposited in public museums and private collections as indicated below.

AFNL Collection of Andrew Neild, London, UK
BMNH The Natural History Museum, London, UK

FRR	Collection of the Romero Family, Maracay, Venezuela
JCS	Collection of Juan Carlos Desousa, Barquisimeto, Venezuela
MCC	Collection of Mauro Costa, Caracas, Venezuela
MIZA	Museo del Instituto de Zoología Agrícola, Maracay, Venezuela
MZUJ	Muzeum Zoologiczne Uniwersytetu Jagiellońskiego, Kraków, Poland
PBF	Collection of Pierre Boyer, Le Puy Sainte Réparade, France
TWP	Collection of Tomasz W. Pyrcz, Warsaw, Poland (to be integrated into MZUJ)
ZMHB	Zoologische Museum Humboldt Universität, Berlin, Germany
ZSBS	Zoologisches Staatssammlung München, Munich, Germany.

Abbreviations used

CC	Cordillera de la Costa
CCC	Colombian Cordillera Central
CM	Cordillera de Mérida
EC	Colombian Cordillera Oriental
ET	Serranía de El Tamá
SI	Serranía del Interior
SL	Serranía del Litoral
SM	Sierra Nevada de Santa Marta
SP	Sierra de Perijá
ST	Serranía del Turimiquire
WC	Colombian Cordillera Occidental
FW	Forewing
HW	Hindwing
D	Dorsal
V	Ventral

Species accounts

***Corades enyo enyo* Hewitson**
(Figs. 37, 38)

Corades enyo enyo Hewitson, [1849]: 115. Lectotype (male) in BMNH, designated by Viloria & Camacho, 1999: 176 [examined].
Corades auriga Herrich-Schäffer, [1856]: figs. 82, 83.

Geographic range: Species: CC, ST, CM, throughout Colombia, Ecuador, north-western and eastern Peru, Bolivia; Subspecies: CC, ST.

Altitudinal range: 2000–2200 m (Krüger, 1925); 1400–2200 m (Adams & Bernard, 1977); 1270–1900 m (Raguso & Gloster, 1993); 1300–2400 m (Pyrcz, 1999); 1400–2300 m.

Remarks: Polytypic; several subspecies are as yet to be described (Pyrcz, MS). Easily identified by five orange FWD patches, and russet ground color. *C. enyo* is common in the surveyed area of the Cordillera de La Costa, frequently observed perching and patrolling along forest trails and in light gaps. Contrary to other congeners, it often penetrates into secondary bushes and open areas (Viloria & Camacho, 1999). *Corades auriga* Herrich-Schäffer is considered junior synonym of *Corades enyo* based on the comparison of original figures of the former with the lectotype of the latter taxon.

Material examined: DISTRITO FEDERAL: 1 male: Cumbre de Boquerón frente a Bajo Seco, 1600 m, 22.II.1977, C. J. Rosales *leg.*, MIZA; 1 male: Serranía El Avila, Los Venados, 1500 m, 15.VII.1950, F. Fernández Y. *leg.*, MIZA; 1 female: El Valle, 15.V.1950, F. Fernández Y. *leg.*, MIZA; 1 female: El Valle,

15.V.1950, F. Fernández Y. *leg.*, MIZA; 1 female: El Valle, 15.V.1950, F. Fernández Y. *leg.*, MIZA; 1 female: P.N. El Avila, 1500 m, 12.VII.1979, D. Baiocchi *leg.*, MIZA; 1 female: El Valle, 15.V.1950, F. Fernández Y. *leg.*, MIZA; 1 female: El Junquito, 28.V.1950, F. Fernández Y. *leg.* MIZA; MIRANDA: 1 female: Qda. Pasaquire, 1100 m, 30.X.1981, J. De Marmels *leg.*; 1 male: Pico Naiguatá, N. of Caracas, 1500 m, 18.V.1975, M. Adams *leg.*, BMNH; ARAGUA: 2 males: Colonia Tovar, 2200 m, 4.XII.1950, F. Fernández Y. *leg.*, MIZA; 1 male: Rancho Grande, 1100 m, 23.I.1952, C. J. Rosales *leg.*, MIZA; 2 males: Colonia Tovar, Los Colonos, 2100 m, 06.VIII.2003, T. Pyrcz *leg.*, TWP; 1 male: Colonia Tovar, vía Capachal, 2100 m, 02.VIII.2003, T. Pyrcz *leg.*, TWP; 1 male: Colonia Tovar, 2100 m, IV.1993, F. Romero *leg.*, FRR; 1 male: same data but III.1995, FRR; 1 male: same data but X.1995, FRR; 1 male: same data but I.1999, FRR; 1 male: carretera Maracay-Choroní, 1510 m, IX.1975, F. Romero *leg.*, FRR; 1 male: same data but 1450 m, II.1979, FRR; 1 male: same data but 1260 m, IX.1975, FRR; 1 male: same data but 1300 m, VI.1982, FRR; 1 male: same data but 1400 m, IX.1992, FRR; 1 male: same data but 1100 m, XI.1976, FRR; 1 female: Colonia Tovar, 2100 m, 04.XII.1950, F. Fernández Y. *leg.*, MIZA; 1 female: Colonia Tovar, vía Capachal, 2100 m, 02.VIII.2003, T. Pyrcz *leg.*, TWP; 1 female: Colonia Tovar, I.1981, F. Romero *leg.*, FRR; 1 female: carretera Maracay-Choroní, 1400 m, X.1978, F. Romero *leg.*, FRR; 1 female: same data but 1510 m, X.1976, FRR; 1 female: same data but 1260 m, IX.1998, FRR; 1 female: same data but 1300 m, V.1976, FRR; 1 female: same date but 1200 m, XI.1975, FRR; 2 females: same data but 1300 m, X.1976; FRR; CARABOBO: 4 males: Bejuma, Cerro San Isidro, 1500–1600 m, 10.VIII.2003, T. Pyrcz *leg.*, TWP; 1 female: Hda. Monte Sacro, Chirgua, 1700 m, 24.V.1976, M. Gadou *leg.*, MIZA.

***Corades medeba pittieri* Pyrcz & Viloria n. ssp.**
(Figs. 39, 40, 57)

Corades medeba Hewitson, 1850: 439, pl. 10, fig. 4. Syntypes (2 males), in BMNH [examined].

Diagnosis: More than 300 individuals of *C. medeba* from the entire range of the species were examined, demonstrating that this subspecies is recognized from the individuals of other subspecies of *C. medeba* first of all by the almost uniform silver beige HWV in the male and light beige in the female. FWV median orange dots of *pittieri* are considerably smaller than in the nominate subspecies and most populations of *columbina* Staudinger, except for the specimens occurring the CM.

Description: MALE (Fig. 39): Head, thorax and abdomen as in other subspecies. FW triangular with a blunt apex, length: 33–34 mm, mean: 33.6 mm, n=14. HW oval with slightly scalloped outer margin and a short tail-like extension along vein Cu2. FWD: dark chocolate brown, very slightly lighter than in *C. medeba columbina*; a large blackish androconial scale covering two-thirds of wing surface. HWD: uniform dark chocolate brown, lustrous. FWV: dark brown; two faint orange spots in the middle of the discal cell, and in the postdical area in cell M2-M3; a faint whitish costal patch in postdiscal area; subapical and apical area beige dusted with some magenta scales. HWV: ground color silver beige, as compared to olive dark brown in other subspecies of *C. medeba*; a slightly darker median band with a yellowish discal cell spot at bese of vein Cu1; a row of faint submarginal dark brown dots, not apparent in cell M3-Cu1. Male genitalia (Fig. 57): In the nominate subspecies the valvae are wide and of the same width throughout their length, whereas in *pittieri* and *columbina* they are consistently slender and gradually narrow towards apex; the difference between *pittieri* and *columbina* are mostly quantitative, and consist in the thinner subunci, shallower saccus and shorter valvae. All the subspecies of *C. medeba* have serrate subunci on dorsal surface near the tip, a character not found in other *Corades*.

FEMALE (Fig. 40): FW length: 34.5–35 mm, mean: 34.7 mm, n=3. FWD: medium brown, glossy; a small median orange patch in M3-Cu1; two whitish postdiscal costal patches; two diffused whitish subapical patches, dusted with brown; a row of four submarginal small orange patches in M2-M3 to Cu1-Cu2 (FWD pattern variable as in all subspecies of *C. medeba*). HWD: medium brown, lustrous; faint, diffused orange markings in postdiscal area. FWV: dark brown; costa, apex and outer margin very light beige; a short orange

discal streak; a roughly rounded orange postdiscal patch in M3-Cu1; a row of four oval postdiscal orange patches in M2-M3 to Cu1-Cu2. HWV: very light beige with some brown ripple-like pattern on the entire wing surface without any noticeable concentration; a very slightly darker median band. Female genitalia: not illustrated.

Types: Holotype (male): Venezuela, Aragua State, Colonia Tovar, La Entrada, 22.V.1993, P. Rouche *leg*., MIZA; Allotype (female): 1 female: Colonia Tovar, Los Colonos, 2100–2150 m, 06.VIII.2003, T. Pyrcz *leg*., TWP; Paratypes (37 males and 4 females): ARAGUA: 1 male: Colonia Tovar, 1900–2100m, 11.XI.1997, P. Boyer *leg.*, PBF; 2 males: same data but 01.X.1997, PBF; 1 male: same data but 03.XII.1994, PBF; 2 males: Colonia Tovar, 2200 m, 4.XII.1950, F. Fernández Y. *leg*., MIZA; 2 males: Colonia Tovar, vía Cuesta Maya, 2100 m, 14.V.1996, J. DeMarmels *leg*., MIZA; 3 males: Colonia Tovar, vía Naranjal, 2100 m, 7.III.2004, M. Costa *leg*., MCC; 3 males: same data but 20.III.2004, MCC; 1 males and 1 female: same data but 28.II.2004, MCC; 2 males: Colonia Tovar, 2200 m, 27.II.1984, M. Costa *leg*., MCC; 5 males: Colonia Tovar, vía Naranjal, 1900 m, 01.XI.2004, T. Pyrcz *leg*., TWP; 5 males: Colonia Tovar, Los Colonos, 2100 m, 06.VIII.2003, T. Pyrcz *leg*., 1 MZUJ, 1 BMNH, 3 TWP; 1 male: Colonia Tovar, 2100 m, III.1995, F. Romero *leg*., FRR; 2 males and 1 female: same data but 2100, IV.1993, FRR; 1 male: same data but 2200 m, FRR; 2 males and 2 females: same data but 2300 m, FRR; 2 males: sama data but 2200 m, IV.1982, FRR; 1 male: same data but 2200 m, IV.1983, FRR; 1 male: same data but 2200 m, X.1995, FRR.

Etymology: Named after Henri Pittier, a Swiss-American botanist and naturalist, promoter of the creation of a research station in Rancho Grande and a protected area of cloud forest in the Cordillera de la Costa currently known as Henri Pittier National Park.

Geographic range: Species: CC, CM, throughout Colombia, Ecuador, eastern slopes in Peru and Bolivia; Subspecies: CC.

Altitudinal range: 2300–2850 m (Adams, 1986); 2300–2400 m (Pyrcz & Wojtusiak, 2002) ssp. *columbina* Thieme; 2000–2400 m (Pyrcz, 2004) ssp. *medeba* Hewitson; 1800–>2400 m in CC.

Remarks: Polytypic, and as widespread as *C. pannonia*. It is less common than *C. enyo* in the CC, still frequently encountered along forest trails, usually perching and patrolling in the subcanopy, engaging in aerial fights with the congeners, and occasionally coming to the ground to feed on organic matter.

Corades pannonia pannonia Hewitson
(Figs. 41, 42)

Corades pannonia pannonia Hewitson, 1850: 438, pl. 10, figs 1, 2. Lectotype (male) in BMNH, designated by Adams & Bernard, 1981: 351 [examined].
Corades ichthya Herrich-Schäffer, [1856]: fig. 84.
Corades fluminalis Butler, 1870: 26. Synonymy established by Thieme, 1907: 212.

Geographic range: Species: CC, CM, throughout Colombia, Ecuador, eastern Peru and Bolivia; Subspecies: CC.

Altitudinal range: 2000–2700 m (Fassl, 1911); 1600–2600 m (Krüger, 1925); 1750–2250 m (Pyrcz & Wojtusiak, 1999); 2400–2500 m ssp. *ploas* Thieme (Pyrcz & Wojtusiak, 2002); 1600–2400 ssp. *condorita* Lamas (Pyrcz, 2004); 1800–2200 m.

Remarks: Polytypic and nearly as widespread as *C. enyo*. *C. pannonia* is identified by a uniform dorsum, and HWV crossed by a straight oblique yellow band. Males perch and keep territories, usually in the subcanopy and frequently come to feed on the ground on decomposing organic matter. In some Andean localities *C. pannonia* is found down to 1600 m, but it occurs only above 1800 m in the surveyed areas of the CC. *Corades ichthya* Herrich-Schäffer is considered junior synonym of *Corades pannonia* based on the comparison of original figures of the former with the types of the latter taxon.

Material examined: ARAGUA: 1 male: Colonia Tovar, 2200 m, 04.XII.1950, F. Fernández Y. *leg*. MIZA; 1 male: Colonia Tovar, vía Capachal, 2100 m, 02.VIII.2003, T. Pyrcz *leg*., TWP; 6 males and 4 females: Colonia Tovar, 2100 m, IV.1993, F. Romero *leg*., FRR; 1 female: same data but 2200 m, FRR; 1 male

and 1 female: same data but 2300 m, FRR; 1 female: same data but 2100 m, V.2003, FRR; 1 female: Colonia Tovar, Capachal, 2000 m, 22.II.2010, T. Pyrcz *leg*., TWP; MIRANDA: 1 female: Avila, Lagunazo, 14.XI.1981, J. DeMarmels *leg.* MIZA.

***Eretris encycla encycla* (C. & R. Felder)**
(Figs. 44, 45, 56)

Pronophila encycla C. & R. Felder, 1867: 472. Syntype (male) in BMNH, Lectotype designated by Pyrcz & Viloria (2007) [examined].

Eretris rubricaria Thieme, 1905: 134, pl. 3, fig. 40. Whereabouts of types unknown. Synonymy to be established by Pyrcz *et al.* (in prep.).

Geographic range: Species: CC, CM, SP [?], WC, CCC [?] and northern EC; Subspecies: SL southern slopes.

Altitudinal range: 1850–2000 as *E. calisto* (Pyrcz & Wojtusiak, 1999); 1700–2400 m in CC; 1700–2200 m.

Remarks: This is a polytypic species with several subspecies distributed in the CM, western Colombia and Ecuador. It was previously confused with *E. calisto* (C. & R. Felder) (Adams & Bernard, 1981), which occurs on the eastern slopes of the Andes in Colombia, Ecuador and northern Peru (Pyrcz, 2004). *E. encycla* and *E. calisto* are not known to be sympatric. The two have closely similar color patterns, but *E. calisto* is recognized by the usually wide brick-red or orange suffusion of the HWV, whereas in *E. encycla* the HWV is all shades of brown. *E. encycla* is also similar to *E. agata* Pyrcz described recently from the Guyana Shield (Pyrcz & Fratello, 2005). The generic taxonomy of *Eretris* has been discussed in more detail recently in a paper dedicated to the description of *E. julieta* Pyrcz & Gareca, another related species found in Bolivia (Pyrcz & Gareca, 2009). *E. encycla* is a common species in the SL, and similarly to *S. bega*, it is very fond of hot, sandy places on forest trails and road.

Material examined: DISTRITO FEDERAL: 1 male: P. N. Avila, Río Catuche, 1200 m, 07.XI.1993, TWP; MIRANDA: 2 males: Pico Naiguatá, N. of Caracas, 1900 m, 15.V.1975, M. Adams *leg*., BMNH; ARAGUA: 1 male: Rancho Grande, VIII.1985, T. Pyrcz leg., TWP; 2 males: Colonia Tovar, vía Gavantes, 1900–1950 m, 25.IV.2004, M. Costa *leg*., TWP; 1 male and 1 female: Colonia Tovar, Los Colonos, 2050–2100 m, 05.VIII.2003, T. Pyrcz *leg*., TWP; 6 males: Colonia Tovar, vía Naranjal, 1700–1800 m, 30.XI.2004, T. Pyrcz *leg*., TWP; 1 male: Colonia Tovar, Capachal, 2050–2100 m, 02.VIII.2003, T. Pyrcz *leg*., TWP; 10 males and 1 female: Colonia Tovar, Los Colonos, 2050–2100 m, 05.VIII.2003, T. Pyrcz *leg*., TWP; 6 males: same data but 06.VIII.2003, TWP; 1 female: Colonia Tovar, 2100 m, 11.XI.1997, P. Boyer *leg*., TWP; 2 females: Colonia Tovar, Los Colonos, 2100 m, 22.II.2010, T. Pyrcz *leg*., MZUJ; 1 male: carretera Maracay-Choroní, 1510 m, VIII.1975, F. Romero *leg*., FRR; 1 male: same data but 1450 m, II.1978, FRR; 1 male: same data but 1550 m, XI.1978, FRR; 1 female: Road to Choroni, N. of Maracay, 1600 m, 25.V.1975, M. Adams *leg*., BMNH.

***Eretris neocycla* Pyrcz & Viloria, n. sp.**
(Figs. 47, 48, 55)

Diagnosis: This species closely resembles in color pattern several congeners, including *E. calisto*, *E. agata* and *E. encycla*. The HWV pattern of *E. neocycla* resembles most closely *E. encycla*, particularly in the shape of postmedian crimson red bands, which is a character recognized as playing an important role in the generic taxonomy of *Eretris* (Adams, 1986; Pyrcz, 2004; Pyrcz & Gareca, 2009). *E. neocycla* is consistently larger in size than *E. encycla*, it has larger HWV submarginal ocelli, and a yellow HWD anal suffusion, which is a character not found in any subspecies of *E. encycla*.

Description: MALE (Fig. 45): Head: eyes chocolate brown, lustrous; palpi grey with rather long, dark brown hair; antennae reaching one third the length of costa, dorsally and ventrally orangish, club dark brown. Thorax: dorsally and ventrally blackish brown; legs dirty yellow. Abdomen: dorsally and laterally blackish brown, ventrally lighter, dull brown. FWD (length: 24–26 mm; mean: 25.4 mm, n=7; *E. encycla encycla*: 19–21 mm; mean: 19.8 mm, n=36) dark brown, slightly lighter and lustrous in distal third; a faint, nearly straight darker brown submarginal line, and a barely noticeable dark brown marginal line. HWD dark brown, same as the FW; a faint undulated darker brown submarginal line and a barely noticeable dark brown marginal line. FWV dark brown, a shade lighter than on the upperside; a thin, arched postbasal darker brown band; a dark brown postmedian band, undulated between vein Cu1 and anal margin; a thin, nearly straight wavy submarginal darker brown band; a thin yellow brown marginal band. HWV dark brown, same as on the FW; an arched, dark brown postbasal band; a crimson red postmedian band, slightly wavy from costa to vein Cu1, zigzagging from vein Cu1 to anal margin, sprinkled along basal edge from vein Cu1 to anal margin with dirty yellow scales; a row of six submarginal black, medium sized or big ocelli with white pupils and yellow rings, each in every cell, the Cu1-C2 slightly bigger than others, the remaining five roughly of the same size, the one in Cu2-1A on submarginal band; a thin red brown undulated submarginal band; a thin brownish yellow marginal band; the area between postmedian band and outer margin steely grey. Male genitalia (Fig. 55): As compared to the nominate subspecies of *E. encycla*, it differs by a shorter subuncus, deeper saccus, slightly thicker valvae, and larger, more noticeably flattened aedeagus.

FEMALE (Fig. 46): Head, thorax and abdomen as in male. FW length: 24–25 mm, mean: 25.5 mm, n=5. FWD: medium brown, distal third, beyond a faint darker brown postmedian band, lighter and duller; faint, nearly straight darker brown submarginal line; thin yellowish marginal band. HWD: medium brown; faint, undulated postmedian crimson red band with dark brown edge; faint sinuate dark brown submarginal line; thin yellow marginal band; three black submarginal ocellus ringed with orange in M3-Cu1, Cu1-Cu2 and Cu2-1A, the middle one slightly bigger than the other two. FWV: medium brown, shade lighter than on the upperside, outer one third, band light brown; thin, arched postbasal dark brown band; dark, nearly straight brown postmedian band; submarginal dark brown band parallel to outer margin; thin brownish yellow marginal band. HWV: medium brown, same as on the upperside; thin arched, dark brown postbasal band; irregular crimson red postmedian band with dark brown distal edge, zigzagging between vein Cu1 and anal margin; row of six submarginal black, medium sized ocelli, roughly similar in size, one in each cell, with white pupils and yellow-orange rings; thin undulated red brown submarginal band; thin brownish yellow marginal band. Female genitalia: not examined.

Etymology: The name of this taxon is a derivation from the epithet of the closely related *E. encycla*.

Types: Holotype (male): Venezuela, Aragua, Colonia Tovar, Cuesta de Puerto Maya (La Cumbre), 2100–2150 m, 23.IV.2006, T. Pyrcz *leg*., to be deposited in MIZA; Allotype (female): same data as the holotype, MZUJ; Paratypes (13 males and 9 females): ARAGUA: 1 male: Colonia Tovar, Los Colonos-Naranjal, north slopes, 2000 m, 19.II.2004, T. Pyrcz *leg.* MZUJ; 4 males and 1 female: Colonia Tovar, Cuesta de Puerto Maya (La Cumbre), 2100–2150 m, 23.IV.2006, T. Pyrcz *leg*., TWP; 1 female: Colonia Tovar, Los Colonos, 2100–2150 m, 25.II.2007. T. Pyrcz *leg*., MZUJ; 1 male: Colonia Tovar, Los Colonos, 2100 m, 22.II.2010, T. Pyrcz *leg*. MZUJ; 2 females: Colonia Tovar, Capachal, 2000 m, 22.II.2010, T. Pyrcz *leg*., MZUJ; 1 female: Colonia Tovar, Los Colonos, 2100 m, 03.III.2010, T. Pyrcz *leg*., MZUJ; 2 males: Colonia Tovar, 2100 m, 11.XI.1997, P. Boyer *leg*., PBF; 2 males: Colonia Tovar, 2000 m, 01.X.1997, P. Boyer *leg*., PBF; 1 female: Colonia Tovar, vía Naranjal, 2150 m, 04.VII.2004, M. Costa *leg*., MCC; 2 females: same data but 07.III.2004, MCC; 2 males: same data but 14.III.2004, MCC; 1 male and 1 female: Colonia Tovar, 2100 m, IV.1993, F. Romero *leg*., FRR.

Geographic range: SL, northern slopes.

Altitudinal range: 2100–>2400 m.

Remarks: This species occurs apparently only on the northern slopes of the Cordillera del Litoral. It is generally parapatric with *E. encycla*, and in most cases it was observed flying at slightly higher elevations. Along the main ridge of the range their ranges locally overlap, and the two species can be observed occurring together at 2100–2200 m. Such a situation takes place north of Colonia Tovar. *E. neocycla* is less common than the second local congener. Most individuals have been observed during particularly warm and sunny

days, flying in skipping action low above the ground, and occasionally setting on humid soil. *E. neocycla* is easily identified in flight from *E. encycla* due to its considerably larger size.

***Lasiophila zapatoza zapatoza* Westwood**
(Figs. 23, 24)

Lasiophila zapatoza Westwood, [1851]: 358. Syntypes (2 males and 1 female) in BMNH [examined].

Geographic range: Species: CC, CM, SP, EC, CCC; Subspecies: CC.

Altitudinal range: 2000–2500 m (Fassl, 1911); 2000–2900 m (Adams, 1986); 2250–2650 m (Pyrcz & Wojtusiak, 2002); 1900–2400 m.

Remarks: This is the only representative of the genus *Lasiophila* in the CC. Some authors (Lamas, 1997) consider it conspecific with *L. orbifera* Butler, but Pyrcz (1999) disagreed and demonstrated that there are important morphological differences between the two in the male genitalia. *L. zapatoza* is highly polytypic with separate, well differentiated subspecies in each north Andean range. Two subspecies occur in the CM, another one in the SP, and a fourth one in the ET. Contrary to the preceding species, *L. zapatoza* is very common in the sampled area of the Cordillera de La Costa. Individuals can be frequently observed executing patrolling flights along the trails, perching, and occasionally engaging into short-lasting interactions with other *Lasiophila*.

Material examined: DISTRITO FEDERAL: 1 male: P.N. El Avila–Caracas, 1500 m, 7.VII.1979, D. Baiocchi *leg*., MIZA; ARAGUA: 1 male: Colonia Tovar, 1800 m, 15.IX.1953, P. Guagliumi *leg*., MIZA; 2 males: Colonia Tovar, 2000 m, 4.XII.1950, F. Fernández Y. *leg*., MIZA; 1 male: Colonia Tovar, 1800 m, 5.II.1955, F. Rondón *leg*., MIZA; 1 male: Colonia Tovar, 26.VII.1987, ex coll. T. Pyrcz, MIZA; 1 male: Portaban, cr. Turmero, 1700, 1.III.1971, F. Fernández Y. *leg*., MIZA; 2 males: Colonia Tovar, vía Cuesta de Maya, 2000 m, 25–26.III.1998, A. Chacón *leg*., MIZA; 1 male: same locality, 2100 m, 21.XI.1996, J. DeMarmels and A. Chacón *leg*., MIZA; 2 males: same locality and collectors, 2100 m, 14.V.1996, J. DeMarmels and A. Chacón *leg*., MIZA; 1 female: Colonia Tovar, 1800 m, 4.XII.1950, F. Fernández Y. *leg*., MIZA; 1 female: Colonia Tovar, 1800 m, 25.IX.1953, F. Fernández Y. *leg*., MIZA; 1 female: Rancho Grande, 1100 m, 18.X.1967, F. Fernández Y. *leg*., MIZA; 8 males and 3 females: Colonia Tovar, Los Colonos, 2100–2150 m, 05.VIII.2003, T. Pyrcz *leg*., TWP; 6 males and 1 female: Colonia Tovar, Los Colonos, 2100–2150 m, 06.VIII.2003, T. Pyrcz *leg*., TWP; 7 males: Colonia Tovar, 2000 m, 19–20.II.1995, P. Boyer *leg*., TWP; 1 male and 1 female: Colonia Tovar, 2100 m, 11.XI.1997, P. Boyer *leg*., TWP; 1 male: Colonia Tovar, 2100 m, 01.XI.1997, P. Boyer *leg*., TWP; 6 males: Colonia Tovar, 2100 m, IV.1993, F. Romero *leg*., FRR; 1 male: same data but V.1970, FRR; 2 males: same data but VI.1975, FRR; 1 female: same data but 1400 m, IV.1979; 1 female: carretera Maracay-Choroní, 1400 m, IV.1979, F. Romero *leg*., FRR; 1 male: 3 kms N.W. of Colonia Tovar, West of Caracas, 2100 m, 22.V.1975, M. Adams *leg.*, BMNH; MIRANDA: 4 males: Pico Naiguatá, N. of Caracas, 1900–2000 m, 15.V.1975, M. Adams *leg.*, BMNH; 1 male: same data but 1500–1900 m, M. Adams *leg.*, BMNH; 1 male: Colonia Tovar, Capachal, 2000 m, 22.II.2010, T. Pyrcz *leg*., MZUJ.

***Lymanopoda obsoleta* (Westwood)**
(Figs. 49, 50)

Sarromia obsoleta Westwood, [1851]: 402. Syntype (male) in BMNH [examined].
Lymanopoda larunda Hopffer, 1874: 361. Whereabouts of types unknown. Synonymy given by Weymer, 1912: 248.

Geographic range: Species (monotypic): CC, CM, throughout Colombia, north-western, south-western and eastern Ecuador, eastern Peru and Bolivia.

Altitudinal range: 2250–2900 m (Adams, 1986; Pyrcz & Wojtusiak, 2002); 1800–2600 m, exceptionally at 1200 m (Pyrcz, 2004); 1700–2400 m.

Remarks: *L. obsoleta* is the most widespread species of the genus *Lymanopoda* but shows little geographic variation; thus, no subspecies have been described. However, a comparison between the population found in the CC and various specimens from the CM reveal some morphological differences. Adults in the CC are consistently smaller (FW length 20–21 mm, compared to 22–24 mm). HWV ground color is lighter, sandy orange-brown. There are some observable differences in the male genitalia, particularly in the amount, size and position of the spines on distal valval process and the width and depth of saccus. The population inhabiting the CC belongs to the nominate subspecies; hence, any future descriptions of new subspecies would concern the Andean populations of *L. obsoleta*. Only two species of *Lymanopoda* of a total of approximately 60 species (Lamas *et al.*, 2004) are found in the CC. *L. obsoleta* is recognized from its congener, *L. caucana*, by having an acute FW apex, and somewhat squarish HW. *L. obsoleta* flies at considerably higher elevations than *L. caucana*, and their elevational ranges do not overlap. *L. obsoleta* is a fairly common species in the CC.

Material examined: DISTRITO FEDERAL: 5 males: Pico Naiguatá, 2765 m, 16.V.1975, R. Dietz *leg.* MIZA; MIRANDA: 1 male: El Jarillo, 29.VI.1970, F. Fernández Y. *leg.* MIZA; 2 males: Avila, Lagunazo, 14.XI.1981, J. DeMarmels *leg.* MIZA; 1 male: Pico Naiguatá, N. of Caracas, 1900 m, 15.V.1975, M. Adams *leg.*, BMNH; 1 male: same data but 2000 m, M. Adams *leg.*, BMNH; 5 males: same data but 2700–2765 m, 16.V.1975, M. Adams *leg.*, BMNH; 1 male: same data but 17.V.1975, M. Adams *leg.*, BMNH; 1 male: same data but 1800 m, 18.V.1975, M. Adams *leg.*, BMNH; 1 male: same data but 2200 m, M. Adams *leg.*, BMNH; 1 male: same data but 1500–1900 m, 15.V.1975, M. Adams *leg.*, BMNH; 1 male: same data but 2650 m, M. Adams *leg.*, BMNH; 1 male: same data but 2700 m, 16.V.1975, M. Adams *leg.*, BMNH; 1 male: same data but 17.V.1975, M. Adams *leg.*, BMNH; 1 male: same data but 1900 m, 18.V.1975, M. Adams *leg.*, BMNH; 1 female: same data but 2700 m, 16.V.1975, M. Adams *leg.*, BMNH; 1 female: same data but 2700–2765 m, 16.V.1975, M. Adams *leg.*, BMNH; ARAGUA: 1 male: Colonia Tovar, 1800 m, 25.IX.1953, P. Guagliumi *leg.* MIZA; 1 male: Colonia Tovar, 1800 m, 25.IX.1953, F. Fernández Y. *leg.* MIZA; 1 male and 1 female: Colonia Tovar, vía Buenos Aires, 2100 m, 14.V.1996, J. DeMarmels and A. Chacón *leg.* MIZA; 1 female: Rancho Grande, 1100 m, 13.IX.1976, F.Fernández Y. and J. Clavijo *leg.* MIZA; 8 males and 1 female: Colonia Tovar, Los Colonos, 2100–2150 m, 06.VIII.2003, T. Pyrcz *leg.*, TWP; 1 males and 2 females: Colonia Tovar, Los Colonos, 2100–2150 m, 06.VIII.2003, T. Pyrcz *leg.*, TWP; 1 male: Colonia Tovar, 2100 m, VI.1982, F. Romero *leg.*, FRR; 1 male and 2 females: same data but X.1986, FRR; 2 males: same data but VI.1991, FRR; 4 males: same data but 2200 m, VII.1993, FRR; 4 females: same data but IV.2003, FRR; 1 female: carretera Maracay – Choroní, 1300 m, V.1975, FRR; 1 female: same data but VIII.1989, FRR.

***Lymanopoda caucana caucana* Weymer**
(Figs. 51, 52)

Lymanopoda caucana Weymer, 1912: 250, pl. 52, row g. Syntypes in ZMHU (?) [not examined].

Geographic range: Species: ST, CC, SP, Cauca valley – eastern slopes of Western and western slopes of Central Cordilleras in Colombia; Subspecies: as above, except Turimiquire.

Altitudinal range: 1800–2100 m (Adams & Bernard, 1979); 1400–1800 m in CC.

Remarks: *L. caucana* is very closely related to *L. caeruleata* Godman & Salvin endemic of the SNSM (Adams & Bernard, 1977, 1979), *L. euopis* Godman & Salvin occurring in Costa Rica and Panama (DeVries, 1987), and *L. orientalis* Viloria & Camacho (1999) from the Sierra de Turimiquire. The latter is externally nearly inseparable from *L. caucana* and differs mostly, if not only, in the male genitalia. It has two long valval processes, similar to *L. obsoleta*, whereas in *L. caucana*, the apical process is short and blunt, and the dorsal one is stout and heavily spined. The various populations of *L. caucana* also differ marginally externally, except for the SP population, which has a contrasting HWV pattern. There are, however, noticeable differences in the male genitalia, especially in the size and placement of the valval spines, and the shape of superuncus and uncus. The CC populations possibly merit a separate subspecific rank, but more individuals from the entire range of *L. caucana* need to be studied (Pyrcz, in prep.). *L. caucana* is confined to the lower

section of cloud forests. The reports of Fassl (1915) giving its range as 2200–2500 m (in Colombia) are inaccurate or refer to a different species.

Material examined: ARAGUA: 1 male: P.N. Henrí Pittier, vía Choroní, 1300 m, VI.1975, F. Romero *leg*., TWP; 1 female: same locality and collector, 1150 m, I.1978, TWP; 3 males: Capachal, vía Colonia Tovar, 2150 m (altitude data unreliable), 11.VII.1984, J. Lattke *leg.* MIZA; 1 male: carretera Maracay-Choroní, 1300 m, X.1992, F. Romero *leg*., FRR; 1 male: same data but VIII.1978, FRR; 1 male: same date but 1250 m, 1975, FRR; 1 male: same data but 1150 m, VIII.1978, FRR; 1 male: same data but 1300 m, X.1992, FRR; 1 female: same data but 1450 m, II.1978, FRR; 1 female: same data but 1550 m, VII.1994, FRR; 1 female: same data but 1250 m, IV.1975, FRR; 1 male: Rancho Grande, Portachuelo, 1100 m, I.1984, F. Romero *leg*., FRR; 1 male: same data but I.1965, FRR; 1 female: same data but VII.1985, FRR; 9 males and 1 female: carretera Maracay-Rancho Grande (south slopes), 850 m, XII.1970; 1 male: Rosario de Paja, 1300 m, X.1993, FRR; CARABOBO: 1 male and 1 female: 15 km North of Bejuma, Cerro San Isidro, 1500–1600 m, 10.VIII.2003, T. Pyrcz *leg*., TWP; 1 male: same locality and altitude, 27.IX.2002, M. Costa *leg*., TWP.

***Mygona irmina* (Doubleday)**
(Figs. 33, 34)

Pronophila irmina Doubleday, [1849]: pl. 60, fig. 2. Syntype (male) in BMNH [examined].
Oxeoschistus irmina (Doubleday); Butler, 1867: 268.
Mygona irmina (Doubleday); Thieme, 1907: 167.

Geographic range: Species (monotypic): CC, CM, SP, EC, Central and Western Cordilleras, north-western Ecuador, eastern slopes in Ecuador to Río Pastaza.

Altitudinal range: 1800–2700 m (Adams, 1986); 2250–2450 m (Pyrcz & Wojtusiak, 2002); 1800–2400 m.

Remarks: This is the only representative of the genus in the CC and, in fact, the entire northern Andes of Venezuela and Colombia. It is monotypic and easily recognized from any other species by the large HWD median light blue rounded patch. *M. irmina* is relatively common in the CC but never as abundant as *L. zapatoza*, which occurs in the same habitat. It has a particular, lazy, slow flapping flight. It usually stays in the subcanopy but occasionally comes to the ground to feed on decomposing organic matter.

Material examined: DISTRITO FEDERAL: 1 male: Serranía El Avila, Los Venados, 1500 m, 15.VII.1950, F. Fernández Y. *leg*. MIZA; 1 female: P.N. El Avila-Caracas, 1800 m, 12.VII.1979, D. Baiocchi *leg*. MIZA; ARAGUA: 1 male: Colonia Tovar, 1800 m, 04.XII.1950, F. Fernández Y. *leg*. MIZA; 1 male: Colonia Tovar, 1800 m, 05.II.1955, F. Rondón *leg*. MIZA; 1 male: Colonia Tovar, sector El Molino, 28.XI.1981, J. DeMarmels *leg*. MIZA; 1 female: carretera Maracay-Choroní, 05.IX.1970, J. Salcedo and J. A. Clavijo *leg*. MIZA; 1 female: Rancho Grande, 02.VII.1952, F. Fernández Y. *leg*. MIZA; 1 female: Colonia Tovar, vía Cuesta Pto. Maya, 2000 m, 25–26. III.1998, A. Chacón, Q. Arias and J. Chirinos *leg*., MIZA; 1 female: same locality, 2100 m, 14.V.1996, J. DeMarmels and A. Chacón *leg*. MIZA; 1 female: same locality, 2100 m, 21.XI.1996, J. DeMarmels and A. Chacón *leg*. MIZA; 3 males and 1 female: Colonia Tovar, Los Colonos, 2100–2150 m, 06.VIII.2003, T. Pyrcz *leg*., TWP; 1 male: carretera Maracay-Choroní, La Cumbre, 1550 m, V.1979, F. Romero *leg*., FRR; 1 male: same data but IX.1998, FRR; 1 female: same data but IX.1968, FRR; 1 female: same data but VIII.1970, FRR; 1 female: same data but 1250 m, I.1978, FRR; 1 female: same data but 1480 m, IV.1978, FRR; 1 female: same data but X.1986, FRR; 6 males and 2 females: Colonia Tovar, 2100 m, IV.1993, F. Romero *leg*., FRR; 1 female: same data but 2300 m, VII.1993, FRR; 1 female: Colonia Tovar, Los Colonos, 2200 m, 04.III.2010, T. Pyrcz *leg*., TWP.

***Oxeoschistus puerta puerta* (Westwood)**
(Figs. 27, 28)

Pronophila puerta Westwood, [1851]: 358. Syntype in BMNH [examined].
Oxeoschistus puerta (Westwood); Butler, 1867: 268.

Geographic range: Species: CC, SP, northern part of the EC; Subspecies: CC (SL northern slopes).

Altitudinal range: 1400–1800 m.

Remarks: This is the only representative of the genus *Oxeoschistus* in the CC. Its relations with closely related taxa are a debated issue, and some authors consider *O. puerta* as conspecific with *O. simplex* or *O. submaculatus* (Lamas *et al*., 2004). It was, however, discovered recently (Huertas, pers. comm.) that *O. puerta* and *O. simplex* are apparently locally sympatric in the north-eastern part of the Colombian Eastern Cordillera, where *O. puerta* occurs at slightly lower elevation. *O. puerta* is the one of the least known Pronophilina in the CC. Despite being large and conspicuous, it is extremely rarely observed.

Material examined: ARAGUA: 1 female: Colonia Tovar, vía Puerto Maya, 1850 m, 02.V.2004, M. Costa *leg*., MCC; 1 male: same data, TWP; 1 male: Rancho Grande, Portachuelo, 1100 m, IX.1968, F. Romero *leg*., FRR; 1 male: carretera Maracay-Choroní, La Cumbre, 1550 m, VI.1970, F. Romero *leg*., FRR; 1 female: same data but 1500 m, VII.1970, FRR; 1 female: same data but 1240 m, IX.1976, FRR; 1 female: same data but 1450 m, IX.1980, FRR.

***Panyapedaliodes panyasis* (Hewitson)**
(Figs. 19, 20)

[*Dasynympha scia* Moritz *in litt.*] *nomen nudum*; Viloria *et al*., 2001: 33.
Pronophila panyasis Hewitson, 1862: 7, pl. 3, fig. 22. 1 male, [Venezuela], HC, BMNH type No. Rh. 3970 [LECTOTYPE of *Pronophila panyasis* Hewitson, herein designated]; 1 male, Venezuela, HC, (slide No. 29540) [PARALECTOTYPE of *P. panyasis* Hew., herein designated], BMNH.
Pedaliodes panyasis (Hewitson); Butler, 1867: 267.
Panyapedaliodes panyasis (Hewitson); Forster, 1964: 157.

Geographic range: Species (monotypic): SL, CM, ET, throughout Colombia, Ecuador, eastern Peru and Bolivia.

Altitudinal range: 2000–2600 m (Pyrcz & Wojtusiak, 1999, 2002; Pyrcz, 2004); 2000–2450 m.

Remarks: The genus *Panyapedaliodes* Forster comprises approximately 15 Andean species (Pyrcz, 2004). *P. panyasis* is its only representative in the surveyed area. This is a fairly widespread species, although in most sampled localities it is uncommon or rare (Adams & Bernard, 1981). In the CC it is rather infrequent and occurs at higher elevations than most other members of the subtribe Pronophilina. Most individuals were collected above 2200 m.

Material examined: ARAGUA: 4 females: Colonia Tovar, 2100m, 01.XI.1997, P. Boyer *leg*., TWP; 1 male: same data but 2000 m, 18.V.1993, M. Costa *leg*., TWP; 1 male: same data but 2000–2050m, 20.V.2001, M. Costa *leg*., TWP; 2 males: same data but 2100–2150m, 31.I.2004, M. Costa *leg*., TWP; 3 males and 1 female: same data but 2100–2150m, 07.III.2004, M. Costa *leg*., TWP; 1 female: same data but 2100–2150m, 25.IV.2004, M. Costa *leg*., TWP; 1 female: Colonia Tovar, vía Buenos Aires, 2100 m, 14.V.1996, J. DeMarmels *leg*., MIZA; 1 male: Colonia Tovar, 2000 m, 22.IX.2002, M. Costa *leg*., MCC; 3 males: Colonia Tovar, 2100 m, 14.III.2004, M. Costa *leg*., MCC; 2 males: Colonia Tovar, 2000 m, 22.V.2005, M. Costa *leg*., MCC; MIRANDA: 1 female: Pico Naiguatá, N. of Caracas, 2700–2765 m, 17.V.1975, M. Adams *leg*., BMNH.

***Pedaliodes piletha piletha* (Hewitson)**
(Figs. 5, 6, 63)

[*Dasynympha phocaena* Moritz, *in litt*.] *nomen nudum*; Viloria *et al.*, 2001: 33.
Pronophila piletha Hewitson, 1862: 7, pl. 3, fig. 23. 1 male, Venezuela, pur. from Dyson, 47-9 BMNH type No. Rh. 3981 [LECTOTYPE of *Pronophila piletha* Hewitson, herein designated]; 1 male, same data, [PARALECTOTYPE of *P. piletha* Hew., herein designated], BMNH.
Pedaliodes piletha (Hewitson); Butler, 1867: 267.

Geographic range: Species: CC; Subspecies: SL in Miranda, Vargas and Aragua States.

Altitudinal range: 1400–2400 m.

Remarks: This species resembles *P. prytanis* and the identification key is given under that species. *P. piletha* is one of the most common species of Pronophilina in the Serranía del Litoral. It occurs above 1400 m and more frequently at 1800–2200 m.

Material examined: DISTRITO FEDERAL: 1 male: Parque Nacional Avila, Río Catuche, 1200 m, 08.XI.1993, P. Rouche *leg*., TWP; 4 males and 1 female: Parque Nacional Avila, Quebrada Anauco, 1400 m, T. Pyrcz *leg*., TWP; 1 male: Serranía El Avila, Los Venados, 1500 m, 15.VII.1950, F. Fernández Y. *leg*., MIZA; 2 males: P. N. Avila, El Edén, 15.V.1975, R. Dietz *leg*., MIZA; 1 male: Pico Naiguatá, 2700 m, 16.V.1975, R. Dietz *leg*., MIZA; 1 female: El Junquito, 28.V.1950, F. Fernández Y. *leg*., MIZA; 1 female: Serranía El Avila, Los Venados, 1500 m, 15.VII.1950, F. Fernández Y. *leg*., MIZA; 4 males: Caracas, Los Venados, P. Corn. Vogl, ZSBS; 2 males: Caracas, Berg Avila, 1000 m, X.1936/V.1937, P. Corn. Vogl, ZSBS; 4 males: same locality, 1500 m, V.1937, P. Corn. Vogl, (1 präparat Nr. SA369), ZSBS; MIRANDA: 2 males: Pico Naiguatá, N. of Caracas, 1500 m, 15.V.1975, M. Adams *leg*., BMNH; 1 male: same data but 1800 m, M. Adams *leg*., BMNH; 3 males: same data but 1900 m, M. Adams *leg*., BMNH; 1 male: same data but 18.V.1975, M. Adams *leg*., BMNH; 1 female: same data but 1500 m, 15.V.1975, M. Adams *leg*., BMNH; 1 female: same data but 1900 m, M. Adams *leg*., BMNH; 10 males: Pico Naiguatá, N. of Caracas, 1500–1900 m, 15.V.1975, M. Adams *leg*., BMNH; 1 male: same data but 1900 m, 18.V.1975, M. Adams *leg*., BMNH; 1 female: same data, M. Adams *leg*., BMNH; 1 female: same data but 2600 m, 15.V.1975, M. Adams *leg*., BMNH; ARAGUA: 15 males and 2 females: Colonia Tovar, vía Capachal, 2100 m, 02.VIII.2003, T. Pyrcz *leg*., TWP; 1 female: Colonia Tovar, vía Capachal, 2100 m, 04.VIII.2003, T. Pyrcz *leg*., TWP; 25 males and 2 females: Colonia Tovar, vía Capachal, 2100 m, 05.VIII.2003, T. Pyrcz *leg*., TWP; 26 males and 2 females: Colonia Tovar, Los Colonos, 2100 m, 06.VIII.2003, T. Pyrcz *leg*., TWP; 4 males and 3 females: Colonia Tovar, vía Naranjal, 2000 m, 01.XII.2004, T. Pyrcz *leg*., TWP; 3 males and 1 female: Colonia Tovar, 2100 m, 01.XI.1997, P. Boyer *leg*., TWP; 2 males: Colonia Tovar, 2100 m, 11.XI.1997, P. Boyer *leg*., TWP; 2 males: Colonia Tovar, 2000 m, 19–20.II.1995, P. Boyer *leg*., TWP; 1 male: Colonia Tovar, 2200 m, X.1995, P. Rouche *leg*., TWP; 1 male: Colonia Tovar, Portapán, 18.XII.1993, P. Rouche *leg*., TWP; 1 male: Colonia Tovar, La Pollera, 31.XII.1991, P. Rouche *leg*., TWP; 1 male: Parque Nacional Henri Pittier, vía Choroní, 1200 m, VII.1985, F. Romero *leg*., TWP; 1 female: Colonia Tovar, Los Colonos, 2200 m, 04.III.2010, T. Pyrcz leg., MZUJ; 3 males: Colonia Tovar, 2000 m, 4.XII.1950, F. Fernández Y. *leg*., MIZA; 1 male: Aragua, Colonia Tovar, vía Puerto Maya, 2000 m, 25–26.III.1998, A. Chacón, Q. Arias and J. Chirinos *leg*., MIZA; 3 males: Colonia Tovar, vía Buenos Aires, 2100 m, 14.V.1996, J. DeMarmels and A. Chacón *leg*., MIZA; 1 male: La Victoria, 1700 m, 02.VIII1963, W. Gatz, ZSBS; 3 males and 2 females: Colonia Tovar, 2100 m, IV.1993, F. Romero *leg*., FRR; 1 male: same data but 2000 m, VI.1991, FRR; 1 male: same data but VI.1975, FRR; 1 female: same data but 2200 m, VII.?, FRR; 1 female: same data but IV.1970, FRR; 1 female: same data but VI.1975, FRR; 1 female: same data but 1700 m, VI.1978; 1 male: Rancho Grande, Portachuelo, 1100 m, VII.1972, F. Romero *leg*., FRR; 1 male: carretera Maracay-Choroní, 1400 m, II.1978, F. Romero *leg*., FRR; 1 male: same data but III.1979, FRR; 1 male: same data but 1500 m, IX.1975, FRR; 1 female: same data but 1250 m, I.1978, FRR; 1 female: same data but 1260 m, IX.1975, FRR; 1 male: carretera Maracay-Choroní, 1450 m, IV.2006, P. Boyer *leg*., TWP; 1 male: [no data], (genit. prep. ALV225-96), G-S, BMNH; 1 male: [no data], Ex Museo Ach. Guenée, OC, BMNH; 5 males and 1 female: [no data, 1 male illustrated in Weymer, 1912 (Seitz)], BMNH; 2 males and 1 female: [no data], Coll. v. Schenck, ZMHB; 3 males:

Venezuela, Felder Colln., RB, BMNH; 1 male: Venezuela, Moritz, Felder Colln., RB, BMNH; 1 male: Venezuela, Druce Coll., Druce Coll. ex Kaden coll., G-S, BMNH; 1 female: Venezuela, Ex Musaeo Dris. Boisduval, OC, BMNH; 1 male and 1 female: Caura Valley, Corosita, T. M. Klages, JB, BMNH [data erroneous].

Pedaliodes piletha costae **Viloria & Pyrcz n. ssp.**
(Figs. 7, 8, 62)

Diagnosis: This subspecies differs immediately from the nominate *P. piletha*, *P. suspiro* Adams & Bernard, and *P. japhleta* Butler in the absence of HWD white anal wedge.

Description: MALE (Fig. 7): Head: eyes chocolate brown; palpi covered ventrally with blackish-brown, and laterally with short, yellow hair; antennae to two-fifth the length of costa, reddish-brown, club slightly thicker than shaft, terminal segments dark brown. Thorax: black; legs dark brown. Abdomen: dark brown, ventrally slightly lighter. Wings: FW length: 25–27 mm; mean: 26.2 mm; n=8; apex blunt, outer margin wavy between apex and vein M2, from M2 to tornus straight. HW rounded with outer margin slightly wavy. FWD: uniform dark brown, lustrous. HWD: uniform dark brown. FWV: dark brown, glossy in median area with a chestnut orange sheen; in some individuals a faint postdiscal whitish streak. HWV: dark brown, dull and a shade darker than on the HWV; a short whitish streak at mid-costa; postmedian to submarginal area very slightly lighter and suffused with sparse whitish scales; a white submarginal dot in Cu1-Cu2. Male genitalia (Fig. 62): Uncus stout and short, two-thirds the length of tegumen, with a sharp apex curved downwards, slightly broader than in the nominate *P. piletha*, otherwise similar; valvae roughly rectangular, apex blunt, dorsa without any prominent dorsal process, instead a single, minute spine, slightly smoother than the serrate dorsal surface of the nominate *P. piletha*; saccus deeper than in the nominate *P. piletha*; aedeagus thin and contorted similar to the nominate subspecies.

FEMALE (Fig. 8): Head, thorax and abdomen as in male. FW length 23 mm. FWD and HWD: uniform chocolate brown, lustrous. FWV: ground color blackish brown, suffused with ligther, chestnut scales in distal one-third; whitish scales in the subapical and apical area; a large, faint, red patch in the postmedian area. HWV: chocolate brown and chestnut forming a marble-like pattern, with a wide chestnut postmedian band; two whitish submarginal dots in Cu1-Cu2 and Cu2-1A; some whitish suffusion along anal margin. Female genitalia: not illustrated.

Types: Holotype (male): Venezuela, Estado Carabobo, 15 km. North of Bejuma, Cerro San Isidro, 1550–1600 m, 10.VII.2003, T. Pyrcz *leg*., to be deposited in MIZA; Allotype (female): same locality, 27.IX.2002, M. Costa *leg*., MZUJ; Paratypes (11 males and 2 females): CARABOBO: 6 males: same data as the holotype, TWP; 1 male and 1 female: Bejuma, Cerro S. Isidro, Venezuela, 1600 m, 24.VIII.2003, M. Costa *leg*., MCC; 1 female: same data but 27.X.2002, MCC; 3 males: Palmichal, Cerro de Paja, ridgetop path, 1500–1600 m, 27.X.2002 A. Neild *leg*., AFNL; 2 males: Municipio Bejuma, Cerro de Paja, 1500 m, 02.XI.2001, J. C. Desousa *leg*., TWP.

Etymology: This species is dedicated to Mauro Costa, a lepidopterist from Caracas, and incidentally refers to the geographical name of the Cordillera de la Costa range (costa means coast, in Spanish).

Geographic range: Hitherto known exclusively from the western part of the Serranía del Litoral.

Altitudinal range: 1500–1600 m.

Remarks: *P. piletha* belongs to a group of closely related, apparently monophyletic species including *P. poesia* (Hewitson), *P. japhleta* and *P. suspiro*, all sharing a broadly similar male genitalia structure and color patterns. HWV patterns of *P. piletha piletha* and *P. piletha costae* are widely divergent and indeed differ more than the color patterns of nominate *P. piletha* and the above mentioned related allopatric species. *P. piletha costae* is the only taxon of this group which has no HWV white anal wedge, which is the most conspicuous color pattern element. On the other hand, the two subspecies of *P. piletha* are consistently smaller than other taxa of this apparently monophyletic group. The reason for considering *costa* and *piletha* as conspecific are also closely similar male genitalia, and androconia (size and shape of FWD androconial patch). There are some ecological differences between the subspecies of *P. piletha*, as *costa* occurs in the lower section of cloud

forests, around 1500–1600 m, whereas the nominate is usually found at considerably higher elevations, usually above 1800 m. A few individuals of *P. piletha* were, however, collected at 1400–1500 m along the Maracay-Choroní road, indicating that it occurs occasionally within the same altitudinal range as the western subspecies.

Pedaliodes manis ivica **Viloria & Pyrcz n. ssp.**
(Figs. 3, 4, 61)

[*Pronophila pisonia* Hewitson, var.; Hewitson, 1862: 7, pl.3, fig. 20].
[*Pronophila ereiba* C. & R. Felder, var.; C. & R. Felder, 1867: 469].
Pronophila manis C. & R. Felder, 1867: 469. 1 male, Bogotá, Uricoechea, Felder Colln., (Rhop. slide No. 11668) [LECTOTYPE of *Pronophila manis* C. & R. Felder, herein designated], RB, BMNH; 4 males, [no data], Felder Colln., (1 genit. prep. ALV148-96) [PARALECTOTYPES of *P. manis* C. & R. Felder, herein designated], RB, BMNH.
Pedaliodes manis (C. & R. Felder); Butler, 1868: 174.

Diagnosis: *P. manis ivica* differs from the nominate subspecies and other, as yet undescribed races of *P. manis* occurring throughout the Andes from the CM to the Bolivian Yungas (more than 200 invididuals examined), in the considerably smaller size, the much lighter HWV ground color with more prominent greyish white postmedian markings. Consistent differences between *ivica* and other subspecies of *P. manis* are also found in the male genitalia (Figs. 58, 59, 60, 61). Specifically, the dorsal process of the valvae is short and acute, whereas in the nominate subspecies, as emphasised by Adams (1986), it is long, nearly as long as the apical process, wide and serrate. On the genitalic level, *P. manis ivica* closely resembles *P. croizatorum* Viloria & Camacho occurring in the ST. The latter has, however, conspicuous orange HWV markings which are absent in *P. manis*.

Description: MALE (Fig. 3): Head, thorax and abdomen as in the nominate subspecies. FW length: 21.5–24 mm: mean: 23.1 mm, n = 21. FWD: Chocolate brown, slightly lighter and lustrous in outer one-third. HWD: Uniform chocolate brown. FWV: Dull brown, slightly darker in median area and along outer margin; dirty white scales along outer edge of postmedian line, denser towards costa, forming a short diffuse streak; a series of four tiny subapical yellow dots R5-M1 to M3-Cu1. HWV: Chestnut brown suffused with orange along anal margin and tornus; fine, greyish white scaling forming a broken median line; greyish white suffusion along distal edge of the postmedian line forming a white costal patch, a fine postmedian line from M1 to M3, and a widening band from M3 to tornus; a white submarginal dot in Cu1-Cu2. Male genitalia (Fig. 61): Primary valval process thin, pointed process, secondary process short and pointed; other sclerits not differing notably from other subspecies.

FEMALE (Fig. 4): FW length: 22.5–24 mm; 23.9 mm; n=5. Similar to male, but lighter brown on the upperside and with somewhat more prominent greyish white elements on the underside. Female genitalia: not examined.

Types: Holotype (male): Altos de Pipe-IVIC, 1600–1650 m, 07.III.2010, T. Pyrcz *leg*., MIZA; Paratypes (49 males and 6 females): DISTRITO FEDERAL: 6 males: Parque Nacional Avila, Sabas Nieves, 1400 m, 24.IV.1993, P. Rouche *leg*., 3 MZUJ, 3 TWP; 2 males: Parque Nacional Avila, Rio Catuche, 1200 m, 07.XI.1993, P. Rouche *leg*., TWP; 1 male: Parque Nacional Avila, Quebrada Anauco, VII.1985, 1400 m, T. Pyrcz *leg*., TWP; 7 males: P. N. El Avila, El Edén, 15.V.1975, R. Dietz *leg*., MIZA; 1 male: Los Venados, Avila, 1500 m, 03.III.1981, M. Costa *leg*., MCC; 1 male: same data but 11.X.1982, MCC; 1 male: Avila, 1800 m, 19.VII.2003, M. Costa *leg*., MCC; 1 male: P. N. El Avila, Qda. Chacaito – Sabas Nieves trail, 31.XII.1980, A. Neild *leg*., AFNL; 1 male: same data but VII.1989, AFNL; 2 males: same data but 7.XI.93, AFNL; 5 males: Caracas, Berg Avila, 1500 m, v-1937, P. Cor. Vogl; 1 male, Caracas, Avila, 05.III.1961, R. Feige *leg*., ZSBS; MIRANDA: 1 male: Altos de Pipe–IVIC, 1550–1650 m, 13.X.2002. A. Neild *leg*., AFNL; 3 males: Altos de Pipe - IVIC, 1600–1650 m, 24.XI.2004, T. Pyrcz *leg*., TWP; 1 male: same data but 26.VI.2006, TWP; 1 male: same data but 24.XI.2004, MZUJ; 5 males: same data but 07.III.2010, MZUJ; 2 males: same data but 08.III.2010, MZUJ; ARAGUA: 1 male: Rancho Grande, 800 m, 10.VII.1952, F. Fernández Y. *leg*.,

MIZA; 1 male: Rancho Grande, 1100 m, 22.V.1952, F. Fernández Y. *leg.*. MIZA; 1 male: Rancho Grande, 1100 m, 10.VIII.1952, F. Fernández Y. *leg.*, MIZA; 1 male: Rancho Grande, 1100 m, 28.VI.1954, F. Fernández Y. *leg.*, MIZA; 1 male: Rancho Grande, 1100 m, 30.V.1953, F. Kern *leg.*, MIZA; 1 male: Rancho Grande, 1100 m, 18.V.1952, Fernández Y. *leg.*, MIZA; 1 male: carretera Maracay-Choroní, 1400 m, 04.VIII.1952, J. Requena *leg.*, MIZA; 1 male: carretera Maracay-Choroní, 1300 m, 24.VI.1952, F. Fernández Y. *leg.*, MIZA; 1 female: Rancho Grande, 1100 m, 25.IX.1952, F. Fernández Y. *leg.*, MIZA; 1 male: Rancho Grande, 1100 m, 15.VII.1952, F. Fernández Y. *leg.*, MIZA; 1 male: Rancho Grande, 1100 m, 02.X.1974, J. Salcedo and J. Clavijo *leg.*, MIZA; 1 female: Rancho Grande, 1100 m, 13.IX.1976, F. Fernández and J. Clavijo *leg*., MIZA; 1 female: Rancho Grande, 1100 m, 21.X.1953, J. Requena *leg*., MIZA; 1 female: Rancho Grande, 1100 m, 10.V.1952, F. Fernández Y. *leg*., MIZA; 1 male: Colonia Tovar, 1900 m, 27.VII.2002, M. Costa *leg*., MCC; 1 male: Colonia Tovar, 1800–2000m. 12.X.2002, A. Neild *leg*., AFNL; 1 male: carretera Maracay-Choroní, 1000 m, VII.1995, F. Romero *leg*., FRR; 1 male: same data but 1250 m, IV.1975, FRR; 1 male: same data but II.1978, FRR; 1 female: Rancho Grande, Portachuelo, 1100 m, VIII.1978, FRR.

Additional material: CARABOBO: 16 males: 15 km N Bejuma, Cerro San Isidro, 1550–1600 m, 10.VIII.2003, T. Pyrcz *leg*., TWP; MIRANDA: 1 female: Qda. Pasaquire, 04.VII.1982, J. DeMarmels *leg*., MIZA; 1 male: P.N. Guatopo, Agua Blanca (Macanillas) , 410 m (1000 m), 14–27.IV.1987, T. Pyrcz *leg*., MIZA; ARAGUA: 3 males: Tiara, 1200 m, 12.XI.1992, J. Clavijo, J. DeMarmels and J. L García *leg*., MIZA; 1 male: same data but 25–27.XI.1992, J. Clavijo and A. Chacón *leg*., MIZA; 2 males: same data but 24.V.1994, J. Clavijo, A. Chacón and Q. Arias *leg*., MIZA; 1 male: same data but 26.V.1994, J. Clavijo, J. DeMarmels and A.Chacón *leg*., MIZA; 3 males: same data but 17.V.1994, A. Chacón and R. Grance *leg*., MIZA; 2 males: same data but 10.X.1994, J. DeMarmels y A. Chacón *leg*., MIZA; 2 males: Tiara, Campamento Rangel, 1200 m, 20.II.1986, F. Fernández Y. and J.Clavijo *leg*., MIZA; 5 males: Villa de Cura, Est. Exp. Cataurito, 27.X.1981, J. DeMarmels *leg*., MIZA; 1 male: Tasajera, al sur de La Victoria El Consejo, 06.II.1983, J. A. Clavijo *leg*., MIZA; 1 female: Tiara, 1200, 23.VI.1994, J. DeMarmels y A. Chacón *leg*., MIZA; 1 female: Villa de Cura, Est. Exp. Cataurito, 1200 m, 21.VII.1982, J. DeMarmels *leg*., MIZA; GUARICO: 18 males and 2 females: Cerro Platillón, 1450–1900 m, 24.II.2007, T. Pyrcz *leg*., TWP.

Etymology: The epithet of this subspecies is derived from the Instituto Venezolano de Investigaciones Cientficas because the holotype and a series of paratypes were collected in the area of Altos de Pipe in a small cloud forest patch belonging to IVIC.

Geographic range: SL (central and eastern).

Altitudinal range: 1100–1900 m.

Remarks: This is the first subspecies of *P. manis* (other than the nominate) to be formally recognized and described. However, *P. manis* is clearly polytypic with several well differentiated subspecies that can be identified by their color patterns, ecology and mostly by their male genital morphology, as can be appreciated in figures 58–61. The nominate subspecies was described from the area of Bogotá and it occurs throughout the EC. Several local populations deserve a separate subspecific status, particularly those found in the northernmost part of Peru (Pyrcz, 2004), the SNSM, and CM. The individuals collected in Bejuma (westernmost SL) and in the Serranía del Interior (most from Cerro Platillón) are excluded from the type series of *ivica*. They are morphologically slightly different from typical individuals of *ivica* from central SL. The specimens from Bejuma are darker, less patterned on the HWV, and differ in the shape of the dorsal process of the valvae. Those from Cerro Platillón are even smaller than typical *ivica*, and have particularly conspicuous HWV grey-white markings. They also come from widely isolated geographic units. *Pedaliodes manis* presents interesting ecological adaptations. The EC and CM populations are adapted to secondary growths, and are commonly found in pastures and cultivated land. They occur far away from bamboo stands and, although their early stages have not been investigated so far, their larvae probably feed on non-bamboosoid exotic Poaceae, such as *Festuca* and *Poa*. In Ecuador and Peru *P. manis* are always associated with cloud forests and are always found in the vicinity of bamboos. The same applies for *P. manis ivica* in the SL and the SI populations. Even though they commonly occur in disturbed areas, they are invariably associated with bamboo clumps, their plausible host plants. *P. manis ivica* is found at low elevations, most often at 1400–1600 m asl. The Cerro Platillón population extends its elevational range to the top of this

isolated mountain at above 1900 m asl. Isolated individuals of *P. manis ivica* were recorded at particularly low elevations, at 1100 m in the Portachuelo Pass, Henrí Pittier National Park, and Macanillas in Guatopo National Park. *P. manis ivica* is found in small, localized but high density populations. Adults are found on the wing throughout the year. *P. manis ivica* is microsympatric with *Pronophila obscura, Pseudomaniola phaselis* and *Lymanopoda caucana*.

Pedaliodes manneja **Thieme**
(Figs. 9, 10)

[*Pronophila pisonia* Hewitson var.; Hewitson, 1862: 7, pl. 3, fig. 20].

Pedaliodes manneja Thieme, 1905: 72, 76. 2 males, Columb.[ia], Moritz, Coll. Sommer [LECTOTYPE & PARALECTOTYPE of *Pedaliodes manneja* Thieme, herein designated]; 1 male, Venezuela, Moritz, Coll. Sommer [PARALECTOTYPE of *P. manneja* Thieme, herein designated], ZMHB.

Geographic range: Species: CC (monotypic).

Altitudinal range: 1900–2600 m.

Remarks: This species resembles closely *P. manis* and the two are difficult to sort out wherever they occur together. Main differences are in size, the shape of the androconial patch, and male genitalia. In the Cordillera de la Costa, however, *P. manis* is much scarcer and flies at considerably lower elevations so that their altitudinal ranges do not overlap. *P. manneja* is very common everywhere in the Serranía del Litoral within the band 1800–2400 m. Individuals fly along forest trails, and feed on moisture on the ground or decomposing organic matter. They are very active and can be seen on the wing even when the sun is overcast. *P. manneja* occurs in the same habitats as *P. plotina* (Hewitson) and *P. piletha* (Hewitson). It is replaced in the Andes by a closely related, possibly even conspecific *P. montagna* Adams & Bernard.

Material examined: DISTRITO FEDERAL: 1 male: El Junquito, 20.X.1957, C. J. Rosales *leg*., MIZA; ARAGUA: 11 males and 2 females: Colonia Tovar, vía Capachal, 2100 m, 02.VIII.2003, T. Pyrcz *leg*., TWP; 3 males: Colonia Tovar, vía Capachal, 2200 m, 04.VIII.2003, T. Pyrcz *leg*., TWP; 10 males: Colonia Tovar, vía Capachal, 2100 m, 05.VIII.2003, T. Pyrcz *leg*., TWP; 3 males: Colonia Tovar, Los Colonos, 2100 m, 06.VIII.2003, T. Pyrcz *leg*., TWP; 3 males: Colonia Tovar, Los Colonos, 2100 m, 01.XII.2004, T. Pyrcz *leg*., TWP; 4 males: Colonia Tovar, vía Cuesta Maya, 2100 m, 21.XI.1996, J. DeMarmels *leg*., MIZA; 1 male: same locality but 2000 m, 25–26.III.1998, A. Chacón, Q. Arias and J. Chirinos *leg*., MIZA; 1 male: Capachal, vía Colonia Tovar, 2150 m, 11.VIII.1984, J. Lattke *leg*., MIZA; 1 male: Colonia Tovar, 1800 m, 25.IX.1953, F. Fernández Y. *leg*., MIZA; 2 males, Venezuela, pur. from Dyson, 47-9; 1 male: Col.[onia] Tovar, 8-ii-1962, Brit. Mus. 1963-769, BMNH; 1 male: S. America, Caracas, Colonia Tovar, 18.II.1962, R. Feige, Brit. Mus. 1962-571, BMNH; 4 males: Colonia Tovar, VI.1975, F. Romero *leg*., FRR; 1 female: same data but IV.1970, FRR; 1 female: same data but VII.1970, FRR; 1 female: same data but IV.1982, FRR; MIRANDA: 2 males: Pico Naiguatá, N. of Caracas, 1800 m, 15.V.1975, M. Adams *leg.*, BMNH.

Pedaliodes pisonia **(Hewitson)**
(Figs. 17, 18)

Pronophila pisonia Hewitson, 1862: 6–7, pl. 3, fig. 21. Lectotype (female) in BMNH [designated by Viloria *et al.*, 2001] [examined].

Pedaliodes pisonia (Hewitson); Butler, 1867: 267.

Geographic range: Species: CC (monotypic).

Altitudinal range: 1400–1800 m.

Remarks: The taxonomy and systematics of *P. pisonia* were discussed in detail by Viloria *et al.* (2001). This species appears to be restricted to the Cordillera de la Costa but is replaced in the Cordillera de Mérida and the Colombian Andes by the closely related *P. phrasiclea* Grose-Smith (Pyrcz, 1999a) and *P. zingara*

(Heredia & Viloria, 2004). They differ basically only in the absence of red scaling in *P. pisonia*. Their sexual characters such as androconia and male genitalia are practically identical, and after thorough study the two might prove to be conspecific. *P. pisonia* occurs in the lower section of cloud forests, generally at 1400–1600 m, but there are reports of it at 1000 m or even below. In the Serranía del Litoral, it was not frequently seen but was reported from numerous localities in the Cerro El Avila, near Choroní, north of Colonia Tovar and in the western part of the range north of Bejuma. The previous report of Viloria *et al.* (2001) that *P. pisonia* does not come to baits is inexact. In fact, it can be lured to dung and rotten fruit baits when strategically placed near the spots where adults are active. *P. pisonia* is also related to *P. roraimae* Strand from the Pantepui (Viloria & Pyrcz, 1995; Pyrcz & Fratello, 2005).

Material examined: ARAGUA: 2 males: Henrí Pittier National Park, vía Choroní, 1400–1700 m, 28.XI.1988, R. Murphy *leg*., TWP; 1 male: Henrí Pittier National Park, vía Choroní, 1200 m, VIII.1994, F. Romero *leg*., TWP; 1 male: Tiara, 1200 m, 18.X.1994, J. DeMarmels, Q. Arias and A. Chacón *leg.*, MIZA; 1 male: same data but 17.V.1994, MIZA; 4 males and 1 female: same data but 23.VI.1994, MIZA; 1 male and 1 female: same data but 24.V.1994, MIZA; 5 males: same data but 26.V.1994, MIZA; 3 males: same data but 25–27.XI.1992, MIZA; 1 female: same data but 30.IX.1993, J. DeMarmels, A. Chacón and F. Vásquez *leg*., MIZA; 1 female: same data but 22.IV.1997, A. Chacón *leg*., MIZA; 1 female: same data but 17.I.1995, J. Clavijo, A. Chacón and S. Johnson *leg*., MIZA; 1 female: same data but 15.II.1995, F. Cerdá y A. Chacón *leg*., MIZA; 1 female: same data but 16.III.1993, A. Chacón *leg*., MIZA; 1 female: Tiara, Campamento Rangel, 1200 m, 20.II.1986, F. Fernández Y. and J. Clavijo *leg*., MIZA; 1 male: Tasajera, al sur de La Victoria, 1300 m, 15.X.1985, F. Fernández Y. and J. Clavijo *leg.*, MIZA; 1 male: Tasajera - Tejerias, VIII.1985, F. Romero *leg*., FRR; 9 males and 2 females: carretera Maracay-Choroní, 1200 m, VIII.1994, F. Romero *leg*., FRR; 2 males: same data but VI.1994, FRR; 1 female: Colonia Tovar, 1900 m, IV.1993, F. Romero *leg*., FRR; 1 male: Colonia Tovar, Cuesta del Puerto Maya, 1850 m, 05.III.2010, T. Pyrcz, MZUJ; CARABOBO: 2 males and 2 females: 15 km N. Bejuma, Cerro San Isidro, 19.II.1996, ex coll. F. Romero, TWP; 2 males: 15 km N. Bejuma, Cerro San Isidro, 1550–1600 m, 10.VIII.2003, T. Pyrcz *leg*., TWP; MIRANDA: 1 male and 2 females: Altos de Pipe - IVIC, 1600–1650 m, 24.XI.2004, T. Pyrcz *leg*., TWP; 1 female: Altos de Pipe - IVIC, 1650 m, 11.VIII.2000, A. Viloria *leg*., TWP.

***Pedaliodes plotina plotina* (Hewitson)**
(Figs. 1, 2)

[*Satyrus tiburtia* Moritz *in litt.*] *nomen nudum*; Viloria *et al.*, 2001: 33.

Pronophila plotina Hewitson, 1862: 4, pl. 2, fig. 9, 10. 1 male, Venezuela, HC, BMNH type No. Rh. 4003 [LECTOTYPE of *Pronophila plotina* Hewitson, herein designated]; 1 female, same data; 4 males, Venezuela, pur. from Dyson, 47-9 [PARALECTOTYPES of *P. plotina* Hew., herein designated]; 2 males, 1 female, Venezuela, Druce Coll., (1 male, genit. prep. ALV227-96), G-S [BMNH].

Pedaliodes plotina (Hewitson); Butler, 1867: 267.

Geographic range: Species: SL, CM, SP, ET, northern EC in Colombia; Subspecies: SL.

Altitudinal range: 1800–2600 m, ssp. *rapha* Adams & Bernard (1981), 1900–2600 in CM.

Remarks: This species can be easily recognized from all the sympatric congeners by the wide HWD orange band covering outer 1/3 of the wing. Its numerous subspecies (3 different subspecies identified in the CM and ST) differ between each other in the extent and shade of this element of color pattern. In the CC, *P. plotina* is one of the most frequently observed satyrine butterflies. It is abundant throughout the year, and persistent even during longer periods of extreme drought.

Material examined: DISTRITO FEDERAL: 2 males: Parque Nacional Avila, Qda. Anauco, 1400m, IX.1985, T. Pyrcz leg., TWP; 1 male: Parque Nacional Avila, Fila Maestra, 2400m, 07.V.1994, P. Rouche leg., TWP; 4 males: Dto. Federal, El Junquito, 28.V.1950, F. Fernández Y. *leg*. MIZA; 3 males: P. N. Avila, Caracas, 2150 m, 27.III.1979, D. Baiocchi *leg*., MIZA; 1 male: Pico Naiguatá, 2700 m, 16.V.1975, R. Dietz *leg*., MIZA; 1 male: P. N. Avila, Est. Teleférico, 16.VI.1983 *leg*., MIZA; 3 males: Avila, Hotel Humboldt,

14.XI.1981, J. DeMarmels *leg*., MIZA; MIRANDA: 4 males: Pico Naiguatá, N. of Caracas, 1500–1900 m, 15.V.1975, M. Adams *leg.*, BMNH; 2 males: same data but 2700 m, 16.V.1975, M. Adams *leg.*, BMNH; 1 male: same data but 17.V.1975, M. Adams *leg.*, BMNH; 1 male: same data but 2100 m, 18.V.1975, M. Adams *leg.*, BMNH; 1 male: same data but 1900 m, M. Adams *leg.*, BMNH; ARAGUA: 1 male: Colonia Tovar, La Pollera, 31.XII.1991, P. Rouche leg., TWP; 2 males and 1 female: Colonia Tovar, 2200m, X.1995, F. Romer Jr. leg., TWP; 18 males and 1 female: Colonia Tovar, 2000m, 19–20.II.1995, P. Boyer leg., TWP; 3 males and 3 females: Colonia Tovar, 2000m, 11.XII.1995, P. Boyer leg., TWP; 7 males and 3 females: Colonia Tovar, 2000m, 01.XI.1997, P. Boyer leg., TWP; 9 males and 2 females: Colonia Tovar, 2100m, 11.XI.1997, P. Boyer leg., TWP; 1 male: Colonia Tovar, 2000m, 13.XI.1997, P. Boyer leg., TWP; 11 males: Colonia Tovar, vía Capachal, 2200m, 04.VIII.2003, T. Pyrcz leg., TWP; 15 males and 1 female: Colonia Tovar, vía Capachal, 2200m, 05.VIII.2003, T. Pyrcz leg., TWP; 2 male: Colonia Tovar, Los Colonos, 2100m, 06.VIII.2003, T. Pyrcz leg., TWP; 14 males and 1 female: Colonia Tovar, vía Naranjal, 02.VIII.2003, T. Pyrcz leg., TWP; 2 males: Colonia Tovar, 2000 m, 04.XII.1950, F. Fernández Y. *leg.* MIZA; 5 males: Colonia Tovar, 1800 m, 25.IX.1953, F. Fernández Y. *leg.* MIZA; 1 male: Colonia Tovar, vía Cuesta Maya, 2000 m, 25–26.III.1998, A. Chacón, Q. Arias and J. Chirinos *leg.* MIZA; 1 male: Capachal, vía Colonia Tovar, 2150 , 11.VIII.1984, J. Lattke *leg*., MIZA; 1 male: Petaquire, 10.IV.1971, A. Montagne *leg*., MIZA; 2 males: carretera Jarillo-Colonia Tovar, 29.VII.1971, A. Montagne *leg*., MIZA; 1 male: El Jarillo, 29.VI.1970, F. Fernández Y. *leg*., MIZA; 2 males: Colonia Tovar, Cuesta de Puerto Maya, 2100 m, 21.XI.1996, J. DeMarmels *leg*., MIZA; 3 males: same data but 14.V.1996, MIZA; 1 male: sector La Mora, vía Colonia Tovar, 23.VII.1991, MIZA; 1 male: Colonia Tovar, 19.VI.1995, A. Chacón *leg*., MIZA; 2 females: Colonia Tovar, vía Cuesta Maya, 2100 m, 21.XI.1996, J. DeMarmels *leg*., MIZA; 2 males: Venezuela, Moritz, Coll. Sommer; 1 male, Venez.[uela], Coll. H.–Sch, ZMBH; 4 males and 1 female: Colonia Tovar, 2200 m, VII.1993, F. Romero *leg*., FRR; 2 males: same data but X.1986, FRR; 1 male: same data but V.1975, FRR; 1 male and 1 female: same data but IV.1970, FRR; 1 female: same data but 1700 m, VI.1987, FRR; 1 female: same data but VI.1975, FRR.

***Pedaliodes prytanis* (Hewitson)**
(Figs. 11, 12, 13, 14, 15, 16)

[*Dasynympha aspaera* Moritz, *in litt.*] *nomen nudum*; Viloria *et al.*, 2001: 33.

Pronophila prytanis Hewitson, 1862: 7–8, pl. 3, fig. 24. 1 male, [Venezuela], HC, BMNH type No. Rh. 3983 [LECTOTYPE of *P. prytanis* Hew., herein designated]; 5 males, Venezuela, pur. from Dyson, 46–75, (2 genit. prep. ALV107-96; ALV276-97), [PARALECTOTYPES of *P. prytanis* Hew., herein designated].

Pedaliodes prytanis (Hewitson); Butler, 1867: 267.

Pedaliodes cestia Thieme, 1905: 92, 94, pl. 1, fig. 8 [type locality: Colombia]. 1 male, Columb[ien]., Karsten, Thieme, (genit. vial No. 9002, L. D. Miller), with a red label saying *lectotype* of *Pedaliodes cestia* Thieme, designated by Lee D. Miller, 1989, [LECTOTYPE of *P. cestia* Thieme, herein designated], ZMHB, synonymy given by Lamas *et al*. (2004).

Pedaliodes adamsi d'Abrera, 1988: 855, holotype male: BMNH [examined], [type locality: Ecuador, Piscourco (erroneous)], **syn. nov.**

Geographic range: Species: CC (monotypic).

Altitudinal range: 2000–2600 m.

Remarks: This species can easily be confused with the sympatric *P. piletha* (Hewitson). The latter is, however, considerably smaller, particularly the females, and has a white HWV anal wedge, variable in *P. prytanis* between snow white, milky white and yellow. *P. prytanis* and *P. piletha* occur in similar habitats. *P. prytanis* is, however, more commonly met with at slightly higher elevations than *P. piletha*, above 2200 m. Moreover, *P. piletha* is much more common and largely outnumbers its bigger congener. *P. prytanis* is closely related to *P. proerna fumaria* Thieme, from the CM, which has the same size, wing shape and male androconia, but instead of a large HWV anal wedge it has only some diffuse white scales, rarely dense enough as to form a full wedge (Adams & Bernard, 1981). Two extreme expressions of individual forms of the males and four of the females were illustrated.

Pedaliodes cestia Thieme is a junior synonym of *P. prytanis*. Its type locality, given by Thieme as Colombia, is erroneous.

Pedaliodes adamsi d'Abrera described based on a single, historical male specimen in the BMNH from "Ecuador is also considered as a junior synonym of *P. prytanis*. The type locality "Piscourco is considered erroneous. None of the lepidopterists who have extensively sampled the Andes of Ecuador in the recent period (T. Pyrcz, K. Willmott, A. Jasiński, P. Boyer, M. Bollino and others) have reported any species possibly matching the type of *P. adamsi*. The type of *P. adamsi* was found to be identical with an individual morph of *P. prytanis* occurring in the area of Colonia Tovar, characterised by particularly large HWV yellowish patches, illustrated herein.

Material examined: DISTRITO FEDERAL: 1 male: P. N. Avila, Caracas, 1800 m, 05.VII.1979, D. Baiocchi *leg.*, MIZA; 1 male: Dto. Federal, Pico Naiguatá, 2700 m, 16.V.1975, R. Dietz *leg.*, MIZA; 1 male, Caracas; 1 male, Caracas, Berg Avila, 1000 m, x-1936/v-1937, P. Corn. Vogl, (präparat Nr. SA370), ZSBS; ARAGUA: 1 female: Colonia Tovar, Cuesta de Puerto Maya, 2000 m, 08.V.2004, M. Costa *leg*., TWP; 1 male: Colonia Tovar, vía Capachal, 2100 m, 02.VIII.2003, T. Pyrcz *leg*., TWP; 2 male and 1 female: Colonia Tovar, vía Capachal, 2100 m, 05.VIII.2003, T. Pyrcz *leg*., TWP; 7 males and 1 female: Colonia Tovar, vía Naranjal, 2100 m, 06.VIII.2003, T. Pyrcz *leg*., TWP; 1 male and 4 females: Colonia Tovar, vía Naranjal, 2100m, 01.XII.2004, T. Pyrcz *leg*., TWP; 3 males: Colonia Tovar, Los Colonos, 2100–2150 m, 06.VIII.2003, J. & T. Pyrcz *leg*., TWP; 2 males: Colonia Tovar, vía Cuesta Maya, 2000 m, 25–26.III.1998, A. Chacón, Q. Arias and J. Chirinos *leg.*, MIZA; 1 males: Colonia Tovar, 1800 m, 25.IX.1953, F. Fernández Y. *leg.*, MIZA; 4 males and 1 female: Colonia Tovar, Capachal, 2050 m, 22.I.2010, T. Pyrcz *leg*., MZUJ; 1 male: Colonia Tovar, Los Colonos, 2100 m, 22.II.2010, T. Pyrcz *leg*., MZUJ; 4 males and 1 female: Colonia Tovar, Los Colonos, 2200 m, 04.III.2010, T. Pyrcz *leg*., TWP; 1 female: Aragua, Colonia Tovar, 19.VI.1995, A. Chacón *leg.*, MIZA; 3 males: Venezuela, Mor.[itz], Felder Colln., RB, BMNH; 1 male: Venezuela, Ex Musaeo Dris. Boisduval, OC, BMNH; 1 male: Druce Coll., Ex Kaden Coll., (genit. prep. ALV106-96), G-S, BMNH; 2 males: Venezuela, Coll. v. Schenck, ZMHB; 7 males and 2 females: Colonia Tovar, 2100 m, IV.1993, F. Romero *leg*., FRR; 6 males and 1 female: same data but 1900 m, FRR; 5 males and 3 females: same data but 2300 m, FRR; 2 males: same data but VI.1975, FRR; 1 female: same data but X.1995, FRR; 1 female: carretera Maracay-Choroní, La Cumbre, 1550 m, IX.1969, F. Romero *leg*., FRR; 1 male: 3 kms N.W. of Colonia Tovar, W. of Caracas, 2100 m, 20.V1.975, M. Adams *leg.*, BMNH; 1 female: Portachuelo Pass, Rancho Grande, 1100 m, 26.V.1975, M. Adams *leg.*, BMNH; MIRANDA: 1 male: El Avila, Lagunazo, 14.XI.1981, J. DeMarmels *leg.*, MIZA; 1 male: Pico Naiguatá, N. of Caracas, 2700–2765 m, 17.V.1975, M. Adams *leg*., BMNH; 1 male: same data but 1800 m, 18.V.1975, M. Adams *leg*., BMNH; 3 males: same data but 2700 m, 16.V.1975, M. Adams *leg*., BMNH; 1 female: same data, M. Adams *leg.*, BMNH.

***Praepronophila perperna perperna* (Hewitson)**
(Figs. 21, 22)

[*Dasynympha euchares* Moritz, *in litt.*] *nomen nudum*; Viloria *et al.*, 2001: 33.

Pronophila perperna Hewitson, 1862: 16–17. 1 male, S. America, HC, BMNH type No. Rh. 3960 [LECTOTYPE of *Pronophila perperna* Hewitson, herein designated]; 1 male, 1 female (BMNH type No. Rh. 3961), S. America [PARALECTOTYPES of *P. perperna* Hew., herein designated], HC, BMNH.

Pronophila satyroides C. & R. Felder, [1867]: 469–470 [Type locality: Caracas, Venezuela]; Butler, 1868: 173 (synonymy given). 1 male, 1 female, Venezuela, Moritz, Felder Colln. [LECTOTYPE and PARALECTOTYPE of *Pronophila satyroides* C. & R. Felder, herein designated], RB, BMNH.

Pedaliodes perperna (Hewitson); Butler, 1867: 267.

Praepronophila perperna (Hewitson); Adams, 1986: 309

Geographic range: Species: CC, CM, SP, ET, northern EC and Central Cordillera, Costa Rica and Panama; Subspecies, as above except Costa Rica and Panama.

Altitudinal range: 1400–1800 m.

Remarks: *P. perperna* is the only representative of this genus, accounting for 3 species, in the CC. In Mesoamerica, *P. perperna* is sympatric with its close relative, a similar but considerably larger species, *P. petronius* (Grose-Smith). The population found in the CC represents the nominate subspecies. At least two other subspecies can be recognized, one in Panama (Viloria, MS) and one in Antioquia, Colombia (Pyrcz & Viloria, 2006). *P. perperna* is a local species, and the altitudinal band where it occurs is under particularly heavy human pressure, as it has the best climate for coffee growth. In the northern Central Cordillera (Medellín area), *P. perperna* is, however, locally very abundant because its larvae apparently feed on secondary Asian *Bambusa* sp. (Pyrcz, unpubl.).

Material examined: DISTRITO FEDERAL: 1 male: P. N.Avila, 2000–2050 m, 22.X.2003, TWP; 1 male: same locality, 1900–1950 m, 31.VIII.2003, TWP; 1 male: P. N. Avila, Qda. Anauco, 1400 m, VII.1987, T. Pyrcz *leg*., TWP; ARAGUA: 9 males and 2 females: Edo. Aragua, Colonia Tovar, Cuesta de Puerto Maya, 1700–1750 m, 28.II.2004, M. Costa *leg*., TWP; 3 males: same locality, 1800–1850 m, 30.XI.2003, T. Pyrcz *leg*., TWP; 1 male and 1 female: Colonia Tovar, vía Gavante, 1900–1950 m, 25.IV.2004, M. Costa *leg.*, TWP; 5 males: carretera Maracay-Choroní, 1400 m, 04.VIII.1952, J. Requena *leg.*, MIZA; 2 males: carretera Maracay-Choroní, 1600 m, 19.IV.1953, F. Fernández Y. *leg.*, MIZA; 1 male: carretera Maracay-Choroní, La Cumbre, 1000 m, 16.V.1989, A.Chacón *leg.*, MIZA; 1 male: Colonia Tovar, vía Cuesta Puerto Maya, 2100 m, 14.V.1996, J. De Marmels y A. Chacón *leg.*, MIZA; 1 male: Colonia Tovar, 26.VIII.1987, J. DeMarmels *leg.*, MIZA; 2 males: carretera Maracay-Choroní, 11.IX.1970, J. Salcedo and J. Clavijo *leg.*, MIZA; 1 male: P. N. Henri Pittier, Pico Guacamaya, 1740 m, 13–17.VI.1989, A. Chacón *leg*., MIZA; 1 male: Colonia Tovar, va Naranjal, 1700–1800 m, 30.XI.2004, T. Pyrcz *leg*., TWP; 2 males: Colonia Tovar Cuesta de Puerto Maya, 1850 m, 05.III.2010, T. Pyrcz *leg*., MZUJ; 1 female: Rancho Grande, 1100 m, 25.III.1987, T. Pyrcz *leg*., MIZA; 1 female: carretera Maracay-Choroní, 11.IX.1970, J. Salcedo and J. Clavijo *leg.*, MIZA; 1 male: carretera Maracay-Choroní, 1200 m, VIII.1985, F. Romero *leg*., FRR; 1 male: same data but X.1968, FRR; 1 male: same data but IX.1968, FRR; 1 male: same data but VIII.1967, FRR; 1 male: same data but 1550 m, VIII.1990, FFRM; 1 male: same data but VIII.1995, FRR; 1 female: same data but 1200 m, VIII.1983, FRR; 1 female: same data but 1450 m, II.1978, FRR; 1 female: same data but 1200 m, IX.1986, FRR; 1 female: same data but III.1983, FRR; 1 female: same data but IX.1967, FRR; 1 male: same data, no altitude, V.1969, FRR; 1 male: N. of Rancho Grande, 1500 m, 01.V.1975, M. Adams *leg.*, BMNH; 9 males: Road to Choroni, N. of Maracay, 1600 m, 25.V.1975, M. Adams *leg.*, BMNH; 2 males: same data but 1550 m, M. Adams *leg.*, BMNH; 1 male: Choroni-Maracay Road, 1600 m, 04.V.1975, M. Adams *leg.*, BMNH; 8 males: same data but 1550–1600 m, 25.V.1975, M. Adams *leg.*, BMNH; CARABOBO: 5 males: 15 km N. Bejuma, Cerro San Isidro, 1500–1600 m, 10.VIII.2003, T. Pyrcz *leg*., TWP; 1 female: same locality and altitude, 24.VII.2003, M. Costa *leg*., TWP; 1 female: same data, 27.IX.2002, TWP.

Pronophila obscura **Butler (Figs. 29, 30)**

Pronophila obscura Butler, 1868: 184, pl. 4, fig. 10. Syntype(s) in BMNH [examined].

Geographic range: Species: CC, ST; Subspecies: SL, SI.

Altitudinal range: 1200–1700 m

Remarks: It is one of two representatives of the genus *Pronophila* in the CC, both endemic. They can be immediately recognized by the fact that *P. obscura* has a uniform dark brown FW and HWD, whereas *P. thelebe* Doubleday has a conspicuous white subapical patch. *P. obscura* occurs at considerably lower elevations; therefore they practically never occur together in nature. *P. obscura* can locally be very common at the right altitude. It keeps inside dense forest and has never been observed wandering into wider trails and open, secondary areas. *P. obscura* is closely related to *P. cuchillaensis* Viloria & Camacho from the Serranía del Turimiquire, which is possibly only a local subspecies of *P. obscura*. It is also related to *P. unifasciata* Lathy, a widespread polytypic Andean species, and *P. timanthes* Salvin from Costa Rica and Panama.

Material examined: DISTRITO FEDERAL: 1 male: Caracas, 920 m, XII.1971, J. Mal, *leg*., MIZA; ARAGUA: 8 males: Tiara, 1200 m, 24.V.1994, J. Clavijo, A. Chacón and Q. Arias *leg*., MIZA; 1 male:

Rancho Grande, 900 m, 10.VII.1952, F. Fernández Y. *leg*., MIZA; 1 male: Rancho Grande-Portachuelo, 1100 m, 23.V.1971, F. Fernández Y. *leg*., MIZA; 1 male: carretera Maracay-Choroní, 05.IX.1970, J. Salcedo and J. A. Clavijo *leg*., MIZA; 1 male: Caserío El Bigote al norte de Paya, 1000 m, 14.IX.1988, L. D. Otero *leg*., MIZA; 1 male: Villa de Cura, Est. Exp. Cataurito, 900 m, 21.X.1982, J. DeMarmels *leg*., MIZA; 1 male: same data but 05.XI.1987, J. DeMarmels *leg*., MIZA; 1 male: Tiara, Campamento Rangel, 1200 m, 20.II.1986, F. Fernández y J. Clavijo *leg*., MIZA; 1 male: carretara Choroní, 1400 m, 04.VIII.1952, JRR *leg*., MIZA; 1 male: Rancho Grande, 900 m, 10.VII.1952, F. Fernández Y. *leg*., MIZA; 1 male: Rancho Grande, 1100 m, 07.VII.1952, F. Fernández Y. *leg*., MIZA; 1 female: Palmarito - El Castaño, 800 m, 10.V.1989, L. D. Otero *leg*., MIZA; 1 female: Tiara, 1200 m, 23.VI.1994, J. DeMarmels and A. Chacón *leg*., MIZA; 1 female: Rancho Grande-Portachuelo, 1100 m, 20.IX.1969, J. Salcedo and J. A. Clavijo *leg*., MIZA; 1 female: Rancho Grande, 1100 m, 01.IX.1977, F. Fernández and J. Clavijo *leg*., MIZA; 1 female: same data but 25.IX.1952, F. Fernández Y. *leg*., MIZA; 1 female: Alto de Tiara, 1200 m, 30.VII.1952, J. A. González *leg*., MIZA; 1 female: Rancho Grande, 1100 m, 12.IX.1975, J. Clavijo *leg*., MIZA; 1 female: Villa de Cura, Est. Exp. Cataurito, 27.X.1981, J. DeMarmels *leg*., MIZA; 1 male: carretera Maracay-Choroní, 1000 m, VI.1982, F. Romero *leg*., FRR; 1 male and 1 female: same data but 1250 m, IV.1975, FRR; 1 male: same data but 1200 m, VIII.1982, FRR; 1 male: same data but 1550 m, IX.1988, FRR; 1 male: same data but X.1965, FRR; 1 female: same data but 1550 m, V.1974, FRR; 1 female: same data but 1550 m, VIII.1990, FRR; 1 female: same data but 1260 m, IX.1975, FRR; 1 female: same data but 1300 m, V.1984, FRR; 1 female: same data but 1200 m, VIII.1994, FRR; 1 female: same data but X.1968, FRR; 1 male: Rancho Grande, Portachuelo, 1100 m, IX.1988, F. Romero *leg*., FRR; 1 male: Rosario de Paya, 1200 m, X.1993, F. Romero *leg*., FRR; 1 male: N. of Rancho Grande, 1500 m, 01.V.1975, M. Adams *leg*., BMNH; MIRANDA: 1 male: Pasaquire, 11.IV.1985, J. DeMarmels *leg*., MIZA; 1 male: Qda. Pajarito - Altamira, Avila, 1000 m, 20.III.1982, J. DeMarmels *leg*., MIZA; 1 female: Qda. Pasaquire, 30.X.1981, J. DeMarmels *leg*., MIZA; 1 male: San Pedro de los Altos, VI.1967, F. Romero *leg*., FRR; CARABOBO: 3 males: Cerro El Café-Valencia, 700–1200 m, 17.XII.1980, L. D. Otero and C. L. Ortega *leg*., MIZA; 1 male: same data but 03.XII.1980, L. D. Otero and C. L. Ortega *leg*., MIZA; 1 female: Cerro El Café-Valencia, 1100 m, 27.IX–03.X.1981, L. D. Otero, J. B. Rodríguez and C. L. Ortega *leg*., MIZA; 1 male: Bejuma, Palmichal, 1200 m, VI.1992, FRR.

Pronophila thelebe **Doubleday**
(Figs. 31, 32)

Pronophila thelebe Doubleday, [1849]: pl. 60, fig. 3. Syntype(s) in BMNH [examined].

Geographic range: Species: CC (monotypic).

Altitudinal range: 1800–2600 m.

Remarks: This is the second endemic species of the genus *Pronophila* in the CC, and it is very common in mid-elevation cloud forests. It patrols in the subcanopy, but some readily come down to the ground to feed on urine, dung and rotten fruits. It is not as confined to dense cloud forest as *P. obscura*. *Pronophila thelebe* is related to *P. epidipnis* Thieme from the CM and the main Andes, and also, which is biogeographically intriguing, to *P. isobelae* Pyrcz, an endemic species of the western slopes of the Andes in Ecuador (Pyrcz, 1999).

Material examined: DISTRITO FEDERAL: 1 male: Serranía El Avila, Los Venados, 1500 m, 15.VII.1950, F. Fernández Y. *leg*., MIZA; 1 male: Serranía El Avila, Naiguatá, 1400 m, 19.IV.1950, F. Fernández Y. *leg*., MIZA; 1 male: P. N. El Avila-Caracas, 1500 m, 15.VII.1979, D. Baiocchi *leg*., MIZA; ARAGUA: 2 males: Colonia Tovar, 2000 m 04.XII.1950, F. Fernández Y. *leg*., MIZA; 1 male: Colonia Tovar, 1800 m, 05.II.1955, F. Rondón *leg*., MIZA; 4 males: Aragua, Colonia Tovar, 1800 m, 25.IX.1953, F. Fernández Y. *leg*., MIZA; 1 male: Colonia Tovar, 27.XII.1953, P. J. Salinas *leg*., MIZA; 2 males: Colonia Tovar, vía Cuesta Maya, 2000 m, 25–26.III.1998, A. Chacón, Q. Arias y J. Chirinos *leg*., MIZA; 1 male: Colonia Tovar, vía Cuesta Maya, 2100 m, 21.XI.1996, J. DeMarmels *leg*., MIZA; 1 female: Colonia Tovar, 08.I.1989, J. González *leg*., MIZA; 1 female: Colonia Tovar, vía Cuesta Maya, 2000 m, 25–26.III.1998, A.

Chacón, Q. Arias y J. Chirinos *leg*., MIZA; 1 female: carretera Maracay-Choroní, 1000 m, 01.XII.1973, J. Salcedo and A. Fernández *leg*., MIZA; 3 males and 2 females: Colonia Tovar, Los Colonos, 2100–2150 m, 06.VIII.2003, T. Pyrcz *leg*., TWP; 4 males: Colonia Tovar, 2100 m, III.1995, F. Romero *leg*., FRR; 2 males and 7 females: same data but IV.1995, FRR; 2 males: same data but VI.1975, FRR; 1 male: same data 2100 m, VI.1982, FRR; 1 male: carretera Maracay-Choroní, 1450 m, IX.1978, F. Romero *leg*., FRR; 1 male: Colonia Tovar, 1800 m, 23.V.1975, M. Adams *leg*., BMNH; MIRANDA: 1 male: Capachal, vía Colonia Tovar, 2150 m, 11.VIII.1984, J. Lattke *leg*., MIZA; 1 female: Pico Naiguatá, N. of Caracas, 2700 m, 17.V.1975, M. Adams *leg*., BMNH; 1 female: Pico Naiguatá, N. of Caracas, 1900 m, 18.V.1975, M. Adams *leg*., BMNH; 2 males: 1 female: Pico Naiguatá, N. of Caracas, 1500–1900 m, 15.V.1975, M. Adams *leg*., BMNH; 1 male: 1 female: Pico Naiguatá, N. of Caracas, 2700 m, 16.V.1975, M. Adams *leg*., BMNH; CARABOBO: 1 female: Hda. Monte Sacro, Chrigua, 1700 m, 24.V.1976, M. Gadou *leg*., MIZA (doubtful data).

***Pseudomaniola phaselis phaselis* (Hewitson)**
(Figs. 25, 26)

Pronophila phaselis Hewitson, 1862: 14, pl. 6, fig. 7. Syntype (male) in BMNH [examined].
Catargynnis phaselis (Hewitson); Thieme, 1907: 152
Pseudomaniola phaselis (Hewitson); Adams, 1986: 311.

Geographic range: Species: CC-Bolivia (Yungas de Cochabamba); Subspecies: CC, SP[?], EC.

Altitudinal range: 1200–1600 m (Pyrcz, 2004); 900–2000 m, ssp. *rogersi* (DeVries, 1987); CC: 1000–1900 m.

Remarks: This is the only representative of the genus *Pseudomaniola* in the CC. It is an extremely widespread, polytypic species with another subspecies, *rogersi* (Godman & Salvin) extending into Mesoamerica. The subspecies of *P. phaselis* are recognized in the first place by the FWD markings. The males of *rogersi* and *pholoe* (Staudinger) possess reddish markings in the subapical area, and their females are all brown. On the contrary, the males of *macasica* (Strand) found in Ecuador and northern Peru have all brown FWD, but their females have elongated orange FWD patches. In the nominate subspecies occurring in the CC, both sexes of the individuals coming from the SL are uniform dark brown on the upperside. However, most examined males collected on the Cerro Platillón in the SI do have small submarginal FWD reddish patches in M3-Cu1 and Cu1-Cu2. It is possible that this isolated population has diverged enough from the SL populations to deserve a separate subspecific status. The decision on that requires more comparative material from the CC, particularly freshly emerged individuals, because in worn butterflies, the upperside color pattern becomes dull and the presence or absence of faint reddish patches cannot be fully appreciated. It is worth pointing out that in the Andes of Colombia, Ecuador, Peru and Bolivia, *P. phaselis* is a rare species, very seldom observed in the field. In the CC it is quite common and in some localities, such as the Cerro Platillón or the Cerro San Isidro, it can be extremely abundant. *P. phaselis* has apparently a discontinuous distribution. Similarly to *T. phoronea*, it appears to be absent in many well-sampled Andean localities.

Material examined: DISTRITO FEDERAL: 1 male: Avila, va Picacho de Galipán, 1800 m, 20.III.1983, M. Costa *leg*., MCC; 2 females: Avila, Hotel Humboldt, 2000 m, 19.III.1983, M. Costa *leg*., MCC; 1 male: Avila, 1000 m, 15.IX.2001, M. Costa *leg*.; MCC; ARAGUA: 1 male: Cerro El Paují al sur de La Victoria, 1400 m, 19.II. 1978, J. Clavijo and C. Michelangelli *leg*., MIZA; 2 males: Tiara, 1200 m, 24.V.1994, J. Clavijo, A. Chacón and Q. Arias *leg*., MIZA; 3 males: same locality, 1200 m, 23.VI.1994, J. DeMarmels and A. Chacón *leg*., MIZA; 1 male: Rancho Grande, 1100 m, 12.VII.1952, F. Fernández Y. *leg*., MIZA; 1 male: Caracas - Junquito, 1500 m, 30.IX.1962, ex-coll. Feige, MIZA; 1 male: Tasajera al sur de La Victoria, 6.II.1983, J. Clavijo *leg*., MIZA; 1 female: Villa de Cura, Est. Exp. Cataurito, 27.X.1981, J. DeMarmels *leg*., MIZA; 1 female: Rancho Grande, 1100 m, 30.IX.1951, F. Fernández Y. *leg*., MIZA; 1 female: Alto de Tiara, 1200 m, 30.VII.1952, F. Fernández Y. *leg*., MIZA; 1 female: Palmarito - El Castaño Maracay, 800 m, 05.V. L. D. Otero *leg*., MIZA; 1 female: Tiara, 1200 m, 23.VI.1994, J. DeMarmels and A. Chacón *leg*., MIZA; 1 female: Rancho Grande, 1100 m, 17.VIII.1952, F. Fernández Y. *leg*., MIZA; 1 female: Rancho Grande,

Portachuelo, 1100 m, 15–30.XI.1987, J. De Marmels *leg*., MIZA; 1 male: Rancho Grande, Portachuelo, 1100 m, XI.1986, F. Romero *leg*., FRR; 2 males: same data but VIII.1987, FRR; 1 male: same data but VIII.1989, FRR; 1 male: same data but VIII.1983, FRR; 1 male: same data but V.1970, FRR; 1 male: same data but VI.1981, FRR; 1 female: carretera Maracay-Choroní, 1300 m, IX.1975, F. Romero *leg*., FRR; 1 female: same data but no altitude, V.1969, FRR; 1 female: same data but 1400 m, IX.1987, FRR; 1 male: Rosario de Paya, 1200 m, X.1993, F. Romero *leg*., FRR; 1 male: Colonia Tovar, vía Naranjal, 2100 m, 31.I.2004, M. Costa *leg*., MCC; 1 female: carretera Maracay-Choroní, 1450 m, TWP; GUARICO: 1 female: Guarico, Pao de Zarate, 1000 m, IX.1987, F. Romero *leg*., FRR; MIRANDA: 1 male: San Jos de los Altos, 1500 m, 18.VII.1982, M. Costa *leg*., MCC; 1 male: Altos de Pipe-IVIC, 1700 m, 07.III.2010, T. Pyrcz *leg*., MZUJ; CARABOBO: 1 male: Carabobo, Cerro San Isidro, 1600 m, 24.VIII.2003, M. Costa *leg*., MCC; 1 female: Cerro El Café-Valencia, 1000 m, 20.II.1983, L. D. Otero *leg*., MIZA; VARGAS: 1 female: El Tigre, route de Petaquire vers Puerto Cruz Km 14, 1400 m, 23.IV.2006, T. Pyrcz *leg*., TWP; GUARICO: 20 males and 1 female: Cerro Platillón, 24.II.2007, 1450 m, T. Pyrcz *leg*., TWP.

***Steroma bega bega* Westwood**
(Figs. 53, 54)

Steroma bega Westwood, [1851]: 66, fig. 6. Syntype (male) in BMNH [examined].

Geographic range: Species: CC, throughout Colombia, north-western and eastern Ecuador, eastern Peru and Bolivia; Subspecies: CC, CM, SP, EC (east slopes).

Altitudinal range: 1800–2700 m (Adams, 1986); 2250–2900 m (Pyrcz & Wojtusiak, 2002); 2000–2700 m (Pyrcz, 2004); 1700–2400 m.

Remarks: *S. bega* is the only representative of the genus in the CC. It is a small, brown, inconspicuous butterfly with a characteristic cryptic HWV pattern resembling lichens or mosses, which it exposes in lateral basking behaviour. It may easily be overlooked, and actually it is much more common than usually thought. It flies slowly and close to the ground, being active in sunny weather only. It comes to a number of baits consisting of decomposing organic matter. In the CC, it occurs above 1800 m, but in some Andean localities it was found as low as 1400 m (Pyrcz, unpubl.).

Material examined: DISTRITO FEDERAL: 2 males: Pico Naiguatá, 2765, 24.III.1978, A. Montagne, *leg*., MIZA; 1 male: P. N. El Avila, Est. Teleférico, 16.VI.1983, MIZA; MIRANDA: 1 male: Pico Naiguatá, N. of Caracas, 2200 m, 13.V.1975, M. Adams *leg*., BMNH; 1 female: Pico Naiguatá, N. of Caracas, 2700 m, 16.V.1975, M. Adams *leg*., BMNH; ARAGUA: 1 male: Colonia Tovar, 2100 m, 22.V.1975, M. Adams *leg*., BMNH; 1 female: Colonia Tovar, 1800 m, 23.V.1975, M. Adams *leg*., BMNH; 1 male: Colonia Tovar, vía Cuesta Maya, 2100 m, 14.V.1996, J. DeMarmels *leg*., MIZA; 2 males: Capachal, vía Colonia Tovar, 2150 m, 11.VIII.1984, J. Lattke *leg*., MIZA; 1 female: Colonia Tovar, II.1994, V. Colmenares *leg*., MIZA; 3 males and 2 females: Colonia Tovar, 2100 m, IV.1982, F. Romero *leg*., FRR; 2 males: same data but IV.1993, FRR; 1 male: same data but IV.1970, FRR; 1 female: same data but 2200 m, VII.1993, FRR; 1 female: Colonia Tovar, Capachal, 2050 m, 22.II.2010, T. Pyrcz *leg*., MZUJ.

***Thiemeia phoronea phoronea* (Doubleday)**
(Figs. 35, 36)

Pronophila phoronea Doubleday [1849]: pl. 60, fig. 1. Syntype (male) in BMNH [examined].
Daedalma phoronea (Doubleday); Butler, 1868: 183.
Catargynnis phoronea (Doubleday); Thieme, 1907: 150.
Thiemeia phoronea (Doubleday); Weymer, 1912: 267.
Thiemeia phoronea var. *obscurata* Krüger, 1924: 38. As a synonym of *T. phoronea phoronea*. Lectotype (male) designated by Pyrcz, 1999: 371 [examined], **stat. reinst.**

Geographic range: Species: CC-Yungas de Cochabamba; Subspecies: CC, SP[?], western slopes of the Andes in Colombia and north-western Ecuador.

Altitudinal range: 1600–2200 m (Pyrcz & Wojtusiak, 1999; Pyrcz, 2004); 2000–2300 m

Remarks: This interesting species has been attributed to three different genera, until it was placed in a monobasic genus *Thiemeia* Weymer. Pyrcz (2004) suggested that *Thiemeia* is a relic which evolved before the radiation of *Daedalma* Hewitson and *Pseudomaniola* Röber. The geographic range of *T. phoronea* is very wide, from the CC to Bolivia, but discontinuous. The apparent absence of *T. phoronea* from many well sampled areas is due to the fact that it is habitat- specific, thus highly localized and seldom encountered in nature. Three subspecies can be recognized, differing mostly by the females. The female of the nominate subspecies has a conspicuous whitish FWD subapical streak. This feature allows its separation from *obscurata* Krüger **stat. reinst.**, characterized by an all medium-brown FWD. Pyrcz (2004) was incorrect in assuming that *obscurata* occurring in the WC does not differ from the nominate subspecies, an observation based on the males only. Adams (1986), in his turn, was right in pointing out that the *obscurata* female is like neither *ortruda* nor *phoronea*. *T. phoronea ortruda* (Thieme), occurring on the eastern slopes of the Andes between Ecuador and Bolivia, has a wide orange oblique postdiscal band. A male individual was observed for two consecutive days on the top road from Los Colonos to Naranjal (CC), keeping a territory in a sunny gap. After it was collected, another male appeared and occupied the very same small area. A female was collected several months later in the same spot, as late as 15:45, on a particularly misty day.

Material examined: DISTRITO FEDERAL: 1 male: Avila, 19.III.1983, M. Costa *leg*., MIZA; 3 males: P. N. Avila, Caracas, 1500 m, 15–16.VII.1979, D. Baiocchi, *leg*., MIZA; 1 male: Avila 1800 m, 1.I.1984, M. Costa, *leg*., MIZA; 1 male: same locality and collector, 1800 m, 20.XI.1982, MIZA; 1 male: Avila, Hotel Humboldt, 20.I.1985, M. Costa, *leg*., MIZA; 1 male: Distrito Federal, Avila, vía Picacho de Galipán, 1800 m, 20.XI.1982, M. Costa *leg*., MCC; 2 males: Distrito Federal, Avila, vía Picacho de Galipán, 1800 m, 20.III.1983, M. Costa *leg*., MCC; 1 male: Avila, 2000 m, 18.XI.2001, M. Costa *leg*., MCC; ARAGUA: 1 female: Colonia Tovar, 2100 m, 31.I.2004, M. Costa *leg*., MCC; 1 male: Colonia Tovar, 09.IX.2003, M. Costa *leg*., MCC; 1 female: Colonia Tovar, vía Naranjal, 2150 m, 19.VII.2006, T. Pyrcz *leg*., MZUJ; 2 males: Colonia Tovar, Los Colonos, 2200 m, 03.III.2010, T. Pyrcz *leg*., MZUJ; 1 male: same data but 04.III.2010, MZUJ; 3 males: same data but 05.III.2010, 1 PBF, 2 MZUJ.

Manerebia mycalesoides (C. & R. Felder)

(Figs. 43, 44)

Pronophila mycalesoides C. & R. Felder, 1867: 473. Syntype in BMNH [examined].
Euptychia lethe Butler, 1867: 465. Syntypes in BMNH [examined]. Synonymy established by Lamas & Viloria, 2004.
Pedaliodes mycalesoides (C. & R. Felder); Thieme, 1905: 69.
Euptychia mycalesoides (C. & R. Felder); Weymer, 1912: 224.
Posteuptychia mycalesoides (C. & R. Felder); Forster, 1964: 137, fig. 171 (male genitalia).
Manerebia mycalesoides (C. & R. Felder); Pyrcz *et al*., 2006: 69, figs. 8H, I, 14D, 20.

Geographic range: Species (Monotypic): CC, CM, ET, EC and CCC.

Altitudinal range: 1400–1800 m.

Remarks: The entire neotropical montane genus *Manerebia* Staudinger, placed in the tribe Pronophilini by Miller (1968), and treated as such by Adams (1986) and Pyrcz (2004) among others, is considered herein as belonging to the predominantly Holarctic subtribe Erebiina, following Lamas & Viloria (2004). It is a diverse genus comprising at least 40 Andean species (Pyrcz *et al.*, 2006) and its only representative in the CC is *M. mycalesoides* characterized by large VHW ocelli, reminiscent of the species of satyrines belonging to the predominantly lowland subtribe Euptychiina. *M. mycalesoides* is an inhabitant of dense cloud forest understory rarely venturing into open areas. It is not surprising that its presence in the CC has been overlooked for many years.

Material examined: ARAGUA: 1 male: Tiara, 1200 m, 25– 27.XI.1992, J. Clavijo and A. Chacón *leg.* MIZA; 1 male: same locality, 10.X.1994, DeMarmels and A. Chacón *leg.* MIZA; MIRANDA: 1 male: Altos de Pipe - IVIC, 1600–1650 m, 09.VIII.2000, A. Viloria *leg*., TWP; 1 male: Altos de Pipe - IVIC, 1600 m, 09.VIII.2001, A. Viloria & J. Gross *leg*., TWP; VARGAS: 1 male: El Tigre, route de Petaquire vers Puerto Cruz Km 14, 1400 m, 22.X.2000, P. Boyer *leg*., TWP; 7 males: Sector El Tigre, Colonia Tovar-Puerto Inca, 1400–1450 m, 02.IV.2006, T. Pyrcz *leg*., TWP.

Discussion

Altitudinal patterns. The Cordillera de la Costa is a relatively low mountainous chain with maximum elevations below 3000 m. It is ecologically less diverse than the Cordillera de Mérida, the Sierra de Perijá or the main Andes, and does not support vegetation corresponding to elfin forest, subpáramo or páramo grasslands. Subpáramo-like vegetation with *Libanothamnus* espeletioids is found exclusively on the highest elevations of the Pico Naiguatá and Pico Oriental. As a consequence, its pronophiline fauna is less diverse and the structuring along an elevational gradient are less marked than elsewhere in the Andes (Pyrcz & Wojtusiak, 1999, 2002; Pyrcz, 2004; Pyrcz et al., 2009). Nevertheless, it is possible to identify two assemblages of Pronophilina species: lower and upper. The lower assemblage is made up of the species occurring from 1000 m to approximately 1800 m. This group is less species-rich and constitutes seven species: *Pedaliodes manis, Pedaliodes pisonia, Praepronophila perperna, Lymanopoda caucana, Pronophila obscura, Oxeoschistus puerta* and *Pseudomaniola phaselis.* Only the species belonging to this assemblage of Satyrinae are found in the lower Serranía del Interior, but they are also found at lower elevations in the Serranía del Litoral. The second group is ecologically very well defined and is made up of 14 species occurring above 1800 m. It is found only in the SL. The only two species that are not exclusive to either assemblage are *Corades enyo*, which occurs at lower elevations in the SI and is equally frequent at elevations above 2000 m in the SL, and *Pedaliodes piletha*, whose western SL subspecies *costa* belongs to the lower species assemblage, whereas the central SL nominate *piletha* usually occurs in association with the upper assemblage species in the SL above 1800 m (and only exceptionally has been found locally down to 1400 m).

Regional geographic patterns. The Cordillera de la Costa divides into three geographic entities: the Serrania del Litoral, the Serrania del Interior and the Sierra de Turimiquire. The fauna of the Turimiquire range, the eastern isolated block of the CC, appears, as far as is known, a marginally differentiated offshoot of the lower faunal assemblage. Hitherto, four species have been reported from the ST. All the taxa described from the ST can be associated with close relatives in the SL and SI: *P. croizatorum–P. manis ivica*, *Pronophila cuchillaensis – Pronophila obscura, Lymanopoda orientalis – Lymanopoda caucana*. *C. enyo* found in the ST represents the same nominate subspecies as in the SL and SI. However, as we have said, the fauna of the ST is still only superficially known, and almost certainly harbors more pronophiline species. It is interesting that so far, even though the ST is nearly as high as the SL with highest peaks raising above 2600 m and an extensive plateau above 1800 m, no representative of the upper species assemblage has been discovered in that range.

The fauna of the SL comprises all 24 satyrine species reported for the CC (excluding ST). There are no endemic genera in the SL. Seven species are endemic in the SL (*Eretris neocycla, P. pisonia, P. piletha* (with two subspecies), *P. prytanis, P. manneja, Pronophila obscura* and *P. thelebe*), which constitutes 28% of the CC entire satyrine fauna. This is a higher endemism ratio when compared to other peripheral ranges of the northern Andes, matched only by the SM (Adams & Bernard, 1977, 1979, 1981; Adams, 1986). This high ratio is, however, heavily biased by the low overall number of species. It has to be pointed out as well that all endemic species found in the SL (and the entire CC) are little differentiated morphologically as compared to allied taxa occurring in the CM or the main Andes. In fact, depending on the taxonomic approach, some of them may incidentally be considered as conspecific with their Andean allopatric replacements (*P. pisonia – P. phrasiclea, P. manneja – P. montagna, P. piletha – P. poesia, P. prytanis – P. proerna*). They are probably neoendemics, products of recent local allopatric speciation. As compared to the CC, the fauna of the SM, another isolated range of the northern extremity of the continent, includes a number of highly differentiated

paleoendemics, or relictual taxa, such as *Arhuaco ica* Adams & Bernard, *Lymanopoda nevada* Krüger or *Corderopedaliodes symmachus* (Godman & Salvin) that can only be associated with very few or none extant Andean relatives. On the subspecific level, at least 15 taxa are endemic of the SL (62%). Most widespread taxa found in the SL (with the exception of the endemic *Pedaliodes piletha costae* and *Pronophila obscura*) belong to the lower assemblage. On the other hand, most endemics (with the exception of the widespread *L. obsoleta, M. irmina, P. panyasis* and *T. phoronea*) belong to the upper assemblage of the SL. *P. piletha* represented by two subspecies, *P. p. costa* found exclusively in the western, somewhat isolated sub-unit, and *P. p. piletha* found in the remaining areas of the range, is the only example of subspecific differentation within the SL.

The pronophiline fauna of the SI is considerably impoverished compared to the SL, due to lower ecological diversity and considerably drier climate. So far, only five species are reported (*C. enyo, L. caucana, P. manis, Pr. obscura, Ps. phaselis*), all of them belonging to the lower species assemblage. Some of the lower assemblage species reported from the SL have not been found in the SI so far; however, their presence is likely, particularly for *P. pisonia* and *P. perperna* (considering their ecological preference and distribution patterns). None of the populations of pronophiline species occurring in the SI has differentiated to a subspecific level. However, the status of the isolated Cerro Platillón population of *Ps. phaselis* may be reconsidered in the future, when more comparative material becomes available.

Faunal affinities. The fauna of the CC shows some interesting affinities with the fauna of the western slopes of the Andes and the northern tip of the Colombian Central Cordillera. Even though in geographical and orographic terms the CC is an extension of the EC, it shares with the WC several faunal elements not found along the eastern slopes of the EC or the CM, including *Eretris encycla, Praepronophila perperna, Thiemeia phoronea, Lymanopoda caucana* and *Oxeoschistus puerta*. Added to this, the plausible sister-species of *Pronophila thelebe* is *Pronophila isobelae* Pyrcz, an endemic species of the western slopes of the Andes in central and southern Ecuador (Pyrcz, 2000). These affinities may reflect some paleoecological processes, particularly possible longer dry periods during interglacial phases on the eastern slopes of the northern Andes that may have led to the extinction of local montane faunas. Interestingly, some similar faunal connections may be detected in the genera *Perisama* (Attal & Crosson du Cormier, 1996) and *Adelpha* (Willmott, 2003).

Species diversity. Pyrcz (2004) proposed a simple diversity measure designed for the taxa that demonstrate intricate altitudinal distribution patterns, such as the example of the subtribe Pronophilina, which he called potential altitudinal transect (*pat*). It is a combination of within and between area indices. Similarly to the *beta* index, it takes into account data gathered along an ecological transect. It is, however, expressed in terms of species richness. It is the total number of species recorded along a transect covering the entire elevational span of a given taxon (existing along the same slope of a range). This index allows avoiding methodological artefacts of standard grids, which may lead to the inflating of local diversity indices by merging allopatric faunal assemblages. For the Colonia Tovar North slopes, the *pat* index is 24. This is an approximately similar diversity to that in the Sierra Nevada de Santa Marta in northern Colombia (San Lorenzo northern slopes = 22). It is inferior compared to that recorded in other peripheral ranges of the northern portion of the continent, the Sierra de Perijá (Manaure western slopes = 36) and the Cordillera de Mérida (La Culata southern slopes = 38) (Pyrcz, 2004). The *pat* diversity index jumps on a different scale when comparing the Cordillera de la Costa with the main Andes of Colombia (Choachi = 75, Puracé = 78), and particularly the central Andes of southern Ecuador (Zamora = 105) and northern Peru (Granada = 104). Pyrcz and Fratello (2005) correlate sharp diversity break-downs in the northern Andes with several topographical and ecological barriers: the so-called Táchira depression, separating the Colombian Cordillera Oriental from the Cordillera de Mérida (Vuilleumier & Ewert, 1978; Pyrcz & Viloria, 2007), the Valle del Cesar separating Perijá from the Sierra Nevada de Santa Marta (Adams, 1985) and the Lara lowlands separating the Cordillera de Mérida from the Cordillera de la Costa.

Acknowledgements

Field work of T. Pyrcz in the Venezuelan Cordillera de la Costa was supported by an internal grant of the Institute of Zoology of the Jagiellonian University (BW/IZ/22b/2004). The authors would like to express their gratitude to (late) Clara and Mauro Costa (Caracas), and Pierre Boyer (Le Puy Sainte Réparade) for their excellent co-operation and logistical support, José Clavijo, Luís Daniel Otero, and Jürg De Marmels for their assistance in the MIZA, Maracay, and Francisco Romero, Jr. (Maracay) for the unrestricted access to the collection of his family. Héctor Suárez and Sergio Zambrano kindly prepared the map to illustrate this paper. This research was carried out as part of the co-operative agreements between the Jagiellonian University (Kraków), the Instituto Venezolano de Investigaciones Científicas (Caracas) and the Universidad Central de Venezuela (Maracay).

Literature

Adams, M.J. (1985) Speciation in the pronophiline butterflies (Satyridae) of the Northern Andes. *Journal of Research on the Lepidoptera*, 1985 (suppl. 1), 33–49.

Adams, M.J. (1986) Pronophiline butterflies (Satyridae) of the three Andean Cordilleras of Colombia. *Zoological Journal of the Linnean Society*, 87, 235–320.

Adams, M.J. & Bernard, G.I. (1977) Pronophiline butterflies (Satyridae) of the Sierra Nevada de Santa Marta, Colombia. *Systematic Entomology*, 2, 263–281.

Adams, M.J. & Bernard, G.I. (1979) Pronophiline butterflies (Satyridae) of the Serranía de Valledupar, Colombia-Venezuela border. *Systematic Entomology*, 4, 95–118.

Adams, M.J. & Bernard, G.I. (1981) Pronophiline butterflies (Satyridae) of the Cordillera de Mérida, Venezuela. *Zoological Journal of the Linnean Society*, 71, 343–372.

Attal, S. & Crosson-du-Cormier, A. (1996) *The genus Perisama*. Venette: Sciences Nat, 149 pp., 12 pls.

Beebe, W. & Crane, J. (1947) Ecology of Rancho Grande, a subtropical cloud forest in northern Venezuela. *Zoologica*, 32(5), 43–60.

Butler, A.G. (1867) Revision of the group of lepidopterous insects hitherto included in the genus *Pronophila* of Westwood. *Annals and Magazine of Natural History*, (3) 20 (118), 266–268.

Butler, A.G. (1868) *Catalogue of diurnal Lepidoptera of the family Satyridae in the collection of the British Museum*. London: Taylor and Francis, vi + 211 pp., 5 pls.

Butler, A.G. (1870) Descriptions of exotic Lepidoptera from the collection of Herbert Druce, esq. *Cistula Entomologica*, 1(2), 17–32.

d' Abrera, B. (1988) *Butterflies of the Neotropical Region. Part V. Nymphalidae (Conc.) & Satyridae*. Victoria, Black Rock: Hill House, [viii] + pp. 679–877.

DeVries, P. (1987) *The butterflies of Costa Rica and their natural history, Papiliondae, Pieridae, Nymphalidae*. Princeton, NJ: Princeton University Press, 327 pp., 50 pls.

Doubleday, E. [1849] *The genera of diurnal Lepidoptera, 1*. London: Longman, pls. 60–62.

Fassl, A.H. (1911) Die vertikale Verbreitung der Lepidopteren in der Columbischen Central Cordillere. *Fauna Exotica*, 7, 25–26.

Fassl, A.H. (1915) Die vertikale Verbreitung der Lepidopteren in der Columbischen West-Cordillere. *Entomologische Rundschau*, 32, 9–12.

Felder, C. & Felder, R. (1867) *Reise der Österreichischen Fregatte Novara um die Erde in den Jahren 1857, 1858, 1859 unter den Befehlen des Commodore B. von Wüllerstorf-Urbair. Zoologischer Theil. Zweiter Band. Zweite Abtheilung: Lepidoptera*. Wien: Carl Gerold's Sohn, (3), [2] + 379–536, pls. 48–74.

Forster, W. (1964) Beiträge zur Kenntnis der Insektenfauna Boliviens, XIX. Lepidoptera III. Satyridae. *Veröffentlichungen der Zoologischen Staatssammlung München*, 8, 51–188, pls. 27–35.

Greeney, H.F., Pyrcz, T.W., Dyer, L.A. & Snchez, M.Z. (2010) The early stages and natural history of *Corades medeba* Hewitson, 1850 in eastern Ecuador (Lepidoptera: Nymphalidae: Satyrinae: Pronophilina). *Tropical Lepidoptera Research*, 20(1), 8–13.

Gregory-Wodzicki, K.M. (2000) Uplift history of the Central and Northern Andes, A review. *Geological Society of America Bulletin*, 112, 1091–1105.

Harvey, D.J. (1991) Appendix B. Higher classification of the Nymphalidae. *In*: Nijhout, H. F.: *The development and evolution of butterfly wing patterns*. Washington, D. C.: Smithsonian Institution Press, pp. 255–273.

Heredia, M.D. & Viloria, A.L. (2004) Description and life history of *Pedaliodes zingara*, a new satyrine species from

Colombia (Nymphalidae). *Journal of the Lepidopterists' Society*, 58(2), 96–103.
Herrich-Schäffer, G. [1858] *Sammlung neuer oder wenig bekannter aussereuropäischer Schmetterlinge, 1*. Regensburg: G. J. Manz, pp. 53–84, pls. 19–22 [1856].
Hewitson, W.C. [1849] Description of a new genus and species of Satyridae. *Proceedings of the Zoological Society of London*, 1848(16), 115–117.
Hewitson, W.C. (1850) Descriptions of some new species of butterflies. *Annals and Magazine of Natural History*, (2)6, 434–440.
Hewitson, W.C. (1862) On *Pronophila*, a genus of diurnal Lepidoptera; with figures on the new species, and reference to all those which have been previously figured or described. *Transactions of the Entomological Society of London*, 1(3), 1–17, pls. 1–6.
Hopffer (1874) Neue Lepidopteren von Peru und Bolivia. *Stettiner Entomologische Zeitung*, 35, 110–121, 329–369.
Huber, O. (1986) Las selvas nubladas de Rancho Grande: observaciones sobre su fisionomía, estructura y fenología. In Huber, O. (ed.), *La selva nublada de Rancho Grande, Parque Nacional "Henri Pittier*. Caracas: Fondo Editorial Acta Científica Venezolana, pp. 131–170.
Krüger, E. (1925) Beiträge zur Kenntnis der columbianischen Satyriden. *Entomologische Rundschau*, 42, 10–12, 14, 17–18, 23–24, 25–26.
Lamas, G., [1997] Diez notas sinonímicas sobre Satyrinae Neotropicales, con la descripción de dos subespecies nuevas de Per y Ecuador (Lepidoptera: Nymphalidae). *Revista Peruana de Entomología*, 39, 49–54.
Lamas, G. & Viloria, A.L. (2004) Subtribe Erebiina; Subtribe Hypocystina, In: Lamas, G. (ed.), *Atlas of Neotropical Lepidoptera, Checklist: Part 4A, Hesperoidea – Papilionoidea*. Gainesville: Association for Tropical Lepidoptera, pp. 215–217.
Lamas, G., Viloria, A.L. & Pyrcz, T.W. (2004) Subtribe Pronophilina, In: Lamas, G. (ed.), *Atlas of Neotropical Lepidoptera, Checklist: Part 4A, Hesperoidea – Papilionoidea*. Gainesville: Association for Tropical Lepidoptera, pp. 206–215.
Miller, L.D. (1968) The higher classification, phylogeny and zoogeography of the Satyridae (Lepidoptera). *Memoirs of the American Entomological Society*, 24, 1–174.
Pelz, V. (1997) Life history of *Pedaliodes parepa* from Ecuador (Lepidoptera: Nymphalidae: Satyrinae). *Tropical Lepidoptera*, 8(1), 41–45.
Pyrcz, T.W. (1999)a The E. Krüger collection of pronophiline butterflies, Part I: Genera: *Pedaliodes* to *Lymanopoda* (Lepidoptera: Nymphalidae: Satyrinae). *Lambillionea*, 99(2), 221–240.
Pyrcz, T.W. (1999)b The E. Krüger collection of pronophiline butterflies, Part II: Genera *Manerebia* to *Thiemeia* (Lepidoptera: Nymphalidae: Satyriae). *Lambillionea*, 99(3), 351–376.
Pyrcz, T.W. (2000) Contributions to the knowledge of Ecuadorian Pronophilini, Part 4, new taxa of Pronophila Doubleday, *Genus*, 11(1), 69–86.
Pyrcz, T.W. (2004) Pronophiline butterflies of the highlands of Chachapoyas in northern Peru: faunal survey, diversity and distribution patterns (Lepidoptera, Nymphalidae, Satyrinae). *Genus*, 15(4), 455–622.
Pyrcz, T.W. & Fratello, S. (2005) Cloud Forest butterfly fauna of the Pantepui – poor or poorly known? Description of new species and records of new genera of Pronophilina: *Eretris agata* and *Oxeoschistus romeo* (Nymphalidae, Satyrinae). *Journal of the Lepidopterists' Society*, 59(4), 201–212.
Pyrcz, T.W. & Gareca, Y. (2009) A new species of *Eretris* Thieme from the Elbow of the Andes region in Bolivia (Lepidoptera, Satyrinae), *Neotropical entomology*, 38(3), 370–375.
Pyrcz, T.W. & Viloria, A.L. (1999) Mariposas de la tribu Pronophilini de la Reserva Forestal Tambito, Cordillera Occidental, Colombia. Primera Parte. Convergencia de los patrones de coloración en mariposas andinas: siete nuevas especies del género *Pedaliodes* Butler, 1867 (Lepidoptera: Nymphalidae: Satyrinae). *SHILAP Revista de Lepidopterología*, 27(106), 173–187.
Pyrcz, T.W. & Viloria, A.L. (2006) Revisional notes on the genus *Praepronophila* Forster, *Boletin del Museo de Historia Natural de la Universidad de Caldas*, 10, 165–182.
Pyrcz, T.W. & Viloria, A.L. (2006) Notes on the systematics of the genus *Praepronophila* Forster with the description of two new subspecies of *P. perperna* (Hewitson) (Lepidoptera: Nymphalidae: Satyrinae). *Boletn del Museo de Historia Natural de la Universidad de Caldas*, 10, 165–182.
Pyrcz, T.W. & Viloria, A.L. (2007) Erebiine and pronophiline butterflies of the Serranía del Tam, Venezuela-Colombia border (Lepidoptera: Nymphalidae: Satyrinae). *Tropical Lepidoptera*, 15(1–2), 18–52.
Pyrcz, T.W., Willmott, K.R. & Hall, J.P.W. (1999) Contribution to the knowledge of Ecuadorian Pronophilini, Part III. Three new species and five new subspecies (Lepidoptera: Nymphalidae: Satyrinae). *Genus*, 10(3), 497–522.
Pyrcz, T.W., Willmott, K.R., Hall, J.P.W. & Viloria, A.L. (2006) A review of the genus *Manerebia* Staudinger (Lepidoptera: Nymphalidae: Satyrinae) in the northern Andes. *Journal of Research on the Lepidoptera*, 39, 1–45.
Pyrcz, T.W. & Wojtusiak, J. (1999) Mariposas de la tribu Pronophilini de la Reserva Forestal Tambito, Cordillera Occcidental, Colombia. Segunda parte. Patrones de distribución altitudinal (Lepidoptera: Nymphalidae: Satyrinae). *SHILAP Revista de Lepidopterología*, 27(106), 203–213.

Pyrcz, T.W. & Wojtusiak, J. (2002) The vertical distribution of pronophiline butterflies (Nymphalidae, Satyrinae) along an elevational transect in Monte Zerpa (Cordillera de Mérida, Venezuela) with remarks on their diversity and parapatric distribution. *Global Ecology & Biogeography*, 11, 211–221.

Pyrcz, T., Wojtusiak, J. & Garlacz, R. (2009) Diversity and Distribution Patterns of Pronophilina Butterflies (Lepidoptera: Nymphalidae: Satyrinae) along an Altitudinal Transect in North-Western Ecuador. *Neotropical Entomology*, 38(6), 716–726.

Raguso, R.A. & Gloster, O. (1993) Preliminary checklist and field observations of the butterflies of the Maquipucuna Field Station (Pichincha Province, Ecuador). *Journal of Research on the Lepidoptera*, 32, 135–161.

Raymond, T. (1982) *Mariposas de Venezuela*. Caracas: Ediciones Corpoven, Gráficas Armitano C. A., 277 pp.

Schäfer, E. (1952) Ökologischer Querschnitt durch den 'Parque Nacional de Aragua'. *Journal für Ornithologie*, 93(3/4), 313–352.

Schultze, A. (1929) Die erste Stande von drei kolumbischen hochandinen Satyriden. *Deutsche Entomologische Zeitschrift Iris*, 43, 157–165.

Steyermark, J.A. & Huber, O. (1978) *Flora del Avila*. Caracas: Sociedad Venezolana de Ciencias Naturales, 971 pp.

Thieme, O. (1905) Monographie der Gattung *Pedaliodes* Butl. (Lepidoptera: Rhopalocera: Satyridae). *Berliner Entomologische Zeitschrift*, 50, 43–141.

Thieme, O. (1907) Monographische Bearbeitung der Gattungen *Lasiophila* Feld., *Daedalma* Hew., *Catargynnis* Röb., *Oxeoschistus* Butl., *Pronophila* Westw., *Corades* Doubl. & Hew. (Lepidoptera: Rhopalocera: Satyridae). *Berliner Entomologische Zeitschrift*, 51, 99–234.

Vareschi, V. (1986) Cinco breves ensayos ecológicos acerca de la selva virgen de Rancho Grande. In: Huber, O. (ed.), *La selva nublada de Rancho Grande, Parque Nacional "Henri Pittier"*. Caracas: Fondo Editorial Acta Científica Venezolana, pp. 171–187.

Viloria, A.L. (1994) High Andean Pronophilini from Venezuela: two new species of *Diaphanos* (Nymphalidae: Satyrinae). *Journal of the Lepidopterists' Society*, 48(3), 180–189.

Viloria, A.L. (2007) The Pronophilina: synopsis of their biology and systematics. *Tropical Lepidoptera*, 15(1–2), 1–17.

Viloria, A.L., Adams, M.J., Pyrcz, T.W. & Romero, F. (2001) Noticia histórica sobre satíridos venezolanos coleccionados por Karl Moritz (1797–1866) y discusión de la identidad taxonómica y la distribución de *Pedaliodes pisonia* (Hewitson, 1862) (Lepidoptera, Nymphalidae, Satyrinae). *SHILAP Revista de Lepidopterología*, 29(113), 31–42.

Viloria, A.L. & Camacho, J. (1999) Three new pronophiline butterflies from the Serrana de Turimiquire, eastern Venezuela, and type designation for *Corades enyo enyo* Hewitson (Lepidoptera: Nymphalidae, Satyrinae). *Fragmenta Entomologica*, 31(1), 173–188.

Viloria, A.L. & Pyrcz, T.W. (1995) Notes on *Pedaliodes roraimae* Strand, a little known satyrid from south-eastern Venezuela (Lepidoptera: Nymphalidae: Satyrinae). *Lambillionea*, 95(4), 584–586.

Viloria, A.L., Pyrcz, T.W., Wojtusiak, J., Ferrer–Paris, J.R., Beccaloni, G.W., Sattler, K. & Lees, D.C. (2003) A brachypterous butterfly?. *Proceedings of the Royal Society of London, B, (Suppl.), Biology Letters*, 270(s1), 21–24.

Vivas, L. (1992) *Los Andes Venezolanos*. Caracas: Academia Nacional de la Historia, 250 pp.

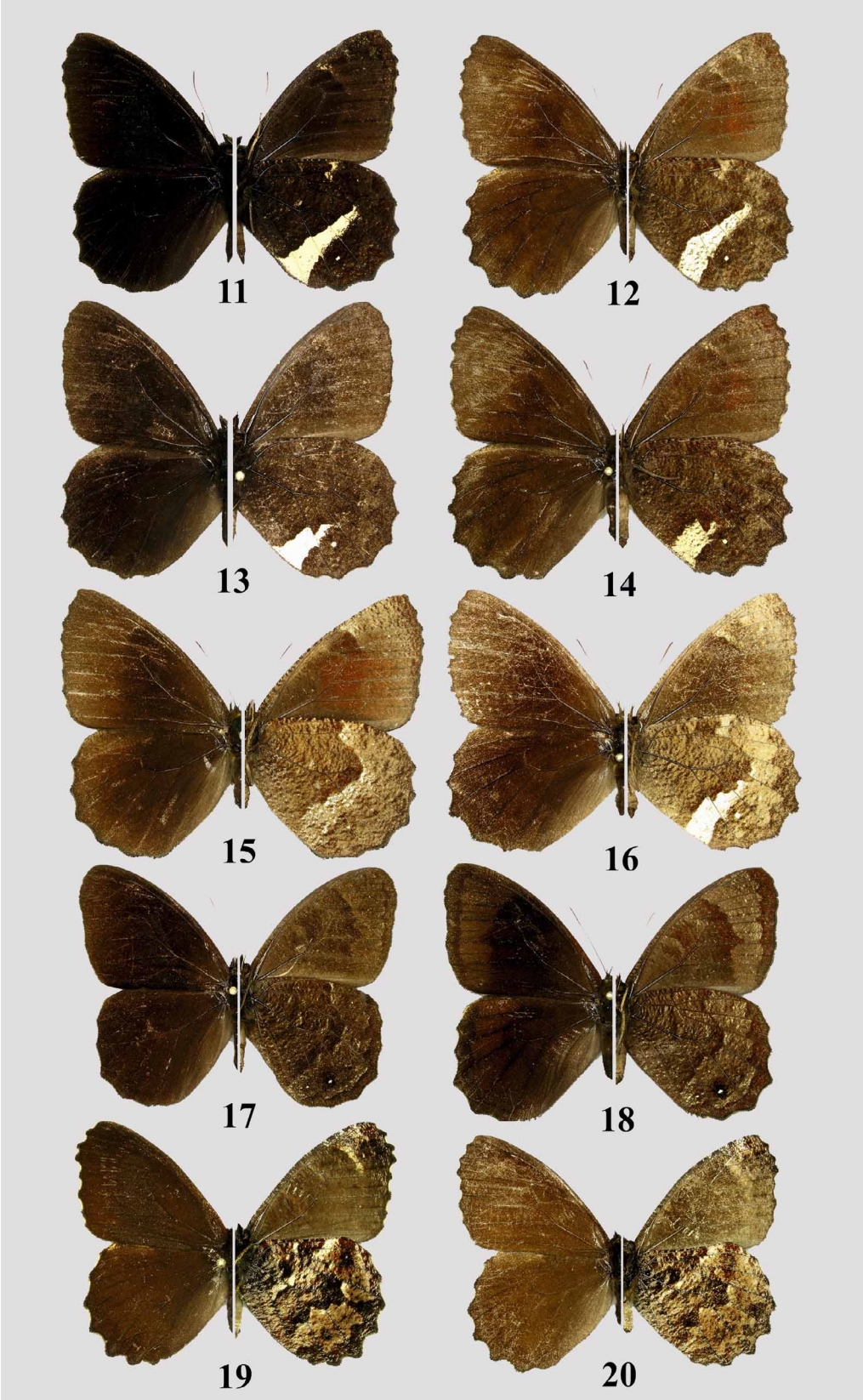
Vuilleumier, F. & Ewert, D.N. (1978) The distribution of birds in Venezuelan paramos. *Bulletin of the American Museum of Natural History*, 162(2), 49–90.

Westwood, J.O. [1851] In: Doubleday, E.: *The genera of diurnal Lepidoptera, 2*. London: Longman, pp. 375–386, pl. 67.

Weymer, G. (1912) 4 Familie: Satyridae. In: Seitz, A. (ed.): *Die Gross-Schmetterlinge der Erde, 2; Exotische Fauna, 5*. Stuttgart: A. Kernen, pp. 173–283.

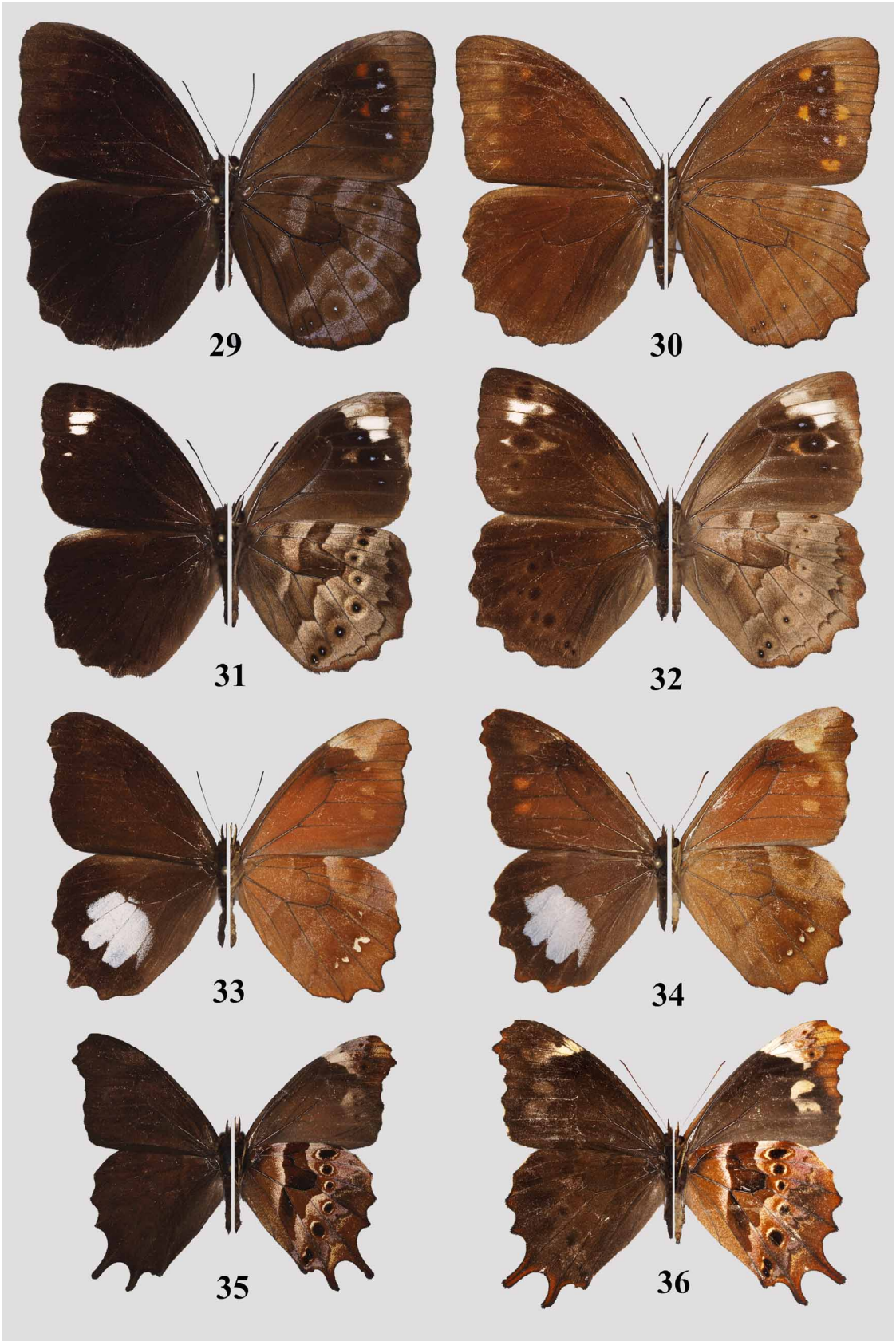
Willmott, K.R. (2003) *The genus Adelpha: Its systematics, biology and biogeography*. Gainesville: Scientific Publishers, 322 pp.

FIGURES 1–10. Adult satyrine butterflies from the Cordillera de La Costa, Venezuela (left: dorsal, right: ventral); **1.** *Pedaliodes plotina plotina* (Hewitson) (male, vía Capachal); **2.** *P. plotina plotina* (Hewitson) (female, vía Naranjal); **3.** *Pedaliodes manis ivica* Viloria & Pyrcz **n. ssp.**, HOLOTYPE (male, Altos de Pipe); **4.** *P. manis ivica* Viloria & Pyrcz **n. ssp.**, PARATYPE (female, Altos de Pipe); **5.** *Pedaliodes piletha piletha* (Hewitson) (male, vía Naranjal); **6.** *P. piletha piletha* (Hewitson) (female, Los Colonos); **7.** *Pedaliodes piletha costa* Viloria & Pyrcz **n. ssp.**, HOLOTYPE (male, Cerro San Isidro); 8. *P. piletha costa* Viloria & Pyrcz **n. ssp.**, PARATYPE (female, Cerro San Isidro); **9.** *Pedaliodes manneja* Thieme (male, vía Capachal); **10.** *P. manneja* Thieme (female, vía Capachal).

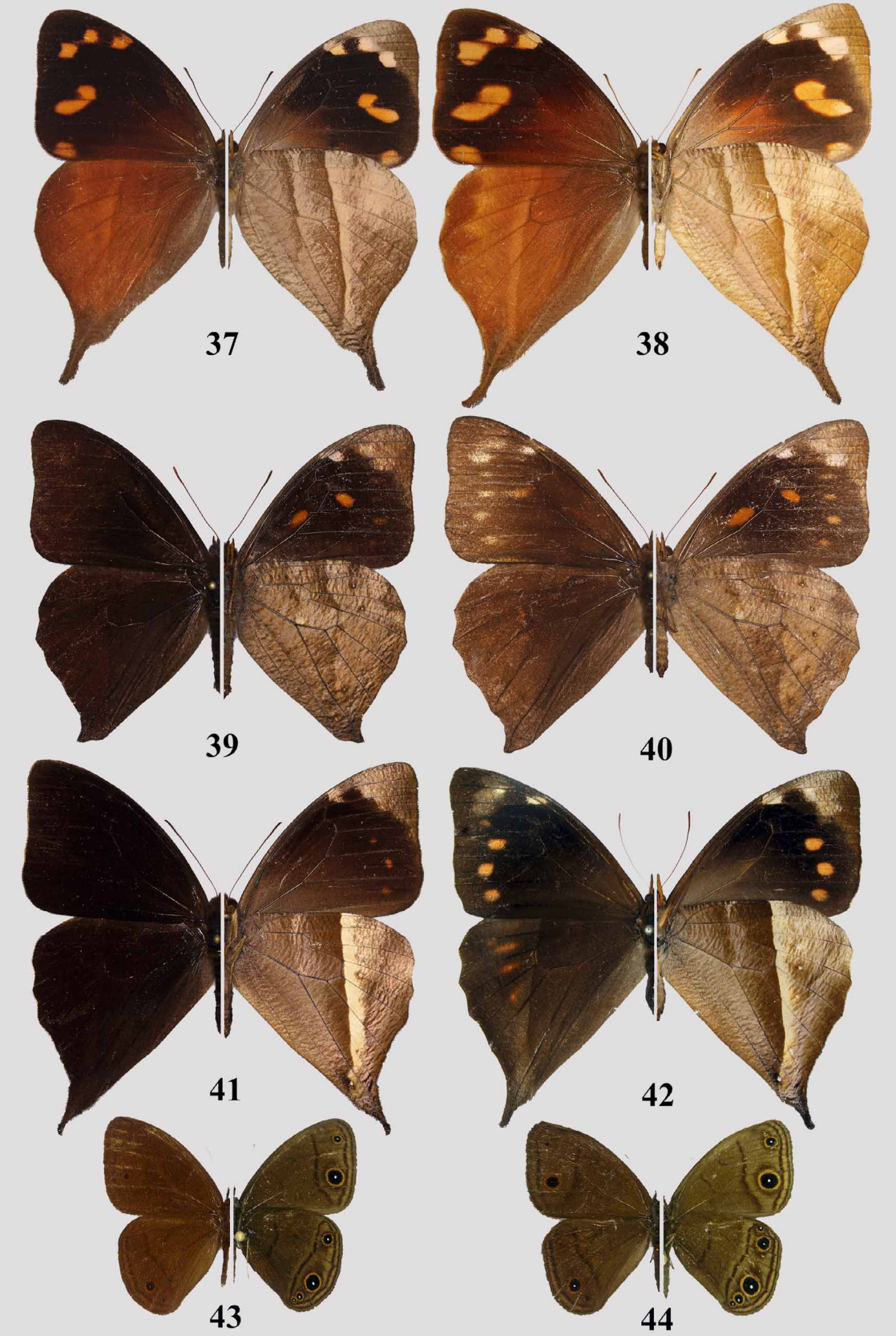


FIGURES 11–20. Adult satyrine butterflies from the Cordillera de La Costa, Venezuela (left: dorsal, right: ventral); **11.** *Pedaliodes prytanis* (Hewitson) (male form, vía Naranjal); **12.** *P. prytanis* (Hewitson) (female form, vía Naranjal); **13.** *P. prytanis* (Hewitson) (male form, vía Naranjal); **14.** *P. prytanis* (Hewitson) (female form, vía Naranjal); **15.** *P. prytanis* (Hewitson) (female form, Los Colonos); **16.** *P. prytanis* (Hewitson) (female form, Los Colonos); **17.** *Pedaliodes pisonia* (Hewitson) (male, Altos de Pipe); **18.** *P. pisonia* (Hewitson) (female, Altos de Pipe); **19.** *Panyapedaliodes panyasis* (Hewitson) (male, Colonia Tovar); **20.** *P. panyasis* (Hewitson) (female, Colonia Tovar).

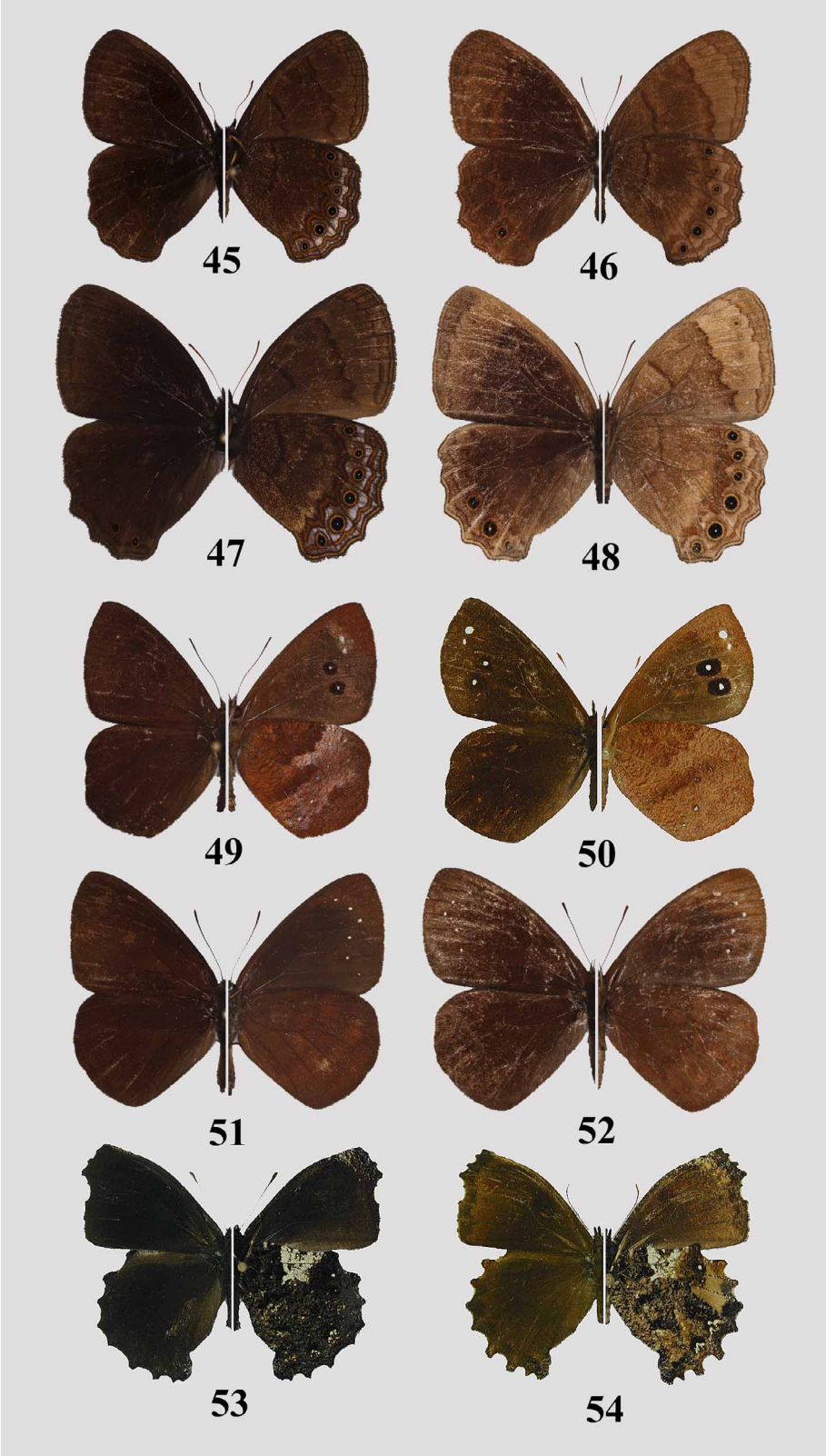
FIGURES 21–28. Adult satyrine butterflies from the Cordillera de La Costa, Venezuela (left: dorsal, right: ventral); **21.** *Praepronophila perperna perperna* (Hewitson) (male, vía Naranjal); **22.** *P. perperna perperna* (Hewitson) (female, Cerro San Isidro); **23.** *Lasiophila zapatoza zapatoza* Westwood (male, vía Naranjal); **24.** *L. zapatoza zapatoza* Westwood (female, vía Naranjal); **25.** *Pseudomaniola phaselis phaselis* (Hewitson) (male, Cerro San Isidro); **26.** *P. phaselis phaselis* (Hewitson) (female, Sector El Tigre); **27.** *Oxeoschistus puerta puerta* (Westwood) (male, Maracay-Choroní); **28.** *O. puerta puerta* (Westwood) (female, Cuesta de Puerto Maya).



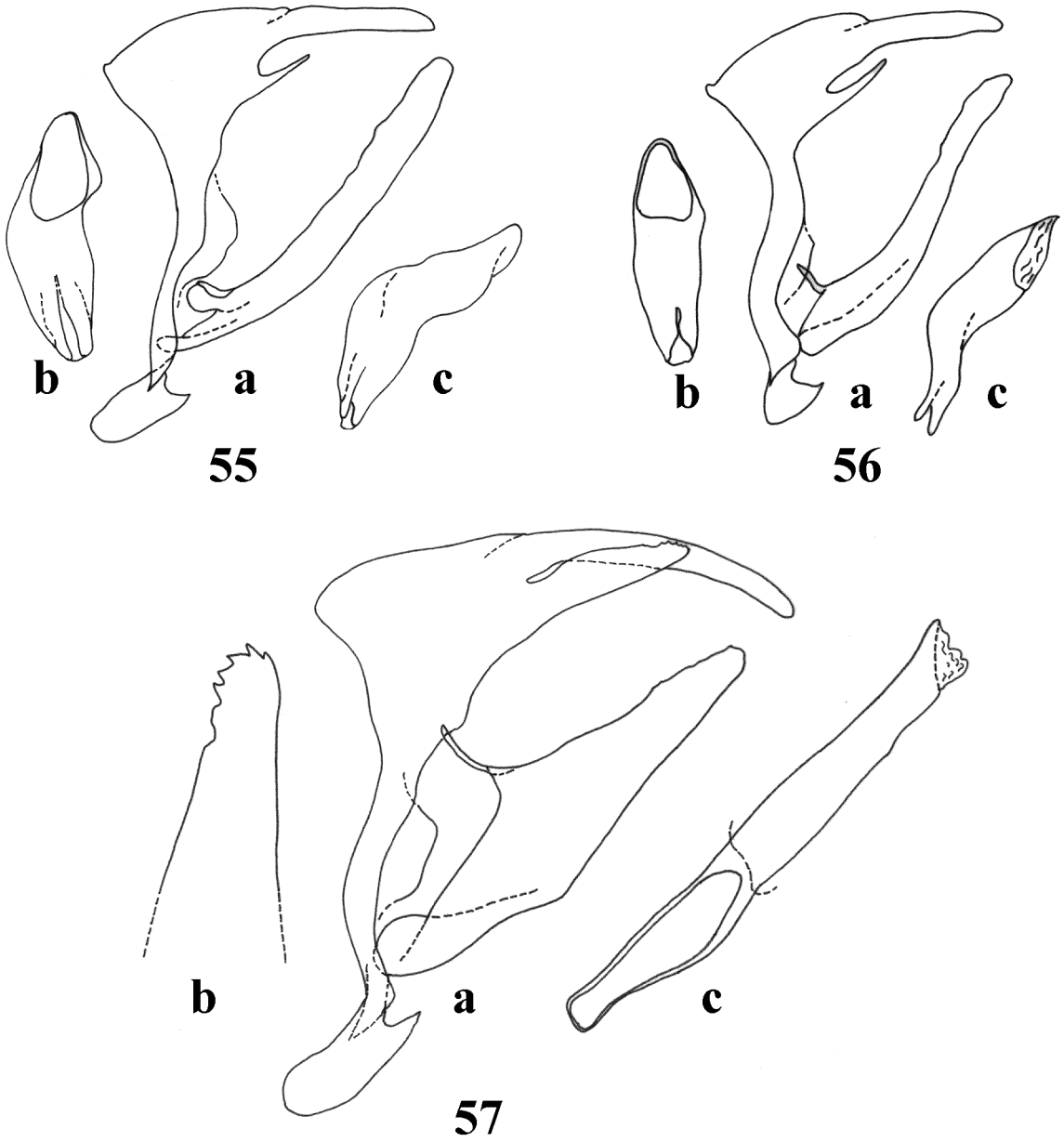
FIGURES 29–36. Adult satyrine butterflies from the Cordillera de La Costa, Venezuela (left: dorsal, right: ventral); **29.** *Pronophila obscura* Butler (male, Cerro San Isidro); **30.** *P. obscura* Butler (female, vía Maracay-Choroní); **31.** *Pronophila thelebe* Doubleday (male, vía Capachal); **32.** *P. thelebe* Doubleday (female, vía Capachal); **33.** *Mygona irmina* (Doubleday) (male, Los Colonos); **34.** *M. irmina* (Doubleday) (female, Los Colonos); **35.** *Thiemeia phoronea phoronea* (Doubleday) (male, vía Naranjal); **36.** *T. phoronea phoronea* (Doubleday) (female, vía Naranjal).



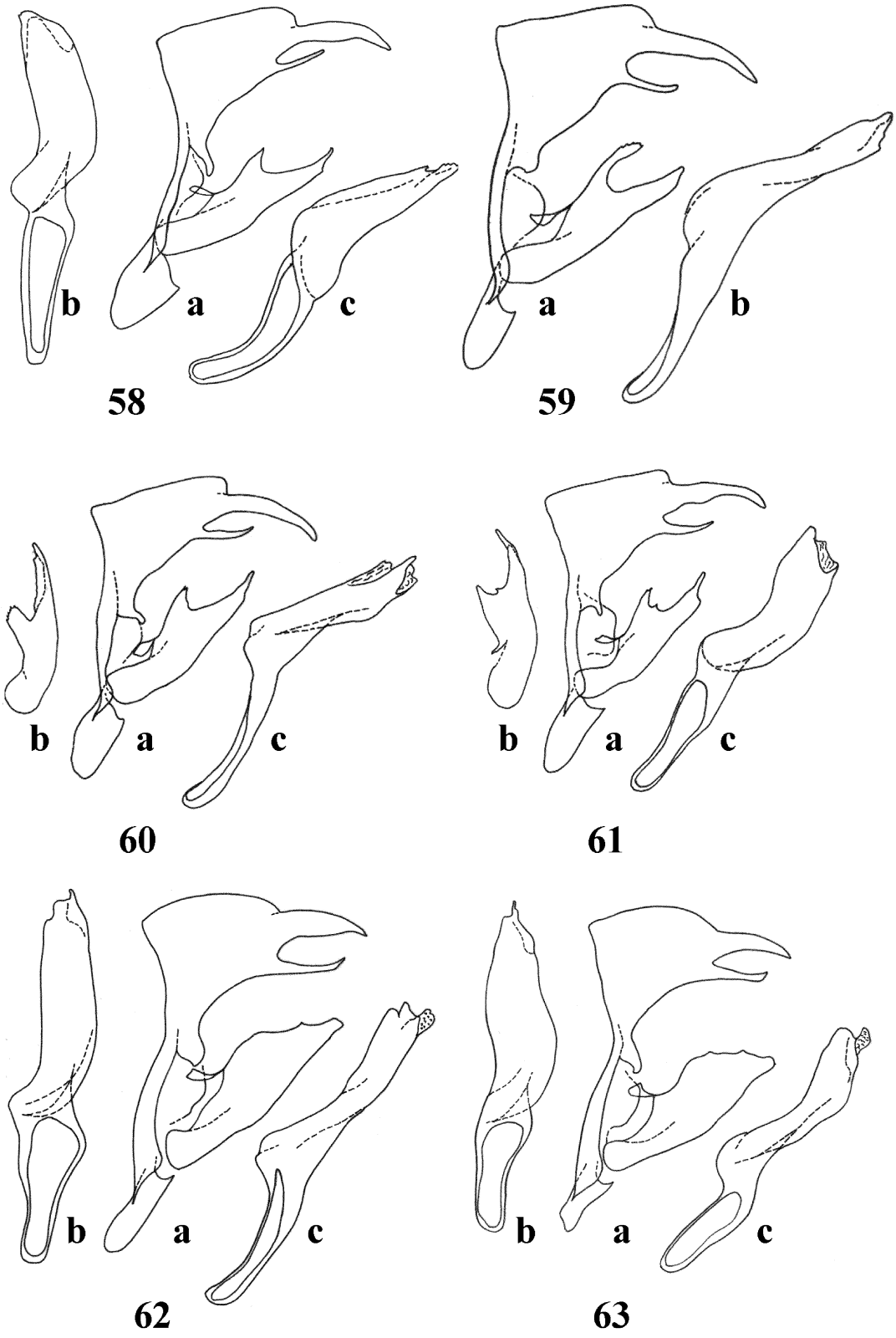
FIGURES 37–44. Adult satyrine butterflies from the Cordillera de La Costa, Venezuela (left: dorsal, right: ventral); **37.** *Corades enyo enyo* Hewitson (male, Los Colonos); **38.** *C. enyo enyo* Hewitson (Los Colonos); **39.** *Corades medeba pittieri* Pyrcz & Viloria **n. ssp.**, HOLOTYPE (male, vía Naranjal); **40.** *C. medeba pittieri* Pyrcz & Viloria **n. ssp.**, PARATYPE (female, vía Naranjal); **41.** *Corades pannonia pannonia* Hewitson (male, vía Naranjal); **42.** *C. pannonia pannonia* Hewitson (female, Colonia Tovar); **43.** *Manerebia mycalesoides* (C. & R. Felder) (male, Sector El Tigre); **44.** *M. mycalesoides* (C. & R. Felder) (female, Sector El Tigre).



FIGURES 45–54. Adult satyrine butterflies from the Cordillera de La Costa, Venezuela (left: dorsal, right: ventral); **45.** *Eretris encycla encycla* (C. & R. Felder) (male, vía Capachal); **46.** *E. encycla encycla* (C. & R. Felder) (female, vía Capachal); **47.** *Eretris neocycla* Pyrcz & Viloria **n. sp.**, HOLOTYPE (male, vía Naranjal); **48.** *E. neocycla* Pyrcz & Viloria **n. sp.**, PARATYPE (female, Cuesta Puerto Maya); **49.** *Lymanopoda obsoleta* (Westwood) (male, Colonia Tovar); **50.** *L. obsoleta* (Westwood) (female, Colonia Tovar); **51.** *Lymanopoda caucana* Weymer (male, Cerro San Isidro); **52.** *L. caucana* Weymer (female, Cerro San Isidro); **53.** *Steroma bega bega* Westwood (male, Colonia Tovar); **54.** *S. bega bega* Westwood (female, Colonia Tovar).



FIGURES 55–57. a Lateral view of the male genitalia of satyrine butterflies from the Cordillera de La Costa, Venezuela (aedeagus removed from its natural position in lateral [**c**] and ventral [**b**] view; in *C. medeba* only in lateral view and tip of subuncus scaled up in **b**); **55**. *Eretris neocycla* Pyrcz & Viloria **n. sp.**, HOLOTYPE (vía Naranjal); **56**. *Eretris encycla encycla* (C. & R. Felder) (vía Capachal); **57**. *Corades medeba pittieri* Pyrcz & Viloria **n. ssp.**, PARATYPE (vía Naranjal).



FIGURES 58–63. a Lateral view of the male genitalia of satyrine butterflies of the genus *Pedaliodes* Butler from the Cordillera de La Costa, Venezuela (aedeagus removed from its natural position in lateral [**c**, except in 59, where it is **b**] and ventral [**b**, except in 59] view); **58**. *P. croizatorum* Viloria & Camacho (Fila San Lorenzo, Monagas State, Venezuela); **59**. *P. manis manis* (C. & R. Felder) (Qda. La Cuesta, Mérida State, Venezuela); **60**. *P. manis ivica* Viloria & Pyrcz n. ssp. (Cerro San Isidro); **61**. *P. manis ivica* Viloria & Pyrcz **n. ssp.**, PARATYPE (Avila); **62**. *P. piletha costae* Viloria & Pyrcz **n. ssp.**, PARATYPE (Cerro San Isidro); **63**. *P. piletha piletha* (Hewitson) (Los Colonos).

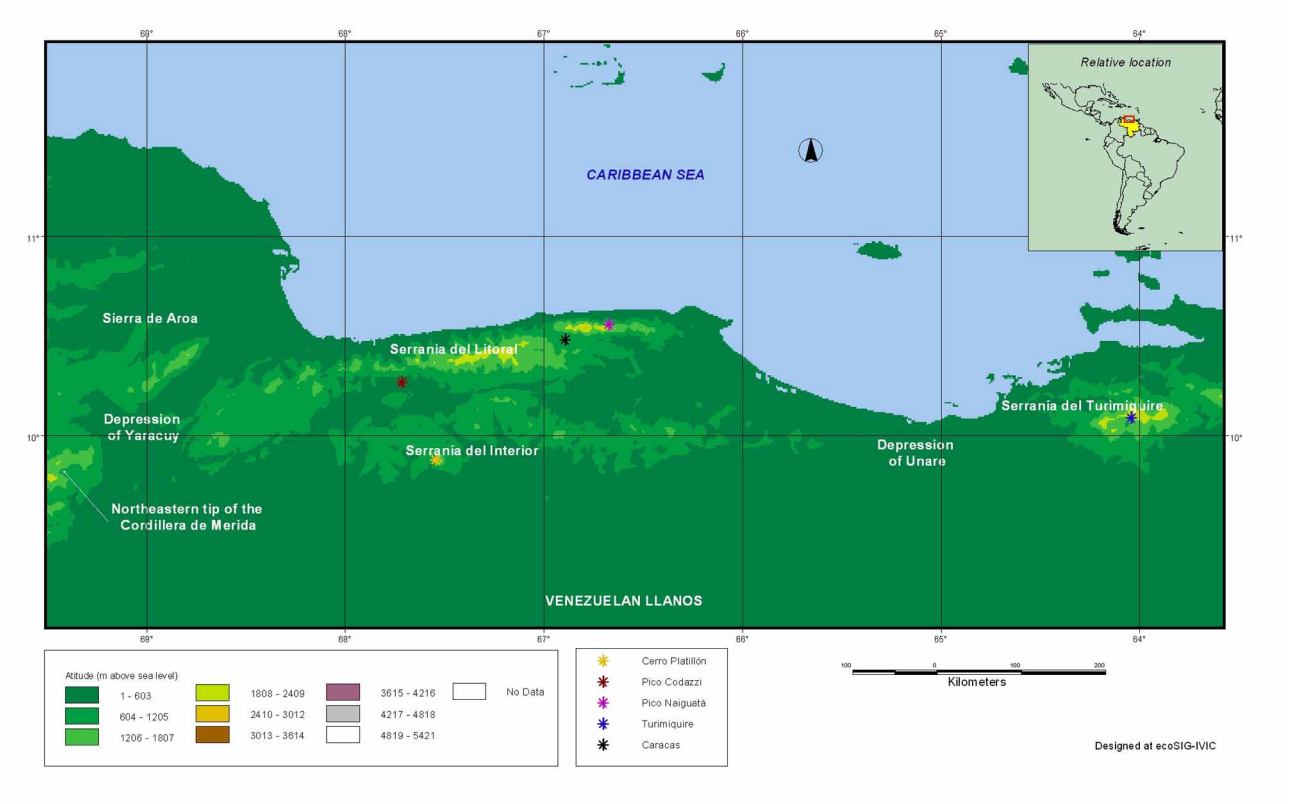


FIGURE 64. Map of northern Venezuela, showing its main physiographical features.