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Contributions to the knowledge of Ecuadorian *Pronophilini*,  
Part II. The genus *Lasiophila*  
(*Lepidoptera: Nymphalidae: Satyrinae*)

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ABSTRACT. The genus *Lasiophila* C. & R. FELDER in Ecuador is surveyed. Three new subspecies, *L. phalaesia alce* n. ssp., *L. phalaesia kroli* n. ssp. and *L. palades limes* n. ssp., are described from the western slopes of the Andes. The status of three taxa described by THIEME (1907): *confusa*, *persepolis* and *zarathustra* is revised. The synonymy of *L. behemoth* Thieme with *L. palades* HEWITSON is established. The characters of adult morphology *Lasiophila* and its sister genus *Mygona* are specified and discussed. The genus *Lasiophila* is subdivided into three groups composed of allopatric taxa based on morphological and ecological criteria.

Key words: entomology, taxonomy, *Lepidoptera*, *Nymphalidae*, *Pronophilini*, *Lasiophila*, Ecuador, National Park Podocarpus, western faunal pool.

INTRODUCTION

***Lasiophila* C. & R. FELDER, 1859: 325**

Type-species: *Lasiophila cirta* C. & R. FELDER, 1859, by subsequent designation, SCUDDER, 1875: 202.

The genus *Lasiophila* C. & R. FELDER belongs in the tribe *Pronophilini* MILLER (1968), considered by HARVEY (1991) as the sub-tribe *Pronophiliti* within

the tribe *Satyrini*, a nearly entirely Neotropical section of the *Satyrinae*. The genus is strictly South American and almost entirely Andean being distributed between northern Argentina (Tucumán) and northern Colombia (Sierra Nevada de Santa Marta) and Venezuela (Cordillera de la Costa). The species of *Lasiophila* occur in the humid montane forests from 1300 m up to the timberline at around 3200-3400 m. Their early stages are undescribed and the biology remains unexplored, however we may assume, with a high degree of confidence, that their larvae feed on montane *Chusquea* bamboo (*Poaceae*) as do other *Pronophilini* (SCHULTZE 1929; DEVRIES 1987; PELZ 1997). Over the period of eighty years separating the publication of the historical monograph of *Lasiophila* by THIEME (1907), who recognised 18 species, and the illustrated catalogue of d'ABRERA (1988), who identified 16 taxa at a specific level, there were only minor changes affecting the systematics of this genus, consisting basically in the varying viewpoint on the status of some closely related entities (WEYMER 1912; GAEDE 1931; LAMAS 1997), and the establishment of a few new taxa (WEYMER 1912; Tessmann, 1928; ADAMS & BERNARD 1979 and 1981). The following acronyms are used throughout the text:

**BMNH:** The Natural History Museum, London, United Kingdom;  
**MUSM:** Museo de Historia Natural, Univ. Nacional Mayor de San Marcos, Lima, Peru;  
**MIZPAN:** Muzeum i Instytut Zoologii Polskiej Akademii Nauk, Warsaw, Poland;  
**MZUJ:** Muzeum Zoologiczne Uniwersytetu Jagiellońskiego, Kraków, Poland;  
**SMTD:** Staatliches Museum für Tierkunde, Dresden, Germany;  
**PUCE:** Pontificia Universidad Católica, Quito, Ecuador;  
**MNCN:** Museo Nacional de Ciencias Naturales, Quito, Ecuador;  
**ZMHU:** Zoologisches Museum, Humboldt Universität, Berlin, Germany;  
**AJ:** Collection of Artur JASIŃSKI, Warsaw, Poland;  
**KWJH:** Collection of Keith WILLMOTT and Jason HALL, Gainseville, U.S.A.;  
**TWP:** Collection of Tomasz Wilhelm PYRCZ, Warsaw, Poland.

#### ADULT TAXONOMY

The adults of *Lasiophila* are medium-sized to large butterflies for satyrine standards, with a wingspan of ca. 5 to 8 cm. The forewings are triangular with a subacute to acute apex and a straight outer margin. The hindwings are oval with a strongly scalloped outer margin, a protruded apex and a tail-like emargination, spatulate in some species, on vein Cu1. The upperside of the wings is predominantly rufous or brick red with black elements denser towards outer margins and conspicuous orange or white forewing submarginal markings, and exceptionally a white hindwing median patch. The venation is typical of the tribe *Pronophilini* (MILLER 1968; ADAMS 1986), characterised by the hindwing crossvein M1-M2 curved inside the cell and the forewing veins Rs and M1 arising slightly apart.

The antennae are short, about 2/5 length of the costa, chestnut to orange with a black and rather slender club. The palpi are moderately to very long. The eyes are covered with sparse but long setae. The leg morphology is typical of the tribe *Pronophilini* (as discussed by MILLER 1968). The male genitalia are rather simple, characterised by a long and narrow uncus, rather short gnathos of 1/3 uncus length, valve with a dentate ampulla devoid of any prominent secondary process, and a very long saccus. The female genitalia have not been studied.

The genus *Lasiophila* forms a monophyletic group with *Mygona* THIEME, which can be defined currently by four synapomorphies of the adult morphology (head, wing shape, colour pattern and male genitalia). Three of them can be defined as qualitative and one as quantitative characters. 1: Labial palpi longer than in other genera of the tribe *Pronophilini*\* (mean: ~4.5 mm for *L. zapatoza*, ~6.5 mm for *L. circe*, ~4.5 mm for *M. irmina*, ~5 mm for *M. poeania*). 2: Scalloped hindwing outer margins, produced on vein Cu1. 3: Hindwing underside submarginal parafoveal elements (*sensu* Nijhout, 1991) present as lunulous yellow spots. 4: Similar male genitalic structures, such as the saccus (long and slender), tegumen, uncus, subuncus (shape, width and relative proportions), valve (sculpture of ampulla, proportions) and aedeagus (length and shape). The genitalia of *Mygona irmina* are almost identical with *Lasiophila circe*. The genera *Lasiophila* and *Mygona* are undoubtedly very closely related. The monophyly of *Lasiophila* in relation to *Mygona* is sustained by four synapomorphies. 1: Forewings outer margin straight (whereas in *Mygona* the forewing is strongly produced below the apex and the outer margin is convex). 2: Margin of the hindwing near apex slightly protruded in *Lasiophila* (this character is also found in loosely related genera *Steroma* Westwood, *Junea* Hemming and *Daedalma* Hewitson). 3: Hindwing tail, usually spatulate along vein Cu1 in *Lasiophila*. 4: Saccus longer and slender in *Lasiophila*.

#### GENERIC SUBDIVISION

The genus *Lasiophila* can be divided into three groups identified on zoogeographical, ecological and morphological grounds.

The „*L. zapatoza* group” is the most widespread, inhabiting the lowermost altitudes and the smallest. It is distributed from northern Venezuela and Colombia to northern Argentina. Its representatives occur in the lower and middle section of the cloud forest from ca. 1400 to 2500 m. The forewing length is approximately 3 cm. Additionally, this group is also characterised by comparatively short palpi and little developed hindwing „tail”. The colour patterns differ

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\*Notes: The taxon *orsedice* HEWITSON, included in *Mygona* by ADAMS (1986) and in *Drucina* by THIEME (1907) belongs to a separate genus (PYRCZ, in prep.). The taxon *propylea* HEWITSON, originally placed in *Pronophila*, considered by ADAMS (1986) as congeneric with *Mygona*, belongs to a monobasic genus *Proboscis* THIEME, which will be redefined and reinstated in a forthcoming paper (PYRCZ, in prep.).

little between taxa, basically in the males as the females are barely distinguishable. The male genitalia of this group differ from the two other sections of *Lasiophila* in that the valva is of similar width in medial and distal part, the uncus is shorter and stout at the base, and also the saccus is comparatively short. This group was considered historically to comprise three allopatric species: *L. zapatoza* (WESTWOOD), *L. ciris* THIEME and *L. orbifera* (HEWITSON). LAMAS [1997] considers *L. zapatoza* and *L. orbifera* as one widespread polytypic species. However, the male genitalia of *L. zapatoza* are quite different from *L. orbifera*, namely the valva is thinner in the latter species and bears a distinctive crest on the ampulla, and the saccus is also longer than in two other species of this group. Therefore, *L. orbifera* is reinstated as a separate species. In Ecuador, this group comprises *L. orbifera intercepta* THIEME inhabiting the eastern slopes of the Andes, with a slight clinal variation in the increase of black suffusion in the median area of the forewing upperside from north to south; and *L. ciris* THIEME known in the northern part of the Ecuadorian Chocó (Imbabura, Pichincha, Cotopaxi).

The „*L. prosymna* group” is the most restricted geographically, inhabiting intermediate elevations and medium-sized. Its species are found from Bolivia to southern Colombia (but are absent in northern Colombia and Venezuela). They occur in middle and upper cloud forest. The average forewing length is ~3.5 cm. It is additionally characterised by moderately long labial palpi and a moderately well developed, acute hindwing tail. The male genitalia do not provide immediate diagnostic characters. In *L. phalaesia* they are characterised by slender valves, very thin in their distal half, with a short distal tip, and little sculptured ampulla, while in *L. parthyene* HEWITSON, *L. regia* STAUDINGER and *L. alkaios* TESSMANN the valves are stout and structurally closer to the next group. *L. phalaesia phalaesia* is superficially very similar to the Bolivian and South Peruvian species *L. regia* STAUDINGER. THIEME (1907) originally treated *L. phalaesia* as separate species, however WEYMER (1912: 264) and GAEDE (1931: 508) considered it as a „variation” of *L. phalaesia*. FORSTER (1964: 176) solved this case by illustrating their male genitalia, clearly emphasising considerable anatomical differences. Apart from the species already mentioned this group includes *L. prosymna* occurring in eastern and northern Ecuador and Colombia. *L. phalaesia* is considered as polytypic, with the nominate subspecies occurring in central and northern Peru and south-western Ecuador, *L. phalaesia confusa* THIEME **n. stat.** in the central part of the Ecuadorian Chocó, the herein described *L. phalaesia alce* **n. ssp.** is restricted to the northern part of the Ecuadorian Chocó (and Colombia south of the Río Patía valley) and *L. phalaesia kroli* **n. ssp.** occurs in western Azuay.

The „*L. circe* group”, distributed between south-western Venezuela and Bolivia, inhabits the uppermost altitudes and is the biggest. Its species occur in the uppermost forest up to the timber line. The average forewing length is 4 cm. It is additionally characterised by particularly long labial palpi, prominent, spatulate hindwing „tails” and a well differentiated male forewing upperside scent patch. The differences in the colour pattern within the group of *L. circe* are

little marked except for a white hindwing upperside median patch in two species, *L. piscina* THIEME and *L. cirta* C. & R. FELDER. This group also includes *L. hewitsonia* BUTLER occurring in southern Peru and Bolivia, an undescribed species discovered recently in the Cordillera de Vilcabamba, Peru (LAMAS in prep.), and *L. circe* occurring in northern Ecuador, the Colombian Cordilleras, including El Tamá range on the Venezuelan border (as a separate subspecies). The male genitalia of this group are characterised by a very long saccus and more robust valve than in other two sections of the genus. Based on the male genitalia structure the Ecuadorian representatives of this group are split into two polytypic species. *L. palades* is identified by distinctive valve with a short, hooked tip on the distal end of the ampulla. *L. palades palades* HEWITSON (Figs 9 & 13), occurs in south-eastern Ecuador, *L. palades persepolis* **n. stat.** THIEME (Figs 11 & 15) in the central and southern part of the Ecuadorian Chocó and the new subspecies described herein, *L. palades limes* **n. ssp.** in south-western Ecuador (and extreme north-western Peru). The second species of this group is *L. circe* R. & C. FELDER, whose nominate subspecies occurs in the Colombian Cordillera Oriental is represented in Ecuador by *L. circe zarathustra* **n. stat.** THIEME (Figs 12 & 16) occurring along the main Andean ridge in the north and the north-east of the country. The valley of Pastaza geographically separates *L. palades* and *L. circe*. The subspecies of *L. circe* differ from *L. palades* in the shape of the valve, thicker and devoid of any terminal process on the ampulla, and also in the shorter aedeagus and saccus.

*Lasiophila behemoth* **n. syn.** THIEME (1907) erroneously described from Colombia is in fact a synonym of *L. palades palades* (actually illustrated as *L. behemoth* by D'ABRERA 1988: 829). The lectotype is herein designated from a male specimen in the Dresden Staatliches Museum für Tierkunde with labels corresponding with the description of THIEME: „*Las. Circe* Columbien; *circe* var ?; STAUDINGER & BAND-HAAS Dresden, Ankauf 1961”.

The species within each group are allopatric, therefore the local faunas of *Lasiophila* are composed of up to three sympatric species, or parapatric along an altitude gradient, representing one group each.

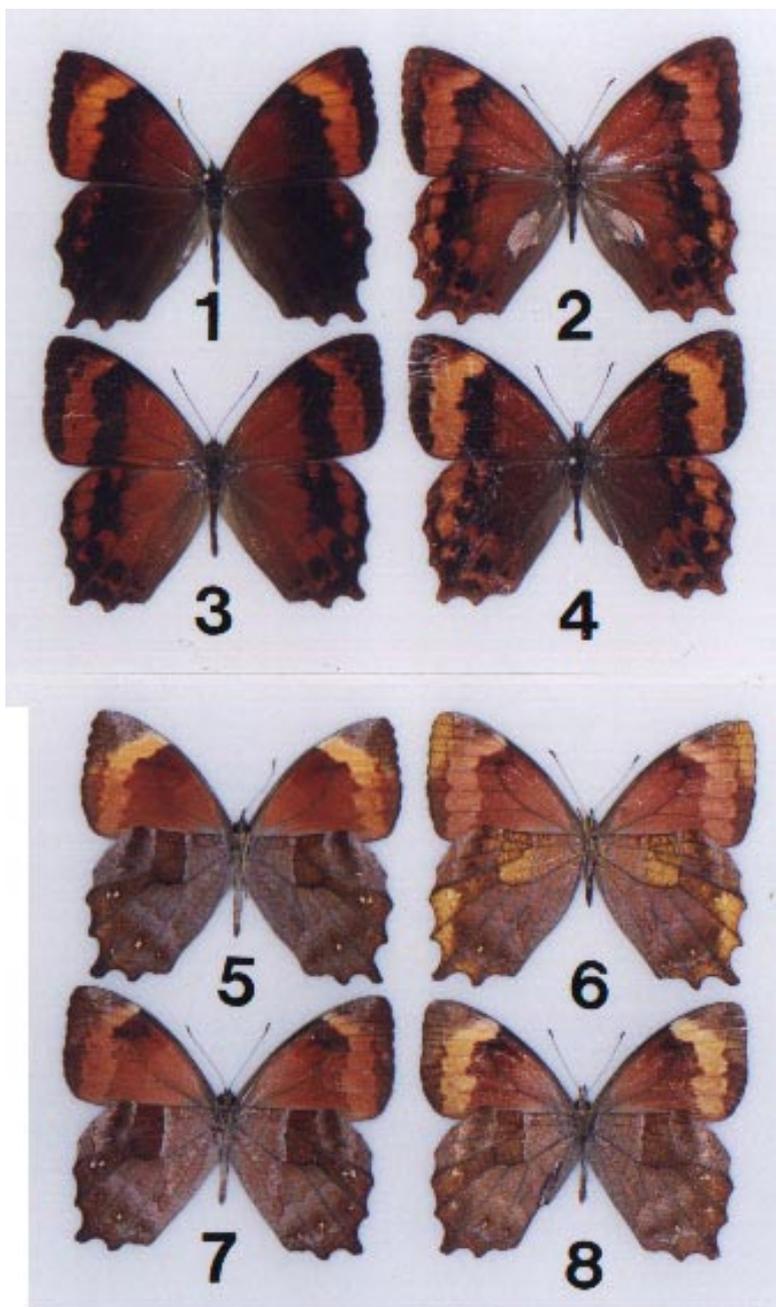
#### NEW TAXA

### *Lasiophila phalaesia alce* **n. ssp.**

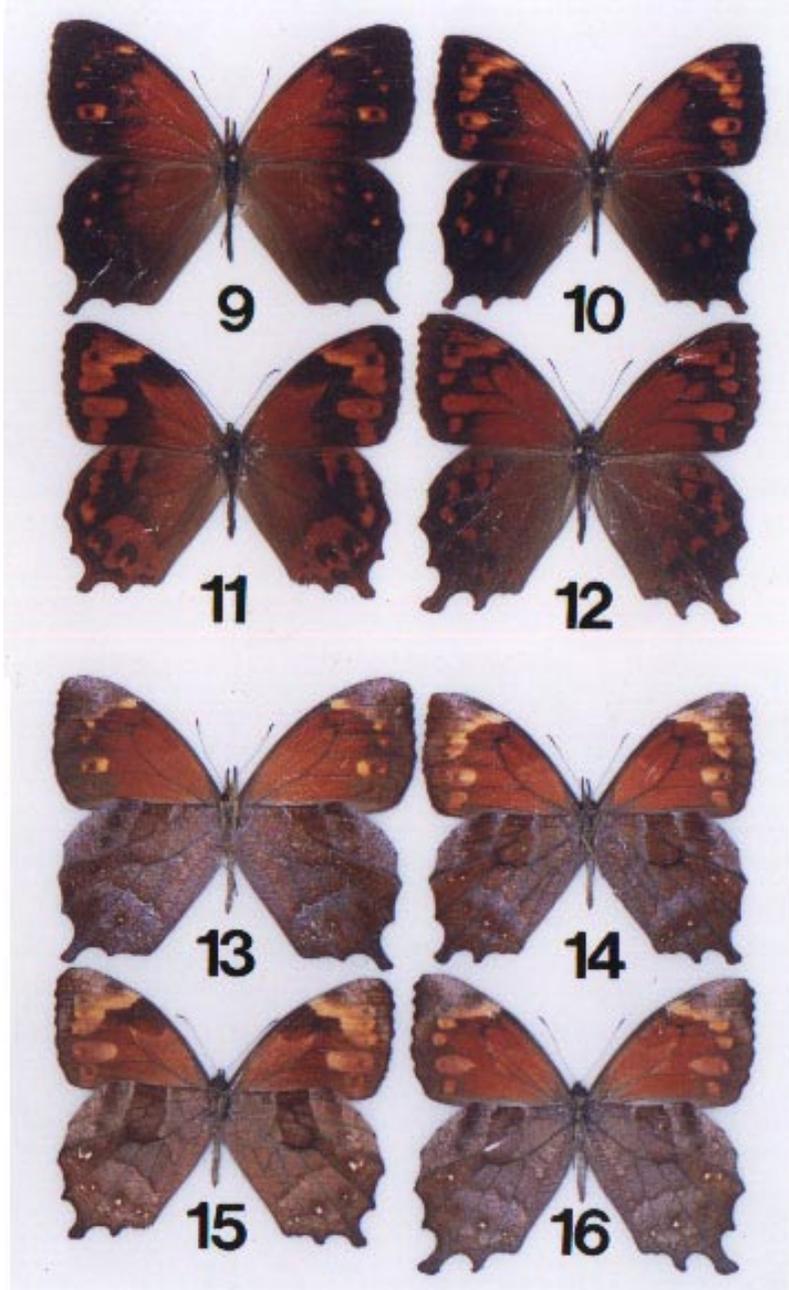
*Lasiophila phalaesia* HEWITSON, 1868, figs 13 & 14.

#### DIAGNOSIS

Wing shape and pattern as in *L. phalaesia confusa* (Figs 3 & 7), but with an orange forewing submarginal band of *L. phalaesia phalaesia* (Figs 1 & 5).



1. *Lasiophila phalaesia phalaesia* (male, upperside); 2. *L. p. kroli* male (male, upperside); 3. *L. p. confusa* (male, upperside); 4. *L. p. alce* (male, upperside); 5. *L. p. phalaesia* (male, underside); 6. *L. p. kroli* male (male, underside); 7. *L. p. confusa* (male, underside); 8. *L. p. alce* (male, underside)



9. *Lasiophila palades palades* (male, upperside); 10. *L. p. limes* (male, upperside); 11. *L. p. persepolis* (male, upperside); 12. *L. circe zarathustra* (male, upperside); 13. *L. p. palades* (male, underside); 14. *L. p. limes* (male, underside); 15. *L. p. persepolis* (male, underside); 16. *L. c.*

Forewing apex less acute than in *L. phalaesia phalaesia*. Hindwing submarginal black spots well defined and better separated from the inner and outer edge of the submarginal band than in the former two species, in this respect looking more like *L. prosymna*.

#### DESCRIPTION

Male: (Figs 4 & 8) **Head**: frons with a tuft of dense brown hair; labial palpi long, twice as long as head, labial hair short, light brown; eyes brown, hairy; antennae slightly less than half length of the costa, dorsally brown, ventrally beige, terminal segments black. **Thorax**: dorsally dark brown, covered with dense, short hair, ventrally black, covered with dense beige hair at base of legs. **Abdomen**: dorsally and laterally dark brown, covered with sparse, short hair, ventrally beige. **Wings**: forewing length: 30 mm, (n=2); fringes short, black on the veins and white in the interspaces. Recto: outer margin straight; forewing ground colour from base to submedian area rufous brown; a black median area contingent to a postmedian submarginal orange band, parallel to the outer margin and curving at an angle to the costa, suffused with brown on the apex; marginal area black. Hindwing outer margin scalloped, producing a short tail on the vein Cu2; ground colour rufous brown, except for a lighter, rufous orange postmedian submarginal band, bordered distally and basally with black; large, oval black submarginal spots of about the same size, except for a tiny dot in Rs-M1 and a smaller patch in Cu2-1A, the M2-M3 spot merging with the black basal bordering, the spot in M3-Cu1 incised distally and touching the distal edge of the postmedian band. Verso: the pattern of the upper surface of the forewing is mirrored on the underside; all colours are slightly paler. Hindwing ground colour rufous-chestnut suffused with lighter grey scales on the whole surface of the wing, but particularly on the apex; a darker median band, about 3-4 mm wide crosses the wing from mid costa to space Cu2-1A where it narrows and fades before reaching the anal margin; three yellow submarginal dots in spaces M2-M3, M3-Cu1 and Cu1-Cu2, the largest in M2-M3 „w” shaped.

**Male genitalia**: as illustrated (Fig. 20). For comparison, male genitalia of *L. phalaesia phalaesia* (Fig. 19), *L. phalaesia confusa* (Fig. 22), *L. parthenye* (Fig. 17), *L. orbifera intercepta* (Fig. 24) and *L. ciris* (Fig. 21).

Female. Hitherto unknown.

Immature stages and hosts. Unknown.

#### TYPES

**Holotype male**: Ecuador, Carchi, Maldonado, 23.V.1997, 2600 m, K. Łoś leg., depository: MZUJ; **Paratypes**: **1 male**, same data as the holotype, in TWP; **1 male**, Ecuador, Carchi, El Corazón, Reserva Las Golondrinas, near La Carolina, 15.IX.1997, 2700 m, K. WILLMOTT leg., in KWJH; **9 males**, same locality, 2400 – 2700 m, 20.VI-10.VII.1999, T. PYRCZ & J. WOJTUSIAK leg., in TWP (6 males), PUCE (1 mal), MNCN (1 male) and BMNH (1 male).

## ETYMOLOGY

Latin *alce* = elk. Dedicated to its first collector Krzysztof Łoś, a Polish coleopterist from Warsaw specialising in the *Cerambycidae* beetles, whose surname means elk in Polish.

***Lasiophila phalaesia krolii* n. ssp.**

*Lasiophila phalaesia* HEWITSON, 1868, figs 13 & 14.

## DIAGNOSIS

Wing shape and pattern as in *confusa* but the ground colour is lighter and duller. The forewing submarginal band is light orange and the black markings are less pronounced. Underside characterised by diagnostic light yellow markings in discal cell and along outer margin of the hindwing, especially in space M2-M3, and along upper third of the outer margin of the forewing.

## DESCRIPTION

Male: (Figs 2 & 6) **Head, thorax** and **abdomen** as in other subspecies. **Wings:** Dorsum. Forewing basal and median area light brick red, distally suffused with black towards in the basal edge of the submarginal band, to a lesser extent than in *confusa*, comparable to *alce*; submarginal band pale reddish-orange, shaped as in *confusa*; marginal area dull dark grey suffused with reddish on the apex. Hindwing basal area light brick red; postmedian black suffusion approximately as intense as in *confusa*; subapical band pale reddish-orange; marginal area black dusted more heavily with red than in *confusa*. Venter. Forewing marginal area distally from pale orange postmedian band, from apex into space M2-M3 coloured with light yellow dusted with brown ripples. The same colour appears on the hindwing in the discal cell, towards costa, and along outer margin, especially between vein M2 and Cu1. **Male genitalia:** not illustrated.

Female. Hitherto unknown.

Immature stages and hosts. Unknown.

## TYPES

**Holotype male:** San Fernando, Girón, south-west of Cuenca, Azuay, Ecuador, 08.V.1998, P. KRÓL *leg.*, in MZUJ; **Paratypes:** 2 males, same date and locality as the holotype, A. JASIŃSKI *leg.*, in TWP.

## ETYMOLOGY

Dedicated to its first collector, Piotr KRÓL, a Polish coleopterist from Warsaw specialising in the *Scarabeidae* dung beetles.

## REMARKS

The discovery of a well-differentiated population of *Lasiophila* in the northernmost part of the Ecuadorian Chocó, on the Colombian border is the first documented case of endemism among cloud forest butterflies in this area. However, a study of the material recently collected by Polish lepidopterists along the road from Tulcán down the Pacific slopes of the Andes in Ecuador and an old material of E. KRÜGER coming from the Colombian side of the border, revealed further interesting undescribed taxa belonging to the tribe *Pronophilini*, including a most outstanding new species of *Corades* (PYRCZ, MS), and also new taxa of *Eretris* THIEME, *Manerebia* STAUDINGER (PYRCZ, MS) and *Pedaliodes* (PYRCZ, MS) not reported from quite well sampled roads situated slightly further south (from Quito to Nanegalito and from Aloag to Santo Domingo). Therefore, this region of cloud forest situated on the western slopes of the snow peaks of the volcanoes Chiles and Cumbal rising to nearly 5000 metres turns out, rather unexpectedly, to be an important area of endemism of montane forest Andean butterflies. The population found in the province of Azuay, which was assigned herein a subspecific status is clearly intermediate in both phenotypic and zoogeographical terms between *confusa* and *phalaesia* and further supports the view that these two taxa ought to be treated as conspecific. It is worth pointing out that *L. phalaesia* forms four subspecies in Western Ecuador but the population found in northern Peru (Chachapoyas area) does not differ in any respect from the nominate occurring in south-western Ecuador. This is the only case known to me of a pronophiline species, which occurs as the same subspecies on both western and eastern slopes of the Andes and across the divide of the upper Marañón.

*Lasiophila palades limes* n. ssp.

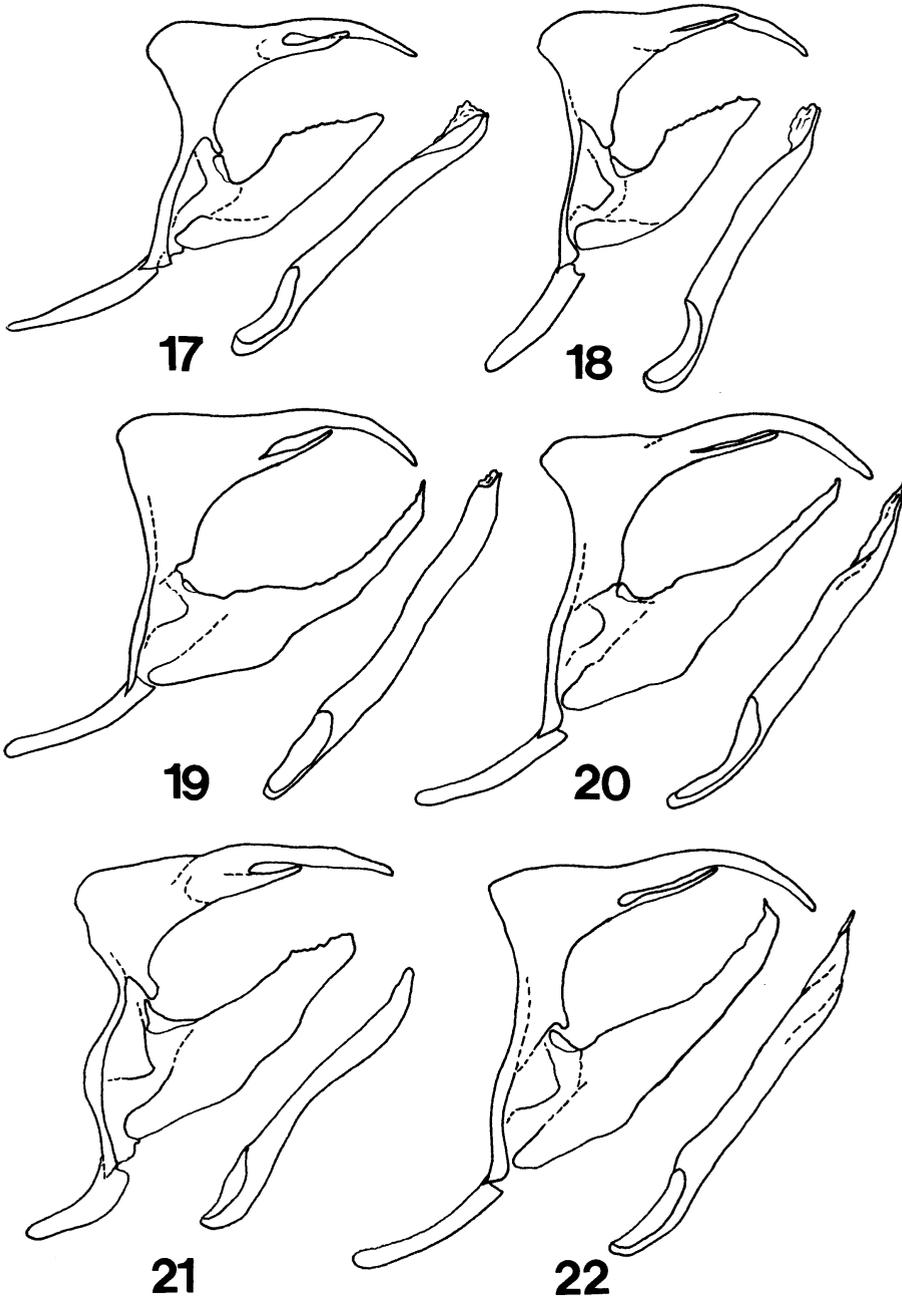
*Lasiophila palades* HEWITSON, 1872 (figs 36 & 39)

## DIAGNOSIS

Differs from *L. palades palades* (Figs 9 & 13), in lighter colour of the antennal club, smaller wingspan (mean forewing length *limes*: 32.3 mm; *palades*: 36.3 mm), more acute forewing apex, spatulate Cu1 tail, and a more prominent Cu2 tail, larger subapical and submarginal forewing upperside orange markings, and more contrast between the underside median band and the rest of the surface of the wing.

## DESCRIPTION

Male: (Figs 10 & 14) **Head**: Frons with a tuft of long, chestnut hair; labial palpi twice as long as head, covered with chestnut, rather sparse hair; eyes brown, covered with long hair; antennae 2/5 length of the costa, ventrally beige, dorsally chestnut, club brown. **Thorax**: brown, dorsally densely hair, ventrally less so.



17-22. Male genitalia: 17 - *Lasiophila parthenye*; 18 - *L. prosymna dirempta*; 19 - *L. phalaesia phalaesia*; 20 - *L. p. alce*; 21 - *L. ciris*; 22 - *L. p. confusa*

**Abdomen:** dorsally and laterally brown, ventrally beige, basally hairy. **Wings:** forewing length: 32-33 mm (mean: 32.3 mm, n = 25). Forewing: fringes short, rufous on the veins and white in the interspaces; outer margin slightly excavate at vein Cu1; apex acute. Recto ground colour rusty red-brown; blackish brown along the costa, and disco-cellular, M2 and M3 veins, on distal half of veins Cu1, Cu2 and 1A, and in the marginal and apical area; a subapical - submarginal band, widest in cell Cu1-Cu2, composed of orange patches, dusted with rusty scaling more heavily so in the distal part of the subapical area and on the tornus, broken in cell M3-Cu1 and on veins Cu2 and 1A, pupiled with black dots in cells M1-M2 and Cu1-Cu2. Hindwing: fringes short, rusty, whitish on the apex; outer margin scalloped, a prominent, spatulate tail produced along the vein Cu1 and a short one on the vein Cu1. Recto basal and median area ground colour rusty brown-red, dusted with black along the inner margin, black in the outer half of the wing; a faint postmedian to submarginal orange band heavily suffused with brown-red, with a row of large, blackish oval patches in cells Rs-M1 to Cu1-Cu2. Forewing verso: the pattern of the upper surface of the forewing is mirrored on the underside; all colours slightly paler; apex suffused with magenta. Hindwing verso: ground colour brown lustrous, suffused with lighter grey and magenta on the whole surface of the wing, but particularly in the basal area; a wide, darker brown median band 5-8 mm wide crosses the wing from mid costa to vein 1A; a row of darker brown, rounded submarginal patches pupiled with pale yellow dots in cells M2-M3 to Cu2-1A/1B.

**Male genitalia:** As illustrated (Fig. 28). For comparison, male genitalia of *L. palades palades* (Fig. 25), *L. palades persepolis* (Fig. 27), *L. circe zarathustra* (Fig. 26), *L. circe circe* (Fig. 23).

Female: Hitherto unknown.

Immature stages and hosts. Unknown.

#### TYPES

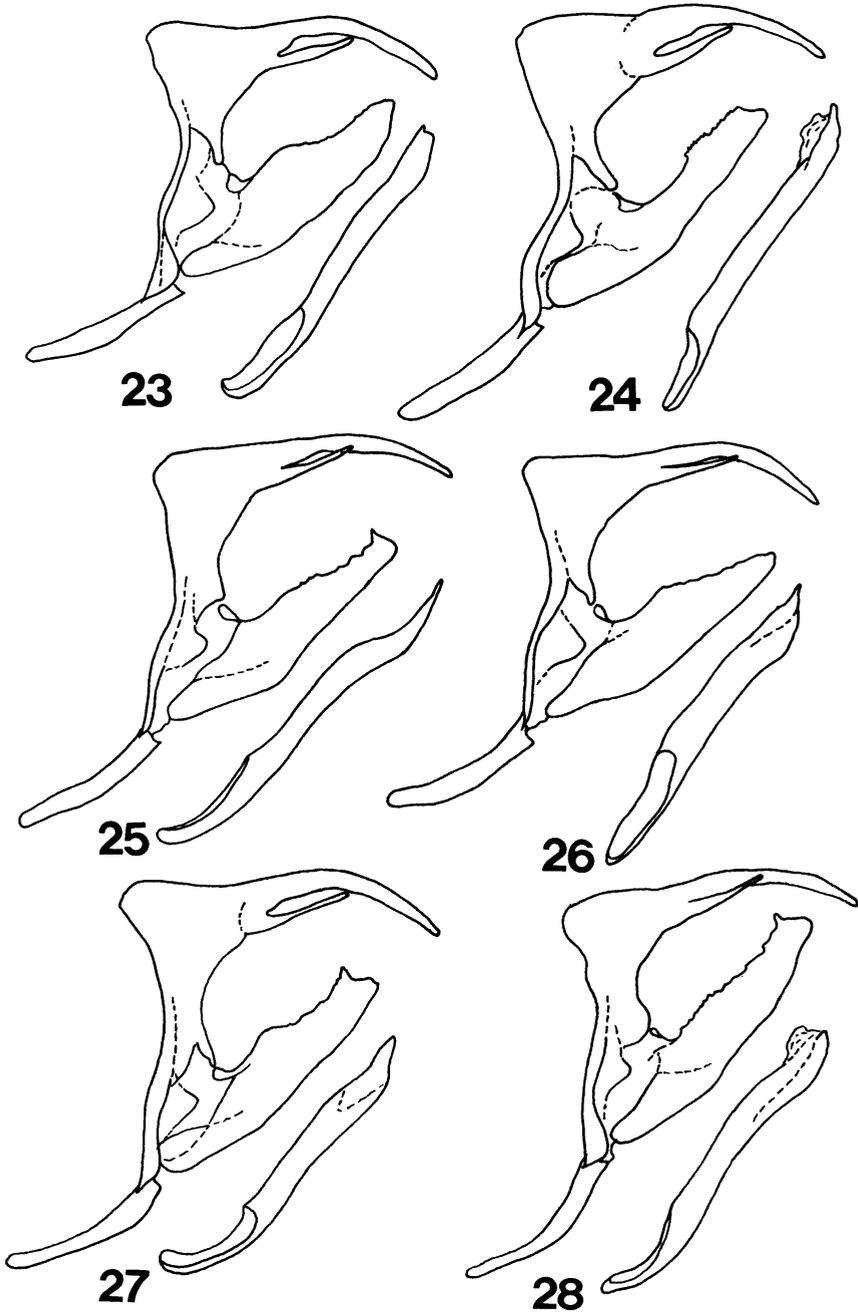
**Holotype male:** Ecuador, Loja, Cordillera de Lagunillas, western slopes, Jimbura – Laguna Negra, 03.V.1997, 3000 m, A. JASIŃSKI *leg.*, in MZUJ; **Paratypes:** 2 males, same data as the holotype, in TWP; 22 males, same locality as the holotype, 15.V.1998, A. JASIŃSKI, K. ŁOŚ & P. KRÓL *leg.*; depository: BMNH, (1 male); MUSM, (1 male); AJ (8 males); PUCE (1 male); MNHN (1 male), TWP (15 males); 1 male, same locality, 22.IX.1997, K. WILLMOTT *leg.*, in KWJH.

#### ETYMOLOGY

Latin *limes* = bordering (adj.). All the individuals were collected on the frontier between Ecuador and Peru.

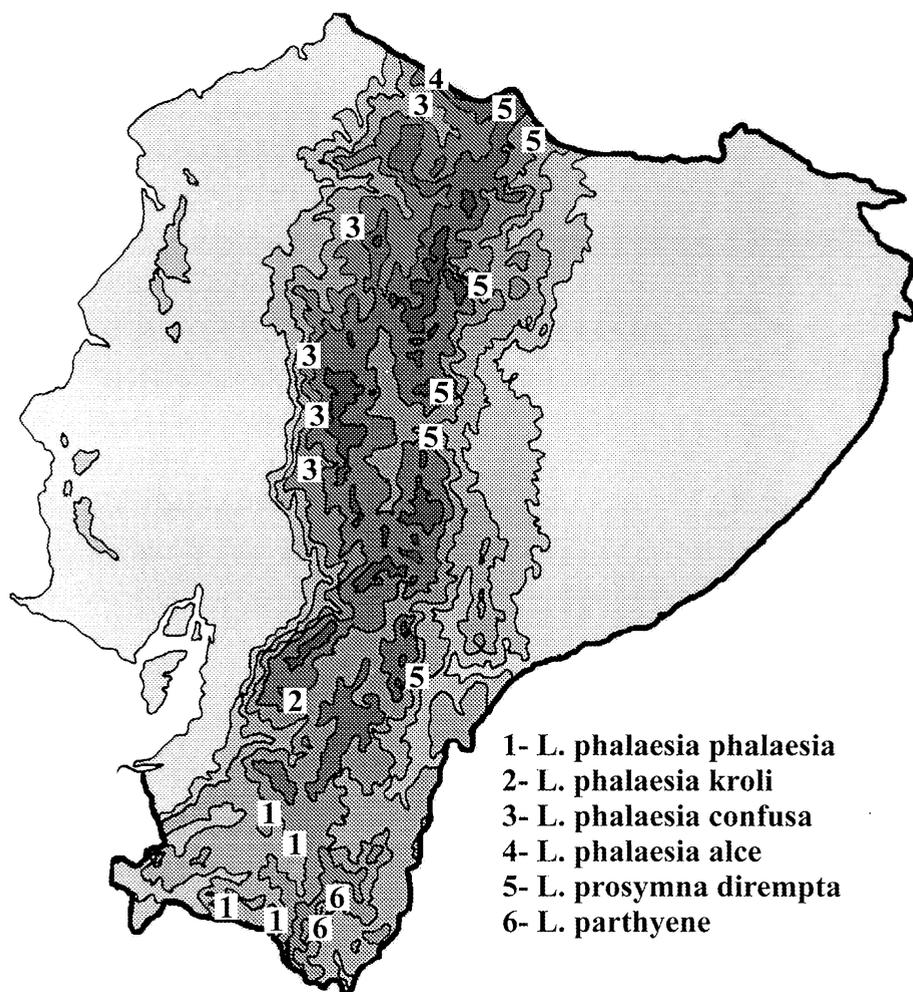
#### REMARKS

The nominate *L. palades* occurs along eastern slopes of the Andes in Ecuador, south from the valley of Pastaza, and in the northernmost Peru, in the upper



23-28. Male genitalia: 23 - *Lasiophila circe circe*; 24 - *L. orbifera intercepta*; 25 - *L. palades*

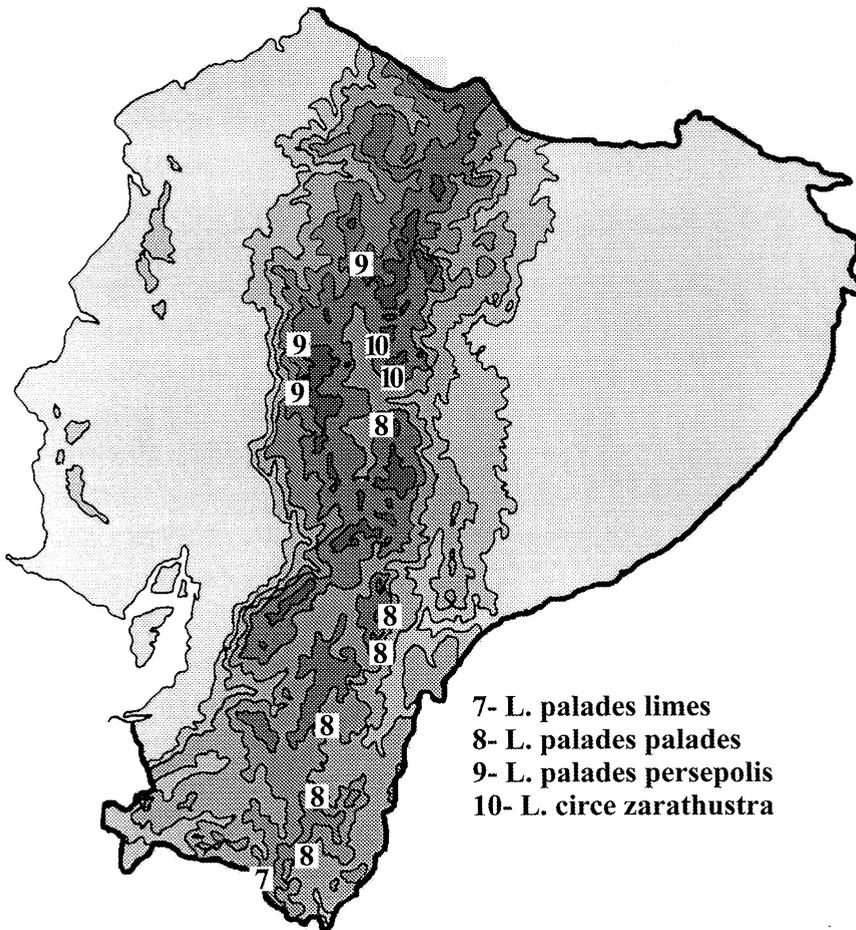
valley of Huancabamba. There is a fairly well marked clinal variation in the amount of orange markings of the upperside. The population occurring on the slopes of the volcano Tungurahua is the brightest, whereas the one in the upper Zamora valley is the darkest. The intra-population differences in *L. palades palades* do not affect the size, wing shape and other elements of the colour pattern than the expression of orange. Therefore, I would hesitate before splitting it into further subspecies. Even though HEWITSON (1872) does not specify the exact type locality of *L. palades*, the original figure is very good and clearly



29. Distribution of *Lasiophila* in Ecuador: *phalaesia* group

agrees with the population of *L. palades* found in the centre of the range, in the upper valley of the Rio Culebrillas.

South-western Ecuador is a region of transition between the arid Peruvian coast and humid Chocó, an area of mosaic of xeric vegetation and cloud forests. It extends along western slopes of the Andes from north-easternmost Peru to southern Azuay province in Ecuador. The biodiversity of this region is undoubtedly lower than in the adjacent valley of Zamora (MADSEN 1989; BLOCH et al. 1991) but endemism ratio among cloud forest butterflies is high. The existence of



30. Distribution of *Lasiophila* in Ecuador: *circe* group

a well-differentiated population of *Lasiophila palades* in south-western Ecuador cannot be considered as unexpected. The fauna of the western slopes of the Cordillera de Lagunillas and the upper valley of the Rio Puyango harbours several endemic species among cloud forest butterflies genera of pronophilines, *Pronophila*, *Pedaliodes*, *Lymanopoda*, *Manerebia* (PYRCZ & VILORIA in press; PYRCZ, WILLMOTT & HALL in press), and other nymphalids, *Perisama*, *Diaethria*, *Actinote*, *Heliconius* (JIGGINS et al. 1997) and *Catasticta* pierids (JASIŃSKI in press). The fauna of these western valleys shows little similarity with that of the upper valleys of Chinchipe and Zamora.

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