

Atlides dahnersi sp. n. from Colombia
(Lepidoptera: Lycaenidae)

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Abstract: *Atlides dahnersi* sp. n. is described from Colombia (type locality: Colombia, Valle, Mpo. de Cali, Cerro San Antonio, 2200 m) and distinguished from other members of the genus.

Key words: Neotropics, Colombia, Lycaenidae, Eumaeini, *Atlides*

INTRODUCTION

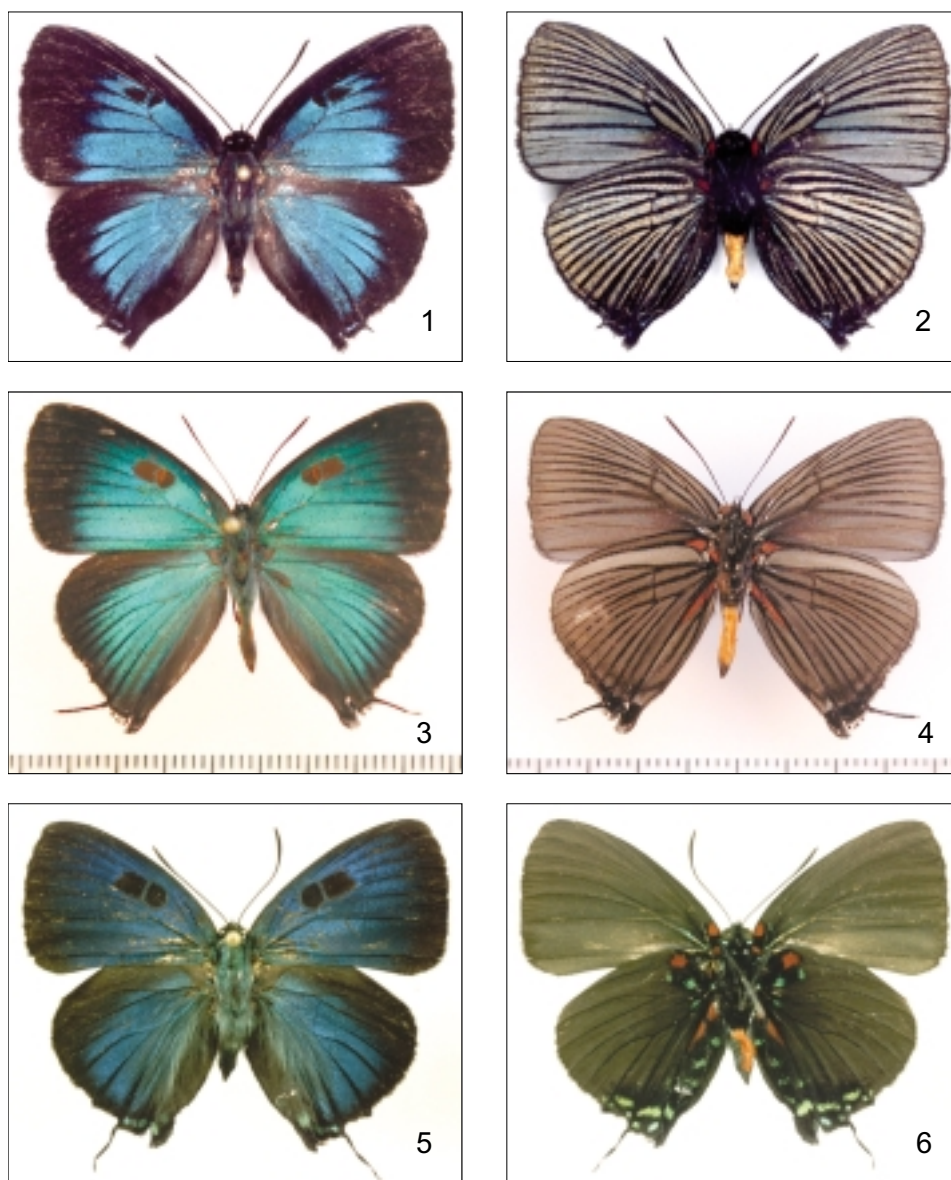
The Neotropical eumaeine lycaenid genus *Atlides* Hübner, 1819 (type species: *Papilio halesus* Cramer, 1777) is not particularly diverse. It includes 11–13 species according to different authors [Brown 1993: 53 (n = 13), Smith *et al.* 1994: 108 (n = “a dozen”), Bridges 1994: IX.16 (n = 11), d’Abrera 1995: 1120–1123 (n = 12)]. Supposedly, all the species share a common larval foodplant family – Loranthaceae, which is unusual amongst lycaenid butterflies (Fiedler 1991). Hence the adults of *Atlides* show bright orange-colored lower abdominal parts as well as prominent red basal spots or dashes at the wing bases adjacent the thorax; presumably to warn predators that they are protected by toxins.

Present paper describes a new species of eumaeine lycaenid butterfly discovered in Colombia (Figs 1–2), which we place in the genus *Atlides*. There is a similar, presumably sister, taxon occurring in Ecuador (Figs 3–5), which will be described in a separate paper (Bálint & Wojtusiak, in prep.). Since eumaeine diversity in the Neotropics is poorly understood, special attention is paid herein, together with the taxonomic description of the Columbian butterfly, to its generic placement. This is because this exceptional looking species shows some wing characters that, for *Atlides*, would have to be considered supralimital. Accordingly, we (1) present a key based on the male’s ventral wing pattern (the female of the newly discovered species is not yet known), (2) describe the species, (3) record what is currently known of its habitat and behaviour, and (4) discuss the taxonomic characters and generic placement of the species.

Descriptive texts are based on terminology given by Scott (1990). Standard techniques were used for making dissections of the genitalia, which have been placed in microvials attached to the specimens and numbered using the serial numbers of Zs. Bálint at the Hungarian Natural History Museum (HNHM). Type locality descriptions and behavioral comments are based on the notes of Mr Dahners (Cali, Colombia), who discovered the species and collected the type material.

Key to the species of *Atlides* based on male individuals

- | | | |
|----|--|---|
| 1 | Fore wing ventral surface with venation hardly visible | 2 |
| – | Fore wing ventral surface with venation well visible, veins covered by black scales | 8 |
| 2. | Fore wing ventral surface with medial pattern | |
| | 3 (<i>A. carpophora</i> , <i>A. havila</i> , <i>A. inachus</i>) | |
| – | Fore wing ventral surface patternless | |
| | 5 (<i>A. browni</i> , <i>A. carpasia</i> , <i>A. cynara</i> , <i>A. gaumeri</i> , <i>A. halesus</i>) | |
| 3. | Fore wing ventral surface with straight medial line | |
| | <i>A. havila</i> (Hewitson, 1865): Andes (Colombia, Ecuador) | |
| – | Fore wing ventral surface with broken medial line | |
| | 4 (<i>A. carpophora</i> , <i>A. inachus</i>) | |
| 4. | Hind wing ventral surface with small basal spot at vein R1 | |
| | <i>A. carpophora</i> (Hewitson, 1868): Mesoamerica | |
| – | Hind wing ventral surface with large basal spot at vein R1 | |
| | <i>A. inachus</i> (Cramer, 1775): Mesoamerica, Colombia, Amazonia | |
| 5. | Fore wing ventral surface brown with lighter brown anal area | |
| | 6 (<i>A. browni</i> , <i>A. carpasia</i>) | |
| – | Fore wing ventral surface brown with greenish anal area | |
| | 7 (<i>A. cynara</i> , <i>A. gaumeri</i>) | |
| 6. | Hind wing ventral surface anal red dash in cell 1A+2A extending across post-basal area | |
| | <i>A. browni</i> Constantino, Salazar et Johnson, 1993: Colombia | |
| – | Hind wing ventral surface anal red dash in cell 1A+2A extending medially beyond the gleaming spots | |
| | <i>A. carpasia</i> (Hewitson, 1868): Mesoamerica | |



Figs 1–6. Male individuals of different *Atlides* species. 1–2: *A. dahnersi* sp. n., holotype – 1: dorsum; 2: venter; 3–4: *A. sp.*, Ecuador (HNHM) – 3: dorsum; 4: ventrum. 5–6: *A. browni* Constantino, Salazar et Johnson, holotype – 5: dorsum; 6: venter

7. Fore wing ventral surface with green anal suffusion restricted to basal and medial areas
A. halesus (Cramer, 1777): southern North America, Mesoamerica
- Fore wing ventral surface with green anal suffusion reaching marginal area
A. gaumeri (Godman et Salvin, 1901): Mesoamerica
8. Fore wing ventral surface with gleaming blue anal suffusion reaching margin
A. polybe (Linnaeus, 1763): Mesoamerica, Colombia, Amazonia
- Fore wing ventral surface with greysih brown anal area
 9 (*A. atys*, *A. bacis*, *A. cosa*, *A. dahnersi*, *A. melidor*, *A. misma*, *A. sp. n.*)
9. Hind wing ventral surface with dark submarginal border
 10 (*A. cosa*, *A. misma*)
- Hind wing ventral surface with lighter intercellular space of Sc+R1
 11 (*A. atys*, *A. bacis*, *A. dahnersi*, *A. melidor*, *A. sp. n.*)
10. Hind wing ventral surface with red costal patch at base
A. cosa (Hewitson, 1867): Southeastern Brazil
- Hind wing ventral surface with red costal dash reaching medial area
A. misma d’Abrera, 1995: Southeastern Brazil
11. Hind wing ventral surface with costal red bar 12 (*A. bacis*, *A. melidor*)
- Hind wing ventral surface with costal red patch 13 (*A. atys*, *A. dahnersi*)
12. Hind wing ventral surface with costal red bar reaching margin
A. bacis (Godman et Salvin, 1887): Mesoamerica, Colombia
- Hind wing ventral surface with costal red bar extending medial area only
A. melidor (Druce, 1909): Andes (Colombia, Ecuador, Peru)
13. Hind wing ventral surface intercellular spaces clear
A. atys (Cramer, 1780): Mesoamerica, Amazonas
- Hind wing ventral surface intercellular spaces with black lines running parallel with veins and reaching margin 14
14. Hind wing ventral surface cell Sc+R1 with black line
A. dahnersi sp. n.: Andes (Colombia)
- Hind wing ventral surface cell ScR1 lighter than ground colour without black line
A. sp. : Andes (Ecuador)

***Atlides dahnersi* sp. n.**
(Figs 1–2)

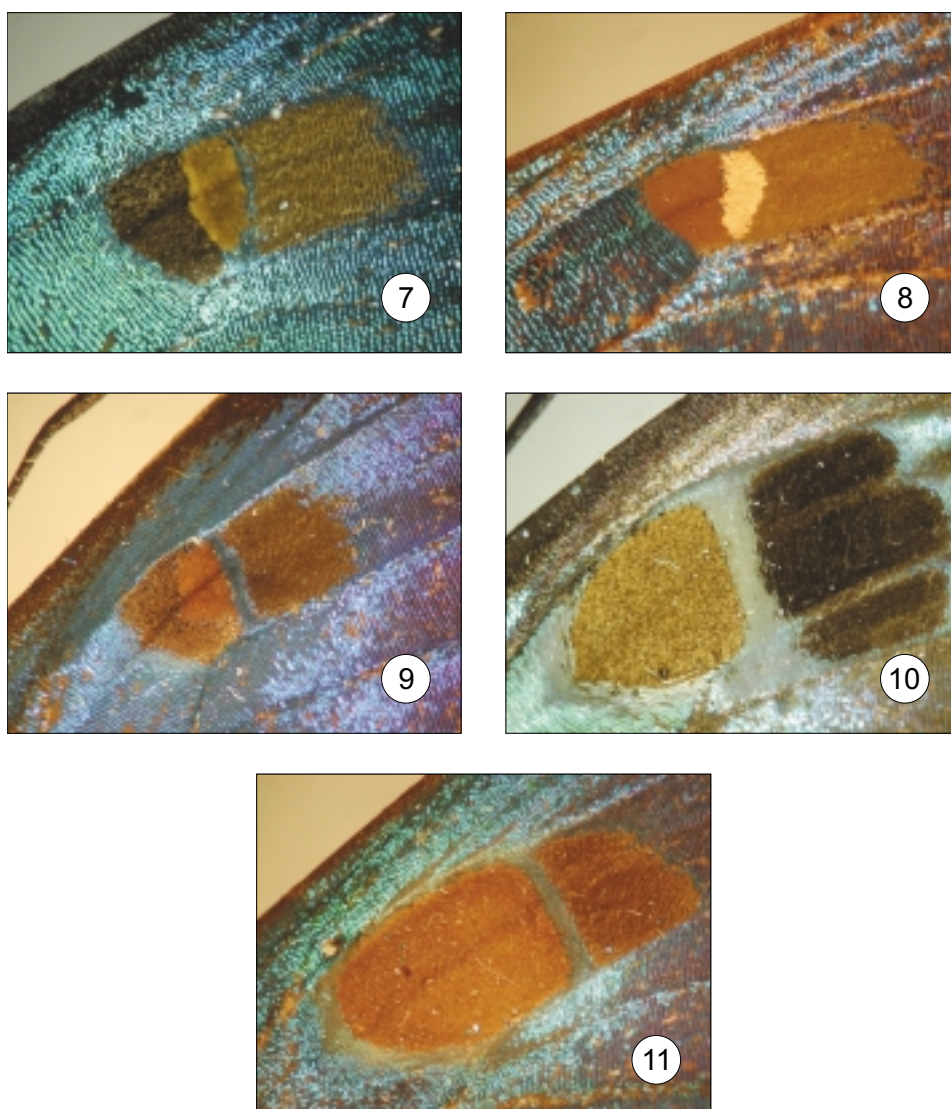
Holotype – Type no. 48. Male in perfect condition, set dorsally, fore wing costal length from base to apex: 22 mm, with the data “Colombia, Valle, Rio Aguacatal, Cero San Antonio, 2300 m, La Horqueta, 3.VIII.2003, Hans Danhers leg”. The holotype will be deposited in the Instituto de Ciencias Naturales de la Universidad Nacional en Bogotá, Colombia (Figs 1–2).

Table. *Atlides dahnersi* type material collected by H. Dahners.

#	D	M	Year	Type status	#	D	M	Year	Type status
1	1	7	1998	Coll. Dahners paratype	31	1	4	2003	Coll. Dahners paratype
2	1	7	1998	Coll. L.M. Constantino, paratype	32	2	4	2003	Coll. Dahners paratype
3	10	10	1998	Coll. Dahners paratype	33	2	4	2003	Coll. Dahners paratype
4	9	7	1999	Coll. Dahners paratype	34	5	4	2003	Coll. Dahners paratype
5	20	8	2000	Coll. Dahners paratype	35	6	4	2003	Coll. Dahners paratype
6	7	2	2001	Coll. Dahners paratype	36	6	4	2003	Coll. Dahners paratype
7	23	6	2001	Coll. Dahners paratype	37	28	4	2003	Coll. Dahners paratype
8	2	7	2001	Coll. Dahners paratype	38	28	4	2003	Coll. Dahners paratype
9	2	7	2001	Coll. Dahners paratype	39	28	4	2003	Coll. Dahners paratype
10	24	7	2001	Coll. Dahners paratype	40	1	5	2003	Coll. Dahners paratype
11	6	8	2001	Coll. Dahners paratype	41	10	5	2003	Coll. Dahners paratype
12	14	12	2001	Coll. Dahners paratype	42	16	5	2003	Coll. Dahners paratype
13	14	12	2001	Coll. Dahners paratype	43	12	6	2003	Coll. Dahners paratype
14	26	6	2002	Coll. Dahners paratype	44	14	6	2003	Coll. Dahners paratype
15	26	7	2002	Coll. Dahners paratype	45	16	6	2003	Coll. Dahners paratype
16	3	8	2002	Coll. Dahners paratype	46	24	6	2003	Coll. Dahners paratype
17	10	8	2002	Coll. Dahners paratype	47	26	6	2003	Coll. Dahners paratype
18	10	8	2002	Coll. Dahners paratype	48	27	6	2003	HOLOTYPE
19	4	1	2003	Coll. Dahners paratype	49	28	6	2003	Coll. Dahners paratype
20	8	1	2003	Coll. Dahners paratype	50	30	6	2003	Coll. Dahners paratype
21	18	1	2003	Coll. Dahners paratype	51	2	7	2003	Coll. Dahners paratype
22	18	1	2003	Coll. Dahners paratype	52	13	7	2003	Coll. Dahners paratype
23	30	1	2003	Coll. Dahners paratype	53	14	7	2003	Coll. Dahners paratype
24	30	1	2003	Coll. Dahners paratype	54	14	7	2003	Coll. Dahners paratype
25	6	3	2003	Coll. Dahners paratype	55	18	7	2003	Coll. Dahners paratype
26	6	3	2003	Coll. Dahners paratype	56	18	7	2003	Coll. Dahners paratype
27	9	3	2003	Coll. Dahners paratype	57	18	7	2003	Coll. Dahners paratype
28	18	3	2003	Coll. Dahners paratype	58	21	7	2003	Coll. Dahners paratype
29	18	3	2003	Coll. Dahners paratype	59	4	8	2003	Coll. Dahners paratype
30	18	3	2003	Coll. Dahners paratype	60	14	9	2003	Coll. Dahners paratype

Additional type material from Colombia – Paratype males, nos 1–47 and 49–60, all from the type locality collected by Dahners and deposited in the Dahners collection (see Table 1), excluding type no. 2 which is deposited in the collection of Luis M. Constantino.

Genital dissections – Paratype male, Colombia, no. 1061.



Figs 7–11. Male androconial clusters of different *Atides* species – 7: *A. sp.* (Ecuador); 8: *A. halesus* (Texas); 9: *A. havila* (Ecuador); 10: *A. polybe* (Paraguay); 11: *A. carpasia* (Mexico)

Diagnosis – Generic placement based on large size (fore wing length from base to costa exceeding 20 mm), dorsal fore wing androconial cluster with intercellular scent pad and extracellular scent patch; and ventral red basal spots occurring basally in fore wing costa and hind wing discal cell. There is no described similar congener in wingshape, coloration and markings. Hind wing vein 1A+2A with short tail; no tail at vein CuA2 terminus. Male dorsally iridescent timber green (sympatric congeners *A. melidor* lighter green or *A. atys* tinted blue) with triangulate-shaped bipartate androconial cluster (rounded in mentioned congeners) and wider marginal border, reaching submedian area (restricted to margin in mentioned congeners). Male with inter- and intracellular, horizontal, black lines on wing venter (absent in all described congeners) and without gleaming basal spots and marginal pattern (present in described congeners).

Description – Male. Fore wing length from base to apex 20–24 mm ($m = 22$; $n = 34$). Head black with white forehead; palpi black with white scales; antennae black and prickled, eyes brown, hairy with black rings white-coloured in front and rear; thorax dorsally metallic green, ventrally black; legs black with white- and orange-scaled femurs; abdomen metallic green dorsally and orange ventrally. Dorsal wings (Fig. 1): Fore wing with ground colour from base to postmedial areas bright metallic timber green with blue iridescence from a side angle, indiscriminately meeting black marginal border with intercellular distal black dash and black coloured veins; androconial cluster complex with discocellular scent pad and postmedian scent patch situated at cellular apex and coloured distally black, terminally lighter brown; postmedian scent patch situated in cells R5 and M1 pointed terminally and coloured darker brown. Hind wing dorsum similar to fore wing in colour and pattern, but with extended veins 3A and CuA2 resulting black tornal lobe and black filamentous tail; fringes black. Ventral wings (Fig. 2): Fore wing with ground grey brown and red spot at base of costa; veins black, inter- and intracellular areas R2–M3 with black central line originating medially and reaching outer margin; anal area lighter. Hind wing similar to fore wing in colour and pattern but with basal red dash in costal cell divided by vein R1 and tornal red dash in cell CuA2 reaching postmedial area; hint of tornal brown submarginal border, tornal lobe distally ash grey, terminally black; tail black, fringes grey brown.

Genitalia. Commonplace eumaeine male structure (cf. Eliot 1973, figs 67–68) with thin ventral vinculum, long and thin penis, loose manica, conspicuous tegumenal ventral process, large dorsal capsule and brush organ; penial dorsal cornutus posteriorly slightly flap-like, expanded with a central notching in dorsal view; penial ventral cornutus with membranous posterior. Measurements (see Robbins 1991: 22, fig. 43): valva length in ventral aspect = 0.16 mm; saccus length = 0.20 mm; internal penis = 0.15 mm; external penis = 0.40 mm; dorsal capsule = 0.05 mm.

Female. Unknown, supposedly similar to male but larger with wider wing-shape and an additional tail at vein terminus CuA1, dorsal colouration bluish and fore wing without androconia.

Distribution – Geographic: known only from a single Colombian locality at elevation 1900–2200 m. Temporal: specimens were recorded throughout the year.

Etymology – Named after the collector of the type material Mr Hans W. Dahners, Cali, Colombia.

DISCUSSION

Type locality – The Colombian locality is located in the Cerro de San Antonio o La Horqueta, immediately to the west of Cali. The area is accessible via a secondary road, which branches off from the National road Cali–Buenaventura at kilometer 14. The ridge conserves about 600 ha of forest. The geographic coordinates of the forest are 76°38' W and 3°30' N and extend between 1800 and 2200 m above sea level in its uppermost part. The area is protected, part of the Forestal Reserve Zone of the Cali River Basin.

According to the system of Holdrige (1967) the San Antonio Forest is classified as Very Humid Low Mountain Forest with the following climatic limits: mean annual biotemperature between 12–18°C and mean annual rainfall between 2000 and 4000 mm (Espinal 1986). Rainfalls peak twice: during April–May and October–November. Typically, in the afternoon, the forest is covered by fog and low clouds, which form through the cooling of watercharged air coming in from the Pacific Ocean. Within the system of Grubb *et al.* (1963) the forest is classified as Low Mountain Rain Forest.

The vegetation of the Cerro San Antonio is characterized by the presence of a great number of palm trees of the genera *Geonoma* and *Euterpe* and Rubiaceae such as *Palicourea*, which are the forest's principal component (28% and 21%, respectively). The other species (2%) are over 10 m tall trees and medium tall bushes (2–4 m): *Ficus* (Moraceae), *Cecropia* (Cecropiaceae), *Nectandra* (Lauraceae), *Ocotea* (Lauraceae), *Hieronyma* (Euphorbiaceae), *Alchornea* (Euphorbiaceae), *Miconia* (Melastomataceae), *Inga* (Mimosaceae), *Oreopanax* (Araliaceae), *Piper* (Piperaceae), *Prunus* (Rosaceae), *Andira* (Fabaceae), *Tibouchina* (Melastomataceae) among others. Most of the trees have their trunks covered profusely with lichens, bromeliads, and vines of a variety of species (Kattan *et al.* 1984).

Thus far, all *A. dahnersi* specimens have been collected while hilltopping at the Cerro San Antonio within the Farallones section of the Western Cordillera, which separates the Cauca River valley from the Pacific coastal plain. This moun-

tain, with its 2200 m peak looming distinctly above the city of Cali (1000 m altitude), can be reached by a dirt road passing the village of San Antonio (about 1600 m altitude). The summit region of this mountain consists actually of a main peak (2280 m) and two slightly lower peaks which are separated by a saddle-like juncture. The eastern twin peak is covered by a fenced-in telecommunications complex with associated antennas and support buildings, while the western summit, some 200 m farther west, and the main peak are vegetationally in its natural state. The mountain's slopes are covered with primary forest consisting mainly of broad-leaved arboreal species. About 10 m beneath the eastern summit there is a path downhill from the dirt road which follows a narrow ledge with a precipitous drop of several hundred meters just to its side. Some tens of meters downhill, where the shrubbery lining the dirt road gives way to the forest trees, there is a tiny opening around a small rock outcrop where one can stand. The particular topography of this site puts part of the canopy region of 20 to 30 m tall trees within reach of a tropical net provided with a 4 m handle. These uppermost trees, including the shrubbery and even the dirt road itself, constitute a real entomological hot spot, where winged insects are extraordinarily abundant during most of the year.

All hitherto known Colombian *A. dahnersi* specimens have been collected on this spot, most of them in the canopy and a few on perching sites situated slightly lower around the above-mentioned rocky outcrop. The site has a high diversity of lycaenid butterflies: more than 60 species of Theclinae have been recorded previously, some of them still unidentified.

Behaviour – Adults of *A. dahnersi* occur in small numbers at the collecting site described above during all of the year; *A. dahnersi* appears most abundant in July/August (see paratype data). Males congregate near this spot, perching on the uppermost leaves of trees, mostly broad-leaved *Ficus* species. When something airborne comes near them, they take off very quickly and either engage in mating flight attempts or soon fly to another perch. Of course, given the site's high insect density, most of the mating attempts are to no avail. The presence of *Aveexcrenota anna* (Druce, 1907) (Eumaeini, Lycaenidae) males, which show a very similar behaviour, prove a real nuisance to collecting *A. dahnersi*, since members of the two species keep each other quite agitated.

The butterflies' behaviour could be considered "hilltopping", only that the actual mountain summit, being occupied by antennas and buildings, is not a suitable habitat. Thus, alternatively, these rock outcroppings over the canopy provide a makeshift hilltopping site. On the main and the western summit, whose original vegetation is intact, *Atlides browni* can be found genuinely hilltopping.

All the collected material of *A. dahnersi* are males. This may be due to the fact that females approaching the hilltopping sites are immediately chased by males. In response, females perform an ascending flight at this initial contact and drop again rapidly out of sight. Another factor may be that since *A. dahnersi* is a very swift flyer, and handling a 4 m net is somewhat awkward, catching airborne individuals (like females) is far more difficult, restricting the known samples to perching males.

During the early morning hours, the number of observed individuals of *A. dahnersi* is few. However, these numbers rise through the morning to a maximum occurrence at about noon. Subsequently there is a decline until about 2 pm when accumulation of clouds limits nearly all butterfly activity. Sunshine is an essential factor in the flight activity of nearly all butterfly species at this site. In fact, the early morning hours are rather chilly here until the rising sun warms the air sufficiently to permit more and more flight activity. The rising sun also generates a flow of moist air rising along the mountain's slopes and this leads, in turn, to a blanketing of stationary clouds that eventually covers the cooler areas near and above the summits. Consequently, from about noontime, sunshine is at best intermittent and ambient temperature varies accordingly. These meteorological conditions most likely account for the peculiar observed behaviour of *A. dahnersi*. Normally, the butterfly sits on the upper side of a leaf with wings doubled, vertically aligned, and perpendicular with respect to the leaf surface. When a cloud blocks the sun, it continues to sit quietly. When a shady interval is long, or if the butterfly is disturbed, it will fly off out of sight and often not return. On the other hand, if periods of sunshine are corpuscular and briefly intermittent, the butterfly can be seen shifting its position around on the leaf, aligning its still-doubled wings into more favorable angles with respect to the solar radiation. Occasionally, it may even be seen with its wings tilted away from vertical, although never to the extreme seen in *A. anna*, which practically lies on the leaf surface, mimicking bird droppings with its dramatically mottled brown-and-white coloured ventral wing surfaces.

Hostplant – We have noted in the introduction that the known larval hosts of *Atlides* all belong to the family Loranthaceae (Zikán 1956, Howe 1975, Ballmer & Pratt 1988), which otherwise have been only recorded in the tribe Eumaeini for species included traditionally in *Mitoura* Scudder, 1872 (type species: *Thecla smilacis* Boisduval et LeConte, 1835) (Fiedler 1991: 175–182). Loranthaceae-feeding species of *Mitoura* were subsequently placed in a separate genus *Loranthomitoura* Ballmer et Pratt, 1992 (type species: *Thecla spinetorum* Hewitson, 1867) (which, by circumstance of a congener in Guatemala not treated by them is a junior synonym of *Cisincisalia* Johnson, 1992).

In their study of these Loranthaceae feeders, Ballmer & Pratt (1992) pointed out that both *Mitoura* and *Loranthomitoura* first instar larvae possess unique apomorphies within the callophryine eumaeines. They speculated that hostplant utilization of *Loranthomitoura* may provide additional insight into the phylogenetic relationship of other callophryine lycaenids (Ballmer & Pratt 1992: 45). In the case of *Atlides*, the situation is also striking. The Afrotropical tribe Iolaini possesses structural traits, which relate it to certain neotropical eumaeine genus-groups generally utilizing Loranthaceae as the larval host (Bálint *in prep.*). Nonetheless, *Atlides* is divergent from Iolaini in many respects. Therefore, a direction of future research on Loranthaceae hostplant utilization should be to see if its usage in *Atlides* is a retained ancestral trait or a specialization resulting in the conspicuous pattern of red warning colourations already noted.

Taxonomic history of *Atlides* – The generic name *Atlides* was introduced by Hübner (1819: 80). It was Scudder (1875: 124), who subsequently selected *Papilio halesus* Cramer, [1777] (= *Atlides dolichos* Hübner, 1823) as type species. Contrary to other eumaeine generic names erected by Hübner, *Atlides* remained in general use, most probably because of its type species was repeatedly listed or discussed in the North American literature (Dyar 1902: 36, Holland 1931: 224, Howe 1975: 300, Scott 1986: 380, Martinez & Bousquets 1993: 379, Smith *et al.* 1994: 108). However, Draudt (1919: 750–751) did not use the name and followed Kirby (1871: 381) placing the type species and all superficially similar taxa in the “Polybe-Gruppe (*Atlides* Hbn.)” under the genus *Thecla* Fabricius, 1807 (type species: *Papilio betulae* Linnaeus, 1758). Because of superficial similarity Draudt (l. c.) also placed the type species of *Brangas* Hübner, 1819, *Papilio caranus* Stoll, 1870 (subsequently selected by Scudder 1875: 128) and its relatives in the same group. The two genera were formally synonymized by Hemming (1967: 67).

The generic name of *Atlides* was listed again with full generic rank by Bridges and a synonymic species list was presented, although without explanation (Bridges 1988: II.16, Bridges 1994: IX.16).

A review of *Atlides* was given by d’Abrera (1995: 1120–1125), who documented the curatorial work of Dr Robert K. Robbins (USA, Washington DC) on the material of the Natural History Museum (London, UK) (=BMNH) in the early 1980’s. In the BMNH collection the genera *Atlides* and *Brangas* were separately curated as distinct genera, and this was followed by d’Abrera, who based their distinction on the basis of presence or absence of androconial clusters (d’Abrera 1995: 1124). This split generic view is supported by genital structures which differ both qualitatively or quantitatively. Female *Atlides* exhibit a very long and sclerotized tubular ductus bursae reaching the 4th abdominal segment, where it joins the ductus

in sclerotized lateral plates separated some 90 degrees and with the lamella postvagenalis bifurcated; *Brangas* exhibits a membranous ductus bursae reaching the 6th abdominal segment, where it joins the ductus in large parallel lateral plates and shows a lamella postvagenalis with spinate termini. The male genital structures do not differ as drastically, but, along with notable quantitative differences, the most remarkable divergence is that the pair of brush organs is attached to a loose membranous manica in *Brangas*, whilst the brush organs of *Atlides* are strongly attached to the dorsal upper part of the vinculum. Therefore, it appears that the separation of these two eumaeine taxa as genera is well based.

Generic placement of *A. dahnersi* – In spite of the fact that, with regard to *A. dahnersi*, there are certain look-alike species among taxa of *Brangas* [e.g. *B. torfida* (Hewitson, 1867) and *B. coccineifrons* (Godman et Salvin, 1887)], each possessing ventral intercellular vertical lines, we place *dahnersi* in *Atlides* on the basis of the following clusters of characters which discriminate *Atlides* from *Brangas*.

Fore wing length from base to apex more than 20 mm; no *Brangas* species with male reaching 20 mm in fore wing length is known to us. Fore wing costa slightly convex (in *Brangas*: straight). These characters are traditionally relied on in separating *Brangas* from *Atlides*. Although, overall, there are other large eumaeines with fore wing length exceeding 20 mm and the kind of wingshapes that characterize each *Atlides* and *Brangas*, it is well known that these others all differ greatly in other respects (for instance in qualitatively distinct structures of the male androconial clusters [for example: *Denivia gispa* (Hewitson, 1869) or *Theritas mavors* (Hübner, 1818)], or with the cluster missing [for example: *Aveexcrenota anna* or *Laothus viridicans* (Felder et Felder, 1865)]).

Fore wing and hind wing base with red spot at costa and discal cell, plus cell 1A+2A with intensive red scaling from base to submedial area. This trait readily identifies all the *Atlides* species. Despite basal red spotting occurring in other eumaeines, for example in *Brangas* or *Janthecla*, these latter otherwise qualitatively differ as evidenced by characters of wingshape, colouration and pattern, as well as the genital configurations.

Fore wing male discocellular androconial cluster present (in *Brangas*: a hardly visible dorsal medial androconial patch is exhibited). The androconial cluster of *Atlides* is complex. We presume that the discal component (= visual patch sensu Eliot, 1973: 495, fig. 122) is a scent pad (cf. Robbins 1991: 12), which is uniformly scaled throughout the genus (Figs 7–11) with exceptions of *A. dahnersi*, the new species from Ecuador (Fig. 7), *A. halesus* (Fig. 8) and *A. havila* (Fig. 9). The scent pad of these species is dorsally composed of two different scales: distally with small, dark brown, relatively unordered scales, terminally with larger, lighter

brown, relatively ordered scales. We cannot judge at the present stage of our knowledge of the genus whether this structure is one supporting monophyly for the traditional view of *Atlides* or not, and the uniformly scaled discal component is derived in certain *Atlides* taxa (Figs 10–11).

Hind wing anal area without a dorsal androconial pouch (in *Brangas*: present). In contrast to the complex *Atlides* fore wing dorsal androconia, *Brangas* possesses ventral androconia in the hind wing cell 1A+2A mentioned and illustrated as “small pencil of hairs” by Godman and Salvin (1887: 24, pl 50, fig. 13a).

Male genital brush organ attached to vinculum (in *Brangas*: brush organ attached to manica). The significance of this structural difference is further supported by the distinctive female genital configurations typifying *Atlides* versus *Brangas*. The ductus bursae of *Atlides* female is a long (ca 0.3 mm) sclerotized tube, broadening to a lamella postvaginalis with terminal spines. The ductus bursae of *Brangas* female is a short (< 0.1 mm) membranous tube, terminating in a flaplike lamella postvaginalis without spines.

Atlides diversity in Colombia – The overall distribution and diversity of *Atlides* is poorly documented. Draudt (1919: 750–751) indicates the Colombian occurrence of *A. atys*, *A. inachus* and *A. polybe*. D’Abrera (1995: 1120–1122) adds to this list *A. bacis* and *A. havila*. Faunistic data concerning *Atlides* has not been widely published. As recent data we could find only the publication of Salazar (2001: 77), who again recorded *A. atys* (as “*A. scamander*”), *A. inachus* and *A. polybe*, occurring syntopically in Cerro Aguacatal. Compared to these taxa *A. dahnersi* is surprisingly supralimital and therefore it is very easy to identify.

Three congeneric species was recorded to be sympatric with *A. dahnersi*: *A. polybe* (various records) and *A. inachus* (a single record), and the recently discovered, therefore poorly known, *Atlides browni* (various records) described on the basis of the holotype male from the same area (“Valle, San Antonio, km 14, 2000 m, 16. August 1989, leg. K. S. Brown”; deposited in Museo de Historia Natural, Universidad del Caldas, Manizales, Colombia), a Caldas museum voucher specimen of a larger number of specimens collected by Brown. We present here the figures from dorsal and ventral aspects of the holotype specimen (Figs 5–6).

A. browni, *A. polybe* and *A. dahnersi* cannot be confused because their colouration and wing pattern are qualitatively different in obvious respects.

All the *Atlides* species hitherto recorded from Colombia are distinctive and their phenotypes are relatively well documented in the folio-book of d’Abrera (1995). The key presented by us herein helps to discriminate similar looking species over the larger Latin American area, even in the case of females (since, ac-

ording to our experience, the ventral pattern of the sexes of the same species are fundamentally identical).

Concerning *A. dahnersi* there still remains much to be discovered. The female and the early stages are unknown, as well as the larval hostplant (supposed to be Loranthaceae, see Brown 1993: 53). Also, there is no distributional data aside from the localities of the types. Moreover, the entire genus needs a taxonomic revision, since the discovery of *A. dahnersi* and its still undescribed relative from Ecuador (Figs 3–4) and the recent placement of *Thecla havila* in *Atlides* (Bálint 2002: 129) underlined that the genus does exhibit supralimital characters, especially in cases linked to apparent long term allopatry in unusual ecological conditions. For example, in the restricted forest remnants of southeast Brazil occurs the outstanding sister species pair *cosa-misma* typified by supralimital phenotypes (d' Abrera 1995: 1122–1123).

*

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