

**First known male of *Brevianta saphonota* (Constantino, Salazar & Johnson, 1993),
Bálint, 2005, comb. nova
(Lepidoptera : Lycaenidae ; Eumaeini)**

Abstract

The first known male of the species *Brevianta saphonota* (Constantino, Salazar et Johnson, 1993) from Puyo, Pastaza (Ecuador) is reported herein together with a proposal for its current taxonomic status.

Key words

Ecuador, allotype, male, *Brevianta, saphonota*.

B*revianta saphonota* was described on the basis of a single female taken in Columbia, (type locality: Valle Alto Anchicayá, 700 m) on august 3, 1983. CONSTANTINO, SALAZAR & JOHNSON originally placed this taxon in genus *Denivia* (Johnson, 1993), based on the following characters:

- genus *Denivia* hind wings dorsal patterns (tails as inconspicuous as in *D. hemon*, Cramer) typically show iridescent emerald green concentric stripes on postbasal, median and submarginal areas;

- genitalia analysis led JOHNSON to consider the genus *Denivia* as the correct placement of this species: “*These considerations, others mentioned above, and the close alignment of the corpus bursae signs near the cervix bursae hood in saphonota and all Denivia species led us to conclude that Denivia was a valid initial placement of this new species*”.

In 2004, ROBBINS put genus *Denivia* in synonymy with genus *Theritas* (Hübner, 1818), placing species *saphonota* in genus *Lamasina* (Robbins, 2002). In 2005, Hungarian entomologist Zsolt Bálint went back over CONSTANTINO, SALAZAR & JOHNSON’s work and Robbins’ conclusions. Based on two new females taken in Colombia and Ecuador, he characterized genus *Denivia* females “*as having strongly sclerotized bipartite ductus bursae with asymmetrical terminal plates, often bristled*” (Bálint, 2005), which is not the case of the genitalia of the females he prepared.

The transverse white dorsal stripe on the female’s forewing and the gleaming ventral pattern could suggest placing this species in the genus *Theorema*. BÁLINT chose instead genus *Brevianta*, whose type species is *Thecla undulata* (Hewitson, 1865). His justification lies in the form, ventral wing coloration and wing pattern as well as a large and membranous ductus bursae found on the genitalia preparations of the *Brevianta busa* and *Brevianta undulata* females. This therefore led him to propose the combination *Brevianta saphonota*.

Three articles, CONSTANTINO (1993), BÁLINT (2005), and more recently BÁLINT & WOJTUSIAK (2011), focusing on the description of the new species *Brevianta bathoryon* sp. n., indicate that the *Brevianta saphonota* male was still unknown.

During the 2012 International insects Fair in Juvisy-sur-Orge (France, September 2012), I had the chance to happen upon a Neotropical male Lycaenidae which I could not identify. However, after a more thorough examination of the wing upperside, I remembered BÁLINT’s 2005 article, more specifically the picture of a female which resembled a species from genus *Theorema*, *T. sapho* (Staudinger, 1888) (figures 3 & 4).

Back home with this beautiful specimen (figure 1), I read CONSTANTINO and BÁLINT’s publications. Both the dorsal wing pattern characteristics, much like the characteristics of the *saphonota* female, and the large androconial scales on the upperside of the forewing, resembling those of *B. ematheon* or *B. busa* (figures 5 & 6), left little doubt: I was dealing with the male holotype of the species described in 1993, as featured on the website displaying the illustrated lists of American butterflies.

The label indicates that this specimen was captured in July 1976 in Puyo (Pastaza Province) in the Oriente of Ecuador. It comes from the GALIC collection. The female described in BÁLINT’s 2005 article also comes from Ecuador, in the Esmeraldas province located in the northwestern part of the country, along the Pacific coast.

Pierre BOYER gave me permission to publish pictures of one of the females from his own collection (figure 2) for this article.

Bob BUSBY, an American entomologist, expert in the Ecuadorian fauna who I contacted thanks to Pierre BOYER is wondering if Puyo can be considered as a proper location. Actually, all known specimens of *B. saphonata* are originating from western Colombia or western Ecuador, so according to him Puyo is seriously questionable.

BÁLINT & WOJTUSIAK (2011) came to the conclusion that the male might display dorsal wing patterns different from those of the female, proof of the sexual dimorphism often witnessed in Lycaenidae from the Eumaeini tribe. Nature seems to have decided otherwise.

Description

Upperside: the forewing measures 18 mm. The shape of the wing reminds that of *B. ematheon* (figure 2). Androconial scales are widespread and rather round; their color is a dark brown-bronze in the center, gradually lessening toward the outside to melt into an iridescent turquoise, the background color of this specimen. Vein 2A on the hind wing ends with a 7 mm tail; the tail of vein CuA1 is shorter.

Underside: wing patterns are similar to those of the female holotype described by CONSTANTINO, SALAZAR & JOHNSON. The brown stripe along the forewing apex is thinner than the female's. Forewing postbasal and postmedian areas display a dark brown spot, rounder than with the females. This brown shade spreads along veins CuA2, CuA1 and M3 in the white median area. In this area, light blue scales can be seen in the upper part of the areas between veins CuA1, CuA1, M3, M2 and M1. Hind wing patterns are similar to those of the female.

We therefore suggest bringing the two genders together as they display similar dorsal wing patterns. Those patterns cannot be found in any other Lycaenidae, except for *Theorema sapho*, which does not have tails at the level of veins 2A and CuA1 on the hind wings, and does not exhibit the same habitus on top.

This specimen designated **male allotype** is kept in the author's collection. Photos supporting this description and relevant data will be communicated to the website:

www.butterfliesofamerica.com

Discussion

BÁLINT & WOJTUSIAK (2011) did not treat *saphonota* as a species belonging to genus *Brevianta*. Since the male species was unknown, they considered the female as *incertae sedis species*.

The specimen's generic placement will require a refinement of *Brevianta* because as BUSBY wrote rightly, JOHNSON made a mess of the taxonomy. Discussions I had with Bob BUSBY allowed me to clarify some points and at this step I have opted to quote the comprehensive discussion Bob BUSBY shared with me: "The original descriptions of *Brevianta* Johnson, Kruse & Kroenlein, 1997 and of *Bussa* Johnson, Kruse & Kroenlein, 1997, preoccupied by *Bussa* Ragonot, 1888, lacked evident characterizing morphology. ROBBINS (2004) placed *saphonota* in *Lamasina* because it possesses the synapomorphy for *Lamasina* (very short forewing discal cell) proposed by D'ABRERA (2001) and repeated by BALINT (2005). The history quoted from ROBBINS & LAMAS is: "ROBBINS (2004b) tentatively placed *Denivia saphonota* Constantino, Salazar & Johnson in *Lamasina*, even though he knew this species only from the original description and illustration. This species was recorded only from females from western Colombia, it had a forewing discal cell length about 40% of the length of the costa-like females of the *L. ganimedes* complex, and a male of *Lamasina* was known from western Colombia that at the time did not have an associated female. These reasons were the basis for its placement, but the subsequent discovery of a female *Lamasina* from western Ecuador falsifies the original justification of the generic placement in *Lamasina*. BÁLINT (2005) transferred *D. saphonota* to *Brevianta* Johnson, Kruse & Kroenlein. He did not note that this species has the same forewing discal cell as females of *Lamasina*. Rather, he based this action on phenotypic wing similarity and a "membranous large and wide female genital ductus bursae." It is hard to understand this action because the ductus bursae of *Brevianta* is sclerotized, not membranous. BÁLINT'S (2005) transfer may be correct (we have not had the opportunity to dissect a specimen), but the placement of *D. saphonota* remains dubious until accurate character evidence is published." Bob BUSBY has added "as a personal communication, ROBBINS says that he characterized the genus by the presence of a small scent pad (cf. ROBBINS, 1991, ROBBINS et al., 2012 for morphology) along the cubital vein on the dorsal surface of the forewing discal cell, a trait this is unique in the *Micandra* section, to which *Brevianta* belongs".

To help me identifying this subtle character BUSBY sent me pictures of *B. undulata* and *B. baryothon* males. Unfortunately, I was not in a position to make a clear picture under the magnifying glass even if I was able to observe some specific grey scales along the cubital vein that could be a small scent pad.

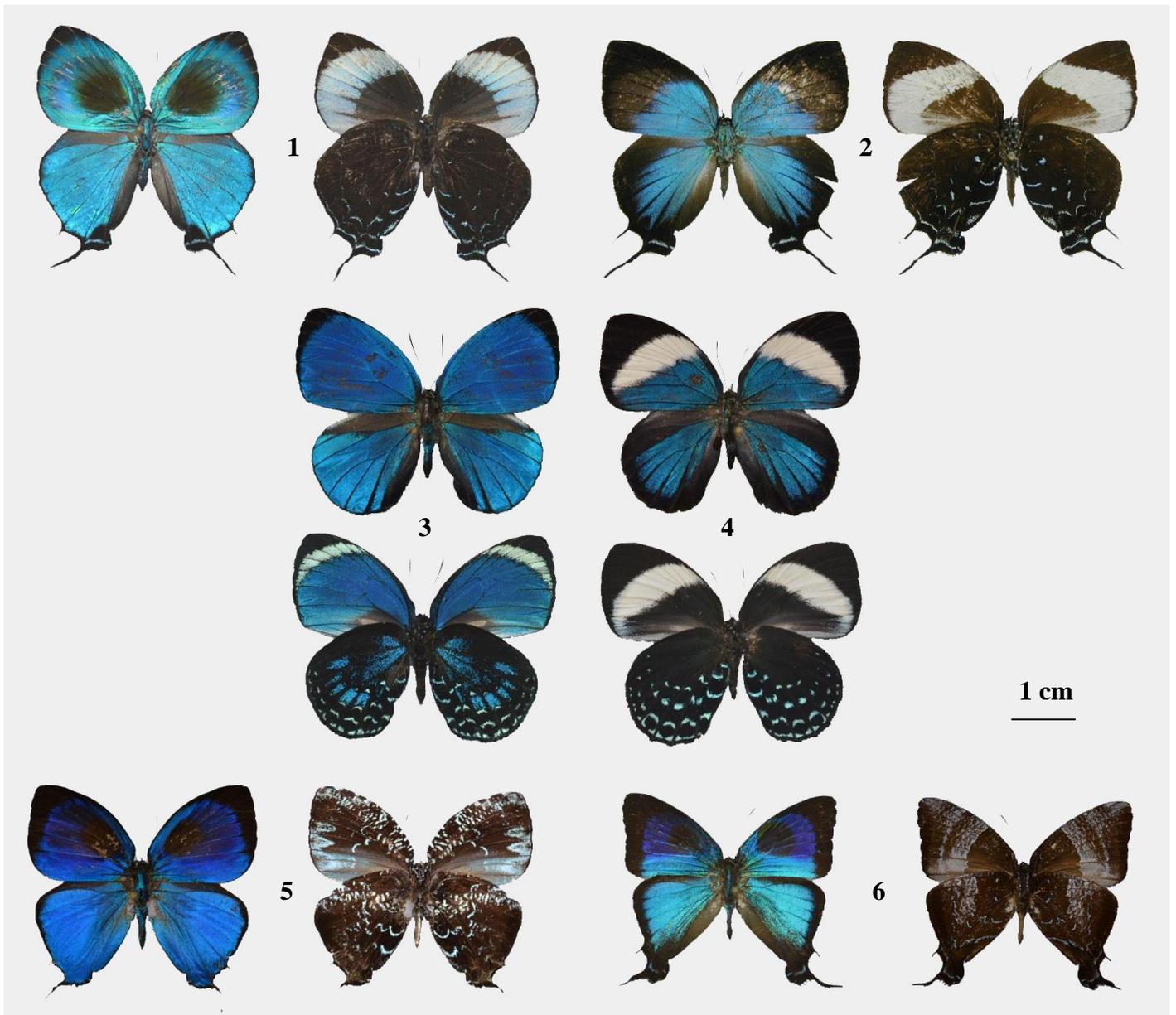
At this step, I can only formulate an assumption; *saphonota* is a bona species which might be placed in the genus *Brevianta* until further researches.

Acknowledgements

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1. *Brevianta saphonota* ♂, Équateur (Ecuador), Puyo, Pastaza, juillet (July) 1976, leg. GALIC - Collection L. DIRINGER.
2. *Brevianta saphonota* ♀, Équateur, Rio Chuchuvi, Lita vers San Lorenzo km 12, 700-800 m, Esmeraldas, septembre 2001, leg. Euclides ALDAZ - Collection et photos P. BOYER.
3. *Theorema sapho* ♂, Équateur, Puyo, Pastaza, juillet 1976, leg. GALIC - Collection L. DIRINGER.
4. *Theorema sapho* ♀, Équateur, Puyo, Pastaza, juillet 1976, leg. GALIC - Collection L. DIRINGER.
5. *Brevianta ematheon* ♂, Pérou, Cayumba, Tingo Maria, 950 m, Huanuco, août 2007, [9°29'00" S- 5°56'56"W], leg. FLORENT - Collection L. DIRINGER.
6. *Brevianta busa* ♂, Mexique, Puebla, 1400 m, mars-avril 2007, leg. SCHÄFFER - Collection L. DIRINGER.