

# Description of a new species of *Telemiades* Hübner, [1819] (Lepidoptera: HesperIIDae) from Peru belonging to the “*centrites* group”

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**Abstract:** *Telemiades nicki* Siewert, Mielke & Casagrande, a new species of *Telemiades* Hübner, [1819] (Lepidoptera: HesperIIDae) from Peru, Cusco, Cosñipata Valley belonging to the “*centrites* group”, is described. The male and its genitalia are illustrated, and an updated key to the males of the *Telemiades* species belonging to the “*centrites* group” is provided.

**Key words:** Butterfly, Eudaminae, Neotropical, skippers, taxonomy

## INTRODUCTION

HesperIIDae (Lepidoptera) comprises one of the most diverse groups among butterflies, with more than 4000 species mostly concentrated in the Neotropics. Besides its large diversity, the systematics of skippers has been historically neglected when compared to other butterflies. The first phylogenetic hypothesis for HesperIIDae was inferred by Warren *et al.* (2008), and since then a few other studies have focused on their phylogeny (Warren *et al.*, 2009; Sahoo *et al.*, 2016; Toussaint *et al.*, 2018; Li *et al.*, 2019). Currently the family is grouped into 13 subfamilies, and of these, Eudaminae stands out with about 50 genera distributed in the following four tribes: Entheini, Eudamini, Oileidini, and Phocidini (Li *et al.*, 2019; Zhang *et al.*, 2019, 2020).

Of the three genera housed in Telemiadina (Eudamini), *Telemiades* Hübner, [1819] is the most species-rich genus highlighted by its 41 species (Siewert *et al.*, 2020). In a recent taxonomic revision of the genus, Siewert *et al.* (2020) recognized 10 artificial groups based on wing pattern and genitalia morphology. The five species belonging to the “*centrites* group” are externally characterized by the ventral hindwings with a yellowish patch on the anal margin, as in: *Telemiades centrites* (Hewitson, 1870), *T. chrysoorrhoea* (Godman & Salvin, 1893), *T. contra* Evans, 1953, *T. esmeraldas* Siewert, Mielke & Casagrande, 2020, and *T. gallius* (Mabille, 1888).

Here we describe a new species of *Telemiades* of the “*centrites* group” from the Cosñipata Valley, Cusco, Peru. Detailed illustrations of the male and of its genitalia, diagnosis, and distributional information, are provided.

## MATERIAL AND METHODS

For the study of the genitalia, the abdomen was detached and soaked in a tube with heated 10% potassium hydroxide

solution (KOH) for about five minutes. The genitalia were dissected, analyzed and photographed using a Leica DMC 4500 stereomicroscope. The morphological terminology used for description follows the same adopted by Siewert *et al.* (2020). The holotype is deposited at the Museo de Historia Natural, Universidad Nacional Mayor de San Marcos, Lima, Peru (MHNL), and the paratype at the Coleção Entomológica Padre Jesus Santiago Moure, Universidade Federal do Paraná, Curitiba, Paraná, Brazil (DZUP-OM). The following abbreviations are used: FW (forewing), DFW (dorsal forewing), VFW (ventral forewing), DHW (dorsal hindwing) and VHW (ventral hindwing).

## RESULTS AND DISCUSSION

*Telemiades nicki* Siewert, Mielke & Casagrande, **new species**  
Figs. 1 - 3

**Diagnosis.** *Telemiades nicki* sp. nov. is distinguished from the other species of the “*centrites* group” by the DHW dark brown without yellow fringes and the VHW with an yellowish patch on the outer margin between Rs and the inner margin at 3A.

**Description.** **MALE.** *Head:* frons and vertex dark brown; eye surrounded by yellow scales; labial palpus with first and second segments mixed with dark brown and yellowish, third segment dark brown; antenna dark brown, base of each segment ventrally cream; apiculus ventrally cream; nudum of 22 segments (n=2). *Thorax:* dorsally and ventrally dark brown with yellowish scales. *Forewing:* length of males 24 mm (n=2). DFW: ground color dark brown; presence of a costal fold; three dark cellular spots, an upper and a lower jointed, and one at the distal margin of the cell; three dark brown discal spots in M<sub>3</sub>-CuA<sub>1</sub>, CuA<sub>1</sub>-CuA<sub>2</sub>, and CuA<sub>2</sub>-2A; three semi-hyaline white apical spots in R<sub>3</sub>-R<sub>4</sub>, R<sub>4</sub>-R<sub>5</sub>, and R<sub>5</sub>-M<sub>1</sub>, the first a little larger; five dark brown



Figure 1. *Telemiades nicki* sp. nov.: (A-B) male holotype, dorsal and ventral views. Scale bar: 1 cm.

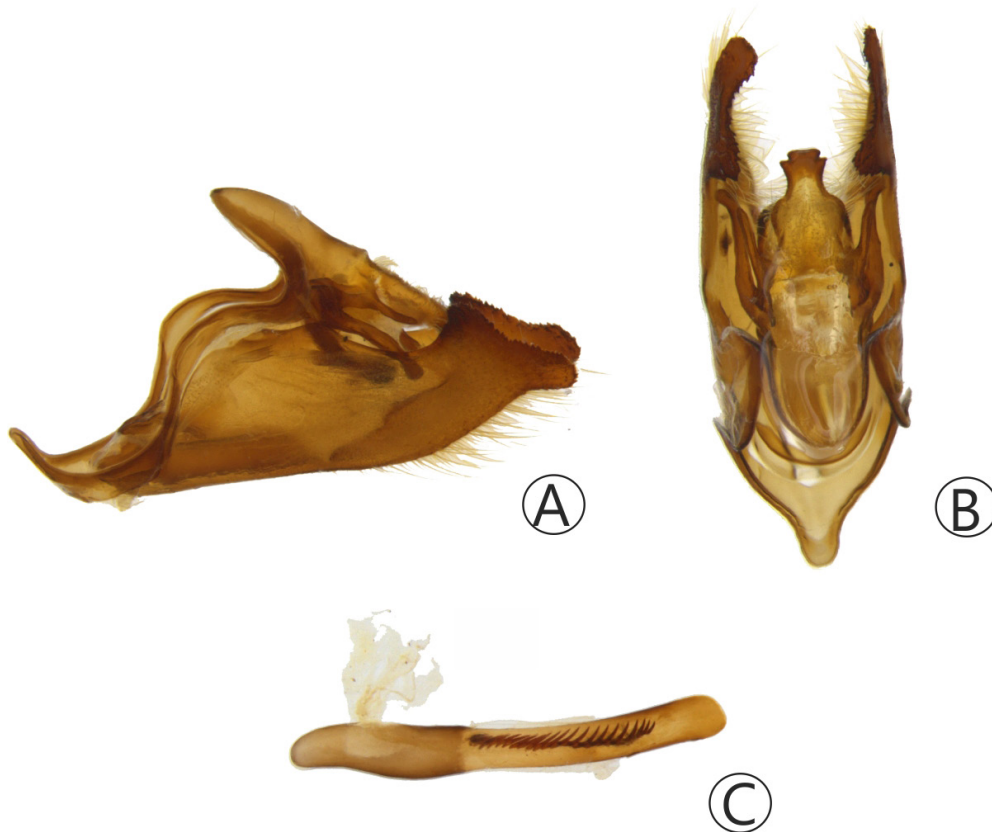
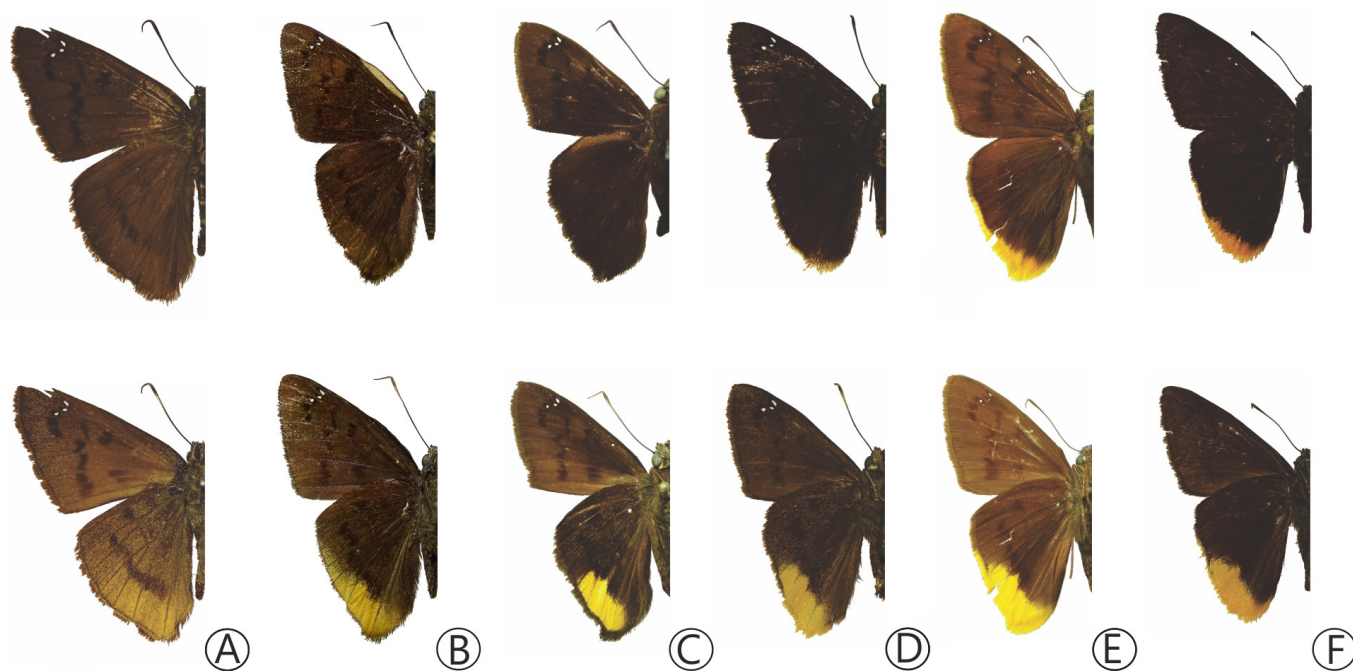


Figure 2. *Telemiades nicki* sp. nov.: (A-C) male genitalia, lateral view (A) and dorsal view (B), and aedeagus in dorsal view (C). Paratype. Scale bar: 1 mm.

submarginal spots between  $R_3$  and  $M_3$ . DHW: ground color dark brown; outer margin lighter, corresponding to the opposite area of the yellowish patch; six dark brown submarginal spots as an irregular band between  $Sc+R_1-Rs$  and  $CuA_1-CuA_2$ . VFW: as DFW but ground color lighter brown; one dark spot in the discal

area of  $CuA_2-2A$ . VHW: as DHW; six dark brown submarginal spots as an irregular band between  $Sc+R_1-Rs$  and  $CuA_1-CuA_2$ ; yellowish patch on outer margin beginning at  $R_s$  with 1 mm width until to  $3A$ , reaching nearly 5 mm. *Abdomen*: dorsal and ventral dark brown, with yellowish scales. *Genitalia* (Fig.



**Figure 3.** Species of *Telemiades* belonging to the ‘centrites group’, dorsal views above and ventral views below. (A) *T. centrites*, (B) *T. nicki* sp. nov., (C) *T. esmeraldas*, (D) *T. contra*, (E) *T. gallius*, and (F) *T. chrysorrhoea*.

2A-C): tegumen rectangular, lateral margin with two pairs of apophysis; anterior margin of saccus rounded; 2/3 basal part of uncus rectangular and 1/3 distal part as a thinner arm with two lateral quadrate and truncated projections; valva rectangular, three times longer than wide, costa rounded, harpe elongated and with a dorsal triangular projection and dorso distal margin serrated, sacculus long, narrow and rectangular, about 1/3 the length of valva; fultura inferior distally bifid, with distal margin rounded; aedeagus cylindrical, straight, opening for ejaculatory bulb rounded, distal margin truncated, opening for vesica about 1/3 of size of aedeagus, cornuti as numerous sharp spines with same size, disposed in lines.

**FEMALE.** unknown.

**Type material.** Holotype male with the following labels (separated by oblique bars): /HOLOTYPUS/ PERU, CUSCO, COSNIPATA VALLEY, QUEBRADA QUITACALZÓN, 1.100 m, 13°01’ S, 71°30’ W, 26-X-2018, O. MIELKE LEG./ *Telemiades nicki* Siewert, Mielke & Casagrande det. 2020/. Deposited in MHNL.

**Paratypes:** Peru, Cusco, Cosñipata Valley, Quebrada Santa Isabel, 1.200 m, 13°02’ S, 71°31’ W, 6-XI-2018, 1 male, O. Mielke leg., OM 87.457. Deposited in DZUP-OM.

**Etymology.** The specific epithet is in honor of our friend Nick V. Grishin, who has been making important contributions towards the knowledge of the phylogeny and evolution of skippers. The epithet is a Latinized masculine noun in the genitive case.

**Distribution.** *Telemiades nicki* sp. nov. is currently known only from its type locality.

**Remarks.** *Telemiades nicki* sp. nov. clearly belong to the “centrites group”, which is externally characterized by the VHW with a yellowish patch on the anal margin (Fig. 3). The new species might be mistakenly associated with the recently described *T. esmeraldas*, which is only known from Ecuador (Esmeraldas province), but it can be distinguished by its lighter and longer yellowish patch, which is compact in *T. esmeraldas* (Fig. 3C). This is the second known *Telemiades* species from the ‘centrites group’ registered in Peru, and is also the southernmost record for a species in the group. Martin (1941) recorded *T. gallius* from Chuchurras, Pasco, and since then no other species from the “centrites group” has been recorded in the country.

**Updated key to the male of *Telemiades* species belonging to the “centrites group” (adapted from Siewert et al., 2020):**

1. Ground color of upper and under side of the both wings light brown and with darker spots; DHW without yellow fringes (Fig. 3A)..... *T. centrites*
- Ground color of upper and under side of the both wings dark brown and with spots not darker as mentioned as above; DHW with or without yellow fringes on tornus..... 2
2. DHW completely dark brown..... 3
- DHW with yellow patch or fringes on tornus..... 4
3. VHW with a no compact yellowish patch on outer margin between Rs and the inner margin at 3A (Fig. 3B)..... *T. nicki*
- VHW with a compact yellowish patch on outer margin between Rs and just a little after 2A (Fig. 3C) ..... *T. esmeraldas*
4. DHW with yellow fringes on tornus (Fig. 3D)..... *T. contra*
- DHW with yellow patch on tornus (Fig. 3E)..... 5
5. FW with semi-hyaline apical spots between R<sub>3</sub> and M<sub>1</sub> (Fig. 3E).... *T. gallius*
- FW without semi-hyaline apical spots (Fig. 3F) ..... *T. chrysorrhoea*

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