

Description of *Johnsonita johnbanksi* sp. n. from Peru  
with notes on the genus (Lepidoptera: Lycaenidae)

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**Abstract:** The eumaeine lycaenid *Johnsonita johnbanksi* sp. n. (Peru, dept. Amazonas, Molinopampa) is described and distinguished from members of the genus. The new combination *Johnsonita catadupa* (Hewitson, 1869) is established, and the new synonymies *Johnsonita* Salazar et Constantino, 1995 = *Owda* Johnson, Kruse et Kroenlein, 1997 and *Thecla auda* Hewitson, 1869 = *Thecla chlamydem* Druce, 1907 are proposed. An identification key for *Johnsonita* species based on wing characters is given.

**Key words:** Neotropics, Peru, diversity, Lycaenidae, Eumaeini, *Johnsonita*

INTRODUCTION

In butterfly samples recently collected in department Amazonas, northeastern Peru I have found male and female individuals of a species resembling *Thecla catadupa* Hewitson, 1869. This species is described in the present paper and placed in *Johnsonita*, proposed by Salazar & Constantino (1995) as a monotypic genus. The same lineage of eumaeine lycaenids was named as genus *Owda* subsequently by Johnson, Kruse & Kroenlein (1997: 19). I demonstrate that *Johnsonita* and *Owda* are synonyms and the genus is not monotypic. The material I have studied is listed in the Appendix.

DESCRIPTION OF THE NEW SPECIES

***Johnsonita johnbanksi* sp. n.**  
(Figs 1–4)

**Diagnosis** – Antennal base adjacent to the margin of the compound eye (family: Lycaenidae). Male prothoracic leg not greatly modified and foreleg coxa not

arched upward distally (subfamily: Lycaeninae). Male fore tarsus stubby-tipped (tribe Eumaeini). Fore wing cellular venation abnormal with displaced apical veins *u*, *m* and *l*, wing ventra with subbasal, submedial and submarginal row of gleaming pattern (*Micandra* genus group). Last three apical antennal club segments yellow, fore wing costal length from base to apex less than 18 mm, hind wing with anal lobe and vein CuA2 extended as 2–4 mm long tail (genus *Johnsonita*), fore wing outer margin is convex (*catadupa* species group). Reminiscent to congener “*Thecla catadupa*”, but dorsal marginal border thicker on both wings not reaching



**Figs 1–4.** *Johnsonita johnbanksi* sp. n., 1–2 = holotype (MUSM) – 1: dorsum; 2: venter; 3–4 = paratype (no. 1) (MZJU) – 3: dorsum; 4: venter. (Photos A. Kun)

the medial area on fore wing and restricted to antemarginal area on hind wing. Male possesses hind wing dorsal intercellular androconial cluster what is missing on "T. catadupa". The hind wing ventral medial line is zigzagged, what is undulated in "T. catadupa".

**Description – Male.** Fore wing costal length from discal cell base to vein  $R_4$  terminus 15.01 mm (holotype). Fore wing costal margin slightly convex, distal margin convex with pointed apex and rounded tornus, anal margin straight. Hind wing costal margin slightly convex with rounded apex, distal margin slightly convex with >3.5 mm tail at vein terminus CuA2, tornal lobe extensive with highest width 2.5 mm from vein CuA2, anal margin waved. Dorsal surface: Fore wing ground colour ultramarine blue; costal black, apex and distal margin with wide black margin, fringes reddish brown. Hind wing as fore wing except with intercellular androconial cluster, long gray tail at vein CuA2 terminus curved 90 degree at middle, large reddish brown tornal lobe and grey cell 3A. Tail and tornal fringes black. Ventral surface: Fore wing ground colour reddish brown with whitish medial line in discal cell, whitish postmedial dash in cell R2 then a continuous line to vein CuA2, submarginal and marginal area somewhat lighter with faint postmedial and marginal lines extending from apex to tornus. Hind wing pattern complex with dark brown basal area, a zigzagged medial stripe and submarginal line, antemarginal area with dark reddish brown and orange spot in cell CuA2.

**Female.** Similar to male, but with longer distal fore wing margin measuring to costa.

**Type material – Holotype:** Male, specimen in perfect condition, set dorsally, will be deposited in the Museo de Historia Natural, Universidad Nacional Mayor de San Marcos, Lima (Peru), labeled as "PERU, Amazonas, Chachapoyas, Molinopampa-Granada, 12.08.2001, 3100 m, leg. B. Calderon, coll. M Bollino". Paratype female (no. 1 "allotype"), deposited in Zoological Museum, Jagiello University, Krakow (Poland): "Peru, Prov. Amazonas, Mendoza-Llanuayco, 29.viii. 1998, 2200–2400, leg. T. Pyrcz", dissected (HNHM Bálint gen. prep no. 829).

Further paratypes: MZJU paratype male (no. 2.): Peru. Amazonas, Chachapoyas, Molinopampa-Granada, August 2001, 3100 m, leg. B. Calderon; female (no. 3): ditto, January 2003. HNHM paratype male (no. 4): ditto, September 2002, 2800 m; paratype female (no. 5): ditto, 29.VIII.1998, 2300–2400 m, leg. T. Pyrcz (gen. Prep. no. 866). Naturhistorisches Museum, Wien: paratype female (no. 6): Peru, Pedro-Ruiz-Gallo, XII.1990, coll. König (no. 511).

**Distribution – Geographical:** known only from the NE Peruvian department Amazonas, in the type locality Molinopampa-Granada, plus Mendoza-Llanuayaco, and Pedro Ruiz Gallo. **Spatial:** the type material was collected between 2200 and 3100 m in the cloud forest ecotone. **Temporal:** known at present from August, September, December and January.

**Etymology – Patronym** of Mr John Banks (London, UK), my maecenas and fatherly friend, ardent student of butterflies, who produced and published the first videofilm entirely dedicated to Peruvian butterflies (Banks 1996).



## NOTES ON JOHNSONITA

The genus *Johnsonita* Salazar et Constantino, 1995 was established as a monotypic genus with the type species *Johnsonita johnsoni* Salazar et Constantino, 1995 (Constantino & Salazar 1995: 459) within the tribe Eumaeini, family Lycaenidae. Subsequently the older established nominal taxa *Thecla auda* Hewitson, 1867 and *Thecla pardoa* d'Abrera, 1995 were placed in new combinations with *Johnsonita* by Lamas *et al.* (1999: 5) and d'Abrera (2001: 195) falsifying the monotypy. However, supportive comments were not presented in any of the previously mentioned cases. The situation was further complicated when the nominal species *Thecla auda* has been selected as type species of *Owda* by Johnson *et al.* (1997: 19), and *Thecla chlamydem* Druce, 1907 was placed in the new combination *Owda chlamydem* (Druce, 1907) Johnson, Kruse et Kroenlein, 1997.

I regard *Johnsonita* as senior subjective synonym of *Owda* new synonym, because their type species represent the same lineage in the *Micandra* genus-group of neotropical eumaeine lycaenids (Robbins 1986: 154) outlined in the diagnosis of the new species I have described above. I place the following taxa in the genus: *Johnsonita auda* (Hewitson, 1867) d'Abrera, 2001, *J. catadupa* (Hewitson, 1869), new combination, *J. pardoa* (d'Abrera, 1995) Lamas, 1999. I consider the nominal species "*Thecla chlamydem* Druce, 1907" as a subjective junior synonym of *J. auda* as in the material I have examined there are phenotypes that intermediate the lectotype of *auda* and the holotype of *chlamydem*, consequently *Thecla auda* Hewitson, 1867 = *T. chlamydem* Druce, 1907, new synonym. This synonymy had been already suggested by d'Abrera (1995: 1131). *J. auda* is a variable species in regard of wing dorsal colouration (pale ultramarine blue to violet blue), intensity of ventral pattern (sharp to faded pattern) and female size (fore wing costal length extremes in mm: 13:18), what probably indicates that the species utilizes larval hostplants from wide range of herbal families influencing these traits, as it was demonstrated in the case of polyommataine lycaenids (Knüttel & Fiedler 2001).

I recognize three groups in *Johnsonita*: (1) the "*johnsonita* species-group" for the type species of the genus having large (2 mm) long hind wing tornal lobe, (2) the "*auda* species-group" for taxa *J. auda* and *J. pardoa* having straight fore wing distal margin in the apical area with gleaming pattern of lines in subbasal and submedial areas. One male specimen in The Natural History Museum (London, UK) from Ecuador ("Rio Sucio, Napo, 1600 m") represents an undescribed member of the group; (3) the "*catadupa* species-group" for taxa *J. catadupa* and *J. johnbanksi* having bent fore wing distal margin in the apical area without fore wing ventral gleaming pattern. There is a hitherto undescribed species from Bolivia, which also belongs to this group. In the Lycaenidae General Collection of The

Natural History Museum the specimen was misidentified as “*Thecla chaluma* Schaus, 1902” (d’Abrera 1995: 1128), and was placed subsequently in *Radissima* Johnson, 1992 (type species: *Sithon umbratus* Geyer, 1837 by original designation) by Johnson (1992: 174), which is erroneous as the type species of *Radissima* differs qualitatively in wing shape, pattern and genital morphology.

#### KEY FOR JOHNSONITA SPECIES

1. Hind wing tornal lobe 2 mm long. Colombia  
*J. johnsoni* Salazar et Constantino, 1995
- Hind wing tornal lobe less than 2 mm 2
2. Fore wing apex pointed with straight distal margin, fore wing ventrum with subbasal and submedial gleaming lines 3
- Fore wing apex less pointed with bent distal margin, fore wing ventrum without subbasal and submarginal gleaming lines 5
3. Ventral hind wing basal area without distinctive gleaming pattern, submedial area with dark undulate line. Colombia to Peru  
*J. pardo* (d’Abrera, 1995)
- Ventral hind wing basal area with distinctive gleaming pattern, submedial area without dark undulate line 4
4. Ventral wing antemarginal area with vestigial pattern or patternless. Venezuela to Bolivia  
*J. auda* (Hewitson, 1867)
- Ventral wing antemarginal area with distinctive gleaming intercellular arrow head pattern. Ecuador  
*Johnsonita* sp.
5. Ventral hind wing medial area with dark zigzagged pattern. Peru  
*J. johnbanksi* sp. n.
- Ventral hind wing medial area without dark zigzagged pattern 6
6. Hind wing subbasal and submedial areas patternless. Ecuador  
*J. catadupa* (Hewitson, 1869)
- Hind wing subbasal and submedial areas with faint pattern. Bolivia  
*Johnsonita* sp.

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## APPENDIX

### Comparative material examined

Abbreviations: BMNH = The Natural History Museum, London; HNHM = Hungarian Natural History Museum, Budapest; MZJU = Zoological Museum, Jagiellonian University, Krakow.

### *Johnsonita auda* (Hewitson, 1867)

Type material – *Thecla auda* 1867: BMNH (E) 266479 lectotype (designated by Johnson *et al.* 1997: 20): “New Granada” (= Colombia). *Thecla chlamydem* Druce, 1907: BMNH(E) 266485 holotype female: “Pozuzo, Peru, 5000 to 6000 ft”.

Additional material – VENEZUELA: Montan, Sierra Merida, 3000 m, Briceno, Rothschild bequest (BMNH: 1 male, 1 female); Pedregosa, Merida, 3000 m, Briceno, Rothschild bequest (BMNH: 1 female); Walle, Merida, 2200 m, 16.IV.1898, Briceno, Rothschild coll. (BMNH: 1 female); [no



locality], Druce coll. ex Kaden coll.; Godman-Salvin collection (BMNH: 1 male, 1 female); [no locality] 47.9., British Museum (BMNH: 1 female); [no locality], 46.75, British Museum (BMNH: 1 female). COLOMBIA: Bogota, Crowley bequest (BMNH: 1 male, 1 female); Bogota, Lindig, Felder coll., Rothschild bequest (BMNH: 3 males, 2 females), Bogota, Rothschild bequest (BMNH: 4 females); Bogota, 97. 146, J. J. Weeks, British Museum (BMNH: 2 females); Bogota, Wheeler (BMNH: 1 male, 1 female); Bogota, 56.142, British Museum (BMNH: 1 male); Bogota, 1898, Rothschild bequest (BMNH: 2 females); Env. Bogotá, 1918, Frère Apollinaire-Marie (BMNH: 2 males); Cauca, Distrito de Pereira, 1886, Roman de Valencia, Oberthür coll. (BMNH: 2 females); Cauca, between Leticia & Purace, E. slopes cent. Cordillera, 2850–2950 m, 9.VIII.1979, [Adams coll.] (BMNH: 1 female); Cali, Salazar (HNHM: 3 males, 3 females); Corinto, Cauca, May–July 1906, Paine & Brinkley, Rothschild bequest (BMNH: 1 female); Interior of Colombia, J. Carder, ex coll. Hamilton Druce 1918, Joicey coll. (BMNH: 3 males, 1 female); Manizales, A. M. Patino, Oberthür coll. (BMNH: 1 male); Rio Minero, Muzo, 2500 ft, Wheeler, Godman-Salvin coll. (BMNH: 1 female); [no locality], Fruhstorfer, Adams bequest (BMNH: 1 female); [no locality], ex Grose Smith 1910, Joicey coll. [no locality], Rothschild bequest (BMNH: 1 female). ECUADOR: Ambato, Anda Vasconez, Oberthür coll. (BMNH: 1 female); Baños, 6800 ft, April–May 1912, M. G. Palmer, British Museum (BMNH: 1 male); Baños, 9000 ft, March 1912, M. G. Palmer, British Museum (BMNH: 1 male); Baños, Rio Pastaza, 5–7000 feet, M. G. Palmer, ex Hamilton Druce coll. 1918, Joicey coll. (BMNH: 6 males, 2 females); Cururai, C. Buckley, Godman-Salvin coll. (BMNH: 1 female); Env. d'Ambato, R. P. Iren de Blanc, Oberthür coll. (BMNH: 3 males, 3 females); Pichincha, Wojtusiak (MZJU: 10 males, 2 females); HNHM: 1 male, 1 female); Pichincha, NW of Quito, Alamo valley, 1800 m, 6.VIII.[19]86, British Museum (BMNH: 1 male); [no locality], ex Grose-Smith 1910, Joicey coll. (BMNH: 1 male); [no locality], Hewitson coll. (BMNH: 4 females). PERU: Huanuco, Cushi, 1900 m, W. Hoffmanns, Rothschild bequest (BMNH: 1 male, 1 female); Manchara, N. Peru, 7000 ft, Sep. 1912, A. & E. Pratt, Joicey coll. (BMNH: 2 males); Molinopampa, Wojtusiak (MZUJ: 1 male, 1 female); HNHM: 1 female); River Tabaconas, 6000 ft, A. E. & F. Pratt, 1912, Joicey coll. (BMNH: 10 males). BOLIVIA: [no locality], ex Grose-Smith 1910, Joicey coll. (BMNH: 1 female); [no locality], ex coll. Ed. Brabant 1920, Joicey coll. (BMNH: 2 males); [no locality], ex Grose Smith 1910, Joicey coll. (BMNH: 1 female); [no locality], Hewitson coll. (BMNH: 1 male); PATRIA?: Br. Guiana, Parish, Ex Grose-Smith 1910, Joicey coll. (BMNH: 1 male).

Genitalia dissections – BMNH vial nos 5813 (Bogota, female), 5814 (Bogota, female).

### *Johnsonita catadupa* (Hewitson, 1869)

Type material – *Thecla catadupa* Hewitson, 1869: BMNH(E) 266559 lectotype (designated by Johnson 1992: 174) male: "Ecuador"; BMNH(E) 266560 paralectotype male: "Ecuador"; BMNH(E) 266561 paralectotype male: "Ecuador".

Additional material – ECUADOR: Environs de Loja, 1893, [18]83, [ex coll. Dognin], Joicey coll. (BMNH: 1 male); Zamora, 3–4000 ft, O. T. Baron, Rothschild bequest (BMNH: 1 male); [no locality], Hewitson coll. (BMNH: 1 male). PATRIA?: [no locality], ex Grose Smith 1910, Joicey coll. (BMNH: 1 male).

Genital dissections – BMNH Rhopalocera vial nos: 5877 (patria?, male), 5878 (Loja, male), 5879 (Ecuador, male).

*Johnsonita pardoa* (d'Abrera, 1995)

Type material – *Thecla pardoa*: BMNH(E) 266486 holotype male COLOMBIA: “Torne, Cauca”; BMNH(E) 266487 paratype male PERU: “Agualani”; BMNH(E) 266488 paratype female ECUADOR: “Baños, Río Pastaza”.

Additional material – COLOMBIA: Tolima, S. above Cundinamarca, 2900 m, 23.VII.1979, [Adams] (BMNH: 1 female). ECUADOR: Bolivar, Balzapamba, III–IV.1894, M. de Mathan, Oberthür coll. (BMNH: 1 female). PERU: Agualani, 10000 ft, Ockenden, Rothschild bequest (BMNH: 1 male); Amazonas, Molinopampa (MZJU: 1 male, 1 female; HNHM: 1 female).

Genital dissection – HNHM Bálint gen. prep. no 808 (Molinopampa, female)

*Johnsonita* sp. (Bolivia)

Material – BOLIVIA: [no locality], Oberthür coll. (BMNH: 1 male).

*Johnsonita* sp. (Ecuador)

Material – ECUADOR: Napo, Río Sucio, 1600 m, VIII–X.1996, C. P. J. Samson (BMNH: 1 male).

Genital dissection – BMNH Rhopalocera vial no. 5816 (Río Sucio, male).

*Raddissima umbratus* (Geyer, 1837)

Type material – *Thecla gauna* Boisduval, 1870: BMNH(E) 701321 syntype male COSTA RICA: [no locality]; BMNH(E) 701322 syntype male COSTA RICA: [no locality]. *Thecla parthenia* Hewitson, 1874: BMNH(E) lectotype male (designated by Johnson 1992: 173) NICARAGUA: [no locality].

Additional material – COSTA RICA: Polochic Valley, Godman-Salvin coll. (BMNH: 2 males). HONDURAS: Jarral, 600 m, 21.IX.[19]21, J. Lienhart, Joicey coll. (BMNH: 1 male). MEXICO: Orizaba, Bilimek, Felder coll., Rothschild bequest (BMNH: 1 male); Sierra Madre, Tepico, Richardson, Godman-Salvin coll. (BMNH: 1 male); Yucatan, Bilimek, Felder coll., Rothschild bequest (BMNH: 1 female).

Genital dissection – BMNH Rhopalocera vial nos: 5876 (Yucatan, female).

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