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Synonymy and homonymy in two butterfly species recently described from Colombia (Lepidoptera: Nymphalidae, Satyrinae)

Sinonimia y homonimia en dos especies de mariposas recientemente descritas de Colombia (Lepidoptera: Nymphalidae, Satyrinae)

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(Received: 10-10-2019 / Accepted: 02-12-2019 / On line: 23/12/2019)

ABSTRACT

The names *Euptychia caerulea* Butler, 1869 and *Caeruleuptychia sinchi* Henao-Bañol, 2019 are recognized as representing the same taxon. Both names should also be considered junior synonyms of *Caeruleuptychia urania* (Butler, 1867), a sexually dimorphic species of Amazonian distribution. On the other hand, *Euptychia similis* Henao-Bañol, 2019, so far known from the Colombian Amazon, is a junior homonym of *Euptychia similis* Butler, 1867. Both entities represent valid, recognizable and distinct species. However, the most recent name is nomenclaturally invalid. Therefore, it is herein proposed its replacement by *Euptychia efraini*, **nom. nov.**

Keywords: *Caeruleuptychia*, *Cissia*, *Euptychia*, sexual dimorphism, *Vareuptychia*.

RESUMEN

Los nombres *Euptychia caerulea* Butler, 1869 y *Caeruleuptychia sinchi* Henao-Bañol, 2019 se reconocen como representantes de un mismo taxón. Ambos nombres deberían considerarse sinónimos posteriores de *Caeruleuptychia urania* (Butler, 1867), una especie sexualmente dimórfica de distribución amazónica. Por otra parte, *Euptychia similis* Henao-Bañol, 2019, hasta ahora conocida del Amazonas colombiano, es un homónimo posterior de *Euptychia similis* Butler, 1867. Ambas entidades representan especies válidas, reconocibles y distintas. Sin embargo, el nombre más reciente es nomenclaturalmente inválido, por lo cual se propone aquí su reemplazo por *Euptychia efraini*, **nom. nov.**

Palabras clave: *Caeruleuptychia*, *Cissia*, dimorfismo sexual, *Euptychia*, *Vareuptychia*.

INTRODUCTION

The Satyrinae represent a major subfamily of the nymphalid butterflies, with a high diversity of species in the Neotropical region (Lamas 2004). Many of them can be commonly found in different habitats, from lowland forests to cloudy mountain landscapes and grassland areas,

where they are often abundant (Nakahara *et al.* 2019). Due to their taxonomic complexity, and in some cases, their phenotypic plasticity, these butterflies have recently been the subject of great interest. It has resulted in new comparative studies combining morphological and molecular data, which are aimed to clarify their phylogenetic relationships (for example, Marín *et al.* 2017, Espeland *et*

al. 2019). The taxonomic knowledge of this group of butterflies has also improved notably (Nakahara *et al.* 2017). Within the subtribe Euptychiina, 425 species, distributed in 56 genera, are currently recognized in the Neotropical region (Zacca *et al.* 2019), with new species and genera surely to be described in the forthcoming years. The Amazon region has been an important source for the latest discoveries (Neild *et al.* 2014, 2015, Huertas *et al.* 2016, Freitas *et al.* 2016, 2019, Zacca *et al.* 2017, Nakahara *et al.* 2018a, 2018b, 2019).

The recent peace agreements in Colombia, have allowed scientists to penetrate remote areas of the national territory formerly considered unsafe because of the historical armed conflict of the country. This is giving way to the establishment of local and regional lists of diurnal butterflies, together with the discovery of new butterfly taxa in forested regions (Huertas *et al.* 2016, Ríos-Málaver 2019). Some diverse genera of the forest Satyrinae, such as *Euptychia* Hübner, with about 35 currently recognized species, and *Caeruleuptychia* Forster, with 25 so far known (Zacca *et al.* 2019), can represent a challenge to traditional taxonomists because of their often convergent color patterns, the resulting occurrence of possible cryptic species, and/or their sexual dimorphism (Nakahara *et al.* 2017). In this note, I report and correct two nomenclatural problems emerged with the recent description of two species belonging to the aforementioned genera, from the Amazonian region of Colombia.

Abbreviations

IVIC, Lepidoptera collection of the Instituto Venezolano de Investigaciones Científicas, Centro de Ecología, Altos de Pipe, Venezuela; **MALUZ**, Museo de Artrópodos de La Universidad del Zulia, Facultad de Agronomía, Maracaibo, Venezuela; **MB**, Lepidoptera collection of Mohamed Benmesbah, Toulouse, France; **MC**, Butterfly collection of Mauro Costa, Caracas, Venezuela; **NHMUK**, The Natural History Museum, London, UK; **nom. nov.**, *nomen novum*; **syn. nov.**, *synonymus novum*.

*Synonymy of Caeruleuptychia urania (Butler, 1867),
Caeruleuptychia caerulea (Butler, 1869) and
Caeruleuptychia sinchi Henao-Bañol, 2019*

The type species of the genus *Caeruleuptychia* Forster, 1964 is *Euptychia caerulea* Butler, 1869 by original designation. Butler based his description of this taxon in a series of an indetermined number of male and female specimens, one of each he adequately illustrated in his work (pp. 6, pl. 3, figs. 1 [male], 2 [female]). The male syntype from Marañham [sic], Brazil, illustrated by Warren *et al.* (2014, pho-

tography taken in the NHMUK by G. Lamas) was apparently collected by Thomas Belt (and not by Wendeborn as indicated by Butler) for Osbert Salvin. It represents in all aspects the same species described by Butler two years earlier as *Euptychia urania* (Butler, 1867: 484-485, pl. 40, fig. 6 [male], type locality Cameta, [Amazonas, Brazil]), whose male syntype as depicted in Warren *et al.* (2014) bears at its right side the forewing of another butterfly species, glued in beneath its broken original wing. The attached structure most probably belonged to a male of *Papilio cephus* Fabricius, 1775 (currently *Cepheuptychia cephus*). Thus, this type specimen is a chimaera. The availability of its name is however not affected (art. 17.1, ICZN 1999), and, because of the characters mentioned in its description match the phenotype of the real wings of the left side of the specimen, it could be assumed that most of the animal body that bears the name *Euptychia urania* Butler represents the same taxon subsequently described by the same author as *Euptychia caerulea*, **syn. nov.** This synonymy, apparently not detected previously (e. g. Forster 1964, Lamas 2004, Brévignon 2008, Nakahara *et al.* 2018 and Marín *et al.* 2019), proceeds by the principle of priority of the Code (art. 23, ICZN 1999): the name *Euptychia caerulea* Butler is a junior synonym of *Euptychia urania* Butler, therefore invalid.

In a recent paper by Henao-Bañol (2019), the author described *Caeruleuptychia sinchi* from the Serranía de Chiribiquete at 279 m, Department of Guaviare, Colombia, a region that belongs in the greater Amazon region of South America. Both the holotype (upper and underside illustrated, pp. 97, fig. 2) and just one paratype, are females. Their wing pattern matches well with that illustrated by Butler (1869: pl. 3, fig. 2) for female *E. caerulea*, from the Amazon basin, and it is also similar to, and within the variation of phenotypes of female specimens obtained in the Gran Sabana region of Southern Venezuela and in several localities of French Guiana (fig. 1). Associated males, captured in the same sites, belong to *Caeruleuptychia urania* (Butler) (combination established by Forster, 1964: 93, 95). Therefore, under the same principle of priority established in Article 23 of the ICZN (1999), the name *Caeruleuptychia sinchi* Henao-Bañol, **syn. nov.** is invalid.

Material examined: see fig. 1.

*Homonymy of Euptychia similis Butler, 1867 and
Euptychia similis Henao-Bañol, 2019*

The name *Euptychia similis*, applied by Henao-Bañol (2019) to one recently discovered member of the “*audacia*-clade” of *Euptychia* Hübner, 1818 (Nakahara *et al.*



Figure 1. *Caeruleptychia urania* (Butler, 1867). a.-f.: Venezuela, Estado Bolívar [Upperside (left), underside (right)]; a. ♂, entre Santa Elena de Uairén e Ikabarú, 1000 m, 3.IX.2000, A. Orellana & R. Hesterberg leg. (IVIC); b. ♀, San Francisco de Yuruaní, 1200m, 3.IX.2002, Mauro Costa leg.; c. ♀, km 22, Ikabarú, 20.IV.2000, Mauro Costa leg.; d. ♀, La Escalera, km 125, 1400m, 9.IX.2003; e. ♀, Santa Elena, km 23, 18.IV.2000 (MC); f. ♀, Municipio Gran Sabana, San Francisco de Yuruaní, 05° 03' 21" N; 061° 05' 54" W, 28-29.VIII.2003, J. Camacho, J. Perozo, A. Orellana & P. Loreto leg. (MALUZ); g. All specimens underside (photo by M. Benmesbah). Left column, Venezuela: 3 ♀, Bolívar, Auyán Tepui, Guayaraca, 1000 m, 11.I.2017, Costa & Benmesbah leg.; Central and right columns, Guyane, Saint Jean, M. Benmesbah leg.: [center]: ♀, 20.V.2009; ♀, 03.X.2011; ♀, 02.IX.2011; [right]: ♂, 03.X.2011; ♂, 31.III.2012 (MB).

2017), is a junior primary homonym of *Euptychia similis* Butler, 1867. The latter is the type species of *Vareuptychia* Forster (1964) and, having been excluded in a recent revision of *Cissia* Doubleday, 1848 (Zacca *et al.* 2018), it either continues to be considered a dubious member of this genus (as proposed by Lamas 2004, see Marín *et al.* 2019) or remains in taxonomic *incertae sedis*.

At least 13 known species (one undescribed), listed in a contribution by Costa *et al.* (2019), appear to be closely related to the taxon described by Henao-Bañol. Careful comparison of information presented in a number of systematic works dealing with the members of this group of *Euptychia* (Butler 1867, Butler & Druce 1872, Weymer 1911, Brévignon 2005, Nakahara *et al.* 2014, 2015, 2017, Fratello *et al.* 2015, Henao-Bañol 2019, Costa *et al.* 2019), indicates that this one should be regarded as a valid species. Following provisions of the articles 52 (Principle of Homonymy) and 60 (Replacement of junior homonyms) of the International Code of Zoological Nomenclature (ICZN 1999), its name is herein replaced by *Euptychia efraini*, **nom. nov.** (<http://zoobank.org/urn:lsid:zoobank.org:act:EE6BB5FE-4594-4E5F-BBC3-600FBF6E7F1E>)

The new name for this species is dedicated to its discoverer, Efraín Reinel Henao-Bañol.

ACKNOWLEDGEMENTS

I thank Mohamed Benmesbah (Toulouse, France), Ángel L. Vioria (San Antonio de Los Altos, Venezuela) and Andrew Neild (St Albans, England), for their advice and help, as well as for critically reviewing this note. Their suggestions and corrections made to my original draft paper were relevant and fundamental for the improvement of its quality. Mauro Costa (Caracas, Venezuela) and Mohamed Benmesbah have kindly supplied data, protographs and biological specimens to develop the present study. Thanks to my beloved María de los Angeles, for her help in preparing the illustrations for the plate.

REFERENCES

- Brévignon, C. 2005. Description de nouveaux Satyrinae provenant de Guyane française (Lepidoptera, Nymphalidae). *Lambillionea* 105 (3) (1): 393–404.
- Brévignon, C. 2008. Inventaire des Satyrinae de Guyane Française (Lepidoptera: Nymphalidae). pp. 62–94, 7 pls. *In*: Lacomme, D. & L. Manil (eds.): *Lépidoptères de Guyane. Tome 3. Rhopalocères 2*. Paris: Association des Lépidoptéristes de France.
- Butler, A. G. 1867. A monograph of the genus *Euptychia*, a numerous race of butterflies belonging to the family Satyridae; with descriptions of sixty species new to science, and notes to their affinities, etc. *Proceedings of the Zoological Society of London* 1866(3): 458–504.
- Butler, A. G. 1869. *Lepidoptera Exotica, or descriptions and illustrations of exotic Lepidoptera*. London: E. W. Janson, 8 pp., pls. 1–3.
- Butler, A. G. & H. Druce. 1872. Descriptions of new genera and species of Lepidoptera from Costa Rica. *Cistula Entomologica* 1(5): 95–118.
- Costa, M., Á. L. Vioria, S. Attal, A. F. E. Neild, S. A. Fratello & M. Benmesbah. 2019. Lepidoptera del Pantepui. Parte VIII. Nuevos Nymphalidae (Charaxinae y Satyrinae) y Riodinidae (Riodininae). *Anartia* 29: 20–48.
- Espeland, M., J. Breinholt, E. P. Barbosa, M. M. Casagrande, B. Huertas, G. Lamas, M. A. Marín, O. H. H. Mielke, J. Y. Miller, S. Nakahara, D. Tan, A. D. Warren, T. Zacca, A. Y. Kawahara, A. V. L. Freitas & K. R. Willmott. 2019. Four hundred shades of brown: higher level phylogeny of the problematic Euptychiina (Lepidoptera, Nymphalidae, Satyrinae) based on hybrid enrichment data. *Molecular Phylogenetics and Evolution* 131: 116–124.
- Forster, W. 1964. Beiträge zur Kenntnis der Insektenfauna Bolivians XIX. Lepidoptera III. Satyridae. *Veröffentlichungen der Zoologischen Staatssammlung München* 8: 51–188, pls. 27–35.
- Fratello, S. A., S. Nakahara, C. Brévignon & D. J. Harvey. 2015. Two new species of *Euptychia* Hübner, 1818 (Lepidoptera: Nymphalidae: Satyrinae) from the Guiana Shield, with notes on *E. marceli* Brévignon, 2005 and *E. rufocincta* Weymer, 1911. *Journal of the Lepidopterists' Society* 69(4): 293–306.
- Freitas, A.V.L., E. P. Barbosa, K. R. Willmott, N. Wahlberg & G. Lamas. 2016. 'Species' from two different butterfly genera combined into one: description of a new genus of Euptychiina (Nymphalidae: Satyrinae) with unusually variable wing pattern. *Revista Brasileira de Entomologia* 60(2): 157–165.
- Freitas, A.V.L., L. L. Mota, T. Zacca & E. P. Barbosa. 2019. Description of a new and highly distinctive genus and species of Euptychiina (Lepidoptera: Nymphalidae: Satyrinae) from the Brazilian southern Amazon. *Revista Brasileira de Entomologia* 63: 254–261.
- Henao-Bañol, E. R. 2019. Dos nuevas especies de mariposas (Nymphalidae: Satyrinae) de la región amazónica colombiana. *Boletín Científico Museo de Historia Natural, Universidad de Caldas* 23(2): 193–207. DOI: 10.17151/bccm.2019.23.2.10
- Hübner, J. 1818. *Zuträge zur Sammlung exotischer Schmettlinge, bestehend in Bekundigung einzelner Fliegmuster neuer oder rarer nichteuropäischer Gattungen*. Augsburg: Jacob Hübner, 1: 1–40.
- Huertas, B., G. Lamas, G. Fagua, J. Mallet, S. Nakahara, K. R. Willmott. 2016. A remarkable new butterfly species from western Amazonia (Lepidoptera: Nymphalidae: Satyrinae). *Conservación Colombiana* 24: 5–11.
- ICZN [International Commission on Zoological Nomenclature]. 1999. *International Code of Zoological Nomenclature / Code International de Nomenclature Zoologique*. 4th ed. Lon-

- don: The International Trust for Zoological Nomenclature, xxx + 306 pp.
- Lamas, G. 2004. Nymphalidae. Satyrinae. Tribe Satyrini. Subtribe Euptychiina, pp. 217–223. *In*: Lamas, G. (Ed.): *Checklist: Part 4A. Hesperioidea - Papilionoidea*. *In*: Heppner, J. B. (Ed.): *Atlas of Neotropical Lepidoptera. Volume 5A*. Gainesville, Florida: Association for Tropical Lepidoptera; Scientific Publishers.
- Marín, M. A., C. Peña, S. I. Uribe & A. V. L. Freitas. 2017. Morphology agrees with molecular data: phylogenetic affinities of Euptychiina butterflies (Nymphalidae: Satyrinae). *Systematic Entomology* 42(4): 768–785.
- Marín, M. A., T. Zacca, S. Nakahara, E. P. Barbosa, M. Espeland, B. Huertas, G. Lamas, K. R. Willmott & A. V. L. Freitas. 2019. An overview of the Euptychiina (Satyrinae) diversity. pp. 76–98. *In*: Guarín-Molina, J. H., C. E. Giraldo-Sánchez & J. L. Jaramillo-González (comps.). *Congreso Sociedad Colombiana de Entomología, Memorias & Resúmenes. 46 Congreso Socolen, Medellín, 17, 18 y 19 de julio de 2019*. Medellín: Universidad Nacional de Colombia, Sede Medellín. USB.
- Nakahara, S., E. P. Barbosa & A. V. L. Freitas. 2017. A potentially endangered new species of *Euptychia* Hübner, 1818 (Lepidoptera: Nymphalidae: Satyrinae) from the Atlantic Coastal Forest of Brazil. *Neotropical Entomology* 46(3): 302–309.
- Nakahara, S., S. A. Fratello & D. J. Harvey. 2014. A new species of *Euptychia* Hübner, 1818 (Lepidoptera: Nymphalidae: Satyrinae: Satyrini) from Mount Roraima, Guyana. *Zootaxa*, 3881(3): 291–300. <http://dx.doi.org/10.11646/zootaxa.3881.3.7>
- Nakahara, S., J. P. W. Hall, G. Lamas & K. R. Willmott. 2015. Seven new species and one new subspecies of *Euptychia* Hübner, 1818 (Lepidoptera: Nymphalidae: Satyrinae) from the tropical Andes. *Tropical Lepidoptera Research* 25(2): 63–79.
- Nakahara, S., G. Lamas, S. Tyler, M. A. Marín, B. Huertas, K. R. Willmott, O. H. H. Mielke & M. Espeland. 2019. A revision of the new genus *Amiga* Nakahara, Willmott & Espeland gen. n., described for *Papilio arnaca* Fabricius, 1776 (Lepidoptera, Nymphalidae, Satyrinae). *ZooKeys* 821: 85–152.
- Nakahara, S., Willmott, K.R., Mielke, O.H.H., Schwartz, J., Zacca, T., Espeland, M., Lamas, G. 2018a. Seven new taxa from the butterfly subtribe Euptychiina (Lepidoptera: Nymphalidae: Satyrinae) with revisional notes on *Harjesia* Forster, 1964 and *Pseudeuptychia* Forster, 1964. *Insecta Mundi* 0639: 1–38.
- Nakahara, S.; T. Zacca; B. Huertas; A. F. E. Neild; J. P. W. Hall; G. Lamas; L. A. Holian; M. Espeland & K. R. Willmott. 2018b. Remarkable sexual dimorphism, rarity and cryptic species: a revision of the ‘*aegrota* species group’ of the Neotropical butterfly genus *Caeruleuptychia* Forster, 1964 with the description of three new species (Lepidoptera, Nymphalidae, Satyrinae). *Insect Systematics and Evolution* 49(2): 130–182. <http://dx.doi.org/10.1163/1876312X-00002167>
- Neild, A. F. E., S. Nakahara, S. A. Fratello & D. J. Harvey. 2014. A new species of *Euptychia* Hübner, 1818 (Nymphalidae: Satyrinae: Satyrini) from the Amazon basin and the Guianas. *Tropical Lepidoptera Research* 24(1): 4–9.
- Neild, A. F. E., S. Nakahara, T. Zacca, S. Fratello, G. Lamas, J.-F. Le Crom, D. R. Dolibaina, F. M. S. Dias, M. M. Casagrande, O. H. H. Mielke & M. Espeland. 2015. Two new species of *Euptychia* Hübner, 1818 from the upper Amazon basin (Lepidoptera, Nymphalidae, Satyrinae). *ZooKeys* 541: 87–108.
- Ríos-Málaver, I. C. 2019. Las mariposas diurnas colombianas en el contexto del conflicto armado: una revisión preliminar. pp. 100–112. *In*: Guarín-Molina, J. H., C. E. Giraldo-Sánchez & J. L. Jaramillo-González (comps.). *Congreso Sociedad Colombiana de Entomología, Memorias & Resúmenes. 46 Congreso Socolen, Medellín, 17, 18 y 19 de julio de 2019*. Medellín: Universidad Nacional de Colombia, Sede Medellín. USB.
- Warren, A. D., K. J. Davis, E. M. Stangeland, J. P. Pelham N. V. & Grishin. 2014. *Illustrated Lists of American Butterflies (North and South America)*. <http://www.butterfliesofamerica.com> (consulted in September 2019)
- Weymer, G. 1911. 4. Familie: Satyridae. pp. 173–283, pl. 46. *In*: Seitz, A. (Ed.): *Die Gross-Schmetterlinge der Erde*. Vol. 5. Stuttgart: A. Kernen.
- Zacca, T., E. P. Barbosa & A. V. L. Freitas. 2019. Euptychiina Species Checklist. https://www2.ib.unicamp.br/labor/site/?page_id=1020 (consulted in September 2019)
- Zacca, T., M. M. Casagrande, O. H. H. Mielke, B. C. Huertas, E. P. Barbosa, A. V. L. Freitas, L. M. Magaldi, M. Espeland, S. Nakahara & K. R. Willmott. 2018. Systematics of the butterfly genus *Cissia* Doubleday, 1848 (Lepidoptera: Nymphalidae: Satyrinae) using an integrative approach. *Arthropod Systematics & Phylogeny* 76(2): 349–376.
- Zacca, T., M. M. Casagrande, O. H. H. Mielke, B. Huertas, A. F. E. Neild & M. Benmesbah. 2017. Description of a new species of Euptychiina (Lepidoptera: Nymphalidae: Satyrinae) from South America. *Zootaxa* 4231(3): 442–450.