



## Revision of the New World genus *Glyphidops* Enderlein (Diptera: Neriidae)

TATIANA A. SEPÚLVEDA<sup>1,2</sup>, MARTA I. WOLFF<sup>2</sup> & CLAUDIO J. B. DE CARVALHO<sup>1</sup>

<sup>1</sup>Departamento de Zoologia, Universidade Federal do Paraná, Postal Box 19020, 81531–980, Curitiba, Paraná, Brazil.

E-mail: [tatiana.sepulveda.villa@gmail.com](mailto:tatiana.sepulveda.villa@gmail.com); [cjbcarva@ufpr.br](mailto:cjbcarva@ufpr.br)

<sup>2</sup>Grupo de Entomología, Universidad de Antioquia, Apartado aéreo 1226, Medellín, Colombia.

E-mail: [mwolff@matematicas.udea.edu.co](mailto:mwolff@matematicas.udea.edu.co)

### Table of contents

Abstract .....	140
Introduction .....	141
Material and methods .....	141
Taxonomy .....	142
<i>Glyphidops</i> Enderlein, 1922 .....	142
Key to adult <i>Glyphidops</i> Enderlein .....	143
<i>Glyphidops</i> ( <i>Glyphidops</i> ) Enderlein, 1922 .....	143
1. <i>Glyphidops</i> ( <i>Glyphidops</i> ) <i>bullatus</i> (Enderlein) .....	143
2. <i>Glyphidops</i> ( <i>Glyphidops</i> ) <i>coracinus</i> , new species .....	146
3. <i>Glyphidops</i> ( <i>Glyphidops</i> ) <i>etele</i> Aczél .....	148
4. <i>Glyphidops</i> ( <i>Glyphidops</i> ) <i>filosus</i> (Fabricius) .....	149
5. <i>Glyphidops</i> ( <i>Glyphidops</i> ) <i>obscurus</i> Hennig .....	151
6. <i>Glyphidops</i> ( <i>Glyphidops</i> ) <i>ruselatus</i> , new species .....	153
7. <i>Glyphidops</i> ( <i>Glyphidops</i> ) <i>steyskali</i> , new species .....	155
8. <i>Glyphidops</i> ( <i>Glyphidops</i> ) <i>vittatus</i> (Cresson), revalidated .....	157
9. <i>Glyphidops</i> ( <i>Glyphidops</i> ) <i>xanthopus</i> (Schiner) .....	159
<i>Glyphidops</i> ( <i>Oncopsia</i> ) Enderlein, 1922 .....	160
1. <i>Glyphidops</i> ( <i>Oncopsia</i> ) <i>carrerai</i> Aczél .....	160
2. <i>Glyphidops</i> ( <i>Oncopsia</i> ) <i>durus</i> (Cresson) .....	161
3. <i>Glyphidops</i> ( <i>Oncopsia</i> ) <i>flavifrons</i> (Bigot) .....	164
4. <i>Glyphidops</i> ( <i>Oncopsia</i> ) <i>limbatus</i> Enderlein .....	167
5. <i>Glyphidops</i> ( <i>Oncopsia</i> ) <i>pluricellatus</i> (Schiner) .....	168
Acknowledgements .....	174
References .....	174

### Abstract

The genus *Glyphidops* Enderlein, 1922, the most widespread and speciose of the New World genera of Neriidae (Diptera), is revised herein. *Glyphidops* (*Glyphidops*) *ruselatus*, **new species**, *G. (G.) steyskali*, **new species** and *G. (G.) coracinus*, **new species** are described. Of the 16 previously described species, which were last treated by Aczél (1961), the following synonyms are proposed: *Chaetomeristes peruanus* Enderlein is treated as a junior synonym of *G. (G.) bullatus* (Enderlein); *Nerius dispar* Cresson, *Oncopsia neutra* Hennig and *Oncopsia dubia* Hennig are treated as junior synonyms of *G. (O.) durus* (Cresson) and *Oncopsia seductrix* Hennig, is treated as a junior synonym of *G. (O.) flavifrons* (Bigot). The species *Telostylus vittatus* Cresson, is removed from synonymy with *G. (G.) filusosus* (Fabricius) and revalidated as senior synonym of *G. ochreus* Hennig. A new diagnosis for the genus and all species are provided, as is an identification key to species. New locality records are provided for Costa Rica, Colombia, Venezuela, Guyana, Ecuador and Brazil.

**Key words:** biodiversity, cactus flies, Nerioidea, new records, taxonomy

**Female.** Similar to male, differs as follows: body length 6.7–7.1 mm (Fig. 13B). Wing length 4.2–4.5 mm and width 5.4–6.2 mm. Fore coxa without anterolateral seta. Oviscape brown with two lateral yellow spots and apex yellow; length 1.8–2.3 times maximum width.

**Comments.** This is among the smallest species of Neriidae (along with *Eoneria aczeli* Sepúlveda & Carvalho) and has wings with intercalated cross-veins as *E. maldonadoi* Aczél, being the only two American species with this particular venation. The general morphology of *G. (O.) pluricellatus* is quite differentiated from all other neotropical Neriidae, especially with respect to general head shape and uncommon coloration. This species was placed in the genus *Glyphidops* on the basis of the shape of inner process of pedicel, the antero-apical seta on the fore coxa and the brown, bare arista. Several authors (Aczél, 1961; Hennig, 1937) have noted that species may belong to an independent genus. It is retained in *Glyphidops* here pending phylogenetic analysis.

**Type material. Holotype:** *Nerius pluricellatus* Schiner, 1868 (♂) “South America” (Brazil) [NHM].

**Remarks.** Neriidae type material collected by Ignaz Rudolph Schiner are deposited in the Naturhistorisches Museum Wien, and we were unable to access either the material or their photographs.

**Material examined.** PANAMA, 1 ♂, Gamboa C. Z., Rio Agua Salud, vii.1967. W. Wirth/ Reared from *Cariudovica* (USNM); 1 ♂ 1 ♀, Canal Zone: barro Colorado Isl., 10–11.vi.1978, Silberglied & Aiello, on fruits of *carludovica* (USNM); 2 ♀, Canal Zone, Barro Colorado Isl., 20.viii.1978/ N. E. Woodley (USNM). COLOMBIA: 5 ♂ 3 ♀, Antioquia, Carepa, Tunelapa, CORPOICA, 7°46′46″N, 76°40′24″W, 48m, VSR fruta-visceras de pollo, 8.ii.2009, N. Uribe (CEUA); 1 ♂, Antioquia, La Pintada, Camping Los Farallones, 5°44′48″N, 75°36′34″W, 660m, VSR visceras, 26.vii.2007, M. Velez & C. Bota (CEUA); 1 ♂, Antioquia, Rio Claro, Camino “La Mulata”, VSR banana, 9.xi.2007, Grupo de Entomología (CEUA); 1 ♀, Antioquia, Aljibes, Providencia, 33km SW Zaragoza, 1.xii.1970, E. Pinger (USNM); 1 ♀, Antioquia, Cauca Viejo, Bosque intervenido, Cerca a quebrada Los Cruces, 614m, VSR fruta, 1–5.vii.2009, M. Wolf & A. Bustamante (CEUA); 1 ♀, Chocó, Jobi, Patio de casa, VSR fruta, 4.viii.2006, P. Dique & M. Wolff (CEUA); 1 ♀, Chocó, PNN Los Katios, Centro Administrativo Sautatá, Fuera del bosque, 7°51′N, 77°8′W, 30m, Malaise, 20.xi–5.xii.2003, P. López (IAvH).

**Distribution.** Costa Rica, Panama, Colombia, Venezuela (Fig. 16E).

## Acknowledgments

The authors would like to thank Dr. Joachim Ziegler (ZMHB), Dr. Uwe Kallweit (SMT), Drs. Allen Norrbom and Lucrecia Rodriguez (USNM) for loan and access to type material. We are grateful to the curators Dr. Manuel Zumbado (INBio), Dr. Claudia Alejandra Medina Uribe (IAvH) and Dr. Carlos Einicker Lamas (MZUSP) for permission to study the material in their collections. Thanks are extended to J. D. Weintraub (ANSP) for the photographs and information on *N. vittatus*, Dr. Hossein Rajaei at the University of Hamburg Zoological Museum, for the valuable information about their entomological collection, to Zöe Simmons (UOM) for sending us photographs of type material and to Alessandre Colavite for helping in the location of type material and for providing the photographs of specimens in the Zoological Museum, Natural History Museum, Denmark. Special thanks to John T. Smit from the European Invertebrate Survey in Nederland, who gave support to this work from the very beginning. We are thankful to the Rede Paranaense de Coleções Biológicas (TAX-on line) for the photos used here and to Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq) for the research grant (TAS proc. 130370/2011-8; CIBC proc. 304713/2011–2). Thanks to James J. Roper for review of the English in its entirety.

## References

- Aczél, M.L. (1949) Catálogo de la familia de las Tylidae (Calobatidae + Micropezidae + Neriidae, Diptera) en la Region Neotropical. *Acta Zoológica Lilloana*, 8, 309–389.
- Aczél, M.L. (1961) A revision of American Neriidae (Diptera, Acalypterae). *Studia Entomologica*, 4, 257–346.
- Barracough, D.A (1993) The southern African species of Neriidae (Diptera). *Annals of the Natal Museum*, 34, 1–17.
- Bigot, J.M.F. (1886) Essai D'une classification synoptique du groupe Tanypezidi. *Annales de la Société Entomologique de France*, 6, 372–373.

- Buck, M. (2010) Neriidae. In: Brown, B.V., Borkent, A., Cumming, J.M., Wood, D.M., Woodley, N.E. & Zumbado, M.A. (Eds.), *Manual of Central American Diptera, Vol. 2*. NRC Research Press, Ottawa, pp. 815–819.
- Buck, M. & Marshall, S.A. (2004) A review of the genus *Longina* Wiedemann, with descriptions of two new species (Diptera, Neriidae). *Studia Dipterologica*, 11, 23–32.
- Cresson, E.T. Jr. (1930) Notes on and descriptions of some Neotropical Neriidae and Micropezidae (Diptera). *Transactions of the American Entomological Society*, 56, 307–362.
- Cumming, J.M. & Wood, D.M. (2009) Morphology and terminology. In: Brown, B.V., Borkent, A., Cumming, J.M., Wood, D.M., Woodley, N.E. & Zumbado, M.A. (Eds.), *Manual of Central American Diptera, Vol. 1*. NRC Research Press, Ottawa, pp. 9–50.
- Czerny, L. (1932) Tyliiden und Neriiden d. Museums in Hamburg. *Stettiner entomologische Zeitung*, 93, 267–302.
- Enderlein, G. (1922) Klassifikation der Micropeziden. *Archiv für Naturgeschichte*, 88, 140–229.
- Fabricius, J.C. (1805) *Systema antliatorum secundum ordines, genera, species, adiectis synonymis, locis, observationibus, descriptionibus*. Reichard, Brunsvigae [=Brunswick], pp. 264–265.
- Hennig, W. (1937) Übersicht über die Arten der Neriiden und über die Zoogeographiedieser Acalyptraten-Gruppe. *Stettiner Entomologische Zeitung*, 98, 240–280.
- Mangan, R.L. & Baldwin, D. (1986) A new cryptic species of *Odontoloxozus* (Neriidae: Diptera) from the Cape Region of Baja California Sur (Mexico). *Proceedings of the Entomological Society of Washington*, 88, 110–121.
- Pitkin, B.R. (1989) Family Neriidae. In: Evenhuis, N.L. (Ed.), *Catalog of the Diptera of the Australasian and Oceanian Regions*. Bishop Museum & E.J. Brill, Honolulu, pp. 468–469.
- Schiner, J.R. (1868) *Reise Fregatte Novara. Diptera. Vol. II. Zoologischer Theil*, 388 pp.
- Steyskal, G.C. (1965) Family Neriidae. In: Stone, A., Sabrosky, C.W., Wirth, W.W., Foote, R.H. & Coulson, J.R. (Eds.), *Catalogue of Diptera of America North of Mexico, Agriculture Handbook 276*. United States Department of Agriculture, Washington, pp. 276.
- Steyskal, G.C. (1968) Family Neriidae. In: Papavero, N. (Ed.), *A catalogue of Diptera of the Americas south of the United States*. Departamento de Zoologia, Secretaria da Agricultura, São Paulo, 49, 1–7.
- Steyskal, G.C. (1977) Family Neriidae. In: Delfinado, M.D. & Hardy, D.E. (Eds.), *A Catalogue of the Diptera of the Oriental Region. Suborder Cyclorrapha (excluding Division Aschiza). Vol. 3*. University Press of Hawaii, Honolulu, pp. 8–11.
- Steyskal, G.C. (1980) Family Neriidae. In: Crosskey, R.W. (Ed.), *Catalogue of the Diptera of the Afrotropical Region*. British Museum (Natural History), London, pp. 578.
- Steyskal, G.C. (1987) Neriidae. In: McAlpine, J.F., Peterson, B.V., Shewell, G.E., Teskey, H.J., Vockroth, J.R. & Wood, D.M. (Eds.), *Manual of Nearctic Diptera. Vol. 2*. Research Branch, Agriculture Canada, Ottawa, Monograph 57, pp. 769–771.
- Weidner, H. (1969) Die Entomologischen Sammlungen des Zoologischen Staatsinstituts und Zoologischen Museum Hamburg. Insecta IX (Mecoptera, Dipetera). *Mitteilungen aus dem Hamburgischen Zoologischen Museum und Institut*, Hamburg, 66, 227–236.