ISSN 0373-5680 (impresa), ISSN 1851-7471 (en línea) Revista de la Sociedad Entomológica Argentina 73 (1-2): 57-60, 2014

Neriinae (Diptera: Neriidae) new records from Corrientes and Chaco, Argentina

DUFEK, Matias I., Elena B. OSCHEROV & Miryam P. DAMBORSKY

Universidad Nacional del Nordeste, Facultad de Ciencias Exactas y Naturales y Agrimensura, Biología de los Artrópodos, Av. Libertad 5470, Corrientes, Argentina.
E-mail: matias.dufek@gmail.com; eboscherov@yahoo.com.ar; mdambor@exa.unne.edu.ar

Neriinae (Diptera: Neriidae) nuevos registros de Corrientes y Chaco, Argentina

RESUMEN. El presente documento proporciona los registros de cuatro especies de Neriidae, *Nerius pilifer* Fabricius, *N. plurivittatus* Bigot, *Eoneria blanchardi* Aczél y *E. aczeli* Sepúlveda y Carvalho, de las provincias de Chaco y Corrientes. *Nerius pilifer* se capturó en ambas provincias y es una nueva cita del nordeste de Argentina. *N. plurivittatus* fue capturado en Mburucuyá (Corrientes), *E. blanchardi* y *E. aczeli* en Colonia Benítez (Chaco). Dos de estas especies, *N. plurivittatus* y *E. aczeli*, constituyen primeros registros de Argentina.

PALABRAS CLAVE. Neriidae. Nuevos registros. Chaco. Corrientes. Argentina.

ABSTRACT. The present paper provides records for four Neriidae species, *Nerius pilifer* Fabricius, *N. plurivittatus* Bigot, *Eoneria blanchardi* Aczél, 1951 and *E. aczeli* Sepúlveda & Carvalho, 2013, for the provinces of Chaco and Corrientes. *Nerius pilifer* was collected in both provinces, and is a new record for northeastern Argentina. *N. plurivittatus* was captured in Mburucuyá (Corrientes), *E. blanchardi* and *E. aczeli* in Colonia Benítez (Chaco). Two of these species, *N. plurivittatus* and *E. aczeli,* are recorded for the first time from Argentina.

KEY WORDS. Neriidae. New records. Chaco. Corrientes. Argentina.

Neriidae is a small group of acalyptrate flies, which can be easily recognized by its morphological features. These flies are medium to large in size, measuring 5.0 to 12.0 mm, usually of dark colors, and the tegument of some species with yellowish or orange areas. They present an elongated antennae projected from the frons; the pedicel is laterally flattened with arista on the dorso-apical margin of first flagellomere; the legs are slender with long coxa and femur, that can carry spines at the anteroventral region; and most species have yellowish to brownish wings. The male genitalia is generally uniform and the females possess a conspicuous ovipositor (Aczél 1951, 1961; Steyskal 1968).

Neriidae distribution is almost entirely circumtropical. Two subfamilies are recognized, Telostylinae and Neriinae, comprising approximately 110 species (Sepulveda *et al*., 2013), with two thirds distributed in the New World. In the Neotropical Region there are around 38 species into 11 genera (Aczél, 1961; Steyskal 1968) known to develop on decaying vegetation and to feed on sap, fruit and other decomposing materials (Mangan & Baldwin, 1986; Steyskal, 1987; Buck, 2010). Regarding their mating behavior, males may or may not perform courtship and stay close by the females during oviposition (William, 1998).

The aim of this note is to report the occurrence of four species of Neriinae, not mentioned before from northeastern Argentina.

Sampling was conducted in four protected areas: Reserva Natural Educativa Colonia Benítez (58° 56´ W; 27° 29´ S), San Fernando department (Chaco Province); Parque Nacional Mburucuyá

Recibido: 17-IX-2013; aceptado: 2-II-2014

(57° 59´ W; 27° 58´ S), Mburucuyá department; Parque San Nicolás (57° 26´ W; 28° 10´ S), San Miguel department and in Galarza (56° 40' W; 28° 06' S), Santo Tomé department (Corrientes province) (Fig. 1). The Reserva Natural Educativa Colonia Benítez, Parque Nacional Mburucuyá and Parque San Nicolás are located in the Chacoan biogeographic province in the Eastern Chaco District (Cabrera, 1976; Carnevalli, 1994), Chacoan Subregion, Chaco Province according to Morrone (2006). Galarza is situated in the Paranaense biogeographic province, Campos Correntinos Misioneros District (Bruniard, 1981). The climate is subtropical, with hot and rainy summers, and dry winters (Bruniard, 1981).

Neriidae specimens were captured between 2010 and 2012. Canopy Van Someren-Rydon traps were used (Rydon, 1964). In each sample date, eight traps were placed every 50 m to a height above 1.50 m from the ground level. Four traps were baited with decaying squid and the remaining four with banana fermented with yeast. All specimens were captured in native woodlands. The bait used in each case was specified in the material examined (see below).

The insects were dry preserved, measured, mounted on pins, examined using a stereoscopic microscope Olympus SZ51, identified using taxonomic keys (Carvalho-Filho, 2008; Sepulveda *et al*., 2013) and quantified. The specimens were deposited in the collection of Universidad Nacional del Nordeste, Facultad de Ciencias Exactas y Naturales y Agrimensura (CARTROUNNE), Corrientes, Argentina.

***Nerius pilifer* Fabricius**

New occurrences from Corrientes and Chaco.

Material examined. Corrientes, Mburucuyá: 5 females, 2 males, and 1 damaged specimen, 01-III-10; 3 females, 2 males, 17-XI-10. Col. V. Fernández. Galarza: 1 female, 1 male and 3 damaged specimens; without sex determination, 23-XI-12. Col. E. B. Oscherov. San Nicolás: 1 female, 1 male, 20-XI-12. Col. E. B. Oscherov. Traps baited with banana. **Chaco**, Colonia Benítez: 2 females, 11-III-10 (bait: banana); 2 females, 1 male, and 1 damaged specimen without sex determination, 05-V-10 (bait: decomposing squid); 2 females, 3 males, 05-V-10 (bait: banana); 2 females, 21-XI-10 (bait: decomposing squid). Col. V. Fernández.

Diagnosis: Male body length: 6.6 – 7.4 mm (excluding antenna and epandrium), female length 7.6 – 8.3 mm (excluding antenna and oviscape). Head partly yellowish, thorax dark brown with one dorsal grayish stripe, pleuron with densily gray and dark brown pruinescence, female paler than male. Oviscape blackish brown and setulose.

Known geographical distribution: Mexico

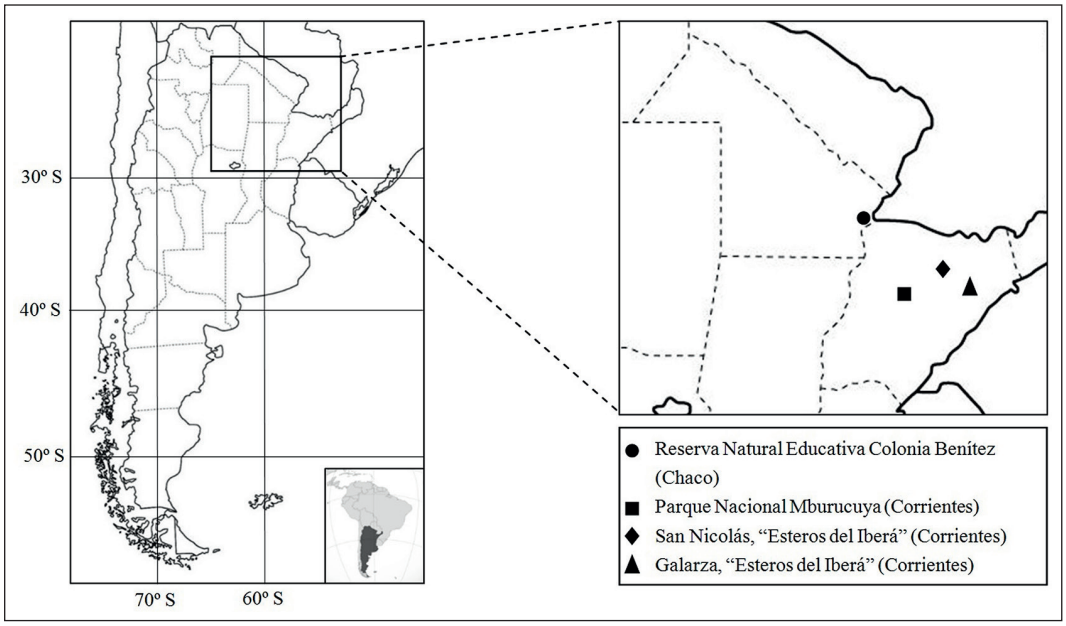

Fig. 1. Sampling sites in the provinces of Chaco and Corrientes, Argentina.

(Tabasco), Panama, Guyana, Surinam, Colombia, Venezuela, Ecuador, Paraguay, Brazil, and Argentina: Tucumán, Jujuy, Misiones (Aczél, 1951; Roscov *et al*., 2013), Corrientes and Chaco (current paper).

***Nerius plurivittatus* Bigot**
New record from Argentina.

Material examined. **Corrientes**, Mburucuyá: 1 female, 01-III-10. Col. V. Fernández. Traps baited with banana.

Diagnosis: This species is larger than *N. pilifer*. Male body length (excluding antenna and epandrium): 9.7–12.8 mm, female lenght 7.2 mm (excluding antenna and oviscape). Dark brown, thorax with two dorsal grayish stripes, pleuron gray and partly pruinose. Oviscape setulose, shiny brown.

Known geographical distribution: Mexico, Panama, Dominican Republic, Trinidad, Guyana, Venezuela, Colombia, Peru, Bolivia, Brazil (Roscov ***et al.***, 2013), and Argentina: Corrientes (current paper).

***Eoneria blanchardi* Aczél, 1951**
New occurrences from Chaco

Material examined. Chaco, Colonia Benítez, Reserva Natural Educativa Colonia Benítez: 1 female and 1 male, 11-III-10. Col. V. Fernández. Traps baited with banana.

Diagnosis: Male body length (excluding antenna and epandrium) 5.5 mm, female length 6.2 mm (excluding antenna and oviscape). Frons yellowish pruinose, except for two lateral brown "Y" shaped stripes. Pleuron gray pruinose. Wings without supernumerary cross-veins. Oviscape pale yellowish brown, white pruinose with brown setulae, except for a bare middle stripe.

Known geographical distribution: Colombia, Brazil, and Argentina: La Rioja, Jujuy, Corrientes (Aczel, 1951) and Chaco (current paper)

***Eoneria aczeli* Sepúlveda & Carvalho, 2013**
New record from Argentina

Material examined. Chaco, Colonia Benítez, Reserva Natural Educativa Colonia Benítez: 1 male, 11-III-10. Col. V. Fernández. Traps baited with banana.

Diagnosis: Relatively smaller and paler when compared to the other species. Male body length (excluding antenna and epandrium) 6 mm. Distal margin of antennal base with two or three conspicuous black setulae, fronto-orbital plate with three pairs of setae, and frons yellow pruinose. Body yellowish to light brown, pleuron cover with white pruinescence.

Known geographical distribution: Colombia (Sepúlveda *et al*., 2013) and Argentina: Chaco (current paper).

DISCUSSION

Little is known about neriids biology, several researchers observed its preference for decomposing vegetation as food supply. In this study, *N. pilifer* was also captured in traps baited with decaying squid.

Individuals were collected in March and November, which correspond to the end of summer and spring, respectively. Besides, *N. pilifer* was also captured in May (autumn) and was the only recorded at both, Eastern Humid Chaco and Paranaense biogeographical provinces.

Eoneria blanchardi females were the first neriids registered in Corrientes (Aczél, 1951), along with *N. pilifer* and *N. plurivittatus*. Thus, three species are listed from this province.

In this paper also *N. pilifer, E. blanchardi* and *E. aczeli* are mentioned from Chaco province. *E. aczeli* and *N. plurivittatus* were not previously recorded from Argentina, so they are reported for the first time and the southern limit of its geographic distribution is extended.

ACKNOWLEDGEMENTS

This study was funded by Secretaría General de Ciencia y Técnica, Universidad Nacional del Nordeste. PI: F017/08, F005/11 and Programa Iberá + 10 (12IF04).

LITERATURE CITED

ACZÉL, M. L. 1951.Morfología externa y división sistemática de las « Tanypezidiformes » con sinopsis de las especies argentinas de Tylidae (Micropezidae) y Neriidae (Dipt.). *Acta Zoológica Lilloana* 11: 483-589.

ACZÉL, M. L. 1961. A revision of American Neriidae (Diptera, Acalyptratae). *Studia Entomologica* 4: 257-346.

BRUNIARD, E. D. 1981. El clima de las planicies del Norte Argentino. Facultad de Humanidades de la Universidad Nacional del Nordeste, Argentina. I y II: 379 p.

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,* Volume 2. NRC Research Press, Ottawa, pp. 815-819.

CABRERA, A. L. 1976. Regiones Fitogeográficas Argentinas. *Enciclopedia Argentina de Agricultura y Jardinería* 2: 1-85.

CARNEVALLI, R. 1994. *Fitogeografía de la Provincia de Corrientes.* Instituto Nacional de Tecnología Agropecuaria Corrientes, Argentina.

CARVALHO-FILHO, F. S. & M. C. ESPOSITO. 2008. Neriidae (Diptera: Schizophora) of the Brazilian Amazon: New records of genera and species, and key to species. *Neotropical Entomology* 37(1): 58-62.

MANGAN, R. L. & D. BALDWIN. 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(1): 110-121.

MORRONE, J. J. 2006. Biogeographic areas and transition zones of Latin America and the Caribbean islands based on panbiogeographic and cladistic analyses of the entomofauna. *Annual Review of Entomology* 51: 467-494.

ROSCOV Y., T. KUNZE, L. PAGLINAWAN, T. ORRELL, D. NICOLSON, A. CULHAM, N. BAILLY, P. KIRK, T. BOURGOIN, G. BAILLARGEON, F. HERNANDEZ & A. DE WEVER A. 2013. (Actualized: 19 de November 2013). Species 2000 & ITIS Catalogue of Life. Annual Checklist. Reading, UK. [Digital resource at www.catalogueoflife.org/annual-checklist/2013/] [November, 19, 2013].

RYDON, A. 1964. Notes on the use of butterfly traps in East Africa. *Journal of the Lepidopterist's Society* 18(1): 51-58.

SEPÚLVEDA VILLA T., M. I. WOLFF & C. J. B. CARVALHO. 2013. Revision of the Neotropical genus Eoneria Aczél (Diptera: Neriidae) with description of a new species from Colombia. *Zootaxa* 3636(2): 245-256.

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. 1987. Neriidae. p.769-771. In: McAlpine, J. F., B.V. Peterson, G. E. Shewell, H. J. Teskey, J. R. Vockeroth & D. M. Wood (eds.), *Manual of Neartic Diptera.* Volume 1, Research Branch, Agriculture Canada, Ottawa, Ontario.

WILLIAM, G. 1998. Reproductive behavior of *Glyphidops flavifrons and Neriusplurivitatus* (Diptera, Neriidae). *Journal of the Kansas Entomological Society* 71(2): 89-107.