SYSTEMATICS, MORPHOLOGY AND PHYSIOLOGY

Neriidae (Diptera: Schizophora) of the Brazilian Amazon: New Records of Genera and Species, and Key to Species

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Neriidae (Diptera: Schizophora) da Amazônia Brasileira: Novos Registros de Gênero e Espécie e Chave para Espécies

RESUMO - O presente estudo fornece dados oriundos de coletas em várias localidades da Amazônia e de espécimes depositados na Coleção Entomológica do Museu Paraense Emílio Goeldi (MPEG-Belém). Os Neriidae foram coletados com armadilhas contendo matéria orgânica em decomposição (banana e pulmão bovino). O gênero Odontoloxozus Enderlein, representado pela espécie Odontoloxozus peruanus Hennig é registrado pela primeira vez no Brasil. As espécies Glyphidops (Glyphidops) flavipes (Widemann), G. (Oncopsia) flavifrons (Bigot), G. (O.) durus (Cresson) e G. (O.) dipsar (Hennig) são novas ocorrências para o Brasil. As espécies G. (O.) carrerai Aczél e N. plurivittatus Bigot são novos registros para a Amazônia Brasileira. Uma chave dicotômica para as espécies é apresentada.

PALAVRAS-CHAVE: Brasil, Glyphidops, Nerius, Odontoloxozus

ABSTRACT - The present study brings together survey data from collection in several localities in the Brazilian Amazon and specimens from the Entomological Collection of Museu Paraense Emílio Goeldi (MPEG-Belém). The flies were collected over organic decomposing matter (bananas and bovine meat) baits. The genus Odontoloxozus Enderlein, with the species Odontoloxozus peruanus Hennig, is recorded from Brazil for the first time. The species Glyphidops (Glyphidops) flavipes (Widemann), G. (Oncopsia) flavifrons (Bigot), G. (O.) durus (Cresson) and G. (O.) dipsar (Hennig) are new occurrences for Brazil. The species G. (O.) carrerai Aczél and N. plurivittatus Bigot are new occurrences from Brazilian Amazon. A key to Brazilian Amazon species is provided.

KEY WORDS: Brazil, Glyphidops, Nerius, Odontoloxozus

Neriidae are medium to large-sized flies of characteristic appearance, with rather long and slender legs usually furnished with short, stout spines. They may be distinguished from most other acalyptratae flies by the arista being situated apically on the third antennal segment (Steyskal 1968).

The family is almost wholly circumtropical. Approximately 110 species are known; two-thirds of these are in New World, including two that that extend into southwestern United States. Two subfamilies are recognized, Telostylinae and Neriinae. Only the Neriinae are American; they are distinguished by expanded, biconvex dorsal margin of the face, which is formed into prominently exposed antennal sockets (Steyskal 1987). In the Neotropical Region approximately 38 species are known, placed in two subfamilies and 11 genera (Aczél 1961).

The American species were monographed by Aczél (1961) and cataloged by Steyskal (1968). Papavero & Pimentel (2002) cataloged the Amazonian species and recognized two species and two genera: Glyphidops (Glyphidops) filosus (Fabricius) and Nerius pilifer Fabricius. However, Rafael (1991) collected Glyphidops (Oncopsia) limbata Enderlein, in Maracá Island, Roraima.

Very little is known of their biology, but they probably feed on decaying vegetable matter (Olsen & Ryckman 1963). Larvae of Odontoloxozus longicornis (Coquillet) were reared from eggs deposited in necrotic tissue of various species of cacti and rotten stems of Carica papaya L. (Steyskal 1987).

The present work gives new and updated information on Neriidae species in the Brazilian Amazon, as well as their geographical distribution.

Material and Methods

In addition to data from the literature, 165 specimens from the Entomological Collection of Museu Paraense Emílio Goeldi (MPEG-Belém) were studied and another 88 specimens were collected from several localities in the

Collected specimens were preserved in 80% alcohol in the field and then mounted on pins. Voucher specimens are deposited in the Entomological Collection of Museu Paraense Emílio Goeldi (MPEG-Brazil). Species were identified with keys from Aczél (1961).

**Genus Odontoloxozus Enderlein**

This genus comprises two species: *O. longicornis* (Coquillett), found in the USA, Mexico, and Costa Rica; and *O. peruanus* Hennig, recorded from Bolivia and Peru (Steyskal 1968) and now for the first time in Brazil.

**Odontoloxozus peruanus Hennig**

Geographical distribution: Brazil (new record) (Acre and Pará), Bolivia and Peru.


**Genus Glyphidops Enderlein**

The genus includes two subgenera: *Glyphidops* Enderlein and *Oncopsia* Enderlein. Both subgenera have been recorded in Brazil (Steyskal 1968).

**Glyphidops (Glyphidops) filosus (Fabricius)**

Geographical distribution: Brazil (Bahia, Pará, Acre, Amazonas, Rio de Janeiro, São Paulo), Guatemala, Honduras, Suriname, Costa Rica, Panama, and Bolivia.

Discussion: This is the only species of the subgenus *Glyphidops* that has been captured in the Brazilian Amazon (Papavero & Pimentel 2002).

**Glyphidops (Glyphidops) flavipes (Widemann)**

Geographical distribution: Venezuela and Brazil (Pará)


Discussion: This species was previously known only from Venezuela (Steyskal 1968).

**Glyphidops (Oncopsia) carrerae Aczél**

Geographical distribution: Brazil (São Paulo and Pará)


Discussion: This species was discovered by Aczél (1961) in São Paulo, and this material is a new record from the Brazilian Amazon.

**Glyphidops (Oncopsia) limbatus Enderlein**

Geographical distribution: Brazil (Rio de Janeiro, Minas Gerais, São Paulo (Steyskal 1968), Roraima (Rafael 1991), Acre, Amazonas, Amapá, and Pará).


**Glyphidops (Oncopsia) flavifrons (Bigot)**

Geographical distribution: USA, Panama, Trinidad, Guyana, Colombia, Brazil (new record) (Pará and Acre).


**Glyphidops (Oncopsia) durus (Cresson)**

Geographical distribution: Costa Rica, Panama, and Brazil (new record) (Amazonas and Pará).


Discussion: This species had never been recorded in Brazil (Aczél, 1961; Steyskal 1968). This record represents a new register for Brazil.

**Glyphidops (Oncopsia) dispar (Hennig)**

Geographical distribution: Panama (Aczél1961, Steyskal 1968) and Brazil (new record) (Amapá and Pará).

Genus Nerius Fabricius

Currently there are ten species in the genus Nerius, four recorded from Brazil (Aczél 1961, Steyskal 1968) and only Nerius pilifer in the Brazilian Amazon (Papavero & Pimentel 2002).

Nerius pilifer Fabricius

Geographical distribution: Mexico, Panama, Guyana, Suriname, Colombia, Venezuela, Paraguay, Peru, Bolivia, Argentina, and Brazil (Pará, Acre, Amazonas Tocantins, Rondônia, Bahia, Mato Grosso, Goiás, and São Paulo).

Nerius plurivittatus Bigot

Geographical distribution: Mexico, Panama, Dominican Republic, Trinidad, Guyana, Venezuela, Colombia, Peru, Bolivia, and Brazil (Pará, Acre, and Amazonas).


Discussion: This species had never been recorded from the Brazilian Amazon, according to Papavero & Pimentel (2002). This material is a new record for the region.

Key to Species of Brazilian Amazon Neriiidae

1. Pedicel short, as long as the postpedicel (Fig. 1)........2
   1’. Pedicel elongated and conspicuously longer than postpedicel..........................Odontoloxozus peruanus

2 (1). Antennal arista bare and dark brown; fore coxae dark brown........................................9
   3 (2).’ Arista entirely or at least its basal third densely whitish pubescent..................................................4
   3’. Arista entirely brown and bare or with brown short pubescence..................................................5

4 (3). Postpedicel gradually tapering into a nearly pointed apex with apical arista (Fig. 1); supraalar bristle absent (Fig. 3).................................Glyphidops flavipes
   4. Postpedicel with rounded tip and subapical arista (Fig. 2), situated near middle of anterior margin of postpedicel; supraalar bristle present..........................Glyphidops avipes
      5 (3’). Legs chiefly dark brown..............Glyphidops dispar
      5’. Legs yellow............................................................6

6 (5’). Arista shining dark brown with short and fine pubescence of the same color...............Glyphidops limbatus
   6’. Arista bare and dark brown..................................................7

7 (6’). Inferior pleurotergite wholly yellow..............................Glyphidops flavifrons
   7’. Inferior pleurotergite dark brown........................................8

8 (7’). Sternumpleural bristle conspicuous...Glyphidops durata
   8’. Sternumpleural bristle absent.............Glyphidops carreri

9 (2). Median longitudinal stripe of the mesonotum narrow and with a dark median line (Fig. 4)...........Nerius pilifer
   9’. Median longitudinal stripe of the mesonotum wider and

![Fig 1. Antenna lateral view of Glyphidops flusos.](image-url)
forming three narrow dark brown vittae, one median that reach anterior edge of pronotum and two lateral that are short and not reach median line of pronotum (Fig. 5). 

Fig 2. Antenna lateral view of *Glyphidops flavipes*.

Fig 3. Thorax lateral view of *Glyphidops flavipes*.

Fig 4. Thorax dorsal view of *Nerius pilifer*.

*Nerius plurivittatus*
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Fig 5. Thorax dorsal view of Nerius plurivittatus.