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## Taxonomic revision of *Neodiogmites* Carrera, 1949 (Diptera, Asilidae) and description of two new species

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### Abstract

*Neodiogmites* Carrera, 1949, a rare Neotropical genus of Asilidae, is revised and divided into three species groups: (1) the *melanogaster* group, including *N. carrerai* Artigas & Papavero, *N. melanogaster* (Wiedemann, 1821), *N. tenebrosus* Carrera and *N. caroliniae* sp. nov.; (2) the *alexanderi* group, including *N. atriapex* (Carrera & Papavero), *N. alexanderi* (Carrera), *N. mixtus* (Carrera), *N. modestus* (Carrera) **reval.**, *N. niger* (Carrera) and *N. papaveroi* sp. nov.; and (3) the *lanei* group including *N. lanei* (Carrera) and *N. tauauna* Artigas & Papavero. A key to the 12 species is included, species distributions are summarized, and two new species are described and illustrated.

**Key words:** Dasypogoninae, Neotropical region, Review

### Introduction

The genus *Neodiogmites* Carrera, 1949 is distinguished from other genera of the Dasypogoninae by the following: anepisternum and katepisternum with relatively long, dense setae; at least tergites 2–4 with long, thin setae laterally and posteriorly; dorsocentral setae starting before transverse suture, becoming longer near the scutellum; first tarsomere of hind leg narrower than tibia and longer than tarsomeres 2–4 combined; cell r1 open (Artigas & Papavero 1988).

*Neodiogmites* was described based on two species, the type species *Neodiogmites melanogaster* (Wiedemann, 1821), which was transferred from the genus *Dasypogon* Meigen, 1803, and *Neodiogmites tenebrosus* Carrera, 1949. According to Carrera (1949) *Neodiogmites* is morphologically similar to *Diogmites* Loew, 1866 and *Lastauroides* Carrera, 1949. It differs from *Diogmites* by having long setae located at the posterior margin of the first four abdominal segments, and from *Lastauroides* by having a flat face and the second segment of the palpus inserted at the apex of the first segment.

Artigas and Papavero (1988) synonymized *Lastauroides* and *Lastaurax* Carrera, 1949 with *Neodiogmites*, thus expanding the concept of the latter. They also provided a key to the genera of Dasypogoninae (steps 32, 33 and 34) and considered the male terminalia of *Neodiogmites carrerai* Artigas & Papavero, 1988 and the spermatheca of *Neodiogmites alexanderi* (Carrera, 1949) as the standard of the genus. Currently 12 species are recognized for *Neodiogmites*, all restricted to the Neotropical Region (Papavero 2009). It is a quite rare genus represented by about 80 specimens in a few collections around the world. Some species are known only from the holotype.

Here the genus *Neodiogmites* is revised and the species are provisionally assigned to three species groups. We also provide a key to the species, species distributions are summarized, and two new species are described.

reddish, apical third black; tarsomeres black; femora, tibiae and tarsomeres with short black setae; tibiae with short yellow setae posteriorly. **Wing**: yellowish basally and posteriorly, apical third slightly darkened; alula hyaline; halter yellow-reddish. **Abdomen**: conical, black with posterior margins brownish, except tergite 8 yellow; tergite 1 with long yellow setae laterally, posterior margin with thin yellow setae; tergites 2–4 with short yellow setae laterally and posteriorly, tergites 5–8 black setose; sternites black, gray pruinose with thin yellow and black setae; terminalia yellow, black and yellow setose. Terminalia: not studied.

Male: Unknown.

**Comments.** *Neodiogmites tauauna* has the same color of *N. lanei*, but differs by not having thin setae between the marginal scutellar pair, protuberance at the base of the antennae lacking, and abdomen without yellow triangular patch of pruinescence laterally on tergites 2 and 3.

**Geographic record.** Brazil: Espírito Santo.

**Type material examined.** Holotype ♀. BRAZIL, Espírito Santo: Itapina, xi.1970, Elias col. (MZUSP).

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