

NOTA / NOTE

A teratological record in *Tabanus piceiventris* Rondani, 1848
(Diptera: Tabanidae) from Brazil.

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Abstract: A case of anisochromia in a specimen of *Tabanus piceiventris* Rondani, 1848 (Diptera: Tabanidae) is described, being the first record of this kind of teratology in tabanids.

Key words: Diptera, Tabanidae, horsefly, teratology, anisochromia, Brazil, Neotropical region.

Resumen: Un caso teratológico en *Tabanus piceiventris* Rondani, 1848 (Diptera: Tabanidae) de Brasil. Se describe un caso de anisocromía en un espécimen de *Tabanus piceiventris* Rondani, 1848 (Diptera: Tabanidae), siendo el primer registro de este tipo de teratología en tabánidos.

Palabras clave: Diptera, Tabanidae, mosca de los caballos, teratología, anisocromía, Brasil, región Neotropical.

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Introduction

Teratological cases in insects have aroused the interest of various entomologists over time and throughout the world, and literature is vast in this regard. The term 'teratology' is derived from the Greek 'τέρας', which means 'monster'. However, there is a tendency for the study to include malformations, defects and abnormalities (Shawn & Luiz, 2010). Thus, not only malformations that have an influence on the ethology and / or physiology of the affected organism are included in the study, but also any alterations that fail to conform to the standard of the species and that constitute a 'defect'. Several authors have elaborated different classifications of teratological cases according to total or partial deformations, by excess, lack or diminution, structural or integumentary, somatic or sex-linked (Dallas, 1926, Cappe de Baillon, 1927, Balazuc, 1947). Modifications of the various parts of the body of insects of various orders, originating from endogenous or exogenous factors, at different intensities, have been well studied by some authors, and the most recent studies are mostly on species of the order Coleoptera, families Carabidae, Cerambycidae, Chrysomelidae and Staphylinidae, order Hymenoptera, families Vespidae and Apidae, and order Diptera, families Culicidae, Drosophilidae, Muscidae, Phoridae, Psychodidae, Tachinidae and Syrphidae (Dalla Torre & Friese, 1899; Ortuño & Vique, 2007; Asiain & Marquez, 2009).

Tabanidae family comprises more than 4,500 species worldwide and around 1,200 in Neotropical region (Henriques *et al.*, 2012). They are important vectors of several zoonoses, such as loiasis, elephoriosis, surra, babesiosis, tularemia and Lyme disease (Krinsky, 1976; Magnarelli *et al.*, 1986). Most studies of the species of this family are about the taxonomy, morphology, diagnosis and epidemiology of

the vectored diseases, and few teratological cases have been documented. Philip (1963) described *Hematopota obscurata* Philip, 1963 from specimens collected in Viet Nam, one of which had alterations in the left wing, in which the basal radial venation was duplicated (Philip, 1963, Fig. 7B). This case was discussed by the same author in a study published in 1965, when it was hypothesized that the alterations were due to atavism, as they would be similar to the intercalating wing veins normally present in some Syrphidae (Diptera). Still in the 1965 study, Philip points out the changes in the left teratoid antenna of a female of *Tabanus discifer* Walker, 1850, collected in Caribbean, Trinidad Island.

Material examined

In 2013, several specimens of *Tabanus piceiventris* Rondani, 1848 were collected at Km 61 of Belém Road Arc, in the state of Pará, Brazil. The specimens are deposited in the Entomological Collection of the Center for Education and Research in Environmental Medicine (IBAMA 5398253).

Voucher specimen: *Tabanus piceiventris* Rondani, 1848, Brazil, Pará, Belém, Arco Viário, Km 61, insect hand net, attracted by horse, 21-VIII-2013, 1♀, Guimarães col. and det. (CEMA).

Results and discussion

The examination of collected material revealed a specimen with an asymmetry of coloration on the left side of the thorax, after the transverse suture, retiring two black spots, nonexistent on the right side (Fig. 1).



Fig. 1.- Anisochromia in thorax of *Tabanus piceiventris* Rondani, 1848.

Chinaglia (1911, 1912) includes in his teratological classification the 'coloring anomalies'. Efflatoun (1922) noted the occurrence of deformation of the medial leg coloration of *Campsicnemus umbrepennis* Loew, 1856 (Diptera: Dolichopodidae). Dallas (1923) includes in his classification the Anisochromia between the chromatic variations, next to albinism and melanism; he considered this anomaly as a type of Hemitery, or slight deviations. Balazuc (1951) classifies as a melanisant alteration, in which the part of affected integument takes blackened aspect, and points the similar case of

Pyrrhocoris carbonaria Horváth, 1895 (Hemiptera: Pyrrhocoridae). Nayar (1977) reports various changes in the pattern of the abdominal colored spots of *Eristalis tenax* Linnaeus, 1758 (Diptera: Asilidae). In Tabanidae, no other record of teratological alterations were found other than those of Philip (1963, 1965), related to structural alterations in antennae of *Tabanus discifer* and wing of *Haematopota obscurata*.

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