

## Remarks on Record of *Chlorotabanus inanis* (Fabricius, 1787) (Diptera, Tabanidae) and its Occurrence in Rio de Janeiro Province, Brazil

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### Abstract

Tabanids collections were conducted during 2013 in Marambaia Island, Rio de Janeiro, Brazil, through modified Manitoba trap and insect hand net in ecotone between forest areas, marsh, Atlantic forest and meadow. Among the diagnosed specimens, *Chlorotabanus inanis* (Fabricius) 1787 was one of the commonest species, which had its occurrence in Rio de Janeiro Province not very well registered since Lutz studies, early last century. Taxonomic aspects of the species are discussed.

**Keywords:** Taxonomy; Horsefly; Atlantic island; Atlantic rainforest; Neotropical

### Case Report

The Tabanidae family owns about 4,400 described species, of which about 1,205 are present in the Neotropics [1]. Between 1905 and 1914, Lutz conducted several studies in Rio de Janeiro Province, proposing 40 genera contemplating 144 species. In 1911 Lutz and Neiva recorded *Tabanus mexicanus* specimens captured in Xerém, Rio de Janeiro, which is included in the new genus *Chlorotabanus* proposed by Lutz in the same year [2]. Fairchild (1960) examined these specimens and verified that they were specimens of *Chlorotabanus inanis* (Fabricius), 1787, *C. parviceps* (Kröber), 1934 and *C. ochreus* Philip and Fairchild, 1956. This short communication clarifies the *status quo* of the *Chlorotabanus inanis* [3].

### Remarks

Lutz and Neiva (1909) published an important contribution to the knowledge of the indigenous fauna of Tabanids providing a list of collected specimens near the metropolitan region of Rio de Janeiro, in Xerém Township, in a marshy ground area, near the root of Serra da Estrela, between February 1907 and February 1908. The report of *Tabanus mexicanus* Linnaeus, 1758 appear on this list [4]. In 1911 Lutz published the list of tabanids deposited in Entomological Collection of the Oswaldo Cruz Institute proposing the new genus *Chlorotabanus*, inserting *Tabanus mexicanus* as type species thereafter named *Chlorotabanus mexicanus* (L., 1758) [2]. Fairchild (1960) revising the entomological collection of Instituto Oswaldo Cruz recognized the specimens of *T. mexicanus* reported by Lutz and Neiva (1909) and Lutz (1911), as being a miscellany of specimens of *Chlorotabanus inanis* (Fabricius), 1787, *C. parviceps* (Kröber), 1934 and *C. ochreus* Philip and Fairchild, 1956.

In 1913, Lutz presented a key to the genera of the subfamily Tabaninae, which included *Chlorotabanus*, even without the formalities required, i. e., the inclusion of effective species or characterization [5]. Lutz (1914) subsequently publishes a new manuscript about tabanid systematic and the omission was maintained [6]. Afterwards, Coscarón and Papavero (2009) considered the genus name *Chlorotabanus* as *nomem nudum* [7].

Krolow and Henriques (2010) revised the genus *Chlorotabanus* and examined specimens of *C. inanis* collected from Angra dos Reis, Tinguá, Macaé and Rezende, at Rio de Janeiro Province, but do not inform where are deposited the examined specimens. They also provided a description of the *Chlorotabanus* genus [8].

In Entomological Collection of Museu de História Natural do Rio de Janeiro are deposited the following specimens of *C. inanis* captured at Rio de Janeiro Province: Itatiaia, RJ, Brasil (Macleira, 1800 m), 1♀, 9-10.iii.1951, D. Albuquerque col., A. Stone det.; Petrópolis, RJ, Alto Mosela, 1100 m, 2♂, ii.1956, D. Albuquerque col.; Itatiaia, RJ, 700 m, 28.xii.1928, J.F. Zikán, EMBRAPA; Itatiaia, RJ, 1300 m, 1♂, 6-10. xii.1950, Trav. and H. Trav. col., (unidentified specimen); Petrópolis, RJ, Alto Mosela 1100 m, 1♀, 1.ii.1956, D. Albuquerque col. (unidentified specimen); Rio de Janeiro, Jacarepaguá, RJ, 1♂, 1931, CallBerla col., Nº 4/561; Angra dos Reis, RJ, 1♀, xii.1931, L.T. col., EMBRAPA; Itatiaia, RJ, Macleira 1800 m 1♀, 9-10.iii.1951, D. Albuquerque col.; Teresópolis, RJ, Machado-Barros, 1♀, 23.x.1957, Dalcly col.; Angra dos Reis, RJ, 1♀, xii.1932; L.T. col., OSWA 1571; Angra dos Reis, 1♂, iv.1934, Trav. and Almeida col., (unidentified specimen); Angra dos Reis, RJ, 1♀, OSWA 1350, (unidentified specimen). And in Entomological Collection of Instituto Oswaldo Cruz are deposited the following specimens captured at Rio de Janeiro Province: Xerém, RJ, 1♀, OSWA 1356; Angra dos Reis, RJ, 1♀, OSWA 1357; Angra dos Reis, RJ, 1♀, OSWA 1359, L.T. col.

The authors of this study collected, during 2013, 113 female

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specimens of *C. inanis* in Marambaia Island, Mangaratiba, confirming the occurrence of the species in Rio de Janeiro Province. The specimens are deposited in Entomological Collection of Centro de Educação e Pesquisas e Medicina Ambiental - CEMA.

Coscarón and Papavero, in the Catalogue of Neotropical Diptera (2009), did not report the occurrence of *Chlorotabanus inanis* in Rio de Janeiro, as well as did not refer to studies of Lutz and Neiva (1909), Lutz (1911) and Fairchild (1960). They also did not mention the occurrence of *C. ochreus* in Rio de Janeiro Province, which was also indirectly recorded by Fairchild since 1960.

The following is a valid dichotomous key only to the females of the species of the *Chlorotabanus* genus occurring in the state of Rio de Janeiro.

### Dichotomous Key for Females of *Chlorotabanus* Genus Recorded in State of Rio de Janeiro, Brazil

1-Frons narrower, frontal indices more than 5.5. Wings hyaline, except for costal, basal costal, basal and radial cells, darkened; veins yellowish, with weak darkening of transverse veins; apex of the hind tibia usually with black setae.....*Chlorotabanus inanis* (Fabricius), 1787

1'-Enlarged frons, frontal indices less than 5.0. Hyaline wings without dark spots, except basal costal and costal cells; cross veins yellowish or yellow-greenish, no darkening.....2

2-Wings hyaline, darkened basal costal and costal cells and strong dark spot on alular incision; yellow-green veins; anterior and posterior tibia with dense black hairs.....*C. parviceps* (Kröber), 1934

2'-Faintly tinged wing, costal cell slightly darkened; yellow veins without darkened sections, apex of fore and hind tibia with reddened setae.....*C. ochreus* Philip & Fairchild, 1956

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