



## Identification of Neotropical blow flies of the genus *Calliphora* Robineau-Desvoidy (Diptera: Calliphoridae) with the description of a new species

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WITH AN APPENDIX BY KNUT ROGNES<sup>2</sup> & TERRY WHITWORTH<sup>1</sup>

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### Abstract

A key to the six known species of *Calliphora* Robineau-Desvoidy (Diptera: Calliphoridae) from the Neotropical Region is given. Species distributions and key characters are discussed. *Calliphora irazuana* Townsend, 1908 is resurrected as a valid name for a species found in Central America and Mexico, **stat. nov.** *Calliphora trisetata* **sp. nov.** is described from numerous specimens from Costa Rica, El Salvador and Mexico. Nominal species *Calliphora nigra* Mello, 1974 and *Calliphora antiojuanae* Mariluis, 1982 are synonymized with *Calliphora nigribasis* Macquart, 1851, **n. syn.** An Appendix is provided that clarifies the status of the names *Calliphora peruviana* Robineau-Desvoidy, 1830, *Lucilia peruviana* Robineau-Desvoidy, 1830, and *Calliphora peruviana* Macquart, 1851.

**Key words:** blow flies, *Calliphora*, Calliphoridae, Diptera, key, Neotropical, new species

### Introduction

The first species of *Calliphora* described from the Neotropical Region was *Calliphora peruviana* Robineau-Desvoidy, 1830, but this is now considered a species of *Lucilia* Robineau-Desvoidy, 1830 (see Appendix). Macquart (1851) described *C. nigribasis* from Colombia, which was later treated by Hall (1948) as a synonym of *C. peruviana* (herein considered a misidentification, the valid name is *C. nigribasis*; see Appendix). Townsend (1908) described *C. irazuana* from Costa Rica. Shannon (1923) synonymized *C. irazuana* with what he called a “dark bearded form” of *C. vomitoria* (Linnaeus) (a Holarctic species misidentified from the Neotropical Region). Later, Shannon (1926) treated *C. irazuana* as a synonym of *C. nigribasis*. Hall (1948) questionably synonymized *C. irazuana* with *C. terraenovae* Macquart (a Nearctic species misidentified from the Neotropical Region) (*C. irazuana* is herein considered a valid species). Mello (1962) described *C. lopesi* from southern Brazil. Mariluis (1978) described a new species of *Calliphora*, *C. calcedoniae*, but later Mariluis and Peris (1985) synonymized it with *C. nigribasis*. More recently, *C. maestrica* was described based on four females from Cuba (Peris *et al.* 1998). Whitworth (2010) redescribed this species (including the male for the first time) and expanded its known range to include Jamaica and Dominican Republic.

Studies of the Neotropical species of *Calliphora* have been conducted in Brazil and Argentina where the genus is represented by only two described endemic and one introduced species. The South American *Calliphora* species *C. lopesi* Mello, *C. nigribasis* Macquart and the introduced *C. vicina* Robineau-Desvoidy have been studied by a variety of authors (Mello 1962; Mariluis 1978; Mariluis & Peris 1985; Baumgartner & Greenberg 1985; Peris & Gonzales-Mora 1989). No studies have been conducted on the Central American *Calliphora*, though they were recently discussed by Vargas & Wood (2010). Those authors suggested that the single Central American *Calliphora* species may be *C. irazuana*, which I can confirm is the case after having examined Townsend’s type of the species. In addition, this study revealed a previously unknown species of *Calliphora* that is described herein.