



Keys to the genera and species of blow flies (Diptera: Calliphoridae) of the West Indies and description of a new species of *Lucilia* Robineau-Desvoidy

TERRY WHITWORTH

2533 Inter Avenue, Puyallup WA 98372. E-mail: twhitworth@wsu.edu

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Abstract

Keys to 11 genera and 21 species of Calliphoridae found or likely to be found in the West Indies are given. Species distributions and key characters are discussed. *Lucilia fayeae* **sp. nov.** is described from numerous specimens from Dominica, Puerto Rico, St. Lucia, and St. Vincent. *Calliphora maestrica* Peris *et al.* is redescribed and the male of the species is described for the first time.

Key words: Diptera, Calliphoridae, *Lucilia*, new species, West Indies, blow flies

Introduction

The blow flies of the West Indies have rarely been studied and are poorly known. Persons wishing to identify Calliphoridae from this area must use keys from North or South America. This has proven confusing because these keys include many species not occurring in the West Indies and lack several species unique to the area. The fauna of Calliphoridae in the West Indies is a mixture of Central American, South American, North American, and Old World species, along with at least seven endemic species. One of the first efforts to identify species of blow flies in the West Indies was by Shannon (1926) who provided a synopsis of all known blow fly species from the Americas. He described two new species from the area, *Cochliomyia minima* Shannon and *Lucilia rica* Shannon, and discussed which valid species occurred in the region. Aubertin (1933) included several species of *Lucilia* Robineau-Desvoidy from this area in her revision of the genus. She noted that *Lucilia* from the region have few distinctive characters and was unsure about which valid species were present. Hall's (1948) keys included several species that occur in the West Indies, including four species of *Cochliomyia* Townsend (under *Callitroga* Brauer) and four species of *Lucilia* (under *Phaenicia* Robineau-Desvoidy), including two species of the latter unique to the area; i.e., *L. problematica* Johnson and *L. rica* Shannon. James (1967) published a brief note on blow flies from Dominica including *Cochliomyia macellaria* (Fabricius) and what he described as non-typical *L. eximia* (Wiedemann). James (1970), in his "Catalog of the Diptera of the Americas south of the United States," listed many of the species known from this area at the time and provided distribution data and synonymies. James (1971) described two new species of *Lucilia* (under *Phaenicia*), *L. lucigerens* (James) from Jamaica and *L. retroversa* (James) from Bahamas and Cuba. Dear (1985) performed a detailed study of the Chrysomyinae of the Neotropical Region, including several species found in the West Indies. His work included synonymies and keys to genera and species. Downes (1986) listed three species of Melanomyiinae from this area and provided genus and species keys. Woodley and Hilburn (1994) collected blow flies in Bermuda and reviewed species recorded from that area. The authors were unable to collect any *L. problematica* from the island and speculated this species may be extinct. They also noted that *L. rica* was the dominant *Lucilia* from Bermuda; this was the first record of it from the island. Peris *et al.* (1998) described a new species of *Calliphora* from Cuba, *C. maestrica* Peris *et al.*, based on female specimens only. Vargus and Wood (2010) keyed and discussed the genera of Central American blow flies, and their key was helpful in the preparation of the genus keys herein.