

## CONTRIBUTIONS TO A HISTORY OF MEXICAN DIPTEROLOGY.- PART I. ENTOMOLOGISTS AND THEIR WORKS BEFORE THE *BIOLOGIA CENTRALI-AMERICANA*.

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### RESUMEN

Se presenta la vida y obra de aquellos entomólogos quienes describieron especies de Diptera de México antes de la publicación de la obra *Biología Centrali-Americana*, incluyendo algunos comentarios respecto a los colectores. Aquí se incluyen las listas de los nombres de especies mexicanas propuestos por Thomas Say (15 especies), Rudolph Wilhelm Wiedemann (35 especies), Pierre Justin Marie Macquart (71 especies), John Obadiah Westwood (5 especies), Bracy Clark (1 especie), Francis Walker (91 especies), Luigi Bellardi (176 especies), Camilo Rondani (5 especies), F. Jaennicke (24 especies) Edward Adolph Gerstaecker (8 especies), Jaques Marie Frangille Bigot (205 especies), Alfred Dugès (1 especie), Friedrich Moritz Brauer (3 especies), F. M. Brauer & J. F. Bergenstamm (13 especies), Ermanno Giglio-Tos (177 especies), and Ewald Rübsaamen (2 especies), esto es, un total de 832 nombres específicos de las siguientes 51 familias actuales (en orden filogenético): Tipulidae, Culicidae, Simuliidae, Anisopodidae, Bibionidae, Ditomyiidae, Mycetophilidae, Sciaridae, Xylomyidae, Stratiomyidae, Tabanidae, Rhagionidae, Pantophtalmidae, Therevidae, Mydidae, Asilidae, Nemestrinidae, Acroceridae, Bombyliidae, Empididae, Dolichopodidae, Syrphidae, Conopidae, Micropezidae, Neriidae, Psilidae, Tanypezidae, Richardiidae, Otitidae, Platystomatidae, Tephritidae, Dryomyzidae, Sepsidae, Sciomyzidae, Lauxaniidae, Lonchaeidae, Ephyridae, Drosophilidae, Chloropidae, Heleomyzidae, Rhinotoridae, Anthomyiidae, Scatophagidae, Muscidae, Hippoboscidae, Streblidae, Nycteribiidae, Calliphoridae, Sarcophagidae, Tachinidae y Cuterebridae. Se presenta la referencia original, la localidad tipo, el museo o colección depositarios, el estado taxonómico actual de cada nombre y referencias adicionales.

**Palabras Clave:** Historia, Diptera, México, taxonomía.

### ABSTRACT

The life and works of entomologists who described species of Diptera from Mexico before the publication of the *Biología Centrali-Americana* are presented, including some commentaries about the collectors. Here are listed all the Mexican Diptera species-names proposed by Thomas Say (15 species), Rudolph Wilhelm Wiedemann (35 species), Pierre Justin Marie Macquart (71 species), John Obadiah Westwood (5 species), Bracy Clark (1 species), Francis Walker (91 species), Luigi Bellardi (176 species), Camilo Rondani (5 species), F. Jaennicke (24 species), Edward Adolph Gerstaecker (8 species), Jaques Marie Frangille Bigot

(205 species), Alfred Dugès (1 species), Friedrich Moritz Brauer (3 species), F. M. Brauer & J. F. Bergenstamm (13 species), Ermanno Giglio-Tos (177 species), and Ewald Rübsaamen (2 species). Included are a total of 832 specific names of the following 51 current families (in phylogenetic order): Tipulidae, Culicidae, Simuliidae, Anisopodidae, Bibionidae, Ditomyiidae, Mycetophilidae, Sciaridae, Xylomyiidae, Stratiomyidae, Tabanidae, Rhagionidae, Pantophtalmidae, Therevidae, Mydidae, Asilidae, Nemestrinidae, Acroceridae, Bombyliidae, Empididae, Dolichopodidae, Syrphidae, Conopidae, Micropezidae, Neriidae, Psilidae, Tanypezidae, Richardiidae, Otitidae, Platystomatidae, Tephritidae, Dryomyzidae, Sepsidae, Sciomyzidae, Lauxaniidae, Lonchaeidae, Ephydriidae, Drosophilidae, Chloropidae, Heleomyzidae, Rhinotoridae, Anthomyiidae, Scatophagidae, Muscidae, Hippoboscidae, Streblidae, Nycteribiidae, Calliphoridae, Sarcophagidae, Tachinidae, and Cuterebridae. The original reference, type-locality, depository museum or collection, present taxonomic status of each name and additional references are presented.

**Key Words:** History, Diptera, Mexico, taxonomy.

## HISTORY

### 1. THE FIRST SPECIES, DESCRIBED BY THOMAS SAY AND RUDOLPH WILHELM WIEDEMANN

Before Mexican independence, in 1821, it was nearly impossible for Europeans to settle in Mexico, being difficult for naturalists to explore a good amount of the territory, principally due to the social and economical situation promoting the scarcity of roads and danger.

The only exception to that rule, as is well-known, was the trip of Baron Alexander von Humboldt (Fig. 1) and Aimé Bonpland to several Spanish colonies in South, Central, and North America, from 1799 to 1804, thanks to special permission from the King of Spain, Charles IV. After travelling through Venezuela, Cuba, Nueva Granada, Ecuador, and Peru, the two naturalists left the Port of Guayaquil on February 15, 1803, heading for Acapulco, in the Vice-kingdom of New Spain, where they landed on March 23. They began their march to the interior of Mexico almost immediately, through the present State of Guerrero, passing by Chilpancingo, Taxco, and later by Cuernavaca in the present State of Morelos. In Mexico City, they were received by the Viceroy, Count Iturrigaray. After a stay in the Capital, they went, on August 1, 1803, to Guanajuato. On September 9, they arrived in Jorullo, near Uruapan, proceeding thence to Toluca, via Morelia, on the 21<sup>st</sup>. Returning to Mexico City, they packed their collections and on January 20, 1804, went to Veracruz, passing through Puebla. They arrived at the former city on February 19. On March 7, they sailed once more to Cuba, staying shortly in Havana, where they picked up the collections made in the Orinoco (Venezuela) and left there since 1801. Through the Consul of the United States, Humboldt received a letter from Thomas Jefferson, inviting him to visit the country. Humboldt and Bonpland sailed to the United States and after some weeks returned to Europe, arriving there in

August 1804 (Beck, 1959-1961; Chardón, 1949; Coats, 1970; Hemsley, 1887; Kellner, 1963; Koehler, 1904; Papavero, 1971b; Penell, 1945; Sprague, 1924; Stafleu & Cowan, 1979; Standley, 1920; Stearn, 1968; Stevens, 1956; Terra, 1955). The travels of Humboldt and Bonpland were published in 1814 (see also Humboldt, 1861-1862).



**Figure 1**  
Baron Alexander von Humboldt. Redrawn by S. Ibáñez-Bernal from self-portrait.

Almost twenty years afterwards, in 1823, William Bullock went to Mexico (Bullock, 1824) with the aim of acquiring abandoned gold and silver mines. Bullock was a former London goldsmith, well-known as the owner of the “London Museum”, which was sold by auction in 1819. When he returned to London at the end of 1823, he brought back with him all sorts of Mexican curiosities which served for public show, called “New Mexico”, in his “Egyptian Hall”. Farber (1982: 49) said:

*“Bullock carefully labelled his specimens and displayed them in a scientific manner. William Jordan, in his “Men I have known” (1866: 70-71) recalled the opening of Bullock’s Museum:*

*‘Up to that date, there was nothing of the sort’ The British Museum was not, in those days, a place of popular resort. The Leverian Museum, in the Blackfriars Bridge Road, was a most heterogeneous medley of stuffed animals, without order or classification, and savage costumes, weapons, and products from the Pacific Ocean, or elsewhere in Asia, Africa, or America, as such curiosities were picked up by adventurous navigators and exploring travellers. In a visit to it a few desultory facts might be gathered; but as a means for solid or lasting instruction, its miscellaneous and aimless character rendered it useless. Mr. Bullock’s collection was quite the reverse of this- admirably preserved and scientifically arranged-. After three or four experimental years in its original locality, it was transported to the Egyptian Hall, then finished for its reception, and not fewer than 32,000 subjects of animated nature were skill-fully grouped and conveniently displayed within its walls. The town was absolutely astonished by the individual acquisition of so vast and marvellous a treasure and crowds soon availed themselves of the privilege of reading its lessons. In one department were seen the quadrupeds, as natural as life, and as they would appear in a real Indian forest, with its rocks, caverns, trees, and all other adjuncts congenial to their habits and habitats. In another direction, 3,000 birds were set up with similar accuracy, and attended by well-selected accessories, so as to afford sufficient ideas of their motion, food, and mode of feeding, and peculiarities of every description’.*

Bullock's Museum was also described by Mullens (1917).

In Germany, the news that mysterious Mexico had become accessible to the ordinary traveller excited the curiosity of a wealthy nobleman, Count von Sack, “Zweiter Ober-Jägermeister” and chamberlain to the King of Prussia (Stresemann, 1954; Papavero, 1971b). He had recently returned from a voyage to Cyprus and Egypt, where he had made a small collection of birds, and at once felt inclined to

visit Mexico, provided that there was a collecting naturalist of good reputation to go with him.

A gardener by the name of Ferdinand Deppe (Binford, 1989; Ewan, 1955; Hemsley, 1887; Hitchcock, 1919; Lindemann, 1884-1885; Nelson, 1922; Papavero, 1971b; Penell, 1945; Schiede, 1829-1830; Smith & Smith, 1973), appointed to the Royal Gardens, was recommended for this task by Professor Hinrich Lichtenstein, director of the Zoological Museum of Berlin University. Deppe was an intelligent and energetic young man born in 1794. For a long while his connections with the Zoological Museum had been intimate, the more so as his elderly brother Wilhelm was accountant of the institution.

On Count von Sack's advice, Deppe gave up his job in 1821, and prepared for the voyage to Mexico. He trained himself in skinning birds and mammals, a technique which he soon mastered to great perfection. Besides, he studied books on the zoology, botany and geography of South America, took lessons in drawing and painting, and acquired English and Spanish. However, the wayward Count remained undecided for three more years, and it was only due to the insistence of Deppe that the plan to go Mexico was finally carried out in 1824.

The party, increased by the Count's domestic, arrived in London on August 23, 1824. There Deppe visited, besides the British Museum (the zoological section of which he judged far inferior to that of the Berlin Museum), Mr. Bullock's Show and Mr. Leadbeater's Shop (a dealer in natural history objects).

On October 8, they sailed from Falmouth on board a British ship to Jamaica via Barbados. There they took another vessel bound for Alvarado, Veracruz, arriving in mid-December 1824; shortly after the Count's footman died from a yellow fever attack.

Two years later, in January 1827, Deppe left Mexico, after having travelled via Mexico City to Oaxaca and Tehuantepec and back via Oaxaca to Alvarado. He and William Bullock's son who had joined him on the trip from Mexico City to Tehuantepec, are the first naturalists who ever collected birds for scientific purposes in Mexico.

The following itinerary has been compiled by Stresemann (1954) from Deppe's letters, kept in the archives of the Zoological Museum in Berlin, and from the entries in Lichtenstein's lists of acquisitions in the same museum. From December 25, 1824 to January 1825, an excursion was made from Alvarado to the swamps and lagunas near Tlacotalpan in Veracruz. In January 1825, he went from Alvarado to Jalapa, Veracruz, and in February from Jalapa to Mexico City. In April, an excursion was made from Mexico City to Temascaltepec, State of Mexico, where Deppe made the acquaintance of Mr. Bullock Jr., who, like his father, took the hobby of collecting birds and was an excellent shot. He had come over with his father in 1823 and lived in Temascaltepec as an agent of a British mining company. Deppe went back to

Mexico City on May 10. He stayed in and near Mexico City from May 11 to the end of the month. In June and July a trip was made to Chico and Toluca, in the State of Mexico, including a stay at Tlalpujahua and another at Cimapán (Zimapán). On August 25, Deppe, joined by Bullock Jr., started for a long trip to Tehuantepec. Taking the route via Puebla and Tehuacán, they reached the city of Oaxaca by September 6. Extensive field work was done in the vicinity. On one of these trips they reached Villa Alta, "37 leguas" from Oaxaca, on September 22. On October 22, Deppe and Bullock continued their journeys and six days later they reached Tehuantepec via San Bartolo. Early in November they proceeded to the Pacific shore (San Mateo del Mar, Santa María del Mar) and were back at the city of Oaxaca by the 22<sup>nd</sup> of that month. On December 5, Bullock left for Mexico City to meet his father. Deppe left Oaxaca the next day and chose a direct route to Alvarado, which proved very difficult. On December 19, he crossed the Cordillera Real at a place called Valle Real (?), Veracruz, clad with luxuriant forest. He was back in Alvarado on December 22.

Early in January 1826, Deppe paid another visit, this time an extensive one, to Valle Real. From there he returned to Alvarado in March and proceeded via Santuario to the city of Veracruz, which was reached by March 23. After a short stay, he left for Mexico City at the end of March. The time from April 13 to July 16 was devoted to excursions to the environs of Mexico City, including a trip to Chico and Ixmiquilpec (?). On July 17, Deppe left the Capital to visit his friend Bullock Jr. at his place in Rincón de Temascaltepec. He crossed the range of Las Cruces and proceeded via Tenancingo and Saculpán (?), Mexico. His stay in Temascaltepec lasted from July 28 to late September, with excursions to Real (de) Arriba (?), Mexico, and to Jantepeque (?) and Cuernavaca in Morelos. In August, in Temascaltepec, Deppe met William Bullock (senior), who had made a business trip to Mexico in company of his wife and daughter. After his return to London in 1823, the senior Bullock founded a British mining company of which he was the director. At the end of September, Deppe went back to the Capital and prepared for a quick departure. He reached Jalapa by October 26 and embarked at Veracruz at the end of January 1827, for Hamburg, on the German vessel "Anna Maria".

On April 9, 1827, after almost three years of absence, Deppe was welcomed back in Berlin.

Since the landing at Alvarado in December 1824, there was no mention of Count von Sack in this short review of the itinerary. The Count seems to have been a very queer and whimsical person. No longer disposed to suffer his employer's bad manners, Deppe parted company with him in May 1825 and carried out the rest of the expedition at his own risk. The Count returned to the coast in the autumn of 1825, sailed back to Jamaica, and reappeared in the summer of 1826 in Berlin, where three years later he died.

In the years 1825 and 1826 Deppe had gathered, all by himself, 958 bird skins, a number of mammals, a quantity of reptiles, amphibians, fishes, snails, and thousands of insects (but very few Diptera). Nor had botany been neglected by this indefatigable naturalist. All his zoological material was bought by the Zoological Museum of Berlin. But in vain, he had hoped to be rewarded with a post at one of the scientific institutions of the Prussian capital. This induced him to return to his beloved Mexico once more, this time in the company of a dear friend, the botanist Dr. Christian Julius Wilhelm Schiede (1798-1836) (Barnhart, 1965; Hemsley, 1887; Knobloch, 1983; Lindemann, 1884-1885; Papavero, 1971b; Schiede, 1829-1830; Smith & Smith, 1973; Stafleu & Cowan, 1985). They expected to make their living in Mexico by selling zoological and botanical specimens to European museums and dealers.

In July 1828 they settled in Jalapa, whence they made distant excursions to various places, all within or near the boundary of the State of Veracruz; among others were the Pico de Orizaba, which they ascended almost to the summit, Misantla, Papantla, Veracruz, and the Laguna Huetulacán (?), west of the Cofre de Perote. But they were very soon disappointed. Lichtenstein was no longer able to buy quantities of Mexican materials at reasonable prices, and although some of the specimens collected up to May 7, 1829, were acquired by the Museums of Berlin and Vienna, the financial result of their efforts was far below what they had expected. Ferdinand Deppe and Wilhelm Schiede were forced to give up this kind of business in 1830. The latter died very soon afterwards. Deppe became a commission agent to merchants located in Acapulco and Monterey, California. In 1836 he was tricked out of all he had learned and decided to sail home to Germany once more. Back in Berlin in 1838, the unfortunate Deppe was again denied an official appointment. He died in oblivion about 1860 (Stresemann, 1954).

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Another collector in Mexico in those times was the illustrious North American entomologist Thomas Say (Fig. 2) (Stroud, 1992; Weiss & Ziegler, 1931). H. S. Barber (1928) called attention to this very little known trip of Say. Say, in the company of William McLure, travelled and collected along the old road between Veracruz, Jalapa, Mexico City, and Tacuba, beginning in the autumn of 1827; and on the approach of summer (1828) they returned to the United States. Barber reproduced in his paper several extracts from Say's papers and other commentaries by other authors confirming that Say had indeed collected in Mexico.



**Figure 2**

Thomas Say. Redrawn by S. Ibáñez-Bernal.

Say (1829) described the following Mexican species:

1. *Limnobia livida*, p. 150. "Mexico". Now in *Limonia (Dicranomyia)* (Alexander & Alexander, 1970: 54), but identity uncertain (Tipulidae).
2. *Penthetria heros*, p. 154. "Mexico". (Hardy, 1966: 2) (Bibionidae).
3. *Dilophus stygius*, p. 155. "Mexico". (Hardy, 1966: 11) (Bibionidae).



4. *Nemotelus polyposus*, p. 160. "Mexico". (James, 1973: 48) (Stratiomyidae).
5. *Stratiomys trivittatus*, p. 160. "Mexico". Now *Hedriodiscus trivittatus* (James, 1973: 41) (Stratiomyidae).
6. *Xilota arquata*, p. 162. "Mexico". Now *Aemosyrphus arquatus* (Thompson *et al.*, 1976: 96) (Syrphidae).
7. *Syrphus stegnus*, p. 163. "Mexico". Now *Carposcalis stegna* (Thompson *et al.*, 1976: 41) (Syrphidae).
8. *Syrphus mutuus*, p. 164. "Mexico". Now in *Toxomerus* (Thompson *et al.*, 1976: 52) (Syrphidae).
9. *Syrphus ectypus*, p. 165. "Mexico". Now in *Toxomerus* (Thompson *et al.*, 1976: 50) (Syrphidae).
10. *Chrysotus concinnarius*, p. 168. "Mexico". As unplaced species of Dolichopodidae (Robinson, 1970: 58).
11. *Medeterus punctipennis*, p. 170. "Mexico". Now *Pelastoneurus punctipennis* (Robinson, 1970: 51) (Dolichopodidae).

Say (1830) also described four new Mexican flies:

12. *Volucella violacea*, p. 166. "Mexico". Preoccupied by Lepeletier & Serville (1825); now *Copestylum metalliferum* (Walker) (Thompson *et al.*, 1976: 79) (Syrphidae).
13. *Volucella postica*, p. 166. "Mexico". Now *Copestylum posticum* (Thompson *et al.*, 1976: 82) (Syrphidae).
14. *Volucella marginata*, p. 167. "Mexico". Now *Copestylum marginatum* (Thompson *et al.*, 1976: 78) (Syrphidae).
15. *Ephydra hians*, p. 188. "Mexico". Now in *Hydropyrus* (Wirth, 1968: 24) (Ephydriidae).

The first species of Mexican Diptera, collected by the travellers mentioned above, were described by the German dipterist Christian Rudolph Wilhelm Wiedemann (1770-1840) (*cf.* the excellent biography of Wiedemann published by Pont (1995)). Wiedemann's first paper on flies was published in 1819. In 1820 he published the first part of the first edition of his *Diptera exotica* (1820a) and a paper describing new genera of Diptera (1820b). In 1821 he published the second part of the first edition of the *Diptera exotica* (1821a, 1821b), and a much enlarged second edition of the same work (1821c). In this latter work, Wiedemann described the first Mexican species of flies, namely:

1. *Culex taeniorhynchus*, p. 43 (&). "Mexico". Now *Aedes (Ochlerotatus) taeniorhynchus* (Wied.) (Culicidae).
2. *Culex posticatus*, p. 43 (&). "Mexico (Coll. Winthem)". Now a junior synonym of *Psorophora (Janthinosoma) ferox* (Humboldt) (Belkin, 1968: 28) (Culicidae).
3. *Tabanus quinquevittatus*, p. 84. "Mexico". (not included in Fairchild's (1971) catalogue or Fairchild & Burger (1994)) (Tabanidae).
4. *Bombylius helvus*, p. 164. "Mexico" (Painter *et al.*, 1978: 3) (Bombyliidae).

5. *Bombylius mexicanus*, p. 166. Curiously, Painter *et al.* (1978: 3) mentioned "U.S.A., Georgia" as type locality. This species, and the foregoing, still in *Bombylius*, according to Painter *et al.*, 1978) (Bombyliidae).
6. *Laphria melanogaster*, p. 236. "Mexico and Savannah". Same combination (Martin & Papavero, 1970: 38) (Asilidae). The specimen serving for the description of this species was also probably collected in Mexico by Humboldt, and in Savannah, Georgia, by Thomas Say.

All these flies were most probably collected in Mexico by Humboldt.

In his *Analecta entomologica* (1824), Wiedemann included only one additional Mexican species:

7. *Bombylius confusus*, p. 60. "Middle America". Now in *Sparnopolius*, according to Painter *et al.* (1978: 7) (Bombyliidae).

In the first volume of the *Aussereuropäische zweiflügelige Insekten* (1828) no Mexican species were included. Only when the second volume was published (1830) did Wiedemann include new species collected in Mexico by Deppe. It is interesting to note that only a few species were included in the main body of the text; most of them were only described in the appendix to that work. Why did that happen? Why did it take such a long time for Wiedemann to obtain those specimens collected by Deppe and deposited in the Berlin Zoological Museum? Most of the species were from Oaxaca, where Deppe collected in 1825. It is an unsolved mystery.

The following species were described in volume II of the *Aussereuropäische zweiflügelige Insekten* (1830):

8. *Xylophagus rufipalpis*, p. 619. "Mexico". Now *Archistratiomys rufipalpis* (Wied.) (James, 1973: 4) (Stratiomyidae).
9. *Tabanus circumfusus*, p. 624. "Mexico"?. Now in *Catachlorops* (*Catachlorops*). Fairchild (1971: 67) said this species is not Mexican, but from Southern Brazil and Uruguay; the type must have been mislabelled in the Berlin Museum (Tabanidae).
10. *Pangonia aurulans*, p. 620. "Mexico, Oaxaca". Now in *Scione* (Fairchild, 1971: 25; Fairchild & Burger, 1994: 49) (Tabanidae).
11. *Pangonia basilaris*, p. 621. "Mexico". Now *Esenbeckia* (*Ricardoia*) *wiedemanni* (Bellardi). *P. basilaris* was pre-occupied by Wiedemann, 1828, so Townsend (1912) proposed the new name *Pangonia tepicana* (Fairchild, 1971:11; Fairchild & Burger, 1994: 29) (Tabanidae).
12. *Pangonia semiflava*, p. 622. "Mexico". Now in *Esenbeckia* (*Ricardoia*) (Fairchild, 1971: 11; Fairchild & Burger, 1994: 28) (Tabanidae).

13. *Mydas interruptus*, p. 628; 1831: 46, pl. 53, fig. 12 (as *Midas* sic.). "Mexico". Unchanged (Papavero & Wilcox, 1968: 8) (Mydidae).
14. *Mydas rubidapex*, p. 626; 1931: 40, pl. 52, fig. 2 (as *Midas* sic.). "Mexico". Unchanged (Papavero & Wilcox, 1968: 9; Papavero, 1996: 632) (Mydidae).
15. *Anthrax latreillei*, p. 633. "Mexico, Oaxaca". Now in *Ligyra* (Painter *et al.*, 1978: 43) (Bombyliidae).
16. *Anthrax lacera*, p. 634. "Mexico". Now in *Stonyx* (Painter *et al.*, 1978: 34) (Bombyliidae).
17. *Anthrax clotho*, p. 635. "Mexico". Now in *Stonyx* (Painter *et al.*, 1978: 34) (Bombyliidae).
18. *Anthrax valida*, p. 636. "Mexico". Now in *Bryodemina* (Painter *et al.*, 1978: 24) (Bombyliidae).
19. *Anthrax astarte*, p. 637. "Mexico". Now in *Villa (Chrysanthrax)* (Painter *et al.*, 1978: 45) (Bombyliidae).
20. *Anthrax leucothoa*, p. 638. "Mexico". Now in *Villa (Paravilla)* (Painter *et al.*, 1978: 51) (Bombyliidae).
21. *Anthrax cyanoptera*, p. 638. "Mexico". Now in *Cyananthrax* (Painter *et al.*, 1978: 58) (Bombyliidae).
22. *Anthrax terminalis*, p. 639. "Mexico"? Now *Ogcodocera leucoprocta* (Wiedemann) (Painter *et al.*, 1978: 24) (Bombyliidae).
23. *Anthrax disjuncta*, p. 639. "Mexico". Now in *Lepidanthrax* (Painter *et al.*, 1978: 35) (Bombyliidae).
24. *Dasyopogon nitidus*, p. 643. "Mexico". Now in *Holcocephala* (Martin & Papavero, 1970: 7) (Asilidae).
25. *Leptogaster fervens*, p. 646. "Mexico". Same combination (Martin, 1968: 3) (Leptogastridae or Asilidae-Leptogastrinae).
26. *Empis spiloptera*, p. 5. "Mexico". Still in that genus (Smith, 1967: 24) (Empididae).
27. *Cyphomyia elegans*, p. 58. "Mexico". Now in *Euparyphus* (James, 1973: 31) (Stratiomyidae).
28. *Volucella lata*, p. 195. "Mexico, Oaxaca". Now *Copestylum latum* (Thompson *et al.*, 1976: 78) (Syrphidae).
29. *Tachina corpulenta*, p. 280. "Mexico". Now in *Adejeania* (Guimarães, 1971: 46) (Tachinidae).
30. *Trypeta scutellata*, p. 494. "Mexico". An unplaced species (Foote, 1967: 58) (Tephritidae).
31. *Trypeta scutellaris*, p. 484. "Mexico". Now in *Dyscrasis* (Steyskal, 1968b: 4) (Otitidae).
32. *Trypeta lichtensteinii*, p. 497. "Mexico". Now in *Ictericodes* (Foote, 1967: 29) (Tephritidae).
33. *Trypeta mexicana*, p. 511. "Mexico". Now in *Dyseuaresta* (Foote, 1967: 22) (Tephritidae).
34. *Calobata pectoralis*, p. 540. "Mexico". Now in *Micropeza* (Steyskal, 1968a: 4) (Micropezidae).
35. *Calobata divisa*, p. 540. "Mexico". Now in *Micropeza* (Steyskal, 1968a: 3) (Micropezidae).

By 1830, Mexico was the least known part of the Americas. Consulting Appendage 1, we see that Wiedemann had included in his *Aussereuropäische zweiflügelige Insekten* (1828, 1830) 2,053 “exotic” (i.e., non-European) species; 688 were reported from South America (mainly Brazil and the Guyanas); 319 from the United States (mostly collected by Say); the West Indies had only 48, and Mexico 28 (plus the species described by Wiedemann in 1821 and 1824 and the species described by Say).

## **2.- THE SPECIES DESCRIBED BY PIERRE JUSTIN MACQUART**

Pierre Justin Marie Macquart (Fig. 3) was born in Hazebrouck, 45 km west of Lille, France, in 1776. In his parental home there was a garden where Macquart first became interested in natural sciences. His older brother, a fellow of the “*Société des Sciences de Lille*”, was an ornithologist, and assembled a sizeable collection which, after his death, served as the starting point for the Lille Museum. A second brother was interested in botany, and built a botanical garden with over 3,000 species. Macquart also became interested in natural history, choosing entomology as his field. His first paper, published by the Lille Scientific Society, dealt with Psyllids.

At the age of 21 he had to leave his native place to join the Army of the Rhine. He went to Mannheim, entering the Corps of Engineers. During his leaves he was able to explore the banks of the Rhine, so rich in natural productions. He served the commander of the Army of Rhine, General Armand Samuel, Marquis of Mariscot, in the quality of secretary and draftsman. With the Army he visited Schwetzingen, Heidelberg and Mainz, passing to Switzerland, to Arau and nearby places. Afterwards the general staff moved on to Zürich, returning to Arau and Basel. While Macquart stayed at Basel he received the sad news of his mother’s death. He return to Lille, after an absence of 18 months (1797-1798).

From the military campaign through Germany and Switzerland he brought home German books, a herbarium, insects and birds.

Once established again in Lille he dedicated himself entirely to natural history, and during the winters studied in the public library of Lille. On 27 nivôse, “An” XI (1802) he was elected fellow of the “*Société des Sciences, de l’Agriculture et des Arts de Lille*”.

Macquart also travelled frequently to several regions of France, especially to Paris, where he followed the entomological lectures of Latreille. The great entomologist identified the collections gathered by Macquart and encouraged him in his career.

After a trip to Holland, Macquart’s “wandering life settled down by a happy marriage, followed by a happy and numerous paternity” (Macquart, 1850a).

Following his marriage, he moved from Hazebrouck to Lestrem, living in a house made of two towers, remains of a castle from the XIV century, in the middle of a beautiful village near the banks of the Lawe, a tributary of the Lys. Eventually, he became the mayor of Lestrem and a member of the “*Conseil Général du Pas de Calais*”.



**Figure 3**

Pierre Justin Marie Macquart. Photograph of his bust taken at the Museum of Natural History of Lille (N. Papavero).

He started then his studies of Diptera, made easier by Meigen's publications. With the help of the works of the great Master he started the study of the French Diptera, which resulted in his "*Diptères du Nord de la France*" (1828-1833). This work opened to him the important collections and libraries of the time: Blainville, Geoffroy de Saint-Hilaire, Férussac, Lepelletier de Saint-Fargeau, Audinet Serville, Audouin, Carcel, Al. Lefebvre, Brullé, Castelnaud, Winthem, etc.

Soon after the publication of this work, Latreille thought of editing a special work on insects, in collaboration with several entomologists, and invited Macquart to take care of the Diptera. This project, whose execution was delayed by the health of the editor, was afterwards started again, under the editorship of N. E. Roret, and the name changed to "*Collection des Suites à Buffon, formant avec les oeuvres de cet auteur un cours complet d'histoire naturelle*" (82 volumes, 11 atlases). Macquart worked very hard, preparing the "*Histoire Naturelle des Insectes Diptères*", studying the collections in the Paris Museum and several private collections. Once the two volumes were published (1834-1835), he received a number of collections of exotic flies and established relations with all the leading entomologists of his time.

In the meantime, he travelled throughout France and Belgium. In 1839 he visited Meigen in Stolberg, where he saw the collections, 3,000 drawings of flies done by the great dipterist and Meigen's library, which contained exclusively his own writings. As Meigen was in straitened circumstances, Macquart offered to buy all those collections. After obtaining permission from the authorities of the Paris Museum, Macquart acquired all that material. The drawings made by Meigen remained unpublished in the Paris Museum, being rediscovered by Matile (1974) and finally published (Morge, 1975).

Returning to the Museum of Paris, and having at his disposition the great collections brought home by the French expeditions and collecting naturalists in almost every corner of the globe, Macquart undertook the description of the new species in the Museum, since these had not been examined by Wiedemann while working on exotic flies, and only a few had been dealt with before in the works of Guerin-Méneville, Olivier, Robineau-Desvoidy and Macquart's own "*Histoire Naturelle des Insectes Diptères*". In this great series, published from 1838 to 1855, in two tomes and five supplements, he described some 1,800 species. In the first volume of his "*Diptères exotiques nouveaux ou peu connus*" (1838a: 15) he gave a list of the collections studied. As new collections arrived from the explorations of several travelling naturalists, such as Durville, Goudot, Pilate, Sallé, d'Orbigny, Claussen, Ghiesbreght, Saint-Hilaire, and others, Macquart published new supplements to this work.

In 1845, he visited Switzerland again, calling on Perty in Berne, and thence passed to Germany. Returning to France, he put his newly acquired entomological collections in order and returned to his work of classifying the exotic flies.

In 1850, he wrote a book on the "*Facultés intérieures des Animaux Invertébrés*" (Macquart, 1850a), in whose introduction he published an autobiography of 82 pages.

Macquart was elected fellow of the entomological and scientific societies of France, Normandy, Bordeaux, Turin, Lyon, Zürich, Malta, Stettin, and others, such as the Linnaean Society.

He died in 1855, the year of publication of the 5<sup>th</sup> Supplement of his "*Diptères exotiques nouveaux ou peu connus*". His bust was placed in the Museum of Natural History of Lille (Fig. 3).

Macquart's types of Diptera are partly in the "*Muséum National d'Histoire Naturelle de Paris*", partly (those belonging to the Bigot collection) in Oxford University (OXF) and the British Museum (Natural History); a few remained in the Museum of Natural History of Lille. In the Diptera section of the "*Muséum National d'Histoire Naturelle de Paris*" (MNHN) there exists a manuscript catalogue of the Diptera collection of Macquart still existing in Lille, organized by Julien Salmon, who saved what was left of the collection in 1899. The introduction to that catalogue says:

*"Catalogue de la collection des Diptères de Macquart (conservés au Musée d'Histoire Naturelle de Lille (Nord)).*

*Notice: Le 15 décembre 1854, Macquart fit don de sa bibliothèque et de ses collections entomologiques à la Société des Sciences et Arts de Lille.*

*Ces précieuses richesses en reçurent malheureusement pas les soins qu'elles méritaient: lorsque je retrouvai la collection Macquart en 1897, au Musée d'Histoire Naturelle de Lille, les anthrènes avaient élu domicile dans tous les cartons et continuaient leurs ravages sans être inquiétés. J'entrepris de sauver tout d'abord les débris de la collection des Diptères. Ceux-ci étaient répartis en trois groupes: 1° une collection renfermant un grand nombre d'espèces-types (Indiquée T dans ce catalogue); 2° une collection composée en grande partie d'espèces exotiques (Marquée G dans ce catalogue); 3° une collection paraissant avoir été composée par Macquart pour le Musée; car le catalogue imprimé de 1850 lui correspond exactement (Indiquée par M dans ce catalogue). Après avoir donné à ces Diptères les soins de préservation que réclamait leur état, j'en ai opéré le transfert dans des cadres neufs, en respectant rigoureusement l'ordre dans lequel je les ai trouvés dans les vieux cartons, et sans essayer aucune intercalation. Puis, à l'aide des ouvrages de Macquart (Mémoires de la Société des Science de Lille) et du Catalogue du*

*Musée, j'ai établi l'numération des espèces qui avaient échappé à la destruction et de celles dont il subsistait des débris observables.*

*On remarquera que certaines espèces d'un même genre se trouvent répétées plusieurs fois avec des annotations différentes; cela tient à ce que je me suis borné, faute de connaissances spéciales, à retranscrire avec la plus grande exactitude, le libellé de chaque étiquette, laissant aux spécialistes le soin d'en tirer les conclusions qu'il leur plaira.*

*Il semble aussi, au premier abord, que ce catalogue soit bien restreint, en comparaison du nombre considérable de Diptères décrits par Macquart. Mais, après avoir fait la part des ravages causés par Antrênes et par l'humidité, il faut tenir compte de l'observation suivante, présentée par le savant entomologiste lorsqu'il légua ses collections à la Société des Sciences: ". . . les espèces qui me furent communiquées pour la détermination et particulièrement la collection du Jardin des Plantes, celles recueillies par les Commissions scientifiques de Morée et d'Algérie, celles rapportées des les Canaries par MM. Webb et Berthelot, etc., me furent simplement confiées, et je me réservai seulement par convention avec les possesseurs, un individu sur quatre de la même espèce, ce qui m'enrichit que très médiocrement ma collection. On y chercherait donc vainement les types d'un grand nombre de genres nouveaux que j'ai publiés, surtout dans l'ouvrage sur les Diptères exotiques, que la Société a bien voulu comprendre dans ses mémoires et qui, accompagné de 186 planches, en contient pas moins de 2300 descriptions d'espèces nouvelles.*

*J'espère cependant que l'énumération des débris de cette collection célèbre, sera de quelque utilité aux Diptéristes qui l'avaient considérée jusqu'à présent comme entièrement détruite.*

*Lille, le 20 janvier 1899  
Signé: Julien Salmon"*

Macquart studied the collections brought from Mexico by Fontaine, Pilate, Ghiesbreght, Linden, and Funk. Let's examine what is known about the lives and itineraries of those naturalists.

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A "Fontaine" (or "Fontaines") was cited by du Petit-Thouars, in his telling of the voyage of the frigate "La Vénus" (1840-1843). Pierre-Antoine Fontana, "dit Fontaine", was "*capitaine d'armes de première classe*" aboard the frigate "La Vénus", commanded by du Petit-Thouars. The frigate left Brest on December 29, 1836, for Teneriffe (January 1837) and then for Fernando de Noronha and Cabo Frio



(February 3) in Brazil. The frigate landed in Rio de Janeiro, staying there from February 4 to 16, going afterwards to Florianópolis, Montevideo (February 24), Buenos Aires, Cape Horn, and Valparaíso (March 27), whence some members of the expedition followed to Santiago overland. Leaving Valparaíso on May 13, they visited several localities on the Peruvian coast, and from Callao (June 14) departed for the Sandwich Islands and other places, returning afterwards to Monterey, California. They then explored the localities of Guadalupe (November 19, 1837), bahía de Magdalena, San Lucas, San Pedro del Cabo, Isla Venado, Mazatlán, Golfo de Cortés, Isla Isabel, San Blas, Tepic, and Acapulco in Mexico. Proceeding then to the Easter Island, they returned again to the South American Pacific coast, touching the Juan Fernández Islands, landing in Valparaíso. After visiting some islands, they headed for the Marquesas (du Petit-Thouars, 1840-1843). However, no reference is made by Petit-Thouars to "Fontaine" as zoological collector, credit being given to the ship surgeon, Adolphe Simon Nébox, "*chirurgien de première classe*", who sent collections of animals, especially birds and insects, to the Paris Museum. Thus, we cannot be sure whether the "Fontaine" cited by Macquart is the same as the one who participated in the "La Vénus" expedition.

Louis Pilate, according to Sallé (1852), travelled through the United States (Alabama, Louisiana, and Texas) and explored the State of Yucatan in Mexico. Returning to France, Pilate decided to visit Mexico again, and came to Yucatan for a second time in 1849. After a prolonged stay in that part of the country, Pilate moved to Mexico City, where he died on March 17, 1852, at the age of 36 years, of "a hypertrophy of the heart". The relation of Pilate's activities and descriptions of the regions he visited were published by himself in 1846, as follows (translation):

*"The province of Yucatan, situated in the southeast of the Gulf of Mexico, extends nearly from 17-29° of latitude. Even in the north, the thermometer does not go below 11° Réamur (=13.75°C, 56.75°F) during the coldest part of the winter; the heat there is considerable in the summer. The northern part down to Campeche is general arid; it is, so to say, only a vast rock, nearly level and with a wrinkled surface. A single chain of hills about a hundred meters or more in elevation, originates a little south of Campeche, follows the coast northward a few kilometres inland for about 20 leagues, and then turns south-eastward to the rocky part of the peninsula. One finds there, at various places, especially in the Northeast, a kind of subterranean ponds called locally senotes (sic!); otherwise there is no water during the dry season except in wells, that is, from November to the end of May. The vegetation is poor, the thinness of the soil permits nothing to live but shrubs, mostly of the Mimosa family, and rarely are there trees whose highest branches attain more than 10 meters of height. I am not speaking of the cultivated places that are*

*continually irrigated. About a dozen leagues south of Campeche, a terrain of another nature starts -from the little river of Champoton, the land is low, flat, humid, and inundated for several months of the year. Finally, in the southern part, rivers abound and the vegetation is magnificent. There is never any dryness there and the country is very unhealthy. I lived in the capital (Merida, in the Northeast) for 5 years and made only short trips to other localities; there was hardly anything in the north that I could secure besides insects. It is easy to imagine that I would find little, and generally only small insects, in a dry and sterile land. I might add that except for a dozen Coleoptera, everything is rare; in 4 or 5 hours of searching I often found only a few specimens. However, in May and June there are more. In the rainy season diurnal Lepidoptera are abundant, but not of many kinds. Except for mosquitoes and the housefly, Diptera are very rare, and I would say the same about all other insects. I needed plenty of perseverance, a very determined attitude, and the aid of a domestic for 10 years, with nothing else to do but collect, to gather here 8,000 Coleoptera comprising almost 720 species, of which 500 about are new”.*

August B. Ghiesbreght (the Ghisbrecht or Ghiesbrecht of Macquart) (1810-1893; cf. Barnhart, 1927, 1965; Breedlove, 1981; Hemsley, 1887; Knobloch, 1983; Linden, 1867; Lorence & García, 1989; McVaugh, 1972; Papavero, 1971b; Pennell, 1945; Rovirosa, 1889; Rzedowski & Rzedowski, 1989) was the zoologist of a Belgian commission charged by the government to undertake a scientific exploration of Mexico and other tropical countries. The other two members were Jean Jules Linden (1817-1898) (Barnhart, 1927, 1965; Breedlove, 1981; Hemsley, 1887; Linden, 1867; Papavero, 1971b; Pennell, 1945; Röhl, 1938a, b; Stafleu & Cowan, 1981 (3:42); Standley, 1930), a botanist, and Nicholas Funck (1817-1896) (Barnhart, 1927, 1965; Hemsley, 1887; Linden, 1867; Papavero, 1971b), the artist of the expedition. Their first travel was to Brazil, where they arrived in December 1835, visiting the provinces of Rio de Janeiro, Espírito Santo, Minas Gerais, and São Paulo. In March 1837, they returned to Belgium with the zoological and botanical collections obtained. Their second travel was made to Cuba, where they arrived in December 1837. The Belgians spent 3 months on the island, exploring its northern and western districts, and left in March 1838 for Mexico. There they visited the plateau of Anáhuac, the volcanoes Popocatepetl and Iztaccihuatl, the peak of Orizaba, the Cofre de Perote, and all the eastern slope of the Cordillera. From Veracruz they sailed to Campeche, crossed Yucatan and then went by sea to visit the state of Tabasco and later Chiapas, entering also northern Guatemala. Linden then went to Havana and the United States and the commission returned in February 1841 to Belgium. It seems that, from 1840 on, Ghiesbreght travelled alone, living in Tabasco, and then in Chiapas; although repeatedly visiting Europe,

Ghiesbreght spent many years in Mexico. Although only the name Ghiesbreght is cited by Macquart, it is possible that in the same collections, insects collected by Linden and Funck were also included. According to the Paris Museum manuscript book of accessions (*catalogue des animaux sans vertèbres*, vol. 3, p. 83), Ghiesbreght sold insects to the Museum in 1842, for 30 francs per hundred specimens.

No Mexican species was described by Macquart in his "*Histoire naturelle des insectes diptères*" (1834-1835).

In his "*Diptères exotiques nouveaux ou peu connus*" (1838-1850), Macquart described 794 Neotropical species, only 71 being Mexican, as follows:

1838a:

1. *Pachyrhina quadrilineata*, p. 50 (%&), "Mexique (Coll. Lefebvre)". Now *Nephrotoma ferruginea* (Fabricius, 1805) (Alexander & Alexander, 1970: 17) (Tipulidae).
2. *Odontomyia lefebvrei*, p. 189 (%), "Mexique (Coll. Lefebvre)". Now *Hedriodiscus lefebvrei* (Macquart) (James, 1973: 41) (Stratiomyidae).
3. *Odontomyia emarginata*, p. 190 (%), "Mexique (Coll. Lefebvre)". Same generic combination (James, 1973: 44) (Stratiomyidae).

1842:

4. *Volucella mexicana*, p. 25 (&), "Mexique"- Type N° 1645 (Box 53), in MNHNP; also a specimen in Lille (M13). Now *Copestylum mexicanum* (Macquart) (Thompson *et al.*, 1976: 79) (Syrphidae).
5. *Helophilus mexicanus*, p. 64 (&), "Mexique (Coll. Lefebvre)"- Type in Lille (T6). Now *Aemosyrphus mexicanus* (Macquart) (Thompson *et al.*, 1976: 97) (Syrphidae).

1843a:

6. *Dejeania analis*, p. 34 (%), "Mexique"- Type N° 1727 in MNHNP lost. Now *Adejeania analis* (Macquart) (Guimarães, 1971: 46) (Tachinidae).
7. *Dejeania rufipalpis*, p. 35 (%), "Mexique". Now *Adejeania rufipalpis* (Macquart) (Guimarães, 1971: 47) (Tachinidae).
8. *Jurinia lateralis*, p. 42 (%), "Mexique". Now *Archytas lateralis* (Macquart) (Guimarães, 1971: 50) (Tachinidae).
9. *Hystricia amoena*, p. 44 (%), "Mexique"- Type N° 1749 in MNHNP, lost. Same generic combination (Guimarães, 1971: 41) (Tachinidae).
10. *Hystricia testacea*, p. 44 (%&), "Mexique (Coll. Lefebvre) et Amérique du Nord"- Specimen in Lille (G14). An unrecognized species of *Bombyliopsis* (Guimarães, 1971:40) (Tachinidae).
11. *Micropalpus ornatus*, p. 48 (%), "Mexique et Colombie"- Type N° 1753 (Box 56) in MNHNP. Now *Cryptopalpus ornatus* (Macquart) (Guimarães, 1971: 61) (Tachinidae).
12. *Blepharipeza rufipalpis*, p. 55 (sex?), "Mexique et Cuba"- Type (from Cuba) N° 2551 in Coll. Sagra/Bigot, MNHNP. Now *Leschenaultia leucophrys* (Wiedemann, 1830) (Guimarães, 1971: 186) (Tachinidae).

13. *Lucilia brunnicornis*, p. 142 (&), "Mexique, Mozaid (?)"- Type N° 1847 in MNHNP, lost. Now *Phaenicia (Phaenicia) purpurascens* (Walker, 1837) (James, 1970: 11) (Calliphoridae).
14. *Lucilia mexicana*, p. 143 (%), "Mexique"- Types N° 1850 (4 specimens) (Box 60) in MNHNP. Now *Phaenicia (Phaenicia) mexicana* (Macquart) (James, 1970: 11) (Calliphoridae).
15. *Curtonevra mexicana*, p. 158 (%&), "Mexique". Now *Neomusca mexicana* (Macquart) (Pont, 1972: 50) (Muscidae).
16. *Herina mexicana*, p. 208 (sex?), "Mexique". Now *Senopterina* Macquart (Steyskal, 1965: 657) (Platystomatidae).
17. *Drosophila mexicana*, p. 259 (%), "Mexique"- Types N° 1998 (Box 66) (2 wings glued to piece of cardboard) in MNHNP. An unplaced species (Wheeler, 1970:30) (Drosophilidae).
18. *Olfersia mexicana*, p. 297 (sex?), "Mexique"- Types N° 2015 (2 specimens) (Box 66) in MNHNP. Now *Lynchia nigra* (Perty, 1833) (Guimarães, 1968a:6) (Hippoboscidae).

1846:

19. *Pachyrhina mexicana*, p. 12 (%), "Mexique (Coll. Guérin-Méneville)"- Type N° 1240 in MNHNP, lost. Now *Nephrotoma mexicana* (Macquart) (Alexander & Alexander, 1970: 17) (Tipulidae).
20. *Tabanus ruber*, p. 42 (&), "Mexique (Coll. Guérin-Méneville)"- Type N° 1345 in MNHNP. Now *Tabanus subruber* Bellardi, 1859 (Fairchild, 1971: 102; Fairchild & Burger, 1994: 150) (Tabanidae).
21. *Cyphomyia fenestrata*, p. 48 (%&), "Mérida, Yucatán (Pilate)"- Specimen in Lille (M6). Now *Cyphomyia albitarsis* (Fabricius, 1805) (James, 1973: 26) (Stratiomyidae).
22. *Hermetia coarctata*, p. 50 (&), "Mexique (Coll. Fairmaire)". Same generic combination (James, 1973: 37) (Stratiomyidae).
23. *Hermetia planifrons*, p. 50 (%), "Mérida, Yucatán (Pilate)". Now *Hermetia albitarsis* Fabricius, 1805 (James, 1973:36) (Stratiomyidae).
24. *Odontomyia rubicornis*, p. 53 (%), "Mérida, Yucatán (Pilate)". Type N° 1440 in MNHNP, lost. Now *Labostigmina rubicornis* (Macquart) (James, 1973: 43) (Stratiomyidae).
25. *Ephippium fenestrata*, p. 54 (%&), "Mérida, Yucatán (Pilate)". Type N° 1445 in MNHNP, lost; specimen in Lille (G5). Now *Adoxomyia fenestrata* (Macquart) (James, 1973: 30) (Stratiomyidae).
26. *Sargus speciosus*, p. 56 (&), "Mérida, Yucatán (Pilate)". Same generic combination (James, 1973: 20) (Stratiomyidae).
27. *Dasypogon candidus*, p. 67 (%), "Veracruz (Coll. Spinola)". Now *Stichopogon trifasciatus* (Say, 1823) (Martin & Papavero, 1970: 5) (Asilidae).
28. *Dasypogon mexicanus*, p. 68 (%), "Mexique (Coll. Guérin-Méneville)". Type N° 1480 in MNHNP, lost. An unrecognized species (Martin & Papavero, 1970: 90) (Asilidae).
29. *Dasypogon nigratarsis*, p. 68 (%), "Mexique (Coll. Guérin-Méneville)". Type N° 1481 in MNHNP, lost. Now *Diogmites nigratarsis* (Macquart) (Martin & Papavero, 1970: 26) (Asilidae).
30. *Megapoda cyaneiventris*, p. 71 (&), "Mexique (Coll. Robyns)". Type N° 1507 in MNHNP. Now *Pseudorus distendens* (Wiedemann, 1828) (Papavero, 1975) (Asilidae).

31. *Atomosia tibialis*, p. 76 (%), "Mérida, Yucatán (Pilate)". Type lost. Same generic combination (Artigas *et al.*, 1991: 59) (Asilidae).
  32. *Erax argyrogaster*, p. 84 (%&), "Mérida, Yucatán (Pilate)". Type not in Paris. Now *Efferia argyrogaster* (Macquart) (Martin & Papavero, 1970: 63) (Asilidae).
  33. *Asilus mexicanus*, p. 94 (%), "Mexique (Coll. Guérin-Méneville)". Type lost. Now *Machimus (Tolmerus) mexicanus* (Macquart) (Martin & Papavero, 1970: 86) (Asilidae).
  34. *Hirmoneura brevirostris*, p. 101 (%), "Mérida, Yucatán (Pilate)". Now *Hirmoneura (Hymnophlaeba) brevirostris* Macquart (Papavero, 1968: 3) (Nemestrinidae).
  35. *Exoprosopa pilatei*, p. 110 (%), "Mérida, Yucatán (Pilate)". Now *Ligyra pilatei* (Macquart) (Painter *et al.*, 1978: 44) (Bombyliidae).
  36. *Exoprosopa limbipennis*, p. 110 (%), "Mérida, Yucatán (Pilate)". Type N° 1595 in MNHNP. Now *Exoprosopa argentifasciata* (Macquart, 1846) (Painter *et al.*, 1978: 39) (Bombyliidae).
  37. *Geron rufipes*, p. 119 (%&), "Mérida, Yucatán (Pilate)". Same generic combination (Painter *et al.*, 1978: 17) (Bombyliidae).
  38. *Psilopus incisuralis*, p. 120 (&), "Mérida, Yucatán (Pilate)". Now *Condylostylus incisuralis* (Macquart) (Robinson, 1970: 8) (Dolichopodidae).
  39. *Mixogaster mexicanus*, p. 123 (&), "Mexique (Coll. Robyns)". Type in MRHNB. Now *Mixogaster mexicana* Macquart (Thompson *et al.*, 1976: 58) (Syrphidae).
  40. *Volucella tibialis*, p. 123 (&), "Mérida, Yucatán (Pilate)". Type not found. Now *Copestylum tibiale* (Macquart) (Thompson *et al.*, 1976: 85) (Syrphidae).
  41. *Syrphus delineatus*, p. 139 (&), "Mexique (Coll. Robyns)". Type in MRHNB. An unplaced species (Thompson *et al.*, 1976: 39) (Syrphidae).
  42. *Baccha lineata*, p. 139 (&), "Texas ou Yucatán (Pilate)". Now *Ocyptamus lineatus* (Macquart) (Thompson *et al.*, 1976: 21) (Syrphidae).
  43. *Trichopoda mexicana*, p. 172 (&), "Mexique (Coll. Robyns)". Same generic combination (Guimarães, 1971: 9) (Tachinidae).
  44. *Dexia rubriventris*, p. 189 (%), "Mérida, Yucatán (Pilate)". Now *Ptilodexia rubriventris* (Macquart) (Guimarães, 1971: 33) (Tachinidae).
  45. *Dexia fuscanipennis*, p. 188 (&), "Mérida, Yucatán (Pilate)". An unrecognized Dexiinae (Guimarães, 1971: 122) (Tachinidae).
  46. *Lucilia meridensis*, p. 199 (%&), "Mérida, Yucatán (Pilate)". Actually not a species of Calliphoridae, now *Morellia meridensis* (Macquart) (Pont, 1972: 9) (Muscidae).
- 1847:
47. *Dichelacera scapularis*, p. 15 (&), "Mexique (Coll. Bigot)". Same generic combination (Fairchild, 1971: 64; Fairchild & Burger, 1994: 98) (Tabanidae).
  48. *Tabanus apicalis*, p. 20 (sex?), "Mexique (Coll. Bigot)". Now *Tabanus bigoti* Bellardi, 1859 (Fairchild, 1971: 84; Fairchild & Burger, 1994: 132) (Tabanidae).
  49. *Sargus nigrifemorata*, p.31 (%), "Mexique (Coll. Bigot)". Now *Himantoloba nigrifemorata* (Macquart) (James, 1973: 10) (Stratiomyidae).
  50. *Ceraturgus rufipennis*, p. 32 (&), "Mexique (Coll. Bigot)". Type OXF. Now *Taracticus rufipennis* (Macquart) (Martin & Papavero, 1970: 35) (Asilidae).
  51. *Dasypogon nigripennis*, p. 34 (&), "Mexique (Coll. Bigot)". Type OXF. Now *Diogmites nigripennis* (Macquart) (Martin & Papavero, 1970: 26) (Asilidae).

52. *Dasyopogon dimidiatus*, p. 35 (%), "Mexique (Coll. Bigot)". Type OXF. Now *Taracticus dimidiatus* (Macquart) (Martin & Papavero, 1970: 35) (Asilidae).
53. *Lampria mexicana*, p. 37 (%), "Mexique (Coll. Bigot)". Type OXF. Same generic combination (Martin & Papavero, 1970: 40) (Asilidae).
54. *Ommatius pumillus*, p. 42 (&), "Mexique (Coll. Bigot)". Type OXF. Same generic combination (Martin & Papavero, 1970: 59) (Asilidae).
55. *Eristalis mexicanus*, p. 59 (%), "Mexique (Coll. Bigot)". Type BMNH. Now *Palpada mexicana* (Macquart) (Thompson *et al.*, 1976: 107) (Syrphidae).
56. *Lucilia violacea*, p. 83 (%), "Mexique (Coll. Bigot)". Now *Phaenicia purpurescens* (Walker) (James, 1970: 11) (Calliphoridae).

1850:

57. *Pangonia planiventris*, p. 26 (&), "Mexique (Muséum)". Type N° 1322 in MNHNP. Now *Esenbeckia (Ricardoia) planiventris* (Macquart) (Fairchild, 1971: 11; Fairchild & Burger, 1994: 28) (Tabanidae).
58. *Pangonia nigronotata*, p. 27 (%&), "Mexique (Muséum)". Type N° 1324 in MNHNP. Now *Esenbeckia (Ricardoia) nigronotata* (Macquart) (Fairchild, 1971: 11; Fairchild & Burger, 1994: 27) (Tabanidae).
59. *Pangonia bicolor*, P. 27 (&), "Mexique (Muséum)". Type N° 1325 in MNHNP. Now *Esenbeckia (Ricardoia) semiflava* (Wiedemann, 1830) (Fairchild, 1971: 11; Fairchild & Burger, 1994: 28) (Tabanidae).
60. *Tabanus albiscutellatus*, p. 34 (&), "Mexique (Ghiesbreght)". Type N° 1365 in MNHNP. Now *Leucotabanus exaestuans* (Linnaeus, 1758) (Fairchild, 1971: 83; Fairchild & Burger, 1994: 123) (Tabanidae).
61. *Odontomyia flavifasciata*, p. 53 (&), "Mexique (Ghiesbreght)". Type N° 1442 in MNHNP. Now *Hedriodiscus lefebvrei* (Macquart, 1838) (James, 1973: 41) (Stratiomyidae).
62. *Mydas vittatus*, p. 60 (%), "Mexique (Coll. Brémond)". Type N° 1460 in MNHNP. Now *Stratiomydas rufiventris* (Macquart, 1850) (Papavero, 1996:632) (Mydidae).
63. *Dasyopogon fasciventris*, p. 69 (%), "Mexique (Coll. Bigot)". Type OXF. Now *Stichopogon trifasciatus* (Say, 1823) (Martin & Papavero, 1970: 5) (Asilidae).
64. *Mallophora fulviventris*, p. 77 (&), "Mexique (Ghiesbreght)". Type N° 1101 in MNHNP. Same generic combination (Martin & Papavero, 1970: 74) (Asilidae).
65. *Mallophora fulvianalis*, p. 78 (&), "Mexique (Ghiesbreght)". Type N° 1102 in MNHNP. A synonym of *M. fulviventris* Macquart? (Martin & Papavero, 1970: 74) (Asilidae).
66. *Mallophora pica*, p. 78 (%), "Mexique ou Bolivie (M. d'Orbigny)". As d'Orbigny never collected in Mexico, this species is probably from Bolivia. Type N° 1103 in MNHNP. Same generic combination (Martin & Papavero, 1970: 75) (Asilidae).
67. *Anisotamia eximia*, p. 115 (%), "Mexique (Ghiesbreght)". Type N° 1615 in MNHNP. Now *Bryodemina valida* (Wiedemann, 1830) (Painter *et al.*, 1978: 24) (Bombyliidae).
68. *Eristalis testaceicornis*, p. 138 (&), "Mexique". Type OXF. Now *Palpada testaceicornis* (Macquart) (Thompson *et al.*, 1976: 104) (Syrphidae).
69. *Hystricia ambigua*, p. 172 (&), "Mexique (Coll. Bigot)". Now *Jurinella ambigua* (Macquart) (Guimarães, 1971: 56) (Tachinidae).
70. *Prosenia mexicana*, p. 231 (%&), "Mexique (Ghiesbreght)". Type N° 1798 in MNHNP. Now *Mochlosoma mexicanum* (Macquart) (Guimarães, 1971: 31) (Tachinidae).

Finally, in an article from 1852, Macquart described from Mexico his last species:

71. *Megistopoda pilatei*, p. 332, pl. 4, fig. 4. (sex?), Mexico, Tabasco, Teapa (Pilate) (Wenzel, 1970: 9) (Streblidae).

### 3. THE SPECIES DESCRIBED BY JOHN OBADIAH WESTWOOD

John Obadiah Westwood (Fig. 4) was born at Sheffield, England, on December 22, 1805, and died shortly after completing his 87<sup>th</sup> year, on January 2, 1892, at Oxford. His father was a die sinker at Sheffield, but afterwards removed to Lichfield. When nearly 16 years of age, Westwood went to London to be articled to a solicitor, and though he devoted his attention more to the study of natural history than of law, he was admitted to the bar as a solicitor and became partner in a firm. Having some private means, which he augmented by writing and drawing, he was able to neglect his profession and devote himself entirely to entomology and archaeology. Westwood was actively associated with the Entomological Society of London, from its foundation in 1831, and was for many years its secretary. Subsequently, he was elected president when the Society celebrated its jubilee in 1833. He was also a fellow of the Linnaean Society from 1827.

Westwood's dipterological publications include short papers describing miscellaneous new species (1835a, 1835b), a revision of the Mydidae (1841), descriptions of a new species of *Systropus* (Bombyliidae) (1842), and two papers on Acroceridae (1848, 1876). Among his other publications, special mention must be made to his "Introduction to the modern Classification of Insects", a systematic arrangement of the genera of British Insects (1840).

In 1858, the Reverend F. W. Hope, a wealthy amateur, who had been for years a warm friend and patron of Westwood, and had purchased his collection, gave the specimens to the University of Oxford, and founded a Professorship of Invertebrate Zoology, which bears his name. Westwood was appointed the first Hope Professor and in consequence removed to Oxford, where he was a conspicuous figure in the University for 35 years (Anon, 1893; Wandolleck, 1893).

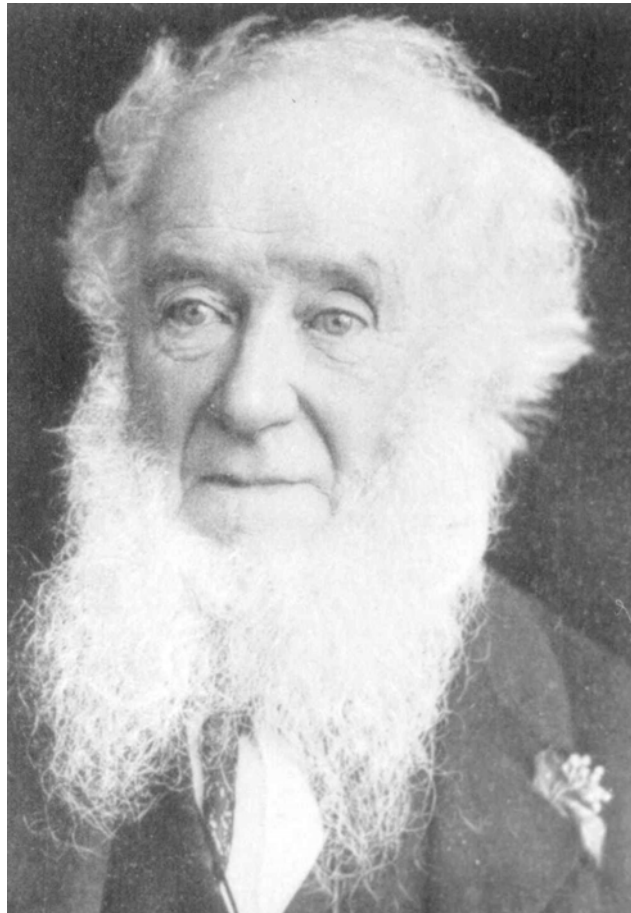
Westwood described only a few species of Mexican Diptera:

1. *Mydas dives*, 1841: 50, pl. 13, fig. 1. "Mexico (locality unknown)". (& OXF). Now *Protomydas rubidapex* (Wiedemann) (Wilcox *et al.*, 1989: 16; Papavero, 1996: 632) (Mydidae).
2. *Mydas crassipes*, 1841: 51, pl. 13, fig. 3. "North America". Now *Ceriomydas crassipes* (Westwood) (Wilcox *et al.*, 1989: 107) (Mydidae).

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3. *Mydas senilis*, 1841: 52. "Mexico, Tacubaya (Coffin)". (% OXF). Unchanged (Wilcox *et al.*, 1989: 41; Papavero, 1996: 631) (Mydidae).
4. *Mydas basalis*, 1841: 53. "Mexico, Tacubaya (Coffin)". (& OXF). Now a junior synonym of *Mydas senilis* Westwood (Wilcox *et al.*, 1989: 41-42; Papavero, 1996: 631) (Mydidae).
5. *Systropus faenoides*, 1842: 3. "Mexico". Unchanged (Painter *et al.*, 1978: 18) (Bombyliidae).

Nothing is known about the collector "Coffin".



**Figure 4**

John Obadiah Westwood. Photograph property of N. Papavero.



#### 4. THE FIRST CUTEREBRIDAE, DESCRIBED BY BRACY CLARK

The oldest known reference to a Mexican Cuterebridae (now subfamily Cuterebrinae of Oestridae, according to Wood, 1987) is found in Fray Bernardino de Sahagun's "*Historia General de las cosas de la Nueva España*". Sahagun, who lived in New Spain from 1529 to 1590, said in that book that there existed "*gusanos que crían en los brazos o miembros de los conejos y ratones*" (worms that live in the marms or members of rabbits and rats); those worms could be seen "*metidos dentro de la carne y miran hacia fuera*" (placed within the flesh, looking to the outside). Those larvae, certainly of *Cuterebra*, were called "*nacaocuilin*" (from nahuatl "*nacatl*"= flesh, and "*ocuilin*"= worm) (Vogelsang & Martín del Campo, 1947: 50). Sahagun described the opening of the wound where the larva lives and its posterior spiracles, taken by him as "eyes", "looking to the outside" (Guimarães *et al.*, 1983: 241).

But the first scientific description of a Mexican Cuterebridae would be made only in 1848, by Bracy Clark, a veterinary surgeon and Fellow of the Linnaean Society of London. In that paper he described *Cuterebra atrox* from Mexico. Sabrosky (1986: 149) said:

*"Holotype of atrox, female, Mexico (Oxford). Clark (1848) stated that the species, from a specimen in the Westwood collection, was "believed to inhabit Africa" ("Habitasse creditur in Africa"), but Westwood himself crossed out those words in the Oxford University copy of Clark's paper and wrote in the margin "Habitat certe in Mexico, J. O. W.", as already noted by Austen (1895). Austen also stated that the type is "apparently a male", but he corrected this in 1933 to female"*.

As also commented by Sabrosky (1972: 89), on November 1<sup>st</sup>, 1796, Bracy Clark (for a biography see *Proc. Linn. Soc. London, 1861: xxi-xxiv*) read to the Linnaean Society an important paper on "Observations on the genus *Oestrus*", and the following year published it in the third volume of the Society's *Transactions*. This was expanded and published in 1815 as his famous "*An essay on the bots of horses and other animals*". Clark's works are particularly significant contributions to the knowledge of oestroid flies, with their keen and direct observations on then little known, confused and misunderstood life histories and immature stages of the bot and warble flies. Over the next decades he published a few other papers, ending with three short comments in 1857, in his 87<sup>th</sup> year. He died in 1860.

Sabrosky (1972) published a very interesting paper on the "rediscovery" of the bot fly collection of Clark.

## **5. THE SPECIES DESCRIBED BY FRANCIS WALKER**

Francis Walker (Fig. 5) was the seventh son, and the tenth and youngest child of Mr. John Walker, a gentleman of independent fortune, residing at Arno's Grove, Southgate, where Francis was born on July 31, 1809. His father had a decided taste for scientific activities, especially natural history; he was a fellow of the Royal and Horticultural Societies and vice-president of the Linnaean, so that his son's almost boyish propensity for those studies could be explained by those influences.



**Figure 5**  
Francis Walker. Photograph.

In 1816 Walker's parents were staying with their family in Geneva, then the center of a literary coterie in which they met, among other celebrities, Lord Byron, Madame de Staël, and the naturalists Saussure and Vernet. They spent more than a year in Geneva and Vevey, and in 1818 proceeded to Lucerne, from which place Francis, then a boy nine years of age, made the ascent of Mount Pilatus, in company with his elder brother Henry; their object, in addition to mountain climbing, being the collecting of butterflies. The family afterwards visited Neuwied and returned to Arno's Grove in 1820.

In 1830 the two brothers, Henry and Francis, again visited the continent, and now it was purely an entomological tour; Mr. Curtis, the well-known author of "British Entomology", being their companion. This party collected the French Satyridae most assiduously on the Island of Jersey and afterwards at Fontainebleau, Montpellier, Nantes, Vaucluse, etc.

Walker's career as an author commenced in 1832. He contributed to the first number of the "Entomological Magazine", the introductory chapter of his "*Monographia Chalciditum*".

In 1834, somewhat reluctantly, he consented to undertake the editorial management of the Entomological Magazine, but resigned this office the following year, yet continued to be a constant contributor to its pages. The same year he visited Lapland.

From 1837 to 1863 he was hired by the British Museum to describe the insect collections, receiving £1 per genus and 1 shilling per species. During his lifetime, as calculated by Horn (1937: 432), Walker prepared some 20,000 ("*zahllosen und trostlosen*"= innumerable and untrustworthy) descriptions of insects in several orders.

Walker's first paper on neotropical flies was published in 1837, containing the descriptions of the Diptera collected during Captain P. P. Kinks survey of the Straits of Magellan.

In 1849 (May) Walker married May Elizabeth, the oldest daughter of Mr. Ford, of Ellet Hall, near Lancaster, and spent the summer on the Continent, again collecting in Switzerland.

In 1848 he had explored the Isle of Thanet, and in 1849 he went to the Island of Wright. During those two years the first four volumes of the "List of the specimens of Dipterous Insects in the collection of the British Museum" were published. In the succeeding years, 1850 and 1851, he visited Geneva and Interlaken. During 1850, he published the first part of a work on the Diptera in the collections of W. W. Saunders (1850a), and a smaller number of new species in the "*Zoologist*" (1850b). He also commenced work on Diptera for a projected series of works on British insects, to be called "*Insecta Britannica*".

In 1851 and 1852, the second and the third parts of his "*Insecta Saundersiana*" were published (1851, 1852a, b), and from 1854 to 1856 the three supplements (=vols. 5-7) of the "List".

In 1856 appeared the last (fourth) part of the "*Insecta Saundersiana*", and in 1857 Walker published the first part of the "*Characters of undescribed Diptera in the collection of W. W. Saunders*", in the "*Transactions of the Royal Entomological Society*".

Another tour of the Continent occupied a considerable portion of 1857, with Walker visiting Calais, Rouen, Paris, Strasbourg, Baden-Baden, Heidelberg, Wiesbaden, Frankfurt, Mainz, Köln, Brussels, Aix-la-Chapelle and Antwerp. During this journey he collected in the Black Forest.

In 1860, the second part of the "*Characters*" was published (and here he described the great majority of his new species of Mexican flies) and the summer of this same year was devoted to a thorough exploration of the Channel Islands. In 1861 Walker's excursions were confined to North Devon, and the third part of the "*Characters*" was published. In 1863 he toured the English lakes.

In the spring of 1865 he visited North Wales and Ireland. In the autumn he again visited Paris, Geneva, Lucerne, Interlaken, and Altdorf, ascending the Righi, Mount Pilatus and the Mürren, proceeding to Kanderstag, the Oeschinen See and the Gemmi Pass.

In 1867, we find him again in France and Switzerland, ascending the Col de Voza and examining the Jardin of the Mer de Glace; thence over the Tête Noire to Martigny, Sion, and the Great St. Bernard, returning through St. Maurice and Villeneuve to Geneva.

In 1868 he made the tour of the Isle of Mann and returned to Holyhead; in 1870 he paid another visit to Llanberis, as well as to all the more beautiful scenery in North Wales, crossing over to Ireland and touring that island from south to north; and in 1874 he examined entomologically the Scilly Islands and the districts of the Lizard and the Land's End.

In 1872 he turned his attention to Italy, visiting Rome, Piza, Lucca, Florence, Naples, Sorrento, Capri, Milan and Venice, as well as the lakes Como and Maggiore.

Finally, in 1874, he had again proceeded as far as Aberystwith, on his way to Ireland, when his intention was frustrated by illness, which terminated fatally on the 5<sup>th</sup> of October, 1874 (Newman, 1874).

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Walker used to take the insects of the British Museum home to describe them. It is said by Horn (1937: 432) that *“dem brave Fr. Walker passierte dabei nicht selten, dass ihm “die ganze Geschichte” auf die Strasse fiel!”* (Not seldom it happened to the brave Fr. Walker that whole “kit and kaboodle” fell into the street!). His careless descriptions aroused much argument, and it is stated by an anonymous writer at the “Entomological Monthly Magazine” for 1874 (p. 141):

*“The authorities of the British Museum who permitted the scandal came under the lash of such criticism as has happily seldom been directed against scientific men. This criticism had no other effect than (apparently) to increase the evil. Walker, by nature, appeared to be utterly indifferent to anything that could be hurled at him, and the only apparent answer on the part of the ruling power at the Museum was the commencement of catalogues of hiterto unassailed groups or orders”.*

Baron Osten Sacken was especially acid when he wrote about Walker (1878: xvi-xix):

*“Mr. Walker’s writings on the order of Diptera are no better than his publications on Lepidoptera, Hemiptera and Orthoptera, as characterized by other authors. The same species are often found described under several different specific names and placed in different genera; well characterized species of a certain genus are placed in the wrong, sometimes in very distant genera, or even in the wrong family. In the great majority of cases, the descriptions of a new species were drawn from a single, often hardly recognizable specimen; and when new species happen to be represented by more than one type-specimen, these are almost sure to belong to different species. (Here Osten Sacken cites several instances of Walker’s misidentifications and proceeds:) Mr. Walker’s identifications of the species of former authors are often, I may say in most cases, incorrect. These facts are given as a warning for entomologists not to trouble themselves too much about the interpretation of Mr. Walker’s descriptions, because in most cases they will find themselves misled by the very data furnished by him... The authorities of the British Museum, in a most praiseworthy, and truly scientific spirit, have bestowed a great deal of labour upon preserving and labelling Mr. Walker’s types. But the task of singling out the original type of the description from among the specimens added afterwards is by no means an easy one, often hardly possible. Furthermore, it is a well-known fact that authors are apt not to be very careful with their own types; to remove and displace them, when made aware of an error; and Mr. Walker, in this respect, was not an exception. Neither this, nor any other types can, therefore, be*

*implicitly relied upon, and we have, ultimately, to fall back on the descriptions. In rescuing those of Mr. Walker's descriptions, which are available and in rejecting the remainder, as useless, we pursue, I think, a course consistent both with justice and scientific expediency".*

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Walker described over 750 species of Neotropical Diptera, 91 from Mexico (listed below). It is very difficult, if not impossible, to say in which part of Mexico they were collected, as Walker, with most other authors from the XIX century, was extremely careless in citing the type-locality. We also know practically nothing about the collectors who brought the specimens to the British Museum of Natural History. Walker cites only the names of Coffin and Glennie, about whom nothing is known.

The species of Mexican flies described by Walker are the following:

1849a:

1. *Anthrax orcus*, p. 237 (&). "Mexico (Coffin)". Now *Ligyra orcus* (Walker) (Painter *et al.*, 1978: 43) (Bombyliidae).

1849b:

2. *Helophilus formalis*, p. 603 (&). "Mexico (Coffin)". Now *Aemosyrphus arquatus* (Say, 1829) (Thompson *et al.*, 1976: 96) (Syrphidae).
3. *Ersitalis diminutus*, p. 622 (&). "Mexico (Coffin)". Now *Palpada diminuta* (Walker) (Thompson *et al.*, 1976: 104) (Syrphidae).
4. *Volucella metallifera*, p. 636 (&). "Venezuela (Mr. Dyson's collection), Mexico (Coffin)". Now *Copestylum metalliferum* (Walker). The specimen from Venezuela is a junior synonym of *Copestylum dispar* Macquart (Thompson *et al.*, 1976: 79) (Syrphidae).
5. *Psilopus inficitus*, p. 649 (sex?). "Mexico (Coffin)". Now *Condylostylus patibulatus* (Say, 1823) (Robinson, 1970: 10) (Dolichopodidae).

1852:

6. *Psilopus lepidus*, p. 207 (%). "Mexico". Now *Condylostylus lepidus* (Walker) (Robinson, 1970: 8) (Dolichopodidae).
7. *Microdon trochilus*, p. 216 (&). "Mexico". Now *Microdon (Microdon) aurifex* (Wiedemann, 1830) (Thompson *et al.*, 1976: 63) (Syrphidae).

1854a:

8. *Sargus linearis*, p. 318 (&). "Mexico (Mr. Glennie's collection)". Same combination nowadays (James, 1973: 19) (Stratiomyidae).

1854b:

9. *Dasygogon magnificus*, p. 427 (&). "Mexico (presented by Mrs. Rouquette)". Now *Archilestris magnificus* (Walker) (Martin & Papavero, 1970: 16) (Asilidae).

1855:

10. *Erax aper*, p. 621 (% &). "Mexico (Mr. Glennie's collection)". *Efferia*-group (Martin & Papavero, 1970: 63) (Asilidae).  
11. *Mallophora antiqua*, p. 581 (&). "Mexico, Veracruz (Sallé)". Same original combination (Martin & Papavero, 1970: 72) (Asilidae).

1857:

12. *Pipiza divisa*, p. 156 (&). "Mexico, Veracruz". Now *Ocyptamus dimidiatus* (Fabricius, 1781) (Thompson *et al.*, 1976: 16) (Syrphidae).

1860:

13. *Cyphomyia simplex*, p. 268 (&). "Mexico". Same combination (James, 1973: 28) (Stratiomyidae).  
14. *Stratiomys constricta*, p. 269 (%). "Mexico". Same combination (James, 1973: 45) (Stratiomyidae).  
15. *Stratiomys pinguis*, p. 270 (&). "Mexico". A junior synonym of *Stratiomys constricta* Walker (James, 1973: 45) (Stratiomyidae).  
16. *Clitellaria obesa*, p. 270 (%). "Mexico". Now *Spaniomyia obesa* (Walker) (James, 1973: 59) (Stratiomyidae).  
17. *Chrysochlora purpurea*, p. 271 (%). "Mexico". Now *Chrysochlorina purpurea* (Walker) (James, 1973: 35) (Stratiomyidae).  
18. *Pangonia atrifera*, p. 272 (%). Not from Mexico; actually a junior synonym of the Palearctic species *Pangonia haustellata* (Fabricius, 1781) (Fairchild, 1971: 164; Fairchild & Burger, 1994: 153) (Tabanidae).  
19. *Pangonia tenuirostris*, p. 272 (%). "Mexico". Now *Esenbeckia (Ricardoia) flavohirta* (Bellardi, 1859) (Fairchild, 1971: 10; Fairchild & Burger, 1994: 27) (Tabanidae).  
20. *Tabanus dorsifer*, p. 273 (&). "Mexico". Same combination (Fairchild, 1971: 91; Fairchild & Burger, 1994: 136) (Tabanidae).  
21. *Tabanus commixtus*, p. 273 (&). "Mexico". Same combination (Fairchild & Burger, 1994: 134) (Tabanidae).  
22. *Tabanus alteripennis*, p. 274 (&). "Mexico". Now *Philipotabanus (Philipotabanus) caliginosus* (Bellardi, 1859) (Fairchild, 1971: 178; Fairchild & Burger, 1994: 116) (Tabanidae).  
23. *Tabanus purus*, p. 274 (&). "Mexico". Now *Phaeotabanus longiappendiculatus* (Macquart, 1855) (Fairchild, 1971: 157; Fairchild & Burger, 1994: 89) (Tabanidae).  
24. *Dasygogon secabilis*, p. 276 (&). "Mexico". Now *Blepharepium secabile* (Walker) (Martin & Papavero, 1970: 28) (Asilidae).  
25. *Dasygogon gelascens*, p. 277 (%). "Mexico". Now *Stichopogon trifasciatus* (Say, 1823) (Martin & Papavero, 1970: 5) (Asilidae).  
26. *Discocephala divisa*, p. 279 (&). "Mexico". Now *Holcocephala divisa* (Walker) (Martin & Papavero, 1970: 7) (Asilidae).

27. *Discocephala interlineata*, p. 279 (&). "Mexico". Now *Holcocephala nitida* (Wiedemann, 1830) (Martin & Papavero, 1970: 7) (Asilidae).
28. *Laphria formidolosa*, p. 280 (%). "Mexico". Now *Andrenosoma (Pilica) formidolosa* (Walker) (Martin & Papavero, 1970: 44) (Asilidae).
29. *Laphria componens*, p. 281 (%). "Mexico". Same combination (Martin & Papavero, 1970: 38) (Asilidae).
30. *Laphria triligata*, p. 281 (&). "Mexico". Same combination (Martin & Papavero, 1970: 38) (Asilidae).
31. *Atomosia sericans*, p. 282 (%). "Mexico". Same combination (Martin & Papavero, 1970: 47) (Asilidae).
32. *Trupanea lateralis*, p. 283 (%). "Mexico". Now *Promachus (Amblyonychus) lateralis* (Walker) (Martin & Papavero, 1970: 81) (Asilidae).
33. *Asilus inamatus*, p. 283 (&). "Mexico". An unrecognized species (Martin & Papavero, 1970: 89) (Asilidae).
34. *Asilus perrumpeus*, p. 283 (%). "Mexico". Now *Triorla interrupta* (Macquart, 1834) (Martin & Papavero, 1970: 69) (Asilidae).
35. *Chrysopila trifasciata*, p. 284 (&). "Mexico". Now *Chrysopilus trifasciatus* (Walker) (James, 1968: 4) (Rhagionidae).
36. *Chrysopila basalis*, p. 285 (%). "Mexico". An unrecognized species (James, 1968: 6) (Rhagionidae).
37. *Psilopus solidus*, p. 287 (&). Now *Condylostylus solidus* (Walker) (Robinson, 1970: 10) (Dolichopodidae).
38. *Psilopus peractus*, p. 287 (&). "Mexico". *Condylostylus peractus* (Walker) (Robinson, 1970: 10) (Dolichopodidae).
39. *Psilopus haereticus*, p. 287 (&). "Mexico". Now *Condylostylus haereticus* (Walker) (Robinson, 1970: 7) (Dolichopodidae).
40. *Psilopus permodicus*, p. 288 (%). "Mexico". Now *Condylostylus permodicus* (Walker) (Robinson, 1970: 10) (Dolichopodidae).
41. *Ceria cacica*, p. 288 (&). "Mexico". Now *Monoceromyia cacica* (Walker) (Thompson *et al.*, 1976: 94) (Syrphidae).
42. *Eristalis familiaris*, p. 290 (%). "Mexico". Now *Palpada familiaris* (Walker) (Thompson *et al.*, 1976: 105) (Syrphidae).
43. *Eristalis expictus*, p. 290 (%). "Mexico". Now *Palpada expicta* (Walker) (Thompson *et al.*, 1976: 105) (Syrphidae).
44. *Xylota subcostalis*, p. 291 (&). "Mexico". Now *Quichuana subcostalis* (Walker) (Thompson *et al.*, 1976: 99) (Syrphidae).
45. *Volucella aperta*, p. 292 (%). "Mexico". Now *Copestylum apertum* (Walker) (Thompson *et al.*, 1976: 71) (Syrphidae).
46. *Temnocera viridula*, p. 292 (%). "Mexico". Now *Copestylum viridulum* (Walker) (Thompson *et al.*, 1976: 87) (Syrphidae).
47. *Temnocera unilecta*, p. 292 (&). "Mexico". Now *Copestylum unilectum* (Walker) (Thompson *et al.*, 1976: 86) (Syrphidae).
48. *Syrphus colludens*, p. 293 (&). "Mexico". An unplaced species of Syrphini (Thompson *et al.*, 1976: 39) (Syrphidae).



49. *Jurinia debitorix*, p. 296 (&). "Mexico". Now *Juriniella debitorix* (Walker) (Guimarães, 1971: 57) (Tachinidae).
50. *Jurinia innovata*, p. 296 (&). "Mexico". Now *Archytas innovatus* (Walker) (Guimarães, 1971: 50) (Tachinidae).
- 1861:
51. *Nemoraea intrita*, p. 297 (&). "Mexico". An unrecognized species of *Archytas* (Guimarães, 1971: 50) (Tachinidae).
52. *Eurigaster saginata*, p. 298 (&). "Mexico". Now *Copecrypta nitens* (Wiedemann, 1830) (Guimarães, 1971: 75) (Tachinidae).
53. *Eurigaster desita*, p. 299 (&). An unrecognized Goniinae (Guimarães, 1971: 215) (Tachinidae).
54. *Eurigaster cometans*, p. 299 (&). "Mexico". Now *Bolomyia cometans* (Walker) (Guimarães, 1971: 187) (Tachinidae).
55. *Eurigaster fertoria*, p. 300 (&). "Mexico". An unplaced Blondeliini (Guimarães, 1971: 152) (Tachinidae).
56. *Eurigaster habilis*, p. 301 (&). "Mexico". An unplaced Sturmiini (Guimarães, 1971: 194) (Tachinidae).
57. *Eurigaster postica*, p. 301 (&). "Mexico". An unplaced Sturmiini (Guimarães, 1971: 194) (Tachinidae).
58. *Masicera disputans*, p. 302 (%). "Mexico". An unplaced Eryciini (Guimarães, 1971: 214) (Tachinidae).
59. *Masicera gentica*, p. 302 (%). "Mexico". An unplaced Blondeliini (Guimarães, 1971: 152) (Tachinidae).
60. *Masicera necopina*, p. 303 (&). "Mexico". An unplaced Tachinidae (Guimarães, 1971: 216) (Tachinidae).
61. *Masicera expergita*, p. 304 (%). "Mexico". An unplaced Blondeliini (Guimarães, 1971: 152) (Tachinidae).
62. *Lydella cessatrix*, p. 305 (&). "Mexico". An unplaced Goniinae (Guimarães, 1971: 215) (Tachinidae).
63. *Lydella indita*, p. 306 (&). "Mexico". Now *Pseudeuantha indita* (Walker) (Guimarães, 1971: 104) (Tachinidae).
64. *Dexia pertecta*, p. 307 (%). "Mexico". Now *Myjobiopsis pertecta* (Walker) (Guimarães, 1971: 118) (Tachinidae).
65. *Sarcophaga intermutans*, p. 308 (&). "Mexico". An unrecognized species (Lopes, 1969: 54) (Sarcophagidae).
66. *Sarcophaga permeta*, p. 308 (%). "Mexico". Now *Oxysarcodexia permeta* (Walker) (Lopes, 1969: 27) (Sarcophagidae).
67. *Sarcophaga innota*, p. 308 (&). "Mexico". An unrecognized species (Lopes, 1969: 53) (Sarcophagidae).
68. *Sarcophaga conclausa*, p. 309 (&). "Mexico". An unrecognized species (Lopes, 1969: 53) (Sarcophagidae).
69. *Sarcophaga despensa*, p. 309 (&). "Mexico". An unrecognized species (Lopes, 1969: 53) (Sarcophagidae).

70. *Sarcophaga effrenata*, p. 309 (%). "Mexico". Now *Chaetoravinia effrenata* (Walker) (Lopes, 1969: 22) (Sarcophagidae).
71. *Calliphora femorata*, p. 310 (&). "Mexico". A junior synonym of *Hemilucilia segmentaria* (Fabricius, 1805) (James, 1970: 7) (Calliphoridae).
72. *Calliphora socors*, p. 311 (&). "Mexico". A junior synonym of *Mesembrinella bicolor* (Fabricius, 1805) (James, 1970: 4) (Calliphoridae).
73. *Lucilia surrepens*, p. 312 (&). "Mexico". Now *Morellia basalis* (Walker, 1852) (Pont, 1972: 8) (Muscidae).
74. *Pyrellia suspicax*, p. 312 (%). Now *Morellia bipuncta* (Wiedemann, 1830) (Pont, 1972: 8) (Muscidae).
75. *Pyrellia specialis*, p. 313 (&). "Mexico". Now *Morellia maculipennis* (Macquart, 1846) (Pont, 1972: 9) (Muscidae).
76. *Pyrellia scordalus*, p. 313 (&). "Mexico". Now *Hemichlora scordalus* (Walker) (Pont, 1972: 49) (Muscidae).
77. *Musca sensifera*, p. 314 (%). "Mexico". An unrecognized Tachinidae! (Pont, 1972: 60) (Tachinidae).
78. *Aricia rescita*, p. 315 (&). "Mexico". Now *Cyrtoneurina rescita* (Walker) (Pont, 1972: 53) (Muscidae).
79. *Aricia procedens*, p. 315 (&). "Mexico". Now *Helina procedens* (Walker) (Pont, 1972: 22) (Muscidae).
80. *Aricia circulatrix*, p. 316 (&). "Mexico". Now *Helina circulatrix* (Walker) (Pont, 1972: 19) (Muscidae).
81. *Anthomyia protrita*, p. 317 (&). "Mexico". An unrecognized Sarcophagidae! (Pont, 1972: 60) (Sarcophagidae).
82. *Hylemyia probata*, p. 318 (%). "Mexico". An unrecognized Tachinidae! (Pont, 1972: 60) (Tachinidae).
83. *Dryomyza maculipes*, p. 319 (no sex declared). "Mexico". An unrecognized species (Steyskal, 1977: 2) (Dryomyzidae).
84. *Sapromyza apta*, p. 321 (no sex declared). "Mexico". Without additional references (Lauxaniidae).
85. *Tetanocera pectoralis*, p. 321 (no sex declared). "Mexico". An unrecognized Otitidae (Knutson et al., 1976: 14) (Otitidae).
86. *Lonchaea discrepans*, p. 322 (no sex declared). "Mexico". Without additional references (Lonchaeidae).
87. *Bricinnia flexivitta*, p. 324 (&). "Mexico". Now *Senopterina flexivitta* (Walker) (Steyskal, 1968f: 3) (Platystomatidae).
88. *Simulium ochraceum*, p. 332 (&). "Mexico". Same combination (Dalmat, 1955: 225) (Simuliidae).
89. *Limnobia stupens*, p. 333 (&). "Mexico". Now *Gnophomyia stupens* (Walker) (Alexander & Alexander, 1970: 130) (Tipulidae).
90. *Tipula associans*, p. 333 (%). "Mexico". Now *Zelandotipula associans* (Walker) (Alexander & Alexander, 1970: 41) (Tipulidae).
91. *Tipula dispellens*, p. 334 (&). "Mexico". Now *Brachypelmna dispellens* (Walker) (Alexander & Alexander, 1970: 6) (Tipulidae).

## 6. THE “SAGGIO DI DITTEROLOGIA MESSICANA” OF LUIGI BELLARDI

Luigi Bellardi was born in Genova, Italy, on May 18, 1818. To please his family he studied law, but as he always had been attracted to the study of natural sciences, he soon began studies on fossil molluscs. With his friend Michelotti he collected fossil shells in the hills of Turin. At only 20 years of age he published his first paper on fossil molluscs. In order to increase his field action, he traveled to Egypt, where he made a large collection of nummulitic fossils.

Between 1854 and 1874, however, he became interested in Diptera, publishing several papers on the fauna of the Piemonte, as well as a monograph on Mexican Diptera, the first in the history of Dipterology, the famous “Saggio di Ditterologia Messicana” (Essay on Mexican Dipterology) (1859-1862).

For the publication of the “Saggio”, Bellardi had access to several collections:

- Those collected by Eugenio Truqui (or Truqui) (sardinian consul in Cyprus; died in Rio de Janeiro in April, 1860), about whose life and travels we could find nothing else). Approximately 50 species, collected in the neighbourhood of Mexico City, by a certain Ettore Craveri (1815-1890), about whom nothing is known (Papavero, 1973; Morisi, 1980; Passerin d'Entrèves, 1983).
- The duplicates of Mexican species in the Paris Museum, sent to Bellardi by the director of the Museum, Milne-Edwards; some of these specimens had been studied by Macquart (cf. part II of this work).
- The collection of the Reale Museo di Zoologia di Torino, loaned by the Director, Filippo di Filippi.
- Specimens collected by Sallé in several parts of Mexico.
- Mexican material in the Bigot collection, which had been identified by Macquart.
- Approximately 100 specimens collected by Sumichrast and Saussure.

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Auguste Sallé died in Paris on May 5, 1896, in his 70<sup>th</sup> year. He travelled extensively in the United States, Mexico, the West Indies, Central America, and Venezuela, making collections in all branches of entomology. On his return to Europe he established himself as a natural history agent in Paris. His Central American collections were afterwards purchased by Godman and Salvin for the “*Biologia Centrali-Americana*”. Sallé was elected fellow of the French Entomological Society in 1875 and of the Entomological Society of London in 1875 (Anon., 1896; Barnhart, 1965; Binford, 1989; Sclater, 1858; Smith & Smith, 1973).

Adrien Louis Jean de Sumichrast was born in Yvonne, Canton de Vaud, Switzerland, on October 15, 1828. His studies were made in Lausanne, Geneva and Berne. He soon became interested in the study of natural history and, as the European fauna was not enough for him, he decided to accompany De Saussure on his trip to Mexico.

Henri Louis Frederic De Saussure was born at Geneva, Switzerland, on November 27, 1829, and died there on February 20, 1905. He received his elementary education at Briquet, and his advanced training at the Institute of Fellenberg. He studied under the entomologist François Jules Pictet de la Rive, who directed his attention to insects. The early part of his entomological career was spent in the study of the Hymenoptera and latter part in Orthoptera, his greatest reputation being made with the last named order. After several years of study in Paris, where he received the degree of licentiate of the Faculty of Paris, he began his travels in 1854, going first to the West Indies, then to Mexico, and finally to the United States, where he met Louis Agassiz and other scientists. He returned to Europe in 1856 with valuable collections of insects, myriapods, crustaceans, birds and other groups. Aside from his interest in entomology, he also studied geography and ethnology. In 1858, he founded the Geographical Society of Geneva and was its president from 1888 to 1889. For many years he was a member of the committee which managed the Natural History Museum of Geneva. There he amassed the finest collection of Hymenoptera and Orthoptera in the world. In 1892 he was elected an Honorary Fellow of the Entomological Society of London (Essig, 1931; Kellogg, 1932).

Sumichrast and Saussure arrived in Veracruz, Mexico, in April 1855, remaining for a few days in that city. Proceeding thence to Córdoba (written "Cordova" by Bellardi), they passed by tospán on April 16 (an "hacienda" not far from Córdoba), where they visited Auguste Sallé, who was exploring Mexico with Boucard. After the short stay in Córdoba the naturalists resumed their journey, going to Orizaba, Puebla, Mexico City, Tampico, and other cities in the interior. Sumichrast collected in those places with Saussure for about one year and those collections were taken back to Geneva by Saussure, when he left Mexico, due to the troubles of travelling and the political unrest caused by several revolutions. Sumichrast decided to stay in Mexico. He married in Cuchitán (Juchitán), Oaxaca on August 30, 1870, and from this time to his death he was occupied with the scientific exploration of Mexico, visiting the States of Veracruz, Puebla, Mexico, Oaxaca (Tehuantepec), and Chiapas. In the latter state death overtook him, in Tonalá, on September 26, 1882 (Boucard, 1884; Binford, 1989; Hemsley, 1887; Kellogg, 1932; Knobloch, 1983; Papavero, 1973; Smith & Smith, 1973; Wauer, 1992).

Sallé's companion, Adolphe Boucard, seems to have been a general collector, but more especially devoted to birds and insects. He wrote an account of his

extensive travels through the United States, Mexico, Central America, Colombia, Chile and other countries (1894). In 1867, he published a catalogue of the natural history specimens he had gathered in Mexico. In 1878, he published another catalogue of the collections obtained in Guatemala, which were exhibited at the "Exposition Universelle de Paris" and perhaps about the same time a list of the Coleoptera offered for sale. According to Carriker (1910), he collected in Costa Rica in 1877. Boucard published a list of the birds collected during that trip (1878) (Papavero, 1971b).

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Bellardi was also assistant of the Mineralogical Museum (since 1844) and curator of the paleontological collections of the geological museum of Turin. He taught for 30 years at the girls college (Regina Margheritta) and in the "Liceo Reale Gilberti" in Turin. He was elected member of several cultural and scientific societies. From 1870 on, he went back to his studies of fossil molluscs, dying in Turin on September 17, 1889 (Lessona, 1884; Papavero, 1973; Sacco, 1889).

Bellardi's "Saggio di Ditterologia Messicana" contains 266 species, 176 of which were proposed as new. The collection is housed at the Istituto e Museo di Zoologia2 Sistemica, Università di Torino, together with Bellardi's library. The list of the species proposed by Bellardi in the "Saggio" is the following:

1859:

1. *Culex mexicanus*, p. 5 (&). "Messico (Sallé)". Box 11. Apparently a distinct species, as currently interpreted, now *Psorophora (Janthinosoma) mexicana* (Bellardi), according to Belkin (1968: 27) (Culicidae).
2. *Tipula nebulosa*, p. 6 (%). "Messico (Sallé)". Box 11. Now *Epiphragma (Epiphragma) nebulosa* (Bellardi) (Alexander & Alexander, 1970: 97) (Tipulidae).
3. *Tipula craverii*, p. 7, pl. I, fig. 1 (%). "Messico (Craveri)". Box 11. Now *Tipula (Bellardina) craverii* Bellardi (Alexander & Alexander, 1970: 20) (Tipulidae).
4. *Tipula edwardsi*, p. 8, pl. I, fig. 2 (%). "Messico (Sallé)". Box 11. Now *Tipula (Bellardina) edwardsi* Bellardi (Alexander & Alexander, 1970: 20) (Tipulidae).
5. *Tipula quadrimaculata*, p. 9, pl. I, fig. 3 (&). "Messico, Cordoba (Saussure)". Box 11. An unplaced Tipulinae (Alexander & Alexander, 1970: 44) (Tipulidae).
6. *Tipula proxima*, p. 9 (&). "Messico (Craveri)". Box 11. Now a junior synonym of *Nephrotoma ferruginea* (Fabricius, 1805) (Alexander & Alexander, 1970: 17) (Tipulidae).
7. *Tipula affinis*, p. 10 (%). "Messico (Truqui)". Box 11. Now *Nephrotoma affinis* (Bellardi) (Alexander & Alexander, 1970: 16) (Tipulidae).
8. *Tipula nigrolutea*, p. 11 (%). "Messico (Sallé)". Box 11. Now *Nephrotoma nigrolutea* (Bellardi) (Alexander & Alexander, 1970: 17) (Tipulidae).
9. *Sciophila popocatepetli*, p. 11 (&). "Messico, Popocatepetl, 3800m (Truqui)". Box 11. Same combination (Papavero, 1978: 53) (Mycetophilidae).

10. *Simulium cinereum*, p. 13 (% &). "Messico, Morelia (Saussure)". Box 11. Preocc. Macquart, 1834). Now *Simulium virgatum* Coquillett, 1902 (Vulcano, 1967: 23) (Simuliidae).
11. *Simulium metallicum*, p. 14 (%). "Messico (Sallé)". Box 11. Same combination (Vulcano, 1967: 16) (Simuliidae).
12. *Plecia nigerrima*, p. 14 (&). "Messico, contorni di Messico (Sallé), Orizaba, Meztilán (Saussure)". Box 11. Now *Penthetria nigerrima* (Bellardi) (Hardy, 1966: 2) (Bibionidae).
13. *Plecia rostrata*, p. 15 (% &). "Messico (Sallé)". Box 11. Now *Plecia rostellata* Loew, 1858 (Hardy, 1966: 5) (Bibionidae).
14. *Plecia bicolor* (and var.), p. 16 (% &). "Messico, Cordova (the type) (Saussure), Messico, Orizaba (Saussure) (the variety)". Box 11. Same combination (Hardy, 1966: 2) (Bibionidae).
15. *Bibio criorhinus*, p. 17 (%). "Messico (Sallé)". Box 11. Same combination (Hardy, 1966: 6) (Bibionidae).
16. *Bibio piceus*, p. 17 (%). "Messico (Craveri)". Box 11. Same combination (Hardy, 1966: 6) (Bibionidae).
17. *Bibio dubius*, p. 18 (&). Messico (Craveri)". Box 11. Now *Bibio vicinus* Lynch Arribálzaga, 1878 (Hardy, 1966: 6) (Bibionidae).
18. *Bibio fuliginus*, p. 19 (&). "Messico (Craveri e Sallé), Orizaba (Saussure)". Box 11. Same combination (Hardy, 1966: 6) (Bibionidae).
19. *Dilophus maculatus*, p. 19, pl. I, fig. 5 (&). "Messico (Truqui)". Box 11. Same combination (Hardy, 1966: 9) (Bibionidae).
20. *Beris mexicana*, p. 20, pl. I, fig. 6 (% &). "Messico (Sallé)". Box 11. Now *Oplachantha mexicana* (Bellardi) (James, 1973: 8) (Stratiomyidae).
21. *Cyphomyia similis*, p. 23, pl. I, fig. 7 (&). "Messico (Truqui)". Box 11. Now a junior synonym of *Cyphomyia tomentosa* Gerstaecker, 1857 (James, 1973: 28) (Stratiomyidae).
22. *Hermetia lativentris*, p. 27, pl. I, fig. 9 (&). "Messico, Tampico (Saussure)". Box 11. Same combination (James, 1973: 38) (Stratiomyidae).
23. *Hermetia aurata*, p. 27, pl. I, fig. 8 (& %). "Messico, Morelia (Saussure)". Box 11. Same combination (James, 1973: 37) (Stratiomyidae).
24. *Stratiomys gerstaeckeri*, p. 31, pl. I, fig. 10 (%). "Messico, contorni di Messico (Sallé)". Box 11. Now a junior synonym of *Hoplitimyia (Hoplitimyia) fasciata* (Fabricius, 1787) (James, 1973: 42) (Stratiomyidae).
25. *Odonthomyia truquii*, p. 34, pl. I, fig. 11 (&). "Messico, Morelos, Cuernavaca (Truqui)". Box 11. Now *Hedriodiscus truquii* (Bellardi) (James, 1973: 41) (Stratiomyidae).
26. *Odonthomyia affinis*, p. 35, pl. I, fig. 12 (&). "Messico, Puebla (Saussure)". Box 2. Now a junior synonym of *Hedriodiscus euchlorus* (Gerstaecker, 1857) (James, 1973: 40) (Stratiomyidae).
27. *Odonthomyia dissimilis*, p. 35, pl. I, figs. 13-14 (& %). "Messico, contorni di Messico (Truqui)". Box 2. Same combination (in *Odonthomyia*) (James, 1973: 44) (Stratiomyidae).
28. *Odonthomyia viridis*, p. 36, pl. I, fig. 16 (&). "Messico, Morelos, Cuautla (as Cuantla) (Saussure)". Box 2. Now *Labostigmia viridis* (Bellardi) (James, 1973: 43) (Stratiomyidae).
29. *Odonthomyia quadrimaculata*, p. 37, pl. I, fig. 15 (%). "Messico (Craveri)". Box 2. Now *Labostigmia quadrimaculata* (Bellardi) (James, 1973: 43) (Stratiomyidae).

30. *Odonthomyia femorata*, p. 37 (&). "Messico, Toluca (Saussure)". Box 2. A junior synonym of the preceding species (James, 1973: 43) (Stratiomyidae).
31. *Odonthomyia tritaeniata*, p. 38, pl. I, fig. 17 (&). "Messico, contorni di Messico (Sallé), Cuautla (as Cuantla) (Saussure)". Box 2. A junior synonym of *Hedriodiscus trivittatus* (Say, 1829) (James, 1973: 41) (Stratiomyidae).
32. *Sargus caesius*, p. 40, pl. I, fig. 18 (&). "Messico, Anganguero (as Angang) (Saussure)". Box 2. Unchanged (James, 1973: 18) (Stratiomyidae).
33. *Sargus latus*, p. 41, pl. I, fig. 19 (%). "Messico (Sallé)". Box 2. Unchanged (James, 1973: 18) (Stratiomyidae).
34. *Sargus aureus*, p. 42, pl. I, fig. 20 (%). "Messico (Sallé)". Box 2. Now a junior synonym of *Sargus speciosus* Macquart, 1846 (James, 1973: 20) (Stratiomyidae).
35. *Sargus sallei*, p. 43 (%). "Messico (Sallé)". Box 2. Now a junior synonym of *Sargus fasciatus* Fabricius, 1805 (James, 1973: 19) (Stratiomyidae).
36. *Sargus subinterruptus*, p. 44, pl. I, fig. 22 (&). "Messico (Sallé)". Box 2. Now *Merosargus subinterruptus* (Bellardi) (James, 1973: 15) (Stratiomyidae).
37. *Pangonia rhinophora*, p. 46, pl. II, fig. 1 (&). "Messico (Sallé)". Box 2. Now *Fidena (Fidena) rhinophora* (Bellardi) (Fairchild, 1971: 23; Fairchild & Burger, 1994: 46) (Tabanidae).
38. *Pangonia rostrifera*, p. 47 (% &). "Messico (Sallé)". Box 2. Now a junior synonym of *Scione aurulans* (Wiedemann, 1830) (Fairchild, 1971: 25; Fairchild & Burger, 1994: 49) (Tabanidae).
39. *Pangonia wiedemanni*, p. 48, pl. II, fig. 3 (&). "Messico (Sallé)". Box 2. Now *Esenbeckia (Ricardoia) wiedemanni* (Bellardi) (Fairchild, 1971: 12; Fairchild & Burger, 1994: 28) (Tabanidae).
40. *Pangonia saussurei*, p. 49, pl. II, fig. 4 (&). "Messico, Veracruz, Orizaba (Sallé)". Box 2. Now *Esenbeckia (Ricardoia) planiventris saussurei* (Bellardi) (Fairchild, 1971: 11; Fairchild & Burger, 1994: 28) (Tabanidae).
41. *Pangonia flavohirta*, p. 49 (&). "Messico (Sallé)". Box 2. Now *Esenbeckia (Ricardoia) flavohirta* (Bellardi) (Fairchild, 1971: 10; Fairchild & Burger, 1994: 26) (Tabanidae).
42. *Pangonia sallei*, p. 50 (%). "Messico (Sallé)". Box 2. A synonym of the preceding species (Fairchild, 1971: 10; Fairchild & Burger, 1994: 27) (Tabanidae).
43. *Pangonia incerta*, p. 52 (&). "Messico, Veracruz, Orizaba (Saussure)". Box 2. Now *Esenbeckia (Ricardoia) incerta* (Bellardi) (Fairchild, 1971: 11; Fairchild & Burger, 1994: 27) (Tabanidae).
44. *Tabanus subruher*, p. 55 (&). "Messico (Sallé, Sumichrast)". Box 2. Unchanged (Fairchild, 1971: 102; Fairchild & Burger, 1994: 150) (Tabanidae).
45. *Tabanus sumichrasti*, p. 56 (&). "Messico (Sumichrast)". Box 2. A synonym of the preceding species (Fairchild, 1971: 102; Fairchild & Burger, 1994: 150) (Tabanidae).
46. *Tabanus albonotatus*, p. 56, pl. II, fig. 5 (&). "Messico (Sallé), Tamaulipas, Tampico (Saussure)". Box 2. Now a junior synonym of *Tabanus oculus* Walker, 1848 (Fairchild, 1971: 98; Fairchild & Burger, 1994: 144) (Tabanidae).
47. *Tabanus defilippii*, p. 57 (&). "Messico (Sumichrast)". Box 2. Unchanged (Fairchild, 1971: 91; Fairchild & Burger, 1994: 135) (Tabanidae).
48. *Tabanus bigoti*, p. 58 (?&, without head). "Messico (Coll. Bigot)". Type in Oxford. Unchanged (Fairchild, 1971: 89; Fairchild & Burger, 1994: 132) (Tabanidae).

49. *Tabanus luteoflavus*, p. 60 (&). "Messico (Sumichrast)". Box 2. Now a junior synonym of *Phaeotabanus longiappendiculatus* (Macquart, 1855) (Fairchild, 1971: 57; Fairchild & Burger, 1994: 89) (Tabanidae).
50. *Tabanus craverii*, p. 60 (&). "Messico (Craveri)". Box 2. Same combination (Fairchild & Burger, 1994: 135) (Tabanidae).
51. *Tabanus flavocinctus*, p. 61 (&). "Mexico". Types in Paris and Turin. Locality in error, as this is a synonym of *Hybomitra zonalis* (Kirby, 1837), a Nearctic species (Fairchild, 1971: 105; Fairchild & Burger, 1994: 154) (Tabanidae).
52. *Tabanus sallei*, p. 61, pl. II, fig. 7 (%). "Messico (Sallé)". Box 2. Now a junior synonym of *Tabanus pungens* Wiedemann, 1828 (Fairchild, 1971: 100; Fairchild & Burger, 1994: 147) (Tabanidae).
53. *Tabanus carneus*, p. 62 (%). "Messico (Sallé)". Box 2. Now a junior synonym of *Tabanus occidentalis* var. *dorsovittatus* Macquart, 1855 (Fairchild & Burger, 1994: 143) (Tabanidae).
54. *Tabanus truquii*, p. 64, pl. II, fig. 6 (%). "Messico (Truqui)". Box 2. Now a junior synonym of *Tabanus colombensis* Macquart, 1846 (Fairchild & Burger, 1994: 134) (Tabanidae).
55. *Tabanus propinquus*, p. 65 (&). "Messico (Sallé, Sumichrast)". Types in Paris and Turin (Box 2). Now a junior synonym of *Tabanus pungens* Wiedemann, 1828 (Fairchild, 1971: 100; Fairchild & Burger, 1994: 147) (Tabanidae).
56. *Tabanus subsimilis*, p. 66 (&). Messico (Sallé). Types in Paris and Turin (Box 2). Unchanged (Fairchild, 1971: 102; Fairchild & Burger, 1994: 150) (Tabanidae).
57. *Tabanus nigropunctatus*, p. 67, pl. II, fig. 8 (&). "Messico, Cordova, Huastec (Saussure)". Box 2. A junior synonym of *Poeciloderas quadripunctatus* (Fabricius, 1805) (Fairchild, 1971: 86; Fairchild & Burger, 1994: 127) (Tabanidae).
58. *Tabanus aurantiacus*, p. 69, pl. II, fig. 9 (&). "Messico (Caveri), Orizaba (Saussure)". Box 2. Now *Agkistrocerus aurantiacus* (Bellardi) (Fairchild & Burger, 1994: 128) (Tabanidae).
59. *Tabanus caliginosus*, p. 68, pl. II, fig. 10 (&). "Messico (Sallé)". Box 3. Now *Philipotabanus (Philipotabanus) caliginosus* (Bellardi) (Fairchild, 1971: 78; Fairchild & Burger, 1994: 116) (Tabanidae).
60. *Tabanus rondanii*, p. 68, pl. II, fig. 11 (&). "Messico (Saussure, Sallé)". Box 3. Now a junior synonym of *Diachlorus ferrugatus* (Fabricius, 1805) (Fairchild, 1971: 53; Fairchild & Burger, 1994: 83) (Tabanidae).
61. *Chrysops subcaecutiens*, p. 69, pl. II, fig. 13 (%). "Messico, contorni di Messico (Saussure)". Box 3. Unchanged (Fairchild, 1971: 534; Fairchild & Burger, 1994: 60) (Tabanidae).
62. *Chrysops affinis*, p. 70, pl. II, fig. 14 (%). "Messico, contorni di Messico (Truqui)". Box 3. Unchanged (Fairchild, 1971: 30; Fairchild & Burger, 1994: 55) (Tabanidae).
63. *Chrysops virgulatus*, p. 71, pl. II, fig. 17 (%). "Messico, Cuautla (as Cuantla) (Saussure)". Box 3. Unchanged (Fairchild, 1971: 35; Fairchild & Burger, 1994: 61) (Tabanidae).
64. *Chrysops latifasciatus*, p. 71, pl. II, fig. 15 (&). "Messico (Sallé)". Box 3. Unchanged (Fairchild, 1971: 32; Fairchild & Burger, 1994: 58) (Tabanidae).



65. *Chrysops scalaratus*, p. 72, pl. II, fig. 19 (&, without head). "Messico (Sumichrast)". Box 3. Unchanged (Fairchild, 1971: 34; Fairchild & Burger, 1994: 60) (Tabanidae).
66. *Chrysops apicalis*, p. 73 (%). "Messico (Sallé)". Box 3. A synonym of the preceding species (Fairchild, 1971: 34; Fairchild & Burger, 1994: 60) (Tabanidae).
67. *Chrysops pallidus*, p. 73, pl. II, fig. 16 (&). "Messico (Sumichrast)". Box 3. Now a junior synonym of *Chrysops flavidus* Wiedemann, 1821 (Fairchild, 1971: 31; Fairchild & Burger, 1994: 57) (Tabanidae).
68. *Chrysops megaceras*, p. 74, pl. II, fig. 18 (&). "Messico (Sallé, Sumichrast)". Box 3. Now *Silvius (Assipala) megaceras* (Bellardi) (Fairchild, 1971: 29; Fairchild & Burger, 1994: 54) (Tabanidae).
69. *Philopota truquii*, p. 77, pl. II, figs 20, 20bis (%). "Messico, Cuazimalpa (actually Cuajimalpa, State of Mexico) (Truqui)". Box 3. (Acroceridae).

1861:

70. *Mydas bitaeniatus*, p. 107, pl. I, fig. 1 (%). "Messico, Playa Vicente (Sallé)". Box 3. Now *Stratiomydas bitaeniatus* (Bellardi) (Papavero, 1996: 632) (Mydidae).
71. *Mydas tricinctus*, p. 108, pl. I, fig. 2 (%). "Messico, contorni di Messico (Truqui, Sallé)". Box 3. Unchanged (Papavero, 1996: 631) (Mydidae).
72. *Mydas subinterruptus*, p. 110, pl. I, fig. 3 (%). "Messico, Anganguero (as Angang), Pátzcuaro (Saussure)". Box 3. Unchanged (Papavero, 1996: 631) (Mydidae).
73. *Pseudorus bicolor*, p. 111, pl. I, fig. 20 (&). "Messico, Playa Vicente (Sallé)". Box 3. Now *Pseudoryclus bicolor* (Bellardi) (Martin & Papavero, 1970: 57) (Asilidae).
74. *Lampria circumdata*, p. 115, pl. I, fig. 17 (&). "Messico (Sumichrast)". Box 3. Unchanged (Martin & Papavero, 1970: 40) (Asilidae).
75. *Laphria cinerea*, p. 116, pl. I, fig. 16 (&). "Messico (Sallé)". Box 3. Now *Andrenosoma cinerea* (Bellardi) (Martin & Papavero, 1970: 42) (Asilidae).
76. *Laphria cincta*, p. 118, pl. I, fig. 19 (%). "Messico (Sallé)". Box 3. Now *Andrenosoma cincta* (Bellardi) (Martin & Papavero, 1970: 42) (Asilidae).
77. *Atomosia nigripennis*, p. 119 (% &). "Messico (Sallé)". Box 3. Now *Cerotainia nigripennis* (Bellardi) (Martin & Papavero, 1970: 52) (Asilidae).
78. *Atomosia macquarti*, p. 120 (&). "Messico (Craveri)". Box 3. Unchanged (Martin & Papavero, 1970: 46) (Asilidae).
79. *Atomosia bigoti*, p. 120 (%). "Messico (Sallé) (Coll. Bigot)". Type in Oxford. Unchanged (Martin & Papavero, 1970: 46) (Asilidae).
80. *Mallophora craverii*, p. 122 (&). "Messico, contorni di Messico (Craveri); Oaxaca (Sallé)". Box 4. Unchanged (Martin & Papavero, 1970: 73) (Asilidae).
81. *Promachus cinctus*, p. 125, pl. II, fig. 2 (% &). "Messico (Sallé)". Box 4. Unchanged (Martin & Papavero, 1970: 80) (Asilidae).
82. *Promachus magnus*, p. 126 (&). "Messico (Saussure)". Box 4. Unchanged (Martin & Papavero, 1970: 80) (Asilidae).
83. *Promachus quadratus*, p. 127, pl. II, fig. 3. "Messico (Sallé)". Box 4. Now *Promachus bellardii* Martin, 1965 (Martin & Papavero, 1970: 79) (Asilidae).
84. *Promachus trapezoidalis*, p. 128, pl. II, fig. 4 (% &). "Messico (Sallé)". Box 4. Now *Promachus (Amblyonychus) trapezoidalis* (Bellardi) (Martin & Papavero, 1970: 81) (Asilidae).

85. *Promachus pulchellus*, p. 129, pl. II, fig. 5 (%). "Messico (Sallé)". Box 4. Now *Promachus (Amblyonychus) pulchellus* (Martin & Papavero, 1970: 81) (Asilidae).
86. *Promachus truquii*, p. 130, pl. II, fig. 6 (%&). "Messico (Truqui)". Box 4. Unchanged (Martin & Papavero, 1970: 80) (Asilidae).
87. *Erax anomalus*, p. 132, pl. II, fig. 7 (%&). "Messico, Cuautla (as Cuantla) (Saussure)". Box 4. Now *Efferia anomala* (Bellardi) (Martin & Papavero, 1970: 63) (Asilidae).
88. *Erax comatus*, p. 134 (%). "Messico (Saussure)". Box 4. Now a junior synonym of *Efferia aper* (Walker, 1855) (Martin & Papavero, 1970: 63) (Asilidae).
89. *Erax parvulus*, p. 135, pl. II, fig. 8 (%). "Messico (Truqui)". Box 4. Now *Efferia parvula* (Bellardi) (Martin & Papavero, 1970: 67) (Asilidae).
90. *Erax carinatus*, p. 136, pl. II, fig. 9 (%). "Messico (Truqui)". Box 4. Now *Efferia carinata* (Bellardi) (Martin & Papavero, 1970: 64) (Asilidae).
91. *Erax unicolor*, p. 137 (&). "Messico, Orizaba (Saussure)". Box 4. Now a junior synonym of *Efferia aper* (Walker, 1855) (Martin & Papavero, 1970: 63) (Asilidae).
92. *Erax eximius*, p. 138 (%). "Messico, contorni di Messico (Truqui)". Box 4. Now *Efferia eximia* (Bellardi) (Martin & Papavero, 1970: 64) (Asilidae).
93. *Erax cinerescens*, p. 139, pl. II, fig. 10 (% &). "Messico (Sallé), Tuxpango presso Orizaba (Sumichrast)". Box 4. Now a junior synonym of *Efferia albibarbis* (Macquart, 1838) (Martin & Papavero, 1970: 62) (Asilidae).
94. *Erax tricolor*, p. 140, pl. II, fig. 12 (% &). "Messico, contorni di Messico (Truqui)". Box 4. Now a junior synonym of *Efferia albibarbis* (Macquart, 1838) (Martin & Papavero, 1970: 62) (Asilidae).
95. *Erax affinis*, p. 141 (%). "Messico, Cordova (Saussure)". Box 4. Now *Efferia affinis* (Bellardi) (Martin & Papavero, 1970: 62) (Asilidae).
96. *Erax cingulatus*, p. 142 (%). "Messico, Cuautla (as Cuantla) (Saussure)". Box 4. Now *Efferia cingulata* (Bellardi) (Martin & Papavero, 1970: 64) (Asilidae).
97. *Erax quadrimaculatus*, p. 144, pl. II, fig. 13 (%). "Messico, playa Vicente (Sallé); Cordova (Saussure)". Box 4. Now *Efferia quadrimaculata* (Bellardi) (Martin & Papavero, 1970: 67) (Asilidae).
98. *Erax bimaculatus*, p. 145, pl. II, fig. 11 (&). "Messico (Sallé)". Box 4. Now *Efferia bimaculata* (Bellardi) (Martin & Papavero, 1970: 63) (Asilidae).
99. *Erax marginatus*, p. 146 (&). "Messico, Cuautla (as Cuantla) (Saussure)". Box 4. Now *Efferia marginata* (Bellardi) (Martin & Papavero, 1970: 66) (Asilidae).
100. *Erax bicolor*, p. 147 (&). "Messico, contorni di Messico (Saussure)". Box 4. Now *Efferia bicolor* (Bellardi) (Martin & Papavero, 1970: 63) (Asilidae).
101. *Erax nigripes*, p. 118 (%). "Messico (Sallé) (Coll. Bigot)". Type in Oxford. Now *Eicherax nigripes* (Bellardi) (Martin & Papavero, 1970: 70) (Asilidae).
102. *Erax villosus*, p. 149 (%). "Messico (Sallé)". Box 4. Now a junior synonym of *Triorla interrupta* (Macquart, 1834) (Martin & Papavero, 1970: 69) (Asilidae).
103. *Proctacanthus craverii*, p. 150 (% &). "Messico, contorni di Messico (Craveri)". Box 4. Unchanged (Martin & Papavero, 1970: 78) (Asilidae).
104. *Asilus humilis*, p. 151 (&). "Messico (Truqui)". Box 4. Now *Machimus (Tolmerus) humilis* (Bellardi) (Martin & Papavero, 1970: 86) (Asilidae).
105. *Asilus truquii*, p. 152 (%). "Messico (Truqui)". Box 4. Now *Philonicus truquii* (Bellardi) (Martin & Papavero, 1970: 85) (Asilidae).

106. *Asilus fuliginosus*, p. 152 (%). "Messico". Box 5. Now *Philonicus fuliginosus* (Bellardi) (Martin & Papavero, 1970: 85) (Asilidae).
107. *Asilus niveibarbus*, p. 153 (% &). "Messico, Cordova (Saussure)". Box 5. Now *Machimus niveibarbus* (Bellardi) (Martin & Papavero, 1970: 86) (Asilidae).
108. *Asilus albospinosus*, p. 154 (%). "Messico, contorni di Messico (Truqui)". Box 5. Now *Philonicus albospinosus* (Bellardi) (Martin & Papavero, 1970: 85) (Asilidae).
109. *Asilus taeniatus*, p. 155 (&). "Messico (Craveri)". Box 5. Now *Philonicus taeniatus* (Bellardi) (Martin & Papavero, 1970: 85) (Asilidae).
110. *Asilus infuscatus*, p. 156, Pl. I, fig. 15 (%). "Messico (Sallé)". Box 5. Now *Machimus infuscatus* (Bellardi) (Martin & Papavero, 1970: 86) (Asilidae).
111. *Asilus apicalis*, p. 157 (&). "Messico (Sallé)". Box 5. Now *Ommatius apicalis* (Bellardi) (Martin & Papavero, 1970: 59) (Asilidae).
112. *Asilus megacephalus*, p. 158, pl. I, fig. 14 (%). "Messico (Sallé)". Box 5. Now *Ommatius megacephalus* (Bellardi) (Martin & Papavero, 1970: 59) (Asilidae).
113. *Ceraturgus vitripennis*, p. 160 (%). "Messico, Cuautla (as Cuantla) (Saussure)". Box 5. Now *Taracticus vitripennis* (Bellardi) (Martin & Papavero, 1970: 35) (Asilidae).
114. *Dasyopogon jalapensis*, p. 165, pl. I, fig. 5 (&). "Messico, Jalapa (Truqui)". Box 5. Now *Diogmites jalapensis* (Bellardi) (Martin & Papavero, 1970: 26) (Asilidae).
115. *Dasyopogon goniostigma*, p. 165, pl. I, fig. 6 (% &). "Messico, Playa Vicente (Sallé)". Box 5. Now *Diogmites goniostigma* (Bellardi) (Martin & Papavero, 1970: 25) (Asilidae).
116. *Dasyopogon cuantlensis*, p. 167 (% &). "Messico, Cuautla (as Cuantla) (Saussure)". Box 5. Now *Diogmites cuantlensis* (Bellardi) (Martin & Papavero, 1970: 25) (Asilidae).
117. *Dasyopogon craverii*, p. 168 (% &). "Messico (Craveri)". Box 5. Now *Diogmites craverii* (Bellardi) (Martin & Papavero, 1970: 25) (Asilidae).
118. *Dasyopogon virescens*, p. 169 (%). "Messico (Truqui)". Box 5. Now *Diogmites virescens* (Bellardi) (Martin & Papavero, 1970: 27) (Asilidae).
119. *Dasyopogon sallei*, p. 170 (&). "Messico (Sallé), Tuxpango (Sumichrast)". Box 5. Now *Diogmites sallei* (Bellardi) (Martin & Papavero, 1970: 27) (Asilidae).
120. *Dasyopogon bigoti*, p. 170 (%). "Mexico (Coll. Bigot)". Type in Oxford. Lost. An unrecognized species (Martin & Papavero, 1970: 88) (Asilidae).
121. *Dasyopogon rubescens*, p. 171 (%). "Messico (Truqui), Tuxpango (Sumichrast)". Box 5. Now *Diogmites rubescens* (Bellardi) (Martin & Papavero, 1970: 27) (Asilidae).
122. *Dasyopogon tricolor*, p. 172 (% &). "Messico (Coll. Bigot)". Box 5. Now *Diogmites tricolor* (Bellardi) (Martin & Papavero, 1970: 27) (Asilidae).
123. *Dasyopogon affinis*, p. 173 (%). "Messico (Sallé)". Box 5. Now *Diogmites affinis* (Bellardi) (Martin & Papavero, 1970: 24) (Asilidae).
124. *Dasyopogon dubius*, p. 174 (&). "Messico, Cuautla (as Cuantla) (Saussure)". Box 5. Now *Diogmites dubius* (Bellardi) (Martin & Papavero, 1970: 25) (Asilidae).
125. *Dasyopogon nigripes*, p. 175 (&). "Messico, Playa Vicente (Sallé)". Box 5. Now *Diogmites nigripes* (Bellardi) (Martin & Papavero, 1970: 26) (Asilidae).
126. *Dasyopogon truquii*, p. 176, pl. I, fig. 10 (&). "Messico (Truqui)". Box 5. Now *Stenopogon truquii* (Bellardi) (Martin & Papavero, 1970: 13) (Asilidae).
127. *Dasyopogon humilis*, p. 177 (%). "Messico, Cuautla (as Cuantla) (Saussure)". Box 5. Now *Cophura humilis* (Bellardi) (Martin & Papavero, 1970: 34) (Asilidae).

128. *Dasyopogon quadrimaculatus*, p. 180, pl. I, fig. 8 (%). "Messico (Saussure)". Box 5. Now *Dizonias tristis* (Walker, 1851) (Martin & Papavero, 1970: 14) (Asilidae).
129. *Dasyopogon lucasi*, p. 181, pl. I, fig. 7 (%). "Messico (Craveri)". Box 5. Now *Dizonias lucasi* (Bellardi) (Martin & Papavero, 1970: 14) (Asilidae).
130. *Dasyopogon spathulatus*, p. 182, pl. I, fig. 9 (%). "Messico (Truqui)". Box 5. Now *Stenopogon (Ospriocerus) abdominalis* (Say, 1824) (Martin & Papavero, 1970: 13) (Asilidae).
131. *Discocephala minuta*, p. 183 (% &). "Messico, Tuxpango presso Orizaba (Sumichrast)". Box 5. Now *Holcocephala minuta* (Bellardi) (Martin & Papavero, 1970: 7) (Asilidae).
132. *Discocephala deltoidea*, p. 185, pl. I, fig. 12 (&). "Messico (Sallé)". Box 6. Now *Holcocephala deltoidea* (Bellardi) (Martin & Papavero, 1970: 6) (Asilidae).
133. *Discocephala longipennis*, p. 186, pl. I, fig. 14 (%). "Messico, Jalapa (Truqui)". Box 6. Now *Holcocephala longipennis* (Bellardi) (Martin & Papavero, 1970: 7) (Asilidae).
134. *Discocephala affinis*, p. 186, pl. I, fig. 13 (% &). "Messico (Sallé)". Box 6. Now *Holcocephala affinis* (Bellardi) (Martin & Papavero, 1970: 6) (Asilidae).
135. *Leptogaster truquii*, p. 187, pl. I, fig. 18 (%). "Messico, Jantepec (Truqui)". Box 6. Now a synonym of *Leptogaster fervens* Wiedemann, 1830 (Martin, 1968: 3, as Leptogastridae) (or Asilidae).
136. *Thereva crassicornis*, p. 188, pl. II, fig. 16 (%). "Messico (Truqui)". Box 6. Now *Ozodiceromya crassicornis* (Bellardi) (Irwin & Lyneborg, 1980: 257) (Therevidae).
137. *Thereva argentata*, p. 189 (%). "Messico, contorni di Messico; Cordova (Saussure)". Box 6. Now *Ozodiceromya argentata* (Bellardi) (Irwin & Lyneborg, 1980: 257) (Therevidae).
138. *Psilocephala univittata*, p. 190 (&). "Messico, Puebla (Saussure) (Collection Bigot)". Type in Oxford; specimen of Turin lost. Now *Ozodiceromya univittata* (Bellardi) (Irwin & Lyneborg, 1980: 258) (Therevidae).
139. *Psilocephala sumichrasti*, p. 191 (%). "Messico, Tuxpango Presso Orizaba (Sumichrast)". Box 6. Now *Cyclotelus sumichrasti* (Bellardi) (Irwin & Lyneborg, 1980: 254) (Therevidae).
140. *Psilocephala nigra*, p. 192 (%). "Messico (Semper)". Box 6. Now *Melanothereva nigra* (Bellardi) (Irwin & Lyneborg, 1980: 193) (Therevidae).
141. *Atherix latipennis*, p. 193 (%). "Messico, Anganguero (as Angang) (Saussure), Oaxaca (Sallé)". Box 6. Now *Suragina latipennis* (Bellardi) (James, 1968: 6) (Rhagionidae).
142. *Atherix longipes*, p. 194, pl. II, fig. 17 (&). "Messico, Cordova (Saussure)". Box 6. Now *Suragina longipes* (Bellardi) (James, 1968: 6) (Rhagionidae).
143. *Leptis cinereus*, p. 195. "Messico, Cordova (Saussure). Type lost. An unrecognized species (James, 1968: 6) (Rhagionidae).
144. *Chrysopila mexicana*, p. 196 (%). "Messico, contorni di Messico (Truqui)". Box 6. Now *Chrysopilus mexicanus* Bellardi (James, 1968: 3) (Rhagionidae).
145. *Hybos dimidiata*, p. 197 (&). "Messico (Sallé)". Box 6. Now *Lactistomyia dimidiata* (Bellardi) (Smith, 1967: 14) (Empididae).
146. *Empis bicolor*, p. 198 (&). "Messico, Cuautla (as Cuantla) (Saussure)". Box 6. Same combination (Smith, 1967: 21) (Empididae).
147. *Empis cyaneus*, p. 198 (&). "Messico, Anganguero (as Angang) (Saussure)". Box 6. Now *Lampremis cyanea* (Bellardi) (Smith, 1967: 20) (Empididae).

148. *Empis totipennis*, p. 199 (&). "Messico, Morelia (Saussure)". Box 6. Unchanged (Smith, 1967: 24) (Empididae).
- 1862:
149. *Culex bigoti*, p. 200, pl. III, fig. 1 (&). "Messico (Sallé)(Coll. Bigot)". Type in Oxford. Unchanged (Culicidae).
150. *Limnophila undulata*, p. 200, pl. III, fig. 2 (&). "Messico, Tuxpango presso Orizaba (Sumichrast)". Box 7. Unchanged (Alexander & Alexander, 1970: 108) (Tipulidae).
151. *Aporosa mexicana*, p. 201 (%). "Messico, Tuxpango presso Orizaba (April) (Sumichrast)". Box 7. Now *Limonia (Geranomyia) mexicana* (Bellardi) (Alexander & Alexander, 1970: 64) (Tipulidae).
152. *Leia punctata*, p. 202, pl. III, fig. 3 (%). "Messico, Tuxpango presso Orizaba (Sumichrast)". Box 7. Unchanged (Papavero, 1978: 30) (Mycetophilidae).
153. *Rhyphus taeniatus*, p. 202, pl. III, fig. 15 (%). "Messico, Tuxpango presso Orizaba (Sumichrast)". Box 7. Now *Olbiogaster taeniata* (Bellardi) (Papavero, 1967a: 4) (Anisopodidae).
154. *Simulium mexicanum*, p. 203 (%). "Messico, Tuxpango presso Orizaba (Sumichrast)". Box 7. Unchanged (Vulcano, 1967: 16) (Simuliidae).
155. *Plecia notata*, p. 204, pl. III, fig. 4 (% &). "Messico, Playa Vicente (Sallé)". Box 7. Now a junior synonym of *Plecia plagiata* Wiedemann, 1824 (Hardy, 1966: 4) (Bibionidae).
156. *Dilophus minutus*, p. 204 (% &). "Messico, Tuxpango presso Orizaba (Sumichrast)". Box 7. Unchanged (Hardy, 1966: 10) (Bibionidae).
157. *Hermetia lativentris*, p. 205 (&). "Messico, Tuxpango presso Orizaba (Sumichrast)". Box 7. Unchanged (James, 1973: 38) (Stratiomyidae).
158. *Acanthina nana*, p. 206 (% &). "Messico, Tuxpango presso Orizaba (Sumichrast)". Box 7. Now *Artemita nana* (Bellardi) (James, 1973:50) (Stratiomyidae).
159. *Stratiomys bimaculata*, p. 207, pl. III, fig. 7 (%). "Messico, Cosamaloapan (Sallé)". Box 7. Now *Hoplitimyia bimaculata* (Bellardi) (James, 1973:42) (Stratiomyidae).
160. *Chordonota fuscipennis*, p. 208, pl. III, fig. 6 (%). "Messico, Playa Vicente (Sallé)". Box 7. Unchanged (James, 1973: 24) (Stratiomyidae).
161. *Chordonota carbonaria*, p. 208 (%). "Messico, Tuxpango presso Orizaba (Sumichrast)". Type lost. Now a junior synonym of *Labocerina atrata* (Fabricius, 1805) (James, 1973:29) (Stratiomyidae).
162. *Clitellaria pygmaea*, p. 209, pl. III, fig. 5 (%). "Messico (Sallé), Tuxpango, presso Orizaba (Sumichrast)". Box 7. Now *Eurineura pygmaea* (Bellardi) (James, 1973:32) (Stratiomyidae).
163. *Sargus versicolor*, p. 210, pl. III, fig. 8 (&). "Messico, Oaxaca (Sallé)". Box 7. Unchanged (James, 1973:20) (Stratiomyidae).
164. *Tabanus subtilis*, p. 211, pl. III, fig. 9 (&). "Messico, Oaxaca (Sallé)". Box 7. Now *Stenotabanus subtilis* (Bellardi) (Fairchild, 1971: 48; Fairchild & Burger, 1994: 76) (Tabanidae).
165. *Tabanus rubescens*, p. 212 (&). "Messico, Oaxaca (Sallé)". Box 7. Now a junior synonym of *Tabanus dorsifer* Walker, 1860 (Fairchild, 1971: 91; Fairchild & Burger, 1994: 136) (Tabanidae).

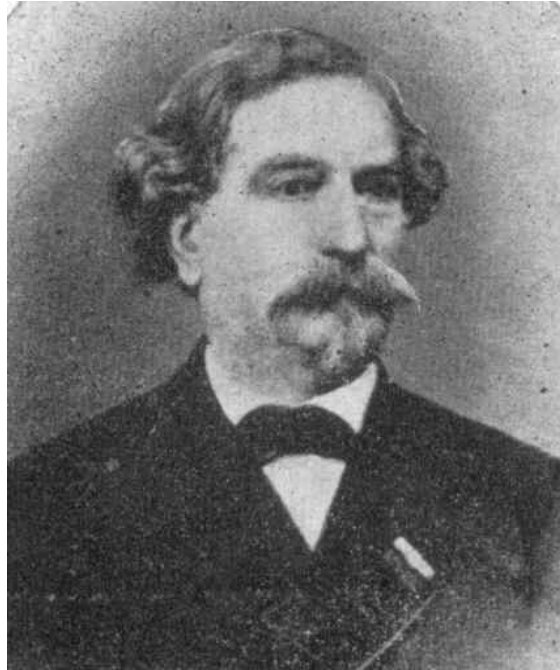
166. *Acanthomera bellardii* Bigot, p. 213, pl. III, fig. 11 (&). "Messico (Sallé) (Coll. Bigot)". Type in Oxford. Now *Pantophthalmus bellardii* (Bigot) (Papavero, 1967b: 2) (Pantophthalmidae).
167. *Acanthomera bigoti*, p. 213, pl. III, fig. 10 (%). "Messico, Chinantla presso Oaxaca (Sallé)". Box 7. Now a junior synonym of *Rhaphiorhynchus planiventris* (Wiedemann, 1821) (Papavero, 1967b: 3) (Pantophthalmidae).
168. *Apelleia vittata*, p. 216, pl. III, fig. 12 (%). "Messico, Playa Vicente (Sallé)". Box 7 (Acroceridae).
169. *Laphria homopoda*, p. 217, pl. III, fig. 16 (%). "Messico, Tuxpango presso Orizaba (May) (Sumichrast)". Box 7. Now *Lampria homopoda* (Bellardi) (Martin & Papavero, 1970:40) (Asilidae).
170. *Erax lowei*, p. 218, pl. III, fig. 17 (%). "Messico, Tuxpango presso Orizaba (Sumichrast)". Box 7. Now in *Efferia* (Martin & Papavero, 1970: 66) (Asilidae).
171. *Asilus tuxpanganus*, p. 219 (% &). "Messico, Tuxpango presso Orizaba (Sumichrast)". Box 7. Now *Philonicus tuxpanganus* (Bellardi) (Martin & Papavero, 1970: 85) (Asilidae).
172. *Ommatius fuscipennis*, p. 220 (% &). Messico, Tuxpango presso Orizaba (April and May) (Sumichrast)". Box 7. Unchanged (Martin & Papavero, 1970: 59) (Asilidae).
173. *Dasypogon pseudoialapensis*, p. 222 (% &). "Messico, Tuxpango presso Orizaba (Sumichrast)". Box 7. Now in *Diogmites* (Martin & Papavero, 1970: 26) (Asilidae).
174. *Leptis bitaeniata*, p. 223, pl. III, fig. 14 (%). "Messico, Tuxpango presso Orizaba (Sumichrast)". Box 7. Now in *Rhagio* (James, 1968: 6) (Rhagionidae).
175. *Leptis politaeniata*, p. 224, pl. III, fig. 13 (&). "Messico, Tuxpango presso Orizaba (Sumichrast)". Box 7. Now in *Rhagio* (James, 1968:6) (Rhagionidae).
176. *Chrysopila nigra*, p. 224, pl. III, fig. 13 (&). "Messico, Tuxpango presso Orizaba (April) (Sumichrast)". Box 7. Now *Chrysopilus niger* Bellardi (James, 1968: 4) (Rhagionidae).

## 7. THE SPECIES DESCRIBED BY CAMILLO RONDANI

Camillo Rondani (pronounced Róndani) (Fig. 6), born in Parma on November 23, 1803, was a descendant of a very old, noble family of that city, which could boast of having produced men of distinction as early as the twelfth century. Among his ancestors was a painter of some renown, Francesco Maria Rondani (1490-1548). His family had decided that Camilo should have an ecclesiastical career. However, in 1818, Rondani began to show a great interest in natural history, after having read the works of Buffon, and he discontinued his religious studies. Afterwards he entered the University of Parma, and with Giorgio Jan, with whom he learned botany, Rondani undertook several excursions, collecting insects.

During his life in the University, Rondani became interested in the politics of his country. Parma was at that time a Duchy governed by Marie Louise, the ex-Empress of France. After the fall of Napoleon in Waterloo, she obtained this government from the Austrians, who again had dominated Italy since 1815. In 1831, following the example given by the revolution of the preceding year in France, which resulted in the ascension to power of Louis Philippe, the Parmese rebelled against

the Austrians. Marie Louise was deposed and fled to Piacenza. The liberal party assumed the government, and one of its members, Macedonio Melloni, offered a chair of natural history to Rondani, with the opportunity of travelling to France, where he was to study in order to take later the professorship in his native town. Rondani travelled to Paris, attending several lectures of the leading naturalists, especially Cuvier. However, with the Austrian troops having suppressed the Parmese revolution, Rondani was forced to leave Paris and return to his native place. In Parma, he stayed for a while helping his brother in commerce. In 1833 he married, and the following year left Parma, going to live in Guardasone, where he dedicated himself to entomological pursuits.



**Figure 6**  
Camillo Rondani. Photograph.

On December 17, 1847, with the death of Marie Louise, the government of the Duchy of Parma passed to Carlo Lodovico di Borbone, who assumed it with the title of Carlo II. The next year another revolution took place, taking him from power. In the same year Rondani published his first paper on exotic Diptera, a study of the Brazilian flies collected by Ghiliani (Rondani, 1848).

In 1849, Carlo Alberto di Savoia declared war on Austria and took Parma with his army. Rondani left the countryside and again came to that city, returning to the political life. He was elected deputy by Traversetolo. However, with the defeat of Novara, Parma was lost again to the Austrians, and Carlo III succeeded his father in the Duchy, exercising a tyrannical rule. Rondani took refuge again in Guardasone, returning to his entomological studies. In this he was rewarded by the excellent harvest brought by Cajetano Osculati from his trip through the equatorial regions of South America, then almost entirely unknown entomologically. The 31 species of Diptera reported by Osculati (17 of which were described as new) were studied by Rondani, who published the results in 1850 (Rondani, 1850a). In that same year, Rondani published another paper describing Diptera, principally from Venezuela and from the Island of São Sebastião (State of São Paulo), Brazil, the latter collected by Giovanni Casaretto (Rondani, 1850b).

In 1854, March 26, Carlo III was murdered, and his consort, Luigia Maria di Bourbon-Artois, assumed the government of Parma. The University experienced notable progress and Rondani was invited to assume the professorship of agronomy, also being named director of an agronomic institution. In 1860, with the unification of Italy and the definite defeat of the Austrians, Rondani went to teach natural history in the Liceo di Parma, as the agronomic institution had been closed. When it was reopened in 1865, Rondani was again appointed to it as director. In 1863, Rondani published one more paper on exotic Diptera, including mostly specimens sent to him by R. A. Philippi, from Chile. Also included were some other specimens caught by Ghiliani in Belém, Pará, Brazil, and some materials given to him by Marquis Massimiliano Spinola. This paper (1863) included specimens from Colombia and Puerto Rico, collected by Giuseppe Bertero.

In 1868, Rondani described Argentinian flies collected by Pellegrino Strobel.

In 1878, he published his last paper on Neotropical flies, describing some Pupipara found in the Museo Civico di Genova. This is his only paper describing Mexican flies, which includes the following:

1. *Lipoptena mazamae*, p. 153. "Central and South America". Unchanged (Guimarães, 1968a: 9) (Hippoboscidae).
2. *Ornithomyia bellardiana*, p. 157. "Messico". Now a junior synonym of *Ornithoctona (Ornithoctona) erythrocephala* (Leach, 1817) (Guimarães, 1968a: 3) (Hippoboscidae).
3. *Olfersia pallidilabris*, p. 161. "Messico". Now a junior synonym of *Lynchia nigra* (Perty, 1833) (Guimarães, 1968a:6) (Hippoboscidae).
4. *Olfersia obliquinervis*, p. 162. "Messico". Also a synonym of *Lynchia nigra* (Perty, 1833) (Guimarães, 1968a: 6) (Hippoboscidae).
5. *Strebla mexicana*, p. 168. Not cited in Wenzel's 1970 catalogue (Streblidae).



In 1870, Rondani had collaborated in the foundation of the Italian Entomological Society, of which he was the vice-president. He died on September 17, 1879. A list of his publications was given by Baron Osten Sacken (1885). His biography was published by Lessona (1884) (see also Bezzi, 1908a, 1908b). Rondani's types of exotic (*i.e.*, Latin American) Diptera are deposited in the Museo de Instituto di Zoologia Sistemática della Università di Torino, in the Museo Civico di Storia Naturale di Milano, and in Naples (a list of types found in Naples, the majority of Rondani's types, was given by A. Costa (1866)).

## 8. DOMINIK BILIMEK

Dominik Bilimek entitled himself "Kustos am National Museum in Mexiko" (Curador del Museo Nacional de México)". During the unfortunate reign of Emperor Ferdinand Maximilian of Mexico, Bilimek explored the Cacahuamilpa Caves, 45 leagues from Mexico City, on January 14, 1866, leaving an account of his explorations, and a description of *Pholeomyia leucozona* (1867) (Milichiidae), the only Mexican fly described by him. According to labels in the Museum of Vienna he also collected extensively in Orizaba and Tacubaya. Before his arrive to Mexico he professed as Augustine monk, but being his principal fondness to collect insect specimens for the European museums. As soon as he deserted the monastic order, he organized a museum of natural history for Maximilian, using an abandoned abbey of La Chroma island, in the Adriatic Sea. Later in Mexico, he collected a great amount of insects around Mexico City and in Morelos, sometimes accompanied by Empress Charlotte and her ladies (Hoffmann *et al.*, 1986). No other details are known about his life and travels (Papavero, 1973: 291-292. See also Barnhart, 1927, 1965; Hemsley, 1887; Linden, 1867).

## 9. THE SPECIES DESCRIBED BY F. JAENNICKE

Unfortunately, we were not able to find data about the life of F. Jaenicke. In his paper of 1867 (reprinted in 1968) he described the following species from Mexico (most of the types are now in the Senckenberg Institution, Frankfurt a. M.):

1. *Odontomyia prasina*, p. 324 (16) (%). "Mexico". Now *Hedriodiscus prasinus* (Jaenicke) (James, 1973: 41) (Stratiomyidae).
2. *Rondania obscura*, p. 325 (17) (% &). "Mexico". Now *Cyphomyia obscura* (Jaenicke) (James, 1973: 27) (Stratiomyidae).

3. *Anthrax castanea*, p. 338 (30), pl. 44, fig. 15 (% &). "Mexico". Now *Villa (Paravilla) castanea* (Jaennicke) (Painter *et al.*, 1978: 50) (Bombyliidae).
4. *Anthrax paradoxa*, p. 339 (31), pl. 44, fig. 16 (&). "Mexico". Now *Neodiplocampta (Neodiplocampta) paradoxa* (Jaennicke) (Painter *et al.*, 1978: 37) (Bombyliidae).
5. *Antharx kaupii*, p. 340 (32), pl. 44, fig. 17 (% &). "Mexico". Now a junior synonym of *Ligyra orcus* (Walker, 1849) (Painter *et al.*, 1978:43) (Bombyliidae).
6. *Exoprosopa anthracoidea*, p. 340 (32), pl. 44, fig. 18 (% &). "Mexico". Unchanged (Painter *et al.*, 1978: 39) (Bombyliidae).
7. *Exoprosopa rostrifera*, p. 341 (33), pl. 44, fig. 19 (% &). "Mexico". Unchanged (Painter *et al.*, 1978: 41) (Bombyliidae).
8. *Exoprosopa blanchardiana*, p. 341 (33), pl. 44, fig. 20 (% &). "Mexico". Now *Villa (Hemipenthes) sinuosa blanchardiana* (Jaennicke) (Painter *et al.*, 1978: 50) (Bombyliidae).
9. *Exoprosopa pueblensis*, p. 342 (34), pl. 44, fig. 21 (% &). "Mexico". Unchanged (Painter *et al.*, 1978: 41) (Bombyliidae).
10. *Adelidea flava*, p. 346 (38) (%). "Mexico". Now a junior synonym of *Lordotus gibbus* Loew, 1863 (Painter *et al.*, 1978: 6) (Bombyliidae).
11. *Poecilognathus thlipsomyzoides*, p. 351 (43), pl. 43, fig. 11 (%). "Mexico". Now *Phthiria thlipsomyzoides* (Jaennicke) (Painter *et al.*, 1978: 15) (Bombyliidae).
12. *Nicocles analis*, p. 355 (47), pl. 43, fig. 13 (%). "Mexico". Unchanged (Martin & Papavero, 1970: 31) (Asilidae).
13. *Atomosia beckeri*, p. 359 (51) (% &). "Mexico". Unchanged (Martin & Papavero, 1970: 46) (Asilidae).
14. *Micropalpus albomaculatus*, p. 388 (80) (&). "Mexico". Now *Epalpus albomaculatus* (Jaennicke) (Guimarães, 1971: 64) (Tachinidae).
15. *Jurinia flavifrons*, p. 390 (82) (&). "Mexico". Now in *Archytas* (Guimarães, 1971: 49) (Tachinidae).
16. *Jurinia apicalis*, p. 390 (82) (% &). "Mexico". Now a junior synonym of *Archytas lateralis* (Macquart, 1843) (Guimarães, 1971: 50) (Tachinidae).
17. *Dejeania rutiloides*, p. 394 (86) (&). "Mexico". Now in *Paradejeania* (Guimarães, 1971: 59) (Tachinidae).
18. *Volucella maximiliani*, p. 395 (87) (% &). "Mexico". Now a junior synonym of *Copestylum metalliferum* (Walker, 1849) (Thompson *et al.*, 1976: 79) (Syrphidae).
19. *Volucella mellea*, p. 396 (88) (% &). "Mexico". Now *Copestylum melleum* (Thompson *et al.*, 1976: 79) (Syrphidae).
20. *Volucella haagii*, p. 397 (89) (&). "Mexico". Now in *Copestylum* (Thompson *et al.*, 1976: 76) (Syrphidae).
21. *Eristalis thoracica*, p. 399 (91) (% &). "Mexico". Now a junior synonym of *Palpada ruficeps* (Macquart, 1842) (Thompson *et al.*, 1976: 108) (Syrphidae).
22. *Eristalis tricolor*, p. 400 (92) (&). "Mexico". Now a junior synonym of *Palpada pusilla* (Macquart, 1842) (Thompson *et al.*, 1976: 108) (Syrphidae).
23. *Eristalis bellardii*, p. 400 (92) (%). Now *Eristalis (Eoseristalis) bellardii* Jaennicke (Thompson *et al.*, 1976: 101) (Syrphidae).
24. *Zodion splendens*, p. 405 (97). Not cited in Papavero's 1971a catalogue (Conopidae).

## 10. THE SPECIES DESCRIBED BY CARL EDUARD ADOLPH GERSTAECKER

Carl Eduard Adolph Gerstaecker died on July 20, 1895 at Greifswald, at the age of 67. He was educated for the medical profession and took his degree, but devoted himself to zoology, especially to entomology. For many years he was keeper of the entomological department of the Berlin Natural History Museum and also a professor of zoology at the University of Berlin. About the year 1876, differences with the then director of the Berlin Museum induced him to resign his appointment in Berlin, and he subsequently accepted the professorship of Zoology at Greifswald, which he held until his death. Gerstaecker was an industrious and thorough worker in all departments of entomology. Among his principal works may be noted the "Arthropoda" in the "Handbuch der Zoologie" (1863) and the same phylum in Bronn's "Klassen und Ordnungen der Tierreichs".

Gerstaecker rendered infinite help to his fellow students by compiling the entomological portions of the German "Bericht" (the forerunner and subsequent contemporary of the English "Zoological Record") from the year 1853 to the year 1867.

Among Gerstaecker's publications are those dealing with the Acroceridae (1856), Stratiomyidae (1857), Acalyptratae (1860), parasitic flies (1868a), and his most important paper, the revision of the Mydidae (1868b).

Gerstaecker studied the Diptera contained in the ancient collection of Tönder Lund in Copenhagen, and that of Westermann in the Vienna Museum. Many of his more recent specimens were collected by Natterer in Brazil (*cf.* Papavero, 1971b: 80-87), Lacordaire (*ibid.*, p. 133) in French Guiana, Deppe (*ibid.*, pp. 103-107; part 1 of the present work) in Mexico, Olfers (*cf.* Papavero, 1971b: 69) in Brazil, Burmeister (*ibid.*, pp. 292-293) in Brazil, Koeppen in Mexico, Moritz (*ibid.*, pp. 297-298) in Colombia and the West Indies, Virmond (*ibid.*, pp. 110, 112) in Brazil, Appun (*ibid.*, p. 291) in Colombia, Ehrenberg and Uhde in Mexico. He also studied the collections organized by Bescke in Brazil (*cf.* Papavero, 1971b: 87) belonging to the coleopterist Germar.

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About Koeppen and Uhde (or Uhle) nothing is known.

Carl August Ehrenberg was born in Delitsch, Province of Sachsen, Prussia, on August 24, 1801, son of the "Stadtrat und Stadtritter" Johann Gottfried Ehrenberg. Carl dedicated himself to commerce (Kauffmannstande) and travelled through St. Thomas (1827-1828), Port-au-Prince in Haiti (March 1828-June 1831) and Mexico (July 1831-April 1840), both near the Capital and 30 leagues to the interior (Mineral

Real del Monte). From all those places he sent to the Museums of Berlin and Halle rich zoological and botanical collections. In Mexico he became especially interested in the Cactaceae. Upon his return to Berlin he entered business with his brother Ferdinand. He died there on August 13, 1849, of cholera (Urban, 1903, p. 43; see also Barnhart, 1965; Hemsley, 1887; Knobloch, 1893; Lorence & García, 1989; McVaugh, 1972; Papavero, 1973; Pennell, 1945; Stafleu & Cowan, 1976 (1: 727); Urban, 1897).

Only 8 species were described by Gerstaecker from Mexico:

1857:

1. *Cyphomyia varipes*, p. 283 (&). "Mexico, Costa Rica, ?Venezuela". Types in Vienna Museum. Unchanged (James, 1973: 28) (Stratiomyidae).
2. *Cyphomyia pilosissima*, p. 293 (%). "Mexico (Koeppen)". Type in Vienna Museum. Unchanged (James, 1973: 28) (Stratiomyidae).
3. *Cyphomyia tomentosa*, p. 294 (&). "Mexico (Koeppen)". Type ?. Unchanged (James, 1973: 46) (Stratiomyidae).
4. *Stratiomys fenestrata*, p. 327 (&). "Mexico (Deppe)". Type ?Berlin. Unchanged (James, 1973: 46) (Stratiomyidae).
5. *Stratiomys euchlorus*, p. 328 (% &). "Mexico (Deppe)". Types ?Berlin. Now *Hedriodiscus euchlorus* (Gerstaecker) (James, 1973: 40) (Stratiomyidae).

1860:

6. *Diacrita costalis*, p. 197, pl. II, figs. 10, 10a. "Mexico, Oaxaca (Deppe)". Type ?Berlin. Unchanged (Steyskal, 1968b: 4) (Otitidae).

1868b:

7. *Mydas lavatus*, p. 96 (% &). "Mexico (Koeppen)". Types Berlin. Now a junior synonym of *Mydas xanthopterus* Loew, 1866 (Papavero, 1996: 631) (Mydidae).
8. *Mydas annularis*, p. 100 (&). "Mexico (Ehrenberg)". Type Berlin. Unchanged (Papavero, 1996: 630) (Mydidae).

## 11. THE SPECIES DESCRIBED BY JACQUES MARIE FRANGILLE BIGOT

Unfortunately, very little is known about the life of the French dipterist Jacques Marie Frangille Bigot (Fig. 7). He was born in 1818, in 1844 was elected fellow of the "*Société Entomologique de France*", and seems to have been a very wealthy person, who could buy large collections of exotic flies, having amassed a very important collection of Diptera.



**Figure 7**

Jacques Marie Frangille Bigot. Photograph property of N. Papavero.

Bigot published two large series of papers, the "*Essai d'une classification générale et synoptique de l'Ordre des Insectes Diptères*", and the "*Diptères nouveaux ou peu connus*".

In relation to the former series, Baron Osten Sacken makes the following comments (1904: 232-233; 1978 (reprint): 232-233):

*It remains for me now to reproduce the opinion expressed by Mr. Bigot himself, at different times, about his own publications:*

*In the Annales etc. 1885, p. 225, he said: "J'avais autrefois (Ann. etc. 1852-1859) commencé la publication d'un travail intitulé: Essai d'une classification générale et synoptique de l'Ordre des Insectes Diptères etc. Cette oeuvre fut alors sévèrement et doctoralement critiquée dans le Bericht de Gerstaecker (Berlin) par l'habile diptériste H. Loew. Je dois confesser que la plupart de ses objections m'ont paru tellement fondées que, reconnaissant la médiocre valeur de mes Essais, je me résigne à les abandonner à mi-chemin". Whereupon Mr. Bigot proposes a new plan for the distribution of the Diptera, into two tribes: Omalocerati and Anomalocerati etc.*

*A further discussion between Bigot and G. H. Verrall, about questions of orthography and of mutual courtesy will be found in the Wien. Ent. Zeitschr., 1889, p. 168, 265 and 293. In the latter notice, Bigot renews his former recantation of his "Essai": "Si Mr. Verrall avait daigné lire mes opuscules, etc. il y aurait vu, maintes fois répété, que mon ancien travail, intitulé "Essai" etc. devait être désormais, et dans son entier, considéré comme nul et non avenu, déclaration qui m'absolue naturellement des fautes que j'ai pu y commettre".*

Regarding the series "*Diptères nouveaux ou peu connus*", Aldrich (1905: ii) points out that:

Bigot's main work (...) is in the form of a long series of articles in the *Annales Soc. ent. France* (...) interspersed chronologically with fragments in the *Bulletin* of the same society. Owing to Bigot's peculiar, complicated and inconsistent system of numbering his contributions, it has been almost impossible for me to find them all, but I believe I have succeeded (...). Sometimes his Roman numerals stop and remain the same for several papers, then again the numbering in "parts" becomes stationary while the other goes on, and in two cases two papers have both the same.

Bigot started publishing in 1852 and the last of his papers that interest us is dated from 1892. He also studied the Diptera collected by Ramón de la Sagra in Cuba (1857a), and those collected by the "*Mission Scientifique du Cap Horn*" (1888a).

Osten Sacken (1904: 232; 1978: 232) comments further, on Bigot's work:

*My excellent friend J. M. F. Bigot died April 14 1893 at his country-seat near Paris at the age of 74 years (An Obituary Notice will be found in the *Bolletin de la Soc. Ent. de France*, April 26 1893). My acquaintance with Bigot was of long date. When I met*

*him again after my return from the United States in 1887, and our relations were renewed, I felt it my duty, although treating him as a friend, to tell him the truth about his publications. I did so, during one of my visits to Paris (the year I do not remember), in telling him that he was doing a useful work in forming a large collection, especially of exotic Diptera; but that he should renounce descriptive work, for which he was not competent. I expressed my opinion in the strongest terms, concluding with the words: "If all your publications could be suppressed, it would be a gain for science". He winced a little, but resumed immediately his serene expression, and said: "Eh bien, cela m'amuse". My frankness did not prevent us from remaining friends up to his death. In the most generous manner, he kept his rich collection and library at my disposal. Even when he was away from Paris (he usually spent his winters in Algiers) he left orders to his housekeeper to admit me at any time into his sanctum, and to light a fire for me in winter. I keep of my friend Bigot and his family (wife and daughter) a pleasant and grateful recollection.*

The great collection of flies gathered by Bigot, including many types, especially of exotic flies, and many types described by Macquart (see part 2 of this work), were bought after his death by G. H. Verrall, and are now deposited at the Hope Department of Entomology, Oxford University (most of the types), some of them also at the British Museum of Natural History. Osten Sacken (l. c.) had an important role in that transaction:

*The share I had in the sale of Bigot's collection is explained in the Bulletin de la Soc. Ent. de France, June 14, 1893. In this notice it should have been added that I had written to the Authorities of the Museum in Paris, urging them to purchase this important collection offered at a very moderate price (6000 francs). My advice, however, was not heeded, and the collection passed into the hands of Mr. G. H. Verrall of Newmarket, England, and will ultimately, as I understand, find its place in the British Museum.*

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Although he never cites the names of the collectors, it is very probable that Bigot studied the collections gathered in Mexico by Pilate, Geisbreght, Linden, and Funck (see part 2 of this work), as well as the material collected by Sallé, Sumichrast, Saussure, and Boucard (see part 6 of this work).

Bigot described the following Mexican flies:

1875a:

1. *Emphysomera pilosula*, p. 243 (%). "Mexico". Type in Oxford. Now *Ommatius pilosulus* (Bigot) (Martin & Papavero, 1970: 59) (Asilidae).
2. *Emphysomera bicolor*, p. 244 (% &). "Mexico". Type in Oxford. Now in *Ommatius* (Martin & Papavero, 1970: 59) (Asilidae).
3. *Ommatius parvus*, p. 247 (%). "Mexico". Type in Oxford. Unchanged (Martin & Papavero, 1970: 59) (Asilidae).

1875b:

4. *Volucella castanea*, p. 476 (%). "Mexico, Oaxaca". Type in Oxford. Now a junior synonym of *Copestylum posticum* (Say, 1830) (Thompson *et al.*, 1976: 82) (Syrphidae).
5. *Volucella tricineta*, p. 477 (&). "Mexico, Oaxaca". Type in Oxford. Now *Copestylum tricineta* (Bigot) (Thompson *et al.*, 1976: 85) (Syrphidae).
6. *Volucella purpurifera*, p. 477 (% &). "Mexico, Oaxaca". Type in Oxford. Now *Copestylum purpuriferum* (Bigot) (Thompson *et al.*, 1976: 82) (Syrphidae).
7. *Volucella variegata*, p. 478 (% &). "Mexico". Types in Oxford. Now *Copestylum variegatum* (Bigot) (Thompson *et al.*, 1976: 86) (Syrphidae).
8. *Volucella amethystina*, p. 479 (%). "Mexico". Type in Oxford. Now *Copestylum amethystinum* (Bigot) (Thompson *et al.*, 1976: 71) (Syrphidae).
9. *Volucella nigrifacies*, p. 479 (%). "Mexico". Type in BMNH. Now in *Copestylum* (Thompson *et al.*, 1976: 80) (Syrphidae).
10. *Volucella pulchripes*, p. 480 (%). "Mexico". Type in Oxford. Now in *Copestylum* (Thompson *et al.*, 1976: 82) (Syrphidae).
11. *Volucella varians*, p. 481 (&). "Mexico". Type in Oxford. Now in *Copestylum* (Thompson *et al.*, 1976: 86) (Syrphidae).
12. *Volucella viridula*, p. 481 (&). "Mexico". Type in Oxford. Now a synonym of *Copestylum vagum* (Wiedemann, 1830) (Thompson *et al.*, 1976: 86) (Syrphidae).
13. *Volucella tristis*, p. 482 (&). "Mexico". Type in Oxford. Now a junior synonym of *Copestylum subrostratum* (Rondani, 1848) (Thompson *et al.*, 1976: 85) (Syrphidae).

1875c:

14. *Cyphomyia scalaris*, p. 487 (% &). "Mexico". Unchanged (James, 1973: 27) (Stratiomyidae).

1876a:

15. *Trichopoda nigricauda*, p. 395 (%). "Mexico". Now *Trichopoda (Trichopoda) nigricauda* Bigot (Guimarães, 1971: 9) (Tachinidae).

1877b:

16. *Somomya pallidibasis*, p. 247 (&). "Mexico". Now *Phaenicia (Phaenicia) purpurescens* (Walker, 1837) (James, 1970: 11) (Calliphoridae).
17. *Somomya mutabilis*, p. 248 (% &). "Mexico". Now *Phaenicia (Phaenicia) eximia* (Wiedemann, 1819) (James, 1970: 10) (Calliphoridae).
18. *Somomya flavigena*, p. 249 (&). "Mexico". Now *Cochliomyia macellaria* (Fabricius, 1775) (James, 1970: 7) (Calliphoridae).



19. *Somomya callipes*, p. 249 (%). "Mexico". Now *Myiolucilia lyrcea* (Walker, 1849) (James, 1970: 8) (Calliphoridae).
20. *Somomya pueblensis*, p. 250 (&). "Mexico". Now *Phaenicia (Phaenicia) eximia* (Wiedemann, 1819) (James, 1970: 10) (Calliphoridae).
21. *Somomya fulvinota*, p. 251 (&). "Mexico". Now in *Myiolucilia* (James, 1970: 7) (Calliphoridae).
22. *Somomya argentifera*, p. 251 (?%). Not cited in James's 1970 catalogue (Calliphoridae).
23. *Somomya aztequina*, p. 252 (% &). "Mexico". Now *Cochliomyia macellaria* (Fabricius, 1775) (James, 1970: 7) (Calliphoridae).

1877c:

24. *Carlottaemyia moerens*, p. xxvii (% &). "Mexico". Now *Diacrita costalis* Gerstaecker, 1860) (Steyskal, 1968b: 4) (Otitidae).

1878a:

25. *Pyrellia scapulata*, p. 35 (% &). "Mexico". Now *Morellia basalis* (Walker, 1852) (Pont, 1972: 8) (Muscidae).
26. *Pyrellia iris*, p. 36 (&). "Mexico". Now *Morellia flavicornis* (Macquart, 1848) (Pont, 1972: 9) (Muscidae).

1878b:

27. *Ocyptera soror*, p. 46 (&). "Mexico". An unrecognized *Cylindromyia* (Guimarães, 1971: 16) (Tachinidae).
28. *Ocyptera simplex*, p. 47 (&). "Mexico". An unrecognized *Cylindromyia* (Guimarães, 1971: 16) (Tachinidae).

1878d:

29. *Pogonosoma arachnoides*, p. 227 (&). "Mexico". Type in Oxford. Now in *Andrenosoma (Pogonosoma)* (Martin & Papavero, 1970: 44) (Asilidae).
30. *Cormansis eupoda*, p. 234 (?&). "Mexico". Type in Oxford. Now in *Atomosia* (Martin & Papavero, 1970: 47) (Asilidae).
31. *Aphestia nigra*, p. 235 (% &). "Mexico". Type in Oxford. Unchanged (Martin & Papavero, 1970: 50) (Asilidae).
32. *Atomosia soror*, p. 236 (% &). "Mexico". Type in Oxford. Now *Atomosia rufipes* Macquart, 1847 (Martin & Papavero, 1970: 47) (Asilidae).
33. *Cerotainia? nigra*, p. 238 (&). "Mexico". Type in Oxford. Unchanged (Martin & Papavero, 1970: 52) (Asilidae).
34. *Cerotainia? dubia*, p. 238 (%). "Mexico". Type in Oxford. Unchanged (Martin & Papavero, 1970: 52) (Asilidae).
35. *Microstylum fulvigaster*, p. 410 (%). "Mexico". Type in Oxford. Unchanged (Martin & Papavero, 1970: 19) (Asilidae).
36. *Stenopogon fuscolimbatus*, p. 421 (?% &). "Mexico". Type in Oxford. Now *Stenopogon (Stenopogon) fuscolimbatus* Bigot. Unchanged (Martin & Papavero, 1970: 12) (Asilidae).

37. *Ceraturgus geniculatus*, p. 443 (%). "Mexico (Veracruz)". Type in Oxford. Now in *Taracticus* (Martin & Papavero, 1970: 35) (Asilidae).

1879a:

38. *Macroceromys fulviventris*, p. 187 (&). "Mexico". Now *Solva (Macroceromys) fulviventris* (Bigot) (James, 1975: 2) (Xylomyidae).

39. *Oplacantha limbata*, p. 196 (&). "Mexico, Veracruz, Orizaba". Unchanged (but *Oplacantha Rondani*) (James, 1973: 8) (Stratiomyidae).

40. *Hermetia nigrifascies*, p. 200 (% &). "Mexico". Now a junior synonym of *Hermetia illucens* (Linnaeus, 1758) (James, 1973: 38) (Stratiomyidae).

41. *Hermetia flavoscutata*, p. 201 (%). "Mexico". Unchanged (James, 1973: 38) (Stratiomyidae).

42. *Histiodroma flaveola*, p. 205 (&). "Mexico". Now *Acrochaeta fasciata* Wiedemann, 1830 (James, 1973: 9) (Stratiomyidae).

43. *Sargus splendens*, p. 224 (&). "Mexico". Now *Sargus speciosus* Macquart, 1846 (James, 1973: 20) (Stratiomyidae).

44. *Macrosargus smaragdiferus*, p. 226 (&). "Mexico". Now in *Merosargus* (James, 1973: 15) (Stratiomyidae).

45. *Chrysonotus flavopilosus*, p. 227 (% &). "Mexico". Now *Himantoloba flavopilosa* (Bigot) (James, 1973: 10) (Stratiomyidae).

46. *Merosargus fraternus*, p. 228 (&). "Mexico". Unchanged (James, 1973: 13) (Stratiomyidae).

47. *Merosargus calceolatus*, p. 229 (&). "Mexico". Unchanged (James, 1973: 12) (Stratiomyidae).

48. *Ptecticus flaviceps*, p. 230 (&). "Mexico". Unchanged (James, 1973: 17) (Stratiomyidae).

1880b:

49. *Eristalomyia rufoscutata*, p. 221 (% &). "Mexico". Types in Oxford. Now *Eristalis (Eoseristalis) bellardii* Jaennicke, 1867 (Thompson *et al.*, 1976: 101) (Syrphidae).

50. *Eristalis sackenis*, p. 224 (%). "Mexico". Type in BMNH. Now *Palpada testaceicornis* (Macquart, 1850) (Thompson *et al.*, 1976: 110) (Syrphidae).

51. *Eristalomyia pachypoda*, p. 224 (&). "Mexico". Type BMNH. Now *Palpada obsoleta* (Wiedemann, 1830) (Thompson *et al.*, 1976: 107) (Syrphidae).

52. *Eristalomyia fulvipes*, p. 225 (&). "Mexico". Type in BMNH. Now *Palpada fulvipes* (Bigot) (Thompson *et al.*, 1976: 105) (Syrphidae).

1882c:

53. *Eurhinomallota metallica*, p. lxvii (&). "Mexico". Type in Oxford. Now in *Criorhina* (Thompson *et al.*, 1976: 119) (Syrphidae).

1882e:

54. *Aemosyrphus oculiferus*, p. cxxviii (&). "Mexico". Type in BMNH. Now *Aemosyrphus mexicanus* (Macquart, 1842) (Thompson *et al.*, 1976: 97) (Syrphidae).

55. *Aemosyrphus nigroscutatus*, p. cxxviii (?&). "Mexico". Type BMNH. Now *Aemosyrphus mexicanus* (Macquart, 1842) (Thompson *et al.*, 1976: 97) (Syrphidae).
56. *Aemosyrphus flavocaudatus*, p. cxxviii (?&). "Mexico". Type BMNH. Now *Aemosyrphus mexicanus* (Macquart, 1842) (Thompson *et al.*, 1976: 97) (Syrphidae).
57. *Aemosyrphus bicolor*, p. cxxix (?&). "Mexico". Type BMNH. Now *Aemosyrphus arquatus* (Say, 1829) (Thompson *et al.*, 1976: 96) (Syrphidae).
58. *Romaleosyrphus villosus*, p. cxxix (%). "Mexico". Type BMNH. Now *Criorhina villosa* (Bigot) (Thompson *et al.*, 1976: 119) (Syrphidae).

1883a:

59. *Volucella tau*, p. 84 (&). "Mexico". Type BMNH. Now in *Copestylum* (Thompson *et al.*, 1976: 85) (Syrphidae).
60. *Phalachromyia vicina*, p. 86 (%). "Mexico". Type in BMNH. Now *Copestylum vicinum* (Bigot) (Thompson *et al.*, 1976: 86) (Syrphidae).
61. *Phalachromyia melanorhina*, p. 86 (&). "Mexico". Type in BMNH. Now *Copestylum subrostratum* (Rondani, 1848) (Thompson *et al.*, 1976: 85) (Syrphidae).

1883c:

62. *Sphylimorpha nigra*, p. 317 (% &). "Mexico". Types in BMNH. Now in *Polybiomyia* (Thompson *et al.*, 1976: 95) (Syrphidae).
63. *Sphylimorpha rufibasis*, p. 318 (%). "Mexico". Type in BMNH. Now in *Polybiomyia* (Thompson *et al.*, 1976: 95) (Syrphidae).
64. *Microdon gracile*, p. 320 (%). "Mexico". Type in BMNH. Now *Microdon (Microdon) gracilis* Bigot (Thompson *et al.*, 1976: 65) (Syrphidae).
65. *Ocyptamus infuscatus*, p. 324 (%). "Mexico". Type in BMNH. Unchanged (Thompson *et al.*, 1976: 20) (Syrphidae).
66. *Ocyptamus fraternus*, p. 324 (&). "Mexico". Type ?BMNH. Unchanged (Thompson *et al.*, 1976: 18) (Syrphidae).
67. *Salpingogaster anchoratus*, p. 328 (%). "Mexico". Type in ?BMNH. Now *Salpingogaster (Salpingogaster) nigra* Schiner, 1868 (Thompson *et al.*, 1976: 32) (Syrphidae).
68. *Salpingogaster cothurnatus*, p. 329 (&). "Mexico". Type in ?BMNH. Now *Salpingogaster (Salpingogaster) cothurnata* Bigot (Thompson *et al.*, 1976: 31) (Syrphidae).
69. *Baccha marmorata*, p. 333 (%). "Mexico". Type in BMNH. Now in *Leucopodella* (Thompson *et al.*, 1976: 47) (Syrphidae).
70. *Baccha luctuosa*, p. 334 (%). "Mexico". Type in BMNH. Now *Ocyptamus luctuosus* (Bigot) (Thompson *et al.*, 1976: 21) (Syrphidae).
71. *Lepidomyia cinta*, p. 345 (%). "Mexico". Type in BMNH. Now in *Quichuana* (Thompson *et al.*, 1976: 98) (Syrphidae).
72. *Spilomyia pallipes*, p. 352 (&). "Mexico". Type in BMNH. Now in *Blera* (Thompson *et al.*, 1976: 119) (Syrphidae).

1883d:

73. *Syritta mexicana*, p. 539 (%). "Mexico". Type in BMNH. Now a junior synonym of *Neplaspallipes vagans* (Wiedemann, 1830) (Thompson *et al.*, 1976: 115) (Syrphidae).

74. *Glaurotricha volucelloides*, p. 548 (%). "Mexico". Type in BMNH. Now in *Copestylum* (Thompson *et al.*, 1976: 87) (Syrphidae).  
75. *Cartosyrphus frontosus*, p. 553 (%). "Mexico". Type in BMNH. Now *Cheilosia* (*Cartosyrphus*) *frontosa* (Bigot) (Thompson *et al.*, 1976: 69) (Syrphidae).

1884a:

76. ?*Melanostoma quadrinotata*, p. 77 (%). "Mexico". Type in Oxford. Now *Xanthandrus quadrinotatus* (Bigot) (Thompson *et al.*, 1976: 45) (Syrphidae).  
77. ?*Melanostoma cruciata*, p. 81 (%). "Mexico". Type in Oxford. Now *Melanostoma cruciatum* Bigot (Thompson *et al.*, 1976: 42) (Syrphidae).  
78. ?*Melanostoma annulifera*, p. 84 (&). "Mexico". Type in Oxford. Now *Toxomerus annulifer* (Bigot) (Thompson *et al.*, 1976: 48) (Syrphidae).  
79. *Syrphus eupeltatus*, p. 91 (%). "Mexico". Type in Oxford. Now *Allograpta eupeltata* (Bigot) (Thompson *et al.*, 1976: 34) (Syrphidae).  
80. *Syrphus agilis*, p. 92 (&). "Mexico". Type in Oxford. Now in *Ocyptamus* (Thompson *et al.*, 1976: 12) (Syrphidae).  
81. *Sphaerophoria rostrata*, p. 102 (&). "Mexico". Type in Oxford. Now in *Allograpta* (Thompson *et al.*, 1976: 37) (Syrphidae).  
82. *Sphaerophoria picticauda*, p. 102 (% &). "Mexico". Type in Oxford. Now a junior synonym of *Allograpta micrura* (Osten Sacken, 1877) (Thompson *et al.*, 1976: 36) (Syrphidae).  
83. *Sphaerophoria nasuta*, p. 103 (%). "Mexico". Type in Oxford. Now in *Allograpta* (Thompson *et al.*, 1976: 36) (Syrphidae).  
84. *Sphaerophoria pachypyga*, p. 104 (%). "Mexico". Type in Oxford. Now a junior synonym of *Sphaerophoria sulphuripes* (Thomson, 1869) (Thompson *et al.*, 1976: 38) (Syrphidae).  
85. *Sphaerophoria fulcicauda*, p. 104 (%). "Mexico". Type in Oxford. Now a junior synonym of *Sphaerophoria contigua* (Macquart, 1847) (Thompson *et al.*, 1976: 38) (Syrphidae).  
86. ?*Mesograpta saphiridiceps*, p. 105 (&). "Mexico". Type in Oxford. Now in *Toxomerus* (Thompson *et al.*, 1976: 54) (Syrphidae).  
87. ?*Mesograpta mu*, p. 105 (&). "Mexico". Type in Oxford. Now in *Allograpta* (Thompson *et al.*, 1976: 36) (Syrphidae).  
88. ?*Mesograpta pallipes*, p. 106 (% &). "Mexico". Type in Oxford. Now a junior synonym of *Toxomerus tridentatus* (Rondani, 1868) (Thompson *et al.*, 1976: 55) (Syrphidae).  
89. ?*Mesograpta circumdata*, p. 107 (% &). "Mexico". Type in Oxford. Now *Toxomerus circumdatus* (Bigot) (Thompson *et al.*, 1976: 49) (Syrphidae).  
90. ?*Mesograpta lacrymosa*, p. 108 (% &). "Brésil et Mexique". Type in Oxford. Now *Toxomerus lacrymosus* (Bigot) (Thompson *et al.*, 1976: 51) (Syrphidae).  
91. ?*Mesograpta heraldica*, p. 109 (% &). "Mexico". Type in Oxford. Now *Toxomerus heraldicus* (Bigot) (Thompson *et al.*, 1976: 50) (Syrphidae).  
92. ?*Mesograpta trilobata*, p. 109 (%). "Mexico". Type in Oxford. Now *Toxomerus trilobatus* (Bigot) (Thompson *et al.*, 1976: 55) (Syrphidae).  
93. ?*Mesograpta bistriga*, p. 110 (&). "Mexico". Type in Oxford. Now in *Toxomerus* (Thompson *et al.*, 1976: 48) (Syrphidae).

94. ?*Mesograpta maculata*, p. 111 (&). "Mexique, Cuba, Brésil". Types in Oxford. Now *Toxomerus maculatus* (Bigot) (Thompson *et al.*, 1976: 52) (Syrphidae).  
95. ?*Mesograpta bicincta*, p. 112 (%). "Mexico". Type in Oxford. Now in *Allograpta* (Thompson *et al.*, 1976: 34) (Syrphidae).

1885a:

96. *Limnophora limbata*, p. 271 (&). "Mexique, Chili". Unchanged (Pont, 1972: 28) (Muscidae).  
97. *Limnophora normata*, p. 272 (%). "Mexico". Unchanged (Pont, 1972: 29) (Muscidae).  
98. *Limnophora rufipes*, p. 273 (&). "Mexico". Now a junior synonym of *Bithoracochaeta leucoprocta* (Wiedemann, 1830) (Pont, 1972: 37) (Muscidae).  
99. *Limnophora anthrax*, p. 274 (%). "Mexico". Now in *Spilogona* (Pont, 1972: 33) (Muscidae).  
100. ?*Hydrophoria pictipes*, p. 275 (&). "Mexico". Now in *Taeniomyia* (Pont, 1974: 9) (Anthomyiidae).  
101. ?*Hydrophoria calopus*, p. 275 (&). "Mexico". Now a junior synonym of *Bithoracochaeta leucoprocta* (Wiedemann, 1930) (Pont, 1972: 37) (Muscidae).  
102. *Homalomyia mexicana*, p. 284 (%). "Mexico". Now a junior synonym of *Fannia canicularis* (Linnaeus, 1761) (Pont, 1972: 4) (Muscidae).  
103. *Dialyta bicolor*, p. 302 (%). "Mexico". Now in *Cordiluroides* (Pont, 1972: 44) (Muscidae).

1885b:

104. *Nycteribia mexicana*, p. 245 (?sex). "?Mexico". Now *Basilisa bellardii* (Rondani, 1878) (Guimarães, 1968b: 2) (Nycteribiidae).

1885d:

105. *Stictomyia longicornis*, p. clxvi (% &). "Mexico". Unchanged (Steyskal, 1968b: 22) (Otitidae).

1885e:

106. *Dimorphomyia calliphoroides*, p. clxxiii (?sex). "Mexico". Type in ?Oxford. Now *Asemosyrphus mexicanus* (Macquart, 1842) (Thompson *et al.*, 1976: 97) (Syrphidae).

1885f:

107. *Melanostoma cyaneocincta*, p. 251 (%). "Mexico". Type in ?Oxford. Unplaced Melanostomini (Thompson *et al.*, 1976: 47) (Syrphidae).  
108. *Ocyptamus fenestratus*, p. 251 (%). "Mexico". Type in Oxford. Now a junior synonym of *Ocyptamus fuscipennis* (Say, 1823) (Thompson *et al.*, 1976: 19) (Syrphidae).

1886a:

109. *Tetradiscus notatus*, p. 371 (%). "Mexico". Now *Chyliza bigoti* Melander, 1920 (Prado, 1975a: 2) (Psilidae).  
110. *Nerius plurivittatus*, p. 372 (%). "Mexico". Unchanged (Steyskal, 1968d: 5) (Neriidae).

111. *Nerius flavifrons*, p. 372 (&). "Mexico". Now in *Glyphidops (Oncopsia)* (Steyskal, 1968d: 3) (Neriidae).
112. *Calobata callichroma*, p. 373 (%). "Mexico". Now a junior synonym of *Ptilosphen cyaneiventris* (Macquart, 1846) (Steyskal, 1968a: 13) (Micropezidae).
113. *Calobata calocephala*, p. 375 (misprinted as 575) (% &). "Mexico". Now in *Scipopus* (Steyskal, 1968a: 15) (Micropezidae).
114. *Taeniptera calosoma*, p. 379 (% &). "Mexico". Now *Rainieria (Rainieriella) calosoma* (Bigot) (Steyskal, 1968a: 15) (Micropezidae).
115. *Taeniptera pallidipennis*, p. 380 (&). "Mexico". Now *Neotanypeza (Neotanypeza) ornatipes* (Bigot) (Steyskal, 1967: 1) (see next species) (Tanypezidae).
116. *Taeniptera ornatipes*, p. 380 (%). "Mexico". Now *Neotanypeza (Neotanypeza) ornatipes* (Bigot) (Steyskal, 1967: 1) (Tanypezidae).
117. *Grallomyia caloptera*, p. 381 (% &). "Mexico". Now a junior synonym of *Taeniptera ichneumonea* Brauer, 1885 (Steyskal, 1968a: 17) (Micropezidae).
118. *Micropeza obscura*, p. 387 (%). "Mexico". Unchanged (Steyskal, 1968a: 3) (Micropezidae).
119. ?*Enicopus fuscus*, p. 387 (&). "Mexico". Now *Themira (Enicita) fusca* (Bigot) (Steyskal, 1968c: 3, unrecognized) (Sepsidae).

1887a:

120. *Conops nigrifascies*, p. 40 (&). "Mexico". Now in *Physocephala* (Papavero, 1971a: 8) (Conopidae).
121. *Conops carbonarius*, p. 42 (% &). "Mexico". A junior synonym of the above (Papavero, 1971a: 8) (Conopidae).

1887b:

122. *Zodion flavipenne*, p. 204 (&). "Mexico". Unchanged (Papavero, 1971a: 12) (Conopidae).
123. *Zodion zebrinum*, p. 204 (%). "Mexico". Unchanged (Papavero, 1971a: 13) (Conopidae).

1887c:

124. *Jurinia barbata*, p. cxl (&). "Mexico". Unchanged (Guimarães, 1971: 68) (Tachinidae).
125. *Jurinia gonioides*, p. cxl (&). "Mexico". Now a junior synonym of *Archytas lateralis* (Macquart, 1843) (Guimarães, 1971: 50) (Tachinidae).
126. *Blepharipeza trichopsis*, p. cxl (%). "Mexico". An unrecognized species of *Leschenaultia* (Guimarães, 1971: 186) (Tachinidae).
127. *Echinomyia cora*, p. cxl (&). "Mexico". An unrecognized species of *Peleteria* (Guimarães, 1971: 44) (Tachinidae).
128. *Echinomyia macrocera*, p. cxl (&). "Mexico". An unrecognized species of *Peleteria* (Guimarães, 1971: 44) (Tachinidae).
129. *Echinomyia notata*, p. cxli (%). "Mexico". An unrecognized species of *Exopalpus* (Guimarães, 1971: 55) (Tachinidae).
130. *Fabricia infumata*, p. cxli (&). "Mexico". An unrecognized species of *Archytas* (Guimarães, 1971: 50) (Tachinidae).

131. *Frontina rufostylata*, p. cxli (%). "Mexico". An unrecognized species of *Chaetogaedia* (Guimarães, 1971: 178) (Tachinidae).  
132. *Frontina chrysopyga*, p. cxli (&). "Mexico". Now in *Triachora* (Guimarães, 1971: 184) (Tachinidae).  
133. *Elachipalpus nigrifrons*, p. cxli (&). "Mexico". An unrecognized Tachinidae (Guimarães, 1971: 216) (Tachinidae).

1887d:

134. *Calliphora xanthorrhina*, p. clxxx (&). "Mexico". Now in *Mesembrinella* (Guimarães, 1977: 35) (Calliphoridae).  
135. *Pyrellia obscuripes*, p. clxxxi (%). "Mexico". Now a junior synonym of *Morellia ochricornis* (Wiedemann, 1830) (Pont, 1972: 9) (Muscidae).  
136. *Musca atrifrons*, p. clxxxi (&). "Cuba et Mexique". Now a junior synonym of *Musca domestica* Linnaeus, 1758 (Pont, 1972: 7) (Muscidae).  
137. *Curtonevra fulvipes*, p. clxxxii (&). "Mexico". An unplaced Cyrtoneurinae (Pont, 1972: 58) (Muscidae).  
138. *Curtonevra vittigera*, p. clxxxii (%). "Mexico". Now a junior synonym of *Hemichlora scordalus* (Walker, 1861) (Pont, 1972: 49) (Muscidae).  
139. *Curtonevra pallidicornis*, p. clxxxii (&). "Mexico". Now in *Myospila* (Pont, 1972: 27) (Muscidae).  
140. *Curtonevra callimera*, p. clxxxii (&). "Mexico". Now in *Morellia* (Pont, 1972: 8) (Muscidae).

1888b:

141. *Echinomyia rubrifrons*, p. 80 (&). "Mexico". An unrecognized species of *Peleteria* (Guimarães, 1971: 45) (Tachinidae).

1888c:

142. *Sphaerophoria nasuta*, p. 253 (%). "Mexico". Type in Oxford. Now *Allograpta nasuta* (Bigot, 1884) (Thompson *et al.*, 1976: 36) (Syrphidae).  
143. *Sphaerophoria trilimbata*, p. 253 (%). "Mexico". Type in Oxford. Now in *Allograpta* (Thompson *et al.*, 1976: 38) (Syrphidae).  
144. *Mesograpta quinquecincta*, p. 254 (&). "Mexico". Type in Oxford. Now *Toxomerus quinquecinctus* (Bigot) (Thompson *et al.*, 1976: 54) (Syrphidae).  
145. *Scopolia satanica*, p. 254 (%). "Mexico". Now in *Penthosia* (Guimarães, 1971: 17) (Tachinidae).  
146. *Stevenia pallidiventris*, p. 255 (%). "Mexico". An unrecognized Phasiinae (Guimarães, 1971: 19) (Tachinidae).  
147. *Stevenia flavocalyptrata*, p. 255 (%). "Mexico". An unrecognized Phasiinae (Guimarães, 1971: 19) (Tachinidae).  
148. *Echinomyia cinerascens*, p. 256 (%). "Mexico". Now in *Peleteria* (Guimarães, 1971: 44) (Tachinidae).  
149. *Exorista rufipalpis*, p. 256 (%). "Mexico". Now in *Trafoia* (Guimarães, 1971: 83) (Tachinidae).

150. *Exorista rufata*, p. 257 (% &). "Mexique et Brésil (Pará)". Now in *Bolomyia* (Guimarães, 1971: 187) (Tachinidae).
151. *Chaetolyga erythropyga*, p. 257 (&). "Mexico". Now in *Winthemia* (Guimarães, 1971: 196) (Tachinidae).
152. *Chaetolyga nigriventris*, p. 257 (%). "Mexico". Not cited in Guimarães's 1971 catalogue (Tachinidae).
153. *Chaetolyga dubia*, p. 257 (%). "Mexico". Now in *Drino* (Guimarães, 1971: 188) (Tachinidae).
154. *Chaetolyga nigripalpis*, p. 258 (%). "Mexico". Now in *Eucelatoria* (Guimarães, 1971: 133) (Tachinidae).
155. *Chaetolyga flavolimbata*, p. 258 (%). "Mexico". Now in *Triodontopyga* (Guimarães, 1971: 213) (Tachinidae).
156. *Chaetolyga albopicta*, p. 258 (&). "Mexico". Now in *Spathimeigenia* (Guimarães, 1971: 148) (Tachinidae).
157. *Chaetolyga occidentalis*, p. 258 (%). "Mexico". An unplaced Winthemiini (Guimarães, 1971: 198) (Tachinidae).
158. *Chaetolyga nitidiventris*, p. 258 (&). "Mexico". An unplaced Winthemiini (Guimarães, 1971: 198) (Tachinidae).
159. *Chaetolyga aenea*, p. 259 (&). "Mexico". An unplaced Blondeliini (Guimarães, 1971: 152) (Tachinidae).
160. *Degeeria cora*, p. 259 (&). "Mexico". Now in *Eucelatoria* (Guimarães, 1971: 133) (Tachinidae).
161. *Degeeria anthracina*, p. 259 (&). "Mexico". Now *Oxynops anthracinus* (Bigot) (Guimarães, 1971: 143) (Tachinidae).
162. *Cestonia nigra*, p. 259 (&). An unplaced Blondeliini (Guimarães, 1971: 153) (Tachinidae).
163. *Macquartia atrifrons*, p. 259 (&). "Mexico". An unrecognized species of *Pseudeuantha* (Guimarães, 1971: 104) (Tachinidae).
164. *Prosopaea americana*, p. 260 (&). "Mexico". An unplaced Blondeliini (Guimarães, 1971: 152) (Tachinidae).
165. *Phorocera barbata*, p. 260 (&). "Mexico". Now in *Metadoria* (Guimarães, 1971: 140) (Tachinidae).
166. *Phorocera melanoceps*, p. 260 (&). "Mexico". A junior synonym of *Metadoria barbata* (Bigot) (Guimarães, 1971: 140) (Tachinidae).
167. *Ceromasia quadrivittata*, p. 261 (&). "Mexico". An unrecognized Dexiinae (Guimarães, 1971: 122) (Tachinidae).
168. *Ceromasia zonata*, p. 261 (&). "Mexico". Now in *Spathimeigenia* (Guimarães, 1971: 149) (Tachinidae).
169. *Ceromasia pictigaster*, p. 261 (&). "Mexico". An unplaced Dexiini (Guimarães, 1971: 97) (Tachinidae).
170. *Ceromasia castanifrons*, p. 261 (&). "Mexico". An unrecognized species of *Prospheerisa* (Guimarães, 1971: 213) (Tachinidae).
171. *Ceromasia chrysocephala*, p. 261 (&). "Mexico". An unplaced Blondeliini (Guimarães, 1971: 152) (Tachinidae).



172. *Ceromasia spinipes*, p. 262 (&). "Mexico". An unplaced Blondeliini (Guimarães, 1971: 153) (Tachinidae).
173. *Ceromasia abbreviata*, p. 262 (&). "Mexico". An unplaced Blondeliini (Guimarães, 1971: 152) (Tachinidae).
174. ?*Viviania rufopygata*, p. 262 (&). "Mexico". An unrecognized Leskiini (Guimarães, 1971: 120) (Tachinidae).
175. ?*Viviania citrina*, p. 262 (&). "Mexico". Now a junior synonym of *Chaetona icterica* (Wiedemann, 1830) (Guimarães, 1971: 105) (Tachinidae).
176. *Micropalpus nigrifrons*, p. 263 (&). "Mexico". An unplaced Linnaemyini (Guimarães, 1971: 83) (Tachinidae).
177. *Masicera flavifacies*, p. 263 (&). "Mexico". An unplaced Sturmiini (Guimarães, 1971: 193) (Tachinidae).
178. *Tricoliga caloptera*, p. 263 (&). "Mexico". Now junior synonym of *Pseudeuantha indita* (Walker, 1860) (Guimarães, 1971: 104) (Tachinidae).
179. *Tricoliga fulvidapex*, p. 263 (%). "?Mexique ou ?Celebes". An unrecognized species of *Winthemia* (Guimarães, 1971: 196) (Tachinidae).
180. *Prosenia maculifera*, p. 264 (&). "Mexico". An unrecognized species of *Stomatodexia* (Guimarães, 1971: 119) (Tachinidae).
181. *Prosenia obscura*, p. 264 (%). "Mexico". Now in *Eudexia* (Guimarães, 1971: 29) (Tachinidae).
182. *Prosenia curvirostris*, p. 264 (%,&). "Mexique ou Brésil". Now in *Prosenoides* (Guimarães, 1971: 32) (Tachinidae).
183. *Rhamphinina formidabilis*, p. 264 (%). "Mexico". Now in *Eudexia* (Guimarães, 1971: 29) (Tachinidae).
184. *Rhamphinina major*, p. 265 (%). 'Mexique et Washington Territory'. Now in *Ptilodexia* (Guimarães, 1971: 33) (Tachinidae).
185. *Rhamphinina anthracina*, p. 265 (%,&). "Mexico". Now in *Ptilodexia* (Guimarães, 1971: 33) (Tachinidae).
186. *Rhynchodexia tincticornis*, p. 266 (%). "Mexico, Paso de Macho". Now in *Ptilodexia* (Guimarães, 1971: 34) (Tachinidae).
187. *Microphthalma calogaster*, p. 266 (%). "Mexico, Orizaba". Now in *Macrometopa* (Guimarães, 1971: 23) (Tachinidae).
188. *Myocera simplex*, p. 266 (&). "Mexico". Now in *Ptilodexia* (Guimarães, 1971: 34) (Tachinidae).
189. *Tromodesia hoemorrhoidalis* (sic), p. 267 (?sex). "Mexico". Now a junior synonym of *Tromodesiopsis atrifrons* (Wiedemann, 1830) (Guimarães, 1971: 102) (Tachinidae).
190. *Homodexia longicornis*, p. 267 (%). "Mexico". Now in *Pseudodexia* (Guimarães, 1971: 108) (Tachinidae).
191. *Homodexia vittigera*, p. 267 (?&). "Mexico". Now *Thelairodes vittigerus* (Bigot) (Guimarães, 1971: 95) (Tachinidae).
192. *Homodexia flavipes*, p. 268 (&). "Mexico". Now in *Eucalodexia* (Guimarães, 1971: 106) (Tachinidae).
193. *Homodexia spinosa*, p. 268 (%). "Mexico". Now *Thelairodes spinosus* (Bigot) (Guimarães, 1971: 95) (Tachinidae).

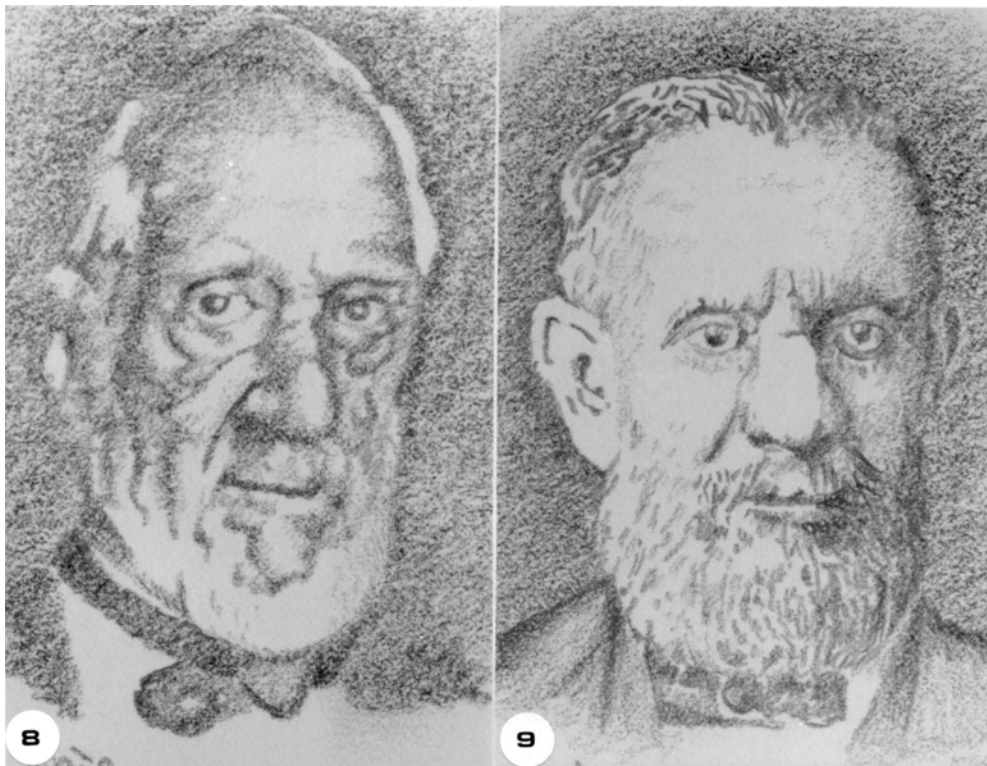
194. *Homodexia triangulifera*, p. 268 (%). "Mexico". Now in *Ptilodegeeria* (Guimarães, 1971: 147) (Tachinidae).
  195. *Oplisa albifacies*, p. 268 (&). "Mexico". Now in *Pseudodexia* (Guimarães, 1971: 108) (Tachinidae).
  196. *Oplisa nigrifacies*, p. 268 (% &). "Mexico". Now in *Metadoria* (Guimarães, 1971: 140) (Tachinidae).
  197. *Pyrrusia ochracea*, p. 268 (% &). "Mexico". Not cited in Guimarães's 1971 catalogue (Tachinidae).
  198. *Phorostoma appendiculata*, p. 269 (&). "Mexico". An unrecognized species of *Myiomima* (Guimarães, 1971: 31) (Tachinidae).
  199. *Dexiosoma fumipennis*, p. 270 (&). "Mexico". Now in *Ptilodexia* (Guimarães, 1971: 33) (Tachinidae).
  200. *Dexiosoma partita*, p. 270 (&). "Mexico". An unrecognized Tachinidae (Guimarães, 1971: 216).
  201. *Anthracomylia pallidicornis*, p. 270 (%). "Mexico". Now in *Pseudodexia* (Guimarães, 1971: 108) (Tachinidae).
- 1888e:
202. *Psilopodinus astequinus*, p. xxx (%). "Mexico". Now in *Condylostylus* (Robinson, 1970: 3) (Dolichopodidae).
  203. *Poecilobothrus mexicanus*, p. xxx (%). "Mexico". Now in *Pelastoneurus* (Robinson, 1970: 51) (Dolichopodidae).
- 1892a:
204. *Anthrax eurhinatus*, p. 355 (&). "Mexico". Now *Villa (Paravilla) eurhinata* (Bigot) (Painter *et al.*, 1978: 51) (Bombyliidae).
  205. *Bombylius albopenicillatus*, p. 363 (%). "Mexico". Now in *Parabombylius* (Painter *et al.*, 1978: 4) (Bombyliidae).

## 12. THE BROTHERS DUGÈS

Alfred Auguste Delsescautz Dugès (Fig. 8) and his brother Eugène (Fig. 9) were born in Montpellier, France, around 1826. Their father, Antoine Louis Delsescautz, was a medical doctor, professor of the University of Paris, and a naturalist. Upon their father's death, the two brothers moved to Paris to study medicine. Alfred left for Mexico, arriving there in 1853. As soon as his medical title was recognized in Mexico City, he moved to Guanajuato, where he remained practicing medicine and teaching natural history. His brother Eugène came to Mexico only in 1865, also becoming established in Guanajuato as a medical doctor. Eugène would send many collections of insects to Paris. Later he founded a natural history museum in Morelia and died in that city on 13 January 1895 (Anon., 1895). Alfred also used to collect

in the neighbourhoods of Guanajuato, especially on Sundays, accompanied by his students. He died at 84 years of age on 7 January 1910 (Adler, 1989; Barnhart, 1965; Duellman, 1961; Howard, 1930; Kellogg, 1932; Martín del Campo, 1937; McVaugh, 1972; Palmer *et al.*, 1954; Papavero, 1971b; Smith & Smith, 1969, 1973; Stafleu & Cowan, 1976 (1:692)).

Alfred Dugès authored the first paper on Diptera published in Mexico (1887), describing *Ornithomyia villadae* (p. 20, pl. 3, figs. 3a-b), now a junior synonym of *Lynchia nigra* (Perty, 1833) (Guimarães, 1968a: 6) (Hippoboscidae).



**Figures 8 - 9**

**8.** Alfred Auguste Delsescautz Dugès. Redrawn by S. Ibáñez-Bernal from a photograph published in Howard (1930). **9.** Eugène Dugès. Redran by S. Ibáñez-Bernal from a photograph published in Dugesiana, 6(2) (1999).

### **13. THE SPECIES DESCRIBED BY FRIEDRICH MORITZ BRAUER**

Friedrich Moritz Brauer was born on 12 May 1832 in Vienna (Mariahilferstrasse 335), the son of Justus Brauer and his second wife Louise Braun, from Hannover. The house where Brauer was born, now in the commercial center of Vienna, was at that time the cottage of the family, which actually resided in the center of Vienna. In the gardens and wells of his home, Brauer started to observe the biology of insects, noting their metamorphosis; he reared mosquitoes in vials.

In 1838 he had as teacher of drawing Anton Löw, who also had the habit to collect insects, and with him Brauer learned the collecting techniques. His father and his uncle Daniel Braun, as well as his brother Theodor were also fond of entomology. Thus Friedrich very early had his tastes inclined to that field of zoology.

Upon his father's death in 1839, the family spent a last summer in Mariahilferstrasse, as the following year they moved to Germany, where they lived with some relatives. In 1841 they rented a cottage in Döbling. There Brauer started excursions with Löw, especially in Krottentoch and Kallenberg. In 1842 his mother married again, with Dr. Victor Ivanchich. Summers were then spent in Brühl, where Friedrich frequently hunted insects in the company of Löw.

In 1845 Brauer was introduced to Gustav Gözsys, who at that time frequented the second grade in the gymnasium. Gözsys' father, the medical doctor of the Brauer family since 1842, convinced them to let Friedrich frequent the public school, for which he was prepared by private teachers since 1843. Brauer entered the school of the 'Piaristen', after passing examinations. He suffered bad moments, however, for until then he had no contact with other children of his age. In 1846, being in the third grade in the gymnasium, he was given a small collection of exotic insects, which he proposed to identify. He was introduced to the then curator of insects in the Hofsmuseum, Vincenz Kollar, by his uncle Daniel, with whom Kollar had relations. From then on, Friedrich began to frequent the collections of the Vienna Hofsmuseum, thus obtaining a good knowledge of all the orders of insects. By that time he received Burmeister's "Handbuch der Entomologie", which he studied assiduously, in spite of the fact that he could not assimilate quite a few things, due to his age.

Thus Brauer spent his time, collecting and studying insects, until the political crisis of 1848, which affected his family. In this same year, the gymnasium where he studied suffered many reforms in the teaching methods, which brought him many difficulties. Precociously interested in research, he had no taste for the regular courses at school. By that time he also became interested in the biology of the Odonata, and in 1850 published his first paper on the subject, in the annals of the "Gesellschaft der Freunde der Naturwissenschaft" of Vienna, through the good

efforts of Georg Frauenfeld, whom he had previously met. Enthused with his first successes, he dedicated himself to the study of insect metamorphosis, especially of the Neuropteroidea, a subject which he would investigate for many years to come.

From July to September 1850 he traveled with his family to Adelsberg, Trieste, Venice and Tyrol. As in his gymnasium, his fame of naturalist brought jealousy, and he changed schools.

In March 1852 he was not able to pass the "matura" exams; in September of the same year he again tried, with the same result. His family decided then to take some providences, and applied directly to the Minister of Education, quiring another chance; a boy with published papers, accepted by the Royal Academy of Vienna and other scientific associations, they noted, could not depend on an examination to proceed in his career. The new chance was granted, and after passing examinations on mathematics and Latin, Brauer entered the University, to follow the course of medicine. He was given at that occasion Westwoods's "Modern classification of insects", which induced him to study English.

On May 1854 he lost his mother, and his brother Albert became his tutor. At that time he made the acquaintance of Schiner and Johann Egger. Schiner was not yet a dipterist, being interested in ornithology and botany. As Brauer had a reasonable collection of flies, Frauenfeld, Egger and Schiner became interested in the systematics of that Order, and tried to identify them through the works of Meigen. In 1854 and 1855 Brauer and Egger undertook frequent excursions to collect Diptera.

In 1856 Brauer married Leontine Boschetty, whom he knew already for some years. In the same year, Karl Lang found in the Pratter a specimen of *Oestrus pictus*, and Brauer decided to start the study of the Oestroidea, beginning to compile the literature and to make field observations. Visiting the Pratter and Imperial Zoological Garden he was able to rear several parasitic oestrids, completing his notes and studies, being helped by Rogenhofer, Zeller and Hermann Loew.

In 1860 he published on *Oestrus hominis*, based on larvae brought from Brazil by Johann Natterer, deposited in the Vienna Museum, erecting then the genus *Dermatobia*.

Finally, after 7 years of studies of medicine, Brauer passed the "Rigorosum" and graduated. Soon afterwards he contracted typhus, and, due to his precarious health, gave up the idea of passing a second "Rigorosum".

In October 1861 he accepted a position in the Naturalienkabinet (Vienna Museum), leaving medicine to dedicate himself exclusively to natural history. However, he remained at the museum for 16 year as curator of molluscs. During that time, with J. F. Bergenstamm, he published the famous monographs of

Muscoidea (1889-1894). In that series, entitled "Die Zweiflügler des Kaiserlichen Museum zu Wien", Brauer and Bergenstamm proposed many genera, especially in the Family Tachinidae.

Brauer also published on the higher classification of the Diptera and on the phylogeny of insects. In 1871 he obtained his doctor's degree in the faculty of philosophy, and two years later the title of "Professor Extraordinarius". With the death of Frauenfeld (1873), Ferrari (1876) and Redtenbacher (1876), the number of members of the Museum diminished and only then Brauer obtained a better position. He dedicated himself entirely to the study of the Diptera, identifying and organizing the collections of the Vienna Museum, which included those of Winthem, Wiedemann, Egger and Schiner.

In 1876 he was named curator of the entomological section of the Museum and made a member of the Academy of Science and other learned societies. From 1880 on, he started publishing his monumental work on the Diptera of the Imperial Museum of Vienna ("Die Zweiflügler des Kaiserlichen Museums zu Wien"). In 1884 he was made "Ordentlich Professor" and in 1888 effective member of the Academy of Sciences.

The elaboration of the "Zweiflügler" left him very little time. At that period the Naturalienkabinet was incorporated to the Hofsmuseum. He revised the collections of Robineau-Desvoidy, Rondani and Bigot. His collaborator, Bergenstamm, was not an ideal partner, but as he had many important types, Brauer had to accept his collaboration. The great work was finished only in 1893. During this period he lost his wife and married for a second time, with Ludmila von Koenig.

With the advancement of the years he felt old and fatigued, and needed much stimulation to prepare his works. He published less and less. In 1896 he had the pleasure of describing the larva of *Cobboldia* extracted from an Indian elephant. With the decline of his mental activities and with the death of his second wife, he became embittered.

In 1898 he was made head of the zoological sections of the Museum, but this position was reached too late in his life to introduce in the Museum the changes he expected to impose. His last paper was Mik's necrologue (1901).

He died on 29 December 1904, after much suffering, at the house of his daughter Laura, the wife of the malacologist A. Wagner (Handlirsch, 1905).

Brauer described only a few species of Mexican Diptera, listed below. His types are all deposited in the Vienna Natural History Museum.

1882:

1. *Cynipimorpha bilimeki*, p. 75, (sex?). "Mexico, Veracruz, Orizaba; Morelos, Cuernavaca" (as *bilimecki*, lapsus). Unchanged (James, 1973:53) (Stratiomyidae).

1885:

2. *Calobata ichneumonea*, p. 388, fig. 4 (pl.) (sex?). "Mexico, Veracruz, Orizaba". Now in *Taeniaptera* (Steyskal, 1968a: 17) (Micropezidae).

1897:

3. *Melanota dubia*, p. 357 (sex?). "Mexico". An unrecognized Tachinidae (Guimarães, 1971: 215).

The remaining species were described with Bergenstamm:

1889:

4. *Phasiopteryx bilimeki*, p. 147 (1889:79). "Mexico, Veracruz, Orizaba". Now in *Ormia* (Guimarães, 1971:21) (Tachinidae).
5. *Macrometopa mexicana*, p. 117 (1889:49). "Mexico". Now a junior synonym of *Macrometopa calogaster* (Bigot, 1889) (Guimarães, 1971: 23) (Tachinidae).
6. *Hystriosphona pseudohystricia*, p. 120 (1889: 93). "Mexico, Tacubaya". Now in *Echinodexia* (Guimarães, 1971: 29) (Tachinidae).
7. *Myiopharus metopia*, p. 161 (1889: 93). "Mexico, Tacubaya, and Yucatan, Merida". Unchanged (Guimarães, 1971: 142) (Tachinidae).
8. *Masipoda geminata*, p. 102 (1889: 94). "Mexico". Now in *Winthemia* (Guimarães, 1971:196) (Tachinidae).

1891:

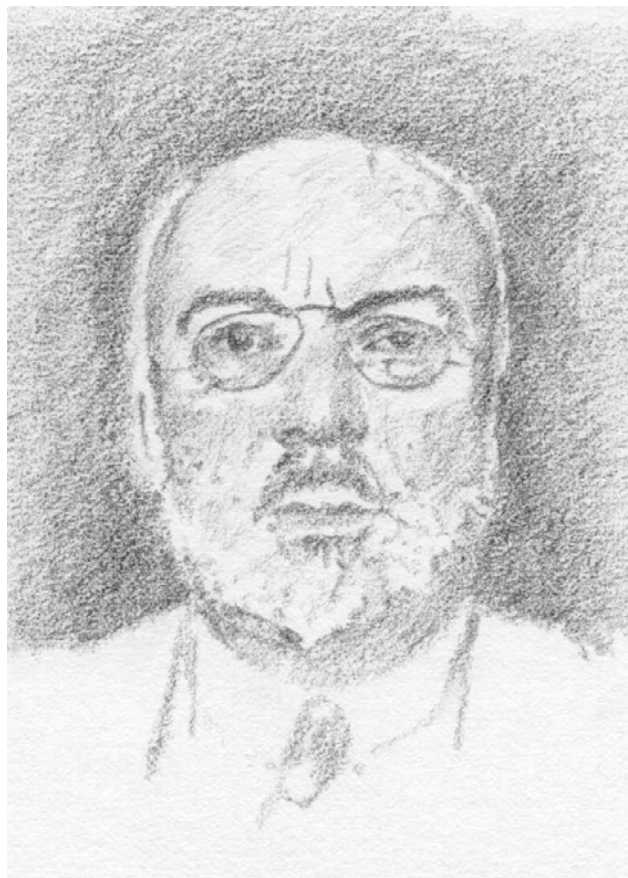
9. *Gaediopsis mexicana*, p. 336 (1891:32). "Mexico". Unchanged (Guimarães, 1971:179) (Tachinidae).
10. *Paragaedia hedemanni*, p. 350 (1891:45). "Mexico". Now in *Chaetoprosopa* (Guimarães, 1971: 184) (Tachinidae).

1893:

11. *Cyrtosoma rufum*, p. 132 (1893: 44). "Mexico, Guerrero, Omilteme". Now in *Ocyrtosoma* (Guimarães, 1971: 37) (Tachinidae).
12. *Wulpia aperta*, pp. 128, 188 (1893: 40, 100). "Mexico". Now in *Catemophrys* (Guimarães, 1971: 114) (Tachinidae).
13. *Microchira mexicana*, p. 128 (1893: 40). "Mexico". Now in *Paradidyma* (Guimarães, 1971: 115) (Tachinidae).
14. *Paradidyma aperta*, p. 127 (1893: 39). "Mexico". A junior synonym of *Paradidyma mexicana* (Brauer & Bergenstamm, 1893) (Guimarães, 1971: 115) (Tachinidae).
15. *Metadoria mexicana*, p. 117 (1893: 20). "Mexico". A junior synonym of *Metadoria barbata* (Bigot, 1889) (Guimarães, 1971: 140) (Tachinidae).
16. *Gaediophana atra*, pp. 123, 201 (1893: 35, 113). "Mexico" Unchanged (Guimarães, 1971: 179) (Tachinidae).

#### **14. THE SPECIES DESCRIBED BY ERMANNO GIGLIO-TOS**

Ermanno Giglio-Tos (Fig. 10) was born in Turin on August 25, 1865. He started his studies of natural history under the guidance of M. Lessona and L. Camerano, with whom he learned the principles of systematic zoology. Even in later years, when he dedicated himself to studies of vertebrate anatomy, hematology, cytology, mechanics of development and applied zoology, he never quite abandoned the study of systematics, of which he was particularly fond.



**Figure 10**

Ermanno Giglio-Tos. Redrawn by S. Ibáñez-Bernal from a photograph property of N. Papavero.



Entering the Museo Zoologico di Torino at the age of 20, Giglio-Tos became interested in the systematics of insects, and began his activities with a number of papers on Diptera, of which there was an abundant collection, left by Bellardi (see Part 6). His first publications were on European and African flies, but his attention turned afterwards to Mexican and Central American flies. He published short papers from 1890 to 1893, and his great work, the "Ditteri del Messico", was published from 1892 to 1895, in 4 parts. As Bellardi had not finished his studies of Mexican Diptera, Giglio-Tos completed the work, describing the remaining Mexican collections of Stratiomyidae, Aschiza, Calyptratae and Acalyptratae. In 1896, he published his last paper on Neotropical Diptera, describing a striking new genus of Tabanidae brought from panama by Enrico Festa.

As the Museum of Turin was receiving a great number of insects, Giglio-Tos became gradually interested in the study of other orders of insects, and after some essays in Coleoptera and Hemiptera, became definitely interested in the Orthoptera (*sensu lato*), in which he was to become known as a specialist.

Appointed professor of zoology and comparative anatomy at the Reale Università di Cagliari, when he was 36 years old, he founded the Istituto di Biologia Marina in San Bartolomeo. He was next called to be professor of zoology and vertebrate anatomy at the University of Firenze, where he remained only two years, passing on to the chair of anatomy and physiology of the University of Turin, where he occupied the chair of zoology, returning then to Cagliari, where he stayed for seven years. His last position was that of professor of zoology in Turin, to which he was appointed in December 1925. He died there on August 18, 1926 (Zavatari, 1927).

All the types of Giglio-Tos are deposited in the Turin Zoological Museum. He described the following Mexican species:

1890:

1. *Ditomyia zonata*, p. 2, pl. II, fig. 6 (% &). "Mexico, Veracruz, Orizaba (Sumichrast). Box 1. As an unplaced Ditomyiidae (Papavero, 1977: 4) (Ditomyiidae).
2. *Ditomyia mexicana*, p. 3, pl. II, fig. 7 (?sex). "Mexico, Veracruz, Orizaba (Sumichrast)". Box 1. As an unplaced Ditomyiidae (Papavero, 1977: 4) (Ditomyiidae).

1891a:

3. *Heteracanthia mexicana*, p. 1 (&) (1892e: 8). "Mexico (Sumichrast)". Box 8. Now *Heteracanthia ruficornis* Macquart, 1849 (James, 1973: 6) (Stratiomyidae).
4. *Cyphomyia ochracea*, p. 2 (&) (1892e: 10, pl. I, fig. 4). "Mexico (Sumichrast)". Box 8. Unchanged (James, 1973: 27) (Stratiomyidae).
5. *Euparyphus carbonarius*, p. 2 (%). (1892e: 12, pl. I, fig. 5). "Mexico (Sumichrast)". Box 8. Now *Euparyphus (Euparyphus) carbonarius* Giglio-Tos (James, 1973: 31) (Stratiomyidae).

6. *Clitellaria stigma*, p. 2 (&) (1892e: 13). "Mexico (Sumichrast)". Type ?lost. Now in *Dieuryneura* (James, 1973: 31) (Stratiomyidae).
7. *Acanthina? bellardii*, p. 2 (&) (1892e: 14). "Tehuacan (Sumichrast)". Box 8. Now in *Artemita* (James, 1973: 50) (Stratiomyidae).
8. *Microchrysa nova*, p. 2 (&) (1892e: 16). "Mexico". Box 8. Unchanged (James, 1973: 17) (Stratiomyidae).
9. *Merosargus hyalopterus*, p. 3 (%&) (1892e: 19). "Orizaba (Sumichrast)". Box 8. Unchanged (James, 1973: 13) (Stratiomyidae).
10. *Merosargus dissimilis*, p. 3 (%) (1892e: 20, pl. I, fig. 7). "Orizaba". Box 8. Unchanged (James, 1973: 12) (Stratiomyidae).
11. *Merosargus orizabae*, p. 3 (%) (1892e: 20). "Orizaba (Sumichrast)". Box 9. Unchanged (James, 1973: 14) (Stratiomyidae).
12. *Merosargus coriaceus*, p. 4 (% &) (1892e: 21). "Orizaba (Sumichrast)". Box 8. Unchanged (James, 1973: 12) (Stratiomyidae).
13. *Sargus (?Macrosargus) filiformis*, p. 4 (%) (1892e: 28). "Mexico". Box 8. Now a junior synonym of *Sargus caesius* Bellardi, 1859 (James, 1973: 18) (Stratiomyidae).

1892c:

14. *Mixogaster dimidiata*, p. 1 (&) (1892e: 33, pl. I, figs. 9, 9a). "Tuxpango (Sumichrast)". Box 15. Unchanged (Thompson *et al.*, 1976: 58) (Syrphidae).
15. *Ubristes chrysopyga*, p. 1 (&) (1892e: 37). "Orizaba (Sumichrast)". Box 15. Now *Microdon (Ubristes) chrysopygus* (Giglio-Tos) (Thompson *et al.*, 1976: 61) (Syrphidae).
16. *Microdon aquilinus*, p. 2 (&) (1892e: 37). "Tuxpango (Sumichrast)". Box 15. Unchanged (Thompson *et al.*, 1976: 63) (Syrphidae).
17. *Copestylum parvum*, p. 2 (% &) (1892e: 42). "Tehuacan (Sumichrast)". Box 15. Now a junior synonym of *Copestylum simile* (Giglio-Tos, 1892) (Thompson *et al.*, 1976: 84) (Syrphidae).
18. *Copestylum simile*, p. 2 (% &) (1892e: 42). "Tehuacan (Sumichrast)". Box 15. Unchanged (Thompson *et al.*, 1976: 84) (Syrphidae).
19. *Volucella omochroma*, p. 2 (&) (1892e: 47). "Mexico, without locality". Box 15. Now in *Copestylum* (Thompson *et al.*, 1976: 80) (Syrphidae).
20. *Volucella furens*, p. 2 (%) (1892e: 48). "Mexico (Sallé)". Box 15. Now in *Copestylum* (Thompson *et al.*, 1976: 76) (Syrphidae).
21. *Volucella craverii*, p. 2 (%) (1892e: 49). "Mexico (Craveri)". Box 15. Now in *Copestylum* (Thompson *et al.*, 1976: 74) (Syrphidae).
22. *Volucella flavissima*, p. 3 (&) (1892e: 50). "Orizaba (Sumichrast)". Box 15. Now *Copestylum flavissimum* (Giglio-Tos) (Thompson *et al.*, 1976: 75) (Syrphidae).
23. *Volucella minima*, p. 3 (%) (1892e: 53). "Orizaba (Sumichrast)". Box 15. Now *Copestylum minimum* (Giglio-Tos) (Thompson *et al.*, 1976: 79) (Syrphidae).
24. *Volucella dichroica*, p. 3 (&) (1892e: 55). "Huastec (Saussure)". Box 15. Now *Copestylum dichroicum* (Giglio-Tos) (Thompson *et al.*, 1976: 74) (Syrphidae).
25. *Volucella trigona*, p. 3 (%) (1892e: 52). "Orizaba (Sumichrast)". Box 15. Now *Copestylum trigonum* (Giglio-Tos) (Thompson *et al.*, 1976: 85) (Syrphidae).
26. *Volucella hyaloptera*, p. 3 (&) (1892e: 57). Tampico (Saussure)". Box 16. Now *Copestylum hyalopterum* (Giglio-Tos) (Thompson *et al.*, 1976: 77) (Syrphidae).

27. *Volucella hirsuta*, p. 3 (%) (1892e: 60, as synon. of *coesariata* Williston). "Meztillan (Saussure)". Box 16. Now a junior synonym of *Copestylum caesariatum* (Williston, 1891) (Thompson *et al.*, 1976: 73) (Syrphidae).
28. *Volucella hispida*, p. 4 (%) (1892e: 61, as synon. of *ornata* Williston). "Orizaba (Sumichrast)". Box 16. Now a junior synonym of *Copestylum ornatum* (Williston, 1891) (Thompson *et al.*, 1976: 80) (Syrphidae).
29. *Volucella volucris*, p. 4 (%) (1892e: 61). "Orizaba". Box 16. Now *Copestylum volucre* (Giglio-Tos) (Thompson *et al.*, 1976: 87) (Syrphidae).
30. *Volucella hystrix*, p. 4 (%) (1892e: 62). "Tuxpango (Sumichrast)". Box 16. Now in *Copestylum* (Thompson *et al.*, 1976: 77) (Syrphidae).
31. *Volucella brevis*, p. 4 (% &) (1892e: 63). "Meztillan (Saussure)". Box 16. Now *Copestylum breve* (Giglio-Tos) (Thompson *et al.*, 1976: 72) (Syrphidae).
32. *Volucella obesoides*, p. 4 (%) (1892e: 65). "Mexico (Craveri)". Box 16. Now a junior synonym of *Ornidia obesa* (Fabricius, 1775) (Thompson *et al.*, 1976: 70) (Syrphidae).
33. *Eristalis bombusoides*, p. 4 (% &) (1893c: 3, as synon. of *circe* Williston). "Oaxaca (Sumichrast)". Box 16. Now a junior synonym of *Eristalis (Eoseristalis) circe* Williston, 1891 (Thompson *et al.*, 1976: 102) (Syrphidae).
34. *Eristalis trilimbata*, p. 5 (&) (1893c: 8). "Tampico (Saussure)". Box 16. Now a junior synonym of *Palpada vinetorum* (Fabricius, 1798) (Thompson *et al.*, 1976: 110) (Syrphidae).
35. *Eristalis praeclarus*, p. 5 (%) (1893c: 11, as synon. of *rufiventris* Macquart). "Tuxpango (Sumichrast)". Type ?lost. Now a junior synonym of *Palpada rufiventris* (Macquart, 1846) (Thompson *et al.*, 1976: 108) (Syrphidae).
36. *Eristalis clarissimus*, p. 5 (%) (1893c: 11). "Tuxpango (Sumichrast)". Box 16. Now *Palpada clarissima* (Giglio-Tos) (Thompson *et al.*, 1976: 104) (Syrphidae).
37. *Eristalis sallei*, p. 5 (&) (1893c: 12). "Mexico (Sallé)". Box ?. Now a junior synonym of *Palpada agrorum* (Fabricius, 1787) (Thompson *et al.*, 1976: 103) (Syrphidae).
38. *Eristalis triangularis*, p. 6 (&) (1893c: 9). "Cuautla". Box 16. Now in *Palpada* (Thompson *et al.*, 1976: 110) (Syrphidae).
39. *Aemosyrphus olivaceus*, p. 6 (&) (1893c: 10, as synon. of *bicolor* Bigot). "Mexico". Box 17. Now a junior synonym of *Aemosyrphus arquatus* (Say, 1829) (Thompson *et al.*, 1976: 96) (Syrphidae).
40. *Aemosyrphus griseus*, p. 6 (% &) (1893c: 20, as synon. of *mexicanus* Macquart). "Tehuacan". Box 17. Now a junior synonym of *Aemosyrphus mexicanus* (Macquart, 1842) (Thompson *et al.*, 1976: 97) (Syrphidae).
41. *Aemosyrphus impurus*, p. 6 (&) (1893c: 19, as synon. of *bicolor* Bigot). "Mexico". Box 17. Now a junior synonym of *Aemosyrphus arquatus* (Say, 1829) (Thompson *et al.*, 1976: 96) (Syrphidae).
42. *Platynochaetus niger*, p. 6 (&) (1893c: 20, pl. II, figs. 1, 1a). "Orizaba (Sumichrast)". Box 17. Now a junior synonym of *Quichuana championi* (Williston, 1892) (Thompson *et al.*, 1976: 98) (Syrphidae).
43. *Salpingogaster nova*, p. 7 (&) (1893c: 23, pl. II, fig. 3). "No locality". Box 17. Unchanged (Thompson *et al.*, 1976: 32) (Syrphidae).

44. *Crioprora arctophiloides*, p. 7 (% &) (1893c: 25, pl. II, figs. 2, 2a). "Mexico (Craveri), Angang(ueo) (Saussure)". Box 17. Now in *Criorhina* (Thompson *et al.*, 1976: 118) (Syrphidae).

1892d:

45. *Eristalis sumischraستي* (sic), p. 1 (%) (1893c: 6, corrected to *sumichraستي*). "Tehuacan (Sumichrast)". Box 16. Now a junior synonym of *Palpada testaceicornis* (Macquart, 1850) (Thompson *et al.*, 1976: 110) (Syrphidae).
46. *Eristalis atropos*, p. 1 (%) (1893c: 14, pl. II, fig. 23). "Mexico (Sallé)". Box 17. Now a junior synonym of *Palpada trigona* (Williston, 1891) (Thompson *et al.*, 1976: 110) (Syrphidae).
47. *Syrphus lautus*, p. 2 (%) (1893c: 29). "Tuxpango (Sumichrast)". Box 17. Now in *Ocyptamus* (Thompson *et al.*, 1976: 21) (Syrphidae).
48. *Syrphus saussurii*, p. 2 (%) (1893c: 30). "Orizaba (Saussure)". Box 17. Now in *Allograpta* (Thompson *et al.*, 1976: 37) (Syrphidae).
49. *Sphaerophoria syrphica*, p. 2 (%) (1893c: 32, pl. II, figs. 5, 5a). "Orizaba (Sumichrast)". Box 17. Now in *Allograpta* (Thompson *et al.*, 1976: 37) (Syrphidae).
50. *Melanostoma elegans*, p. 2 (% &) (1893c: 39, pl. II, fig. 21). "Orizaba (Sumichrast)". Box 18. Now in *Ocyptamus* (Thompson *et al.*, 1976: 17) (Syrphidae).
51. *Melanostoma bellum*, p. 3 (&). (1893c: 38, pl. II, figs. 7, 7a). "Mexico, without locality". Box ?. Unchanged (Thompson *et al.*, 1976: 42) (Syrphidae).
52. *Mesogramma rombicum*, p. 3 (% &) (1893c: 46, pl. II, fig. 13). "Orizaba (Sumichrast)". Box 18. Now *Toxomerus rombicus* (Giglio-Tos) (Thompson *et al.*, 1976: 54) (Syrphidae).
53. *Mesogramma diversum*, p. 3 (&) (1893c: 48, pl. II, fig. 13). "Mexico, without locality". Box 18. Now *Toxomerus diversus* (Giglio-Tos) (Thompson *et al.*, 1976: 50) (Syrphidae).
54. *Mesogramma ciliatum*, p. 3 (% &) (1893c: 50, pl. II, figs. 16, 16a-b). "Tuxpango (Smichrast)". Box 18. Now *Toxomerus ciliatus* (Giglio-Tos) (Thompson *et al.*, 1976: 49) (Syrphidae).
55. *Mesogramma comma*, p. 4 (%) (1893c: 53). "Mexico (Sallé, Truqui)". Box 18. Now in *Toxomerus* (Thompson *et al.*, 1976: 49) (Syrphidae).
56. *Baccha spatulata*, p. 4 (&) (1893c: 56, pl. II, figs. 18, 18a). "Orizaba (Sumichrast)". Box 18. Now *Ocyptamus spatulatus* (Giglio-Tos) (Thompson *et al.*, 1976: 27) (Syrphidae).
57. *Chilosia aurotecta*, p. 4 (% &) (1893c: 58, pl. II, fig. 22). "Orizaba (Sumichrast)". Box 19. Now *Cheilisia aurotecta* Giglio-Tos (Thompson *et al.*, 1976: 68) (Syrphidae).
58. *Physocephala maxima*, p. 5 (&) (1893c: 64). "Mexico". Box 19. Unchanged (Papavero, 1971a: 9) (Conopidae).
59. *Conops ocellatus*, p. 5 (%). (1893c: 67, as synon. of *parvus* Williston). "Mexico (Sumichrast)". Box 19. Now in *Physoconops* (Papavero, 1971a: 3) (Conopidae).

1892e:

60. *Berismyia fusca*, p. 7, pl. I, fig. 2 (%). "Mexico (Sallé)". Box 7. Unchanged (James, 1973: 5) (Stratiomyidae).
61. *Hermetia flavipes* var. *aeneipennis*, p. 11 (&). "Mexico (Sumichrast)". Box 8. Now *Hermetia aeneipennis* Giglio-Tos (James, 1973: 36) (Stratiomyidae).

62. *Chrysonotus aeneiventris*, p. 25 (% &). "Mexico, Orizaba (Sumichrast)". Box 9. Now a junior synonym of *Himantoloba flavopilosa* (Bigot, 1879) (James, 1973: 10) (Stratiomyidae).
63. *Copestylum distinctum*, p. 41, pl. I, fig. 15 (%). "Tehuacan (Sumichrast)". Box 15. Now a junior synonym of *Copestylum marginatum* (Say, 1830) (Thompson *et al.*, 1976: 78) (Syrphidae).
64. *Camerania macrocephala*, p. 45, pl. I, fig. 13 (%). "Mexico (Sallé)". Box ?. Now *Copestylum macrocephalum* (Giglio-Tos) (Thompson *et al.*, 1976: 78) (Syrphidae).

1893a (Giglio-Tos did not cite the localities in this paper, only in the 1894 paper):

65. *Hystrisiphona* (sic) *bicolor*, p. 1 (%) (1894: 54, fig. 17). "Mexico (Truqui)". Box 24. Now in *Jurinodexia* (Guimarães, 1971: 30) (Tachinidae).
66. *Mochlosoma anale*, p. 1 (?sex) (1894: 55 (%)). "Mexico (Truqui)". Box ?. Unchanged (Guimarães, 1971: 30) (Tachinidae).
67. *Mochlosoma sericeum*, p. 2 (&) (1894: 56). "Mexico (Truqui)". Box 24. Unchanged (Guimarães, 1971: 31) (Tachinidae).
68. *Hystrichodexia mellea*, p. 2 (%) (1894: 58). "Oaxaca (Sallé)". Box 24. Unchanged (Guimarães, 1971: 30) (Tachinidae).
69. *Hystrichodexia aurea*, p. 2 (&) (1894: 59). "Mexico, without locality (Sumichrast)". Box 24. Now in *Sumichrastia* (Guimarães, 1971: 35) (Tachinidae).
70. *Scotiptera cyanea*, p. 2 (%) (1894: 61). "Angang(ueo) (Saussure)". Box 25. Unchanged (Guimarães, 1971: 35) (Tachinidae).
71. *Myioscotiptera cincta*, p. 2 (%) (1894: 62, fig. 14). "Solco". Box 25. Unchanged (Guimarães, 1971: 31) (Tachinidae).
72. *Microphthalmum sordida*, p. 3 (%) (1894: 63). "Mexico (Truqui), Toluca (Saussure, Boucard)". Box 25. Now a junior synonym of *Microphthalma obsoleta* (Wulp, 1890) (Guimarães, 1971: 24) (Tachinidae).
73. *Thelairodes basalis*, p. 3 (&) (1894: 65). "Mexico, no locality (Boucard)". Box 25. Now a junior synonym of *Cholomyia inaequipipes* Bigot, 1884 (Guimarães, 1971: 106) (Tachinidae).
74. *Chaetona cruenta*, p. 3 (&) (1894: 65). "Mexico, no locality (Boucard)". Box 25. Unchanged (Guimarães, 1971: 105) (Tachinidae).
75. *Aporia elegans*, p. 3 (%) (1894: 66, fig. 15). "Tuxpango (Sumichrast)". Box 25. Now in *Paraporía* (Guimarães, 1971: 104) (Tachinidae).
76. *Calliphora praepes*, p. 3 (%) (1895:1). "Mexico (Saussure)". Box 26. An unplaced species of Calliphoridae (James, 1970: 16) (Calliphoridae).
77. *Lucilia praescia*, p. 4 (%) (1894: 3). "Tampico (Saussure)". Box?. Now a junior synonym of *Phaenicia purpurescens* (Walker, 1837) (James, 1970: 11) (Calliphoridae).
78. *Lucilia quieta*, p. 4 (&) (1894: 4). "Mexico, no locality". Box 26. An unplaced species of Calliphoridae (James, 1970: 16) (Calliphoridae).
79. *Mesembrinella bicolor*, p. 4 (%) (1895: 11, figs. 1, 1bis). "Chinantla, Oaxaca (Sumichrast)". Box 26. Now a synonym (and homonym) of *Mesembrinella bicolor* (Fabricius, 1805) (James, 1970: 4) (Calliphoridae).
80. *Hyadesimyia grisea*, p. 5 (&) (1895: 8, fig. 2). "Mexico, Oaxaca (Sallé)". Box 26. Now a junior synonym of *Synthesiomyia nudiseta* (Wulp, 1883) (Pont, 1972: 12) (Muscidae).

81. *Graphomyia mexicana*, p. 5 (?sex) (1895: 9 (%)). "Tuxpango (Sumichrast, Boucard)". Box 26. Unchanged but in *Graphomyia* (Pont, 1972: 28) (Muscidae).
82. *Cyrtoneurina parilis*, p. 6 (?sex) (1895: 14 (% &)). "Oaxaca (Sumichrast)". Box 27. Now in *Neomuscina* (Pont, 1972: 50) (Muscidae).
83. *Cyrtoneurina vecta*, p. 6 (?sex) (1895: 14, fig. 4 (%)). "Tuxpango (Sumichrast)". Box 27. Now in *Neomuscina* (Pont, 1972: 51) (Muscidae).
84. *Cyrtoneurina inuber*, p. 6 (%) (1895: 15). "Solco (Sumichrast)". Box 27. Unchanged (Pont, 1972: 53) (Muscidae).
85. *Cyrtoneurina gluta*, p. 6 (% &) (1895: 15). "Tuxpango (Sumichrast)". Box 27. Unchanged (Pont, 1972: 53) (Muscidae).
86. *Cyrtoneurina pellex*, p. 6 (&) (1895: 16). "Tuxpango (Sumichrast)". Box 27. Now a junior synonym of *Cyrtoneurina inuber* Giglio-Tos (Pont, 1972: 53) (Muscidae).
87. *Cyrtoneurina uber*, p. 7 (%) (1895: 17). "Tuxpango (Sumichrast)". Box 27. Unchanged (Pont, 1972: 54) (Muscidae).
88. *Leucomelina garrula*, p. 7 (%) (1895: 18). "Tuxpango (Sumichrast)". Box 27. Now in *Limnophora* (Pont, 1972: 28) (Muscidae).
89. *Leucomelina corvina*, p. 7 (?sex) (1895: 19 (% &)). "Mexico (sallé), Solco (Sumichrast)". Box 27. Now in *Limnophora* (Pont, 1972: 28) (Muscidae).
90. *Leucomelina strigata*, p. 7 (&) (1895: 19). "Tuxpango (Sumichrast)". Box 27. Now in *Limnophora* (Pont, 1972: 29) (Muscidae).
91. *Hyetodesia mulcata*, p. 7 (%) (1895: 20, fig. 5). "Mexico, no locality (Sumichrast)". Box 27. Now in *Helina* (Pont, 1972: 21) (Muscidae).
92. *Hyetodesia parsura*, p. 8 (%) (1895: 20). "Mexico, no locality (Truqui)". Box 27. Now in *Helina* (Pont, 1972: 22) (Muscidae).
93. *Hyetodesia abacta*, p. 8 (%) (1895: 21). "Mexico, no locality (Boucard)". Box 27. Now a junior synonym of *Helina laetifica* (Robineau-Desvoidy, 1830) (Pont, 1972: 21) (Muscidae).
94. *Hyetodesia abdita*, p. 8 (&) (1895: 21). "Mexico, no locality (Craveri)". Box 27. Now a junior synonym of *Helina laetifica* (Robineau-Desvoidy, 1830) (Pont, 1972: 21) (Muscidae).
95. *Hyetodesia insons*, p. 8 (%) (1895: 21). "Mexico, no locality (Boucard)". Box 27. Now in *Mydaea* (Pont, 1972: 25) (Muscidae).
96. *Spilogaster refusa*, p. 8 (% &) (1895: 22). "Tuxpango (Sumichrast)". Box 27. Now in *Helina* (Pont, 1972: 22) (Muscidae).
97. *Spilogaster abdita*, p. 8 (&) (1895: 23). "Mexico, no locality (Boucard)". Box 27. Now in *Bigotomyia* (Pont, 1972: 18) (Muscidae).
98. *Spilogaster etesia*, p. 8 (&) (1895: 23). "Tuxpango (Sumichrast)". Box 27. Now in *Helina* (Pont, 1972: 20) (Muscidae).
99. *Spilogaster meracula*, p. 9 (&) (1895: 24). "Mexico, no locality (Boucard)". Box 27. Now in *Pegoplata* (Pont, 1974: 9) (Anthomyiidae).
100. *Spilogaster pansa*, p. 9 (&) (1895: 24, fig. 3). "Mexico, no locality (Sumichrast)". Box 27. Now in *Mydaea* (Pont, 1972: 25) (Muscidae).
101. *Spilogaster sera*, p. 9 (%) (1895: 25). "Mexico (Truqui)". Box 27. Now in *Helina* (Pont, 1972: 23) (Muscidae).

102. *Spilogaster scabra*, p. 9 (% &) (1895: 25). "Mexico (Craveri)". Box 27. Now in *Dendrophaonia* (Pont, 1972: 13) (Muscidae).
103. *Brachiophyra effrons*, p. 9 (% &) (1895: 26, fig. 6). "Tuxpango (Sumichrast)". Box 27. Now a junior synonym of *Limnophora normata* Bigot, 1885 (Pont, 1972: 29) (Muscidae).
104. *Lasiops mexicana*, p. 10 (?sex) (1895: 28 (% &)). "Orizaba (Sumichrast, Boucard)". Box 27. Now a junior synonym of *Calythea crenata* (Bigot, 1885) (Pont, 1974: 2) (Anthomyiidae).
105. *Anthomyia trifilis*, p. 10 (?sex) (1895: 28 (% &)). "Coscom(atepec) (Sumichrast)". Box 27. Now a junior synonym of *Delia platara* (Meigen, 1826) (Pont, 1974: 4) (Anthomyiidae).
106. *Chortophila stlemba*, p. 10 (&) (1895: 29). "Mexico (Craveri)". Box 27. Now in *Pegomya* (Pont, 1974: 9) (Anthomyiidae).
107. *Hylemyia levipes*, p. 10 (&) (1895: 30). "Mexico, no locality (Boucard)". Box 27. An unplaced Anthomyiidae (Pont, 1974: 10) (Anthomyiidae).
108. *Hylemyia abrepta*, p. 10 (&) (1895: 30). "Mexico, no locality". Box 27. An unplaced Anthomyiidae (Pont, 1974: 10) (Anthomyiidae).
109. *Hylemyia rhodina*, p. 10 (&) (1895: 31). "Tuxpango (Sumichrast)". Box 27. Now in *Pegoplata* (Pont, 1974: 9) (Anthomyiidae).
110. *Coenosia pacifera*, p. 11 (&) (1895: 31). "Tuxpango (Sumichrast)". Box 28. Now in *Bithoracochaeta* (Pont, 1972: 37) (Muscidae).
111. *Coenosia vitilis*, p. 11 (&) (1895: 32 (% &)). "Tuxpango (Sumichrast)". Box 28. Now in *Neodexiopsis* (Pont, 1972: 48) (Muscidae).
112. *Coenosia uvens*, p. 11 (&) (1895: 32 (% &)). "Mexico, no locality (Boucard)". Box 28. A junior synonym of *Bithoracochaeta leucoprocta* (Wiedemann, 1830) (Pont, 1972: 37) (Muscidae).
- 1893b (Also in this paper Giglio-Tos did not cite the localities, which were only given in his 1894 and 1895 papers):
113. *Gymnomma novum*, p. 1 (&) (1894: 12, fig. 2). "Mexico (Sumichrast)". Box 20. Unchanged (Guimarães, 1971: 67) (Tachinidae).
114. *Nemochaeta incerta*, p. 2 (%) (1894: 14, fig. 3). "Oaxaca (Sumichrast)". Box 21 (under *Tachinodes*). Now *Archytas incertus* (Giglio-Tos) (Guimarães, 1971: 50) (Tachinidae).
115. *Nemochaeta dubia*, p. 2 (%) (1894: 15, fig. 8). "Mexico, no locality". Box 21 (under *Tachinodes*). Now *Archytas dubius* (Giglio-Tos) (Guimarães, 1971: 49) (Tachinidae).
116. *Nemochaeta crucia*, p. 2 (?sex) (1894: 16 (% &)). "Mexico (Truqui), Tuxpango (Sumichrast), Huastec". Box 21 (under *Tachinodes*). Now *Archytas crucius* (Giglio-Tos) (Guimarães, 1971: 49) (Tachinidae).
117. *Nemochaeta pernox*, p. 2 (?sex) (1894: 16) "Mexico (Boucard), Orizaba (Sumichrast)". Box 21 (under *Tachinodes*). Now in *Archytas* (Guimarães, 1971: 51) (Tachinidae).
118. *Nemochaeta jurinoides*, p. 2 (%) (1894: 18, fig. 5). "Oaxaca (Sallé)". Box 21 (under *Tachinodes*). Now an unrecognized species of *Archytas* (Guimarães, 1971: 50) (Tachinidae).
119. *Nemochaeta? aberrans*, p. 2 (&) (1894: 18, fig. 9). "Meztillan". Box 21 (under *Tachinodes*). Now in *Archytas* (Guimarães, 1971: 48) (Tachinidae).

120. *Dejeania aurea*, p. 3 (%) (1894: 20). "Solco (Sumichrast)". Box?. Now in *Adejeania* (Guimarães, 1971: 46) (Tachinidae).
121. *Saundersia aurea*, p. 3 (?sex) (1894: 21 (% , ?&)). "Mexico (Craveri), Angang(ueo)". Box 21. Now *Epalpus aureus* (Giglio-Tos) (Guimarães, 1971: 64) (Tachinidae).
122. *Saundersia picea*, p. 3 (?sex) (1894: 25, fig. 10 (% , &)). "Mexico (Sumichrast)". Box 20. Now *Epalpus piceus* (Giglio-Tos) (Guimarães, 1971: 65) (Tachinidae).
123. *Belvosia bella*, p. 3 (&) (1894: 30, figs. 6, 6a). "Mexico, no locality". Box 22. Unchanged (Guimarães, 1971: 181) (Tachinidae).
124. *Chaetogena carbonaria*, p. 4 (%) (1894: 31, fig. 19). "Orizaba (Sumichrast)". Box 23. An unplaced species of Dexiinae (Guimarães, 1971: 122) (Tachinidae).
125. *Chaetogena cincta*, p. 4 (?sex) (1894: 32 (% , &)). "Orizaba (Sumichrast)". Box 23. An unplaced Dexiinae (Guimarães, 1971: 122) (Tachinidae).
126. *Chaetogena gracilis*, p. 4 (&) (1894: 33, fig. 6). "Mexico, no locality (Boucard)". Box 23. An unplaced Dexiinae (Guimarães, 1971: 122) (Tachinidae).
127. *Acroglossa tessellata*, p. 5 (&) (1894: 35). "Oaxaca (Sumichrast)". Box 23. Now in *Chaetogaedia* (Guimarães, 1971: 178) (Tachinidae).
128. *Plagia mexicana*, p. 5 (&) (1894: 42, fig. 13). "Mexico, no locality (Boucard)". Box 23. Now a junior synonym of *Voria ruralis* (Fallén, 1810) (Guimarães, 1971: 93) (Tachinidae).
129. *Plagia dicta*, p. 5 (&) (1894: 42). "Mexico, no locality". Box 23. Now in *Voria* (Guimarães, 1971: 93) (Tachinidae).
130. *Tricholyga gracilens*, p. 5 (%) (1894: 39, fig. 16). "Mexico, no locality (Boucard)". Box 23. An unplaced Goniinae (Guimarães, 1971: 215) (Tachinidae).
131. *Tricholyga insita*, p. 5 (%) (1894: 39). "Mexico, no locality (Boucard)". Box 23. An unplaced Goniinae (Guimarães, 1971: 215) (Tachinidae).
132. *Blepharipoda mexicana*, p. 6 (&) (1894: 33, fig. 18). "Tehuacan". Box 23. Now in *Drino* (Guimarães, 1971: 189) (Tachinidae).
133. *Cyrtophloeoba horrida*, p. 6 (%) (1894: 40). "Mexico, no locality (Sumichrast)". Box 23. Now in *Eucyrtophloeoba* (Guimarães, 1971: 90) (Tachinidae).
134. *Masicera sesquiplea*, p. 6 (&) (1894: 43). "Mexico, no locality (Boucard)". Box 23. An unrecognized Tachinidae (Guimarães, 1971: 216) (Tachinidae).
135. *Masicera usta*, p. 6 (&) (1894: 44). "Mexico (Boucard)". Box 23. An unrecognized Tachinidae (Guimarães, 1971: 216) (Tachinidae).
136. *Masicera glauca*, p. 6 (&) (1894: 46). "Mexico, no locality (Boucard)". Box 23. An unrecognized Tachinidae (Guimarães, 1971: 216) (Tachinidae).
137. *Degeeria mexicana*, p. 7 (%) (1894: 46). "Orizaba (Sumichrast)". Box 23. An unplaced Blondeliini (Guimarães, 1971: 152) (Tachinidae).
138. *Degeeria dicax*, p. 7 (%) (1894: 49). "Mexico, no locality (Boucard)". Box 23. An unplaced Blondeliini (Guimarães, 1971: 152) (Tachinidae).
139. *Degeeria insecta*, p. 7 (?&) (1894: 48). "Mexico, no locality (Boucard)". Box 23. An unplaced Blondeliini (Guimarães, 1971: 152) (Tachinidae).
140. *Degeeria cruralis*, p. 7 (&) (1894: 49). "Mexico, no locality (Sumichrast)". Box 23. An unplaced Blondeliini (Guimarães, 1971: 152) (Tachinidae).
141. *Clistomorpha ochracea*, p. 7 (&) (1894: 53). "Mexico (Sumichrast)". Box 23. Without additional references (Tachinidae).



142. *Scatophaga reses*, p. 7 (?sex) (1895: 34 (% &)). "Mexico (Truqui)". Box 28. Unchanged (Albuquerque, 1984: 3) (Scatophagidae).
143. *Scatophaga coenosa*, p. 8 (1895: 34 (&)). "Popocatepetl, 3800 m". Box 28. Without references (Scatophagidae).
144. *Tauromyia pachyneura*, p. 8 (&) (1895: 37, figs. 7-8). "Mexico (Sallé)". Box 28. No more information.
145. *Helomyza iniens*, p. 8 (?sex) (1895: 35, figs. 9-10 (% &)). "Mexico, no locality (Sumichrast)". Box 28 Now in *Suillia* (Gill, 1968: 7) (Heleomyzidae).
146. *Sepedon praemiosus*, p. 8 (%) (1895: 38). "Morelia (Saussure)". Box 28. Unchanged (Knutson *et al.*, 1976: 10) (Sciomyzidae).
147. *Sapromyza stata*, p. 9 (&) (1895: 47). "Orizaba (Sumichrast)". Box 28. (Lauxaniidae).
148. *Sapromyza plagosa*, p. 9 (?sex) (1895: 47, as synon. of *geminata* Fabricius). "Mexico". Box 28. (Lauxaniidae).
149. *Sapromyza sonax*, p. 9 (?sex) (1895: 48). "Tuxpango (Sumichrast)". Box 28. (Lauxaniidae).
150. *Sapromyza vinnula*, p. 9 (?sex) (1895: 48). "Tuxpango (Sumichrast)". Box 28. (Lauxaniidae).
151. *Sapromyza urina*, p. 9 (?sex) (1895: 50, as *Physogenua*). "Mexico, Tuxpango (Sumichrast)". Box 28. (Lauxaniidae).
152. *Sapromyza innuba*, p. 9 (?sex) (1895: 49). "Mexico, no locality (Boucard)". Box 28. (Lauxaniidae).
153. *Euaresta audax*, p. 9 (&) (1895: 55, fig. 22). "Tuxpango (Sumichrast)". Box 29. A junior synonym of *Dyseuaresta mexicana* (Wiedemann, 1830) (Foote, 1967: 23) (Tephritidae).
154. *Blepharoneura regina*, p. 9 (%) (1895: 56, fig. 16). "Mexico, no locality". Box 28. Unchanged (Foote, 1967: 18) (Tephritidae).
155. *Blepharoneura saga*, p. 10 (%) (1895: 56, fig. 19). "Cordova (sic) (Saussure)". Box 28. A junior synonym of *Blepharoneura poecilosoma* (Schiner, 1868) (Foote, 1967: 18) (Tephritidae).
156. *Blepharoneura io*, p. 10 (%) (1895: 57, fig. 18). "Tuxpango (Sumichrast)". Box 29. Unchanged (Foote, 1967: 18) (Tephritidae).
157. *Blepharoneura diva*, p. 10 (&) (1895: 57, fig. 17). "Tuxpango (Sumichrast)". Box 29. Unchanged (Foote, 1967: 18) (Tephritidae).
158. *Blepharoneura splendida*, p. 10 (%) (1895: 58, fig. 20). "Mexico, no locality (Boucard)". Box 29. Now in *Hexachaeta* (Foote, 1967: 28) (Tephritidae).
159. *Acrotoxa mucida*, p. 10 (%) (1895: 58, fig. 21). "Mexico, no locality (Boucard)". Box 29. Now in *Polionota* (Foote, 1967: 36) (Tephritidae).
160. *Ostracocoelia mirabilis*, p. 11 (&) (1895: 44, fig. 13). "Tampico (Saussure)". Box 29. Unchanged (Foote, 1967: 32) (Tephritidae).
161. *Chaetocoelia palans*, p. 11 (%) (1895: 51, fig. 14). "Orizaba (Sumichrast)". Box 29. Without additional references.
162. *Molynocoelia lutea*, p. 11 (%) (1895: 60, fig. 23). "Tuxpango (Sumichrast)". Box 29. Unchanged (Foote, 1967: 31) (Tephritidae).

163. *Platystoma mexicanum*, p. 12 (%) (1895: 46, fig. 24). "Tuxpango (Sumichrast)". Box 29. Now a synonym of *Automola atomaria* (Wiedemann, 1830) ( Steyskal, 1968e: 2) (Richardiidae).
164. *Paragorgopis maculata*, p. 12 (&) (1895: 41, fig. 12). "Tuxpango (Sumichrast)". Box 29. Unchanged (Steyskal, 1968b: 7) (Otitidae).
165. *Oedopa elegans*, p. 12 (&) (1895: 42). "Oaxaca (Sallé)". Box 29. Unchanged (Steyskal, 1968b: 20) (Otitidae).
166. *Rhinотора diversa*, p. 13 (%) (1895: 43). "Tuxpango (Sumichrast)". Box 29. Now in *Neorhinотора* (Papavero, 1967c: 2) (Rhinotoridae).
167. *Bricinniella cyanea*, p. 13 (?%) (1895: 45). "Cuernavaca (Boucard)". Box 29. Now in *Senopterina* (Steyskal, 1968f: 2) (Platystomatidae).
168. *Chyliza enthea*, p. 13 (&) (1895: 64). "Tuxpango (Sumichrast)". Box 29. Unchanged (Prado, 1975a: 2) (Psilidae).
169. *Tanypeza mexicana*, p. 14 (?sex) (1895: 61 (% &)). "Orizaba; Tuxpango (Sumichrast)". Box 29. Now a junior synonym of *Neotanypeza (Neotanypeza) ornatipes* (Bigot, 1886) (Steyskal, 1967: 1) (Tanypezidae).
170. *Calobata plectilis*, p. 14 (&) (1895: 62). "Mexico, no locality". Now in *Rainieria (Rainieria)* (Steyskal, 1968a: 14) (Micropezidae).
171. *Drosophila excita*, p. 14 (&) (1895: 66). "Mexico, no locality (Boucard)". Box 29. Not included in Wheeler's 1970 catalogue (Drosophilidae).
172. *Chlorops unicornis*, p. 14 (?sex) (1895: 65). "Coscom(atepec) (Sumichrast); Puebla (Saussure)". Box 30. Unchanged (Sabrosky & Paganelli, 1984: 35) (Chloropidae).
- 1893c:
173. *Sphaerophoria willistoni*, p. 31, pl. II, figs. 6, 6a (% &). "Mexico, Orizaba (Sumichrast)". Box 17. Now in *Allograpta* (Thompson *et al.*, 1976: 38) (Syrphidae).
174. *Sphaerophoria forreri*, p. 32 (%). "Mexico, Ciudad in Durango; Solco; Cuernavaca. Box 17. Now in *Allograpta* (Thompson *et al.*, 1976: 35) (Syrphidae).
175. *Mesogramma bidentatum*, p. 49, pl. II, fig. 12 (% &). "Mexico: Acahuizotla, Chilpancingo, Tepetlapa, Medellin near Veracruz, Teapa in Tabasco, Orizaba (Sumichrast), Tampico". Box 18. Now in *Toxomerus* (Thompson *et al.*, 1976: 48) (Syrphidae).
- 1895:
176. *Pterocalla bella*, p. 39, fig. 11 (&). "Orizaba (Sumichrast, Boucard)". Box 29. Unchanged (Steyskal, 1968b: 8) (Otitidae).
177. *Chaetocoelia vergens*, p. 51, fig. 15 (%). Tuxpango (Sumichrast)". Box 29. Without additional references.

## 15. THE SPECIES DESCRIBED BY EWALD RÜBSAAMEN

Ewald Rübsaamen was born on May 20, 1857 in Haardt (now Weidenau, Province of Siegen), on the margins of the Sieg, as the son of Frans and Mathilde

Rübsaamen. His basic studies were made at the public school in Wiedenau and later at the Royal Gymnasium of Siegen, until the end of the "Ober Sekunda". The father, owner of a factory of instruments for mountain engineering and metallurgy, wanted him to study metallurgy, and for that reason, in 1875, Rübsaamen entered the Superior Technical School in Karlsruhe, to study mathematics. However, after 4 semesters, he gave up the idea and, with his parents' consent, decided to become professor of drawing, studying for that purpose at Hilchenbach (Siegen). In 1878, he became a teacher in a public school in Steinhauserberg, in Schwen, and during the fall of the same year he was the main teacher of that school. In the spring of 1879 he was granted the directorship of a private school in Siegen.

He learned by himself botany and zoology and became especially interested in plant-galls, very little known at that time, and in a special way in the dipterous family Cecidomyiidae. Upon his father's death, he and his family moved to Berlin, so he could finish his botanical studies. His mother stimulated him to complete those studies.

In Berlin he found a job at the "*Pflanzenphysiologische Institut der Landwirtschaftlichen Hochschule*". From 1892 to 1893 he frequented the "*Königlich Kunstschule*", and after two years passed examination to graduate. Natural history enthused him so much that he could not think of becoming a teacher any more, and he decided to become a researcher. He found a position as a volunteer in the Berliner Museum, with Professor Möbius. Later on, as a research assistant, in the section of entomology, he received materials collected in several regions around the world. In 1884 he started the preparation of several water-colors depicting the plant galls and their agents. A collection of 100 water-colors was exposed during the International Exposition of Gardens in Hamburg, in 1897, and he received the Great Golden Medal from the Government of Hamburg. He also received a Golden Medal from the "*Vereins zur Förderung des Gartenbaues in den Kgl. preussischen Staates*", by the occasion of the 75<sup>th</sup> anniversary and jubilaemum of that Society.

From 1897 on, he occupied several important positions in the *Phylloxera* commission. He published some interesting papers on zooecidia, some with beautiful colored plates.

Towards the end of his life he suffered much from heart and lung diseases, remaining sick for many years; he also suffered from dropsy. In 1912, he received the title of Professor, through the Ministry of Agriculture, and was elected in 1917 a member of the *Leopoldinischen-Carolinischen Akademie der Wissenschaften* in Halle.

Rübsaamen died on March 17, 1919, in Metternich bei Koblenz (Schaffnit, 1927; Papavero, 1973: 327-328).

Rübsaamen published only seven papers dealing with Neotropical Cecidomyiidae and Sciaridae (1892, 1894, 1895, 1905, 1908a, 1908b, 1916). Only two Mexican species, both Sciaridae, were described by him:

1. *Sciara nigra*, 1884: 26, pl. 1, fig. 7, pl. 3, figs. 12, 19, 22. "Mexico, Oaxaca". Types: Berliner Museum. Now in *Odontosciara* (Amorim, 1992: 63) (Sciaridae).
2. *Sciara striata*, 1894: 37, pl. 2, fig. 12, pl. 3, fig. 4. "Mexico, Oaxaca". Type: Berliner Museum. Now in *Pseudosciara* (Amorim, 1992: 65) (Sciaridae).

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## APPENDIX 1

Exotic species of Diptera treated by C. E. W. Wiedeman in his "Ausereuropäische Zweiflügelige Insekten" (1828-1830) (Abbr. NA-North America; WI-West Indies; SA-South America (mostly from Brazil)).

Family Genera	Total number of species	NA	WI	SA	Mexico
I. Fam. TIPULARIAE (Mücken)					
1. <i>Culex</i>	26	5	1	11	2
2. <i>Anopheles</i>	5	4	1		
3. <i>Corethra</i>	1	1			
4. <i>Chironomus</i>	11	6		3	
5. <i>Tanytus</i>	4	2		1	
6. <i>Macropeza</i>	1				
7. <i>Lasioptera</i>	1	1			
8. <i>Cecidomyia</i>	2	2			
9. <i>Campylomyza</i>	1	1			
10. <i>Psychoda</i>	1	1			
11. <i>Erioptera</i>	1	1			
12. <i>Limnobia</i>	38	7		22	
13. <i>Ctenophora</i>	5	2			
14. <i>Tipula</i>	25	11		6	
15. <i>Megistocera</i>	4			1	
16. <i>Polymera</i>	2			2	
17. <i>Ptychoptera</i>	2	2			
18. <i>Trichocera</i>	1	1			
19. <i>Platyura</i>	3	2		1	
20. <i>Sciophila</i>	6	6			
21. <i>Leia</i>	2	1		1	
22. <i>Mycetophila</i>	3	3			
23. <i>Sciara</i>	10	7		3	
24. <i>Simulia</i>	1	1			
25. <i>Scatopse</i>	1	1			
26. <i>Penthetria</i>	2				
27. <i>Plecia</i>	7			6	
28. <i>Dilophus</i>	6	5		1	
29. <i>Bibio</i>	10	9			
30. <i>Rhyphus</i>	3	3			
Total in the family	185	85	2	58	2

**Appendix 1.**

Family Genera	Total number of species	NA	WI	SA	Mexico
<b>II. Fam. XYLOPHAGI (Holzfliege)</b>					
1. <i>Beris</i>	3	2		1	
2. <i>Xylophagus</i>	4	2			1
3. <i>Coenomyia</i>	1	1			
Total in the family	8	5	0	1	1
<b>III. Fam. TABANII (Bremsen)</b>					
1. <i>Pangonia</i>	37	1		14	3
2. <i>Rhinomyza</i>	2				
3. <i>Rhaphiorhynchus</i>	1			1	
4. <i>Acanthomera</i>	6		1	5	
5. <i>Silvius</i>	4	1		2	1
6. <i>Tabanus</i>	137	21		28	1
7. <i>Chrysops</i>	27	7		12	
8. <i>Haematopota</i>	11			5	
Total in the family	225	30	1	67	5
<b>IV. Fam. LEPTIDES (Scheffenfliegen)</b>					
1. <i>Leptis</i>	18	11	0	4	0
<b>V. Fam. XYLOTOMAE</b>					
1. <i>Thereva</i>	18	5		2	
2. <i>Chiromyza</i>	3			3	
3. <i>Ruppelia</i>	1				
Total in the family	22	5	0	5	0
<b>VI. Fam. MIDASII (Midasfliegen)</b>					
1. <i>Midas</i>	23	2	1	11	2
<b>VII. Fam BOMBYLIARII (Schwebfliegen)</b>					
1. <i>Hirmoneura</i>	1			1	
2. <i>Nemestrina</i>	15			2	
3. <i>Lomatia</i>	1	1			
4. <i>Anthrax</i>	118	17	4	23	10
5. <i>Tomomyza</i>	1				
6. <i>Xestomyza</i>	2				



**Appendix 1.**

Family Genera	Total number of species	NA	WI	SA	Mexico
VII. Fam BOMBYLIARII (continued)					
7. <i>Apatomyza</i>	1				
8. <i>Corsomyza</i>	4				
9. <i>Lasia</i>	1			1	
10. <i>Mulio</i>	2				
11. <i>Bombylius</i>	43	5		8	
12. <i>Amictus</i>	2				
13. <i>Thlipsomyza</i>	1				
14. <i>Phthiria</i>	3			1	
15. <i>Geron</i>	1		1		
16. <i>Cyllenia</i>	2				
17. <i>Systropus</i>	2			1	
18. <i>Toxophora</i>	4			1	
19. <i>Dolichomyia</i>	1			1	
20. <i>Usia</i>	1				
Total in the family	206	23	5	39	10
VIII. Fam. ASILICI (Räuberfliegen)					
1. <i>Dioctria</i>	6	1		1	
2. <i>Dasygogon</i>	84	8	1	32	1
3. <i>Ceraturgus</i>	1	1			
4. <i>Damalis</i>	4				
5. <i>Ommatius</i>	10	1	1		
6. <i>Asilus</i>	122	18	2	54	
7. <i>Laphria</i>	64	13		27	1
8. <i>Leptogaster</i>	7	1		2	
Total in the family	298	43	4	116	2
IX. Fam. HYBOTINAE					
1. <i>Hybos</i>	7	1		3	
X. Fam. EMPIDIAE					
1. <i>Empis</i>	12		1	2	1
2. <i>Rhamphomyia</i>	7	4		1	
3. <i>Drapetis</i>	1				
Total in the family	20	4	1	3	1

**Appendix 1.**

Family Genera	Total number of species	NA	WI	SA	Mexico
<b>XI. Fam. TACHYDROMIDES</b>					
1. <i>Hemerodromia</i>	1	1			
2. <i>Tachydromia</i>	2	1			
Total in the family	3	2	0	0	0
<b>XII. Fam INFLATAE</b>					
1. <i>Cyrtus</i>	4				
2. <i>Acrocera</i>	2	1		1	
3. <i>Philopota</i>	1			1	
Total in the family	7	1	0	2	0
<b>XIII. Fam. STRATIOMYDAE</b>					
1. <i>Hermetia</i>	7			6	
2. <i>Sargus</i>	28	4	1	17	
3. <i>Acrochaeta</i>	1			1	
4. <i>Eudmeta</i>	1				
5. <i>Nemotelus</i>	2	1			
6. <i>Clitellaria</i>	5		1	1	
7. <i>Acanthina</i>	3			3	
8. <i>Platyna</i>	1				
9. <i>Cyphomyia</i>	8			7	1
10. <i>Ptilocera</i>	1				
11. <i>Oxycera</i>	1		1		
12. <i>Stratiomys</i>	28	7		12	
Total in the family	86	12	3	47	1
<b>XIV. Fam. SYRPHIDIAE</b>					
1. <i>Ceratophya</i>	2			2	
2. <i>Ceria</i>	2				
3. <i>Microdon</i>	11	2		7	
4. <i>Chrysotoxum</i>	2		1		
5. <i>Paragus</i>	4				
6. <i>Ascia</i>	1				
7. <i>Psarus</i>	2	2			
8. <i>Baccha</i>	9		1	2	
9. <i>Xylota</i>	11	5		3	

**Appendix 1.**

Family Genera	Total number of species	NA	WI	SA	Mexico
XIV. Fam. SYRPHIDIAE (continued)					
10. <i>Milesia</i>	8	3		1	
11. <i>Pipiza</i>	1				
12. <i>Eumerus</i>	7				
13. <i>Rhingia</i>	1	1			
14. <i>Chrysogaster</i>	1	1			
15. <i>Syrphus</i>	53	12	1	18	
16. <i>Platynochaetus</i>	1				
17. <i>Merodon</i>	6	1		1	
18. <i>Eristalis</i>	64	6	2	18	
19. <i>Volucella</i>	20		2	14	1
20. <i>Graptomyza</i>	4				
Total in the family	210	33	7	66	1
XV. Fam. MEGACEPHALI (Grossköpfe)					
1. <i>Pipunculus</i>	1			1	
XVI. Fam. DOLICHOPODII (Dünnbeinfliegen)					
1. <i>Rhaphium</i>	1				
2. <i>Diaphorus</i>	1				
3. <i>Chrysetus</i>	1				
4. <i>Psilopus</i>	33	10	1	11	
5. <i>Porphyrops</i>	1				
6. <i>Medeterus</i>	1				
7. <i>Dolichopus</i>	9	2		2	
8. <i>Scenopinus</i>	1				
Total in the family	48	12	1	13	0
XVII. Fam. CONOPSARIAE (Kopffliegen)					
1. <i>Conops</i>	10	3		3	
2. <i>Zodion</i>	3	2		1	
3. <i>Myopa</i>	6	3			
Total in the family	19	8	0	4	0
XVIII. Fam. STOMOXYDIAE					
1. <i>Stomoxys</i>	12	1		7	
2. <i>Glossina</i>	1				
Total in the family	13	1	0	7	0

**Appendix 1.**

Family Genera	Total number of species	NA	WI	SA	Mexico
XIX. Fam. OESTRACIDAE (Stumpfmaulfliegen)					
1. <i>Oestrus</i>	2	1			
2. <i>Trypoderma</i>	5	4			
3. <i>Colax</i>	2			1	
Total in the family	9	5	0	1	0
XX. Fam. MUSCIDIAE (Urfliegen)					
1. <i>Phasia</i>	3			1	
2. <i>Ocyptera</i>	6			1	
3. <i>Phania</i>	1			1	
4. <i>Trichopoda</i>	13	6		7	
5. <i>Trixa</i>	1				
6. <i>Miltogramma</i>	2				
7. <i>Tachina</i>	117	4	7	45	1
8. <i>Gonia</i>	6			1	
9. <i>Musca</i>	73	1		15	
10. <i>Mesembrina</i>	1			1	
11. <i>Idia</i>	12	1			
12. <i>Sarcophaga</i>	31	1	5	17	
13. <i>Dexia</i>	27		1	16	
14. <i>Anthomyia</i>	36	1	1	17	
15. <i>Coenosia</i>	13				
16. <i>Lispe</i>	7				
17. <i>Cordylura</i>	2			1	
18. <i>Ochtera</i>	1	1			
19. <i>Scatophaga</i>	5	2		1	
20. <i>Dryomyza</i>	1			1	
21. <i>Sapromyza</i>	16	1	1	7	
22. <i>Ortalis</i>	16	2	2	7	
23. <i>Sepsis</i>	7	1		1	
24. <i>Cephalia</i>	3			3	
25. <i>Lauxania</i>	16		1	13	
26. <i>Lonchaea</i>	3		1	2	
27. <i>Trypeta</i>	58	3		17	4
28. <i>Dacus</i>	20			6	
29. <i>Tetanops</i>	1			1	
30. <i>Psila</i>	1				
31. <i>Loxocera</i>	1	1			

**Appendix 1.**

Family Genera	Total number of species	NA	WI	SA	Mexico
XX. Fam. MUSCIDIAE (continued)					
32. <i>Tanypeza</i>	3			3	
33. <i>Chyliza</i>	4			1	
34. <i>Calobata</i>	26	1	1	17	2
35. <i>Micropeza</i>	4	1		2	
36. <i>Nerius</i>	8			5	
37. <i>Longina</i>	1			1	
38. <i>Achias</i>	3			2	
39. <i>Diopsis</i>	8	1			
40. <i>Timia</i>	1				
41. <i>Ulidia</i>	2			1	
42. <i>Dictya</i>	1			1	
43. <i>Platystoma</i>	3				
44. <i>Ropalomera</i>	4			4	
45. <i>Homalura</i>	4		1		
46. <i>Sciomyza</i>	4			3	
47. <i>Sepedon</i>	5				
48. <i>Oscinis</i>	2				
49. <i>Pyrgota</i>	1	1			
50. <i>Tetanocera</i>	5			5	
51. <i>Helomyza</i>	4	1		1	
52. <i>Notiphila</i>	11			2	
53. <i>Ephydra</i>	4		2		
54. <i>Chlorops</i>	11		1	6	
55. <i>Borborus</i>	2				
56. <i>Stegana</i>	1			1	
57. <i>Trineura</i>	1				
58. <i>Celyphus</i>	2				
59. <i>Hippobosca</i>	4				
60. <i>Olfersia</i>	3	1			
61. <i>Ornithomyia</i>	9	4		1	
62. <i>Strebla</i>	1			1	
63. <i>Melophaga</i>	3	1			
Total in the family	645	36	24	240	7
<b>GRAND TOTAL</b>	<b>2053</b>	<b>319</b>	<b>48</b>	<b>688</b>	<b>32</b>