STUDIES ON THE FAUNA OF CURAÇAO AND OTHER CARIBBEAN ISLANDS: No. 126.

RECORDS OF SYRPHIDAE (DIPTERA) FROM THE LESSER ANTILLES

by

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Having terminated his term of office as a Director of the Suriname Museum at Paramaribo, Dr. D. C. GEIJSKES returned to Holland. Accompanied by Mrs. GEIJSKES he availed himself of the opportunity to make a collecting-trip to several islands of the Windward Group of the Lesser Antilles, situated in a curved line between Trinidad and Puerto Rico. The islands of Grenada, Barbados, St. Vincent, St. Lucia, Martinique, Dominica, Guadeloupe, Antigua, Barbuda, Montserrat, St. Kitts, St. Eustatius, St. Martin, Saba and Anguilla were visited in succession.

Though Dr. GEIJSKES himself is especially interested in Odonata and aquatic Neuroptera, he and Mrs. GEIJSKES have been kind enough to catch also the Syrphidae they came across. In total 170 Syrphid flies were taken representing 13 species. The flies are in very good condition with full data.

The author is greatly indebted to Dr. and Mrs. GEIJSKES for their kind collecting, and also for the generous donation of the specimens. Some duplicates have been placed in the collection of the Rijksmuseum van Natuurlijke Historie at Leiden.

Firstly the specimens captured by Dr. and Mrs. GEIJSKES are listed below, followed by other records from the Lesser Antilles by previous authors. Finally a list of the known Syrphidae from each island apart is given. For the sake of brevity Dr. D. C. GEIJSKES and Mrs. E. GEIJSKES-SOLLEWIJN GELPKE are indicated as collector by their respective initials of G and GS.

TABLE 3

DISTRIBUTION OF SYRPHIDAE IN THE LESSER ANTILLES' WINDWARD GROUP based on specimens from the GEIJSKES Collection (O) and data from literature (\times)

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Genus Allograpta Osten-Sacken

OSTEN-SACKEN 1876, Bull. Buff. Soc. Nat. Hist. 3: 49.

Allograpta fuscisquama Curran

Allograpta fuscisquama CURRAN, 1927, Amer. Mus. Novit. 245: 4.

ST. EUSTATIUS, The Quill (slope), 27.VI.1965, 1 &, G. – Oranjestad (on *Carolita*), 28.VI.65, 3 Q, G. ST. MARTIN, Cul de Sac, Reward, 1.VII.65, 1 &, GS. SABA, Ladder Bay, 4/5.VII.65, 6 &, 3 Q, G. – The Bottom, 5.VII.65, 1 &, G.

Genus Mesograpta Loew

LOEW 1872, Berl. Ent. Zeitschr. 16: 114.

Mesograpta basilaris (Wiedemann)

Syrphus basilaris WIEDEMANN, 1830, Auss. Zweifl. Ins. 2: 143.

MARTINIQUE, near Medaille, 23.V.1965, 2 &, GS. DOMINICA, Springfield Estate, 28.V.65, 2 &, G; 29.V., 2 &, GS. GUADELOUPE, Point-à-Pitre, 5.VI.65, 5 &, 1 Q, G. – Prise d'Eau, 5.VI.65, 2 &, 1 Q, G. – Deshaies (Port Royal), 6.VI.65, 1 Q, GS. ANTIGUA, All Saints Village, 12.VI.65, 2 &, GS.

Mesograpta basilaris flavocuneus (Hull)

Mesogramma basilaris flavocuneus HULL, 1940, J. Wash, Acad. Sci. 30: 433; 1943a, Ent. Amer. 23: 9, fig. 53.

DOMINICA, Fresh Water Lake, 2200 ft., 31.V.1965, 2 9, GS.

Mesograpta duplicata (Wiedemann)

Syrphus duplicatus WIEDEMANN, 1830, Auss. Zweifl. Ins. 2: 142.

ST. VINCENT, Greathead River near Airfield, 12.V.1965, 1 Q, G. GUADELOUPE, Prise d'Eau, 5.VI.65, 2 Q, G.

Mesograpta floralis (Fabricius)

Scaeva floralis FABRICIUS, 1798, Ent. Syst. Suppl.: 563.

ST. VINCENT, Greathead River, 12.V.1965, 1 \bigcirc , G. – Leewardside Cumberland River, 13.V.65, 1 \bigcirc , G. ST. LUCIA, Union Agric. Station, 17.V.65, 1 \eth , GS. DOMINICA, Springfield Estate, 28.V.65, 1 \bigcirc , G. GUADELOUPE, Point-à-Pitre, 5.VI.65, 3 \eth , 2 \heartsuit , G. – Prise d'Eau, 5.VI.65, 1 \circlearrowright , 1 \heartsuit , G. – Deshaies (Port Royal), 6.VI.65, 1 \circlearrowright , 1 \heartsuit , GS.

Mesograpta ornithoglypha (Hull)

Mesogramma ornithoglypha HULL, 1942, Proc. New Engl. Zool. Club 20: 17; 1943a, Ent. Amer. 23: 14, fig. 69 (Mesogramma).

DOMINICA, Springfield Estate, 28/29.V.1965, 2 &, G. - Fresh Water Lake, 2200 ft., 31.V.65, 3 &, GS.

Mesograpta picta (Macquart)

Syrphus pictus MACQUART, 1842, Dipt. Exot. 2: 99, tab. 16 fig. 11.

ST. LUCIA, Windwardside Dennery, 18.V.1965, 2 Q, G. MARTINIQUE, near Medaille, 23.V.65, 1 J, GS.

Genus Baccha Fabricius

FABRICIUS, 1805, Syst. Antl.: 199.

Baccha clavata (Fabricius)

Syrphus clavatus FABRICIUS, 1794, Ent. Syst. 4: 298.

ST. LUCIA, Union Agric. Station, 17.V.1965, 1 \mathcal{J} , GS. DOMINICA, Springfield Estate Valley, 29.V.65, 2 \mathcal{J} , 1 \mathcal{Q} , GS. GUADELOUPE, Deshaies, strandvegetation, 6.VI.65, 1 \mathcal{Q} , GS. BARBUDA, Godrington Village, lagoon, 20.VI.65, 1 \mathcal{Q} , GS. MONTSERRAT, Belham River, 14/15.VI.65, 2 \mathcal{J} , 1 \mathcal{Q} , GS. ST. EUSTATIUS, Oranjestad (on *Carolita*), 28.VI.65, 2 \mathcal{J} , G. – The Quill (slope), 27.VI.65, 3 \mathcal{J} , G. ST. MARTIN, Colombier Ravine, 30.VI.65, 3 \mathcal{J} , 1 \mathcal{Q} , G. – Cul de Sac, Reward, 1.VII.65, 9 \mathcal{J} , 1 \mathcal{Q} , GS. SABA, Ladder Bay, 4.VII.65, 1 \mathcal{J} , 1 \mathcal{Q} , G.

Baccha cylindrica (Fabricius)

Syrphus cylindricus FABRICIUS, 1781, Spec. Ins. 2: 249.

ST. EUSTATIUS, The Quill (slope), 27.VI.1965, 1 \bigcirc , G. ST. MARTIN, Colombier Ravine, 30.VI,65, 1 \eth , 2 \bigcirc , G. – Cul de Sac, Reward, 1.VII.65, 9 \circlearrowright , 1 \bigcirc , GS. SABA, Ladder Bay, 4.VII.65, 10 \circlearrowright , 9 \bigcirc , G.

Baccha deceptor Curran

Baccha deceptor CURRAN, 1930, Amer. Mus. Nov. 403: 14.

ANTIGUA, All Saints Village, 12.VI.1965, 1 Q, GS.

Baccha dimidiata (Fabricius)

Syrphus dimidiatus FABRICIUS, 1781, Spec. Ins. 2: 434.

BARBADOS, brackish water swamp, 10.V.1965, 1 3, 1 9, G. ST. LUCIA, Union Agric. Station. 17.V.65, 1 9, GS. DOMINICA, Springfield Estate, 28.V.65, 2 9, G. GUADELOUPE, Prise d'Eau, 5.VI.65, 1 9, G. ST. KITTS, Wingfield Estate River, 24.VI.65, 1 3, G. ST. MARTIN, Colombier Ravine, 30.VI.65, 1 3, G.

Genus Ornidia Lepel. & Serv.

LEPELETIER & SERVILLE, 1825, Encycl. Meth. 10: 768.

Ornidia obesa (Fabricius)

Syrphus obesus FABRICIUS, 1775, Syst. Ent.: 763.

ST. LUCIA, Union Agric. Station. 17.V.1965, 2 J, GS. DOMINICA, Springfield Estate, 28.V.65, 1 \bigcirc , G. GUADELOUPE, Deshaies (Port Royal), 6.VI.65, 1 \bigcirc , GS.

Genus Eristalis Latreille

LATREILLE, 1805, Hist. Nat. Crust. Insect. 14: 363.

Eristalis agrorum (Fabricius)

Syrphus agrorum FABRICIUS, 1787, Mant. Insect. 2: 335.

GRENADA, windwardside Antoine Bay, 5.V.1965, 2 Q, G. GUADELOUPE, Prise d'Eau, 5.VI.65, 1 & G. ANGUILLA, 7/8.VII.65, 2 Q, G.

Eristalis vinetorum (Fabricius)

Syrphus vinetorum FABRICIUS, 1798, Ent. Syst. (Suppl.): 562.

GRENADA, Woodlands Estate, 3.V.1965, 2 3, 1 \circ , G. BARBADOS, St. Lawrence, brackish water swamp, 10.V.65, 2 3, G. ST. VINCENT, Greathead River near Airfield, 12.V.65, 1 \circ , G. ST. LUCIA, Union Agric. Station, 17.V.65, 2 3, GS. MARTINIQUE, La François, brackish water swamp, 25.V.65, 3 \circ , G. – near Medaille, 23.V.65, 1 3, 1 \circ , GS. DOMINICA, Springfield Estate, 28.V.65, 2 3, GS. GUADELOUPE, Prise d'Eau, 5.VI.65, 1 3, G. – Deshaies, beach, 6.VI.65, 3 3, 1 \circ , GS. ANTIGUA, Belmont Hill Farm, 11.VI.65, 2 3, 3 \circ , G. – All Saints Village, 12.VI.65, 1 \circ , GS. – Ant. Sugar Fact., 13.VI.65, 4 3, 2 \circ , GS. MONTSERRAT, Plymouth, 15/17.VI.65, 2 3, GS. ST. KITTS, Wingfield Estate River, 24.VI.65, 2 3, 1 \circ , G. ST. MARTIN, Colombier Ravine, 30.VI.65, 2 3, 1 \circ , G.

REMARKS

Allograpta fuscisquama Curr. The type-specimens came from Puerto Rico. The other localities recorded by CURRAN are St. Thomas, St. Croix and Mona Island which are lying comparatively close to Puerto Rico, just as do Saba, St. Eustatius, St. Martin and the Virgin Islands.

Mesograpta basilaris (Wied.) is a rather common species in Central and South America and is also recorded from Texas. Flavocuneus (Hull) is one of the numerous varieties credited to the synonymy of basilaris. HULL's type female and three paratypes (\mathfrak{P}) came from Spanish Honduras, one paratype (\mathfrak{P}) from México. Females of flavocuneus from Brasil, Suriname, Trinidad and Costa Rica are in my collection.

VAN DER WULP (1883) described *Mesograpta variabilis* after several males from Guadeloupe (p. 6) and gave a coloured figure of it (pl. 1 fig. 9). Undoubtly this is the same species as *flavocuneus* Hull (1940). NEW SYNONYMY. A closer examination of the male genitalia should settle whether *variabilis* Wulp is a proper species or a variety of *basilaris* (Wied.). The types of *variabilis* were in the Museum at Brussels, together with much more Diptera collected on Guadeloupe by a Mr. DELAUNAY. The Syrphidae have been recorded by VAN DER WULP (1882, 1883). Mesograpta duplicata (Wied.). Frequent in the Tropical region. Also known from Puerto Rico.

Mesograpia floralis (F.). Common in the neotropical region and just as variable as basilaris. The species has been recorded by CURRAN (1928) and by WOLCOTT (1948) from Puerto Rico, St. Thomas, and the Virgin Islands.

Mesograpta ornithoglypha (Hull). HULL (1942) described the species after one \mathcal{J} and two \mathcal{Q} from the Dominican Republic, collected at an altitude of 3000/7000 ft., and one \mathcal{J} from the Trinidad Mountains, Cuba. Since three of our specimens have also been found at an altitude of 2000 ft., ornithoglypha should presumably be a mountain-species; the two other males, however, have been collected near Springfield Estate, which is lying in the mountains only a few hundred feet above sealevel (according to GEIJSKES). – HULL (1943a) gave a clear drawing after a female. In our males the transverse markings on the second abdominal segment are narrowly separated in one specimen, in the others they are touching. The black spots on the fore and middle femora agree with HULL's description of the female. – VAN DER WULP (1883) recorded 11 \mathcal{J} and 3 \mathcal{Q} from Guadeloupe in the Brussels Museum collection as being Mesograpta arcifera Loew. He gave a coloured figure of a male. There is no doubt that VAN DER WULP's specimens belonged to ornithoglypha Hull. The markings upon the second abdominal segment are quite different from those in arcifera Loew.

Mesograpta picta (Macquart). Frequent in the Neotropical region. Also recorded from Puerto Rico by CURRAN (1928). MACQUART's type \mathcal{Q} was from Cayenne.

Baccha clavata (F.). A very common species in the Neotropics, and also recorded from the southern part of North America. On account of the face and epistoma which project beyond the antennal base, HULL (1949) erected the monotypical subgenus *Dioprosopa*. – In most of the males recorded above, and in one of the females from St. Martin (Cul de Sac), the abdomen has a pale yellowish fading upon the third segment, sometimes also over the fourth segment. The author did not find such a fading in nearly fifty specimens from the continent of South America.

Baccha cylindrica (F.). Up till now known only from the Westindian Islands and apparently not rare there. The blackish wing-markings of the males are somewhat more extensive than in the females. The length of the specimens is ranging from 7 to 12 mm, on the whole, however, the males are obviously longer than the females.

Baccha deceptor Curran. The holotype male came from St. Croix, the allotype female from St. Thomas. Moreover, CURRAN recorded three females from Adjuntas, Puerto Rico, and another female from St. Thomas. Antigua, somewhat remote from Puerto Rico, is a new locality.

Baccha dimidiata (F.). Very common in the neotropical region. On account of the hair-collar along the mesonotal front-margin, the not constricted abdomen, and the dark coloration, the species may be placed into the sub-genus Ocyptamus Macq., just as B. cylindrica (F.).

Ornidia obesa (F.). Very common in the neotropical region and from there it spread over the tropical parts and islands of Africa and Asia, presumably by oldtime sailing-ships on board of which the tidiness often left much to be desired. Dr. ZURCHER found in Paraguay the larvae on putrefying fruits, but also in the excreta of a latrine (SACK, 1921, with figures of larva and pupa). The species also occurs in the southern states of the U.S.A.

Eristalis agrorum (F.) has been recorded from South and Central America, the West Indies and the southern part of the U.S.A., and is also recorded from Cuba, Puerto Rico and the Virgin Island under the synonymous name *cubensis* Macquart.

Eristalis vinetorum (F.) is very common in the neotropics; also recorded from Central America, the southern states of the U.S.A., México, Cuba, and Puerto Rico.

PREVIOUS STATEMENTS OF SYRPHIDAE FROM THE LESSER ANTILLES

Milesia virginiensis (Drury) Musca virginiensis Drury, 1773. – Guadeloupe.

Mesograpta pulchella (Macquart)

Syrphus pulchellus Macquart, 1846. Mesograpta pulchella (Macq.), VAN DER WULP, 1883 (2 2). – Guadeloupe (Delaunay coll.).

Eristalis guadeloupensis Macquart MACQUART, 1942. – Guadeloupe.

Ornidia obesa (F.) Volucella obesa F., VAN DER WULF, 1882. Guadeloupe (Delaunay).

Eristalis vinetorum (F)

VAN DER WULP, 1882 (both sexes). - Guadeloupe (Delaunay).

? Eristalis unicolor Wulp

VAN DER WULP, 1882 (1 2). - Guadeloupe (Delaunay).

VAN DER WULP himself was in doubt about the genus in which the species had to be placed, viz. *Eristalis* or *Plagiocera*. *Plagiocera* Macquart, 1842, appeared to be preoccupied by KLUG, 1834, for a Hymenopterous genus, and has been replaced by *Meromacrus* Rondani, 1848, by all recent authors. – After a detailed study of vAN DER WULP's description, it is beyond doubt that the name should be *Meromacrus unicolor* (Wulp) (NEW COMBINATION). – The description of *unicolor* (\Im only) agrees very well with CURRAN'S (1936) description of *Meromacrus bruneri* from Cuba (also 1 \Im). The third antennal segment, however, was described as egg-shaped, not transversal in unicolor, as transverse in bruneri. – The type Q of unicolor should be in the Brussels Museum.

Allograpta exotica (Wiedemann)

Syrphus exotica Wiedemann, 1830. VAN DER WULP, 1883 (8 \mathcal{Q}). - Guadeloupe (Delaunay).

According to VAN DER WULP's full description these specimens cannot belong to *exotica*; presumably they are belonging to *fuscisquama* Curran. Their scutellum was "yellow with a central, semicircular, black spot" and the face with "a shining, black, median band."

Allograpta venusta Curran

Recorded by CURRAN, 1927, from St. Thomas.

Mesograpta arcifera (Loew)

Mesogramma arcifera Loew, 1865. VAN DER WULP, 1883 (11 3, 3 9). - Guadeloupe (Delaunay).

As stated above, these specimens are recognized as M. ornithoglypha Hull.

Mesograpta multipunctata Wulp

VAN DER WULP, 1883 (1 3). - Guadeloupe (Delaunay).

Mesograpta ferroxida (Hull)

Mesograpta ferroxida (Hull) 1942, from St. Vincent, Grenada and Guadeloupe, is very much alike multipunctata Wulp, if not identical. The third and fourth abdominal segments each bear four black dots ranged as the four angular points of a rectangle. *M. ferroxida* should have there "a pair of narrow, linear, submedial vittae which are centrally evanescent" (HULL, 1942: 21). Possibly only the four remainders of the two sub-medial vittae were visible in VAN DER WULP's specimen. Expansion of the yellow ground-colour is a common phenomenon in male Mesograpta. When the synonymy appears to be correct, VAN DER WULP's multipunctata should have priority.

Mesograpta basilaris (Wiedemann)

Syrphus basilaris Wiedemann, 1830. VAN DER WULP, 1883 (Many specimens, but only males). – Guadeloupe (Delaunay).

Mesograpta variabilis Wulp

VAN DER WULP, 1883. Many specimens (males only). - Guadeloupe (Delaunay).

According to description and figure given by VAN DER WULP, this species is identical with M. basilaris flavocuneus Hull (1940). However, the latter described females only from Spanish Honduras and México. (See above under M. basilaris Wied.).

Volucella unipunctata Curran

Described by CURRAN, 1926, after specimens from Desecheo Island, near Puerto Rico; recorded by Wolcott (1948) also from St. Croix and St. Thomas.

Baccha cylindrica (F.)

Ocyptamus fascipennis Macq. (1834). VAN DER WULP, 1883 (3 9). - Guadeloupe (Delaunay).

Under the latter name VAN DER WULP referred to an award by SCHINER (1868, Reise Nov., Dipt.: 346) in which the synonymy of *fascipennis* Macq. and *fuscipennis* Say was distinctly contradicted after study of typical specimens in WIEDEMANN's collection. O. *fascipennis* Macq. is the same as *cylindrica* (F.). At present Ocypianus is considered to be at most an ill-defined sub-genus (HULL), or a group (CURRAN), of Baccha.

Baccha clavata (F.)

VAN DER WULP recorded 2 3, 1 9 in the Brussels Museum. - Guadeloupe.

Baccha dimidiata (F.)

VAN DER WULP, a number of specimens in the Brussels Museum. - Guadeloupe.

All Syrphids from Guadeloupe recorded by VAN DER WULP have been collected by a Mr. DELAUNAY.

In 1896 WILLISTON published a list (193 pages!) of the Diptera found in the island of St. Vincent, by Mr. H. H. SMITH. The Syrphidae are to be found on the pages 346-350: Meromacrus pratorum F., Eristalis vinetorum F., Volucella obesa F., Volucella sp. n.?, Baccha clavata F., Ocyptamus dimidiatus F., Allograpta exotica Wulp ("nec Wiedemann" WILL.), Mesogramma basilare F. var.?, Mesogramma laciniosa Loew, Mesogramma bosci Macq., Mesogramma sp.? Mesogramma Loew (1866) (occupied) = Mesograpta Loew (1872).

Allograpta exotica Wulp (nec Wiedemann). WILLISTON recorded a single female fully agreeing with the description by VAN DER WULP of what the latter thought to be WIEDEMANN'S Syrphus exoticus. In WILLISTON'S opinion this could not be correct because the scutellum of his specimen was broadly black. To our mind it is a female of All. fuscisquama Curran.

Mesogramma laciniosa Williston (nec Loew) is most probably Mesograpia ferroxida (Hull) (? = M. multipunctata Wulp; see above).

Mesogramma spec. Sixteen specimens were amply described, but not named by WILLISTON. This description is fully in accordance with description and figure 66 (1943) given by Hull of M. ferroxida.

Volucella sp. n.? WILLISTON could not find any description that would apply well to the three specimens which differed from *pallens* Wied. in the presence of a median, and two lateral, facial stripes, in the hair of the mesonotum being for the most part black, and in the presence of a large black spot on the scutellum. All these characters may be found in CURRAN'S (1926) description of Volucella discalis from the neighbouring island of Grenada.

Meromacrus pratorum Williston (nec Fabricius) is M. flukei Curran. CURRAN (1936) described a \mathcal{J} and a \mathcal{Q} from St. Vincent, and a paratype \mathcal{Q} from St. Thomas.

Mesograpia ferroxida (Hull). The holotype \mathcal{J} came from St. Vincent, the allotype \mathcal{G} from the mountains of Guadeloupe, three paratypes from Grand Etang, Grenada.

WILLISTON'S article "On the Diptera of St. Vincent (West Indies) (Dolichopodidae and Phoridae by Professor J. M. Aldrich) "was communicated by DAVID SHARP, on behalf of the Committee for investigating the Flora and Fauna of the West Indies. According to SHARP'S Preface "the Diptera found in St. Vincent were collected by Mr. H. H. SMITH, the well-known American entomologist, who was sent to the islands by F. D. GODMAN Esq. to assist the Committee in its investigations." "A second memoir, treating the Diptera of the neighbouring island of Grenada, will, it is hoped, be almost immediately ready for publication, the present instalment having been in the hands of the Committee for upwards of two years. – D.S.."

As far as I know this second memoir has never been published. Only the *Dolichopodidae* of Grenada have been communicated by ALDRICH (1902).

In a not very well-known paper CURRAN (1939) records 4 Syrphid species from Martinique: Mesograpta basilare (Wied.), Mesograpta laciniosa (Lw.), Ornidia obesa (F.), and Eristalis vinetorum (F.).

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