

with 7, and the Cymatophoridæ, in which the bar is lost and vein 8 anastomoses with 7.

(7) The Rhopalocera, which have lost the frenulum, but in some of the lower forms of which traces of vein 1 *c* and the stalk of the radial vein are retained; vein 5 of the fore wing is given off either above or below the middle of the discocellulars, and vein 8 of the hind wing has become entirely free. In the lowest family—the Hesperiidæ—the subcostals of the fore wing are all given off from the cell, the union of their bases only occurring in the higher families.

G. F. HAMPSON.

XXXV.—*On some Small Collections of Odonata (Dragonflies) recently received from the West Indies.* By W. F. KIRBY, F.L.S., F.E.S., Assistant in Zoological Department, British Museum.

THE British Museum has recently received some collections of insects of various orders from the West-Indian Exploration Committee. Among these were nineteen species of Dragonflies which were collected by Mr. H. H. Smith in St. Vincent and Grenada, an account of which is furnished in the present paper. Four species have been described as new, one of which is regarded as the type of a new genus, while two or three others are new to the collection of the British Museum; and two specimens, probably new, but belonging to obscure and imperfectly known groups, are left undetermined for the present, the material at hand being insufficient for their elucidation.

The whole of the information which accompanied them is here published, being placed between inverted commas. About nineteen species were received, belonging exclusively to the subfamilies Libellulinæ and Cœnagrioninæ.

The species described as new are as follows:—

Brechmorhoga (g. n.) *grenadensis*.

Dythemis *multipunctata*.

Cannacria *Smithii*.

Micrathyria (?) *pruinosa*.

All these belong to the Libellulinæ.

Libellulidæ.

LIBELLULINÆ.

1. *Pantala flavescens*.

Libellula flavescens, Fabr. Ent. Syst. Suppl. p. 285 (1798).

The most widely ranging dragonfly known, occurring commonly in most parts of the world, except Europe, where the sole record respecting it is a reported capture by Sparshall at Horning many years ago.

4 St. Vincent (Windward side).

"Rare."

"The male and female of this species are alike. Hermitage Estate, Cumberland Valley, 1000 feet. Open stagnant pools."

2 Grenada.

"Swamp by Leeward coast, 1 mile E. of St. George's Bay, Aug. 24."

2. *Tramea abdominalis*.

Libellula abdominalis, Ramb. Ins. Névr. p. 37 (1842).

Not an uncommon species. The British Museum has specimens from Brazil (Rio?), Para, and Jamaica.

In the male the dark space on the hind wings extends to the inner margin and anal angle; in the female it does not reach either.

3 Grenada.

"184."

"Mount Gay (Leeward), 150 feet, Sept. 6. Open marshy land, over pools."

3. *Trithemis abjecta*.

Libellula abjecta, Ramb. Ins. Névr. p. 83 (1842).

Originally described from Colombia.

Distinguished from *T. fusca* by the much smaller dark spot at the base of the hind wings. It may be the same as *T. fraterna*, Hag. The numerous American species of this group are very imperfectly worked out at present, and many of them are still undescribed.

8 St. Vincent.

"Windward side, no. 190."

"Leeward side, 500 feet, May."

"Hermitage Estate, Cumberland Valley, 1000 feet, Dec. 20. Open stagnant pools."

"Great Head Swamp, southern end of island, near sea, Dec. 24."

4. *Trithemis fusca*.

Libellula fusca, Ramb. Ins. Névr. p. 78 (1842).

Originally described from Cayenne. It also occurs in Colombia.

9 Grenada.

Nos. "56," "106," "205," and "233."

5. *Trithemis pulla*.

Libellula pulla, Burm. Handb. Ent. ii. p. 855. n. 41 (1839).

Libellula unimaculata, Burm. (nec De Geer, Ramb.), l. c. n. 43 (1839).

Diplax ochracea, Hag. (nec Burm.) Neur. N. Amer. p. 181 (1861).

Libellula fervida, Erichs. Schomb. Reisen in Brit.-Guiana, iii. p. 584 (1848).

Libellula justina, Selys, Sagra, Hist. Cuba, Ins. p. 450 (1857).

All these references appear to me to belong to the same species.

Both *unimaculata*, De Geer, Ramb., and *ochracea*, Burm., should have only two rows of post-triangular cells, instead of one or more rows of three, followed by one or more rows of two increasing, as in typical *Trithemis*. The species which Erichson calls *unimaculata*, and of which he describes the female, may be called *T. Erichsoni*, and differs from *pulla* in the adult male being pruinose, and the vertex steel-blue in both sexes.

28 Grenada.

Nos. 21, 42, 53, 94, 205, 223, 233, and 235.

"3rd coll. no. 75."

"Swampy forest by seashore, north of Granville, May 9."

6. *Trithemis umbrata*.

Libellula umbrata, Linn. Syst. Nat. (ed. x.) i. p. 545. n. 13 (1758).

An extremely common species throughout tropical America. It varies a little in size and in the breadth and depth of colour of the dark band in the male.

7 St. Vincent.

"Great Head Swamp, southern end of island, near sea, Dec. 24."

"Hermitage Estate, Cumberland Valley, 1000 feet, Dec. 20. Open stagnant pools."

"Grand Sable (Windward), by pools near sea, Jan. 4."

47 Grenada.

Nos. 101, 124, 184, 205, 223, 233.

"3rd coll. nos. 74, 75."

"Common on open swamp near seashore, north of Granville, May 9."

"Swamp on Leeward coast, 1 mile N. of St. George's, Aug. 22."

"Mustique Island, Grenada, June."

7. *Orthemis ferruginea*.

Libellula ferruginea, Fabr. Syst. Ent. p. 423. n. 19 (1775).

A common tropical American species.

1 Union Island, October.

7 St. Vincent.

"Windward side, 1500 feet."

"Leeward, 500 feet, October, common."

"Hermitage Estate, Cumberland Valley, 1000 feet, Dec. Open stagnant pools."

"Grand Sable, by pools near sea, Jan. 4."

"Windward side, no. 190, seashore."

"Cumberland, Leeward, by seashore, Dec. 20."

3 Grenada.

"No. 106"; "3rd coll. no. 79."

"Gay Estate, Leeward, 150 feet, Sept. 6. Open marshy land, over pools."

BRECHMORHOGA, gen. nov.

Male.—Frontal tubercle bifid; abdomen much longer than the hind wings, moderately slender, inflated at base, and gradually thickened towards the extremity. Wings moderately long and broad; pterostigma moderately long: fore wings with 12 or 13 antenodal and 6 or 7 postnodal nervures, the last antenodal and two first postnodals not continuous; triangle slightly oblique, free (or, more rarely, traversed), followed by two rows of cells, increasing; the post-triangular space has a loop-nervure above, enclosing 7 or 8 cells, and is half as broad again at the hind margin as at the triangle; subtriangular space consisting of three cells: hind wings with 8 or 9 antenodal and 7 to 9 postnodal nervures, the two first postnodals not continuous; upper anal appendages longer than the eighth segment, hairy, not much thickened laterally before the extremity, which is pointed; lower appendage nearly as long as the upper: legs long; femora slightly thickened and denticulated in front, with a double row of bristles. Other characters as in *Macrothemis*, Hagen.

In *Macrothemis* the frontal tubercle is not bifid, the post-triangular space on the fore wings has no loop-nervure, and the two rows of cells only increase close to the hind margin, where the space is scarcely, if at all, broader than at the triangle.

8. *Brechmorhoga grenadensis*, sp. n.

Long. corp. 40–42 millim.; exp. al. 54 millim.; long. pter. $2\frac{1}{2}$ millim.

Male.—Reddish brown or blackish; head with the frontal tubercle and clypeus (except at the sides below) violet-blue, mouth-parts sometimes black; thorax with an L-shaped greenish band on each side above, thicker, and turned towards each other; pleura with two broad greenish bands and a narrow one between, which is interrupted in the middle; there are also sometimes pale spots between the wings above; behind the last broad lateral stripe is a pale spot above, and a pale stripe on the median line below; abdomen inflated at base, with three pale spots on each side; the uppermost are followed by three long spots as far as the front of the fourth segment; the last is sometimes followed by a line; on the seventh segment is a reddish stripe on each side, not extending to the suture either before or behind. Wings hyaline, more or less tinged with yellow at the base and sometimes towards the costa; pterostigma brown or yellow, between black nervures; membranule dark grey.

Dythemis mendax and *præcox*, Hagen, probably belong either to this genus or to *Macrothemis*.

Two male specimens from Grenada, nos. 106 and 119.

9. *Dythemis multipunctata*, sp. n.

Long. corp. 36–39 millim.; exp. al. 50–56 millim.; long. pter. 3 millim.

Reddish brown, abdomen darker; face yellow, shading into rusty towards the frontal tubercle, which is violet-blue, and towards the tips of the mandibles and adjacent mouth-parts, which are black, as well as the centre of the labium; occiput black, shining, spotted with yellow on the sides; thorax with three short yellow stripes in front, the middle one linear; behind each of the lateral stripes is a detached, slightly curved, yellow stripe; all the parts of the thorax on the median line are yellow, and there are several yellow dots at the base of the wings; the sides of the thorax beneath the wings have three alternating yellow and black stripes, the latter inclining to brassy green; in front of these is the commencement of a fourth yellow stripe, followed by two small yellow spots; the middle yellow band is broken into three, the hindermost is hooked at the top and is followed below by two large irregularly-triangular spots, followed by a broad transverse semi-circular mark; abdomen with double, nearly continuous, central lines on the upperside; there are some yellow markings

and spots at the base and sides, followed by a double row of linear markings on segments 2 to 7, that on segment 6 smallest and that on segment 7 largest; legs black, front trochanters and femora yellow beneath; anal appendages black, as long as the eighth segment, the lower appendage yellow, except at the sides, above and below, and nearly as long as the others. Wings hyaline, slightly tinged with yellow at the base, but sometimes yellowish or smoky hyaline, with even the tips clouded; pterostigma brown, sometimes yellowish in the centre; fore wings with 12 or 13 antenodal and 7 to 9 postnodal nervures; post-triangular space with 3 cells increasing, subtriangular space consisting of three cells; hind wings with 9 or 10 antenodal and 7 to 10 postnodal nervures.

10 St. Vincent.

"Great Head Swamp, southern end of island, near sea, Dec. 24."

"Pools near Bannonnallie, Jan. 12."

"Richmond (Leeward), near sea-level, Dec. 14. This species is rather rare about open streams."

"Hermitage Estate, Cumberland Valley, 1000 feet, Jan. 20. Open land, rare."

10. *Dythemis multipunctata*, var. (?).

These specimens are clouded hyaline, with dusky tips, and the antenodal and postnodal cross-nervures are rather closer together; but I cannot find sufficient characters to separate them specifically at present.

2 Grenada, nos. 213 and 235.

11. *Cannacria Smithii*, sp. n.

Long. corp. 42-44 millim.; exp. al. 70-80 millim.; long. pter. 3-4 millim.

Differs from *Cannacria Batesii*, Kirb., the type of the genus, in having only 9 antenodal and 8 postnodal nervures on the fore wings, and 6 antenodal and 8 postnodal nervures on the hind wings, and the abdomen is somewhat shorter and broader; but in every other respect this species exhibits all the characters of my genus *Cannacria*.

Rufo-testaceous, frontal tubercle darker, shining, and bifid in front; abdomen with a more or less distinct dark band above, commencing on the fourth segment, and contracted into an hour-glass-shape between each two incisions; sometimes it is brown and hardly visible, at other times it is blackish, but is always darkest towards the extremity of the abdomen.

Wings clear hyaline; pterostigma yellowish, between dark brown nervures: hind wings stained with yellow at the base; membranule small, brownish grey, with a paler line towards the upper end.

2 St. Vincent.

"Grand Sable, Windward. Pools near sea, Jan. 4."

3 Grenada.

Nos. 106 and 213.

"Near Mount Maitland, Sept. 13. Leeward, 600 feet. Open hillside."

12. *Micrathyria æqualis*.

Dythemis æqualis, Hag. Neur. N. Amer. p. 167 (1861).

I believe I have correctly identified this species. The triangle of the fore wings is untraversed, and there are two rows of subtriangular cells, followed by three increasing.

3 Grenada.

"3rd coll. no. 74."

"One pair taken *in coitu*."

13. *Micrathyria* (?) *pruinosa*, sp. n.

Exp. al. 50 millim.; long. pter. 3 millim.

Male.—Head: frontal tubercle strongly bifid in front, violet-blue, as are also the upper lobes of the clypeus, except at the sides; face yellowish white; mandibles, suture of labrum, and occiput black, the latter with two yellow spots on each side; prothorax and pleura bronzy green, with two lateral yellow lines converging behind, on the front two thirds of the prothorax; median line very slightly marked, but commencing at a small yellow crescent in front; sides and hinder edge of prothorax bordered by a pale yellow zigzag line; pleura with three broad pale yellow stripes, the first slightly contracted in the middle and broadest below, the third broader than the second; interalary space above and base of abdomen, which is inflated, pruinose blue, except the sutures. Under surface pruinose bluish grey, segments 2 to 4 of abdomen slender, black, with a long pale yellow lateral spot on the sides of each at the base; those at the base of the second segment least marked, but divided by the carina; the remaining segments missing. Wings clear hyaline; pterostigma dark reddish brown, between black nervures: fore wings with 11 antenodal and 9 or 10 postnodal nervures, the last antenodal and first two postnodals not continuous; triangle rather broad, traversed, followed by one row of three cells and five or six of two, followed again by three; no loop-

nervures, except below the subnodal sector; subtriangular space consisting of three cells: hind wings with 9 antenodal and 10 postnodal nervures; membranule rather small, blackish.

A slender species, with the frontal tubercle more strongly bifid than in the more typical species of the genus.

1 Grenada, no. 233.

14. *Lepthemis vesiculosa*.

Libellula vesiculosa, Fabr. Syst. Ent. p. 421. n. 7 (1775).

1 St. Vincent, "Windward side, May."

10 Grenada, nos. 136, 223, 205, 184, 233, 101.

"Swamp on Leeward coast, 1 mile north of St. George's. This species is common in Grenada, near sea-level, both sides of island, Aug. 22."

2 Union Island, October.

Agrionidæ.

CÆNAGRIONINÆ.

15. *Argia insipida*.

Argia insipida, De Selys, Bull. Acad. Belg. (2) xx. p. 387 (1865).

24 St. Vincent.

Nos. 189, 190.

"Sea-level."

"St. Vincent, Windward side, 500 feet."

"Bowwood Valley, near Kingstown, 1000 feet, by mountain-stream, Dec. 23."

"Richmond Valley Forest, 1800 feet, by mountain-stream, Dec. 21, 31. Colours blue and black."

"Pools near Bannonallie, Jan. 12."

"Forest, Soufrière Volcano, 2000 feet, Jan. 5."

"Hermitage Estate, Cumberland Valley, 1000 feet, Dec. 20. Open stagnant pools."

7 Grenada.

"Balthazar (Windward), 250 feet, second growth."

Nos. 56, 64, 164, 219, 229.

16. *Argia*, sp.

1 St. Vincent, near Kingstown.

A single specimen of a very dark species, probably new, but which it would be useless to describe without a series.

17. *Cænagrion*, sp.

In this case also it is better to wait for a series than to describe a probably new species prematurely.

1 Grenada.

"Grand Étang (Mountain Lake), 1700 feet, March 9.
Common along the shore."

18. *Micronympha senegalensis*.

Agrion senegalense, Ramb. Ins. Névr. p. 276 (1842).

17 St. Vincent.

"No. 190."

"May."

"500 feet."

"Grand Sable (Windward), by pools near sea, Jan. 4."

"Hermitage Estate, Cumberland Valley, 1000 feet, Dec. 20.
Open stagnant pools."

"Great Head Swamp, southern end of island, near sea,
Dec. 24."

9 Grenada.

Nos. 53, 64 (pair *in coitu*), 71 (3rd collection), and 229.

"Grand Étang (Mountain Lake), 1700 feet, March 9.
Common along the shore."

4 "Mustique Island, Grenada, June."

19. *Lestes spumaria*.

Lestes spumaria, De Selys, Bull. Acad. Belg. (2) xiii. p. 309 (1862).

Originally described from Porto Rico.

2 Grenada, nos. 204 and 221.

XXXVI.—*A List of the Bornean Species of the Genus Opisthostoma, and Descriptions of Four new Species.* By
EDGAR A. SMITH.

A POPULAR account of the species of *Opisthostoma* from Borneo was published by the writer in March of this year in the first number of the new series of 'Science Gossip.' In addition to the ten different species there referred to, I have now to mention one described by Dr. Boettger and four new forms, of which diagnoses are now given.

All the known species, with the exception of *O. otostoma*, Boettger, have been figured; and as the present paper is unillustrated, it is proposed to give figures of the new forms

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