NOTES ON THE ODONATA OF MAURITIUS.

1. THE GENUS HEMICORDUILLA KELLY.

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The late Mr. J. F. H. Roberts delegated to me the task of reporting on a series of collections of Odonata made by Mr. J. Vinson in the island of Mauritius. As further collecting is being carried out by Mr. Vinson and more material continues to reach me I have decided to act on Mr. Roberts' suggestion and to deal with individual genera in a series of short papers, instead of reporting on the collections as a whole. A discussion of the Odonata fauna of Mauritius will form the subject of a final and longer paper.

This first paper deals with the genus Hemicorduilla Kelly, a dominant one in the family Corduliidae, probably on account of the strong migratory tendencies of some of its species and their very wide distribution. The genus is essentially a Pappusian one, but one species at least, H. asiatica Kelly, has extended into continental Asia and spread right across to the Western Ghats of India and Ceylon. Two others, concerning which there is good evidence to show that they are lineal descendants of H. asiatica, are found in the Macaronesian islands and Madagascar, viz. H. virescens (Randbury) reported only from Mauritius, and H. similis (Randbury) from Madagascar and the Seychelles; in all probability H. similis will also be found to occur in Mauritius. Both sexes of H. similis have been described somewhat imperfectly, but only the female of H. virescens was known hitherto. Recently Mr. Vinson has taken both sexes of this rare insect and so it is now possible to complete the description. Species of Hemicorduilla breed in still waters, weedy ponds, lakes or even meadows beingpreferred, but I have found that in the absence of them, H. asiatica will take to breeding in the deep still pools of rivers, as in the Amassoffahi Hills of south-west India. This species breeds at altitudes varying from 5000 to 7000 ft.

The descriptions of these two species follows.

Hemicorduilla similis (Randbury).

*Carduilla similis* Randbury, 1894, Isr. Neur. 170. (Dorm. 2).

= Corduilla similis *Selys*, 1899, Pollux, 114, (Dorm. 2).

= Hemicorduilla similis *Selys*, 1891, Pollux, 114, (Dorm. 2).

= Hemicorduilla similis *Selys*, 1891, Pollux, 114, (Dorm. 2).

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= Hemicorduilla similis *Selys*, 1891, Pollux, 114, (Dorm. 2).

Male—Abdomen 22-30 mm. Hind wing 30-35 mm.

Abdomen black, auburn or brownish, and opalescent uniform brownish yellow or the base of labrum may be darker; from in front and laterally white. labrum yellow, the upper surface and venation brilliant metallic peacock-blue, opalescent brown, eye usually blue or proc. B. ent. soc. Lond. (b) 18, pt. 7-8. (August 1945).

Female—Abdomen 30-35 mm. Hind wing 35 mm.

Abdomen brown, black dots or spots, and opalescent uniform brownish yellow or the base of labrum may be darker; from in front and laterally white. labrum yellow, the upper surface and venation brilliant metallic peacock-blue, opalescent brown, eye usually blue or proc. B. ent. soc. Lond. (b) 18, pt. 7-8. (August 1945).
Hemiscordulia virina (Rambur),

*Hemiscordulia virina* Seyle, 1872, *Fossil Rev.:* 34, 35.
*Hemiscordulia virina* Kirby, 1889, *Cat. Obl.:* 47.

Males—Abdomen 20-26 mm. Hind wing 35 mm.
Head: black, dull yellow, labrum bright orange, epistome brownish yellow, front and vertex bright emerald green metallic; the lower border of front marginate narrowly with orange, occiput brown; opal must certainly emerald green during life. Prothorax brown, posterior into evenly rounded, depressed. Synthorax pale yellowish brown or dull brown, the upper third of dorsum, a diffuse area on the upper half of humeral angle and the upper anterior half of episternum bright emerald green metallic; the mesosternum also has a golden or coppery metallic reflex over its lower half in certain lights. The whole thorax coated with fine short downy hair, especially thick on dorsum. Legs very long and slender, black, the anterior femora, the exterior surfaces of the middle femora and the bases of the hind femora pruinose. Wings hyaline, the extreme bases of hind tibial with amber, membranes brown, its base white; pleurae and thorax brown, very short, covering less than 1 cell; 5 antennal scales in forewings, 9 in hind; 6 pandal scales in forewing, 8-9 in hind; 10 cells in the anal loop, 3 cells in subtriangles, the rest of the venation closely similar to that of *H. erichseni* Seyle. Abdomen stouter or broadest thick on dorsonotum with a dark brownish reflex, the lower part of side blackish orange, but the black of dorsum on segments 4 to 8 extending on to sides rather broadly at the basal ends so as to interrupt what would otherwise be a continuous lateral yellow stripe; beneath blackish orange, the apical black extending diffusely on to ventrum on segments 4 to 7. Segments 9 and 10 entirely black. Anal appendages black; superior at least three times as long as segment 10, cylindrical and very sinuous, with a double convexity outwards, the spines gradually tapered and a little obscure; inferior about one-fifth shorter, an elongated triangular elevation with its extreme apex sharply pointed.

Females—Abdomen 28 mm. Hind wing 34 mm.
Coloured and marked exactly similar to the male. Wings deeply tinted with amber throughout, but more deeply so in the subcostal and submedian spaces of fore wings and in as far postically as the end of membranes in the hindwings to about the level of the 1st antennal and half way to discoidal cell. Anal appendage black, about as long as the combined length of segments 9 and 10, cylindrical and fusiform, tapering both gradually and apically, the spines slightly ciliate. Genital valves short and deeply bifid, but not quite to base, about half the length of segment 0, the apical border of which is markedly emarginate and produced medially.

Habitats: *Mauritius*: Mohr, 5.5. 6. xii. 45 and 10. xii. 46; 2. 30. vi. 45 and 20. xii. 46, all coll. J. Vison. The June female is fully adults, with deeply tinted wings, all others are subadults, but one male approaching adulthood. The holotype female is in the Hope collection, Oxford, and there is another female in the Paris Museum collection, formerly in the Martin collection. The male described above was hitherto unknown and appears to have been confused with that of *H. sinus*, its near relative, from which it is distinguished by its larger size and more robust build, the male by its sinuous anal appendages and higher nodal index; the female by the latter character and by the short genital valve which is only half the length of segment 3 and more deeply bifid. Very little separates this species from *H. erichseni* Seyle; the anal appendages are perhaps rather longer and more sinuous and the wings always bear some colour.
The venation and colouring are identical in the two species, but the female of *H. stictus* always has rather extensive colouring of the wings, in striking contrast to the colourless or almost colourless wings of female *H. asiatica*. Thus whilst it might be difficult to differentiate between the males of the two species, especially if at all teneral, there is never any difficulty in separating the females.