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*On the Culicid Genus Eretmapodites, Theobald.*

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THE object of this paper is to clear up certain points of synonymy in the genus *Eretmapodites* without entering into any discussion of the generic position. The species certainly form a well-marked group, and can be treated of as such, whether or not the group be worthy of generic rank. I may, however, point out that there is very little to separate this genus from *Desvoidya*.

A certain amount of confusion appears to have arisen between the two species described by Mr. Theobald, *E. quinquevittatus* (Mon. Culicid. i. p. 280, 1901) and *E. austenii* (Mon. Culicid. v. p. 572, 1910). Mr. E. E. Austen, of the British Museum, had placed the following note under the series of *E. quinquevittatus* :—

“N.B.—It appears to me that the four specimens from Wilberforce, Freetown (E. E. Austen), in the top row above are *specifically distinct* from the three from the same locality in the next row. The latter belong to the following species [*E. austenii*], which is distinguished by the marking of the dorsum of the thorax,

and the more noticeable enlargement of the tip of the hind tibiæ in the ♂. In the typical *E. quinquevittatus* the thorax is not conspicuously striped at all.—E. E. Austen, 22. xii. 04.”

To this Mr. C. S. Banks (of the Bureau of Science, Manila), who visited the Museum some three years ago, added the following :—

“I quite agree with Mr. Austen regarding the absence of special (quinquevittæ) markings in the ♂ or ♀ type of *E. quinquevittata* and believe that Theobald must have mixed his specimens after describing and before labelling them. C. S. Banks. 9. ix. 08.”

On the suggestion of Mr. G. A. K. Marshall I have gone carefully into the matter, examining critically every specimen of the genus (seventy-three altogether) in the British Museum. As a result I have come to a somewhat different conclusion from that of Banks. The results of my examination may be set forth as follows :—

(1) Theobald's description of *E. quinquevittatus* applies to the male of one species and the female of another.

(2) The insect described by Theobald as *E. quinquevittatus* ♀ was redescribed by him, together with its true ♂, as *E. austenii*.

(3) The insect Theobald described as *E. quinquevittatus* ♂ was redescribed by Graham, together with its true ♀, as *E. chrysogaster*.

Were this all, the riddle would be comparatively simple. But the female insect labelled “*E. quinquevittatus* type” is of the same species as the male type, and agrees with the description of *chrysogaster*, but not of *quinquevittatus*. Thus Banks's conclusion was in the main correct. It looks as though Theobald drew up his first description before he recognized that he had two species before him, and so was not sufficiently careful in choosing his types. The best course seems to me to be to ignore the type label and follow the description, in which case the two species will have to be known as *quinquevittatus* (with a striped thorax and simple hind tarsi in the male) and *chrysogaster* (with unstriped thorax and feathered hind tarsi in the male).

A scrutiny of the series of *E. melanopous*\*, Graham, showed that here also two species, if not three, had been confused.

\* I have not felt myself justified in Latinizing the spelling of Dr. Graham's names.

One or two specimens are undoubtedly *E. chrysogaster*, while two males do not agree with the description of the male of any known species, and are therefore described below. The majority of the specimens forming the series seemed, however, to agree closely with the description of *E. inornatus*, Newstead, and I therefore wrote to Mr. Newstead, who very kindly presented to the Museum a pair of *E. inornatus* from the original Congo series. A comparison of Graham's series with the specimens received from Mr. Newstead shows that *E. melanopous*, Graham, is undoubtedly a synonym of *E. inornatus*, Newstead. Dr. Graham's description was made before Mr. Newstead's, but was not published till two years later. A single specimen of this species taken by Major F. Smith at Sierra Leone was in the series of *E. quinquevittatus*.

I at first believed that Giles's *Uranotenia nitidiventer* (which, as stated by Banks and Carter, is synonymous with his *Runchomyia philippinensis*) should be placed in this genus, owing to the close similarity in scale-structure and colouring. A more careful examination, however, showed that this species is a *Phoniomyia*, and is, in fact, Theobald's *P. bimaculipes*. The name *nitidiventer* will have to supplant *bimaculipes*. In this species, as in several others of the genus *Phoniomyia*, there appear to be no hairs on the metanotum. Giles evidently allowed his imagination to have free play in describing this insect, as it is clear from his types that what he called the "frontal protuberance" is the structure which is present in all mosquitoes and is called by Theobald the clypeus; the prothoracic lobes, too, are of perfectly normal form. Unfortunately no male is known.

The golden-yellow coloration of the venter in *Eretmapodites* would seem to be a good generic character, though it has sometimes been overlooked by previous writers owing to the fact that when the abdomen is not distended with food the venter is hidden and the sides seem to meet in the mid-ventral line. Consequently some species have been described as having the venter banded with black and silver; this is not the case, as both sexes of every species have a golden-yellow venter. Sometimes the venter is completely enfolded except at the extreme base, and then it is very difficult, without reference to other specimens, to make out what has happened.

The larvæ of two species are known. Dr. A. C. Connal bred a series of *E. inornatus* from larvæ found at Lagos in the shell of a large land-snail. *E. chrysogaster* was bred in numbers by Dr. A. D. Fraser from larvæ found in an empty lemon-skin at Kasala Forest, Mpamu, Uganda.

Dr. A. Ingram has also bred *E. chrysogaster*, and sent (23. iii. 1909) the following notes from Ashanti:—

“Notes relative to *Eretmapodites chrysogaster*, *Graham*.

“Ova appear to be laid singly like *Stegomyia* ova, often not actually upon the surface of the water, but on the side of the vessel almost in contact with the surface of the water. Larvæ are long and worm-like, bear some resemblance to the larvæ of *Stegomyia*, having a short syphon-tube hanging almost perpendicular to the surface of the water when at rest, and moving with a lashing worm-like motion when disturbed. The most marked characteristic of the larva, however, appears to be the length of time it can spend browsing at the bottom of the vessel; lying horizontally and crawling about like a worm, it can remain ‘below’ for longer periods of time than any other *Culex* larva I have seen.

“Pupæ are very active when disturbed, but, like the larvæ, spend much time at the bottom of the vessel, ‘sitting’ in a characteristic attitude upon their tails and swaying gently backwards and forwards.

“*E. chrysogaster*, like *Stegomyia*, is a ‘house’ mosquito; the ova are laid in small collections of stagnant water in tins, calabashes, &c. The eggs are never very numerous, less so than those of *Stegomyia*; at least *Stegomyia* and *Eretmapodites* larvæ are frequently associated together in small collections of water, and the former are always in the majority.

“I have never known *E. chrysogaster* to ‘bite.’”

“Akrokerri, Ashanti,  
5/3/09.”

#### *Brief Diagnoses of the Species.*

1. *E. quinquevittatus*, Theob.—Prothoracic lobes silvery-scaled. Mesothorax golden-scaled, with five sharply-defined lines of black scales; when denuded pale ochreous brown. Hind tarsi of male simple.
2. *E. condei*, Ventrillon\*.—Prothoracic lobes with flat silvery scales. Mesothorax golden-scaled, with two longitudinal lines and a continuous marginal line black; when denuded pale ochreous brown. Hind tarsi of male simple.

I can see nothing to separate this species from

\* ‘Archives de Parasitologie,’ ix, 1905, p. 444.

*E. quinquevittatus*, but as the specimens in the British Museum are all rubbed, I refrain from sinking the name as a synonym. The only difference that is apparent from the description is the absence of the median black line on the thorax; the original specimens may have been in bad condition.

3. *E. inornatus*, Newstead.—Prothoracic lobes with flat silvery scales. Mesothorax mainly dark-scaled, with an anterior submedian pair; a lateral pair and a median posterior golden line. Colour of chitin dark brown. Male with simple hind tarsi; the penultimate segment of abdomen with lateral silvery spots; claspers of genitalia with dark scales.
4. *E. grahami*, sp. n., ♂.—Prothoracic lobes with flat silvery scales. Mesothorax mainly dark-scaled, with scattered yellow scales, but without distinct markings, chitin dark brown. Hind tarsi simple. Penultimate segment of abdomen with lateral silvery spots; claspers of genitalia with light scales.—Described from a male from Obuasi, Ashanti, 8. viii. 1907 (*Dr. W. M. Graham*): type, and one other specimen from same locality, taken 13. xi. 1907, in British Museum (Natural History).

Since no females are yet available for examination, it is impossible to give characters applicable to both sexes; the study of further material may, indeed, prove that *E. grahami* is only a form of the following species. Dr. Graham has examined these two specimens, and agrees that they are apparently distinct from any previously described species.

5. *E. chrysogaster*, Graham.—Prothoracic lobes with flat silvery scales. Thorax without distinct markings, chitin variable in colour, from rather light brown to almost black. Hind tarsi of male feathered, but the amount of scaling varies somewhat. Penultimate segment of abdomen *usually* with a continuous silvery band across the dorsum; claspers of genitalia with light scales.

As in all other species belonging to the present genus, there is a variable number of yellow upright scales on the head mixed with the black ones; this character cannot therefore be used, as it was by Newstead, for the separation of *E. inornatus* and *E. chrysogaster*.

6. *E. leucopous*, Graham.—Prothoracic lobes with narrow-curved yellow scales. Thorax with rather obscure dark

stripes, chitin dark brown. Last two joints of hind tarsi white in both sexes. Claspers of ♂ genitalia hardly scaly.

7. *E. oidipodeios*, Graham.—Prothoracic lobes with narrow-curved yellow scales. Thoracic markings somewhat like those of *E. inornatus*, but the yellow markings more extended and not sharply defined. Hind tarsi of ♂ bent, with a tuft of long hair. Claspers of genitalia hardly scaly.

*Table for determining the Species of Eretmapodites.*

1. Prothoracic lobes covered with flat silvery scales . .	2.
Prothoracic lobes entirely without flat silvery scales.	6.
2. Hind tarsi of male simple . . . . .	3.
Hind tarsi of male feathered; thorax without distinct markings . . . . .	<i>chrysogaster.</i>
3. Thorax without distinct markings . . . . .	<i>grahami.</i>
Thorax distinctly striped . . . . .	4.
4. Thorax light-coloured, with distinct black stripes . .	5.
Thorax dark-coloured, with narrow golden stripes . .	<i>inornatus.</i>
5. A median black longitudinal stripe on thorax . . . . .	<i>quinquevittatus.</i>
No median black longitudinal stripe on thorax . . . . .	<i>condei.</i>
6. Last two joints of hind tarsi white; hind tarsi in ♂ simple . . . . .	<i>leucopous.</i>
Last two joints of hind tarsi not white; hind tarsi in ♂ tufted . . . . .	<i>oidipodeios.</i>

*Summary of Synonymy.*

1. *E. quinquevittatus*, Theob.  
*quinquevittatus*, Theob., ♀.  
*austeni*, Theob.
2. *E. condei*, Ventrillon.  
? præc. var.
3. *E. inornatus*, Newstead.  
*melanopous*, Graham.
4. *E. grahmi*, sp. n.  
? *chrysogaster*, Graham, var.
5. *E. chrysogaster*, Graham.  
*quinquevittatus*, Theob., ♂.
6. *E. leucopous*, Graham.
7. *E. oidipodeios*, Graham.

*Geographical Distribution of the Species.*

*E. quinquevittatus*.—Sierra Leone; Ashanti (Obuasi); S. Nigeria (Oshogbo, *Dr. T. F. G. Mayer*; Ilesha, *Capt. L. E. H. Humfrey*).

*E. condei*.—Madagascar.

*E. inornatus*.—Sierra Leone; Ashanti (Obuasi); S. Nigeria (Ilesha, *Capt. Humfrey*; Lagos, *Dr. Connal*); Congo Free State (Coquilhatville and Lusambo).

*E. grahami*.—Ashanti (Obuasi).

*E. chrysogaster*.—Sierra Leone; Ashanti (Obuasi and Akrokerri); Uganda (Kampala Swamp, Kasala, Mpumu, and Buanuka, *Dr. A. D. Fraser*).

*E. leucopous* and *E. oidipodeois*.—Ashanti (Obuasi).

