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XXXII.—*New African Phlebotomic Diptera in the British Museum (Natural History).*—Part I. *Tabanidæ*. By ERNEST E. AUSTEN.

THE interest excited at the present time by blood-sucking flies, in view of the possibility that they may act as carriers of micro-organisms pathogenic to man or domestic animals, supported by an appeal for specimens circulated by H.M. Foreign and Colonial Offices throughout the British Empire, has resulted during the last year or two in the acquisition by the British Museum (Natural History) of a certain amount of material, chiefly from Africa, including many new species. Some of the latter, from Tropical Africa, are described in the following pages, and descriptions of others, including a number of additional species of *Hæmatopota* (a genus of which the African continent is apparently the headquarters), will be published shortly in subsequent communications in this series. The types of all the new species described below are in the British Museum (Natural History). Coloured figures of the majority will appear later in an official publication.

PANGONINÆ.

Genus *CADICERA*, Macq.

Cadicera quinquemaculata, sp. n.

♀.—Length (2 specimens) 14.5 to 16.25 mm.; width of
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XLV.—*On a new British Terrestrial Isopod* (*Trichoniscus linearis*, *sp. n.*). By ALEXANDER PATIENCE.

[Plate XI.]

Family *Trichoniscidæ*.

Genus *TRICHONISCUS*, Brandt, 1833.

Trichoniscus linearis, *sp. n.* (Pl. XI.)

Description of species.—Body oblong linear in form, fully three and a half times as long as broad. Dorsal face moderately convex and very strongly tuberculated transversely across the segments. Cephalon with front obtusely rounded; lateral lobes fairly prominent and each bearing one or two tubercles. Lateral parts of the segments of mesosome having no obvious spicules, the lateral parts of the three posterior segments recurved and acuminate. Metasome occupying less than one fourth of the length of body, the terminal expansion being broadly rounded at the tip and carrying three small spicules. Eyes consisting apparently of a single visual element imbedded in dark pigment. Antennulæ with the last joint about twice the length of second and having from five to seven sensory filaments. Antennæ about one-third the length of body, the joints of peduncle being strongly spinulose, and the flagellum being composed of four articulations. Left mandible with two, right with one, penicil behind the cutting part. The meral joint of seventh peræopod in male is broadly expanded, while the last joint is densely ciliated on the outer edge. The seventh peræopod in female not observed. Inner ramus of first pair of pleopoda in male biarticulate; the terminal joint about same length as first, and ending in a sharp point turned slightly inwards and finely serrated on the outer edge. Inner ramus of second pair biarticulate, proximal joint short; the distal joint greatly produced, contracted at about half its length and then produced to a fine hair-like point. The tip of the outer plate reaches to about the middle of distal joint of inner ramus. Uropoda with outer ramus about twice the length of basal part, the inner ramus being narrower and shorter. Colour of the living animal, white, semipellucid, the male exhibiting slight ramifications of minium-red across the segments. No trace of pigment

discernible on the dorsal face of the female. Length of adult male and female specimens about 3 mm.

Remarks.—Three specimens of this species (one male and two females) were sent to me for examination by my friend Mr. R. S. Bagnall, F.E.S., Winlaton-on-Tyne, and, so far as I have been able to ascertain, it does not seem to have been hitherto described. It is at once distinguished from all the other British species of *Trichoniscus* by its conspicuously linear form, approaching nearer to *T. pygmæus*, G. O. Sars, in this respect than any other member of the genus. It offers some further points of resemblance to the just-named species, notably in the form and structure of the first and second pairs of pleopoda of the male. The inner ramus of the first pair in both species shows a close resemblance; the proximal part of the outer plate, however, is more broadly expanded in *T. linearis*; while the distal joint of the inner ramus of the second pair appears to be more flexible than that found in *T. pygmæus*. It differs obviously, however, from that species in the structure of the eye, having only one visual element—in this respect resembling not only *T. roseus* (Koch), but also *Trichoniscoides albidus* (B.-Lund), *Haplophthalmus danicus*, B.-Lund, and *H. mengii* (Zaddach); while the dorsal face is very much more strongly tuberculated, and the tip of the last segment of the metasome is rounded, whereas in *T. pygmæus* it is truncate. *T. linearis* agrees in the form of the telson with *T. stebbingi*, Patience, and *T. spinosus*, Patience.

Occurrence.—Mr. Bagnall found three specimens in Kew Gardens, London, December 3rd, 1907, in company with *Haplophthalmus danicus*, Budde-Lund, under flower-pots, in a moderately cool greenhouse. In these flower-pots, among the roots of several plants, *T. stebbingi* was also found. Mr. Bagnall informs me that its movements are slower than any other species of the genus, resembling rather the movements of *Haplophthalmus*, and, in consequence of this, was regarded as belonging to that genus until examined under a microscope.

The genus *Trichoniscus* is readily distinguished from *Haplophthalmus* by the abruptly contracted metasome, the epimeral plates of the two anterior segments not being concealed. These latter in *Haplophthalmus* are small and concealed by the lateral part of the last segment of the mesosome, while the three posterior segments are broadly expanded. The sculpture of the dorsal face in this genus is also somewhat different, having more or less distinct longi-

tudinal ribs. In the oral parts *Haplophthalmus* differs from *Trichoniscus* in the structure of the maxillipeds, the terminal part of which is 5-articulate, while the epignath is simple and lanceolate.

Other species belonging to the *Trichoniscidæ* taken at Kew on that date were *Trichoniscus pusillus*, Brandt, *T. pygmæus*, G. O. Sars, *T. roseus* (Koch), *Trichoniscoides albidus* (B.-Lund), *Haplophthalmus danicus*, B.-Lund, and *H. mengii* (Zaddach).

Note.—A preliminary description of *T. linearis* was read to the Glasgow Natural History Society on January 28th, 1908.

EXPLANATION OF PLATE XI.

- ♂. Male specimen of *Trichoniscus linearis*, about 3 mm.
*a*¹. Antennula.
 A. Antenna.
f. Flagellum of antenna.
*m*¹. First maxilla.
mp. Maxilliped.
prp. 7 ♂. Seventh peræopod of male.
plp. 1 ♂. First pair of pleopoda of male.
plp. 2 ♂. Second pair of pleopoda of male.
 T. Last segment of metasome with uropoda.

*m*¹ is magnified on a higher scale than *mp*.

PROCEEDINGS OF LEARNED SOCIETIES.

GEOLOGICAL SOCIETY.

November 6th, 1907.—Sir Archibald Geikie, K.C.B., D.C.L., Sc.D.,
 Sec.R.S., President, in the Chair.

The following communications were read:—

1. 'On a Collection of Fossil Plants from South Africa.' By Prof. Albert Charles Seward, M.A., F.R.S., F.G.S.

The material on which this paper is based was, for the most part, collected by members of the Geological Survey in Cape Colony from the Molteno and Burghersdorp Beds. The Molteno Beds are placed at the base of the Upper Karroo, or Stormberg Series; the Burghersdorp Beds constitute the uppermost strata of the Middle Karroo, or Beaufort Series. Mr. A. L. Du Toit, who has contributed accounts of the stratigraphy of the plant-bearing and associated rocks,