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DIPTERA (BRACHYCERA)
CAMILLIDAE,
CURTONOTIDAE & DROSOPHILIDAE

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ALMQVIST & WIKSELLS BOKTRYCKERI AB

Chapter XVIII

✓ Diptera (Brachycera): Camillidae, Curtonotidae and Drosophilidae

By WALTER HACKMAN

Part of the Diptera collected in Southern Africa in 1950-51 by Professor PER BRINCK and Dr. G. RUDEBECK were given to me for examination. There are few studies of the South African species of the dipterous groups in question (families Camillidae, Curtonotidae, and Drosophilidae) and several species in the collection are new. Five species are described and named below: *Camilla armata* n. sp., *Cyrtona capensis* n. sp., *C. consobrina* n. sp., *Erima crassiseta* n. sp. and *Erima brincki* n. sp. The genus *Erima* KERTÉSZ (Drosophilidae) was not previously recorded from the Ethiopian region. Some other species (*Cyrtona* sp., *Leucophenga* sp., *Mycodrosophila* sp., and *Drosophila* sp.) are possibly new, but the material is too small for describing and naming them.

The types of the new species were deposited in the Entomological Museum of the Zoological Institute, Lund, Sweden.

CAMILLIDAE

Camilla HALIDAY

✓ *Camilla armata* n. sp.

(Figs. 7, 8)

Description: Body length 2.4 mm. Wing length 2.2 mm.

♂. Front trapezoid, narrower anteriorly; anterior margin not very deeply notched. All parts of frons shiny blackish brown except a narrow yellow anterior margin. Proclinate orbital bristle medium-sized, anterior reclinate orbital bristle represented by a minute hair; the posterior reclinate orbital bristle is broken on both sides in the present specimen but obviously it has been rather coarse. Ocellar and vertical bristles also lost. Occiput almost black with yellowish pollinosity. Eyes bare. Antennae dusky yellow and pubescent. Second joint with two black bristles. Arista with 3 long dorsal branches and some short dorsal hairs in the apical half. Face flat, blackish and very slightly pollinose. The short palps brown like the other mouth parts. Yowls brown and narrow, about $\frac{1}{3}$ of the eye's vertical diameter. Mesonotum blackish brown, shiny, only anteriorly slightly pollinose. One humeral bristle

(only the basal rings left), two strong postsutural dorso-central bristles. Pleura shiny dark brown, only the posterior parts pollinose. Wings yellowish with a dark basal transverse fascia (at the humeral cross-vein). Venation normal and apex of wing rounded as in *Camilla glabra* FALL. The row of thick black costal fringes reaches a little beyond the second vein. Squama brownish. Halteres pale yellow. Legs yellow but apical half of second and third femora brownish and basal third of second and third tibia brown. First femur with a stout black spine antero-ventrally at $\frac{2}{3}$ the femoral length (measured from the base). Chaetotaxy for the rest as is usual in the genus. Abdomen shiny black, elongated; as is usual in *Camilla* the 4th tergite is prolonged (in the present species more than half as long as the abdomen). The most characteristic feature of the species is a pair of extremely long dorsal bristles at the hind margin of the first tergite. These bristles reach beyond the hind margin of the 3rd tergite. Also the 3rd tergite has a conspicuous pair of dorsal marginal bristles, but they are only about $\frac{1}{3}$ the length of those of the first tergite. Along the side margins of the tergites (which are in the dried specimen bent inwards) there are some longer, hair-like bristles.

C. armata n. sp. differs from all other species of *Camilla* known to me by its long abdominal bristles and by the dark fascia at the base of the wing. *C. africana* BEZZI, the only endemic African species so far known, was described very briefly by BEZZI (1908) and is said to have yellow frons, except a black ocellar area, and entirely hyaline wings.

Cape Prov.: Cape Peninsula, Hout Bay, Skoorsteenkop, holotype ♂, in insect trap, 2.II.1951 (Loc. No. 166).

CURTONOTIDAE

Cyrtona SÉGUY

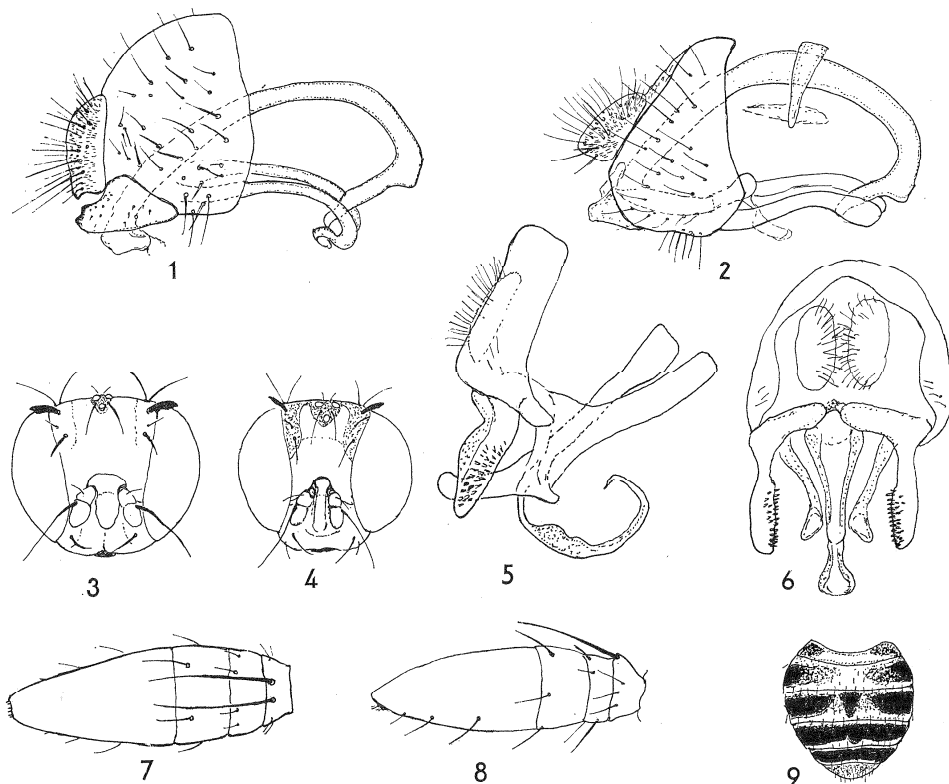
SÉGUY (1938) erected the genus *Cyrtona* for a single species, *C. appendiculata* SÉGUY, from Kenya. Below I have inserted two new South African species and with some hesitation added a third which will not, however, be named because of insufficient material. The genus was separated from *Curtonotum* MACQ. mainly by the absence of hairs on the disc of scutellum. In the generic description SÉGUY also mentions the presence of a small recurrent branch of 4th vein of the wing. It seems, however, that this character is of specific value only, since it does not occur in the South African species. Two further African species, hitherto placed in the genus *Curtonotum*, viz. *C. fuscipenne* MACQ. and *albomacula* CURRAN, both with bare scutellar disc (cf. CURRAN 1933), might belong to the genus *Cyrtona*.

Cyrtona capensis n. sp.

(Fig. 2)

Description: Body length 3.0–3.6 mm. Wing length 3.2–4 mm.

♂. Frons reddish brown, ocellar area and orbitae dark greyish brown, covered



Figs. 1-9. — 1. *Cyrtona consobrina* n. sp., male genitalia. — 2. *Cyrtona capensis* n. sp., male genitalia. — 3. *Erima crassisetata* n. sp., front view of the head. — 4. *Erima brincki* n. sp., the same. — 5-6. *Erima crassisetata* n. sp., male genitalia in lateral and caudal view. — 7-8. *Camilla armata* n. sp., abdominal chaetotaxy, dorsal and lateral view. — 9. *Erima crassisetata* n. sp., abdominal pattern.

with a pale, greyish pollinosity. Frons anteriorly somewhat narrower than at the posterior margin. The width of frons, in the middle, is almost as large as the length along the median line. The orbitae end a little beyond the middle of frons. Proclinate orbital bristle strong, the anterior reclinate orbital bristle minute and hair-like, the posterior reclinate orbital bristle slightly longer than the proclinate one. Ocellar bristles and vertical bristles strong, the inner vertical one slightly stronger than the outer one. Postvertical bristles about half as long as the inner verticals. Occiput with a dense pale, greyish pollinosity and a row of postocular setulae. Antennae reddish yellow; third joint darkened towards apex and about one and a half time as long as broad. Arista with the long dorsal hairs gradually shortened towards the aristal apex and with much shorter ventral hairs. Face dusky yellow. Yowls yellow and narrow, about $\frac{1}{3}$ - $\frac{1}{2}$ of the eye's vertical diameter (yowls measured along this vertical line). There is one strong vibrissa which is followed by a rather dense row of more hair-like oral bristles. Mouth margin dark brown. Palpi slender, dark brown,

at apex almost black. Other mouth parts mainly yellowish brown. Mesonotum yellowish to greyish brown, strongly pollinose and with numerous rows of dark setulae arising from small dark spots. Humeral callus with three bristles, one strong upper bristle and two unequal lower ones; of the latter the lowermost is the smallest. Two pairs of strong postsutural dorsocentral bristles in the posterior half of mesonotum. The prescutellar bristles are about half as long as the dorsocentrals. Pleura mainly of the same colour as mesonotum; pteropleura and ventral parts paler yellow, all parts greyish pollinose. Propleurum yellow, with a small black hair. Mesopleurum with two strong bristles near the posterior margin and a small hair-like bristle above these bristles. On the mesopleura there are also some small irregularly situated hairs. Sternopleurum with one strong bristle and some hairs. Other parts of pleura without hairs or bristles. Scutellum yellowish brown, greyish pollinose, paler yellow along the margin. Two pairs of strong marginal scutellar bristles, the basal pair slightly shorter. Between the scutellar bristles there are on each side two black marginal hairs. The disc of scutellum is bare. Wings fuscous with distinctly shadowy cross-veins (ta and tp). The marginal cell is usually somewhat darker brown. Veins normal, no recurrent branch of fourth vein in any of the specimens. The costa ends at third vein and is provided with numerous small marginal setulae in mg_1 and mg_2 . Halteres pale yellowish. Legs yellow; first femur slightly greyish above. First coxa with three black bristles, second coxa with two bristles and some medially situated black hairs, third coxa with a hair-like bristle and some additional hairs. First femur in the apical half with 4-5 posterodorsal and four posteroventral hair-like bristles. In the apical half there is also a row of 7 short anteroventral black spines. Second femur with an anterodorsal row of bristles, not much different from the hairs, and with a strong anteroventral subapical spine. Third femur with a thin anterodorsal bristle about $\frac{1}{4}$ from the apex. Second tibia with a strong ventro-apical spine and a less strong dorsal subapical one. Third metatarsus with a short row of unequal, black setulae, ventrally near the base. First four abdominal tergites of almost same colour as the mesonotum; the 5th, 6th and 7th tergites more or less yellow. Laterally at the base the 3rd and 4th tergites have indistinct brown spots which are only slightly pollinose and sometimes an indistinct brown median stripe can be seen. The setulae on the tergites are similar to those of the mesonotum, but the setulae at the posterior margin are longer. Cerci blunt, rounded. Male genitalia with small yellow forceps (see further fig. 2).

♀. Colour and chaetotaxy almost as in the male. The yowls are slightly broader, about $\frac{1}{7}$ - $\frac{1}{8}$ of the eye's vertical diameter. Female cerci yellowish brown with some undulated hairs.

Cyrtona capensis n. sp. is very similar to the *C. consobrina* n. sp., described below, but the yowls are narrower and the male genitalia are different.

Cape Prov.: Cape Town, Table Mnt., 15.XII.1950, holotype ♂ (Loc. No. 83). — Cape Peninsula, Hout Bay, Skoorsteenkop, 2.II.1951 (Loc. No. 166), allotype ♀. — Paratypes: 3 ♀♀ taken with the holotype, 1 ♂ + 3 ♀♀ taken with the allotype and further from the allotypic locality 1 ♀, 9.XII.1950 (Loc. No. 78), 1 ♀ 26.XII.1950 (Loc. No. 95), 4 ♂♂ + 10 ♀♀ 22.I.1951 (Loc. No. 157), 1 ♀ 24.I.1951 (Loc. No. 158), 1 ♂ + 1 ♀ 14.II.1951 (Loc. No. 183) and 1 ♀ 18.II.1951 (Loc. No. 184).

Cyrtona consobrina n. sp.

(Fig. 1)

Description: Body length 2.4–3.6 mm. Wing length 2.8–4.0 mm.

♂. Colour and chaetotaxy of head almost as in *C. capensis* n. sp. Vertical bristles subequal in size. Apical half of third antennal joint darker than in *capensis*. Arista pubescent only ventrally; dorsal hairs moderately long, gradually shortened towards aristal apex. Face yellowish grey, as a rule darker than in *capensis*. Yowls reddish yellow with white pollinosity except in the marginal area, decidedly broader than in *capensis*, i.e. $\frac{1}{5}$ of the eye's vertical diameter. Palpi as in *capensis* but in some specimens nearly black towards apex. Colour and chaetotaxy of thorax as in *capensis*. Wings as a rule slightly paler than in *capensis* but like the latter species with shadowy cross-veins (ta and tp). Halteres pale yellow. Legs yellow, first femur dorsally slightly greyish, chaetotaxy as in *capensis*. Abdominal tergites with the same indistinct pattern as in *capensis*, but only the 5th tergite is yellow; the basal parts are greyish pollinose. Male genitalia (see fig. 1) differ from those of *capensis*.

♀. In colour and chaetotaxy essentially similar to the male. Width of yowls about $\frac{1}{5}$ of the eye's vertical diameter. In some specimens the wings are much paler brownish than in any specimen of *capensis*. In these cases also the shadows on the cross-veins are very faint. The abdominal tergites without any distinct brown spots, sometimes darkened along the hind margins. At least in some specimens the 5th and the following tergites are yellow. Cerci as in *capensis*.

In both sexes this species is easily separated from *capensis* by the broader yowls.

Cape Prov.: Cape Peninsula, Hout Bay, Skoorsteenkop 22.I.1951, holotype ♂ (Loc. No. 157). — Same locality, 2.II.1951, allotype ♀ (Loc. No. 166). — Paratypes: 1 ♂♂ + 1 ♀ taken with the holotype, 6 ♂♂ + 4 ♀♀ collected with the allotype and further 1 ♀ (preserved in alcohol; colours faded) labelled Hout Bay, 1–12.I.1951, and originating from the same locality.

Cyrtona sp.

One single damaged male specimen probably belongs to the genus *Cyrtona* but differs from the above species. The arista is pubescent and without long hairs. Many bristles of head and thorax are lost, but those which are left agree well in size and position with those of the species of *Cyrtona*. The mesonotum is grey with four longitudinal brown stripes. Scutellum reddish yellow and with only one pair of hairs between the scutellar bristles; the disc of scutellum is bare. Wings brown, darker in the marginal cell, cross-veins not distinctly shadowed. Body length 4.3 mm, wing length 5.0 mm. It is most probable we have to do with a new species, but I prefer not to name until more material is available.

Natal: Albert Falls, Umgeni River E of Pietermaritzburg, 1 ♂, 13.IV.1951 (Loc. No. 272).

DROSOPHILIDAE

Erima KERTÉSZ

I have placed two new South African species of the *Gitona-Cacoxenus-Erima* complex in the genus *Erima* KERT., a genus not previously known from Africa.

Erima was erected by KERTÉSZ (1899) for a single species from New Guinea (*E. fasciata* KERT.). The two new South African species agree in important characters with the description of this genus, as follows: The orbital bristles are all situated in the upper half of frons, the anterior reclinate orbital bristle is small, arista bare, tibiae without a preapical bristle. The venation of the wing is essentially the same as in *Erima fasciata* as figured by KERTÉSZ (op. cit., fig. 9). In the two African species the uppermost ("posterior reclinate") orbital bristle is peculiarly modified, but this character can hardly be sufficient for creating a new genus.

✓ *Erima crassiseta* n. sp.

(Figs. 3, 5, 6, 9)

Description: Body length 2.8–3 mm. Wing length 2.8–3 mm.

♂. Head at least as broad as thorax. Frons broad, width at the level of the proclinate orbital bristle $1\frac{1}{2}$ the frontal length along the median line, pale yellowish and silvery pollinose. Ocellar area dark grey. The front margin is deeply notched, leaving a rather large lunula free. Lunula of same colour as frons. The orbital bristles are all situated above the middle of frons. The most remarkable feature of this species is the shape of the uppermost orbital bristle which is flattened, enlarged and nearly flabelliform (see fig. 3) and bent outward. The anterior reclinate orbital bristle is small, the proclinate orbital bristle is stronger and bent somewhat inward. The vertical bristles are well developed, the external one stouter. The ocellar bristles are also well developed but the postvertical bristles are very small. The eyes are bare and, ventrally, they form an obtuse corner. Occiput grey with a row of postocular setulae. Face pale yellow, silvery pollinose and with a broad (not nose-like) carina. Arista brown, naked, slightly thickened in the basal third. Cheeks and yowls silvery white and broad. On their narrowest point the latter are about $\frac{1}{2}$ of the eye's vertical diameter. One strong vibrissa. Margin of mouth (only a narrow median portion visible) dark grey. Palpi yellow and short, other mouth parts brown. Mesonotum silvery grey (because of dense pollinosity) and with numerous irregular rows of short, coarse hairs. One humeral bristle, 2 strong notopleural bristles, 2 supraalar bristles, 1 postalar bristle (stouter than the posterior supraalar bristle), two postsutural dorsocentral bristles situated far back, the posterior one—which is stronger—is close to the mesonotal margin. The prescutellar bristles about half as stout as the posterior dorsocentral pair. The pleura are silvery white. Two strong sternopleural bristles; no other bristles are found on the pleura. Scutellum brown, paler at the margin and with silvery pollinosity; disc moderately convex. Two subequal pairs of scutellar bristles are found at the margin, both in the posterior half of scutellum. Wings hyaline without any spots, venation as in *Erima fasciata* KERT. Costal index 2.1–2.5. Costa extends to 3rd vein; the thick costal fringes end near the middle of mg_3 . Halteres pale yellow. Most of the legs yellow. First coxa anteriorly silvery pollinose, femora greyish pollinose. Tibiae comparatively short, broadly annulated with brown in the middle and at apex; on the first tibiae this pattern is less distinct.

Tarsi yellow with the last joint dark brown. Metatarsus about as long as the remaining joints together. First femur with a lateral irregular row of 5 hair-like bristles, second femur with a curved dorsal, apical, hair-like bristle. Second tibia with a ventral spur. Anterior two abdominal tergites yellowish brown, laterally greyish pollinose and with large lateral, very dark brown spots or fasciae, hind margins pale yellowish white. 3rd tergite with a median dark spot surrounded by a triangular yellowish white area; lateral parts dark brown (see fig. 9). 4th and 5th tergites dark brown to blackish with pale margins. 6th tergite silvery pollinose without dark pattern. The male hypopygium as illustrated in figs. 5 and 6.

♀. Similar to the male in colour pattern and chaetotaxy. Frons reddish yellow with considerably less silvery pollinosity than in the male. Also the thoracic pollinosity is less dense and the basic brown colour therefore gives the female a much darker appearance than the male. Abdominal pattern paler than in the male. First tergite almost entirely yellow, slightly greyish laterally. Second tergite with traces of a median dark stripe and laterally a large brown spot. 3rd tergite with a large dark median spot and on each side a large dark brown spot or fascia, each occupying about a third of the width of the tergite. 4th and 5th tergites with broad, dark fasciae which are usually not interrupted. Sometimes the fascia of the 4th tergite is divided into a median spot and a short lateral fascia. 6th tergite with a dark brown fascia which is medially interrupted. Anal cerci brown with short dense hairs.

Cape Prov.: Hout Bay, Skoorsteenkop, 2.II.1951, holotype ♂ and allotype ♀ (Loc. No. 166). — Paratypes: 4 ♂♂ + 4 ♀♀ taken with the holo- and allotypes.

Erima brincki n. sp.

(Fig. 4)

Description: Body length 2.8 mm. Wing length 2.8 mm.

♂. In general appearance similar to the preceding species. Frons dull reddish brown with dark grey orbitae and ocellar area; it is conspicuously narrower than in *E. crassiseta* n. sp. (see fig. 4). The uppermost orbital bristle short and flattened but not flabelliform. For the rest the frontal chaetotaxy is as in *E. crassiseta* n. sp. Antennae reddish brown, short; third joint hardly longer than wide. Arista naked, very slightly thickened at the base. Face blackish with yellow pollinosity, more narrowly carinate than in *E. crassiseta*. Cheeks and yowls dark brown, broad, the latter about $\frac{1}{3}$ of the eye's vertical diameter. One strong vibrissa, other oral bristles small. Palpi yellow, somewhat triangular. Mesonotum dark grey, yellowish pollinose; chaetotaxy as in *E. crassiseta*. Pleura dark grey with paler pollinosity. Two strong sternopleural bristles. Scutellum coloured as mesonotum; margin yellow, disc convex. Two pairs of scutellar bristles, the basal scutellars longer than the apical ones. Wings hyaline, veins yellow and venation as in the two other species of the genus. Halteres yellow. Coxae dark grey. Femora mainly dark grey but apically more or less yellow. Tibiae yellow with broad median and apical dark annulation.

Tarsi entirely yellow. Abdominal pattern similar to that of *E. crassiseta* but much darker. Second tergite yellow with an indistinct dark median spot and a big dark lateral spot. 3rd and 4th tergites black with only a narrow yellow posterior margin. 5th and 6th tergites entirely black, the latter more greyish pollinose than the other tergites. Hypopygium yellow.

Cape Prov.: Cape Peninsula, Hout Bay, Skoorsteenkop, 2.II.1951, holotype ♂ (Loc. No. 166).

Leucophenga MIK

✓ *Leucophenga* sp. (prope *subvittata* DUDA)

Possibly a new species close to *subvittata* DUDA. The arisal branches are fewer than in the latter species (6 above, 2 below, in addition to the end fork). As there is only a single female specimen in the collection, I prefer not to name the species.

Natal: Royal Natal National Park, Tugela Valley, 3.IV.1951 (Loc. No. 258).

✓ *Leucophenga* ? *yaure* BURLA

Three specimens in the collection agree in most details with the description of *L. yaure* BURLA (1954), described from a single female specimen from the Ivory Coast. With some hesitation I have identified the three specimens as *L. yaure*.

Cape Prov.: Tzitzikama Forest, Stormsrivierpiek, 13.I.1951, 1 ♂ (Loc. No. 137). — Assegaibos, 28.II.1951, 1 ♀ (in alcohol) (Loc. No. 191). — **Natal:** Royal Natal National Park, The Cascades 1-2.IV.1951, 1 ♀ (Loc. No. 257).

Mycodrosophila OLDENB.

✓ *Mycodrosophila* sp. (prope *kabacolo* BURLA)

Possibly a new species close to *M. kabacolo* BURLA (1954), described from the Ivory Coast. One single female specimen in the collection. It differs from *M. kabacolo* amongst others by having 6 rows of acrostical hairs (in *kabacolo* 4 rows). The wing pattern resembles that of *kabacolo*, but there is no dark shade at the end of the second vein. The abdominal pattern is somewhat different. As the genus *Mycodrosophila* contains many variable and difficult species, I prefer not to name this species until more material is available.

Cape Prov.: Tzitzikama Forest, Stormsrivierpiek, indigenous forest, 13.I.1951, 1 ♀ (Loc. No. 137).

Zaprionus COQ.

✓ *Zaprionus vittiger* COQ.

Cape Prov.: Groot River, 12 miles NE of Plettenbergbaai, 11.I.1951, 1 ♀ (Loc. No. 132).

This species was described by COQUILLET from the Cape Province and is widely distributed in the Ethiopian region.

Zaprionus tuberculatus MALLOCH

Cape Prov.: Assegaaibos, 28.II.1951, 1 ♂ (Loc. No. 191).

Like the preceding species widely distributed in the Ethiopian region.

Drosophila FALLÉN*Drosophila poeciloptera* DUDA

Cape Prov.: Cape Peninsula, Hout Bay, Skoorsteenkop 2.II.1951, 1 ♂, 2 ♀♀ (Loc. No. 166).

The species was described from South Africa by DUDA (1940).

Drosophila sp. (prope *fraburu* BURLA)

Cape Prov.: Cape Peninsula, Hout Bay, Skoorsteenkop, 13.XII.1950, 1 ♀ (Loc. No. 82).

Scaptomyza HARDY*Scaptomyza (Parascaptomyza) ? pallida* ZETT.

Parascaptomyza disticha DUDA.

A single ♀, preserved in alcohol (colours faded), agrees structurally well with this common cosmopolitan species.

Cape Prov.: Cape Town, Table Mountain, Blinkwater stream, 1 ♀, 4.XI.1950 (Loc. No. 23).

References

- ✓ BEZZI, M. 1908. Diagnoses d'espèces nouvelles de Diptères d'Afrique. Ann. Soc. Ent. Belgique, 52: 374-388.
- ✓ BURLA, H. 1954. Zur Kenntnis der Drosophiliden der Elfenbeinküste (Französisch West-Afrika). Revue Suisse Zool., 61: Suppl., 1-218.
- ✓ CURRAN, C. H. 1933. The African species of *Curtonotum* MAQUART (Drosophilidae; Diptera). American Mus. Nov., Nr. 675: 1-4.
- ✓ DUDA, O. 1940. Revision der afrikanischen Drosophiliden (Diptera). II. Ann. Mus. Nat. Hungariae, 33: 19-53.
- ✓ KERTÉSZ, K. 1899. Verzeichnis einiger von L. BIRO in Neu-Guinea und am Malayischen Archipel gesammelten Dipteren. Természetrájsi Füzetek, 22: 173-195.
- ✓ SÉGUY, E. 1938. Mission scientifique de l'Omo. Diptera I. Nematocera et Brachycera. Mém. Mus. Hist. Nat. Paris (N.S.), 7: 319-380.