# THE REDESCRIPTION OF CERTAIN TRYPETIDAE (DIPTERA) PUBLISHED BY BEZZI IN 1924, WITH THE DESCRIPTIONS OF A NEW GENUS AND SPECIES.

(With 30 text figures).

# By H. K. Munro.

When in 1924 the late Prof. M. Bezzi published, in the Bulletin of Entomological Research, his summary of the Trypetidae of the Ethiopian Region, he included in the tables numerous species of which he stated the complete descriptions would appear later. This he did in many cases but there remained some thirty species of which he did not complete the descriptions prior to his death. The majority of the types of the species concerned proved to belong to the collection of the Hungariar National Museum in Budapest and I am greatly indebted to Dr. Szilády for his kindness and courtesy in sending me the material for study.

There are still four species of which I have not been able to locate the types; these are — Carpophthoromyia angusticeps Bez., Pardalaspis Roubaudi Bez., Pardalaspis cyanescens Bez. and Themara Speiseriana Bez. I should be glad if any museum possessing these types would communicate with me.

All the types received from Dr. Szilády are redescribed here, an undertaking that seemed essential in view of the generally incomplete data available from the tables for the determination of the genera and species. The position was unsatisfactory especially as it was often impossible to say for certain if apparently new species were really different from Bezzi's or not. Bezzi himself redescribed one species as new, and I redescribed one of the genera on a closely allied species.

Further, it seemed possible there might be some lack of agreement as to the status accorded to Bezzi's names. It would appear, however, that all except two of the species are sufficiently characterised to be valid under the rules of nomenclature. In this opinion Dr. Karl Jordan has kindly told me he agrees. It is necessary, however, to consider another question, namely that the two species referred to above are not described at all and so must be considered

nomina nuda, and they have been described here as new. Both names are quoted as genotypes of new genera, Brachyaciura, and Brachiopterna. The genera themselves may be regarded as valid. Some authors, however, consider that genera should date from the time of the publication of the description of the genotype. That the question cannot yet be considered settled is evidenced by the revival of the controversy in regard to Meigen's 1800 names. If the latter are eventually rejected, names of many genera of various authors will be affected. In the case of the two under discussion, I would reluctantly have to claim Brachyaciura and my Cyanodesmops would replace Brachiopterna. In this paper I have credited all names previously published by Bezzi to him, only describing as new the two where this appeared necessary to make them valid.

While I am not generally in favour of the use of contractions in descriptions, I have followed Bezzi in using his for the bristles. That a few may be used to advantage is evident, but excessive use of contractions is apt to lead to confusion, especially as there seems to be no general agreement as to what should be employed.

It has been considered advisable to describe the species under the genera in which Bezzi placed them; also, unfortunately, most of the species are represented by unique specimens. That it may be necessary to locate some in other genera is very probable. To some extent I have indicated what may be necessary changes, but to go into the subject thoroughly would require a revision of many related species which is beyond the needs of the present paper.

A few words in regard to the illustrations of the wings given here may not be out of place. They were made with the aid of a camera lucida and should be regarded more as diagrams than as photographic reproductions. As regards the pattern, dark markings have generally been made lighter in order that the venation might be apparent, and light markings made darker, especially in the case of *Euribia xiphias* and *Ensina evanida*, in both of which the markings are almost invisible.

#### Dacus hyalobasis BEZ.

BEZZI, Bull. Ent. Res., XV, 87, 90 (1924).

This species belongs to a series placed by Bezzi in *Dacus* and which have the following characters in common: face unspotted, a rather narrow costal border on the wing and no anal stripe, third segment of male not ciliated, a single hypopleural spot and yellow

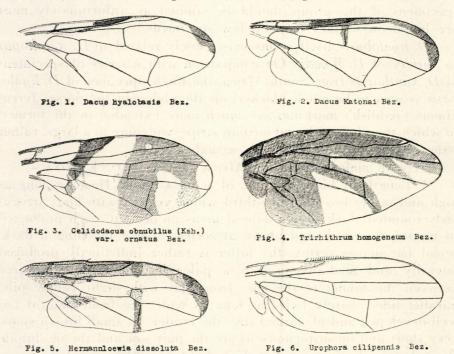
humeri. Of the species given by Bezzi in his tables (l. c. p. 87) D. annulatus Beck., D. hyalobasis Bez., D. xanthopus Bez., D. Maynei Bez., D Mochii Bez., D. Woodi Bez. and D. macer Bez. as well as D. Chapini Curr. all appear very closely allied. A large series of specimens of this group should be studied as unfortunately most are based on solitary or very few specimens.

D. hyalobasis itself seems most closely related to D. xanthopus (a variety of D. Woodi). On comparison with a series of specimens of D. xanthopus from South Africa, the single specimen of D. hyalobasis is seen to be much blacker; on the abdomen the dorsal ferruginous ('reddish') markings are much more extended in the former, in which they form a broad median stripe, widening to a large, rather paler, triangular fascia on the second segment.

Type, a male, Arusha-Ju, Africa Or., X, 1905, KATONA.

3. Length of body 5.5 mm, of wing 4.5 mm. Head as long as high and rather less than one-third wider, yellow, with large irregularly rounded, dark brown, lateral areas on occiput, each prolonged to meet below neck and above at corner of eye touching a dark, broad bar across vertex, the latter is rather indistinctly produced laterally and medially to join a paler brown, trapezoidal area between the hinder of the i.or; from flat with slight yellow pile, parallel sided, barely twice as long as wide, the front pair of i.or. well-developed and of normal size, the hinder, on small brown spots, very short and inconspicuous, as are the pair s.or and the oc: lunule short, brownish; face unspotted; a slight brownish spot below eye; palpi broad, flattened, yellow; proboscis short, antennae brownish, paler on inner side of third joint; arista bare, brown, basal joints paler. Thorax very dark reddish brown on dorsum with very faint indication of broad, grevdusted, sub-median stripes extending anteriorly barely past the suture, vestiture pale blackish, appearing silvery obliquely, pubescence yellow on yellow areas; pleura paler anteriorly; yellow spots well-developed, i. e humeri, a single hypopleural spot and a very broad mesopleural fascia which reaches on to the sternopleura below and the notopleura above; there is also a pale vellowish spot on the widened portion of the suture on each side of the dorsum. Bristles normal, outer cervicals strong, the middle weak, a latero-median pair seems also present but may be only strongly developed hairs; a.sa absent. Wing (fig. 1) hyaline, veins brownish, stigma dark brown, costal stripe slight, no anal stripe nor brown 'cloud' below end of sixth vein: scutellum vellow, the two bristles about as far from each other as from base. Abdomen

oval, segments fused, third segment not ciliated, concolorous with thorax, a broad, reddish median stripe a quarter width of abdomen, just past middle of sixth segment the stripe widens to cover the whole of the width of segment. Venter and genitalia reddish.



#### Dacus Katonai BEZ. emend.

Bezzi, l. c., 86, 90. Dacus katonae.

This species agrees with *Dacus hyalobasis* and the others previously mentioned in the series of characters noted with two exceptions: there is a very faint indication of an anal stripe and the humeri are ferruginous; in addition it may be separated by the infuscation over the upper cross-vein. This latter character, however, it has in common with *D. Maynei* Bez.

Type, Mto-ja-Kifaru, Africa Or., 1905, KATONA.

3 (?). Length of body 5.9 mm, of wing 5.0 mm. Head a little higher than long, and not quite one-third wider, straw yellow with only a black ocellar dot. Frons not quite twice as long as wide, parallel sided, about one-third narrower than an eye, i.or, inner and outer vt strong, the single s.or and oc minute, very slight black pubescence anteriorly. Antennae, third joint of both missing; face

with a flat, median tubercle; palpi flattened, parallel sided, Thorax shining blackish ferruginous, paler and more reddish on anterior parts of pleura and on humeri, on dorsum a welldefined median white pollinose stripe from just behind cervical bristles to half way between suture and scutellum, its hind two-thirds narrowly divided by a shining black streak, a broad mesopleural fascia and single hypopleural spot yellow, inner and outer cervicals strong (but in type the right inner is weak), a.sa absent. Scutellum flattened, yellow with very slight darkened base, sides somewhat concave, posterior margin straight and three-quarters length of scutellum. Halteres yellow. Legs straw yellow, except light brown stripes on inner and outer surfaces of anterior tibiae, a brownish illdefined streak towards apex of outer surface of front femora, on middle legs distal half of femora and proximal half of tibiae and hind coxae and tibiae ferruginous. Wing (fig. 2) with normal venation, stigma dark, a narrow costal stripe, a very faint suggestion of an anal stripe but no distinct cloud below sixth vein, although the microtrichiae are rather more closely-set there. Abdomen rather long oval, concolorous but with a slightly more reddish tinge than thorax, fascia on hind margin of second segment represented by rather small, oval, pale yellowish areas irregularly developed on either side, a small median pale spot on hind margin of fourth segment, segments fused with well-defined sutures, venter and genitalia eaten away, but specimen is probably a male.

## Celidodacus obnubilus (KSH.) var. ornatus Bez.

BEZZI. 1. c., 94.

Type, a female, Ukami, Africa Or.

Q. This variety agrees with typical specimens of *C. obnubilus* from the Congo in all respects except a slight variation in the wing pattern (fig. 3). There is a small hyaline spot on the second vein near the outer end of the marginal cell and the hyaline indentation in the second posterior cell is much wider and reaches half way across the first posterior cell; further, the outer end of the second posterior cell is rather more faintly infuscated.

## Trirhithrum homogeneum BEZ

BEZZI, l. c., 105, 108.

Type, a rather damaged male, "Deutsch O. Afrika".

3. A black species of the same size and appearance as Trirhi-

thrum occipitale Bez. There are slight differences in the coloration of the head: the occiput is brown, the frons yellow and there is a broad bar across the upper third of the face; in *T. occipitale* the first two are yellowish brown and orange respectively and there is on the face only a slight brown mark below the roots of the antennae. As far as can be judged, the rest of the body is as in *T. occipitale*, but the silvery dusted, submedian fasciae on the second, third and fourth segments of the abdomen are not evident in the present specimen. The main difference is in the wing pattern (fig. 4) the basal third of the wing being very dark and opaque; the veins above and below the discal cell are practically parallel, and the lower angle of the cell is acute.

## Hermannloewia dissoluta Bez.

BEZZI, l. c., 115.

Type, a female, Pretoria, Transvaal, 8, XI, 12.

A rather small, greenish-yellow species that I have so far failed to discover myself.

Q. Length of body and of wing 4.2 mm, Head vellow, length six-ninths, height eight-ninths of width: occiput with some slight dark marks above neck. flat, not very prominent below, the bristles black, thin: frons, width at vertex twice, and length nearly three times, width of an eye, somewhat narrowed anteriorly, bristles black, two s.or, four i.or, the hindmost of the latter small and thin, oc medium, ocellar dot black, some thin brownish pubescence on frons, longer on orbits; lunule short, arcuate, yellow; antennae twothirds length of face, rounded at end, vellow at apex and below, on inner and outer sides with greenish markings; arista brown, bare; face flat, epistome barely visible in profile, cheeks as, and genae twice as wide as third antennal joint; oral opening short and wide, palpi vellow, proboscis darker vellow, short, drawn up into oral cavity in specimen. Thorax straw-vellow on about the anterior fourfifths, with slight silvery dust and black pubescence, also a median and a pair of sub-lateral stripes, these are blackish and somewhat irregular, ending just behind the dc in outward hooks, and where they cross the suture are large dark brown spots; the posterior twofifths and the scutellum are waxy vellow with practically no pubescence: the dc are far back at the hind quarter of the dorsum; laterally there is a brown spot above the root of the wings; apex of scutellum with a green spot; it has four bristles, the apicals the

shorter; on the thorax the bristles are black, the inner cervicals apparently absent; two mpl; mesophragma darker yellow and a pair of large dark brown spots on the postscutellum; halteres with green stem and yellow knob; legs yellow with touches of green on coxae and faintly on ends of femora; squamae large, yellow, more or less edged with green; wing (fig. 5), stigma large, as long as outer costal cell, upper cross-vein about one and a half times its length from lower (not less as indicated by Bezzi), lower cross-vein straight, third vein with two setae at extreme base, veins brown, paler and greenish towards base, from the base of the wing there is a broad greenish-brown costal margin, with a large darker spot at end of stigma and at the apex of wing darker, a small dark brown spot below junction of second and third veins, stigma and costal cells distinctly greenish, a pale cloud at base of third posterior cell extending into discal cell, and slightly into anal and second basal cells, a bar from base of first posterior cell where it is pale, extending, darker, over lower cross-vein to wing margin. Abdomen straw yellow, somewhat discoloured in specimen, with rather long black pubescence, which develops into setae on hind margins of segments and is longest on the last, fifth and sixth of about equal length; base of ovipositor straw yellow, black at apex and with black pubescence, very short and broad, about as long as last segment; venter yellow.

## Urophora cilipennis BEZ.

BEZZI, l. c., 116.

Type, a male, Mujenje, Uganda, VII, 1913, KATONA.

A small black species, with yellow head and notopleural stripe and hyaline wings, at once distinguished from known related species by the row of long setae along the costa at stigma.

3. Length of body 2.4 mm, of wing 2.6 mm. Head a little higher than long and half as much again wider; occiput flat, not prominent below, shining black with a yellow stripe on lower margins of eye broadening to yellow genae; occipital bristles thin, black; frons one and two-thirds width of eye, a little wider at vertex than long, rather narrowed anteriorly, dark yellow, bare with some orbital pubescence, ocellar dot black, one s.or, two i.or, oc well-developed; lunule arcuate, pale yellow; antennae as long as face, dark yellow, third joint blackened, arista brown with rather short pubescence; face narrow, yellow, epistome a little prominent;

cheeks linear, genae as wide as third antennal joint; oral opening rounded; palpi brownish; proboscis not very elongate, labellae about as long as median portion which is a little shorter than oral opening. Thorax shining black, with slight dust and brown pubescence, vellow lateral stripes from humeri to base of wing inclusive, dc on line of a.sa; halteres vellow; scutellum flat, clothed as thorax, with four bristles, the apicals slightly the longer; squamae vellow, upper large, lower more or less linear; wing (fig. 6) hyaline with brownish veins and yellowish stigma, which is elongate with costa and vein below it somewhat thickened, along costa above stigma and for about an equal distance further a row of strong setae, grading outwardly into usual costal setulae; legs black, tibiae brownish and tarsi paler. Abdomen shining black, pubescence and bristles black, the latter laterally and round margin of last segment, tergites rather narrow and lateral membranes prominent, venter and genitalia black.

# Brachyaciura Bez.

BEZZI, l. c., 121.

In regard to this genus BEZZI states: — ..in the form of the head this genus is allied to the Acidia-Pseudospheniscus group but is distinguished by the very short antennae, by the bare third vein, by the dc being placed on the line of the a.sa, by the peculiar coloration of the head, and by the wing pattern of the Aciura-type." From the tables for the determination of the genera (l. c. p. 78) additional characters to be noted are: — ..head in front view higher than broad, well developed lower occipital swellings, the very short antennae inserted above middle of eye." From an examination of the type of the genotype, the following remarks may be made: the third vein is not bare, but has a few, three or four, setae at the base, and a few, four or five, beyond the upper cross-vein; the dc are slightly before the line of the a.sa; the head is actually about eight per cent wider than high; the ocp are whitish and somewhat flattened. The genus seems most closely related to Acidia ROB.-DESV., and has also a row of bristles on the propleura below the humeri, but the st is present and the occiput much less prominent, especially above.

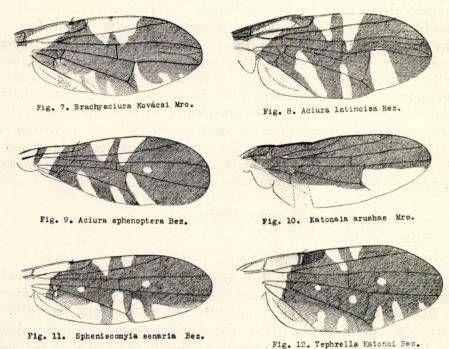
Genotype, the following new species.

#### Brachyaciura Kovácsi n. sp.

BEZZI, l. c., 121, nomen nudum.

Type, a male, Ulamo, Abyssinia, III, 1921, Kovács.

The affinities of the species have been indicated under the genus. 3. Length of body 4.7 mm. of wing 4.2 mm. Head of rather large proportions compared with the body, a little wider than high and about four-fifths width in length: occiput blackish, concave above, prominent below, the bristles whitish and somewhat flattened; frons flat, parallel sided, one-third longer than wide, and slightly wider than an eye, orbits broadly yellow with pale pu-



bescence, centre broadly brown with a faint median streak which widens to surround the black ocellar dot; only the merest suggestion of pubescence anteriorly, bristles brown, two s.or, three i.or, oc strong; lunule wide U-shaped, nearly twice as wide as long, darker brown than frons, but with paler lateral and hind margins; antennae close together, opposite middle of eye, short, less than half length of face, second joint prominent, black, bristly above, third joint rather small, about twice as long as wide, brown, rounded at end, arista twice as long as antenna, brown, short pubescent; cheeks

and genae yellow as sides of frons, cheeks less than, genae twice, width of third antennal joint; face elongate, flat, velvety black, epistome not at all prominent, oral opening slightly elongate oval; proboscis short, black, palpi blackish ferruginous. Thorax shining black, with whitish pubescence and grey dust on dorsum where along whole length are a median and two dorsocentral blacker streaks, pleura with a slight ferruginous tinge, stronger along notopleura and distinct on humeri; postscutellum whitish; bristles brown, de slightly before line of a.sa, a row of four bristles on propleura below humeri, st present. Scutellum flat, somewhat triangular, shining black, with slight dust and pale pubescence, four bristles, the apicals about three-fourths of basals; halteres with brown base and black knobs; squamae yellow. Wing (fig. 7) with brown Aciuralike pattern, upper cross-vein about one and a half times its length from lower, third vein with three or four setae at base, and four or five beyond upper cross-vein. Legs straw yellow, femora blackish on upper surface, middle and hind femora black on proximal half. Abdomen short, shining black, apparently without dust except on basal segments where there is also longer, whitish pubescence, which is elsewhere brownish, a row of brown bristles on hind margin on fifth segment. Venter black, genitalia slightly ferruginous, membranes rather more so at base of abdomen.

## Aciura latincisa BEZ.

BEZZI, l. c., 122, 123.

Type, a female, Moshi, Africa Or., VII, 1905, KATONA.

It would appear that this species should be placed in *Metasphenisca* Hend. It agrees in all essential details given by Hendel in Bull.Soc.R.Ent.d'Égypte, Année 1951, pp. 8—9, except that in this particular specimen the sixth abdominal segment is shorter than the fifth and this does not seem to be due to the fact that the one overlaps the other more than is usual. In the females of both *Metasphenisca tetrapoda* Bez. and *M. haematopoda* Bez. examined by me, the lengths of the segments in question are practically equal. The present species, however, could not be placed in *Aciura* nor any of the related genera as the third vein is bristly.

2. Length of body 5.3 mm, of wing 4.5 mm. Head nearly as high as wide and about two fifths height in length, blackish ferruginous, face and lunule somewhat silvery pollinose; from two-thirds as wide as long, a little narrowed anteriorly, three i.or (four

on left in type), two s.or; lunule semicircular; antennae missing except first and second joints on left; face reddish yellow, silvery on upper half with shallow grooves, epistome only slightly prominent; cheeks narrow, genae wider; ocp. posterior and outer vt whitish, others brown to blackish; proboscis short. Thorax black, with ferruginous tinge on pleura, white dust and sparse white pubescence; bristles brownish, cervicals absent, dc on line of a.sa; scutellum more shining black and less white dusted than thorax; legs ferruginous like head, middle femora slightly, hind tibiae and femora more blackened, front coxae with two strong bristles outwardly, front femora with a row of three strong spines lateroventrally. Squame very pale yellowish. Wing (fig. 8), stigma short, outer end of discal cell widened, third vein with short row of six small setae at base and five, more widely spaced, beyond small cross-vein, pattern dark brown, the very broad hyaline indentation in second posterior cell may be noted. Abdomen shining black, with black pubescence but very slightly white dusted, fifth segment half as long again as sixth; base of ovipositor conical (flattened in type), shining black, with black pubescence, more ferruginous below at base. Venter blackish.

## Aciura sphenoptera BEZ.

BEZZI, l. c., 122, 125.

Type, a rather damaged male, Arusha-Ju, Africa Or., XI, 1905, KATONA.

3. Length of body 5.2 mm, of wing 5.4 mm. Head about as long as high and two-fifths wider, occiput black, concave above, swollen below, the bristles whitish, thickened, ocellar dot black; frons yellow, blackish in hind half, bristles blackish, two s.or, the hinder rather small as are the oc, three i.or, width at vertex about one-fifth wider both of width at antennae and of width of an eye and three-quarters of length; lunule sunken in specimen, yellow, short and small; antennae yellow, about as long as face, third joint somewhat tapered to a blunt point, arista elongate, brownish, paler at base, with sparse but rather long pubescence; face as wide as lower part of frons, yellow, cheeks very narrow, genae wider, epistome somewhat projecting, broadly excavated medially, oral opening rounded oval; proboscis and palpi yellow, the former short. Thorax rather shining black, with a slight ferruginous tinge and slight whitish dust, otherwise bare or the pubescence has been ab-

raded, bristles blackish, one mpl, dc on line of a.sa. Scutellum as thorax, with only a basal pair of bristles, halteres yellow, squamae short, yellow; legs blackish, rather paler than thorax but front coxae and distal ends of front femora more yellowish, all tibiae and tarsi yellow, except hind tarsi slightly blackened. Wing (fig. 9) narrow, lanceolate, no bristles could be observed on the third vein. Abdomen shining black, apparently bare, with very slight trace of dust, venter blackish, genitalia more ferruginous.

# Katonaia n. g.

In considering the position of this genus, the first point to be remarked is that the fifth and sixth abdominal segments of the female are of approximately equal length. In spite of this, however, it does not appear to belong to the Tephritinae sensu Hendel. The bristles of the head are all (apparently) thin and black, and there is only one s.or. Further, as the third vein is bare and there are two scutellar bristles, it runs to *Placaciura* Hendel (Pal. Dipt. 49. Tryp. p. 20). From this it differs, among other points, in the shape of the head, the narrower from and in wing venation and pattern. The latter is dimidiate while the venation is crowded towards the costa, the fourth vein ending at the tip of the wing as in species of *Spheniscomyia*. The basal half of the wing appears wider than is usual.

Genotype, the following new species.

## Katonaia arushae n. sp.

Type, a female, in poor condition, Arusha-Ju, Africa Or., XI, 1905. KATONA.

When received the specimen was thickly covered with a mat of apparently fungus mycelia, only one wing being partly visible, the other mostly broken off. It bore a label in BEZZI's writing "indet. n. sp." After soaking the specimen in water it was possible to remove most of the thick mat, and after slight treatment in dilute potash and gentle teasing with needles, most of the strands of mycelia were removed. Many of the bristles were unfortunately broken off, but sufficient remained for examination and description, others could be noted from the position of their alveoli. The one wing that was fairly complete was also found to be damaged and in danger of falling to pieces; a mount was accordingly made of this and is pinned to the rest of the specimen.

2. A shining black species, with only front portions of head. extremities of legs and halteres yellow; wing with a striking dimidiate pattern. Length of body 5.4 mm, of wing 2.9 mm. Head, proportions of width, height and length, 9, 8 and 6; occiput shining black, slightly concave above, prominent below, the bristles thin and black; frons broad, one and a half times width of eye, and a little more than one-third longer than wide, strongly sloping and prominent anteriorly in profile, vertical plates ferruginous, ocellar dot black, a few black hairs on front portion of orbits, one s.or, two i.or, oc apparently present and small; lunule short, lunate, vellow: antennae straw vellow, second joint rather more than half length of third, which is about twice as long as wide and rounded at apex, arista brown, with slight pubescence; face slightly concave, yellow, cheeks about half, and genae about as wide as third antennal joint: genal bristle absent or abraded: eve elongate oval in profile, sloping backwards, anterior facets enlarged, oral opening rounded; proboscis short, yellow, palpi yellow, but scarcely visible in specimen. Thorax swollen, shining black, on dorsum very slight trace of dust and slight black pubescence; dc on line of a.sa. Scutellum shining black, two strong basal bristles and apparently a pair of microscopic apicals. Halteres yellow. Legs, coxae and femora black, except apices of femora and al tibiae and tarsi yellow. Wing (fig. 10), venation more or less crowded towards costa, fourth vein ending at tip of wing, stigma elongate, third vein bare, discal cell large, a uniformly brown, dimidiate pattern. Abdomen and base of ovipositor shining black with black pubescence, fifth and sixth segments of equal length; base of ovipositor elongate leggingshaped, rather longer than pre-abdomen, width at base half, and at apex one-eight, of its length; second joint blackish, third, brown; venter black.

#### Spheniscomyia senaria BEZ.

BEZZI, l. c., 124, 125. MUNRO, Ann. S. A. Mus., XXIX, 14 (1929).

Of the specimens from South West Africa in the collection of the South African Museum determined by me as this species in 1929, a female retained in my collection agrees closely with the type. There are however slight differences in the proportions of the head: while in the type the head is slightly higher than long, in my specimen it is slightly longer than high, which gives its head a somewhat depressed appearance. The fronto-facial angle is also rather less in the type, and the eye rather more rounded in profile.

Type, a female, Mujenje, Uganda, IX, 1913, KATONA.

2. Length of body 4.2 mm, of wing 2.8 mm. Head, proportions of width, height and length, 4.3 and 2.5, in profile flattened in appearance, the fronto-facial angle obtuse, the eye large in profile, its long axis sloping backwards; occiput black, flattened, only slightly prominent below, the bristles rather thin and blackish; frons at antennae about as wide as eye, about one-third wider at vertex and not quite twice as long as wide, opaque yellow anteriorly, sub-translucent blackish on sides and behind, ocellar dot black, one s.or, three i.or, the anterior one smaller, or small: lunule yellow, broadly rounded U-shape, as long as wide; antennae deep yellow nearly as long as face, third joint twice as long as wide, with an upper, terminal blunted point; face yellow, narrower than frons, concave, grooves distinct; cheeks linear, genae about as wide as third antennal joint, epistome hardly prominent, broadly rectangularly excavated, oral opening slightly elogante oval; palpi yellow, proboscis short, yellow. Thorax shining black with slight dust and sparse brownish pubescence on dorsum, dc twice as far from line of a.sa as from suture; scutellum shining black, with slight dust and two long basal bristles; legs with all coxae and femora black, also proximal ends of hind and middle tibiae blackened, otherwise straw yellow; halteres yellow; squamae yellow, rather large. Wing (fig. 11) rather elongate, somewhat parallel sided, with brownish pattern and hyaline spots and indentations. Abdomen shining black, with black pubescence but no dust; sixth segment a little longer than fifth; base of ovipositor shining black, with black pubescence, 0.6 mm long, about two-thirds length of pre-abdomen, leggingshaped, rather flat below, and flattened at apex, second joint black, brownish on distal half, third brownish; venter black.

## Tephrella Katonai BEZ. emend:

BEZZI, l. c., 126.

Type, a female, Arusha-Ju, Africa Or., XI, 1905, KATONA. The specimen is in poor condition, having been attacked by mould.

It is somewhat difficult to indicate the affinities of this species. It seems, however, that it is very closely allied to *Trypeta ternaria* Lw. (Berl.Ent.Zeit., V, 273, 1860). The latter species was placed by Bezzi in *Spheniscomyia* (l. c., p. 124) but it does not seem to have

been recorded since the original description. I have in my collection a female (from Bualwayo, 14.6.25, R.H.R. STEVENSON) which I have no doubt is LOEW's species. It agrees almost word for word with the description, but the wing pattern differs slightly from that figured by LOEW, as the outer indentation in the second posterior cell is wider outwardly, and it appears almost as if a marginal spot has become confluent with the indentation. However, apart from the fact that in the Bulawayo specimen the hyaline markings are larger, there is no sign of a hyaline spot at the outer end of the second posterior cell. Tephrella Katonai differs also in the proportions of the head and frons: in the Bulawayo specimen the frons is, if anything slightly shorter than wide, while in T. Katonai it is almost a quarter longer than wide. Further in T. Katonai the base of the ovipositor is shorter and more broadly truncate apically.

The generic position of both seems to offer further difficulties. In both the sixth segment is distinctly shorter than the fifth, but the third vein is bare. Hence it does not seem that they should be placed in *Metasphenisca* Hend, to which genus they seem to belong, nor can they be placed in the *Aciura-Spheniscomyia* group of the Trypetini, owing to the bare third vein. Both species run down to *Spheniscomyia* in Hendel's tables except that *T. Katonai* has three i.or and the Bulawayo specimen three on one side and two on the other. It is interesting to remark here that in *Spheniscomyia sexmaculata* Macq. the third vein is bristly while Hendel (in Lindner, Die Fliegen, 49, Tryp. p. 105) states that it is not bristly. At any rate, in the absence of more material for comparative study, I do not propose to discuss the matter further here, except that perhaps the South African specimens recorded as *Spheniscomyia sexmaculata* may prove to be another species.

Q. Length of body and of wing 3.3 mm. Head, proportions of length, height and width about 3, 4 and 5; occiput black, the bristles whitish, thickened; frons dark yellow, blackened behind, ocellar dot black, bare, slightly narrower than an eye, at vertex three-quarters length and somewhat narrowed anteriorly, bristles brownish, two s.or, the hind one smaller, three i.or; lunule rather short semi-circular, blackened; antennae yellow, about three-fourths length of face, third joint a little darkened, twice as long as wide, rounded at end, arista brown, paler at base with slight pubescence; face rather dark yellow, cheeks narrow, oral opening circular, palpi and proboscis yellow, the latter short. Thorax black (dull in

type) with grey dust and brownish pubescence, dc only slightly before line of a.sa; scutellum as thorax, with four bristles of about equal length; halteres yellow; legs, femora and coxae black, tibiae and tarsi dark yellow; wing (fig. 12) brown with hyaline base and small indentations and spots. Abdomen and base of ovipositor shining black, pubescence black but scarcely any dust; the latter short and broad, broadly truncate at end, flattened in type, probably not quite conical in life, as long as last two segments together; fifth segment about one-fifth longer than sixth; venter black.

#### Tephrella limbata BEZ.

BEZZI, l. c., 126.

Type, a female, Mujenje, Uganda, VIII, 1913, KATONA. This species seems to be a true Metasphenisca HEND.

2. Length of body 4.7 mm, of wing 4.2 mm. Head, proportions of width, height and length, 9, 7 and 6, yellow, only upper part of occiput and ocellar dot black; ocp light brownish, flattened;

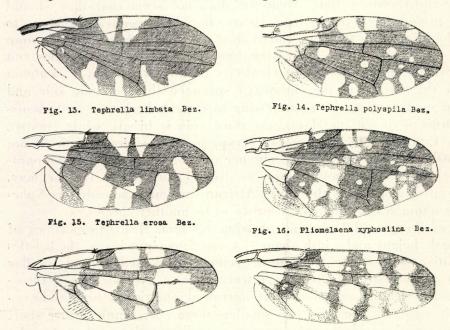


Fig. 17. Spathulina abyssinica Bez.

Fig. 18. Spathulina euryomma Bez.

frons with blackish tinge, flat, bare, slight orbital pubescence anteriorly, parallel sided, as wide as an eye, three-quarters as wide as long, two s.or, three i.or, oc well-developed; lunule semicircular;

antennae about two-thirds length of face, third joint rounded at end, about one and a half times as long as wide; arista with slight pubescence; face flat, epistome hardly projecting, cheeks narrow, genae about as wide as third antennal joint, (it should be noted that in the specimen the face and epistome seem to have been pushed in, and the antennae, also, are flattened against the face). Mouth opening rounded; proboscis and palpi much retracted, the former apparently short. Thorax shining black with ferruginous tinge on sides, very slight dust and yellow pubescence on dorsum; bristles brown, dc half way between suture and line of a.sa, one mpl. Scutellum flat, shining black, with ferruginous tinge marginally, slight grey dust and pubescence laterally at base only, four brown bristles, apicals only a little more than half length of basals; halteres yellow, knob blackish; squamae short, yellow, in specimen appressed against thorax; legs straw vellow; wing (fig. 13) with brown Aciura-like pattern, third vein with two small setae at extreme base on upper side. Abdomen shining black, with slight indication of dust and rather long pubescence whitish on first two segments, brownish elsewhere; sixth segment a little longer than fifth; base of ovipositor shining blackish ferruginous above, blacker at base and ferruginous below, with brownish pubescence, nearly as long as pre-abdomen, flattened in specimen; venter more or less blackish ferruginous.

## Tephrella polyspila BEZ.

BEZZI, l. c., 126.

Type, a female, Mto-ja-Kifaru, Africa Or., KATONA.

A careful review of related species would be required before this species could be placed in its correct genus with certainty. It might be placed in *Acinia*, but there are several points of difference between it and the diagnosis of the genus.

2. Length of body 5.1 mm, of wing 3.6 mm. Head, proportions of length, width and height, 3, 5 and 4; occiput yellow with strong black suffusion, the bristles white, thickened; frons as long as wide, a little narrowed anteriorly somewhat less than twice width of an eye, pale translucent blackish yellow, largely deep yellow anteriorly, where there is slight pubescence centrally and on orbits, bristles brownish, inner vt long, two s.or, three i.or; lunule arcuate, yellow; antennae yellow, third joint rounded at end, arista blackish, brown at base, with short pubescence; face narrower than

frons, translucent blackish; cheeks and genae narrow; mouth opening ovoid, wider behind; epistome slightly projecting; proboscis short, palpi vellow. Thorax black, humeri and notopleura vellowish, prosterna vellow, dorsum thickly grey dusted, with whitish pubescence, mostly abraded in specimen; bristles brownish, dc a little behind line of a.sa, two mpl. Scutellum as thorax, yellowish marginally, four bristles of equal length; legs straw vellow; halteres and squamae yellow. Wing (fig. 14) with brown pattern and hyaline spots and indentations, stigma dark with slight pale spot, third vein with two setae at extreme base on right wing, and one on left wing on upper side. Abdomen reddish, appearing more or less blackish mottled through discoloration, but black basally and laterally, pubescence pale brownish, fifth and sixth segments of equal length: base of ovipositor shining black with black pubescence, about as long as pre-abdomen, rather pointed, flattened in specimen; venter, lateral membranes blackish, sternites blackish yellow, with distinct broad, paler hind margins, narrow on last segment, pubescence white.

## Tephrella erosa Bez.

BEZZI, l. c., 126.

Type, a male, Moshi, Africa Or., VII, 1905.

3. Length of body 3.6 mm, of wing 3.8 mm. Head, length about one-third less, and width as much more, than height; occiput black, dark straw vellow below, the bristles pale brownish or dirty white, thickened; frons flat, bare, width slightly more than an eye, and three-quarters of length, yellow anteriorly, blackish behind, ocellardot black, bristle brown, inner vt. very long, two s.or, three i.or; lunule vellow with whitish bloom, nearly semicircular; antennae dark straw vellow, third joint twice as long as wide, rounded at end, arista brown with short pubescence; face rather narrow, dark straw yellow, cheeks and genae narrow, epistome slightly projecting, oral opening rounded; proboscis short, and with palpi straw yellow. Thorax and scutellum shining black, with rather thin grey dust and white pubescence (slight on scutellum); bristles blackish, dc. about half way between line of a.sa and suture. four scutellars, apicals one-third length of basals; legs dark straw yellow, only coxae blackened; halteres straw yellow; squamae white. Wing (fig. 15) brown with hyaline indentations. Abdomen shining black, with black pubescence but no apparent dust; venter and genitalia shining black with grey dust. Derended to made allow and

BEZZI, l. c., 129, 130.

Type, a male, Dire-Daua, Abyssinia, 19.XI.1911, Kovács. This would appear to be a species of *Acinia* Rob.-Desv.

3. Length of body and of wing 5.3 mm. Head about as wide as high and one-third shorter; occiput dark vellow, flat above, prominent below, the bristles yellow, thickened; frons at vertex a little less than length, which is twice width of eye, width at antennae two-thirds length, flat, with slight pubescence anteriorly, where it is yellow, elsewhere subtranslucent blackish yellow, ocellar dot black, vertical plates nearly half length of frons, two s.or, three i.or, oc strong; lunule yellow, arcuate; antennae straw yellow, about three-quarters length of face, third joint tinged with blackish, blacker along upper edge and at rounded apex, second joint setiferous, arista brown, pubescent; face rather narrow, slightly concave, yellow, epistome only slightly projecting, cheeks and genae vellow, the former narrow, latter not as wide as third antennal joint, genal bristle strong; oral opening rather elongate oval, palpi whitish, spatulate, proboscis yellow, labellae short. Thorax somewhat amber brown, with blackish tinge stronger on dorsum, with fine brown pubescence: bristles brown, dc just behind suture; scutellum as thorax, but hardly blackened, four bristles, the apicals the shorter; halteres yellow; squamae medium; mesophragma black with white dust. Legs somewhat more yellow than thorax, with slight touches of blackening on femora. Wing (fig. 16) pattern anchor-like, third vein setiferous to beyond upper cross-vein. Abdomen concolorous with thorax with similar pubescence and bristles, the blackening more defined forming a spot in middle of second segment, a band on anterior portion of third half width and length of segment, on anterior three-fourths of fourth segment reaching nearly to edges, and on anterior half of fifth segment from side to side; genitalia more ferruginous narrow sternites like legs and wide membranes black.

#### Spathulina Monroi Bez. var. majuscula Bez.

BEZZI, l. c., 152, 154. BEZZI, Ann. S. A. Mus., XIX. 556, pl. XIV, f. 84(wing) (1924).

Type, a female, Rustenburg, Transvaal, S.Afr. 2.VII.10. (not from East Africa as stated by Bezzi).

The specimen agrees closely with the description of Spathulina Munroi Bez. (Ann. S. A. Mus. XIX, 535, 1924). It may be noted that the frons in both is a little longer than wide, not more than one-tenth, and is certainly not one and a half times as long as wide; it is somewhat narrowed anteriorly, where there is some yellow pubescence; two s.or and three i.or; lunule short. In majuscula the humeri and pleural sutures are yellowish, and there are two mpl, the lower rather smaller. The only difference in the wing pattern is than while in Munroi there are five distinct spots in the second posterior cell, in majuscula the four inner are fused in pairs to form two elongated indentations reaching nearly to the fourt vein, and the outer spot, on the wing margin, is larger. In one of the paratypes of Munroi the inner pair of spots is practically fused. In both forms the spots in the third posterior cell are similarly fused, but in Munroi they tend to be more separated.

#### Spathulina abyssinica BEZ.

BEZZI, I. c., 133, 134.

Type, a male, Hamaraja, Abyssinia, V, 1911, Kovács. This is undoubtedly a species of *Tephrella*.

3. Length of body 2.4 mm, of wing 2.7 mm. Head, proportions of height, length and width 5, 4 and 6; occiput blackish ferruginous, flattened, rather concave above, convex below, the bristles whitish, rather thin; from twice width of an eye, a little shorter than wide, more or less parallel sided, but rather sharply narrowed at antennae, flat, only a little prominent anteriorly, bare, yellow; lunule and sides of frons a little paler, ocellar dot ferruginous, bristles pale brownish, two s.or, two i.or (three on one side); antennae a little shorter than face, second joint blackish, third yellow, rounded at end, about twice as long as wide, arista brownish with slight pubescence; face vellow, rather narrow and concave, epistome projecting; cheeks narrow, genae a little wider than third antennal joint; proboscis dark vellow, labellae broad, as long as haustellum, palpi short, yellow. Thorax shining black with a ferruginous tinge, grey dusted, less on pleura, and rather sparse pale pubescence; bristles brown, dc just behind suture; scutellum as thorax, two long basal bristles; post-scutellum white; squamae yellow, lower short, upper longer; halteres dark yellow. Legs, all coxae and femora except ends of front four, as thorax, otherwise straw yellow. Wing (fig. 17) with a rather reduced, broadly reticulate, light brown pattern; third vein bare, upper cross-vein short, twice its length from lower, costal spine double. Abdomen black, with very slight suggestion of dust, with very long, rather sparse, brownish pubescence except at base where it is shorter. Genitalia black.

## Spathulina euryomma Bez.

BEZZI, l. c., 133, 134.

Type, a male, Dire-Daua, Abyssinia, 19.XI.1911, Kovács.

A greyish species with a reticulate wing pattern with some resemblance to species of *Paroxyna* Hend. (*Ensina* sensu Bezzi). It may perhaps be placed in *Tephrella* on account of the shining black abdomen, the two scutellar bristles and the short labellae, although there are three i.or.

3. Length of body 3.1 mm, of wing 3.6 mm. Head a little longer than high and half again as wide; occiput slightly concave above, prominent below, black with grev dust, the bristles thickened, whitish; from a little narrowed anteriorly, a little narrower at vertex than long, and about one-sixth wider than an eye, flat, bare, with some lateral pubescence, opaque vellow but translucent blackish yellow on sides and behind, ocellar dot black, vertical plates prominent bristles brownish, two s.or (both hind ones abraded in specimen), three i.or, the anterior one small; lunule semicircular, pale yellow; antennae dark yellow, three-fourts length of face, arista brown, yellow at base, slightly pubescent. Front portions of head yellow. Face shallowly concave with shallow grooves, cheeks narrow, genae about as wide as third antennal joint; palpi and proboscis dark yellow, latter short, genal bristle long; eye in profile large, rounded oval. Thorax shining black with rather thick grey dust and yellowish pubescence on dorsum, whitish on hind portions of pleura; bristles brown, dc one third of distance from suture to a.sa behind former. Scutellum as thorax; two long sub-apical bristles; upper part of mesophragma brown; halteres yellow, squamae pale yellow, the upper large, circular the lower short, linear. Legs: all coxae and femora, except extremities of latter, black, otherwise straw vellow. Wing (fig. 18) with reticulate sub-banded pattern; on the fore half of the wing the markings are darker, becoming paler in the second posterior cell and in the anal region; their margins are not sharply defined as they grade more or less gradually into hyaline; third vein bare; anal cell ending in a blunt point. Abdomen shining black with

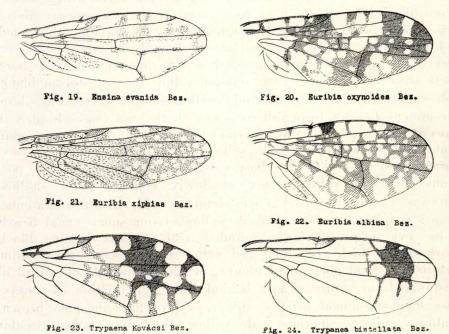
slight grey dust, pubescence brown on tergites, paler on sternites, middle sternites with narrow brownish posterior margins.

#### Ensina evanida Bez.

BEZZI, 1. c. 136.

Type, a female, Marako, Abyssinia, III, 1912, Kovács.

\$\partial \text{Length of body 2.5 mm, of wing 2.6 mm. Head, proportions of height, length and width 7, 6 and 9; occiput black, concave above, fairly swollen below, the bristles thickened, yellow, with some short thin, black setae. Frons about two and a half times width of eye, a little wider than long, and a quarter narrower at antennae, yellow, blackish on posterior half, ocellar dot black, orbits white pollinose, bristles brown, two s.or, the upper white, two i.or, oc strong; lunule arcuate, yellow; antennae darker yellow,



third joint nearly as wide as long, broadly rounded below at apex and the upper corner a right angle; cheeks and genae yellow slightly white pollinose, the former narrow, barely one quarter width, and latter as wide as, third antennal joint; face slightly white pollinose, with shallow grooves, epistome slightly projecting, oral opening elongate oval, palpi elongate, yellow, proboscis rather long, base as long as oral opening, labellae a little shorter, hook-like. Thorax black, grey pollinose, white pubescence, dc just behind suture, bristles dark brown, except pt pale; halteres yellow; legs: coxae and femora and proximal two-thirds of hind tibiae black, otherwise, including distal ends of femora, yellow; upper squama large, lower linear. Wing (fig. 19) with an extremely faint, only just perceptible, sub-reticulate pattern, stigma pale yellow, lower angle of anal cell a right angle. Abdomen black, less grey pollinose than thorax and with longer white pubescence, some black setae at end of sixth segment, fifth as long as sixth; base of ovipositor 0.5 mm long, shining black, with black pubescence, a little shorter than pre-abdomen; venter black.

#### Euribia oxynoides BEZ.

BEZZI, l. c., 137, 138.

Type, a male, Arusha-Ju, Africa Or., X, 1905, KATONA. This is a species of *Paroxyna* Hend.

3. Length of body 2.9 mm, of wing 3.4 mm. Head, proportions of width, length and height 7, 5 and 6, entirely vellow except upper portion of occiput blackish; occiput flattened above, swollen below, the bristles thickened, yellow, with a row of short, black setae; frons twice width of an eye, a little longer than wide. narrowed to antennae with convex margins, mostly opaque vellow, slightly translucent blackish behind, very slight yellow pubescence anteriorly in middle and less on orbits, bristles black, two s.or (the hind one thickened, yellow), two i.or, oc strong; lunule darker yellow, rather short and wide; antennae dark yellow, third joint less than twice as long as wide, with short, blunt apical point, arista brown with short pubescence; face, cheeks and genae paler yellow; face flattened, cheeks rather narrow, genae as wide as third antennal joint, epistome slightly projecting, oral opening rounded; proboscis vellow with rather long labellae, palpi yellow. Thorax black, with thick brown dust and white pubescence, bristles black, except pt pale, dc a little behind suture; scutellum blackish with brown dust, vellow on apical half, two strong basal and two thin short apical bristles; halteres light brownish; legs straw yellow, femora broadly blackened medially, squamae whitish, the upper the larger. Wing (fig. 20) with a more or less reticulate pattern, stigma brown, with a basal light spot, third vein with two or three small setae at base. Abdomen thickly shining brown dusted, with

a pair of sub-median, broad, rounded, dark brown spots on each segment from second backwards, pubescence yellow; venter black, genitalia brownish.

## Euribia xiphias Bez.

BEZZI, l. c., 137, 138.

Type, a female, Tshertsher, Abyssinia, X, 1911, Kovács.

A large elongate greyish species with narrow wings having a very faint reticulate pattern and the basal joint of ovipositor very long. It is certainly a species of *Acanthiophilus Beck*. (sub-genus *Tephritomyia Hend*.) and seems to have some resemblance to *A.* (*T.*) lautus Lw. but differs in its much larger size, the longer base of the ovipositor and the shape of the third antennal joint.

2. Length of body 10.8 mm, of wing 6.0 mm. Head, proportions of width, length and height 13, 8 and 11, yellow except two darkish spots on occiput and brown ocellar dot; ocp thickened whitish; from flat, parallel sided, about one-sixth narrower than long, and about one-third wider than an eve, slight central pubescence anteriorly and some on orbits, bristles brown, two s. or (the hinder thickened, white), three i.or, oc well-developed; lunule large, semicircular, quarter length of frons: antennae rather short, about three quarters length of face, second joint with black setulae and blackish above and along front edge, third joint flattened short oval from side (i. e. about as wide as long), somewhat rounded at end, darker yellow, arista brown, yellow at base, slightly pubescent; face short, flattened, with shallow grooves, epistome somewhat projecting, cheeks narrow, genae about one-third as wide as third antennal joint, oral opening rounded, palpi spatulate, with some strong brown setae at end, proboscis short, labellae not very long. Thorax black, yellowish from humeri to and including margin of scutellum; thickly golden dusted, with a more or less distinct median and sub-lateral stripes, pubescence pale vellow, rather dense, de just behind suture. Scutellum flattened, clothed as thorax, two long basal and two shorter, decussate, apical brown bristles; halteres yellow; legs dark straw yellow; squamae large, yellowish. Wing (fig. 21) long, narrow, third vein bare, very faintly greyish with a faintly developed, barely perceptible, reticulation on outer half, stigma yellowish. Abdomen black, clothed as thorax, but dust more grevish, fifth and sixth segments about equal, the sixth slightly longer if anything, base of ovipositor very elongate and narrow, length 5.4 mm, about half of total length of body, white pubescence on anterior half, and brown on apical half.

#### Euribia albina Bez.

BEZZI, I. c., 138.

Type, a female, Shiraki, Africa Or., II, 1908, KATONA.

2. A pale yellowish species with reticulate wingpattern. Length of body 3.4 mm, of wing 3.2 mm. Head about one-third as high and about one half as long as wide, entirely pale yellow with only a pair of medium, brownish spots on occiput and brownish ocellar dot; occiput shallowly concave above, not very prominent below; bristles thickened, rather paler than others on head; from slightly shorter than long and one-third wider than an eye, a little narrowed anteriorly, bare, with slight orbital pubescence; two s.or, three i.or; oc long; antennae missing; face slightly concave with shallow grooves, epistome slightly projecting, cheeks almost linear, genae narrow, oral opening rounded, proboscis too retracted for examination, labellae apparently moderately long. Thorax black on dorsum, otherwise yellow with more or less black tinge, stronger on sternites with dense dust and white pubescence, bristles pale, dc a short distance behind suture; scutellum yellow with faint blackish tinge on flat disc, two basal and two shorter, decussate apical bristles, only slight pubescence on margins; upper half of postscutellum yellow, lower portions black with silvery dust, lowest portion of mesophragma shining black; halteres, legs and squamae yellow. Wing (fig. 22) with broadly reticulate, pale brownish pattern, stigma darker but hyaline on basal two-fifths, third vein with a single seta at extreme base. Abdomen mainly yellow, with yellow pubescence, a black band, separated in median line, on anterior two-thirds of third, fourth and fifth segments; fifth and sixth of about equal length; base of ovipositor short, broad and flattened in specimen, length 0.6 mm, reddish yellow with black apex, as wide as last segment at base, but barely as long as last two segments together; venter yellow.

#### Trypanea Kovácsi BEZ.

BEZZI, l. c., 140, 143.

Types, a male, Tshertsher, Abyssinia, X, 1911, Kovács, and a female, Haramaja, Abyssinia, V. 1911. Kovács.

39. This species agrees with the common Trypanea peregrina

ADAMS (1908) closely in body coloration, shape of head, chaetotaxy and wing pattern (fig. 23). T. peregrina ADAMS and T. mundella Bez. (1924) appear to be the two species most closely related to T. Kovácsi, which may be distinguished by the entirely black femora. Further, the third joint of the antenna appears broadly spatulate, being widened from base to apex, and only slightly longer than broad. The base of the ovipositor is about as long as the pre-abdomen, while in peregrina it is a quarter of its length longer. A further study of this species in relation to those most closely allied is being made.

## Trypanea goliath BEZ.

BEZZI, l. c., 141, 144.

Tyrpanea haemorrhoa Bezzi, Bol. Lab. Zool. Portici, XVIII, 114 (1926); Munro, Union of S. Afr., Dept. Agric., Entomology Memior V, 35 (1926) — biology.

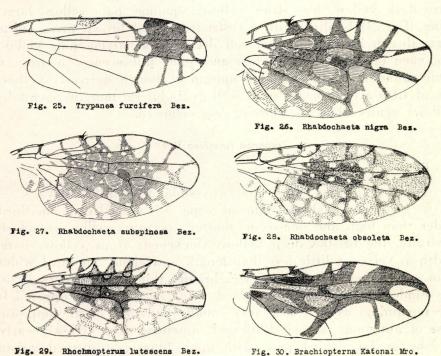
Type, a female, Haenertzberg, Zoutpansberg, Transvaal, S.Afr. (The specimen is not from Arabia as stated by Bezzi).

There is no doubt as to the above synonymy as I have the type (male) of *T. haemorrhoa* as well as a series of specimens of both sexes.

As far as Trypanea dentiens Bez. is concerned, although it may be closely allied to T. goliath and both may be placed in Acanthiophilus Beck., there are characters by which they may be separated. As regards size, T. goliath is a much larger species (male body length 5.5 mm) while T. dentiens is smaller (only 3.5 mm). The difference in size is, however, of little importance as the size of T. goliath seems to depend on the size of the flower of the particular hostplant. The type of T. haemorrhoa is only slightly larger than the average size of T. dentiens, and I have specimens even. smaller. Differences between the species, apart from those given by Bezzi in the description of T. haemorrhoa may be noted as follows: — in T. goliath there is always a well-developed third i.or, white in colour, opposite the base of the antennae; in T. dentiens this bristle is more often than not absent, if present usually quite small, rarely well-developed. In T. goliath the elongate indentation along the costa, beyond the stigma, is not hyaline, but yellow; another character in the wing which serves to distinguish the two without fail and not noted by Bezzi is the position of the dark spot in the apical fuscous area. In T. goliath this spot is small and restricted to the sub-marginal cell, just beyond the end of the second vein.

between the costa and the third vein; in *T. dentiens* it extends upwards into the end of the marginal cell, and below half way across the first posterior cell, where there is even a slight suggestion of the formation of a "bulla" as occurs in *T. bulligera Bez.* On the abdomen of *T. goliath* the hind margins of the segments are distinctly edged with yellow which is visible to the naked eye, and the apical segments of each sex half yellow.

The undescribed female resembles the male. The ovipositor is as long as the pre-abdomen, orange in colour with a black tip, pubescence white on anterior half, brown on posterior half; (in *T. dentiens* the base of the ovipositor is only half the length of the pre-abdomen).



Trypanea bistellata BEZ.

BEZZI, Bull.Ent.Res., XV, 142, 147 (1924).

Type, a male, Moshi, Africa Or., VII, 1905, KATONA.

3. Length of body 3.2 mm, of wing 5.2 mm. Head twice as wide as long and one-third higher; occiput yellow, blackened centrally above neck, the bristles yellow, thickened; from as long as wide at vertex and one-fifth wider than an eye, a little narrowed

anteriorly, yellow, blackened on sides and behind, bristles brown, two s.or, upper thickened, whitish, three i.or, the lowest small, whitish, oc strong; slight yellow pubescence before lunule; ocellar dot black; lunule short, half rounded oval; antennae deep yellow, nearly as long as face, third joint somewhat pointed to end; face yellow, flat, narrow, epistome very slightly prominent; cheeks narrow, almost linear, yellow, genae barely wider than third antennal joint, vellow; oral opening circular, palpi vellow, proboscis vellow, labellae rather elongate. Thorax black, with thick grey dust and white pubescence: humeri to wing base vellowish: bristles brown. npl thickened yellow, dc just behind suture; scutellum as thorax, with two long basal and two short, decussate, apical bristles; halteres dark yellow; legs straw yellow; squamae pale yellow, large; wing (fig. 24) hyaline with a restricted apical brown area, apical fork absent, tip of marginal cell deep black, stigma pale vellow. Abdomen black, with grey dust and pale pubescence, a row of setae round last segment, hind margin of fourth narrowly yellowish, of fifth a little more so, as well as its lateral margins; genitalia vellow: venter blackish, more or less vellowish.

## Trypanea furcifera BEZ.

BEZZI, l. c., 142, 147.

Type, a female, Dire-Daua, Abyssinia, 19.Xl.1911, Kovács.

2. Length of body 4.2 mm, of wing 3.7 mm. Head one-third wider than high and one-sixth shorter; occiput vellow, blackish centrally, the bristles deep yellow, thickened; from yellow, bare, width at vertex a little less than length and about one-third wider than an eye, narrowed anteriorly; bristles thin, brownish, two s.or. the hinder deep yellow, thickened, two i.or (only the upper left one remaining) as well as a very small, hair-like bristle opposite base of antennae, oc well-developed; antennae deep yellow, nearly as long as face, third joint with apex bluntly up-turned, arista broken off except deep yellow base; face yellow, narrow, with shallow grooves; cheeks vellow, almost linear, genae vellow, narrower than third antennal joint, genal bristle weak; eye in profile large, rounded oval, perpendicular, oral opening rounded oval. palpi and proboscis yellow, labellae fairly elongate. Thorax black, thickly grey dusted, pubescence white, bristles pale brownish, yellow on pleura, dc on suture, two mpl; scutellum with two bristles: halteres vellow: legs straw vellow;

squamae yellow; wing (fig. 25) hyaline with well-developed apical spot and rays, stigma slightly brownish, tip of marginal and top corner of sub-marginal cells blacker, double costal spine. Abdomen black, rather less grey dusted than thorax, pubescence white, fifth and sixth segments of about equal length; base of ovipositor shining black, pubescence white on anterior half, brown on distal half, about as long as pre-abdomen; venter as dorsum.

## Rhabdochaeta nigra BEZ.

BEZZI, l. c., 151.

Types, male and female, Mujenje, Uganda, IX, 1913, KATONA. There is a paratype female in the British Museum and I have a female in my collection from Woodbush, Transvaal, 14.4.24, J. C. FAURE. The variety anteroflava MRO. seems the commoner in South Africa.

Further description seems unnecessary. A figure of the wing (fig. 26) is given here. The reddish bullae are shown by horizontal lines. The variety mentioned differs in addition to the coloration of the legs, in having more of the small hyaline spots, but the Woodbush specimen, although having fewer than the variety, has more than either of the types. As regards these "hyaline" spots, as for instance the one before the black patch in the middle of the wing, these really appear blue; of the two reddish bullae in the sub-marginal cell, the outer is heavily infuscated. The wing pattern of this and of related species is difficult both to describe and to figure: apart from the reddish, almost shellac coloured bullae, the colours vary in browns, blues and black. The coloration of the face in both the species and the variety seems rather variable, sometimes pale, or quite blackish, or with a well-defined white bar across the epistome.

The head is missing in the male type, and both third joints of the antennae in the female; in the Woodbush specimen the antennae are rather dark brown than black; the arista is brownish with yellow base and is slightly pubescent.

## Rhabdochaeta subspinosa Bez.

BEZZI, l. c., 151, 152.

Type, a male, Mujenje, Uganda, VII, 1913, KATONA.

The specimen differs from Rhabdochaeta nigra Bez. in its much paler coloration and in details of the wing pattern. The black spots

between the base of the antennae and the eye are rather small and not markedly developed; the antennae are yellow; the face yellowish with apparently a blackish bar across. The thorax is thickly dusted, mainly greyish, and appears less mottled than in nigra. There are faint blackish spots on the four hind femora. The wing pattern (fig. 27) is very similar. The bullae and spots are in more or less the same positions, but the bullae are fewer and the small blue "hyaline" spots more numerous than in either nigra or anteroflava. The most conspicuous difference is in the appearance of the apical rays: in nigra they are longer and better defined, in subspinosa shorter and paler.

## Rhabdochaeta obsoleta BEZ.

BEZZI, l. c., 151.

Type, a male, Dire-Daua, Abyssinia, 19.11.1911, Kovács,

3. Length of body 2.6 mm, of wing 3.2 mm. Head, proportions of length, height and width 4, 5 and 6.5; occiput black, grey dusted, yellow laterally along orbits and below, the bristles mostly denuded, yellow, flattened with some black setae along orbits; frons a little wider at vertex than long, and more than twice as wide as an eye, slightly narrowed anteriorly, flat, bare, yellow, blackish laterally and behind, ocellar dot black, bristles yellow, two s.or, three i.or (the lowest smaller), oc small, poc small, far forward; a deep black spot at sides of antennae; lunule arcuate, blackened; antennae, second joint vellow, third brown, pointed, arista vellow: face flat, brown on upper two-thirds, white pollinose on lower third, epistome projecting, cheeks linear, genae about as wide as third antennal joint, yellow with brown spot below eye, oral opening round, palpi deep yellow, proboscis short; eye in profile more or less rounded more rounded and less oblique than in R. nigra. Thorax black, thickly brownish dusted, pubescence white, but too rubbed in specimen to state details of pattern; humeri and a line to apical half of scutellum yellowish; bristles pale brown, dc just behind suture; scutellum with four bristles, basals denuded, apicals short, yellowish, only black and dusted on disc; halteres yellow; legs straw yellow, only hind tibiae with small blackish spot on upper surface near proximal end. Wing (fig. 28) covered with a rather undefined, very faint, reticulate pattern, with a darker, more or less blackish, central area. The reticulation of the peripheral portions is caused by blackish microtrichiae, which, on the

hyaline spots, are colourless; besides, on certain irregular spots, especially along the costa, is a brownish infuscation of the membrane, and where these occur adjacent veins are also darker; on the central dark area, near the base of the first posterior cell and above the lower cross-vein, is an elongate, shining reddish brown bulla. The third vein is bristly from its base to the upper cross-vein and for an equal distance beyond. Abdomen greasy in specimen, black with yellow pubescence, dust not evident; some ferruginous tinge on hind margins of segments; venter black, genitalia mostly ferruginous.

## Rhochmopterum lutescens Bez.

BEZZI, l. c., 153.

Type, a male, Tshertsher, Abyssinia, X, 1911, Kovács, a female, Moshi, Africa Or., VII, 1905 Katona.

39. Length of body 2.9 mm, of wing, male, 2.9 mm, female, 2.8 mm. Head as high as wide and one-fifth shorter; occiput flat above, not very prominent below, blackened centrally above neck, about a quarter wider than long, and more than twice width of an ocp mostly denuded, yellow, with some short black setae; frons eye, a little narrowed anteriorly, flat, bare, yellow, ocellar dot black, bristles black, two s.or, the upper white, three i.or, the lowest white, the hindmost thickened and long, inner vt white; lunule arcuate, inconspicuous; no spot at sides of antennae; antennae yellow, third joint sharply pointed, arista yellow, pubescent; face yellow, with upper median keel, epistome large and prominent, cheeks linear, vellow, genae narrow, vellow, genal bristle black, oral opening widely rounded, palpi yellow with black setae, proboscis vellow, short. (Note: the head of the female is much discoloured, but all the bristles are present). Thorax black with thick grey dust, badly denuded, but probably much as in Rhochmopterum Munroi Bez. — discoloured in female. Humeri to wing base broadly yellow; dc a little behind suture. Halteres and legs yellow, front femora with a broad spot near distal end on outer side, middle and hind femora with a larger brown spot on proximal end on inner side and another at outer third. Squamae vellow. The wing pattern (fig. 29) is somewhat difficult to describe. In transmitted light there is to be seen a central dark area around the

upper cross-vein; there may be noted in the marginal cell three short triangular rays not quite reaching the costa, these are light slate blue (dotted in diagram) with dark margins; similar light blue spots occur in the first basal and first posterior cells; the three reddish bullae, one at base of sub-marginal, one in upper part of first posterior cell, and one near upper corner of discal cell. The broad apical and posterior areas appear practically hyaline. In oblique incident light, however, a faint reticulate pattern is evident, and also all the dark rays are seen to be faintly connected with the costa, and where any ray meets the costa, it is darkened as well. The light slate blue spots appear enamel white; third vein with two or three setae at extreme base and one close to base. Scutellum vellow, a pair of long, brown, basal bristles and a pair of short, straight, white bristles one-third length of basals. Abdomen, male, pale reddish vellow, with slight dust and white pubescence, second, third and fourth segments with hind margins yellow, last segment shining black with grey dust on anterior half; genitalia yellow, venter reddish. Abdomen, female, more yellow than in male, with hind margins of segments vellow margined, fifth and sixth segments about equal; base of ovipositor barely as long as last two segments, reddish with brown tip and very short pale pubescence. Venter vellow.

# Brachiopterna Bez.

BEZZI, l. c., 81 and 124. Cyanodesmops Munro, Bull.Ent.Res., XXII, 124 (1951).

When the species Cyanodesmops ornithomorpha Mro. was described, it was only through an oversight that it was not placed in Brachiopterna Bez., with which Cyanodesmops is identical. Further, as Brachiopterna is sufficiently described to be valid under the rules of nomenclature, it must take precedence. I, however, designate Cyanodesmops ornithomorpha Mro. as the genotype, and in so doing may state that Bezzi's name Katonae must be regarded as a nomen nudum as no specific characters are mentioned in the diagnosis of the genus. It is thus not valid, and in this Dr. Karl Jordan agrees. Therefore, in terms of Article 30, section III, n, Brachiopterna ornithomorpha Mro. (described under Cyanodesmops) may be accepted as the genotype.

### Brachiopterna Katonai n. sp.

Bezzi, l. c., 153. Brachiopterna katonae, nomen nudum.

Type, a female, Arusha-Ju, Africa Or., X, 1905, KATONA.

The specimen is in a poor state of preservation, all the bristles on the head being denuded. As far as the state of the specimen allows, it agrees with the description of Cyanodesmops ornithomorpha Mro. There is, however, a striking difference in the wing pattern, for which reason two species may be recognised, at least until more material shows a range of intergraded variation, when the one may be regarded as a variety. While the pattern in both species is very similar, in the wing of ornithomorpha (Munro, l. c. fig. 5) at the end of the third vein a broad ray breaks up into two fairly widely separated short rays on the costa, in Katonai (fig. 30) there is a single broad ray meeting the costa beyond the end of the first vein and extending over the end of the second vein, while at the same time the hyaline indentation just beyond the stigma is much narrower and has straight margins. Further, in Katonai, there is no reticulation in the anal area from the axillary cell a broad hyaline indentation extends obliquely upwards and outwards across the third posterior cell, just entering the discal cell, leaving, a fairly broad ray across the outer end of the third posterior cell. It may be noted that none of the large series of ornithomorpha I have examined show any variation in the pattern — but they all came from one locality. The anal cross-vein, as well as a short section of the fifth at the lower outer corner of the second basal cell is apparently quite absent. It is not possible to make a more definite statement from the dried specimen, only by making a mount of a wing could more precise details be obtained. In ornithomorpha both are distinct, but rather weak.

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