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REVIEWED STATUS OF THE AFROTROPICAL SIGNAL FLY GENERA *FEDERLEYELLA* AND *CONOPARIELLA* AND A NEW GENUS (DIPTERA, PLATYSTOMATIDAE, PLASTOTEPHRITINAE)

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Reviewed status of the Afrotropical signal fly genera *Federleyella* and *Conopariella* and a new genus (Diptera, Platystomatidae, Plastotephritinae).

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ABSTRACT

A collection of Plastotephritinae specimens by the late Amnon Freidberg, which were collected in 2010, included long series of species for which only a few specimens were previously known. These long series shed new light on the genera *Federleyella* Frey, 1932 and *Conopariella* Enderlein, 1922 in particular. The status of these two genera is reviewed. *Federleyella* is considered a junior synonymy of *Conopariella*. As a consequence, the combination *Conopariella pallidipes* (Enderlein, 1922) is reinstated. *Anaphalantias septemfenestrata* Enderlein, 1922, previously in *Federleyella*, is placed in synonymy with *Conopariella pallidipes* (**n. syn.**). A revised key to genera of Plastotephritinae is provided and *Conopariella* is redescribed and a key provided for the species assigned to it. Each species is provided a differential diagnosis comprising distinguishing features and new records and/or distribution extensions are commented upon. A new genus, *Meniscomyia* (**n. gen.**) and species, *Meniscomyia phaia* (**n. sp.**), distinctive within the Plastotephritinae, are described, despite having just a single specimen.

INTRODUCTION

The taxonomic position of *Federleyella* Frey, 1932 and its relationship with *Conopariella* Enderlein, 1922 and the junior subjective synonym *Anaphalantias* Enderlein, 1922 had its inception based on a single female specimen with the briefest of diagnosis. Such sparsity of material on which to base new taxa is not unusual in these small signal flies, as they may be overlooked in the field during collecting and brief diagnoses were not uncommon at that time. The similarity of morphology within this group of genera within the Plastotephritinae has resulted in some confusion during identification of specimens, which I hope to rectify here.

Enderlein (1922, p.12) described *Conopariella*, separating it from *Plastotephritis* Enderlein, 1922 (p.6), based on the shape of the gena being cone-like and strongly diverging outwards and downwards, the presence of four (as opposed to six) scutellar setae and the position of cross-vein *r-m* a little distal to the middle of the discoid cell (*dm*). Three new species were assigned to the genus: *C. acutigena* Enderlein, 1922 based on a male and a female specimen, *C. crenata* Enderlein, 1922 based on a pair of male specimens and *C. togoensis* Enderlein, 1922 based on a single male specimen.

Two pages later, Enderlein then described *Anaphalantias* (1922, p.14), separating it from *Plastotephritis* on the basis of four (as opposed to six) scutellar setae, the position of cross-vein *r-m* at the middle of the discoid cell (*dm*) qualifying that as “rarely a little bit proximal”. Four species were assigned to this genus: *A. picipennis* Enderlein, 1922 based on three male and two female specimens, *A. pallidipes* Enderlein, 1922 based on a single male specimen, *A. albitarsis* Enderlein, 1922 based on a single male specimen and *A. septemfenestrata* Enderlein, 1922, based on a single female specimen, but incorrectly annotated by Enderlein (1922) on the type label and in the description as a male (see Whittington 2003, p.131).

In the key to species, Enderlein (1922, p.4) separated *Conopariella* from *Anaphalantias* in the following manner:

Male: cheek normally or only strongly cheek-shaped and broadened. Anterior transverse vein in the middle of the discoid cell, rarely a little proximal *Anaphalantias*

Male: cheek conically extended and strongly diverging. Anterior transverse vein a little distal to the middle of the discoid cell *Conopariella*

These supposedly diagnostic features hardly allow for confident placement of specimens in either of the two genera. In recognition of this, Frey (1932) synonymised *Anaphalantias* with *Conopariella*, because the distinction based on unexpanded gena and position of cross-vein *r-m* along cell *dm* seemed to him to be arbitrary. He therefore moved *A. albitarsis*, *A. pallidipes* and *A. picipennis* to *Conopariella*, but created a new monotypic genus, *Federleyella*, for the species *Anaphalantias septemfenestrata*. Frey explained that the new genus was distinct from *Conopariella* (= *Anaphalantias*) because the shape in profile projected at the mouth margin (despite his earlier criticism about the arbitrariness of head shape), vein *Cu* with setulae for its full length, the scutellum has 4 marginal setae and “wings rather short and blunt” - seemingly no less arbitrary and all of which (except the condition of setulae on *Cu*) are consistent with species placed in *Conopariella* by Frey (1932).

In the most recent revision of the subfamily Plastotephritinae (Whittington 2003), I doubtfully retained the status of *Federleyella* supported by previously unexamined specimens, but rather slim characterisation and at the time, I considered the characters used by Frey (1932) to be unreliable. Even the condition of setulae along the vein *Cu* became questionable, as there were specimens not included in Frey (1932) that were better placed in *Conopariella* than in *Federleyella* that did have these setulae. Seeking more substantial characterisation, I re-evaluated the two genera as part of a larger revision of all the Afrotropical members of the subfamily, noting the sexually dimorphic nature of head shape and the presence of setae on vein *Cu* in members of both *Conopariella* and *Federleyella*.

Notably, in some species of *Conopariella* (e.g. *C. tibialis* Hendel, 1914) there is little difference in the head profile compared with that of *F. septemfenestrata*. Both genera have two pairs of scutellar setae. The ‘short blunt wings’ of *Federleyella* is now found to be a subjective statement as there was no difference between the body to wing length ratio in the two genera, which ranges from 0.7 to 1.1 for *Conopariella* and 0.9 to 1.0 for *Federleyella*.

At the time, it seemed that the two genera could be separated by the presence of distinctive morphological differences of the medial surstylus of the male genitalia. *Federleyella septemfenestrata* shared with *C. pallidipes*, which I moved to *Federleyella*, a basal spur on the external surface of the medial surstylus that articulates with a corresponding notch in the lateral surstylus and a bilobed apex (here referred to as condition A). All other members of *Conopariella* lack this spur and notch of the surstyli, and in its place the apex of the medial surstylus is modified into various shaped structures, which in the simplest form could include bilobed (here referred to as condition B) and more complexly, tri-lobed (e.g. *C. picipennis*) or with elongate apical protrusions (e.g. *C. crenata*). In *C. paucifenestrata* (Steyskal, 1963) there is a small basal spur on the inner face of the medial surstylus that apparently articulates with nothing obvious, but may serve for muscle attachment. This feature being male, left female identification in question and at the time I proposed that respective body size and wing length would separate female specimens in *Conopariella* (larger) or *Federleyella* (smaller).

In the 2003 revision, I defined the *Conopariella-Federleyella* generic group, by the following subset of synapomorphies:

Arista plumose; inner vertical setae reduced and hair-like, often indistinguishable from post-ocellars; postpronotal seta absent; 2 pairs of scutellar setae; setulae present ventrally on R_{2+3} and/or on M_1 , in addition to setulae dorsally along length of R_1 and R_{4+5} ; wing membrane generally dark brown with hyaline spots and incisions.

and further separated *Conopariella* and *Federleyella* in the key to genera in the following manner (Whittington 2003, couplet 18):

Medial surstylus of male genitalia bilobed at apex, having an outward directed hook midway along stem, which articulates with a notch in lateral surstylus (figs. 272 & 273) [♂] Body length 2.7-3.3 mm; wing length 2.7-3.8 mm; ♀ body length 2.7-3.4 mm; wing length 2.9-3.8 mm] *Federleyella* Frey, 1932

Medial surstylus of male genitalia modified at apex, hooked and sickle-shaped, or with an extended apical lobe (fig. 197); stem of medial surstylus lacking an outward projecting hook [♂] Body length 3.5-3.9 mm; wing length 4.0-4.9 mm; ♀ body length 3.2-5.5 mm; wing length 3.9-5.5 mm] *Conopariella* Enderlein, 1922 part (*C. paucifenestrata* (Steyskal, 1963) & *C. exigua* Whittington, 2003).

All other members of *Conopariella* were separated in the previous couplet (17) as lacking setulae on vein *Cu*. The original combination for the species *paucifenestrata* was *Federleyella paucifenestrata* Steyskal, 1963, which I moved to *Conopariella*, on the basis of the condition of the medial surstylus, which is shared with all other members of *Conopariella*. In hindsight, this was in fact little different to the position suggested by Frey in 1932, that is, that *Conopariella* (except *C. paucifenestrata* & *C. exigua*) lacked setulae on *Cu* while members of *Federleyella* had them.

The questions I should have asked were:

1. does the shape of the medial surstylus of the male genitalia sufficiently outweigh the presence or absence of *Cu* setulae as evidence to separate these two groups of species?
2. or conversely does the presence or absence of *Cu* setulae sufficiently outweigh the condition of the male medial surstylus?
3. or does neither condition sufficiently outweigh the other and the members of this group all belong to one genus?

On the one hand we have:

all *Conopariella* (except *C. paucifenestrata* & *C. exigua*) lacking setulae on *Cu* and having apically modified medial surstylus of male genitalia

and on the other we have:

Federleyella plus *C. paucifenestrata* (previously placed in *Federleyella* by Steyskal (1963)) & *C. exigua* newly described and placed in *Conopariella* by myself in 2003 rather than in *Federleyella*, having setulae on *Cu* and having a combination of apically modified or bilobed medial surstylus with or without an outward directed hook midway along the stem, which articulates with a notch in the lateral surstylus of male genitalia.

Even though the presence of setae on *Cu* separates *F. pallidipes*, *F. septemfenestata*, *C. exigua* and *C. paucifenestrata*, these four taxa share both conditions of the medial surstylus, such that *F. pallidipes* and *F. septemfenestata* have condition A while *C. exigua* and *C. paucifenestrata* along with all other members of *Conopariella* have condition B.

In the light of new material before me and in the interests of clarification, I wish to revisit this decision and re-evaluate the position of *Federleyella*. Within this newly collected material is a long series of specimens collected in 2010 by the late Amnon Freidberg, which lead me to re-evaluate the position of *F. pallidipes* and *F. septemfenestata*.

Given the amount of sexually dimorphic variation in Plastotephritinae as a subfamily, and within the genus *Conopariella* more specifically and given the difficulties in clearly diagnosing *Federleyella* from *Conopariella*, it is now clear that the former genus is a junior subjective synonym of the latter and that *F. septemfenestrata* is a junior subjective synonym of *F. pallidipes*. I hereby formally synonymise *Federleyella* with *Conopariella* (**n. syn.**) and move *F. pallidipes* back to *Conopariella* (*sensu* Steyskal 1980), placing *Anaphalantias septemfenestrata* in synonymy with *Conopariella pallidipes* (**n. syn.**).

Accordingly, the character states previously used to define the two genera require re-evaluation, particularly those of the surstylus of male genitalia, which could be viewed as a progression from simple (condition A: basal spur articulates with a corresponding notch in the lateral surstylus, apically bilobed) to complex (condition B: basal spur is lost, but the apex of the medial surstylus is complexly modified). The presence or absence of the setulae along *Cu* then becomes questionable as a generic character, especially as these may be broken off and the alveoli of which can be difficult to discern using a light microscope, and at best, defines a group of species within the genus *Conopariella*.

The presence or absence of setulae along *Cu* is also used to distinguish *Atopocnema* Enderlein, 1922 from *Venacalva* Whittington, 2003. While the use of setulae along *Cu* may need to be re-evaluated for this pair of genera, there are several other apomorphies supporting the distinction between the two and, given that so little material was available for *Venacalva* (14 specimens) I would only wish to do this when fresh material becomes available.

Finally, a single unique specimen from Republic of Côte d'Ivoire, with highly diagnostic features was found among unsorted specimens from Muséum National d'Histoire Naturelle, Paris. This specimen clearly represents a genus close to *Conopariella* that has not previously been described and was overlooked during the 2003 revisionary work. Despite only having a single specimen, I have no hesitation describing it here, as it cannot be confused with any known genera because of the atypical wing pattern. This distinctive new species is incorporated into a revised key for the genera within the Plastotephritinae.

MATERIAL AND METHODS

This paper applies the evolutionary species concept in its broad sense, *i.e.*, “A species is a single lineage of ancestor-descendant populations which maintain its identity from other such lineages and which has its own evolutionary tendencies and historical fate” (Wiley 1981: 25). Nomenclatural checks were conducted in *Systema Dipteriorum* (Evenhuis & Pape 2024), GBIF (2025), Zoobank (2024) and the Index to Organism Names (ION) (Clarivate Analytics 2009) to ensure the new generic name has not been previously used.

Descriptions are based solely on morphological criteria as observed using a using a Motic M-400 binocular dissecting microscope. Body measurements and photographs taken using a Euromex CMEX-10 Pro USB 3.0 camera c-mounted onto a Wild Heerbrugg M5 dissecting microscope linked to ImageFocusAlpha software (Version 1.3.7.27993.250901). Composite images were constructed from stacked multiple-plane images using depth map rendering in Helicon Focus (Version 8.3.6). Body length was taken in dorsal or lateral aspect (whichever was more suitable for the specimen) from the ptilinal suture to the apex of tergite 5 (taken as a sum of lengths if the abdomen was deflexed); wing lengths were taken from the apex of the tegula in a straight line to the apex of the wing. Where possible the right wing was measured, but if missing or crumpled the left wing was measured. The ratio of the discal cell (*d-m*) was derived from the length through the middle of the cell divided by the width at the position of crossvein *r-m*.

Species accounts include a list of the previously published works, a brief diagnosis (for revisionary descriptions see Whittington 2003; new taxa are given a full description), discussion of relevant characters, a list of additional material, which refers to specimens seen since Whittington (2003) and distribution, which is cumulative of the old and new material examined. To avoid confusion dates have been standardised to the format dd.mm.yyyy with the month in lower case Roman numerals and institutional coden are given last in square parentheses.

Material identified as belonging to the Plastotephritinae was loaned from the following Institutions (codens used in the text consistent with Evenhuis 2025):

AEWC – private collection of the author.

ANHRT – African Natural History Research Trust, Leominster, England.

NMBZ – Natural History Museum of Zimbabwe, Bulawayo, Zimbabwe.

FBUB – Universität Bielefeld, Bielefeld, Germany.

MNHN – Muséum National d'Histoire Naturelle, Paris, France.

NHMUK – Natural History Museum, London, England.

RMCA – Musée Royal de l'Afrique Centrale, Tervuren, Belgium.

TAU– Tel Aviv University collection, Tel Aviv, Israel.

Terminology and abbreviations concerning gross morphology generally follow Cumming and Wood (2017). To avoid complication, figures referred to in previous publications are referred to in lower case (fig., figs or figure), while figures in this paper are referred to as Fig., Figs or Figure. The figures previously published in the 2003 revision have not been reproduced here, so there is need to use both the revision and this paper together.

Photographic records posted on public interest websites, such as iNaturalist that feed into GBIF sometimes have questionable identifications because many of the characters used in identification are either not visible or require high magnification. In some cases it is possible to make reasonable identifications from photographs and these records are listed for the relevant species under the heading *Multimedia material*. This can be particularly helpful in understanding the distribution of the species, given that at the time of description, knowledge of many species was limited by the number of specimens available to study in museum collections.

TAXONOMY

Errata: In Whittington (2003), figure 3 labelling of acrostichal and dorsocentral setae were inadvertently transposed. The corrected image is provided here as Figure 1.

Enderlein (1922) proposed the tribe Plastotephritini, but used it in the context of the family Ortalidae. Nevertheless, *Plastotephritis* is the type genus for both the subfamily Plastotephritinae and the tribe Plastotephritini. In my 2003 revision, I demonstrated that the then 18 genera could be divided into two distinct groups based on the extent of pubescence on the arista (pubescent or plumose) in combination with the number of well-developed setae on the vertex (inner and outer vertical setae well developed versus only outer vertical setae well developed). This arrangement divided the subfamily into two tribes Agrochirini Whittington, 2003 and Plastotephritini Enderlein, 1922, and the Agrochirini were further divided into the *Agrochira*-group and the *Cladoderris*-group based on subjective assessment. In error, *Prosopoconus* Enderlein, 1922 was included in the *Agrochira*-group of the Agrochirini, when it should have been placed in the Plastotephritini.

Based on the presence of a plumose arista and single vertical seta (the outer vertical setae well developed, while the inner vertical setae is thin and hair-like) the new genus described below can be placed with the tribe Plastotephritini and clearly has a close affinity with *Conopariella*.

This arrangement enabled a pragmatic division of the genera, facilitating a reasonable dichotomy in the development of the key to genera, but it did mean that the comparison of synapomorphies '3 pairs of scutellar setae' versus '2 pairs of scutellar setae' was repeated more than once in the key. This remains a useful means to separate members of the subfamily into two groups, but it highlights the arbitrariness of the subjectively based key and was found to result in clusters of genera that were not entirely logical. For example, those genera having 2 pairs of scutellar setae include *Furcamyia* Whittington, 2003, *Agadasys* Whittington, 2000, *Pterogenomyia* Hendel, 1914, *Conopariella* and the new genus. This is certainly counterintuitive, as *Agadasys* has a radiate wing pattern and is best placed in the *Cladoderris*-group with *Cladoderris* Bezzi, 1914, *Eudasys* Whittington, 2003 and *Stellapteryx* Whittington, 2003. Likewise, *Furcamyia* has raptorial forelegs and clearly has affinities with *Agrochira* Enderlein, 1911 and *Mesanopin* Enderlein, 1912 in the *Agrochira*-group.

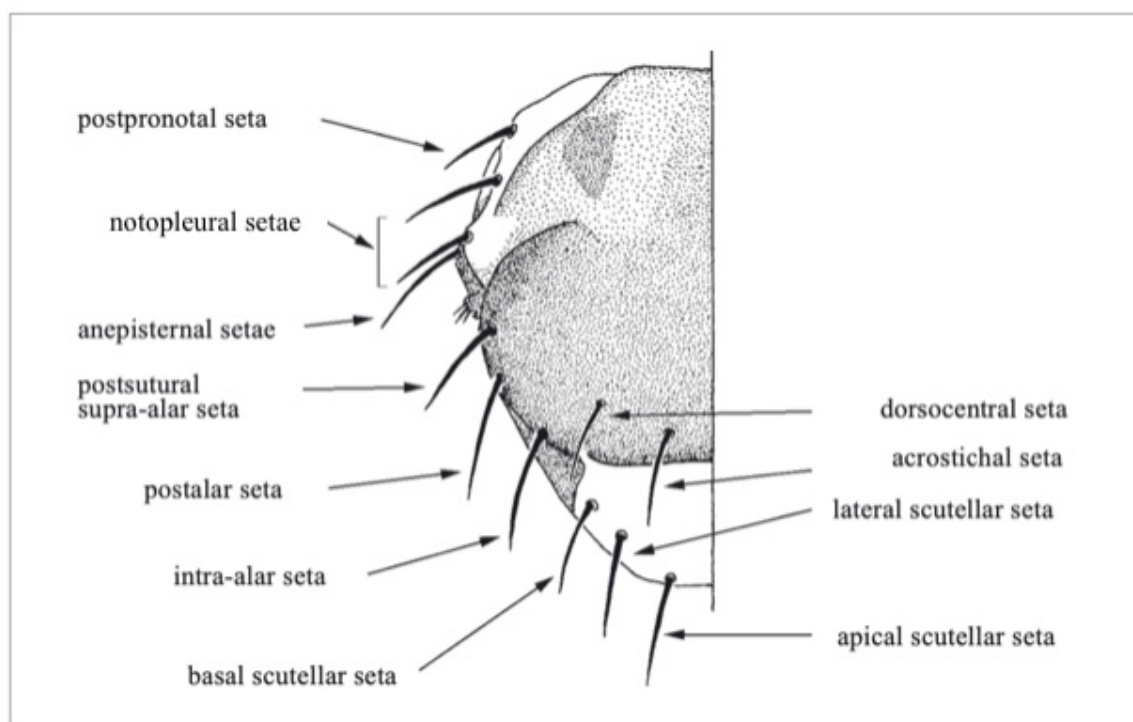


Figure 1. Correction of the labelling for acrostichal and dorsocentral setae, inadvertently transposed in Whittington, 2003, fig. 3.

Given the new genus and the above mentioned changes to nomenclature, the key to genera of the Afrotropical and Oriental members of the subfamily Plastotephritinae is revised below and supersedes that published by Whittington (2003).

Key to Plastotephritinae genera

1. Arista pubescent (Whittington 2003, fig. 24) *and* inner and outer vertical setae present (Whittington 2003, figs. 24 & 25) **2**
- Arista plumose (Whittington 2003, figs. 169 & 170) *and* only outer vertical setae strongly developed (inner vertical setae reduced and setula-like, often indistinguishable from postocellar setae - Whittington 2003, figs. 169–171) **9**
2. Wings with brown membrane with hyaline spots and bars (Whittington 2003, fig. 29); fore femur distinctly raptorial, with multiple spines on ventral surface (Whittington 2003, fig. 28) (these may be present only as small tubercles in females, e.g. *Mesanopin tridens* Whittington, 2003).. **3**

- Wings with radiate brown pattern along the wing venation (Whittington 2003, fig. 113), sometimes combined with brown spots (Whittington 2003, fig. 556); fore femur sometimes distinctly setose, but not spinose, at most with a single ventral spine 6
- 3. 3 pairs of scutellar setae (Whittington 2003, fig. 27) 4
- 2 pairs of scutellar setae (Whittington 2003, fig. 285) *Furcamyia* Whittington, 2003
- 4. Inner vertical setae clearly shorter and weaker than outer vertical setae (Whittington 2003, figs. 435–437); notum strongly microtrichose; hind trochanter with a setulose ventral lobe (Whittington 2003, fig. 438); hind tibia bent inwards at apex (Whittington 2003, fig. 439)
..... *Micronesomyia* Whittington, 2003
- Inner vertical setae equal to or similar in length to outer vertical setae (not distinctly weaker) (Whittington 2003, figs. 24 & 25); notum lacking distinct patterns of microtrichia; hind legs simple..... 5
- 5. Lateral surstylus of male genitalia elongate, equal to or longer than length of epandrium (Whittington 2003, fig. 47); aculeus tip sharply pointed (Whittington 2003, fig. 39); wing pattern lacking r_{2+3} hyaline spots (Whittington 2003, fig. 36)..... *Agrochira* Enderlein, 1911
- Lateral surstylus of male genitalia reduced, much shorter than length of epandrium (Whittington 2003, figs. 324); aculeus tip bluntly rounded (Whittington 2003, fig. 334); wing pattern frequently with hyaline spots in r_{2+3} (Whittington 2003, fig. 323)..... *Mesanopin* Enderlein, 1912
If in doubt and specimen has a broad head, then check key for *Agrochira* and couplet 6 of key for *Mesanopin* (see Whittington 2003)
- 6. Postpronotal setae present (Whittington 2003, fig. 111); setulae inconspicuous and sparse 7
- Postpronotal setae absent (Whittington 2000 fig. 4; Whittington 2003, fig. 4); conspicuous white setulae interspersed among black setae and setulae, on head, scutellum and abdomen (Whittington 2000 figs. 1-5 & 8) 8
- 7. Orbital setae compressed – distinctly broader in lateral view than in frontal view (Whittington 2003, figs. 108 & 109); fore femur strongly setose ventrally, setae inserted normally in alveoli; hind trochanter of male with a long curved, posteriorly directed spur on ventral surface and a compact knob on inner dorsal surface (Whittington 2003, fig. 112); hind tibia of male simple *Cladoderris* Bezzi, 1914
- Orbital setae cylindrical – not distinctly compressed (Whittington 2003, figs. 542 & 543); male fore femur with at most one spine present, otherwise usually strongly setose ventrally and setae inserted on small tubercles (Whittington 2003, fig. 545), and inserted normally in alveoli in females; hind trochanter of male rounded on inner ventral margin; hind tibia of male swollen at apex and slightly concave, concavity bounded by a dense fringe of black setulae (Whittington 2003, figs. 554 & 555)..... *Stellapteryx* Whittington, 2003
- 8. Eye bare; ocellar triangle small, slightly raised above frons, with two long thin ocellar setae (Whittington 2003, fig. 258); orbital plate extended dorsally, thus raised well above top margin of eye in lateral view, beset with dense tufts of setae (Whittington 2003, figs. 257 & 258); 3 pairs of scutellar setae (Whittington 2003, fig. 259) *Eudasys* Whittington, 2003
- Eye distinctly haired (Whittington 2000 figs. 1-3); ocellar triangle elongate, strongly raised above frons, with 3 pairs of thick ocellar setae - a white pair anterior to lateral ocellus, a black pair above lateral ocellus and posterior white pair behind medial ocellus (Whittington 2000 figs. 1-3); orbital plate only slightly raised above level of vertex, not distinct in lateral view, lacking tufts of setae, having two strongly thickened (in lateral view) orbital setae; 2 pairs of scutellar setae (Whittington 2000 figs. 4 & 5) *Agadasys* Whittington, 2000

9. 3 pairs of scutellar setae (Whittington 2003, fig. 91) (unusually sometimes 4 pairs in *Atopocnema*)..... 10
- 2 pairs of scutellar setae (Whittington 2003, fig. 150)..... 16
10. Lower facial margin strongly protruding forward, to beyond apex of postpedicel (Whittington 2003, figs. 528 & 529) *Prosopoconus* Enderlein, 1922
- Lower facial margin not protruding further than base of postpedicel (Whittington 2003, fig. 453) 11
11. Abdomen strongly sclerotised and sculptured, hemispherical in shape – tergites arching around laterally and distally to form a concave shell (Whittington 2003, fig. 445).....*Oeciotypa* Hendel, 1914
- Abdomen not heavily sclerotised, lacking sculpture, ovoid to elongate in shape and slightly dorsoventrally compressed or cylindrical (not a concave hemisphere)..... 12
12. Fore and mid femora of males and fore femur of females having ventral row of short black setae (Whittington 2000 figs. 21 & 22); costal cell broad - distance from *C* to *R*₁ twice dimension of *r-m* (Whittington 2000 fig. 24); abdomen weakly sclerotised, prone to collapse or to become misshapen in dried specimens..... *Rhegmatosaga* Frey, 1930
- Fore and mid femora at most strongly setulose, entirely lacking short setae; costal cell narrower than twice length of *r-m* (Whittington 2003, fig. 78), but in some cases nevertheless noticeably broad, but then abdomen normally sclerotised and not prone to collapse in dried specimens.... 13
13. Postsutural acrostichal seta present adjacent to hind margin of notum (Whittington 2003, fig. 91); face and frons narrow (about as wide as length of antennae), frons less than twice as broad as high between ptilinum and medial ocellus (Whittington 2003, figs. 89 & 90) 14
- Postsutural acrostichal setae absent (Whittington 2003, fig. 490); face and frons broad (wider than length of antennae), frons at least twice as broad as high (Whittington 2003, fig. 487) . 15
14. Setulae always present on *Rs* and *Cu* (Whittington 2003, fig. 70); arista long plumose – dorsal and ventral rays together exceed width of postpedicel (Whittington 2003, fig. 68); outer margin of hind trochanter sometimes extended into a lobe; hind tibia of male swollen at apex to almost twice width of base of tibia and terminating in an acute angle on outer margin, with this surface glabrous and slightly concave and bounded by a dense fringe of black setulae (Whittington 2003, fig. 69); face usually tuberculate (Whittington 2003, fig. 68) *Atopocnema* Enderlein, 1922
- Setulae always absent on *Cu*, usually absent on *Rs* (Whittington 2003, fig. 565); arista short plumose – dorsal and ventral rays together less than or equal to width of postpedicel (Whittington 2003, fig. 563); inner surface of hind trochanter distally extended as a lobe (Whittington 2003, fig. 564); hind tibia of male either not modified or modification is only slight and not readily noticeable, without fringe along border; face concave - evenly curved between antennal sockets and lower facial margin, which extends forward forming a narrow “lip” (Whittington 2003, fig. 563)..... *Venacalva* Whittington, 2003
15. Head of male frequently triangular in frontal view with gena expanded laterally (Whittington 2003, fig. 593); face tuberculate or concave, lower facial margin protruding forward beyond a line level with apex of pedicel (Whittington 2003, fig. 594); apex of male hind tibia elaborately modified (Whittington 2003, figs. 597 & 619); gena shallow, <15% of height of head in frontal view (Whittington 2003, fig. 593) *Xyrogena* Whittington, 2003
- Head rounded to oval in frontal view; gena of males unmodified (Whittington 2003, fig. 487); face flat, lower facial margin in approximately same plain as face (Whittington 2003, figs.

488 & 494), rounded (Whittington 2003, fig. 487) or an even curve (Whittington 2003, fig. 493) in frontal view; male hind tibia unmodified (Whittington 2003, fig. 486); gena deep, >20% of height of head (Whittington 2003, fig. 488 & 494) *Plastotephritis* Enderlein, 1922

16. Postpronotal setae present; notum lacking postsutural acrostichals; serial setulae sometimes present ventrally on R_1 basal to pterostigma and/or on base of R_{4+5} , in addition to serial setulae dorsally along length of R_1 and R_{4+5} (Whittington 2003, fig. 535), but never along R_{2+3} nor on M_1 ; wings striped (Whittington 2003, fig. 535); posterior orbital seta reduced and setula-like (Whittington 2003, figs. 533 & 534); large species - wing length exceeding 6.9 mm *Pterogenomyia* Hendel, 1914
- Postpronotal setae absent (Whittington 2003, figs. 140 & 174); notum with postsutural acrostichals (Whittington 2003, fig. 174); serial setulae present ventrally on R_{2+3} and/or on M_1 , in addition to setulae dorsally along length of R_1 and R_{4+5} ; wing membrane generally dark brown with hyaline spots and wedge shaped marginal incisions (Whittington 2003, figs. 151 & 234); posterior orbital seta at most a little shorter than anterior orbital seta (Whittington 2003, fig. 149); small species - wing length less than 6.5 mm 17
17. Major setae on notum of approximately equal length; veins R_{4+5} and M_1 more or less straight and parallel to diverging; serial setulae present dorsally along length of R_1 and R_{4+5} (and in some species along Cu and/or M_4) and ventrally on R_{2+3} and/or on M_1 ; wing membrane generally dark brown with hyaline spots and wedge shaped marginal incisions; dm elongate, approximately 4 times longer than wide (Whittington 2003, fig. 151) *Conopariella* Enderlein, 1922
- Postalar and lateral scutellar setae longer than other major setae; veins R_{4+5} and M_1 strongly curved in an almost parallel arc; serial setulae present dorsally along length of R_1 and R_{4+5} and ventrally on M_1 , but none ventrally on R_{2+3} ; wing membrane banded in non-parallel arcs following the curve of veins R_{4+5} and M ; cell, dm short, approximately 2 times longer than wide (Fig. 2) *Meniscomyia gen.n*

Note: Two genera (*Agadasys* Whittington, 2000 & *Rhegmatosaga* Frey, 1930) are distributed in the Oriental regions, the remainder are all Afrotropical in the sense of the revised concept of the region as outlined in Kirk-Spriggs (2017: 2, fig. 1.1) which extended the region eastwards to include the modern coastal Arabian states of Oman, United Arab Emirates and Yemen.

***Conopariella* Enderlein 1922**

Conopariella Enderlein, 1922: 12 (description). Type species: *Conopariella acutigena* Enderlein, 1922, by original designation. Frey 1932: 257 (key), 260 (discussion + key to species); Steyskal 1980: 564 (catalogue); Whittington 2003: 79 (revision, key, description, illustrated).

= *Anaphalantias* Enderlein, 1922: 14 (description). Type species: *Anaphalantias picipennis* Enderlein, 1922, by original designation. Frey 1932: 260 (synonymy); Steyskal 1980: 564 (catalogue).

= *Federleyella* Frey, 1932: 263, plate VIII, figure 43 (wing). Type species: *Anaphalantias septemfenestrata* Enderlein, 1922, by original designation (as *fenestrata* in error). Frey 1932: 257 (key); Steyskal 1963: 133, key to species; Steyskal 1980: 564 (catalogue); Whittington 2003: 123 (revision, key, description, illustrated). **n. syn.**

Redescription: largely based on Whittington (2003).

Measurements. Male Body length 2.7 - 5.6 mm; wing length 2.7 - 6.3 mm.

Female body length 2.7 - 6.1 mm; wing length 2.9 - 6.3 mm.

Colour/Vestiture: Ground colour pale yellowish with dark brown markings, exceptionally entirely brown; wing membrane mostly dark brown with hyaline spots and incisions. Setulae on extended male gena dense, brown and a mixture of two distinct lengths (very short and long). Subvibrissal setulae black, brown or pale yellow; sometimes a mixture of dark setulae on ventral portions and pale setulae

dorsally. Silver microtrichia weak and difficult to discern; most noticeable on thoracic pleurites (view from and acute angle from below).

Head: Elongate and anteroposteriorly compressed (slightly more so in males than in females), vertex much narrower than thorax. Face indented slightly under antennae, but lower facial margin projecting only a little at margin. Low, poorly developed tubercle present below antennal grooves, which are shallow. Eye elongate, oval, reddish-brown. Frontogenal and ptilinal fissures not meeting, usually separated by distance equal to approximately half width of postpedicel. Frons narrowing dorsally, tinted with orange of buff adjacent to ptilinal fissure; having brown-bronze microtrichia. Ocellar triangle elongate, positioned forward of orbitals. Lunule equal to vertical dimension of scape. Antenna pendulous, buff to yellow-brown; scape set dorsal to midway down length of head; arista long plumose - longest setulae as long as postpedicel is wide and arranged in five series, with dorsal and ventral series longest, the others protruding at equal angles in between (two on inner surface and one on outer surface). Pedicel with a latero-ventral fringe of long brown to yellowish setulae. Middle of vertex slightly sunken below level of top margin of eye. Gena shallower than distance between apex of antenna and lower facial margin. Postgena slightly swollen, roughly equal to width across the lower quarter of eye. Palp flattened, strongly setose. Supracervical setulae evenly spaced, silver in colour. Setae: 1 pedicel, 1 divergent (slightly reclinate) ocellar the anterior of which is slightly more robust, 1 parallel-to-divergent post-ocellar, 2 reclinate orbitals (anterior one slightly more robust), 1 vertical, 1 strong genal (present in females only). Postocular row distinct, merging distally with background setation on gena and continuing dorsally adjacent to post-ocellars.

Thorax: Setulae short, recumbent, and quite dense, generally silver-white, but black over dark body parts; strongly developed on posterior margin of mesonotum, centre of anepimeron, ventral parts of katapisternum and coxae. Notum longer than broad, broadest across anepisternum. Anepisternal phragma evident in some species. Katatergite slightly bulging. Margin between katatergite and anatergite usually defined by broad but shallow furrow. Posterior spiracle close to base of halter. Setae strong and well developed: 2 notopleural (posterior one raised on callus), 1 supra-alar, 1 postalar, 1 intra-alar, 1 postsutural dorsocentral, 1 postsutural acrostichal, (both latter along posterior margin of scutum), 1 lateral and 1 apical scutellar; 1 tegular (plus some smaller strong, black setulae). Subalar sclerite dark brown and densely covered with velvet-like pubescence. Scutellum asetulose. **Legs:** completely pale buff-yellow or creamy-white to marked with brown rings or tibiae entirely brown to dark brown; tarsi pale buff to orange-brown. Fore coxa with 2 long pale apical setae; mid coxa with single long dorsal setae. Mid coxal prong pointed at apex, curved throughout length. Mid coxa developed into a flat fringe, which curves ventrally under trochanter a short way and is strongly setose at apex. Mid tibia with strong ventral pre-apical seta longer than width of apex of tibia. Setulae of legs pale (sometimes black on tibiae), conspicuous and long baso-laterally on fore femur and dorsally on apex of final tarsomere, curving over apex in front of the claws. Ventral setulae of tarsomeres slightly stouter and denser than other setulae on legs, apical two or three tarsomeres of fore and mid legs with short black preapical setulae across latero-ventral margins, most strongly developed on middle leg. Empodium setiform, small and inconspicuously situated between large, pale pulvilli. Claws strongly developed, setose on basal half.

Wing: Costa with pre-humeral, humeral and subcostal weakness (but no distinct breaks); pre-humeral weakening marked by stronger setulae basally and weaker setulae apically. Subcosta sinuous, ending in slight swelling, evanescent beyond swelling and toward costa (occasional specimens have the appearance of an entire subcosta, but on turning toward costa it continues as a fold in the membrane); *Sc-R* spur poorly or only partially developed. R_{2+3} slightly sinuous to straight; and M_1 arcing forward slightly after dm , before curving to posterior to terminate at wing margin. Setulae dorsally on entire length of R_1 and R_{4+5} ; ventrally on basal quarter to three quarters of R_{2+3} (if present at all), R_{4+5} (some species) and middle portion of M from just before $r-m$ to just beyond end of dm ; some species with setulae dorsally on all or part of Cu . First basal cell (*br*) narrowed slightly at midpoint by in-curving

R_{4+5} . Discal cell (dm) broader distally than basally, slightly curved along anterior margin at junction with $r-m$. Calypter smoky grey with dark brown margin and marginal fringe of long, black setulae.

Abdomen: Ovate, broadest across margin between T_{1+2} and T_3 ; pale on T_{1+2} , remaining tergites black or dark-brown; pleurites concolorous with pale yellowish sternites. Sternites narrow, about one third width of tergites; pleurites and sternites pale buff-yellow; pleurites membranous.

Male genitalia: Short dorsal spur midway along S_7 . Epandrium rounded to sub-square; proctiger and hyperproct membranous, having many short setulae, stouter and denser ventrally than dorsally. Lateral surstylus broad, apically blunt, curved around apex of medial surstylus. Medial surstylus apically hooked and sickle-shape, usually fused to lateral surstylus on outer bend of “sickle” or bilobed, in which case distal lobe ventral to more basal lobe and heavily sclerotised at apex; basal (and more dorsal) lobe not heavily sclerotised; stem with an outward directed hook basally which articulates with a corresponding notch in the lateral surstylus. Base of ejaculatory apodeme membranous, large and bulbous, apex weakly sclerotised. Distiphallus, phallapodeme and hypandrium variable (weakly to strongly sclerotised); distiphallus short and stout, sometimes weakly annulated on dorsal surface and finely microtrichose. Glans a complex association of interlocking sclerites, with basal caeca and apical vesica variably developed, sometimes with a small basal sclerotised bar.

Female genitalia: T_6 reduced to a narrow slightly sclerotised strip or completely absent. T_6 and oviscape tucked under T_5 . S_6 approximately half as wide as preceding sternites. Oviscape conical, shorter dorsally than ventrally, concolorous with distal segments of abdomen, thus contrasting ventrally with pale sternites and pleurites; ovipositor short; eversible membrane ornamented on apical half with fine, parallel but curved wrinkles; aculeus blade-like; aculeus tip pointed apically, finely ornamented with setulae on main body and 2-5 long apical setulae on each side. Three rounded spermathecae; spermathecal ducts arranged in a 2+1 sequence, vagina covered with fine microtrichia at apex and with a single finger-like vesicle protruding from apex near base of spermathecal ducts.

Differential diagnosis. The combination of the following characters distinguishes *Conopariella* from other genera in the subfamily: Arista plumose; gena in males of many species laterally expanded, the head shape therefore triangular to sub-triangular, oval in females; inner vertical setae reduced and hair-like, often indistinguishable from post-ocellar row; postpronotal seta absent, notum with postsutural acrostichal setae present; two pairs of scutellar setae; setulae present ventrally on R_{2+3} and/or on M_1 , in addition to setulae dorsally along length of R_1 and R_{4+5} ; row of setulae present dorsally along Cu in some species; wing membrane generally dark brown with hyaline spots and incisions; medial surstylus of male genitalia apically modified (bilobed, hooked, sickle shaped or with an extended apical lobe).

Along with 9 other genera (listed below), *Conopariella* is assigned to the Tribe Plastotephritini, all of which have a plumose arista and 1 distinct pair of vertical setae, the medial pair being reduced and similar in length to the postocular row. The Plastotephritini includes: *Atopocnema*, *Conopariella*, *Oeciotypa*, *Meniscomyia* **gen.n.** *Plastotephritis*, *Prosopoconus*, *Pterogenomyia*, *Rhegmatosaga*, *Venacalva* and *Xyrogena*. The genera *Oeciotypa*, *Prosopoconus* and *Rhegmatosaga* are clearly distinguished from *Conopariella* in the key above. *Conopariella*, *Meniscomyia* **gen.n.** and *Pterogenomyia* which have two pairs of scutellar setae distinguishing them from *Atopocnema*, *Plastotephritis*, *Venacalva* and *Xyrogena*, all of which have three pairs of scutellar setae. Among other characters detailed in the key above, *Conopariella* and *Meniscomyia* **gen.n.** can generally be distinguished from *Pterogenomyia* by the body size and wing pattern, *Pterogenomyia* being noticeably larger and having a striped wing pattern (Whittington 2003, fig. 535) and the absence of postpronotal setae and presence of postsutural acrostichal seta on the notum. Finally, *Conopariella* can be distinguished from *Meniscomyia* **gen.n.** by the relative length of major setae on the notum (see key) and wing venation and pattern.

Etymology – *cono-* derived from *konos* Gr. m. - cone, and *pario* (from *pareion*) Gr. neuter - cheek and the diminutive suffix *-ellus* in the feminine form of endearment, hence *-ella*; i.e. “little cone cheek” compared with the “larger cone cheek”. Gender feminine.

Included species –

Conopariella acutigena Enderlein, 1922
Conopariella albitarsis (Enderlein, 1922)
Conopariella cidara Whittington, 2003
Conopariella conspicua Frey, 1932
Conopariella crenata Enderlein, 1922
Conopariella exigua Whittington, 2003
Conopariella pallidipes (Enderlein, 1922) **combination reinstated**
Conopariella paucifenestrata (Steyskal, 1963)
Conopariella picipennis (Enderlein, 1922)
Conopariella steyskali Whittington, 2003
Conopariella tibialis (Hendel, 1914)
Conopariella togoensis Enderlein, 1922
Conopariella ustulata Whittington, 2003

Discussion: All four of the species originally described in *Anaphalantias* by Enderlein (1922) are now placed in *Conopariella*, including *Anaphalantias septemfenestrata* Enderlein, 1922, which Frey (1932) moved to *Federleyella* as the type species of that genus, and which I now place in synonymy with *Conopariella pallidipes*. *Conopariella* shares a close affinity with the new genus *Meniscomyia* in the tribe Plastotephritini.

Distribution – *Conopariella* is distributed widely across the Afrotropical Region, but with predominance in Central and West Africa.

Key to the species of *Conopariella*

1. Anepisternum entirely brown (Whittington 2003, fig. 147) 2
- Anepisternum partly or mostly pale yellow (Whittington 2003, figs. 140-146)..... 3
2. Fore femur sparsely setose ventrally, with long setulae in a single series; wing membrane brown with basal hyaline spots in costal and subcostal cells and a large wedge-shaped mark on posterior margin in anal cell, across *bcu* and *bm* into *br*, but lacking hyaline marks beyond *r-m* (Whittington 2003, fig. 163)..... ***C. albitarsis* (Enderlein, 1922)**
- Fore femur densely setose ventrally, with long setulae in many series; wing membrane brown with hyaline spots basally as above, but also a series beyond *r-m* at a slight diagonal in *r*₁, *r*₂₊₃ and *r*₄₊₅, and a further spot basally in *dm* and medially in *m*₄ (Whittington 2003, fig. 251)..... ***C. ustulata* Whittington, 2003**
3. Anepisternum mostly pale yellow, any brown markings are narrowly restricted to the posterior margin (Whittington 2003, figs. 140-143)..... 4
- Anepisternum roughly half pale-yellow, half brown or more extensively brown (Whittington 2003, figs. 144-146) 9
4. Wing membrane dark brown without distinct hyaline spots or wedge shaped marginal incisions and slightly pale along wing margin in *cu* and anal cell, but entirely brown in cell *r*₄₊₅ beyond crossvein *r-m* 5

- Wing membrane dark brown with distinct hyaline incision at R_1 or spots in cells r_1 , r_{2+3} or r_{4+5} level with R_1 6
- 5. Dorsal surface of Cu with a serial row of setulae; apical scutellar setae wide apart (distance between apical setae approximately equal to distance between basal and apical setae; Whittington 2003, fig. 202); katapisternum with brown posterior margin *C. exigua* Whittington, 2003
- Dorsal surface of Cu with no setulae; apical scutellar setae close together (distance between apical setae much less than distance between basal and apical setae; Whittington 2003, fig. 217); katapisternum pale yellowish *C. picipennis* (Enderlein, 1922)
- 6. Wing membrane brown, with hyaline spots in cells r_1 , r_{2+3} and r_{4+5} , but lacking a wedge-shaped hyaline mark at apex of R_1 (Whittington 2003, fig. 225) *C. steyskali* Whittington, 2003
- Wing membrane brown, a wedge-shaped hyaline mark at apex of R_1 extending into r_1 , but with out hyaline spots in cells r_{2+3} and r_{4+5} beyond $r-m$ (Whittington 2003, figs. 225 & 234) . 7
- 7. Notum pale yellowish on lateral margins, dark brown in central area with additional darker brown vittae (Whittington 2003, fig. 174); wing membrane with wedge-shaped hyaline mark at apex of R_1 little more than a small spot, extending into r_1 by less than length of $r-m$; wedge-shaped hyaline mark at base of m_4 large, extended across M_4 and M_1 into br (Whittington 2003, fig. 175) *C. cidara* Whittington, 2003
- Notum pale yellowish on lateral margins, brown in central area lacking darker vittae; wing membrane with wedge-shaped hyaline mark at apex of R_1 extending into r_1 by length of $r-m$ or more; wedge-shaped hyaline mark at base of m_4 at most extended across M_4 into dm but not extending across M_1 into br (Whittington 2003, figs. 151 & 194) 8
- 8. Fringe of setulae on pedicel pale; wedge-shaped hyaline mark on wing membrane at base of m_4 small, restricted to that cell (Whittington 2003, fig. 151) *C. acutigena* Enderlein, 1922
- Fringe of setulae on pedicel black; wedge-shaped hyaline mark on wing membrane at base of m_4 longer, extending across M_4 into dm (Whittington 2003, fig. 194) *C. crenata* Enderlein, 1922
- 9. Scutellum, bicoloured with central area pale yellowish and lateral margins brown; basal scutellar seta closer to apical seta than to base of scutellum, *i.e.* laterally positioned (Whittington 2003, figs. 184 & 185); a large oval to round hyaline spot centrally in m_4 in line with which is sometimes a much smaller round spot in dm (Whittington 2003, fig. 186) *C. conspicua* Frey, 1932
- Scutellum entirely brown, even if lateral margins brown slightly darker than central area; basal scutellar seta closer to base of scutellum than to apical seta, *i.e.* basally positioned; hyaline mark in m_4 entirely lacking, *or* hyaline mark centrally in m_4 restricted to a triangle along posterior wing margin with no corresponding hyaline marks in dm and br , in combination with hyaline mark at apex of R_1 no more than a small spot (Whittington 2003, fig. 244) *or* hyaline mark centrally in m_4 not restricted to m_4 , but extending across dm and br in which case hyaline mark at apex of R_1 extends to R_{2+3} (Whittington 2003, figs. 234 & 279); male and female genital characters not as listed above 10
- 10. Wing membrane lacking a hyaline spot in cell r_{4+5} beyond $r-m$ 11
- Wing membrane with a hyaline spot in cell r_{4+5} beyond $r-m$ 13

11. Mid and hind tibiae mostly pale yellow, at most with a basal brown ring; pattern of wing membrane sexually dimorphic: in male specimens only, wing membrane almost entirely dark brown, there is a single hyaline mark in *Sc*, no hyaline marks beyond this in the anterior margin of the wing, and on the posterior margin of wing, anal cell with a wedged-shaped mark, but no hyaline mark in *m*₄ (Whittington 2003, fig. 269); setulae dorsally along vein *Cu*..
 males of *C. pallidipes* (Enderlein, 1922)
- At least mid and hind tibiae entirely brown, lacking extensive pale yellow marks; 3 hyaline marks in *Sc* and a hyaline mark on posterior wing membrane in *m*₄ (Whittington 2003, figs. 210 & 244); setulae on vein *Cu* variable: absent when entire fringe of pedicel consists of pale setulae or present when dorsal setulae on pedicel are black 12
12. Wedge-shaped hyaline mark on posterior wing membrane at base of *m*₄ extending across *M*₄ into *dm* terminating at *M*₁ (Whittington 2003, fig. 210); serial setulae on vein *Cu* present; dorsal setulae on pedicel black; setulae of post-ocular row brown
 *C. paucifenestrata* (Steyskal, 1963)
- Triangular hyaline mark on posterior wing membrane centrally *m*₄ restricted to *m*₄ with no corresponding hyaline marks in *dm* and *br*, in combination with hyaline mark at apex of *R*₁ no more than a small spot (Whittington 2003, fig. 244); serial setulae on vein *Cu* absent; entire fringe of pedicel consists of pale setulae; setulae of post-ocular row yellow
 *C. togoensis* Enderlein, 1922
13. Wing membrane brown, with wedge-shaped hyaline marks either side of apex of *R*₁ and usually a variably sized hyaline spot in cell *r*₄₊₅ and mark on posterior margin of wing in *m*₄ wedge-shaped (Whittington 2003, fig. 234); serial setulae on vein *Cu* absent
 *C. tibialis* (Hendel, 1914)
- Wing membrane brown, with an oval hyaline mark at apex of *R*₁ and usually a large sub-square hyaline mark filling width of cell *r*₄₊₅ just beyond its base, mark on posterior margin of wing in *m*₄ bar-shaped (Whittington 2003, fig. 279); serial setulae on vein *Cu* present.....
 females of *C. pallidipes* (Enderlein, 1922)

***Conopariella acutigena* Enderlein, 1922**

Conopariella acutigena Enderlein, 1922: 12. Frey 1932: 261 [key], pl. VII, fig. 28; Steyskal 1963: 133 [list]; Steyskal 1980: 564 [catalogue]; Whittington 2003: 86 [revision, key, Lectotype designation], figs. 148-160 & 685.

Differential diagnosis: In common with *C. cidara*, *C. crenata* and *C. exigua* the anepisternum is mostly pale-yellow with brown limited to isolated and poorly defined marks on the posterior edge (Whittington 2003, figs 140-143). The extent of this faint brown mark is limited to the posterior ventral corner of the anepisternum in *C. exigua* which is also distinct from the other three species in having the legs entirely pale coloured, excepting distal tarsomeres which are suffused with brown and the wing membrane lacking hyaline spots or marks other than a pale suffusion along the posterior margin. It is more extensive in *C. cidara* and *C. crenata*, but is restricted to around the base and just ventral to the base of the alveolus of the anepisternal seta in *C. acutigena*. The closest affinity is probably with *C. crenata* from which it can be distinguished by the fringe of setulae on pedicel pale (black in *C. crenata*) and the small wedge-shaped hyaline mark on wing membrane at base of *m*₄, restricted to that cell (Whittington 2003, fig. 151) (large and triangular in *C. crenata*, extending across *M*₄ into *dm*). *Conopariella acutigena* can be further distinguished from these other species in that all femora and tibiae are entirely brown and by the male and female genitalia.

Material examined: **Republic of Côte d'Ivoire:** 1♀ Man, Mt Tonkoui, 07°27'15"N 07°38'14"W, 1200m, 20-27.x.2019, Y. Braet & A. Gué, Malaise Trap [AEWC]; 2♀ same data but dated 23-30.vi.2019 [RMCA]. **Togo,** Fazao-Malfakassa NP., 4km South of Point de vue campsite, 8°46'25.8"N, 0°49'8.9"E, 495m, 18-23.viii.2018, Malaise trap, Swamp Forest, Aristophanous, M., Geiser, M., Moretto, P., & Sanbena, B. [ANHRTUK 00248985].

Remarks: *Conopariella acutigena* is newly recorded for Republic of Côte d'Ivoire. It is a widespread species, known from West, Central and East Africa: Republic of Côte d'Ivoire, Nigeria, Cameroon, Central African Republic, Equatorial Guinea, Democratic Republic of the Congo, Uganda and Sudan.

***Conopariella albitarsis* (Enderlein, 1922)**

Anaphalantias albitarsis Enderlein, 1922: 15.

Conopariella albitarsis, Frey, 1932: 261 [key, combination], pl. VIII, fig. 31; Steyskal 1980: 564 [catalogue]; Whittington 2003: 89 [revision, key], figs. 161-168 & 685.

Differential diagnosis: *Conopariella albitarsis* is one of two species (together with *C. ustulata*) that are entirely brown except for pale cream tarsi, being distinguished from *C. ustulata* by the ventrally sparsely setose fore femur, with long setulae in a single series; and absence of hyaline spots distal to *r-m*.

Material examined: no additional material has been examined for this species.

Remarks: *Conopariella albitarsis* is a West African species, known only from Nigeria and Cameroon.

***Conopariella cidara* Whittington, 2003**

Conopariella cidara Whittington, 2003: 90 [description, key], figs. 169-181 & 685.

Differential diagnosis: *Conopariella cidara* appears to share an affinity with *C. acutigena* and *C. crenata* and *C. exigua* as all four genera have the anepisternum mostly pale-yellow with brown limited to isolated and poorly defined marks on the posterior edge. In *C. acutigena*, *C. cidara* and *C. crenata* the wing membrane is brown with a wedge-shaped hyaline mark at apex of *R*₁ extending into *r*₁, but without hyaline spots in cells *r*₂₊₃ and *r*₄₊₅ beyond *r-m*. *Conopariella cidara* can be distinguished from both these species in that the notum has dark brown vittae, which are not present in *C. acutigena* and *C. crenata*.

Material examined: **Republic of Côte d'Ivoire:** 2♀ Man, Mt Tonkoui, 07°27'15"N 07°38'14"W, 1200m, 12-19.v.2019 and 15-22.ix.2019, Y. Braet & A. Gué, Malaise Trap [AEWC]; 1♂ 1♀ same data but dated 30.vi.-07.vii.2019 [AEWC].

Remarks: *Conopariella cidara*, a West-Central African species, is newly recorded for Republic of Côte d'Ivoire; the known distribution is: Sierra Leone, Republic of Côte d'Ivoire, Ghana, Cameroon and Democratic Republic of the Congo.

***Conopariella conspicua* Frey, 1932**

Conopariella conspicua Frey, 1932: 261, pl. VII, fig. 27, 260 [key]. Steyskal 1980: 564 [catalogue]; Whittington 2003: 94 [revision, key], figs. 182-189 & 685.

Differential diagnosis: *Conopariella conspicua* could superficially be confused with *C. tibialis*. Males can be distinguished after dissection by the hook-like apex to the vesica of the distiphallus glands. Besides this, *C. conspicua* is distinguished by the shape of the scutellum and position of the scutellar setae; and the large oval to round hyaline spot central in *m*₄. It is one of five species that have hyaline marks in *r*₂₊₃ and/or *r*₄₊₅ beyond *r-m*, the other species being female specimens of *C. pallidipes* and males and females of *C. steyskali*, *C. tibialis* and *C. ustulata*. These five species all have a hyaline

mark at the apex of r_1 and they fall into two groups: firstly *C. conspicua*, *C. tibialis* and female specimens of *C. pallidipes* having no mark in r_{2+3} and the mark in r_1 is wedge shaped and touches the vein R_1 ; and secondly *C. steyskali* and *C. ustulata* having marks in both r_{2+3} and r_{4+5} , and the mark in r_1 is a spot that is distinctly separate from the vein R_1 . The hyaline marks in *C. conspicua* are small and round, while in female specimens of *C. pallidipes* they are larger and oval (r_1) and sub-square (r_{4+5}). The anepisternum is bicoloured in *C. conspicua*, *C. pallidipes* and *C. tibialis* but nearly entirely yellow in *C. steyskali* and entirely brown in *C. ustulata*. *Conopariella conspicua* can be distinguished from both *C. pallidipes* and *C. tibialis* because it has a bicoloured scutellum with the central area pale yellowish and lateral margins brown and the basal scutellar seta closer to apical seta than to base of scutellum, *i.e.* laterally positioned (Whittington 2003, figs. 184 & 185). In both *C. pallidipes* and *C. tibialis* the scutellum is entirely brown, even if lateral margins brown slightly darker than central area and the basal scutellar seta are closer to base of scutellum than to apical seta, *i.e.* basally positioned.

Material examined: no additional material has been examined for this species.

Remarks: *Conopariella conspicua* has a middle African distribution, known from Democratic Republic of the Congo, Malawi and Zimbabwe.

***Conopariella crenata* Enderlein, 1922**

Conopariella crenata Enderlein, 1922: 13. Frey 1932: 261 [key], pl. VII, fig. 29; Steyskal 1980: 564 [catalogue]; Whittington 2003: 96 [revision, key], figs. 190-198 & 685.

Differential diagnosis: In common with *C. acutigena*, *C. cidara* and *C. exigua* the anepisternum is mostly pale-yellow with poorly defined brown posterior margin. *Conopariella crenata* shares close affinities with *C. acutigena* (*q.v.*), sharing with it a similar wing pattern and characters in the male genitalia. Specimens can initially be separated from *C. acutigena* by the colour of the fringe of setulae on the pedicel of the antenna (black in *C. crenata*, yellow in *C. acutigena*) and the extent of the wedge-shaped hyaline mark on wing membrane at base of m_4 (longer in *C. crenata* than in *C. acutigena*). The male genitalia are distinct in *C. crenata*, even in the undissected state, as the apex of the medial surstylus has two lobes, the ventral one of which extends beyond the lateral surstylus and the hypoproct as an elongate pointed protrusion that is not present in *C. acutigena*.

Material examined: no additional material has been examined for this species.

Remarks: *Conopariella crenata* is known only from the type locality in Equatorial Guinea.

***Conopariella exigua* Whittington, 2003**

Conopariella exigua Whittington, 2003: 99 [description, key], figs. 199-207 & 685.

Differential diagnosis: In common with *C. acutigena*, *C. cidara* and *C. crenata* the anepisternum is mostly pale-yellow with poorly defined brown posterior margin. The extent of this faint brown mark is limited to the posterior ventral corner of the anepisternum in *C. exigua* which is also distinct from the other three species in having the legs entirely pale coloured, excepting distal tarsomeres which are suffused with brown and the wing membrane lacking hyaline spots or marks other than a pale suffusion along the posterior margin. *Conopariella exigua* and *C. picipennis* are also remarkably similar and co-exist in part of their distribution ranges. Both species have the anepisternum mostly pale yellow with any brown markings narrowly restricted to the posterior margin; both have a dark brown wing membrane without distinct hyaline spots or incisions, that is, entirely brown in cell r_{4+5} beyond crossvein $r-m$ and slightly pale marks along posterior wing margin in m_4 and the anal cell. *Conopariella exigua* differs from *C. picipennis* by having setulae present dorsally on *Cu*, and the apical scutellar setae wide apart (distance between apical setae approximately equal to distance between basal and apical setae), whereas *C. picipennis* lacks setulae dorsally on *Cu* and has the apical scutellar setae

close together (distance between apical setae much less than distance between basal and apical setae). Furthermore, the base of the scutellum in *C. exigua* is entirely brown, whereas the yellow lateral colour on the notum of *C. picipennis* spills over onto the base of the otherwise brown scutellum. The apex of medial surstylus of *C. exigua* has dorsally protruding blunt lobe, while the apex of medial surstylus in *C. picipennis* lacks the lobe and curves downwards. The female ovipositor provides little to separate females in the two species.

Material examined: no additional material has been examined for this species.

Remarks: *Conopariella exigua* is known only from Democratic Republic of the Congo, where it overlaps with the more extensive range of *C. picipennis*.

***Conopariella pallidipes* (Enderlein, 1922)**

Anaphalantias pallidipes Enderlein, 1922: 15.

Anaphalantias septemfenestrata Enderlein, 1922: 15; **syn.n.**

Conopariella pallidipes Frey, 1932: 261 [key, combination]; Steyskal 1963: 133 [list]; Steyskal 1980: 564 [catalogue]; Whittington 2003: 126 [revision, key], figs. 269-276 & 686; **Combination reinstated.**

Anaphalantias fenestrata Frey, 1932: 263 – incorrect subsequent spelling.

Federleyella septemfenestrata Frey, 1932: 263, pl. VIII, fig. 43 (combination); Steyskal 1963: 134 [list]; Steyskal 1980: 564 [catalogue]; Whittington 2003: 129 [revision, key], figs. 277-284 & 686.

Differential diagnosis: male specimens of *C. pallidipes* have wing patterns similar to *C. paucifenestrata* and *C. togoensis* except that both of these species have a triangular mark on the hind margin of the wing in m_4 , while *C. pallidipes* lacks such a mark. The wing pattern of female specimens resembles that of four other species (*C. conspicua*, *C. steyskali*, *C. tibialis* and *C. ustulata*) that have hyaline marks in r_{2+3} and/or r_{4+5} beyond $r-m$ (cf. differential diagnosis for *C. conspicua*). The hyaline marks in female specimens of *C. pallidipes* they are larger and oval (r_1) and sub-square (r_{4+5}), while in *C. conspicua* they are small and round. There is potential for confusion between female *C. pallidipes* and *C. tibialis* as both have a large subsquare hyaline spot beyond crossvein $r-m$ in cell r_{4+5} . The wing pattern of female *C. pallidipes* differs from that of *C. tibialis* in that, at the apex of R_1 there is a single oval hyaline mark reaching from the anterior wing margin to R_{2+3} , whereas in *C. tibialis*, there is a pair of wedge-shaped hyaline marks either side of the apex of R_1 . Furthermore, the mark in m_4 is elongate and roughly parallel sided in female *C. pallidipes*, while a mark in the same position in *C. tibialis* is distinctly wedge-shaped. Finally, in *C. pallidipes* the mid and hind tibiae are mostly pale yellow, at most with a basal brown ring, but are entirely brown in *C. tibialis*.

Discussion: I have recently examined a long series of specimens collected along RtM5, 5km SE of Mzuzu in Malawi, 11°28'S 34°03'E, 1336m, on 2.i.2010 by Amnon Freidberg. Using the previously published criteria, these specimens key to 34 male specimens of *F. pallidipes* (Enderlein 1922) and 33 female specimens of *F. septemfenestrata* (Enderlein 1922). This obvious gender separation prompted me to re-evaluate the two species and look back at previous division of sexes for the two species. I found that my 2003 revision was based on 34 male and 10 female specimens of *F. pallidipes* (Enderlein 1922) and a single male and 31 female specimens of *F. septemfenestrata* (Enderlein 1922), the distinction being based on the colour of the legs and minor differences in the form of the lateral surstylus. The following key was proposed and is now found to be inconsistent with the hypothesis that there are two species:

1. All legs pale creamy-yellow (Whittington 2003, fig. 269); lateral surstylus subrectangular, apex almost as broad as base (Whittington 2003, fig. 271) ***F. pallidipes* (Enderlein, 1922)**
- At least apex of mid and hind femora and base of mid and hind tibiae brown (sometimes pale, but nevertheless brown); lateral surstylus tapering toward apex, at apex less than half as broad as base (Whittington 2003, fig. 280)

..... *F. septemfenestrata* (Enderlein, 1922)

At the time I noted for *F. pallidipes* that:

“Wing pattern (Whittington 2003, fig. 269) variable, hyaline costal incisions sometimes more clearly defined than in Holotype [which was male] and in other specimens wing is almost entirely brown, with only faint areas where marks are paler brown. Marks at apex of R_1 and in r_{4+5} beyond $r-m$ vary from well-defined hyaline incision or spot, through poorly defined pale brown smudge to completely absent.”

and for *F. septemfenestrata* (based on a female Holotype):

“Wing patterns generally prominent, but occasional specimens have hyaline spots restricted and in some instances spot in r_{4+5} absent.”

It is interesting to note that at the time Enderlein (1922) described *A. pallidipes* and *A. septemfenestrata* he had just a single specimen for each (not unusual for Plastotephritinae), listing both as males, and apparently had some difficulty distinguishing the two species. The descriptions are nearly identical, other than minor variations in colour and the listing of hyaline spots on the male holotype of *A. septemfenestrata*. Upon examination, the ‘male’ holotype of *A. septemfenestrata* was in fact female.

The long series of specimens collected in 2010 by the late Amnon Freidberg can be divided entirely on the absence or presence of hyaline marks on the wings into females (hyaline marks at apex of R_1 , in r_{4+5} beyond $r-m$ and from the hind wing margin across m_4 , dm and br before crossvein $r-m$) and males (wing membrane lacking these hyaline marks). Both males and females have hyaline marks on the wing membrane in Sc and the anal lobe, rather more restricted in females than in males. The new specimens also show variation in leg colouration, such that the character states used in the key, are unreliable for separation of the two nominal taxa.

Upon reconsideration then, it seems clear that these two species are in fact one and that I had previously not realised the sexual dimorphism due to there being too few specimens of alternative sexes across the two species to make a more realistic decision and had confused variation in the females as grounds to distinguish the species. Now that a larger series of specimens is available and the dimorphic male and female specimens can be associated, it is pragmatically clear that only one species exists and I consequentially synonymise *F. septemfenestrata* (Enderlein, 1922) with *F. pallidipes* (Enderlein, 1922), and reinstate *pallidipes* in *Conopariella* as per Frey (1932).

Material examined: **Malawi:** 34♂ 33♀ Mzuzu, 5 km SE Rt.M5, 11°28'S: 34°03'E, 1336m, 2.i.2010, A. Freidberg, [TAU & 1♂ 1♀ AEWC]; **Zambia:** 1♂ 1♀ Ikelenge, Hillwood, 11°16'15"S, 24°18'31"E, 1400m, 21-28.x.2013, Chmurova, L., Smith, L., Smith, R. & Takano, H., yellow pan, riverine forest & camp [ANHRTUK 00258110 & 00271583]; 1♂ same data but 30.iv.-11.v.2014 [ANHRTUK 00272103].

Remarks: *Conopariella pallidipes* is newly recorded in Zambia, which is consistent with the known distribution: widely across tropical Africa - Liberia, Republic of Côte d'Ivoire, Cameroon, Central African Republic, Democratic Republic of the Congo, Equatorial Guinea, Uganda, Malawi, Zambia and Zimbabwe.

***Conopariella paucifemestrata* (Steyskal, 1963)**

Federleyella paucifemestrata Steyskal, 1963: 133. Steyskal 1980: 564 [catalogue]; Whittington 2003: 101 [revision, combination, key], figs. 208-214 & 685.

Differential diagnosis: One of a group of three species (along with males of *C. pallidipes* and both sexes of *C. togoensis*) that share the combination: wing membrane lacking a hyaline spot in cell r_{4+5}

beyond *r-m* and scutellum entirely brown, *C. paucifenestrata* is easily distinguished by the large triangular hyaline mark on the posterior wing membrane at base of m_4 extending across M_4 into dm terminating at M_1 (Whittington 2003, fig. 210). The presence of serial setulae on vein *Cu* also separates *C. paucifenestrata* from *C. togoensis*.

Material examined: **Zambia:** 1♀ Ikelenge, Hillwood, 11°16'15"S, 24°18'31"E, 1400m, 21-28.x.2013, Chmurova, L., Smith, L., Smith, R. & Takano, H., yellow pan, dry evergreen forest [ANHRTUK 00271585].

Remarks: *Conopariella paucifenestrata* was moved from *Federleyella* on the basis of the male genital morphology (Whittington 2003). It is newly recorded in Zambia and distributed in West and Central Africa: Republic of Côte d'Ivoire, Cameroon, Democratic Republic of the Congo, Malawi and Zambia. With the discovery of this species in Zambia, the single specimen collected by S. Neave in 1910, from Mlanje Boma (16°02'S, 35°30'E) in Malawi at an altitude of 641m.a.s.l. [NHMUK] no longer appears to be an outlier as previously expressed (Whittington 2003).

***Conopariella picipennis* (Enderlein, 1922)**

Anaphalantias picipennis Enderlein, 1922: 14.

Conopariella picipennis Frey, 1932: 261 [key, combination]; Steyskal 1963: 133 [list]; Steyskal 1980: 564 [catalogue]; Whittington 2003: 103 [revision, key], figs. 215-222 & 685.

Differential diagnosis: *Conopariella picipennis* could easily be confused with other dark winged species, such as *C. pallidipes*, but is distinguished by having only a faint brown mark along the posterior margin of the anepisternum. In combination with the lack of hyaline spots in cell r_{4+5} beyond crossvein *r-m*, *C. pallidipes* and *C. exigua* differ from other possible species and *C. pallidipes* can be distinguished from *C. exigua* by the serial row of setulae on the dorsal surface of *Cu* in addition to pale yellowish katapisternum (in *C. exigua* it has a brown posterior margin) and the apical scutellar setae close together (distance between apical setae much less than distance between basal and apical setae; Whittington 2003, fig. 217) compared with wide apart (distance between apical setae approximately equal to distance between basal and apical setae; Whittington 2003, fig. 202) for *C. exigua*.

Material examined: Uganda: 1♂ Masaka distr., Lake Victoria W, Bugala Island, near village Bugoma, E of Luku, 0°15'11"S, 32°04'40"E, 1150 m, 28.iii.2012, M. von Tschirnhaus, secondary rain forest along a sports field; swept, filled into eclector; sample #2079 (= Menzel: UGA37) [FBUB].

Remarks: The additional specimen examined is within the known range of this species. Whittington (2003) previously overlooked a record from NW Zambia at Mwinilunga, 11°43'02"S 24°25'44"E, May 1983, D.L. Hancock (Hancock 1987) which extends the previously listed distribution. The distribution of *Conopariella picipennis* is West, Central and East Africa: Cameroon, Central African Republic, Democratic Republic of the Congo, Equatorial Guinea, Uganda and Zambia.

***Conopariella steyskali* Whittington, 2003**

Conopariella steyskali Whittington, 2003: 107 [description, key], figs. 223-226 & 685.

Differential diagnosis: *Conopariella steyskali* is one of five species (*C. conspicua*, female specimens of *C. pallidipes*, *C. tibialis* and *C. ustulata*) that have hyaline marks in r_{2+3} and/or r_{4+5} beyond *r-m* (cf. differential diagnosis for *C. conspicua*). *Conopariella steyskali* and *C. ustulata* have marks in both r_{2+3} and r_{4+5} in addition to a spot in r_1 . In *C. steyskali* the r_1 spot touches vein R_{2+3} , in *C. ustulata* it does not. In both species the r_{2+3} and r_{4+5} marks touch where they meet R_{4+5} - in *C. steyskali* these two spots are large and oval, while in *C. ustulata* they are small and round. Male

specimens of *C. steyskali* are yet to be collected and described as this species is known only from the female type specimen, yet is distinctive and easily distinguished from other species by the wing pattern.

Material examined: no additional material has been examined for this species.

Remarks: *Conopariella steyskali* is known only from the type locality in Cameroon.

***Conopariella tibialis* (Hendel, 1914)**

Pterogenomyia tibialis Hendel, 1914b: 408.

Conopariella tibialis Frey, 1932: 260 [combination], 261 [key]; Steyskal 1980: 564 [catalogue]; Whittington 2003: 109 [revision, key], figs. 227-240 & 685.

Differential diagnosis: numerous variations on the wing pattern (Whittington 2003, fig. 234) could in future lead to the recognition of more than one species, especially given the large distribution of *C. tibialis* as we currently understand it. In 2003 and now, I have refrained from attempting to break *Conopariella tibialis* into smaller units, as these variations appear to form a continuum across long series of specimens. *Conopariella tibialis* is one of five species (*C. conspicua*, female specimens of *C. pallidipes*, *C. steyskali* and *C. ustulata*) that have hyaline marks in r_{2+3} and/or r_{4+5} beyond $r-m$ (cf. differential diagnosis for *C. conspicua*). Of all of these species, the extent of the hyaline marks on the wing are most variable in *C. tibialis*, but the species is nonetheless distinct from all other species in the genus in having paired wedge-shaped hyaline marks either side of the apex of R_1 .

Material examined: **Malawi**: 4♂ 5♀ Mzuzu, 5 km SE Rt.M5, 11°28'S: 34°03'E, 1336m, 2.i.2010, A. Freidberg [TAU & 1♂ 1♀ AEWC].

Multimedia material: **Zambia**: Luapula Province, Kawambwa District, 9°13' 11"S 29°18'18"E 30.iii.2017, fringes of Lusenga Plain National Park, W. van Niekerk, <https://www.inaturalist.org/observations/70665759> and 09°31'51"S, 31.iii.2017, W. van Niekerk, <https://www.inaturalist.org/observations/70665753>, GBIF ID: 5104275436, <https://www.gbif.org/occurrence/3059028071>; det. W. van Niekerk.

The species appears to be largely consistent with the description with the exception the notum, scutellum and abdomen are glossy black, while specimens I have previously examined are dark brown with faint paler vittae and that there is a hyaline mark on the hind margin of the wing in m_1 . The darker body colour is likely to be the difference between dead specimens from collections and *in vivo* specimens in the field and the extra wing mark may be variation - the extent of variation in the position and size of hyaline markings in *Conopariella tibialis* was commented upon by Whittington (2003, p. 113 and fig. 234). All other occurrences listed in GBIF were previously listed by Whittington (2003).

Remarks: The additional specimens from Zambia are within the known range of this species, the distribution of which is widely across the Afrotropical Region: Cameroon, Central African Republic, Democratic Republic of the Congo, Equatorial Guinea, Malawi, Mozambique, Uganda, Zambia and Zimbabwe.

***Conopariella togoensis* Enderlein, 1922**

Conopariella togoensis Enderlein, 1922: 13. Frey 1932: 261 [key], pl. VII, fig. 30; Steyskal 1980: 564 [catalogue]; Whittington 2003: 113 [revision, key], figs. 241-248 & 685.

Differential diagnosis: One of a group of three species (along with males of *C. pallidipes* and both sexes of *C. paucifenestrata*) that share the combination: wing membrane lacking a hyaline spot in cell r_{4+5} beyond $r-m$ and scutellum entirely brown, *C. togoensis* is distinctly paler than all other

species in *Conopariella*. *Conopariella togoensis* differs from males of *C. pallidipes*, having a triangular mark on the hind margin of the wing in m_4 (shared with *C. paucifenestrata*, but lacking in males of *C. pallidipes*). In specimens of *C. paucifenestrata* this triangular mark tends to curve toward the apex, meeting M_1 just before $r-m$, while in *C. togoensis* it curves toward the wing base and does not even reach M_4 . The apex of the wing is dark brown and lacking hyaline marks other than a small spot just beyond the apex of R_1 and a small spot over $r-m$, where the crossvein is weakened (both characters shared with *C. cidara*). *Conopariella togoensis* differs from *C. cidara* in having the central notum dark brown, whereas in *C. cidara* it is pale brown with dark vittae. male specimens of *C. pallidipes* have wing patterns similar to *C. paucifenestrata* and *C. togoensis* except that both of these species, while *C. pallidipes* lacks such a mark.

Material examined: **Zambia**: 1♀ Ikelenge, Hillwood, 11°16'15"S, 24°18'31"E, 1400m, 21-28.x.2013, Chmurova, L., Smith, L., Smith, R. & Takano, H., Yellow Pan, dry evergreen forest [ANHRTUK 00271584].

Remarks: The addition of Zambia to the West and Central African distribution may indicate the extreme southern point of the range of this species, the distribution of which is: Togo, Cote d'Ivoire, Nigeria, Cameroon, Central African Republic and Zambia.

***Conopariella ustulata* Whittington, 2003**

Conopariella ustulata Whittington, 2003: 116 [description, key], figs. 249-256 & 685.

Differential diagnosis: *Conopariella ustulata* is morphologically similar to *C. albitarsis* and is distinguished from that species by head colour, fore femur densely setulose ventrally with long setulae in many series and hyaline marks on the membrane distad of $r-m$. It also shares characteristics with species that have hyaline marks in r_{2+3} and/or r_{4+5} beyond $r-m$ (*C. conspicua*, female specimens of *C. pallidipes*, *C. steyskali* and *C. tibialis*). Within this group of five species, the wing pattern of *C. ustulata* most resembles that of *C. steyskali*, differing in that the r_1 spot touches neither R_1 nor R_{2+3} (touching R_{2+3} in *C. steyskali*) and the r_{2+3} and r_{4+5} marks are small and round (large and oval in *C. steyskali*).

Material examined: no additional material has been examined for this species.

Remarks: *Conopariella ustulata* is known only from Cameroon.

***Meniscomyia* gen.n.**

Figure 2–4.

LSID urn:lsid:zoobank.org:act:C41BFAE6-38DB-43FF-849A-0245B63D039F

Etymology: *meniskos* Gr. m. - crescent, and *myia* Gr. f. - fly in reference to the brown crescent band on the wing membrane. Gender feminine.

Type species: Monotypic - based on single male holotype of *Meniscomyia phaia* sp.n.

Measurements. Body length 2.8 mm; wing length 3.3 mm.

Colour/Vestiture: Ground colour entirely dark brown with slightly paler brown legs. Setulae on extended gena dense, brown and a mixture of two distinct lengths (short and long). Subvibrissal setulae brown. Brass-coloured microtrichia weak and difficult to discern, but distinct patches on notum in front of scutoscuteellar suture; most noticeable on thoracic pleurites (view from an acute angle from below).

Setulae fine, short, slightly recumbent, sparse, and brown on notum, and pleurites; quite long and brown on abdominal tergites, longer along laterodistal margins; golden on abdominal sternites.

Head: Subsquare in frontal view; anteroposteriorly compressed vertex much narrower than thorax. Face indented slightly under antennae, but lower facial margin projecting only a little at margin. Antennal groove shallow. Eye elongate, oval, brown. Frontogenal and ptilinal fissures not meeting, usually separated by distance equal to approximately half width of postpedicel. Frons narrowing dorsally. Ocellar triangle more oval than triangular, positioned forward of orbital setae. Lunule equal to half vertical dimension of scape. Antenna pendulous, buff to yellowish-brown; scape set dorsal to midway down length of head; arista long plumose - longest setulae as long as postpedicel is wide and arranged in four series, with dorsal and ventral series longest, the others protruding at equal angles in between (one on each of inner and outer surfaces). Pedicel setose, without a noticeable longer latero-ventral fringe. Postpedicel covered with pale golden setulae. Middle of vertex slightly sunken below level of top margin of eye. Gena a little shallower than distance between apex of antenna and lower facial margin. Postgena slightly swollen, roughly equal to width across the lower quarter of eye. Palp flattened, strongly setose apically. Supracervical setulae evenly spaced, silver in colour. Setae: 1 long, divergent, slightly reclinate ocellar, divergent post-ocellar pair strongly developed, 2 reclinate orbitals (broken in holotype, but alveoli obvious), 1 vertical, 1 weak genal. Postocular row distinct, merging distally with background setation on gena and continuing dorsally adjacent to post-ocellars.



Figure 2. *Meniscomyia* g.n. *phaia* sp.n. habitus of male holotype specimen before dissecting (specimen in Muséum National d'Histoire Naturelle, Paris, France). Scale bar = 0.5 mm.

Thorax: Notum as long as broad, broadest across notopleuron. Anepisternal phragma evident as a shallow furrow. Katatergite slightly bulging. Margin between katatergite and anatergite defined by broad but shallow furrow. Posterior spiracle close to base of halter. Setae strong and well developed: 2 notopleural (posterior one raised on callus), 1 supra-alar (missing in holotype), 1 postalar (long), 1 intra-alar (long, reaching beyond base of lateral scutellar seta), 1 postsutural dorsocentral, 1 postsutural acrostichal, (both postsutural setae along posterior margin of scutum, with acrostichal inserted closer to suture than dorsocentral), 1 lateral (long, reaching apex of T_{1+2}) and 1 apical scutellar (missing in holotype, alveoli widely separated - distance between apicals equal to distance between laterals and

apicals). Tegula with group of five strong, brown setulae. Subalar sclerite obscured by wings in holotype. Scutellum asetulose.



Figure 3. Labels of holotype of *Meniscomyia g.n. phaia sp.n.* (specimen in Muséum National d'Histoire Naturelle, Paris, France).

Legs: completely brown except apex of tibiae and all tarsi buff to pale-brown. Fore coxa with 2 long black apical setae; mid coxa with single long, black dorsal setae. Mid coxal prong poorly differentiated, rounded at apex. Mid tibia with strong ventral pre-apical seta one third length of first mid-tarsomere, which is longer than terminal 4 tarsomeres together. Setulae of legs brown, but pale on tarsomeres, conspicuous long on apex of final tarsomere, curving over apex in front of claws. Ventral setulae of tarsomeres stouter and denser than other setulae on legs. Empodium setiform, small and inconspicuously situated between large, pale pulvilli. Claws strongly developed.



Figure 4. Right wing, dorsal view of *Meniscomyia g.n. phaia sp.n.* holotype (specimen in Muséum National d'Histoire Naturelle, Paris, France). Scale bar = 1 mm.

Wing (Figure 4): Costa with humeral weakening (but no distinct break); subcosta straight, ending abruptly (its path to the costa marked by the edge of the brown membrane of the subcostal cell); R_{2+3} slightly curved toward apex; R_{4+5} and M subparallel, diverging slightly apically, noticeably curved after dm . Serial setulae present dorsally on entire length of R_1 and R_{4+5} and ventrally on M_1 , but absent from Cu . Discal cell (dm) broader distally than basally, slightly curved along anterior margin at junction

with $r-m$, which meets M_1 before midway along dm . Calypter smoky grey with dark brown margin and marginal fringe of long, black setulae.

Abdomen: Ovate, broadest across margin between T_{1+2} and T_3 ; all tergites dark-brown; membranous pleurites pale yellowish, sternites buff to yellowish-brown. Sternites narrow, about one quarter width of tergites.

Male genitalia: epandrium rectangular, sparsely covered with fine brown setulae; proctiger membranous, densely covered with short brown setulae; medial surstylus more densely sclerotised than lateral surstylus, hooked and heavily sclerotised at apex; distiphallus short and stout, terminating in subsquare glans larger in dimension than epandrium as wide, apparently with a small preglans; gonostyle narrow; apex of phallapodeme and hypandrium weakly sclerotised.

Differential diagnosis. The long postalar, intra-alar and lateral scutellar setae, strongly curved R_{4+5} and M_1 which form an almost parallel arc and the banded wing membrane in non-parallel arcs following the curve of veins R_{4+5} and M , and short dm (approximately 2 times longer than wide) in combination differentiate *Meniscomyia* from all other Plastotephritinae. In all other genera in this subfamily, the major thoracic setae are more or less equal in length and strength, the wing veins are straight (at most slightly sinuous) and the pattern ranges from plane brown with few marginal hyaline spots to being marked with multiple irregular hyaline marks, sometimes orange and brown striped and sometimes a brown radial pattern following the major veins; dm is long (more than twice as long as wide). Along with *Pterogenomyia* and *Conopariella*, *Meniscomyia*, is one of three genera in a cluster that share the combined apomorphies '2 pairs of scutellar setae + plain fore-femur'. All other genera in the Afrotropical Plastotephritinae have 3 pairs of scutellar setae except *Furcamyia*, which has the apomorphy 'raptorial fore-femur'. *Meniscomyia* is immediately differentiated from *Pterogenomyia* and *Conopariella* by the wing pattern comprising bands in non-parallel arcs of brown following the curved R_{4+5} and M veins (these veins are more or less straight in *Conopariella* and *Pterogenomyia*). In *Conopariella*, the dark brown wing membrane is marked by hyaline spots and by hyaline wedges leading inwards from the margin of the wing. In comparison, the wings of *Pterogenomyia* are marked with parallel stripes leading straight to the wing apex. Furthermore, members of *Pterogenomyia* are much larger flies (wing length exceeding 6.9 mm), compared with the smaller flies in *Conopariella* and *Meniscomyia* (wing length less than 6.5 mm).

Included species – *Meniscomyia phaia* sp.n.

Discussion: Females are unknown and at present, nothing is known about the biology or immature stages of this species.

Distribution: *Meniscomyia* is known from a single specimen from Republic of Côte d'Ivoire.

***Meniscomyia phaia* sp.n.**

Figure 2–5.

LSID urn:lsid:zoobank.org:act:2775CA51-935A-48FA-91AE-04BAF5F7D23F

Etymology: φαία Gr. f. adj. - dusky, grey or brown in reference to the colour of this species; *phaia* is the feminine form of the Greek adjective *phaios* (φαίος).

Description: based on single male holotype.

Measurements. Male, body length 2.7 mm; wing length 3.1 mm.

Colour/Vestiture: Ground colour entirely dark brown; wing membrane hyaline with brown anterior margin broken by a hyaline mark over *Sc*, terminating at apex a little beyond R_{4+5} ; basal cells brown; a further brown mark across apex of *dm* dividing in two, with the anterior part in an arc following M_1 and the posterior part in an arc from the anterior corner of *d-m* to apex of *CuA+CuP*. Setulae on frons and pedicel brown and on extended male gena sparse, a mixture of brown and black. Subvibrissal setulae a mixture of brown and black; setulae black on postgena and postocular row. Silver microtrichia weakly developed and difficult to discern; most noticeable on thoracic pleurites (view from an acute angle).

Head: Elongate and anteroposteriorly compressed, vertex much narrower than thorax; face indented slightly under antennae, paler brown than rest of head; lower facial margin projecting more than postpedicel. Low, poorly developed tubercle present below antennal grooves, which are shallow. Eye elongate, oval, reddish-brown. Frontogenal and ptilinal fissures not meeting, separated by distance equal to approximately half width of postpedicel. Frons parallel sided, but slightly sunken between ocellar triangle and eye margins. Ocellar triangle raised and narrow, positioned forward of orbitals. Lunule equal to vertical dimension of scape. Antenna pendulous, buff to yellowish-brown, postpedicel slightly darker above than below; scape set slightly dorsal to midway down length of head; arista long plumose - longest setulae longer than postpedicel is wide and arranged in five series, with dorsal and ventral series longest, the others protruding at equal angles in between (two on inner surface and one on outer surface). Pedicel with a latero-ventral fringe of long brown setulae. Gena from lower eye margin to furthest ventral extent equal to distance between apex of antenna and lower facial margin. Postgena slightly swollen, roughly equal to width across the lower quarter of eye. Palp flattened, well developed black apical setulae. Supracervical setulae sparse evenly spaced, black in colour. Setae: 1 pedicel, 1 pair divergent ocellar, 1 divergent post-ocellar, 2 reclinate orbitals (anterior one slightly more robust), 1 vertical. Postocular row distinct, merging distally with background setation on gena and continuing dorsally adjacent to post-ocellars.

Thorax: Setulae short, recumbent, and evenly spaced, bronze brown. Notum broader than long, broadest across notopleural callus. Posterior margin of anepisternum and all of anepimeron sparsely covered with brown to black setulae. Anepisternal phragma distinct. Katatergite slightly bulging. Margin between katatergite and anatergite defined by deep furrow; ventral margin with long bronze-brown setae. Posterior spiracle close to base of halter. Setae strong and well developed: 2 notopleural (posterior one raised on callus), 1 supra-alar (missing in type specimen, but alveola present), 1 postalar, 1 intra-alar, 1 postsutural dorsocentral, 1 postsutural acrostichal, (both latter along posterior margin of scutum), 1 lateral and 1 apical scutellar. Dorsal surface of scutellum asetulose.

Legs: brown, paler at apex of tibia and first two tarsomeres. Fore coxa with a square anterior apical margin on which are 2 long and several shorter black apical setae; apex of mid coxae with long bronze-brown setae. Mid coxa developed into a flat fringe, which curves ventrally under trochanter a short way and is strongly setose at apex, but mid coxal prong undeveloped. Mid tibia with strong ventral pre-apical seta longer than twice width of apex of tibia. Setulae of legs brown, but pale on apex of tibia and first two tarsomeres, brown and curving over apex in front of the claws. Ventral setulae of tarsomeres slightly stouter and denser than other setulae on legs. Empodium setiform, small and inconspicuously situated between large, pale pulvilli. Claws strongly developed, curved.

Wing (Figure 4): Costa humeral weakening (but no distinct breaks) beyond crossvein *h*. Subcosta sinuous, terminating abruptly; *Sc-R* spur undeveloped. R_{2+3} slightly sinuous; R_{4+5} and M_1 beyond *dm* curving in an even arc toward hind margin, with R_{4+5} terminating at wing apex and M_1 terminating well behind wing apex. Setulae dorsally on entire length of R_1 and R_{4+5} ; ventrally on M_1 to just beyond end

of *dm*. Discal cell (*dm*) *dm* short, approximately 2 times longer than wide, *r-m* positioned before middle of *dm*. Calypter a pale brown band on postalar wall.

Abdomen: Ovate, broadest across margin between T_{1+2} and T_3 . Sternites narrow, about one third width of tergites; pleurites membranous; both pale brown.

Male genitalia (Figure 5): epandrium rectangular, sparsely covered with fine brown setulae; proctiger membranous, densely covered with short brown setulae; medial surstylus more densely sclerotised than lateral surstylus, hooked and heavily sclerotised at apex; distiphallus short and stout, terminating in subsquare glans larger in dimension than epandrium as wide, apparently with a small preglans; gonostyle narrow; apex of phallapodeme and hypandrium weakly sclerotised.

Female genitalia: unknown

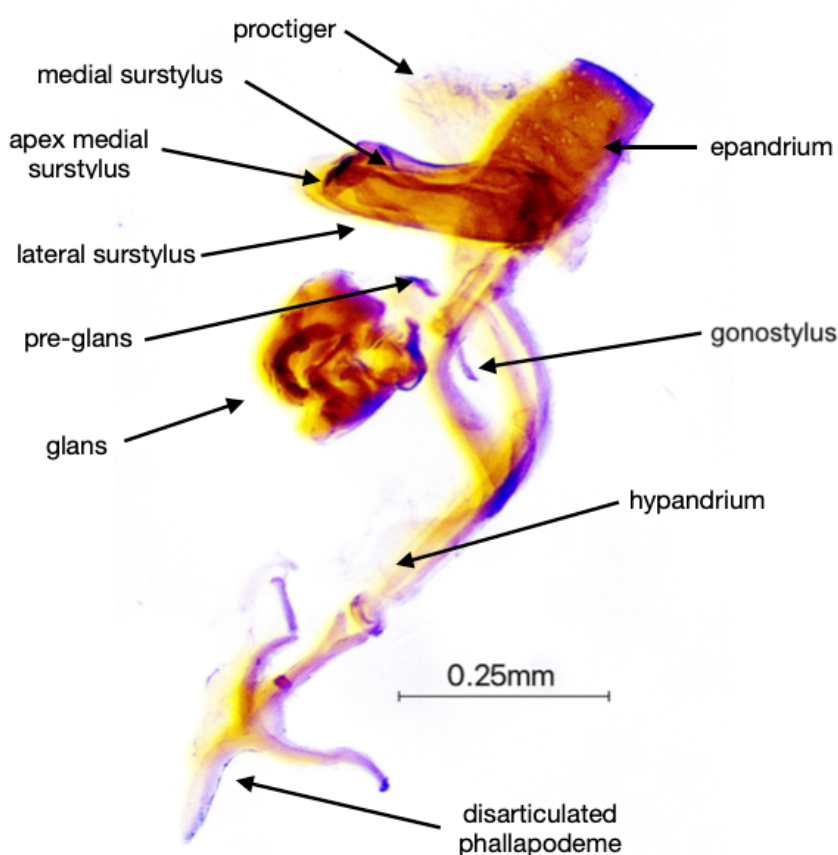


Figure 5. Male genitalia of *Meniscomyia g.n. phaia* sp.n. holotype (specimen in Muséum National d'Histoire Naturelle, Paris, France). Scale bar = 0.25 mm.

Differential diagnosis. Ground colour entirely brown, wing membrane with brown arcs. Arista plumose. Gena in males laterally expanded, the head shape therefore triangular to sub-triangular; oval in females. Inner vertical setae reduced and hair-like, indistinguishable from post-ocellar row. Postpronotal seta absent, notum with postsutural acrostichal setae present. Two pairs of scutellar setae, basal setae inserted closer to base of scutellum than to apical setae; apical setae closer together than distance between basal and apical setae. Setae present ventrally on M_1 , in addition to setae dorsally along length of R_1 and R_{4+5} . Medial surstylus of male genitalia apically hooked and strongly sclerotised; glans large and subsquare.

Material examined: Republic of Côte d'Ivoire: Holotype ♂ Tai, 19-20.viii.1978, G. Couturier, Forêt dense sempervirente (= dense evergreen forest) [MNHN]; Figure 3. In deteriorating condition,

a little greasy and badly pinned, with left wing alongside body, but right wing crumpled and directed forwards (Figure 2). Apex of abdomen dissected off (by myself), cleared in 10%KOH and stored in glycerine in microcapsule above label on same pin.

Discussion: *Meniscomyia phaia* is known only from the male holotype specimen and it is clear that additional collection will eventually result in more samples of this distinctive taxon.

Distribution: *Meniscomyia* is known from a single specimen from Republic of Côte d'Ivoire.

DISCUSSION

An important consideration when examining specimens of *Conopariella* in particular, is that the pigments in yellow coloured sclerites are unstable and prone to bleaching by killing agents and preservatives. This sometimes results in white and brown specimens where one would expect pale yellow and brown specimens. Often the white is chalky in texture. The brown pigments on the other hand, appear to be strongly stable, so long as the specimen is not teneral. It is reasonably easy to pick out teneral specimens as the sclerites appear flimsy or semi-translucent and the brown pigments seem 'washed-out'. Such specimens will still key out using the above key, but occasional specimens in which the entire exoskeleton is bleached pale creamy yellow, the key will not work, neither will comparisons with the figures presented by Whittington (2003). Male specimens can be dissected and the genital structures compared with the descriptions and illustrations, but for most female specimens, a generic identification may be all that is possible.

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