

Amicitia impressiva (Coenosiini) and
Ocypodomyia inopinata (Limnophorini),
two remarkable new species
of little known small Afrotropical Coenosiinae genera

(Diptera, Muscidae)

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Two new species belonging to the subfamily Coenosiinae are described. *Amicitia impressiva* sp. nov. is now the first species to be assigned to the genus since the latter was first described with its four species more than eighty years ago. The species originates from Madagascar and not Uganda like the other *Amicitia* species and is distinguished by features not found in the other taxa. Another species, *Ocypodomyia inopinata* sp. nov., has been assigned as third species to this small genus, because its taxonomic features closely match the genotypic characteristics and it bears a closer resemblance to species in this genus than in any other Afrotropical muscid genus. However, it not only differs significantly from the two known species in terms of its habitat, but also in various taxonomic characteristics.

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Introduction

As part of the numerous new determinations of Muscidae species during the investigations of the material collected by the Ruwenzori Expedition the genus *Amicitia* with four species was described as new to science by van Emden (1940). The *Amicitia* specimens had been found exclusively in Uganda. Each species description was based on at least one male, females were only available for two species. The taxa were listed by Pont (1980) in the catalogue of Afrotropical Muscidae. The overview of the genus prepared by Couri (2003) did not reveal, apart from a few sketches of the taxonomic characteristics of two species, any new findings since the investigations were limited to the specimens already described in detail by van Emden. No additional information was found in literature on further representatives of this

genus and on its four species since the publication of their descriptions more than 80 years ago. However, recently when examining unidentified muscids from Madagascar one male and one female were found, both of which were clearly identified as *Amicitia* specimens using the available identification keys. Due to a lack of sufficient information about the *Amicitia* females, the female specimen has not yet been clearly assigned to one of the known species. The identification still requires further clarification. The male, on the other hand, has striking taxonomic characters not found in any other of the known species. It is described below as *Amicitia impressiva* sp. nov.

The hitherto known species of another small afrotropical genus are of a very unusual appearance. Although the genus *Ocypodomyia* and the two associated species were not described by Pont until 2006,

knowledge of the strange Muscidae dates back at least to 1958, when, according to Pont, the first specimens of this genus were collected by Stuckenberg in Madagascar. A few years later Stuckenberg then informed Pont about these flies. Males and females of both species are very small and characterized by little differentiated parts of the frons, a conspicuous reduction in the head setae and a predominantly white body colour. The species were collected either at the seashores of Madagascar and Seychelles or Angola, The Gambia and Senegal, respectively. Both species seem closely associated with the burrows of crabs of the genus *Ocypode* Weber, 1795. No other species have become known over time, and although the genus was described in detail, no further information on these unusual flies seems to be available in the literature, apart from the mention of the genus in identification keys. Among the above mentioned muscid material from Madagascar a male was recently detected whose taxonomic criteria closely matched those of the genus *Ocypodomyia*. Although, the specimen showed some deficiencies, due to poor conservation conditions, it was still well comparable with the species of the genus. The taxonomic characteristics of the male agree with the most criteria of the genus, but there are also a few differences. Some of these may be the result of living in completely different biotopes inhabited by the specimens. While the previously known species came from crab burrows on the seashore, the additional specimen was recovered from a “yellow pan trap” placed in the highlands of central Madagascar at an altitude of 850 m a.s.l. The newly found male is most likely a representative of a new species that at first glance appears to be very similar to the two known *Ocypodomyia* species, but which, on closer inspection, differs significantly from them in several taxonomic features. Despite the differences found, the new species is assigned to *Ocypodomyia* for the time being, since it shows more taxonomic similarities with this genus, at least in appearance, than with any other muscid genus of the Afrotropical region. Accordingly, the species is described below as new to science as *Ocypodomyia inopinata* sp. nov.

Materials and methods

The two specimens of the new species were isolated from the in ethanol preserved remains of traps that had been placed for collecting Hymenoptera and Coleoptera at various locations in Madagascar. The material was preserved in ethanol and processed at a later date. The remaining remnants with the contamination typical of catches had been stored and was examined years later for any muscids that might have been present (Zielke 2021).

Morphological terminology follows McAlpine (1981), but postpedicel (Stuckenberg 1999) is used instead of “first flagellomere” as proposed by McAlpine. The width of postpedicel of antenna seen from the side is called “depth”, it refers to the greatest depth of the postpedicel. The length of postpedicel is measured from the most anterior margin of pedicel to the apex of postpedicel. Only the postsutural intra-alar setae are called as such. The so-called intra-alar setae of the presutural part of mesonotum are referred to as posthumeral and presutural setae. Body length was measured in millimetres (mm).

The determination of the genus *Amicitia* and its species is based on van Emden’s overview on the Afrotropical Coenosiniinae (van Emden 1940). This publication is referred to quite often in the current contribution, for the sake of simplicity the publication is several times cited only by the author’s name without mentioning each time the year of publication. The same applies to the publication by Pont (2006) and the description and identification of the *Ocypodomyia* species. For confirmation of the determination of the genus *Amicitia* the keys provided by Couri & Pont (1999) and Couri (2007) and the cladistic analysis of the Coenosiniini by Couri & Pont (2000) were used. The assignment of the third *Ocypodomyia* species to the genus is based on the detailed descriptions of the genus and the two species by Pont (2006). The genus is also listed as “undescribed genus” and “new genus” without mentioning the genus name in the keys to the Malagasy (Couri et al. 2006) and Afrotropical (Couri 2007) muscid genera, respectively.

External morphological features of the specimens were studied using a Zeiss Stemi SV6 stereomicroscope and images were created by means of combination of a Zeiss Discovery 8 stereomicroscope and an AxioCam ERc5s camera. Helicon Focus 6 and Adobe Photoshop CS2 were applied for further processing of the images.

The undetermined material of Muscidae was kindly made available for investigation by the Moravian Museum, Brno (CZ).

Results

Amicitia impressiva sp. nov.

Figs 1–4

Material examined. ♂ Holotype; locality label reads: “Madagascar, Ambohitantly Spec. Reserv., 1530 m, 19.4.2011, local collectors“. Apart from the wings, which are somewhat folded lengthwise and a few absent setae, the holotype is in good condition. The holotype will be located in the Moravian Museum, Brno after completion of the examination.

Etymology. The epithet “impressiva” is a feminine adjective and refers to the strikingly different combination of taxonomic characters of the new species and in particular to the impressive fifth sternite.

Description

Male. Head. Ground-colour dark, densely dusted grey. Dichoptic; eye practically bare, facets of about equal size, distinctly narrowed in lower half of eye and posterior margin somewhat indented, close to lower margin only about half as wide as the maximal width of eye in upper half (Fig. 1). Frons at base of antennae almost as wide as one eye, narrowed to vertex, protruding in profile about by the depth of postpedicel; frontal triangle reaching middle of frons. Fronto-facial stripe almost evenly and practically not dilated to mouth margin, face slightly longer than frons. Parafacial at basis of antenna almost as wide as depth of postpedicel, strongly tapering in upper half and almost sub-parallel in lower half, barely half as wide as diameter of anterior ocellus. Mouth margin somewhat above the level of the lower margin of the eye. Antenna long but not reaching anterior mouth margin. Postpedicel slightly more than three times as long as its depth and also three times as long as pedicel, arista about twice as long as length of postpedicel, short plumose, not much more than half as wide including plumosity than depth of postpedicel. Frontal vitta black, fronto-orbital plate at certain angle of viewing somewhat greyish-white; antenna dark brownish-grey, pedicel darker grey than postpedicel and sparsely dusted; parafacial densely dusted whitish-grey. Fronto-orbital plate well developed, in anterior half with two inclinate fronto-orbital setae, the posterior one much weaker and distinctly shorter. About at middle of frons and at level of anterior ocellus one strong reclinate seta each, the anterior one distinctly stronger. Outer vertical seta about as long as upper reclinate orbital seta, inner vertical seta distinctly longer, post-verticals about as long as outer verticals, ocellar seta about as long as upper reclinate orbital seta. Labella yellow (Fig. 1), wider than depth of proboscis, prementum shiny dark brown. Palpus completely yellow (Fig. 1), about as long as prementum, apical third distinctly dilated.

Thorax. Dark, densely dusted grey, in parts or as in pleura almost uniformly (Fig. 1) with a bluish shimmer; mesonotum with a pair of broad longitudinal brown dusted stripes, each one surrounding a row of dorsocentral setae (Fig. 2) and reaching the second postsutural dorsocentral seta, from there fainting towards the third seta, the stripe very poorly demarcated and only at certain light incidence clearly recognizable. Metanotum dark greyish with the lower third strikingly glossy dark (Fig. 3). Acrostichal setulae in one median row (Fig. 2), in two rows only in posterior half of postsutural part of mesonotum. Dorsocentrals 2 + 3, the first seta shorter than half the length of the others and closer to the

second presutural seta than this one to the transverse suture; posthumeral seta 1, rather short; presutural seta 1, long and strong; postpronotal seta 1; notopleural setae 2; prealar seta absent; intra-alar seta 1; katepisternals in an almost equilateral triangle, the area of the triangle with two fine erect hairs, anterior katepisternal seta rather weak, lower one almost as strong as the very well-developed strong posterior seta; anepisternal setae 1 anterior and a posterior row of three strong seta in the upper part and a distinctly stronger seta somewhat more downwards; one strong and below a more setula-like proepisternal and proepimeral setae respectively, the lower proepimeral setula neither curved upwards nor directly downwards, but rather sideways. Scutellum only with a pair of long and strong apical setae, no distinct lateral seta, or hair, surface of scutum with three setulae about as short as ground-hair of mesonotum, of the three setulae one each laterally.

Wings. Slightly smoky, veins brownish, cross-veins and surrounding membrane not infuscate, tegula and basicosta yellowish-white, costa reaching apex of vein M, costal spine practically not distinguishable from adjacent bristles. Cross-vein r-m slightly beyond where vein R1 enters costa. Vein A1 distinctly shorter than half the distance from its base to the wing margin. Calypters whitish with whitish fringe and white margin, lower calypter strongly projecting beyond upper one, at least twice as long, sides subparallel in middle part. Halteres with stem and knob predominantly whitish.

Legs. Long and slender, predominantly yellow (Figs 1, 3), all coxae densely dusted greyish-white, in certain light condition apical third of mid and hind femora at least dorsally and dorso-laterally dark brownish, tarsi infuscate. Fore femora with about seven posteroventral setae alternating with small ones, the long setae with the longest in the basal part, the subsequent setae decreasing in length up to the apical part, basal half with a row of fine short anteroventral setae; front tibia with a moderate postero-ventral seta barely twice as long as diameter of the slender tibia. Mid femur from base to beyond middle with about seven anteroventral setae increasing in length from about as long as depth of femur, a distinctly longer and stronger anterior seta just beyond the last anteroventral seta, a strong posterior seta preapically; mid tibia with a posterodorsal seta at least twice as long as diameter of tibia. Hind femur in basal two thirds with a row of anterodorsal setae, barely as long as depth of femur, apart from the most apical seta, that is distinctly stronger and about 1.5 times as long as depth of femur, in addition in basal two thirds a row of seta-like anteroventral hairs, about as long as and in middle third distinctly longer than depth of femur, the longest hair at the

end of middle third more than twice as long as depth of femur, the row of anteroventrals continued in the apical third by distinctly shorter anteroventral seta-like hairs, one long posteroventral seta-like hair in basal half and another equally long one beyond middle about at the level of the strikingly long anteroventral and anterodorsal seta-like hairs, a few much shorter posteroventral setae along the basal two thirds of femur and a row of posteroventral setae opposite the apical anteroventral row, the setae about as long as the anteroventrals, preapically with one anterodorsal, anteroventral, posterodorsal and posteroventral seta each, all distinctly stronger than the surrounding seta-like hairs of the various rows; hind tibia with a strong and long median and a somewhat shorter and weaker submedian anterodorsal seta, the anteroventral seta in apical half of tibia only half as long as the median anterodorsal seta, on posterodorsal surface a much shorter seta each almost level with each of the two anterodorsal setae, the median seta about as long as diameter of tibia, the submedian posterodorsal setae about twice as long, preapically a long dorsal and a shorter anterodorsal seta.

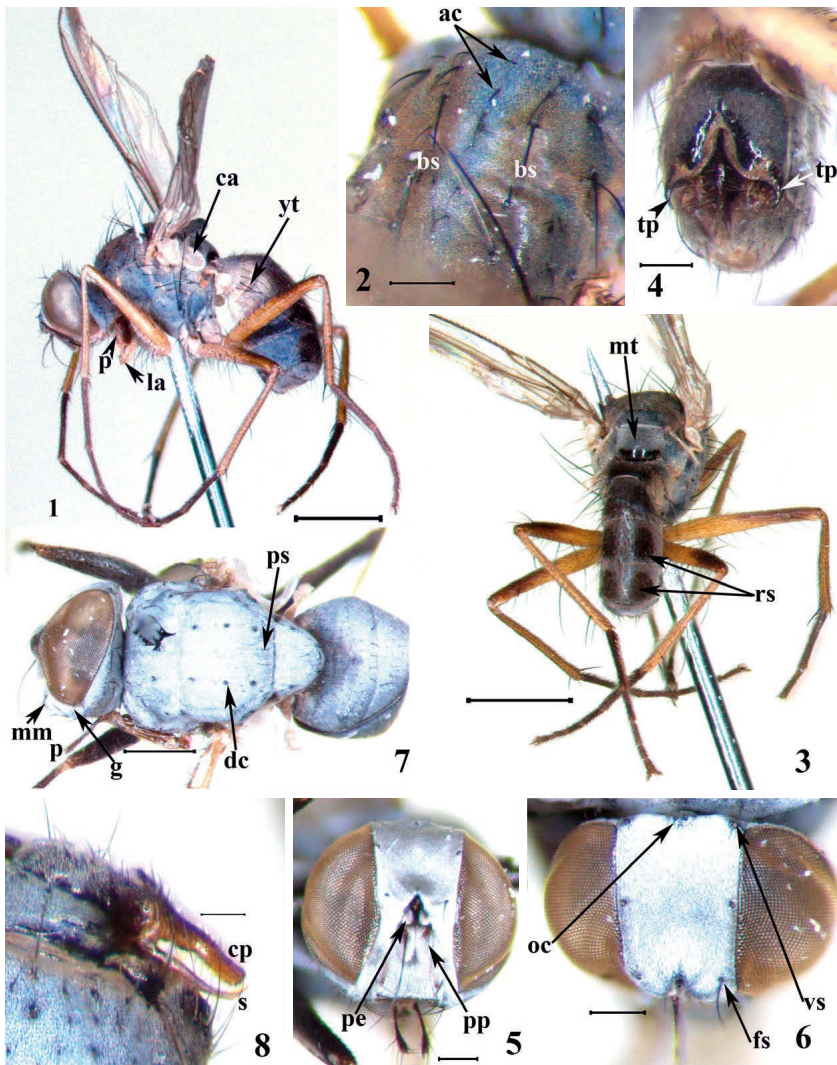
Abdomen. Slender, syntergite 1 + 2 slightly depressed, segments 3 to 5 strongly compressed over the entire length of the abdomen (Fig. 3) and ending in a large terminal part. Ground-colour mainly dark, dorsal and dorso-lateral surface of syntergite 1 + 2 and 3 almost uniformly dark brownish, lateral and ventral surfaces predominantly translucent yellowish-white (Fig. 1), posterior segments uniformly dark grey and in strictly posterodorsal view (Fig. 3) with a pair of big conspicuous black rounded spots on segments 4 and 5, the grey surface between the spots about half as wide as the diameter of spots and without a dark vitta. Syntergite 1 + 2 with one strikingly long and strong and three somewhat shorter but still long setae on the lateral side; tergite 3 with a pair of somewhat elongate seta-like hairs laterally, however distinctly shorter than those of syntergite 1 + 2; tergite 4 with a few discal and marginal setae not very strongly developed; tergite 5 with long marginals and an almost complete row of distinct discal setae. Anterior sternites yellowish. Sternite 5 (Fig. 4), however, dark grey, strongly enlarged with a central V-shaped incision in the apical half, the two lobes of the sternite lying laterally on the body, the outer apical edge of the lobe ending in an inwards curved thorn-like process. Each lateral lobe shortly before the inner margin with a shiny black surface, the curved apical thorn-like process also chitinized shiny black, surface on the inner margin and thorn-like process without hairs. Hypopygium with some curved, semi-erect, seta-like hairs.

Male genitalia. Although it would have been interesting to study the hypopygium in detail, it was deemed wiser not to extract the genitalia, to avoid inflicting damage on the hitherto only available specimen of the species. Since *Amicitia impressiva* sp. nov. can be clearly distinguished from the other known taxa of the genus on the basis of several other taxonomic characters, characteristics of the hypopygium are not needed for identification purposes.

Measurements. Body length 3.7 mm, length of wings 4.2 mm.

Female. Not known.

Remarks and diagnosis. Apart from the lower proepimeral setula, which is neither curved up nor down but sideways, while the corresponding seta is curved down in the known species, the taxonomic characters of *Amicitia impressiva* sp. nov. show close agreement with the genotypic characteristics as defined by van Emden. Correspondingly, the features used for the identification of the genus in the key to the Coenosiniinae of the Afrotropical Region fully matched with the appearance of the new species: Frons strongly protruding at base of antennae (Fig. 1), two pairs of reclinate fronto-orbital setae, arista short-plumose to almost bare, dorsal surface of thorax with a pair of broad dark vittae (Fig. 3), scutellum with the apical setae strong, the lateral pair missing or less than half as long as the first or second postsutural dorsocentral seta, hind tibiae with one or two posterodorsal setae, never with an anterior seta and an anterodorsal seta closely placed. But there is less agreement in the combinations of features between the new and the known species, and in addition, the new species is characterized by criteria which are not known from the four other species. The palpi are uniformly light yellow (Fig. 1), the acrostichal setulae are in only one row in the presutural part of the mesonotum (Fig. 2), anterior lateral parts of tergites are yellowish-white (Fig. 1) and the sternite 5 is marked by a striking curved thorne-like process of each lateral lobe (Fig. 4). The palpi of the males of the four species described by van Emden are fuscous, at most partly testaceous, there are always two presutural rows of acrostichal setulae in the known species, the abdomen has no yellow parts and the lobe of sternite 5 is not furnished with a thorne-like process. In van Emden's key there are two species having 1+3 strong dorsocentral setae, small but distinct lateral scutellar setae, and a posterior as well as a posterodorsal preapical seta on the mid femur. The other group consisting of also two species have 1+1-2 strong dorsocentrals only, no or only hair-like lateral scutellar setae, and only a posterior preapical seta on the mid femur.



Figs 1-8. 1-4 *Amicitia impressiva* sp. nov., ♂ holotype: 1. lateral view; 2. dorsal view, anterior half of mesonotum with only one row of acrostichal setulae and a pair of paramedian vittae brownish dusted; 3. posterodorsal view, abdomen with a pair of big roundish dark brown spots each on tergites 4 and 5, lower part of greyish dusted metanotum glossy dark; 4. ventral view, remarkably enlarged sternite 5, at each apex of the two lobes with a conspicuous curved thorne-like process. Abbreviations: **ac**, acrostichals; **bs**, brown dusted stripes; **ca**, calypters; **la**, labella yellowish; **mt**, metanotum; **p**, yellow palpus; **rs**, round spots; **th**, thorne-like process; **yt**, tergites 1+2 and 3 with yellowish-white lateral sides.

5-8 *Ocypodomyia inopinata* sp. nov., ♂ holotype: 5. anterior view of head, including antennae uniformly white dusted; 6. anterodorsal view; frons uniformly whitish dusted and with indistinguishable parts of the frons; 7. lateral view of head, mouth margin not reaching profrons, dorsal view of thorax and anterior half of abdomen; all dusted white, abdomen with several small dark setulae; 8. lateral view of hypopygium with long processes of the cercal plate and with long surstyli. The right side of the figure corresponds about the ventral side of the holotype. Abbreviations: **cp**, elongate process of cercal plate; **dc**, scars of presutural and postsutural dorsocentral setae; **fs**, fronto-orbital seta; **g**, width of gena; **mm**, mouth margin; **oc**, ocellar triangle; **p**, very slender palpus; **pe**, pedicel; **pp**, short postpedicel; **ps**, prescutellar acrostichal setae, short and weak; **s**, surstylus; **vs**, scar of inner (?) vertical seta. Some greyish coloured body parts with a weak bluish tinge appear in both species in photographic light conditions more bluish than in normal microscopic light. Scale bars: Fig. 1 = 1 mm; Figs 3 and 7 = 0.5 mm; Figs 2 and 4-6 = 0.2 mm; Fig. 8 = 0.1 mm.

Amicitia impressiva is characterized by a combination of the features of both groups, there are 1 + 3 strong dorsocentrals, however the lateral scutellar setae are absent and there is also only a posterior preapical seta on mid femur.

With the objective of retaining on the one hand side van Emden's identification table with the detailed species characterizations, and on the other side distinguishing the new species from the known taxa, the identification table supplemented by *A. impressiva* could function as follows:

1 (2) Male: palpi uniformly yellow, only one median presutural row of acrostichal setulae, anterior lateral parts of tergites yellowish-white, lateral lobes of sternite 5 with striking curved thorne-like process *A. impressiva*

2 (1) Palpi usually fuscous, at most partly testaceous, at least two presutural rows of acrostichal setulae, abdomen without yellow markings, sternite without thorne-like process.

Couplet 3 (6) and the following ones are identical to couplet 1 (4) and the others of van Emden's key, the numbers of the couplets in the original key have just to be increased by 2, i.e. 2 is changed to 4, 3 to 5, 4 to 6, etc., the characterizations of the species provided by van Emden remain unchanged.

Ocypodomyia inopinata sp. nov.

Figs 5–8

Material examined. ♂ Holotype; locality label reads: "VOH/AUG 2012 Madagascar, Réserve Expérimentale de Vohimana, Circuit 1, 30.viii.2012, YPT, 870 m, S18°55'30.9" E48°30'22.7", L. S. Rahanitriniaina & E. M. Rabotoson, lgt."

Due to unfavourable conservation conditions the specimen has several defects. Most of the setae have been lost, but their dark scars are clearly visible on the whitish body surface. The tarsi of the right front leg, the left middle leg and both hind legs are missing. The left wing has a rupture along vein R4+5. The abdomen is partially torn and the last three segments are more or less pushed into each other. A specimen in this state would normally not be designated holotype. However, despite the shortcomings, it is possible to provide a well-founded description of the species. Mainly because the species differs so clearly from similar taxa. It would therefore hardly be justifiable to withhold this new species from science on the grounds that the body condition of the holotype is not up to the usual standard. On the other hand, not describing the species would mean that this interesting species is not known for an unforeseeable period of time and therefore not available for further study.

The holotype will be located in the Moravian Museum, Brno after completion of the examination.

Etymology. The epithet "*inopinata*" is a feminine adjective, comes from Latin and means "unexpected". It indicates that in the yellow pan trap located in central Madagascar no fly was expected resembling the unusual taxa of the genus *Ocypodomyia*, only known so far from the Afrotropical seashores.

Description

Male. Head. Dichoptic; ground-colour dark grey; except for the eyes, the head is generally dusted densely silvery-white (Fig. 5), at certain incidence of light predominantly or in places dark grey. Eye almost as large as the side of the head (Figs 5, 7) and practically bare. Frons tapering slightly from vertex to lunule (Fig. 6); at vertex 0.43 times and at lunule 0.39 times as wide as maximal head-width. Frons uniformly densely whitish dusted (Fig. 6) or uniformly dark greyish in appearance in different incidence of light, the differentiation into fronto-orbital plates and frontal triangle barely detectable, ocellar triangle directly on the dorsal edge of head and extremely shortened (Fig. 6). Frons about 1.5 times as long as face, profrons slightly below middle of head and somewhat protruding, in lateral view mouthparts slightly but distinct behind profrons. Antennae very short, ground-colour uniformly dark grey, usually all segments strikingly dusted white (Fig. 5), arista dark brown and bare, at least three times as long as postpedicel. Postpedicel twice as long as deep and about twice as long as pedicel, distance between tip of postpedicel to mouth margin about as long as length of postpedicel. Frons with one anterior proclinate fronto-orbital seta above lunule, almost half as long as the width of frons, the scar of another seta similarly strong as the anterior one directly in the middle of frons very close to the eye margin. The scar of a third seta, equally strong as the two anterior setae of the frons directly in front of the dorsal edge of head close to the eye margin, most probably originating from the inner vertical seta. Ocellar setae missing, however scars of the setae distinct, not as big as scars of fronto-orbital setae. Postocular setulae in a single row. Parafacial at basis of antenna at least twice as wide as depth of postpedicel (Fig. 5), strongly tapering in upper part and in lower half subparallel, at least half as wide as depth of postpedicel. Facial ridge in lower half almost as wide as parafacial. Parafacial and facial ridge bare apart from the vibrissal seta and a neighbouring much smaller seta, both somewhat above the lower facial margin. The latter not narrowed, vibrissal setae not unusually close together. Vibrissal setae missing, the size of the scars indicating a well-developed size of

the setae. Gena below lowest eye-margin about as wide as depth of postpedicel (Fig. 7), bare except for several setae along lower margin. Proboscis neither strikingly long nor short, slender, prementum shiny brown to dark brown, labella slightly longer than depth of proboscis, palpi (Fig. 7) dark brown, very slender, apically slightly dilated.

Thorax. Ground-colour dark grey. In general, mesonotum, scutellum (Fig. 7) and pleura uniformly whitish to silvery-white dusted, without any dark pattern; at certain incidence of light in parts or predominantly more greyish with sparse whitish pollinosity. Spiracles white, the posterior without dark setae on lower margin. Acrostichals, a pair of very short and weak prescutellar acrostichal setae (Fig. 7); two pairs of weak setulae at level of the middle pair of postsutural dorsocentral setae only, another pair of setulae in front of the pair of prescutellar setae. Very strong scars of 1+3 dorsocentral setae (Fig. 7), indicating the former presence of long setae. Apart from a very few tiny scars of setulae there is no scar to which an anterior presutural dorsocentral seta could have been belonged to. The scars of the dorsocentral setae are clearly stronger than the basis of the presutural seta which is longer than the length of the presutural part of mesonotum; postpronotals 2; notopleuron with 2 setae, otherwise bare; pre-alar absent; intra-alar seta 1; weak; supra-alar 1; post-alar 3. Prosternum, proepisternal depression, anepimeron, meron and katepimeron bare; proepisternum with 1 seta and 1 setula, and 1 proepimeral seta all directed upwards, the proepimeral setula downwards. Katepisternals 1+2, the lower one not weaker than the upper anterior seta and distinctly closer to the posterior upper seta than to the anterior upper one. Anepisternum with up to five setae in posterior row, a distinct small seta in upper anterior corner. Scutellum (Fig. 7) with scars of one pair of lateral and one pair of apical setae, the scars of preapical and basal setae, although very small, clearly recognizable due to absence of ground-hair; disc at least with two more setulae; lateral margins and ventral surface bare.

Wings. Membrane entirely covered with microtrichia, transparent with a distinct brownish tinge. Tegula dark brown, basicosta brownish-yellow. Veins yellowish-brown at base, subsequent parts brown. Costa extends around the rounded wing tip to the vein M; a long bristly hair at base, costal spine not much longer than adjacent bristles. Subcosta with a slightly but clearly sinuous course. Cross vein r-m slightly behind the point where vein R1 enters the costa, cross vein dm-cu almost straight and erect. Vein M runs straight in the apical part to the wing-margin, not curving slightly forward vein R4+5.

Vein A1 distinctly shorter than half the distance from its base to the wing margin. Calypters including margins white. Lower calypter of the *Phaonia* type and projecting well beyond upper one. Halter with brownish stem in the lower half, upper part and knob pale yellow.

Legs. Ground-colour dark; hind legs missing except coxae. All coxae dark, densely dusted greyish-white; trochanters brown; fore femora brown depending on light conditions more or sparsely dusted greyish, mid femur dark brown and predominantly glossy; fore tibia and tarsi yellowish, mid tibia and tarsi brown. Fore femur with a posteroventral row, the setae weaker in basal half. Fore tibia without a median posterior seta, one dorsal and one short posteroventral apical setae. Mid femur with a posterior but no anterior apical seta. Mid tibia with one median posterior seta.

Abdomen. Ground colour dark greyish. Dorsal surface usually wholly dusted whitish, at certain incidence of light with a bluish-greyish shine, without any dark markings (Fig. 7). Tergites not densely covered but with many small dark setulae, all tergites with a row of short marginal setae, tergites 4 and 5 with longer marginals and in addition with a row of distinct discal setae. Ventral parts of tergites and sternites concolourous with dorsal surface. Sternite 1 narrow, with a few distinct hair-like setae.

Male genitalia. The male of *Ocypodomyia inopinata* differs markedly from the two known taxa of the Afrotropical coasts by several striking characters. Therefore, the genitals were not extracted to avoid further worsening the condition of the very fragile and already severely damaged male abdomen. Even without dissection of the hypopygium it can be seen that it is characterized by remarkably long and slender processes of the cervical plate and by surstyli about as long and also very narrow. This clearly distinguishes it from the hypopygia of *O. africana* and *O. stuckenbergi*.

Measurements. Approximately 3.7 mm, length of wing about 3.4 mm.

Female. Not known.

Remarks and diagnosis. The male of *Ocypodomyia inopinata* has a rather stocky build. The taxonomic features of the male matched very well the following genotypic characters described by Pont for the genus, in brackets deviations observed in the new species: Entire head except for eyes and antennae silvery white pruinose (antennae usually silvery-white dusted). Frons short and very broad (frons somewhat longer than face). Frons uniform in appearance, with a differentiation into fronto-orbital plates, frontal vitta and ocellar triangle almost un-

detectable. Head setae are reduced and, apart from the few strong setae, sometimes only setula-like, for example the peristomal setae, which are not or only hardly recognizable in the illustrations. Prementum of proboscis glossy, undusted. Katepisternals 1+2. Mid femur with 0 anterior and 2 posterior preapical setae (only 1 posterior preapical seta, similar to some specimens of *Ocypodomyia stuckenbergi* Pont, 2006). Sternite 1 with setulae at sides.

Some characters of the genus are listed by Pont with two options: Prosternum, proepisternal depression, and meron below spiracle with or without setulae (in new species: all mentioned parts bare). Veins bare, but vein R4+5 sometimes with a few setulae at base (veins bare).

The genotypic characterization and the new species do not agree in regard to the narrow lower facial margin and the vibrissae unusually close together, as listed as characters of the genus, whereas in the new species the lower facial margin is not narrowed and the vibrissal setae are not unusually close together in the new species.

The comparison of the new species with the generic description of *Ocypodomyia* revealed an agreement not seen with any other genus of the Muscidae, and by means of the short but slightly modified identification key (Pont 2006) the three species can be distinguished as follows:

- 1 One or more distinct setae or setulae on fronto-orbital plate present2
- Fronto-orbital setae absent; prosternum bare, male abdomen without dark spots
..... *O. stuckenbergi* Pont
- 2 Prosternum setulose, male abdominal tergites 3 and 4 each with a pair of small subtriangular spots *O. africana* Pont
- Prosternum bare, male abdomen without any dark markings *O. inopinata* sp. nov.

The two species described by Pont differ clearly in several characteristics. Differences in shape and chaetotaxy of the head, the genotypic characters with two options, one of the options for one species each only, and the differences mentioned in the identification key are examples of the different appearance of the two species. However, when comparing *O. inopinata* with the individual descriptions of *O. africana* and *O. stuckenbergi*, respectively, it becomes evident, that the new species differs fundamentally in the following characteristics from the two others (*inopinata* vs. the two others):

Eye covering almost the whole lateral side of the head, gena only about as wide as depth of postpedicel (Fig. 7) – eye much smaller, gena at least as wide as a quarter of the eye-depth.

In lateral view, profrons slightly below middle of head, frons (Fig. 7) somewhat longer than face – profrons in upper half of head, face very long.

Profrons clearly protruding (Fig. 7), mouth parts behind profrons – profrons in line with or behind of mouthparts.

Antennae with postpedicel very short (Fig. 5) – antenna and postpedicel extremely long.

Lower face margin broad (Fig. 5), vibrissals not strikingly close together – lower face margin strikingly narrow, vibrissals unusually close together.

Thorax with 1+3 dorsocentrals (Fig. 7), all long, like also the presutural seta – thorax with 2+3 dorsocentrals, all setae rather short.

Hypopygium (Fig. 8) with long processes of cercal plate and long slender surstyli – cercal plate without long processes, surstyli simple.

Body colour in general densely dusted white, however, at certain conditions of light, large areas greyish to dark grey – body colour generally white or silvery-white, it is mentioned that ground colour is dark but not whether the body colour is similarly sensitive to changes in light, and body parts then appear dark.

Discussion

In the present contribution, two new species are described on the basis of only one male each, with one of the specimens also missing the hind legs. Describing a new species from just one specimen carries a certain risk, therefore it is done with great hesitation, and in particular, when the type material is not in perfect condition. Skepticism that arises is therefore understandable when subpar specimens are designated as types. However, if circumstances do not allow for more specimens to be collected in better condition in the near future, this is probably the only way of making the knowledge on the new species available to the larger scientific community. Unfortunately, it is simply not realistic to plan additional field work with the aim of collecting more and better material from a certain species that was represented by just one specimen when trapped along with hundreds of other flies some or even many years ago. Both specimens described in this paper differ strikingly from hitherto known taxa by several taxonomic characters, allowing for a solid description and diagnosis of the new species. Making a clearly new species publicly available is probably a better contribution to science than postponing description until more specimens sometime become available by chance. With the result that this species will remain unknown for an indefinite period and consequently is not available for further scientific investigations.

It was pointed out by Pont & Baldock (2007) that only few Muscidae species have been newly described from the Afrotropical region in a quarter of a century since the publication of the Catalogue of the Afrotropical Muscidae “due to death of available taxonomic expertise”. Some 75 new Muscidae species have been described in the literature since 2007. However, these are primarily specimens of well-known and widespread genera. With the exception of (Couri & Sousa 2021) *Alluaudinella* Giglio-Tos, 1895 and the recently (Zielke 2022) described new species of *Rhinomusca* Malloch, 1932, no other small genera with less than ten Afrotropical species appear to be among the newly described species. From some of the Coenosiinae genera introduced by van Emden no further species have been described in the last eighty years since the genera were revised. Not even finds of further specimens of the known species have been reported. This latter group of genera also includes *Amicitia* van Emden, 1940. The four species described by van Emden were all from Uganda and speculation that it was a genus endemic to Uganda was not unfounded. The two specimens of the genus discovered in the muscid material from Madagascar not only prove that the genus is not limited to Uganda in its distribution, but the male complements the appearance of the species with other combinations of the genus-specific taxonomic characters. In addition, the male is marked by criteria hitherto unknown from the genus, such as purely yellow palpi, a single median presutural row of acrostichal setulae, a partially whitish-yellow coloured abdomen, and conspicuously formed ventral lobes of the fifth sternite. If it is assumed, based on the clear similarity of the females with the males in the two known *Amicitia* species, that this will be also the case with the newly described species *Amicitia impressiva*, then the female found in Madagascar is by no means to be assigned the male, even if it has the same collection data as the male.

A very interesting constellation has emerged in the genus *Ocypodomyia* with the description of the new species *Ocypodomyia inopinata*. Primarily due to the small body size, the predominantly shiny whitish body colouring, the conspicuous white head with the reduced chaetotaxy, and the indistinguishable parts of the frons such as fronto-orbital plates, frontal vitta and orbital region, but also due to other genus-specific features the species was assigned the genus described by Pont in 2006. Especially since no other muscid species shows a corresponding similarity. The interspecific comparisons revealed not only a large variability between the three species, they also showed clear differences between the taxa originating from the seashores of Africa and the specimen

found in the central highlands of Madagascar. The different habitats may explain the strikingly different sized eyes. In this context, Pont has already pointed out the relatively small eyes of the previously known species. The shorter setae are perhaps also due to the life in crab-burrows, as it was observed for the flies collected from the seashores. The specimen from Madagascar, on the other hand, was found in a yellow pan trap that was actively visited by the fly. This specimen also has a greatly reduced chaetotaxy, but some very long setae still exist. The occurrence of 2 + 3 dorsocentral bristles in the coastal forms and 1 + 3 very long bristles in the Malagasy male is less to be explained by the lifestyle. The same is true for the lower proepimeral setula, directed downwards. The species from the seashore, however, are marked by having all proepimeral setae directed upwards. The hypopygium of the newly described male with the long processes of the cercal plate and the long and slender surstyli, which are clearly visible without any dissection, are quite distinct from the male genitalia described by Pont of the two coastal species. However, this does not automatically mean that the species cannot belong to the genus. Gregor et al. (2016), for example, compiled the cercal plates and surstyli of a large number of species from different genera and thus also showed the diversity of male genitalia within the individual genera. When studying the specimen of *Ocypodomyia inopinata*, it was also considered to extract and dissect the male genitals in order to possibly obtain clues as to which genus this species belongs to. However, the extraction of the male genitalia in this very fragile and extremely small male can also result in almost complete destruction of the holotype. Thereby, it is not necessarily guaranteed that the preparation of the genitalia leads to a clear assignment of the *inopinata* specimen. A severely damaged holotype, however, is not useful for comparisons with other specimens, and male genitalia alone are of no help in species identification, in particular when comparison with a possible female of the species is needed. Therefore, it was decided to avoid extensive damage to the holotype and to postpone examination of the genitals until more males are available that allow examination of the genitals without destroying the reference material.

With the different expression of some characteristics, also a similarity with the related tribe Coenosiini is to be thought of. But the general appearance and some of the genotypic features already described above speak against it. Therefore, the species was assigned to the genus *Ocypodomyia* for the time being. Should more specimens of *O. inopinata* or even additional species of the genus become available

for further investigation it will become evident if *inopinata* is an aberrant species of a different genus or perhaps of *Ocypodomyia*. However, reconsideration of the genus criteria and adaptations to new findings can then be done taking in account the available holotype.

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