

## Descriptions of two new African *Curranosia* species with characteristics not yet reported from the genus and remarks on the subspecies of *Curranosia spekei* s. l. (Diptera; Muscidae)

With 16 figures

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### Abstract

*Curranosia setissima* spec. nov. and *Curranosia allroundera* spec. nov. are described from Uganda and Cameroun, respectively. Both species are marked by taxonomic characteristics, which were not known hitherto from other species of the genus. *C. setissima* is distinguished from all other species by an extraordinarily long ventral hair-like seta on the distal end of the stem vein of the wing. *Curranosia allroundera* has practically all characteristics present which are typical for *Curranosia*, but, unusual for the genus, the lower calypter does not extend under the scutellum and appears in general clearly smaller than in most of the other species of the genus. In addition, it is the first species of the genus with a violet-brownish or yellowish-brownish abdomen, depending on the point of viewing. It is also recommended that each subspecies of *Curranosia spekei* s. l. be treated as a distinct species, namely as *Curranosia spekei* (JAENNICKE, 1867), *Curranosia pilarara* (SNYDER, 1951) and *Curranosia vansomereni* (SNYDER, 1951).

### Nomenclatural acts

*Curranosia setissima* spec. nov. – urn:lsid:zoobank.org:act:5D58F0DE-2B3C-4CC6-8E82-67F4086BEB3F

*Curranosia allroundera* spec. nov. – urn:lsid:zoobank.org:act:DB44B29A-762E-408C-902E-7BB61EAF2F65

### Key words

Insecta, Muscini, *Curranosia setissima* spec. nov., *Curranosia allroundera* spec. nov., Afrotropical Region, Uganda, Cameroun, transfer of subspecies to species status.

### Zusammenfassung

*Curranosia setissima* spec. nov. und *Curranosia allroundera* spec. nov. werden von Uganda bzw. Kamerun beschrieben. Beide Arten fallen durch taxonomische Merkmale auf, die bisher nicht von anderen Arten der Gattung bekannt sind. *Curranosia setissima* unterscheidet sich von allen anderen Arten durch eine ventrale, überaus lange haarförmige Borste auf dem distalen Ende der Stammvene des Flügels. *Curranosia allroundera* weist praktisch alle für *Curranosia* typischen Merkmale auf, aber ungewöhnlich für die Gattung ist, dass das untere Thorakalschüppchen deutlich kleiner erscheint als bei den meisten anderen Arten der Gattung und sich auch nicht unter das Scutellum erstreckt. Darüber

hinaus ist *C. allroundera* die erste Art der Gattung mit einem, je nach Lichteinfall, überwiegend violett- oder bläulich-braunen oder gelblichen Abdomen. Es wird ferner empfohlen, jede der drei Unterarten von *Curranosia spekei* s. l. als eine eigenständige Art zu behandeln, nämlich als *Curranosia spekei* (JAENNICKE, 1867), *Curranosia pilarara* (SNYDER, 1951) und *Curranosia vansomereni* (SNYDER, 1951).

## Introduction

In a previous contribution on two new species and records of a few known species of the genus of *Curranosia* PATERSON, 1957 two males are mentioned from the Ruwenzori Range as new for Uganda (ZIELKE 2020a). Using the keys provided by SNYDER (1951) and ZIELKE (1971), the taxonomic characteristics of the two specimens such as white anterior spiracle, brownish calypters, dusted area on the anterior part of presutural mesonotum and wing membrane without dark markings on the front margin, led directly to *Curranosia spekei pilarara* (SNYDER, 1951) and consequently the two males were registered as such\*. When the flies were returned and sorted into the collection of *Curranosia* species of the Natural History Museum in London, UK, one of the males was compared just randomly and superficially to the holotype of *C. spekei pilarara* located in the same collection box. On the first quick glance both flies differed in the width of the frons, and in the colour and extent of the pollinosity of the anterior part of the presutural mesonotum. Direct comparison under the microscope revealed, that the holotype had 1+2 and the male 1+3 katepisternal setae present. Additionally, the most striking feature of the Ugandan male was discovered, an extremely long hair on the ventral side on the stem vein just before the branching of the wing veins  $R_1$  and  $R_{2+5}$ . The length of the hair extends beyond the radial node. The second male with the same collecting data was marked by the same features including the exceptionally long hair. Such a long hair on the ventral side of the wing has apparently not been reported yet from other muscids.

Based on these newly discovered differences, the two males originally assigned to *C. spekei pilarara* are regarded as representatives of a previously unknown *Curranosia* species and are described as new to science in the paper in hand.

The Museum für Naturkunde in Berlin, Germany kindly supported the ongoing investigations of undetermined African muscids by providing several muscid species on loan for comparison. Among the material received were three specimens with a broad brownish anterior margin of the wing, extending from base to apex.

The specimens had been assigned in the early 20<sup>th</sup> century to *Neomyia marginipennis* (STEIN, 1918), two of which, however, proved (ZIELKE 2021) to be *Neomyia intacta* (CURRAN, 1935). The third specimen, a female, associated

with the two *Neomyia*, clearly differed macroscopically from the two by a strikingly yellowish abdomen at certain angles of light and a very dark olive-green thorax. Closer examination revealed that the specimen had the typical characteristics of the genus *Curranosia*. The lower calypter, however, does not extend under the scutellum but diverge from the margin of the scutellum in a steep angle, in addition it appears smaller than in most of the other species of the genus. It resembles somewhat the small calypters typical for the species of *Pyrellina* MALLOCH, 1923, one of the few genera of the tribe Muscini with species having small lower calypters. It remains to be seen, whether this female is indeed a member of the genus *Curranosia* or whether it belongs to another perhaps even new genus. It is described below for the time being as a new *Curranosia* species.

## Materials and methods

The keys to *Orthellia* (now *Neomyia*) species (SNYDER 1951, ZIELKE 1971) and to *Pyrellina* and *Curranosia* species (ZIELKE 1971) were used for identification. Standard terminologies as applied by GREGOR et al. (2016) are used for the descriptions. However, the width of postpedicel seen from lateral view is called “depth”, and the greatest depth of the postpedicel is usually used for comparisons and calculating ratios, e.g. length vs depth of postpedicel. External morphological features of the specimens were studied using a Zeiss Stemi SV6 stereomicroscope. Images were created by means of a Zeiss Discovery 8 stereomicroscope combined with an AxioCam ERc5s camera. The aforementioned stereomicroscope has an almost vertical LED illumination integrated in the microscope body, which ensures a very bright, uniform illumination of the object from above. For further processing of the images Helicon Focus 6 and Adobe Photoshop CS2 were applied. The collection data of the new species are reproduced verbatim from the labels attached to the examined flies. The three specimens belonging to the new species will be returned to the institutions from which they were borrowed.

## New *Curranosia* species

### *Curranosia setissima* spec. nov.

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**Material examined:** ♂ holotype, Uganda, Ruwenzori Range, Kilembe 4.000 ft.; Dec. 1934 - Jan. 1935,

\*Unfortunately, only the male symbol but not the number of specimens (= 2) was printed in the section “Material examined”, in the published version (ZIELKE 2020, page 198).

F. W. Edwards, B. M. E. Afr. Exp. B. M. 1935-203; the specimen is lacking the right fore and hind leg, the right wing membrane is ruptured and the abdominal segments have shrunk and are strongly bent downwards towards the thorax. The holotype bears two identification labels which read "(*Pyrellia*) ♂ *bonnarius* van Emden det. 1942" and "*Orthellia* sp. nr. *distincta*, van Emden det. 1942". The male paratype with the same data as holotype is lacking the right mid leg and both hind legs. The abdomen is extremely shrunk, somewhat twisted and apically the hypopygium is dented. Despite the deficits, the identification and description of the new species were not affected.

**Description (male):** Head ground-colour brown to dark brown (Figs 1+2). Eyes practically bare, without areas of strikingly enlarged facets on the front part of eye. Shortest distance between margins of eyes about twice as wide as diameter of anterior ocellus (Fig. 2). Fronto-orbital plates are separated by a frontal vitta about as wide as fronto-orbital plate, width of fronto-orbital plate at shortest distance about half as broad as diameter of anterior ocellus. Parafacial at level of basis of antenna as broad as diameter of anterior ocellus, slightly dilating all over the length to barely half the width of postpedicel. When viewed from anterior face matt brown, parafacial, and fronto-orbital plate brown, gena with a reddish-brown tinge. At certain angle of light face and parafacial more or less greyish-whitish dusted. Pedicel dark brown somewhat shining, postpedicel dark brown and depending on angle of view very weakly greyish dusted. In profile upper mouth part about in line with profrons (Fig. 1). Width of gena at lowest eye margin about half the length of postpedicel. Postpedicel about three times as long as deep and about 2.2 times as long as pedicel. Arista brown, slightly longer than postpedicel, longest dorsal hairs of arista more than twice as long as depth of postpedicel. Ocellar setae not distinguishable from setulae. Fronto-orbital plate throughout its length with a row of about 10 hairs, not much longer than half the length of postpedicel, the anterior hairs somewhat stronger and somewhat longer; hairs of the anterior half inclinate, of posterior half predominantly proclinate. Vibrissals about 1.5 times as long as the longest surrounding peristomal setae. Gena with dark reddish-brown hair-like setae. Proboscis rather short (Fig. 1), brown; prementum shining, length of labella approximately 1.5 times the depth of proboscis; palpus brown, apically more darkened, clavate and somewhat longer than prementum.

Thorax including scutellum uniformly dark blue-violet, shining, with bluish or violet reflections, depending on angle of view. Anterior surface of presutural part of mesonotum with a pale brownish pollinated broad median strip almost reaching the suture, at certain angles of view behind each postpronotal lobe a short pale brownish dusted strip-like patch. Anterior pleura shining dark violet, katapisternum at some points of viewing slightly whitish dusted, posterior pleura such as meron, katepimeron and anepimeron shining brownish. When

viewed directly from posterior mesonotum partly with a layer of pale-brownish dust, when viewed from anterior pleura partly light brownish dusted. Anterior spiracle contrasting white, posterior spiracle brownish. Mesonotum well covered with seta-like short hairs. Acrostichals 0+1, dorsocentrals 2+4, the most anterior postsutural seta not much longer than the ground hair, but distinguishable, three postpronotal setae, the inner one somewhat shorter than the two outer setae; posthumeral seta 1; presutural seta 1; notopleuron with several setulae, two notopleural setae, the anterior seta somewhat longer; pre-alar seta almost as long as posterior notopleural seta; the posterior supra-alar seta distinctly shorter; one strong intra-alar seta, three post-alar setae. Infra-alar bulla without setulae, suprasquamal ridge setulose. Prosternum with few hairs, anepimeron haired. Proepimeral area and katepimeron bare; meron with some hairs below posterior spiracle and setulae above hind coxa. Katapisternals 1+3, anepisternal setae 1+7 and few interstitial seta-like hairs, clearly shorter than the setae. Scutellum with a pair each of long apical setae, subapical setae and lateral setae, all long and well developed; the basal setae barely distinguishable from seta-like ground-hair; lateral surface and margin to ventral surface with fine hairs.

Wing membrane hyaline, uniformly covered with microtrichia. Basis of wing not conspicuously clouded, tegula and basicosta dark brown to blackish, veins brown. Costal spine barely distinguishable from surrounding bristles. Subcostal sclerite with two distinct setae, stem vein at distal end before junction of radial veins  $R_1$  and  $R_{2-5}$  dorsally with one curved hair and ventrally with a well-developed setula and a strikingly long hair-like seta (Fig. 3), which exceeds beyond the radial node of vein  $R_{4+5}$ . Radial node and vein  $R_{4+5}$  dorsally and ventrally with a row of distinct setulae, exceeding cross-vein r-m. Vein M curved forward obtusely to vein  $R_{4+5}$  in distal half of wing without inward dent beyond bend. Cross-vein r-m basad of the point where vein  $R_1$  enters costa; distal cross-vein dm-cu oblique and slightly sinusoid. Upper calypter hyaline transparent with white margin that is marked at certain angles of view with a very narrow black seam; lateral connection of upper and lower calypter white with a white margin, lower calypter brown transparent and at least twice as big as upper calypter. Haltere with stem yellow, knob pale yellow.

Legs dark brown, somewhat shiny. Claws and pulvilli well developed but rather short. Fore femur with complete rows of posterodorsal and posteroventral setae, posteroventrals about as long as depth of femur at their insertion, posteroventrals distinctly longer than depth of femur. Fore tibia without median posterior seta. Approximately the basal three quarters of mid femur with a row each of anteroventral and posteroventral hairs, almost as long as depth of femur at level of their insertion, in distal half few anterior bristles somewhat stronger than the bristles covering the anterior surface but barely half as long as depth of femur, and a row of posterior bristle-like setae, the three most apical setae of the row significantly

stronger and located more postero-dorsally. Mid tibia with about four strong posterior or posterodorsal setae of varying length and in distal half a longer posteroventral seta. Hind femur with a complete row of anterodorsal setae, strong and about as long as depth of femur, and a complete row of anteroventrals, at apical half more seta-like and somewhat longer than depth of femur or anterodorsal setae, in basal half more hair-like and about as long as depth of femur, at least basal half of femur with a row of posteroventral hair-like setae some of which much longer than depth of femur and the other setae; pre-apically two strong posterodorsal bristle-like setae. Hind tibia with one anterodorsal and five anteroventral setae, all barely as long as diameter of tibia, the three more apical located anteroventrals distinctly stronger than the basal ones, and with one posterodorsal seta about twice as long as diameter of tibia.

Abdomen uniformly dark violet or, depending on angle of light, dark bluish, shining with little bluish or violet reflections and without white pollinosity. Tergites 3 and 4 laterally with few seta-like hairs, dorsal surfaces without erected hairs, tergite 5 only with erected seta-like hairs and a complete row of long marginal setae. Sternite 1 haired.

**Male genitalia:** The species is distinctly distinguished from the known species of the genus by several taxonomic characteristics and the differentiation does not depend on the male genitalia. However, since the abdomen of the paratype was crumpled and twisted and practically unusable for taxonomic purposes (Fig. 4) and the hypopygium was indented and glued with dirt (Fig. 5), the abdomen was removed in order to examine the male genitals, if possible. The abdomen was softened in a mixture of water and a little of 70 % ethanol and the still very hard hypopygium was extracted and transferred into 15 % KOH solution. Despite several hours in KOH solution the hypopygium remained hard and brittle. When it was finally dissected, it broke into pieces. The various parts were cleaned and pictures (Fig. 6) of the separated cercal plates were taken. Even if the separated cercal plates no longer reflect the species-specific shape of the hypopygium, the tooth-like spines on the edge of the cercal plates indicate the similarity to the genitals of the *pilarara*-group (ZIELKE 1971, NIHEI & CARVALHO 2009).

**Measurements:** Length of body about 7.5 mm; length of wing about 7 mm.

**Female:** Not known.

**Etymology:** The species name *setissima* is a female adjective and a combination of seta and longissima (Latin = the longest) and refers to the conspicuously long ventral hair-like seta on the distal part of the stem vein of the new species.

**Diagnosis:** The taxonomic features of *Curranosia setissima* spec. nov. lead in the key to the species of the genus (ZIELKE 1971) directly to *Curranosia spekei pilarara*

(SNYDER, 1951). However, when *C. setissima* was directly compared with the male holotype of *C. spekei pilarara*, further distinguishing features were found. The frons of *C. spekei pilarara* is about as broad as the anterior ocellus, the frons of *C. setissima* is twice as broad as the anterior ocellus. The presutural part of the mesonotum of the holotype of *C. spekei pilarara* is predominantly whitish and in *C. setissima* pale brownish dusted. *Curranosia spekei pilarara* is marked by 2+3 dorsocentral setae, the most anterior postsutural seta small, and 1+2 katepisternal setae; the new species has 2+3-4 dorsocentrals, the second postsutural seta of four setae very distinct, the first one small and barely recognizable, and 1+3 katepisternals. There are two short ventral setulae at the end of stem vein of *C. spekei pilarara*, whereas *C. setissima* is marked by one very distinct setula (Fig. 3) and one conspicuously long hair-like seta reaching at least the radial node. The holotype has about one or two conspicuously long posteroventrals present in the middle third of hind femur which are much longer than the anteroventral hairs in basal half; the hind femur of *C. setissima* is marked by several long anteroventral and posteroventral hairs in the basal half, all more or less of about equal length.

*Curranosia allroundera* spec. nov.

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**Material examined:** ♀ holotype; the attached labels read "Kamerun Nssanakang A. Diebl S.G." and „Zool. Mus. Berlin". The female holotype has no forelegs and the body is slightly polluted. These shortcomings, however, did not affect the identification and description of the species. The date of collecting is not indicated on the label. As there are some other Muscidae in the Museum of Natural History in Berlin which were collected by Diebl in Cameroon Nssanakang, it was asked whether it is known from which time the muscids originate. Unfortunately, no relevant information was available on the other specimens either. Due to the appearance of the labels, however, it can be assumed that the specimens may have come from the turn of the 18th to the 19th century.

**Description (female):** Head ground-colour depending on light conditions deep dark brown to dark bluish-black (Figs 12 + 13) and, depending on angle of viewing, partly white dusted. Eyes relatively small, practically bare, facets close to the frons not conspicuously but distinctly larger than the facets of lateral areas. Distance between eyes at level of anterior ocellus 4.5 times as wide as distance between outer margins of posterior ocelli (Fig. 13). When viewed from anterior, frons parallel sided. Width of fronto-orbital plate at level of anterior ocellus slightly wider than diameter of anterior ocellus, and at anterior margin of frons 1.5 times as wide as depth of postpedicel. Frontal vitta at level of anterior ocellus about four times as wide as distance between outer margins of posterior ocelli and tapering sharply towards the anterior margin

of the frons, where the vitta is then only slightly wider than the ocellar tubercle. Frontal triangle barely reaching up to midway of frons. In profile upper mouth margin almost in line with profrons. Genal depth below lowest eye margin about as wide as two thirds of the length of postpedicel (Fig. 12). Parafacial in upper half practically parallel-sided and about as broad as depth of postpedicel, strongly dilated in lower part. Fronto-orbital plate and basis of parafacial glossy blackish-brown without any pollinosity, frontal vitta matt blackish, and frontal triangle more or less shiny, depending on angle of viewing. The larger part of parafacial below basis, peristomal area, genal and occipital surface and face dark brown to blackish and depending of point of viewing more or only slightly greyish dusted, the facial ridge predominantly shiny brown. Antenna brown, pedicel reddish brown with an almost yellowish apical band (Fig. 13), from certain viewpoints whitish-grey pollinose, contrasting to the glossy black adjacent parafacial. Postpedicel depending on angle of viewing matt pale brown or brownish-grey. Postpedicel about 3.5 times as long as deep and about 2.2 times as long as pedicel. Basal third of arista yellowish-brown, apical part brownish. Arista about 1.5 times as long as length of postpedicel, longest dorsal hairs of arista about twice as long as depth of postpedicel. Fronto-orbital plate over almost all the length with a row of about eight strong scars originating from lost setae, and a few scars with smaller diameter, probably of shorter interstitial hairs. At level of anterior part of frontal triangle two strong scars of orbital setae and at the level between anterior and posterior ocellus a strong scar of another seta, possibly from a reclinate orbital seta. The shiny top of the fronto orbital plate and frontal triangle (Fig. 14) with small patches consisting of microscopic small golden hair, setula not visible; further down some setulae on the surface between the eye margin and the row of frontal setae. Outer vertical setae well developed only slightly shorter than inner vertical setae. Scars of ocellar setae not very strong. Parafacial bare; facial plate between vibrissal setae and above the lower facial margin without small setulae. Scars of vibrissals not much stronger than those of surrounding peristomal setae. Gena and post occipital surface with rather short dark hairs. Proboscis short and strikingly strong, somewhat chunky (Fig. 12), prementum about 1.5 times as long as depth of proboscis, brown and somewhat dusted; labella slightly longer than depth of proboscis; palpi strikingly yellow, slender slightly clavate, about as long as prementum. Thorax ground color dark olive green, somewhat shiny metallic (Fig. 9), depending on light conditions either with some brass reflections or densely dusted (Fig. 8). Mesonotum including scutellum uniformly dark olive green (Fig. 7), shiny with little reflections; postpronotal lobes and the anterior presutural surface of the mesonotum in between slightly greyish pollinose. When viewed directly from posterior, mesonotum in general with a weak shimmer of greyish dust. Anterior pleura including katapisternum olive green, somewhat shiny with brass

reflections; posterior pleura brown, depending on angle of viewing shiny or dusted. Anterior spiracle large, white and in contrast to the dark surroundings (Figs 8, 9 and 12). Posterior spiracle distinctly smaller and brownish. When viewed directly from posterior or from anterior, pleura with a distinct layer of greyish-white dust. Mesonotum well covered with short seta-like ground hair, barely as long as depth of postpedicel. Infra-alar bulla bare; supra-squamal ridge anteriorly and posteriorly covered with setulae, some of which rather long; prosternum distinctly haired; meron without hairs below spiracle but with some hairs above hind coxa; katepimeron with few short but distinct setae; anepimeron haired; proepimeral area bare. Acrostichals 0+1; dorsocentrals 2+4, the anterior two postsutural setae distinct but much smaller than the two posterior postsutural setae; postpronotals 3, the inner one shorter; posthumeral seta 1; presutural seta 1; notopleurals 2, posterior seta slightly shorter, notopleuron haired; pre-alar seta at least as long as posterior notopleural seta; supra-alar setae 2; post-alar 3; intra-alar seta 1. Katapisternals 1+2, anepisternals 1+5 and some shorter interstitial hairs. Scutellum with a pair each of apical setae, strong and long; preapical setae, well-developed, more than two thirds as long as apical seta; lateral setae weak, barely half as long as apical seta; and basal setae very strong, about equal to apical seta. Lateral surface of scutellum and margin to ventral surface with long setulae. Wing membrane uniformly covered with microtrichia, anterior margin of wing with a brown band (Figs 7 + 11) extending up to vein  $R_{4+5}$  and from base to apex, remaining part of wing membrane with weak brownish tinge. Tegula and basicosta brown, veins dark brown, cross-vein r-m slightly infuscate (Fig. 11). Subcostal sclerite ventrally with about three distinct setae. Costal spine barely distinguishable from surrounding bristles. Radial node and vein  $R_{4+5}$  dorsally bare, ventrally with a row of setulae reaching almost cross-vein, and with a few single smaller setulae behind r-m. Cross-vein r-m oblique and basad of the point where vein  $R_1$  enters costa; distal cross-vein dm-cu rather straight and clearly oblique. Vein M apically smoothly curved (Fig. 11) to vein  $R_{4+5}$ . Upper calypter (Fig. 15) hyaline whitish transparent, the margin partly whitish, partly brownish, connection between upper and lower calypter white, lower calypter yellowish-brownish with a dark brown margin (Fig. 16) and longer than upper calypter, but in general it appears somewhat smaller than in most of the other *Curranosia* species and it does not extend under the scutellum (Fig. 16). Stem of haltere yellow, knob pale yellow.

Legs uniformly brown, claws and pulvilli well developed, but not as long as corresponding last tarsomere. Basal third of mid femur with one spine-like posteroventral seta about half as long as the depth of femur, at apical third with a short irregular row of distinct posterior setae barely half as long as depth of femur at level of insertion, and with three preapical posterodorsal to dorsal setae, the two posterodorsals distinctly longer than the setae of the posterior row, the dorsal seta rather small and weak. Mid

tibia with four posterior setae about as long as or slightly longer than diameter of tibia; a long posteroventral seta in distal half of tibia. Hind femur with a row of anterodorsal setae, basal ones not as long as depth of femur, four setae in distal half as long as depth of femur; one posteroventral seta-like hair in basal half, distinctly longer than depth of femur and the apical anteroventral setae, a short posterodorsal seta preapically of femur. Hind tibia with one anterodorsal and two anteroventral setae, not very strong and shorter than diameter of tibia, in distal third a posterodorsal seta at least twice as long as diameter of tibia.

Abdominal tergite 5 almost twice as long as tergite 4 or 3 (Fig. 10). In dorsal view, tergites 1+2 till 4 uniformly brownish-violet or bluish, depending on quality of light; tergite 5 yellowish brown (Fig. 7). When viewed from posterior, the anterior four tergites predominantly brownish with varying blue or violet reflections depending on light conditions and with a dark brown-violet band at posterior margin of each tergite, tergite 5 independent of viewing angle yellowish brown (Fig. 10). In lateral or ventral view, the tergites are predominantly yellowish; tergites 3, 4 and 5 are squeezed out under the overlapping posterior margin of the respective front tergite and are marked by a shiny brown basal band on the sides (Fig. 8). Tergite 5 also laterally and ventrally yellowish brown. Tergites covered with semi-erect short seta-like hairs, marginals not strikingly long. Sternite 1 with only few hairs on posterior margin.

**Female genitalia:** Not investigated.

**Measurements:** Length of body about 9 mm; length of wing about 7.3 mm.

**Male:** Not known.

**Etymology:** The name of the species *allroundera* is a feminine adjective and refers to the fact that the specimen has characteristics that make it appear at first glance to belong to each of the three genera *Neomyia*, *Curranosia* and *Pyrellina*. The species is also dedicated to all creative all-rounders, who usually know right away how best to help when help is needed.

**Diagnosis:** The female of *Curranosia allroundera* spec. nov. runs in the keys (SNYDER 1951, ZIELKE 1971) directly to *Curranosia spekei vansomereni* (SNYDER, 1951), of which only the female holotype is known so far. Both females are easily distinguished from one another by the rather small lower calypter of *C. allroundera*, which does not extend under the scutellum but diverge from the margin of the scutellum in a steep angle, and the yellowish-brownish abdomen with a consistent yellowish-brown tergite 5. *Curranosia spekei vansomereni*, however, is marked by a shiny uniformly blue-green abdomen and a lower calypter which is much larger than the upper one and extends under the scutellum.

## Discussion

When SNYDER (1951) described *Orthellia pilarara pilarara* and *O. pilarara vansomereni* (according to PATERSON (1957) now *C. spekei pilarara* and *C. spekei vansomereni*) both taxa were the only representatives of *Orthellia* ROBINEAU-DESVOIDY, 1863 having white anterior spiracles. All other African species of the genus *Orthellia*, which is named in meantime due to nomenclature rules *Neomyia* WALKER, 1859 (ZIELKE 2021), are characterized by dark anterior spiracles. The rare occurrence of *Neomyia* species with white spiracles and the fact that *vansomereni* was only represented by one female might have been the reason to treat *N. vansomereni* as a subspecies of *N. pilarara*, and *N. pilarara* became the nominate subspecies. Van Someren collected the holotypes of both subspecies and the allotype female and paratypes of the nominate form on the same date in the same area (Bwamba, Kenya) and possibly also at the same site. SNYDER differentiated the females of both subspecies by a conspicuous taxonomic criterion, the brown anterior margin of the wing of *N. vansomereni*. In addition, it cannot be deduced from the descriptions that the author considered this feature as an intraspecific deviation. Much too little is known about biology, preferred biotopes and distribution of the two distinct forms to consider a female with dark brown wings and some specimens without this wing pattern as representatives of different populations within a species. The same is true for the third subspecies of this group, *Curranosia spekei spekei* which was originally described as *Lucilia spekei* JAENNICKE, 1866. The holotype of this species proved to be a *Curranosia* and was transferred to the genus (ZIELKE 1971). Since this form is also marked with a white anterior spiracle, it was considered third subspecies of the *pilarara* group. *C. spekei* is also distinguished from the two other subspecies by clear taxonomic features - densely pollinated katapisternum and pure white calypters vs. brownish or brown calypters and only slightly dusted katapisternum. Due to the priority rules, the transfer from *Lucilia spekei* to *C. pilarara* was the reason why the species name had to be changed from *pilarara* to *spekei*. The list of *Curranosia* species in the catalogue of the Afrotropical Diptera (PONT 1980) contains six species with dark anterior spiracles, *C. spekei* s.l. is still the only taxon with a white anterior spiracle, which further reinforced the impression that the white spiracle is a rare exception in this genus. Only the recent descriptions of two other *Curranosia* species (ZIELKE 2020) and the currently presented findings of two further species, all characterized with white anterior spiracles, document that this feature occurs more frequently in *Curranosia* than previously assumed. Since all three subspecies of *C. spekei* s.l. are distinguished by clear taxonomic characteristics, it is recommended that each subspecies be treated as a distinct species, namely as *Curranosia spekei* (JAENNICKE, 1866), *Curranosia pilarara* (SNYDER, 1951) and *Curranosia vansomereni* (SNYDER, 1951). As a consequence of

this transfer and the newly described species, the genus now consists of six species characterized by dark anterior spiracles, and seven species are characterized by white anterior spiracles, provided that *C. allroundera* indeed proves to be a *Curranosia* species.

The morphological characteristics of the newly described species *C. allroundera* correspond to the features typical of the known *Curranosia* species with the exception of the partially yellow coloured abdomen and the shape of the lower calypter. The latter is longer than the upper calypter (Fig. 15), however it does not extend under the base of the scutellum (Fig. 16) and in general it appears smaller than the lower calypters of most of the other species of the genus. It resembles (Fig. 16) somehow the lower calypter of *Polietes lardarius* (FABRICIUS, 1781) described as “*Phaonia*-type” by PONT & FALK (2013) “with the hind margin diverging from the margin of the scutellum at right angle.”

Species of the genus *Pyrellina* MALLOCH, 1923 have some characters in common with *C. allroundera*. For example, deviating from the diagnosis of *Pyrellina* provided by NIHEI & CARVALHO (2009) “coloration metallic violaceous-blue; wings without maculae” are some African species of the genus characterized similar to *C. allroundera* by yellowish coloured abdomen. In addition, the wings of *Pyrellina congensis* ZIELKE, 1971 e.g. are marked with a brown band along the anterior margin. *Pyrellina* species are also known for having small lower glossiform calypters which usually taper towards the rounded apex. The lower calypter of the new *Curranosia* species however is apically broad. Furthermore, *Pyrellina* species are characterized by wing vein  $R_1$  having usually at least ventrally some setulae present, vein  $R_{4+5}$  is covered dorsally and ventrally and vein M partly ventrally with strong setulae, the subcostal sclerite is bare and the surface of the first abdominal sternite is covered with numerous setulae. In addition, the suprasquamal ridge of *Pyrellina* species is not setulose. All of these signs are different from those of *C. allroundera*. This underlines the much greater correspondence between the new species and the genus *Curranosia*. But due to the somewhat chunky head shape with a very strong proboscis, the striking yellow palpi, the very dark olive-green thorax color, the bluish or purple-brown to yellowish abdomen and the yellowish-brown last abdominal segment along with the unusual lower calypter, the species appears somehow alien in the group of *Curranosia* species, which so far made a fairly homogeneous impression

The description of a new species based only on one female collected more than a hundred years ago and lacking both forelegs can only be done with great hesitation and careful consideration. With regard to the missing front legs, it should be noted that all species of *Curranosia*, *Neomyia* or *Pyrellina*, the three genera closest to *C. allroundera*, have no distinct posterior or posteroventral seta present on the anterior tibia. Therefore, the front legs are practically not used to distinguish species within and between the genera. It can be assumed that this also applies to

*C. allroundera*. The combination of taxonomic features of this species, however, is so uniquely different that it can be easily distinguished from all known species of the aforementioned genera. But no complete correspondence has been found between the specific characteristics of the individual genera and the new species. Perhaps, initiated through the present description of this unusual species, some more specimens of this or a related taxon will be found in one or the other muscid collection of the various institutions and can support the correct assignment of the species to one of the known genera or to a new genus, which then still has to be defined. The species is initially assigned to *Curranosia*, the genus with the greatest agreement in taxonomic characteristics.

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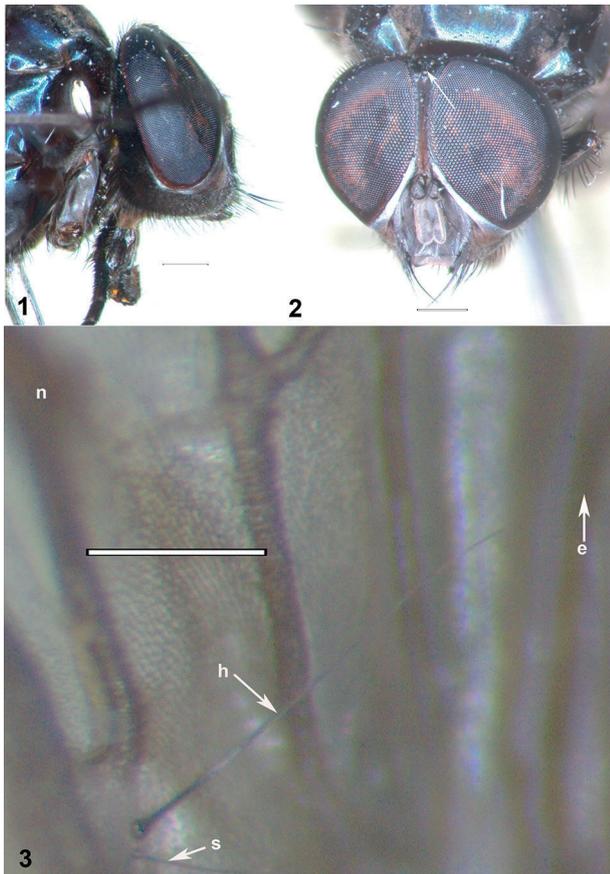
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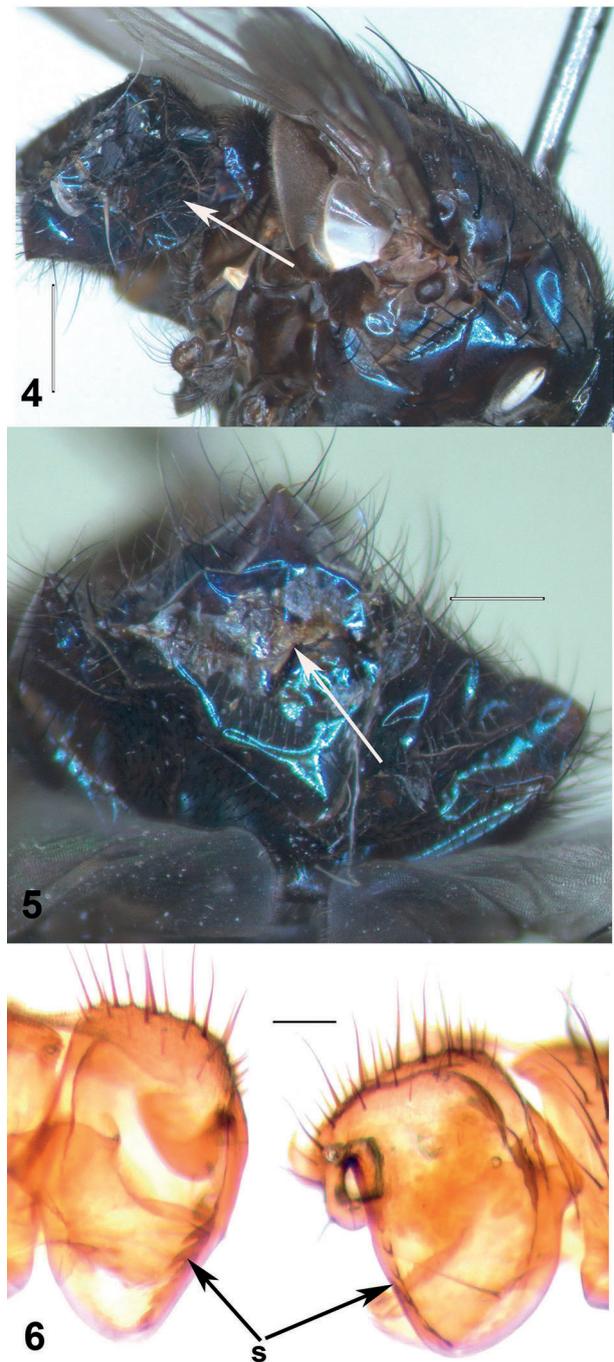
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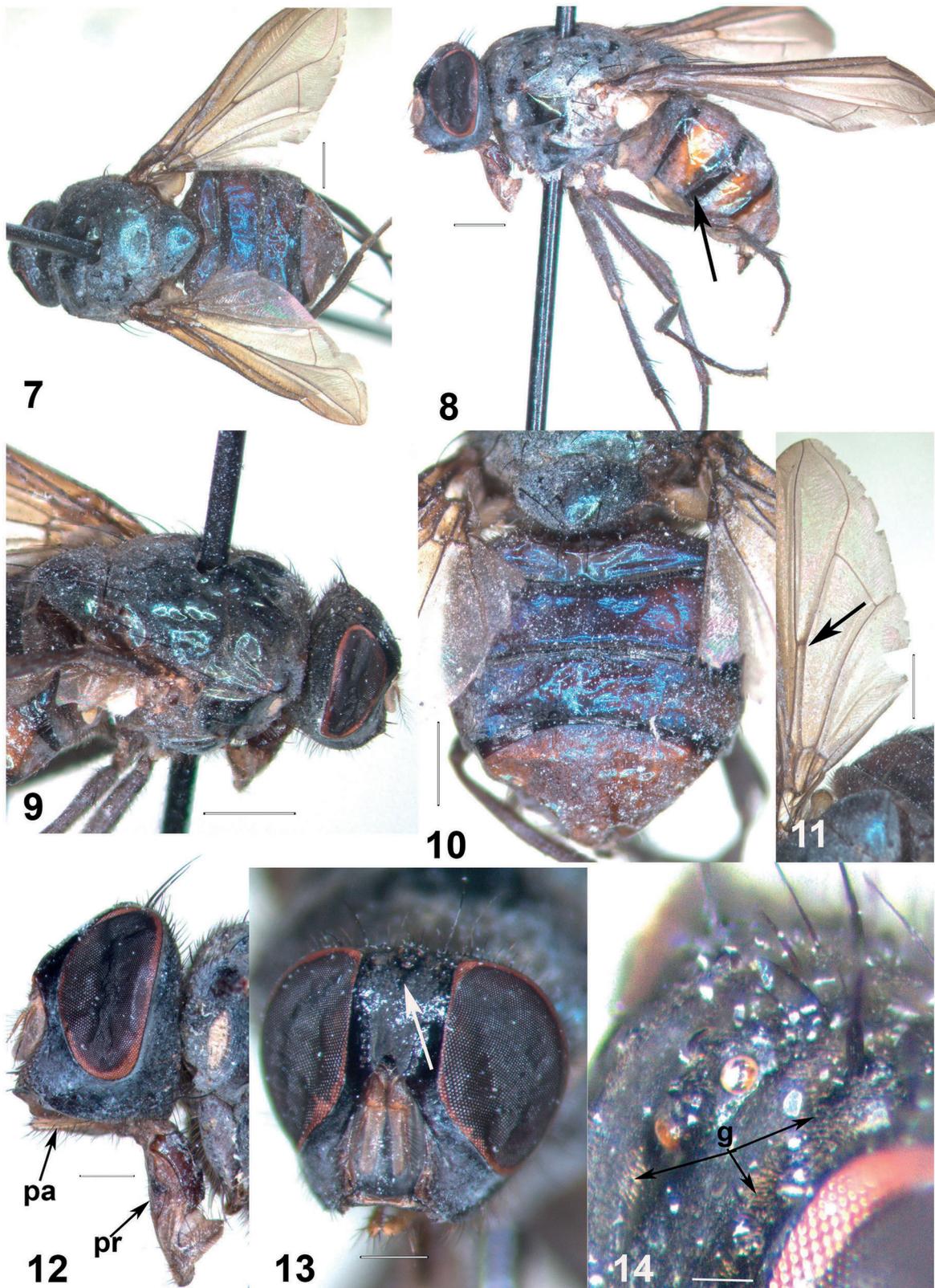
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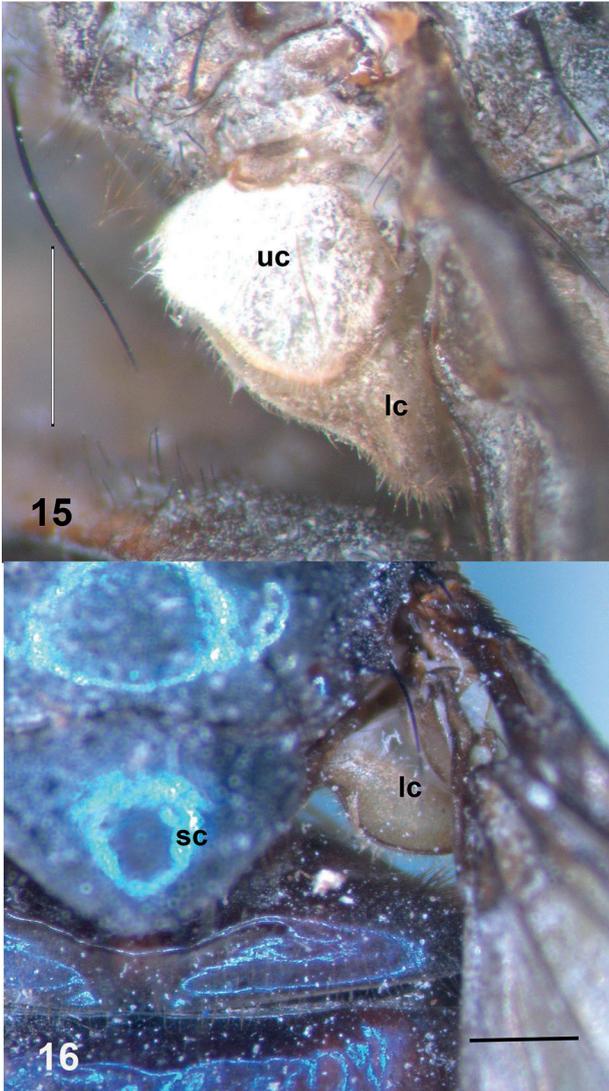
Figs 1–3: *Curranosia setissima* spec. nov., ♂ holotype; 1. Head, lateral view, 2. Head viewed from anterior, arrow pointing to anterior ocellus; 3. Ventral surface of wing, setula (s) and long hair-like seta (h) on the distal part of stem vein, e = end of seta, barely recognizable in the image, n = radial node. (Figs 1 and 2: bar = 0.5 mm; Fig. 3: bar = 0.2 mm.)

Figs 4–6: *Curranosia setissima* spec. nov., ♂ paratype; 4. Abdomen photographed before it was removed, arrow points to crumpled and dented parts of the completely shrunk and twisted abdomen (bar = 0.5 mm); 5. Hypopygium indented in the crumpled apical part (arrow) of abdomen, glued with dirt (bar = 1 mm); 6. Separated cercal plates of hypopygium s = tooth-like spines at the margin of cercal plate (bar = 0.1 mm).





Figs 7–14: *Curranosia allroundera* spec. nov., ♀ holotype; 7. Dorsal view of female holotype; 8. Lateral view of same female but different angle of viewing, arrow pointing to shiny brown basal band, only visible when the tergite is pushed out from the overlapping posterior margin of the respective front tergite; 9. Latero-dorsal view of thorax of same specimen, shiny dark olive green only slightly dusted at different perspective; 10. Abdominal tergites brownish blue, somewhat shiny, tergite 5 consistently yellowish-brown, independent of viewing angle; 11. Right wing with brown front margin, slightly infusate cross-vein r-m (arrow) and vein M obtusely bent towards vein  $R_{4+5}$ ; 12. Head, lateral view, pa = palpus, pr = proboscis; 13. Head with frons in anterior view, arrow points to anterior tip of frontal triangle; 14. Upper part of frons and frontal triangle with patches (g and arrows) consisting of microscopic golden hair; (Figs 7–11: bar = 1 mm; Figs 12 + 13: bar = 0.5 mm; Fig. 14: bar = 0.07 mm).



Figs 15–16: *Curransia allroundera* spec. nov., ♀ holotype; 15. Left upper (uc) and lower calypter (lc); 16. Right lower calypter (lc) with the hind margin diverging from margin of scutellum (sc) almost in right angle and not extending under scutellum; (Figs 15–16, bar = 0.5 mm).