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**Monograph**

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# Revision of the Afrotropical genus *Afrepipona* Giordani Soika, 1965 and description of *Afrepsilon* gen. nov. (Hymenoptera: Vespidae: Eumeninae)

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**Abstract.** A taxonomic study on the Afrotropical genera *Afrepipona* Giordani Soika, 1965 and *Afrepsilon* gen. nov. is presented. Twenty new species are described, of which 15 are in *Afrepipona* (*Afrepipona anomala* sp. nov., *Afrepipona cellularis* sp. nov., *Afrepipona clonata* sp. nov., *Afrepipona cuprea* sp. nov., *Afrepipona lamellata* sp. nov., *Afrepipona lamptula* sp. nov., *Afrepipona lobulata* sp. nov., *Afrepipona meridionalis* sp. nov., *Afrepipona occidentalis* sp. nov., *Afrepipona orientalis* sp. nov., *Afrepipona punctatissima* sp. nov., *Afrepipona scabra* sp. nov., *Afrepipona segregata* sp. nov., *Afrepipona ulterior* sp. nov., *Afrepipona vulcanica* sp. nov.) and five are in *Afrepsilon* (*Afrepsilon aterrimum* gen. et sp. nov., *Afrepsilon ferrugineoaureum* gen. et sp. nov., *Afrepsilon hybridum* gen. et sp. nov., *Afrepsilon minor* gen. et sp. nov., and *Afrepsilon pictum* gen. et sp. nov.). *Afrepipona lamptoensis* Giordani Soika, 1965 is withdrawn from synonymy with *A. angusta* (de Saussure, 1863) and subsequently revalidated. *Afrepipona unifasciata* Gusenleitner, 2012 is transferred to the genus *Antodynerus* de Saussure, 1855 (*Antodynerus unifasciatus* comb. nov.). Keys to all known species are provided.

**Keywords.** Solitary wasps, key to species, new genus, Africa, revision.

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## Introduction

*Afrepipona* Giordani Soika, 1965 is a small genus of Afrotropical potter wasps, presently including four species mainly distributed in Central and Oriental Africa, with one species reaching the Ivory Coast in the West (Carpenter *et al.* 2009).

It was originally described (Giordani Soika 1965) to include the type species *Odynerus macrocephalus* Gribodo, 1894, and the newly described *Afrepipona lamptoensis* Giordani Soika, 1965. Gusenleitner (2011) described a third species, *Afrepipona tertius* Gusenleitner, 2011, and provided a key to the known species, and later (Gusenleitner 2012) synonymized *A. lamptoensis* with *Odynerus angustus* de Saussure, 1863 (= *Afrepipona angusta*), and described the fourth species of the genus, *Afrepipona unifasciata* Gusenleitner, 2012.

Examination of abundant material housed in museums and private collections revealed the presence of important inconsistencies in the current classification of *Afrepipona*, making a revision necessary. A complete taxonomic revision is performed, leading to the description of a new genus and 20 new species.

## Material and methods

The morphology of the adults and their coloration were observed on pinned specimens under a Leica MZ6 stereoscopic microscope. Metasomal tergites, metasomal sternites and antennal flagellomeres are abbreviated as T, S and F respectively. "Body length" indicates the length in dorsal view of head, mesosoma, and first two metasomal tergites combined; measurements were taken using a digital Vernier caliper (accuracy ± 0.1 mm). For extraction and study of the male genitalia, the following process was used: a) relaxation of specimen in humid chamber and extraction of genital capsule; b) immersion in 10% KOH solution until clarification; c) neutralization of the base with 10% acetic acid solution; d) dissection of the genital capsule while immersed in distilled water; e) storing in glycerin.

Images were acquired using a Canon EOS 1300D equipped with an inverted Canon EF-S 18–55mm lens and extension tubes, stacked with CombineZP, processed and assembled with Photoshop CC 2018. For each species, the following pictures are provided (when both sexes are available): habitus in dorsal view, head of male, head of female, flagellum of male, vertex of female, T2–3.

Distributional data are summarized by country, with all references listed in the end. Localities marked with an asterisk are new records. The range of the Afrotropical Region is defined as in Carpenter *et al.* (2009), excluding countries in northern Africa that belong to the Palearctic Region and Yemen, but including Madagascar.

**Institutional abbreviations**

AMNH = American Museum of Natural History, New York, USA
JMU = Julius-Maximilians-Universität Würzburg, Würzburg, Germany
MJSK = private collection of Martin & Jonathan Schwarz, Kirchschlag bei Linz, Austria
MNHN = Muséum national d'histoire naturelle, Paris, France
MSNVE= Museo Civico di Storia Naturale, Venezia; Italy
MSVI = private collection of Marco Selis, Viterbo, Italy
MZUB = Museo di Zoologia dell'Università, Bologna, Italy
NHMW = Naturhistorisches Museum, Wien, Austria
OLML = Oberösterreichisches Landesmuseum, Linz; Austria
SMF = Forschungsinstitut und Naturmuseum Senckenberg, Frankfurt am Main, Germany

## Results

A total of 46 specimens distributed in 24 species were examined, of which 20 are new to science. Additionally, five of these new species are described in a new genus.

## *Taxonomy*

Class Insecta Linnaeus, 1758
Order Hymenoptera Linnaeus, 1758
Family Vespidae Latreille, 1802
Subfamily Eumeninae Leach, 1815

### Genus ***Afrepipona*** Giordani Soika, 1965
Fig. 1

*Afrepipona* Giordani Soika, 1965: 46.

**Type species**

*Odynerus macrocephalus* Gribodo, 1894, by original designation.

**Diagnosis**

"Odynerine" wasps of small size (body length 6.1–9.7 mm in female and 5.8–8.0 mm in male), with following characters: free apical part of clypeus much shorter than basal part (Fig. 1A); vertex long, distance from posterior ocellus to occipital margin 1.8–2.3 × (female, in *A. anomala* 1.4 ×) or 1.55–2.2 × (male) as long as distance between posterior ocellus and eye, in female gena in dorsal view at least as long as dorsal lobe of eye (Fig. 1C); cephalic foveae of female placed in small differentiated area, depressed and usually with shiny integument (except *A. lamptoensis*, Fig. 1C); margins of eye and vertex forming single even curve in frontal view (Fig. 1A); mandible robust and mostly shiny on outer surface, bearing five teeth in female and four in male, first four or three similar and with same orientation, basalmost more or less developed and pointing more medially (Fig. 1B); epicnemial carina present even if weak; axillary fossa small and elliptical; tegula with short posterior lobe not equaling parategula (Fig. 1D); metanotum not carinate and sloping down from base to apex, oblique in lateral view; posterior face of propodeum with dorsal propodeal aperture covering half of midline (Fig. 1E), submarginal carina not projecting (except in *A. lobulata*), propodeal valvula completely fused with submarginal carina; T1 sessile and not carinate, apically with very short translucent border, T2 and usually T3 apically lamellate (Fig. 1G); prestigma shorter than half pterostigma, second submarginal cell sessile, with acute basal angle and receiving both recurrent veins (Fig. 1F).

### ***Afrepipona angusta*** (de Saussure, 1863)
Figs 2, 27A

*Odynerus angustus* de Saussure, 1863: 228.

**Diagnosis**

Recognized by the following characters: apical teeth of clypeus sharply carinate; clypeus 1.2 × as wide as long (Fig. 2B–C); gena flattened on ventral ⅔; occipital carina of even height on gena, lower but complete on vertex; vertex of female 1.8 × as long as distance between posterior ocellus and inner eye margin (Fig. 2E), 1.55 × in male; T1 narrower than T2, separated by constriction; apical translucent margin of T2 sharply separated by change in sculpture and coloration, lacking preapical series of large punctures; S2 not or barely furrowed basally; clypeus with deep punctures; preapical depressed area of T2 coarsely and densely punctured, interspaces ridge-like to reaching one puncture diameter in width (Fig. 2F); metanotum black. Genitalia in Fig. 27A.

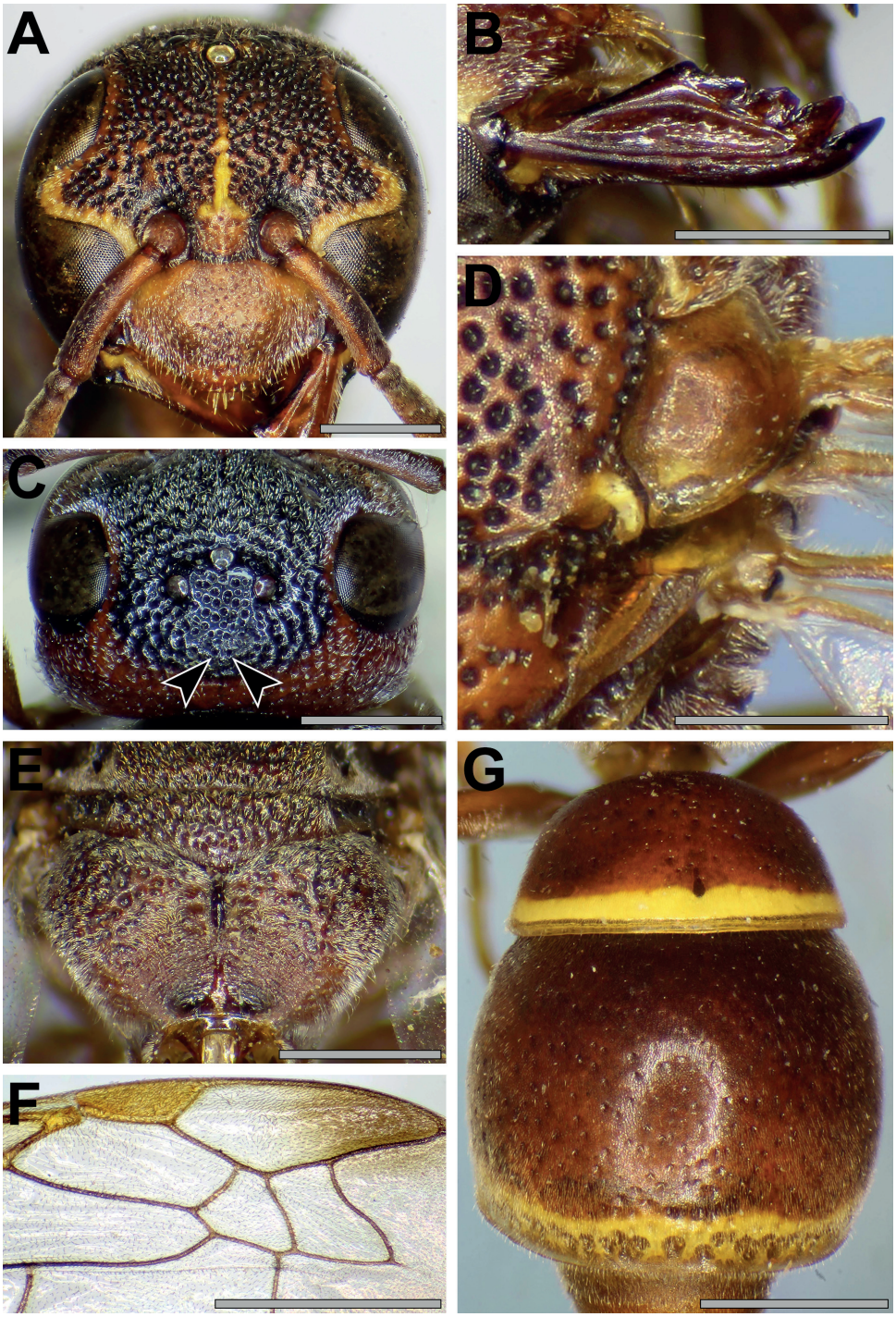


**Fig. 1.** Diagnostic characters of *Afrepipona* Giordani Soika, 1965. **A–C**, **E**. ♀. **D**, **F–G**. ♂. **A**. Head of *A. meridionalis* sp. nov., paratype from Durban (MSNVE), frontal view. **B**. Mandible of *A. vulcanica* sp. nov., holotype from Mount Kilimanjaro (MSNVE), frontal view. **C**. Head of *A. lamptoensis* Giordani Soika, 1965, paratype from Lamto (MSNVE), dorsal view, arrow heads pointing to cephalic foveae. **D**. Tegula, parategula and axillary fossa of *A. cuprea* sp. nov., holotype from Malindi (MSNVE), dorsal view. **E**. Metanotum and propodeum of *A. occidentalis* sp. nov., paratype from Senegal (MSVI), posterior view. **F**. Apex of fore wing of *A. cuprea* sp. nov., holotype from Malindi (MSNVE), dorsal view. **G**. Metasoma of *A. cuprea* sp. nov., holotype from Malindi (MSNVE), dorsal view. Scale bars: A–C, E–G = 1 mm; D = 0.5 mm.

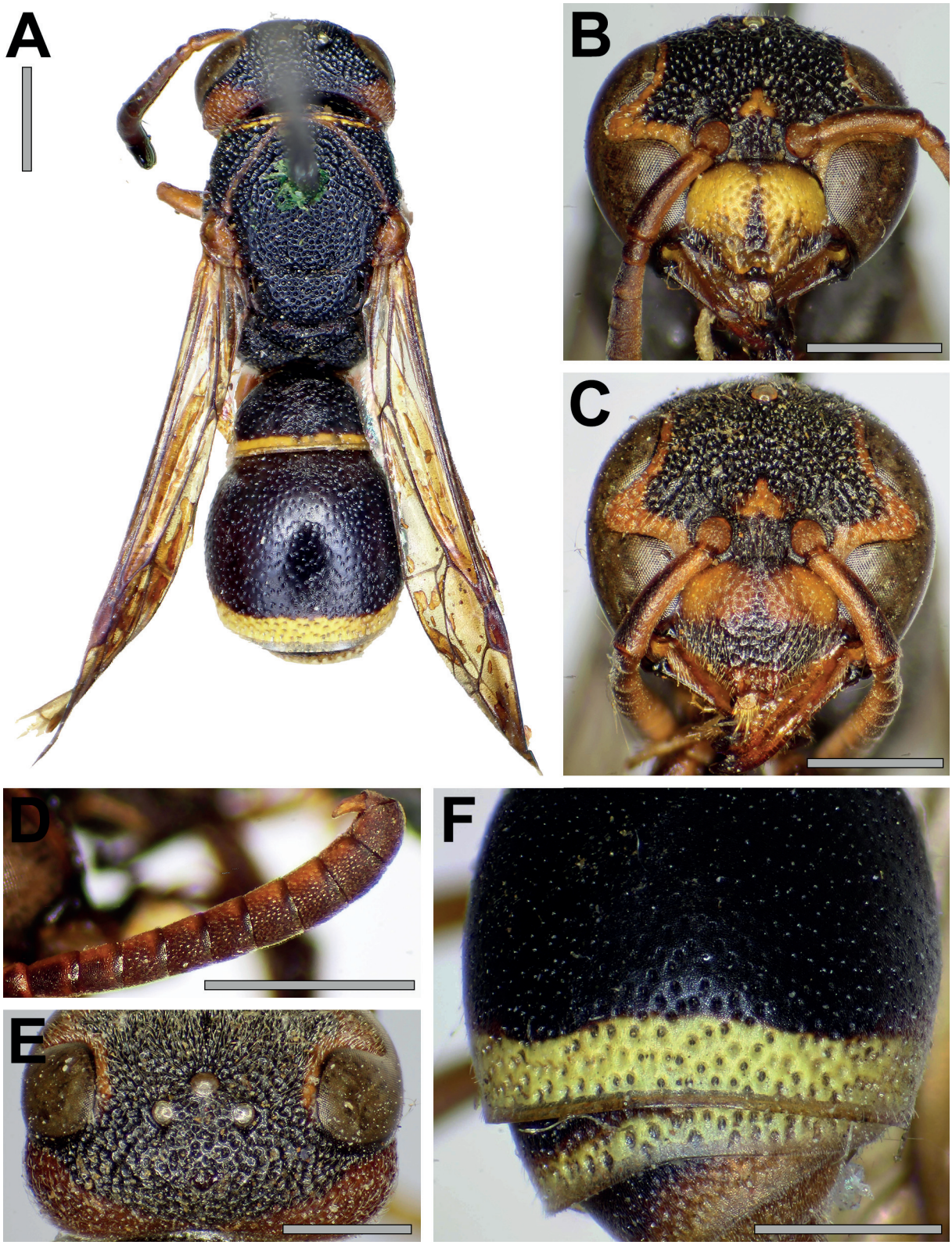


**Fig. 2.** *Afrepipona angusta* (de Saussure, 1863). **A–B**, **D**. ♂ from Adi Keyh (MSVI). **C**, **E–F**. ♀ from Asmara (MSNVE). **A**. Habitus, dorsal view. **B–C**. Head, frontal view. **D**. Flagellum, lateral view. **E**. Head, dorsal view. **F**. T2–3, dorsal view. Scale bars = 1 mm.

**Material examined**

ERITREA • 1 ♂; Adi Keyh; Jun. 1902; Andreini leg.; MSVI • 1 ♀; Asmara; MSNVE.

**Distribution**

Eritrea*, Ethiopia (de Saussure 1863).

***Afrepipona anomala*** sp. nov.
urn:lsid:zoobank.org:act:9448ED7D-1795-4C56-A60F-590C97E93FB0
Fig. 3

**Diagnosis**

Recognized by the following characters: elongate appearance; apical margin of clypeus narrower than interantennal distance and subtruncate, lateral teeth with thick carinae forming U-shaped ridge (Fig. 3B); vertex short, 1.4 × as long as distance between posterior ocellus and inner eye margin (Fig. 3C); pronotal carina sharp, shortly lamellate on humeri; T1 about as long as wide; apical translucent margin of T2 very short and barely noticeable, not separated from rest of tergite (Fig. 3D); head and mesosoma coarsely punctured, interspaces reduced to ridges, T1 and base of T2 with deep punctures.

**Etymology**

The specific epithet derives from the Latin adjective ‘anomalus, -a, -um’ (= ‘anomalous’), in reference to the differences from all other species of the genus.

**Type material**

**Holotype**

BURUNDI • ♀; Rwegura, Kibira National Park; 2°56′25.9″ S, 29°27′25.4″ E; elev. 2226 m; 28–30 Jan. 2011; M. Mei, P. Cerretti and D. Whitmore leg.; MSNVE.

**Description**

**Female**

Measurements. Body length 9.7 mm; fore wing length 8.5 mm.

Morphology. Head evenly rounded, 1.15 × as wide as long in frontal view. Clypeus 1.3 × as wide as long, apical margin subtruncate and narrow, 0.15 × as wide as maximum width of clypeus; apical teeth barely projecting and with short thick carinae, connected with the thickened apical margin and forming an U-shaped ridge, area between carinae shallowly depressed; clypeus in profile strongly and evenly convex from base to apex, smoothly passing into interantennal space. Vertex 1.4 × as long as distance between posterior ocellus and inner eye margin; cephalic foveae close to each other and equidistant from posterior ocelli and occipital carina, placed in a small shiny depression with raised V-shaped posterior margin; gena 1.25 × as wide as eye at bottom of ocular sinus; occipital carina fine on vertex, strong and lamellate on gena, delimiting a crenate furrow, strongly curved in lower half. F1 1.3 × as long as wide and 1.3 × as long as F2, F2–3 and F9 subquadrate, F4–8 transverse and becoming progressively shorter. Fifth tooth of mandible barely protruding and completely rounded. Mesosoma 1.4 × as long as wide. Sides of pronotum sinuate in dorsal view, slightly concave behind humeri, anterior margin straight; pronotal carina complete and sharp, shortly lamellate on lateral thirds and becoming higher on humeri; pretegular carina complete but dull, preceded by a shallow furrow. Mesoscutum 1.05 × as long as wide, weakly and evenly convex in lateral view; short hints of notauli on posterior margin. Scutellum flattened in lateral view, on same level of mesoscutum and smoothly passing into metanotum; anterior margin very shallowly crenate, pits more evident on extreme sides. Metanotum weakly convex,

anterior margin with deep pits at extreme sides. Tegula short and not equaling parategula, outer margin straight in anterior third and rounded in posterior two thirds, slightly reflexed; parategula small, more or less right-angled. Mesepisternum elongate, more or less flattened dorsally, becoming convex ventrally; epicnemial carina low and rounded, reaching epipleural suture above. Propodeum evenly and weakly convex in lateral view; posterior face very shallowly concave, nearly flattened and smoothly passing into dorsal faces; lateral faces flattened; dorsal, lateral and inferior carinae absent, propodeum entirely rounded. T1 semi-elliptical, 0.7 × as long as wide in dorsal view; apical margin with a short hyaline lamella. T2 0.9 × as long as wide in dorsal view, apical margin 1.3 × as wide as basal margin, apically

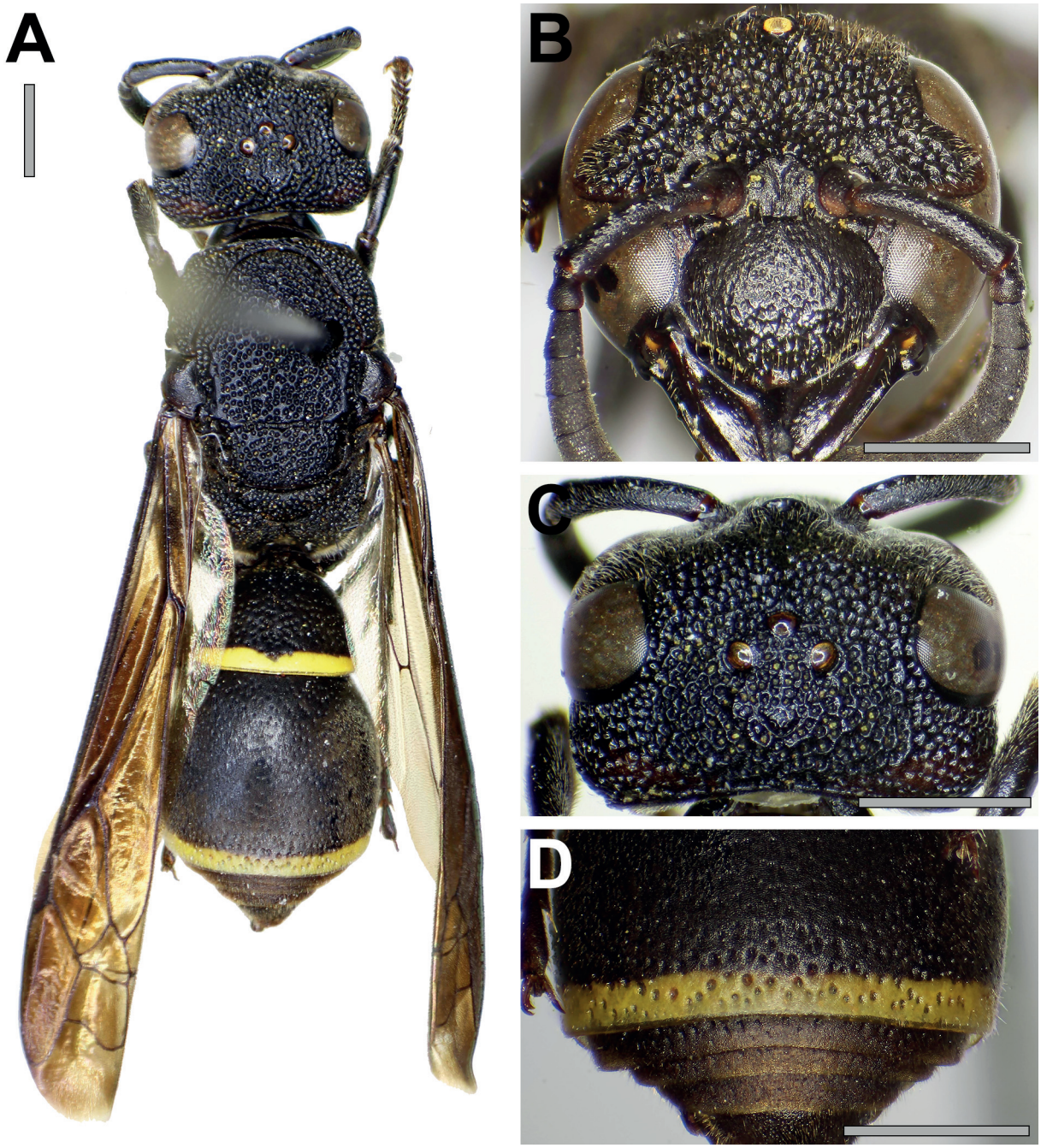


**Fig. 3.** *Afrepipona anomala* sp. nov., ♀, holotype from Rwegura (MSNVE). **A**. Habitus, dorsal view. **B**. Head, frontal view. **C**. Head, dorsal view. **D**. T2–3, dorsal view. Scale bars = 1 mm.

with a very short and barely visible translucent margin. S1 subtriangular, posterior margin concave and strongly raised. S2 almost straight in lateral view, then strongly sloping basally; basal margin with shallow subtriangular depression and a barely visible short longitudinal furrow; apically with short lamellar margin, longer than that on T2.

Sculpture and vestiture. Clypeus on disc and apical part shiny with sparse micropunctures and irregular macropunctures, punctures variable in depth and interspaces ranging from half to two puncture diameters, some punctures touching; basal third and lateral thirds densely micropunctate near disc and shagreened near margins, finely and sparsely punctured. Frons and vertex coarsely and deeply punctured, punctures very dense and mostly touching, interspaces reduced to very short sharp ridges; punctures on gena similar to vertex but becoming progressively sparser and shallower below. Scape shagreened with very small deep punctures. Most of mesosoma punctured like frons; interspaces flattened on metanotum; punctures shallower and partially fused on dorsal faces of propodeum; interspaces slightly wider on dorsal half of mesepisternum and becoming very wide posteroventrally, epicnemium and mesosternum shagreened with few shallow punctures on posterior margin; metaepisternum shagreened and slightly shiny, with fine transverse striae on dorsal plate and few punctures on lower plate; posterior and lateral faces of propodeum with fine oblique striae and sparse shallow punctures. T1 with rounded punctures, denser and deeper on disc and becoming shallower and much sparser on sides, anterior vertical face impunctate; T2 more finely punctured than T1, all interspaces equal to several puncture diameters, punctures becoming slightly deeper and denser in apical fifth; T3–6 matte and finely shagreened, micropunctures becoming progressively denser and macropunctures becoming sparser in apical tergites; S1 shiny, barely microsculptured on basal petiole, irregularly reticulate and punctate in posterior part; punctures on S2 deeper and sparser than on T2, interspaces shiny on disc and becoming matte on sides; S3–6 more finely sculpted than respective tergites. Head and mesosoma with short bristle-like setae, sparser and brassy on head and dorsal face of mesosoma, denser and silvery on rest of mesosoma and propodeum; clypeus with sparse brownish setae on disc and dense silvery pubescence along basal margin; metasoma with dust-like pubescence, rusty on tergites and paler on sternites, sparse erected short setae on T3–6 and S2–6, T1 with dense pale short setae and scattered long ones.

Coloration. Black; following parts yellow: very narrow and irregular line along pronotal carina not reaching humeri, narrow apical bands on T1–2 and posterior corners of S2; following parts dark red: apex and carinae of mandible, oblique line on gena starting from occipital carina on vertex and reaching eye in lower third. Wings infuscate with bright brassy reflections.

**Male**

Unknown.

**Distribution**

Burundi.

***Afrepipona cellularis*** sp. nov.

urn:lsid:zoobank.org:act:2C39021E-BDBB-47BC-A7D6-475399E4EFFD

Figs 4, 27B

**Diagnosis**

Recognized by the following characters: male clypeus 1.35 × as wide as long (Fig. 4B); pronotal carina sharp but low in median third, shortly lamellate in lateral thirds; apical translucent margin of T2 separated from rest of tergite by large also translucent punctures intercalated by pigmented cuticle (Fig. 4D); head

and mesosoma with very large and deep punctures, larger than half ocellar diameter on mesoscutum; clypeus barely punctured in basal third; S2 with deep and large punctures. Genitalia in Fig. 27B.

**Etymology**

The specific epithet was found handwritten by Giordani Soika on a label pinned under the specimen.

**Type material**

**Holotype**

ZIMBABWE • ♂; S. Rhodesia, Nyamandhlovu; 16 Apr. 1926; R.H.T. Stevenson leg.; MSNVE.

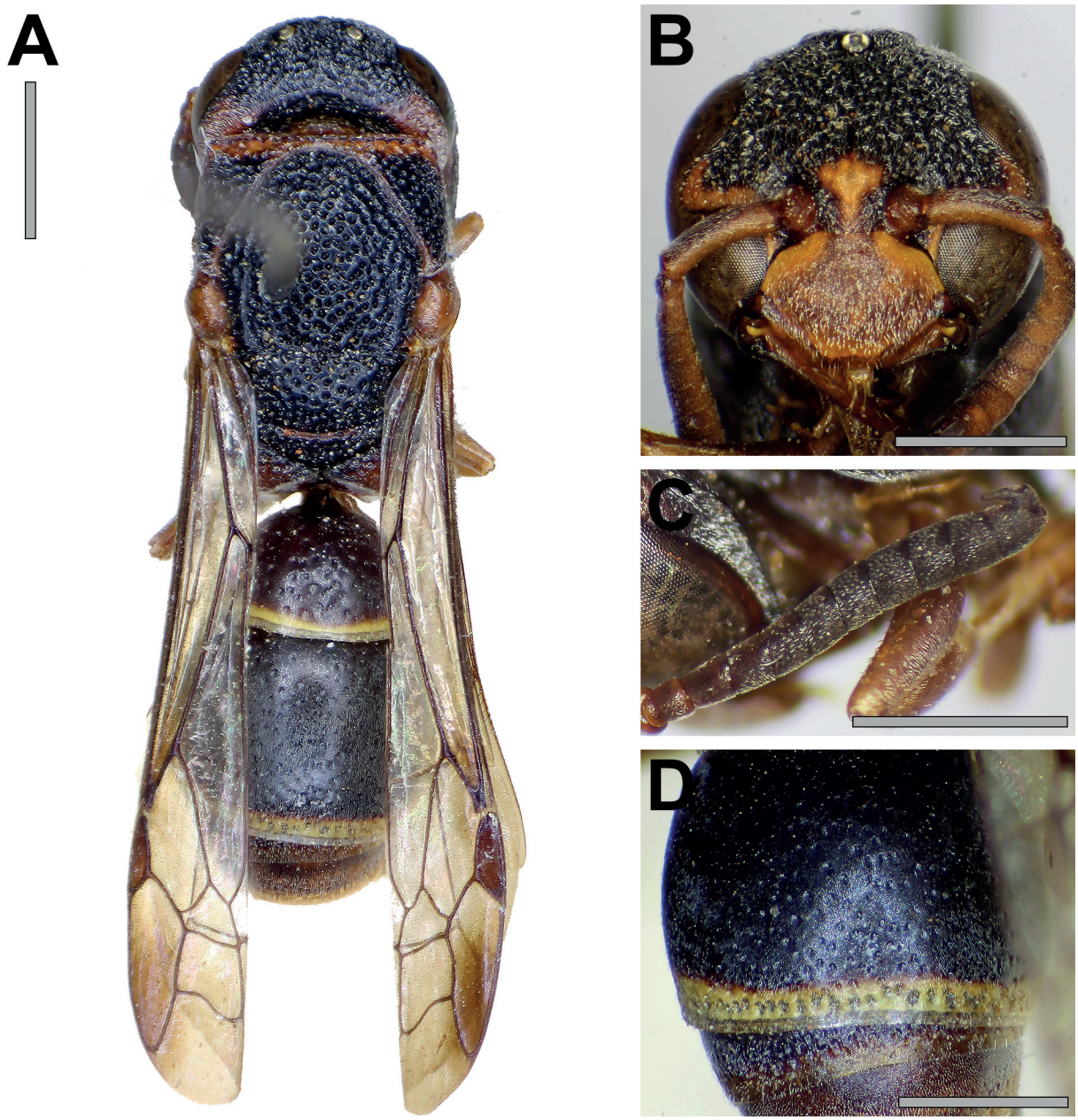


**Fig. 4.** *Afrepipona cellularis* sp. nov., ♂, holotype from Nyamandhlovu (MSNVE). **A**. Habitus, dorsal view. **B**. Head, frontal view. **C**. Flagellum, lateral view. **D**. T2–3, dorsal view. Scale bars = 1 mm.

**Description**

**Male**

Measurements. Body length 6.0 mm; fore wing length 5.5 mm.

Morphology. Head evenly rounded, 1.2 × as wide as long in frontal view. Clypeus 1.4 × as wide as long, apical margin subtruncate with barely developed lateral teeth, 0.3 × as wide as maximum width of clypeus; clypeus strongly and evenly convex in lateral view. Vertex 1.9 × as long as distance between posterior ocellus and inner eye margin; gena 0.6 × as wide as eye at bottom of ocular sinus; occipital carina complete, fine on vertex, strong and shortly lamellate on gena, delimiting a shallow crenate furrow on lower half, roundly angled in lower half. F1 1.3 × as long as wide and 1.3 × as long as F2, F2–3 subquadrate, F4–8 transverse, F9 longer than basally wide, F11 small and more or less claw-shaped, not reaching base of F9 and weakly curved in lateral view, subtriangular with rounded apex in dorsal view. Mesosoma 1.4 × as long as wide. Sides of pronotum almost parallel-sided in dorsal view, completely straight, anterior margin very shallowly concave, humeri slightly obtuse; pronotal carina complete and sharp, shortly lamellate on lateral thirds; pretegular carina barely developed, indicated by a fold of cuticle; transition between dorsal and lateral faces of pronotum distinctly angled, but not forming a humeral carina. Mesoscutum as long as wide, barely convex in lateral view. Scutellum weakly convex anteriorly, almost on same level of mesoscutum and smoothly passing into metanotum; anterior margin shallowly crenate, with a larger pit in the middle. Metanotum flattened. Tegula short and not equaling parategula, outer margin more or less evenly rounded, posterior lobe apically rounded; parategula small, strongly curved and depressed, apex pointing medially. Mesepisternum elongate, more or less entirely flattened; epicnemial carina very low and barely visible. Propodeum in lateral view extended for a short almost horizontal section, then falling vertically; posterior face shallowly concave and not clearly separated from dorsal faces; lateral faces flattened, with a deep incision above propodeal valvula; dorsal, lateral and inferior carinae absent, propodeum entirely rounded. T1 more or less semicircular, 0.55 × as long as wide and anteriorly evenly rounded in dorsal view; apically with translucent margin longer than height of pronotal carina. T2 0.8 × as long as wide in dorsal view, apical translucent margin slightly longer than that on T1 medially and becoming longer laterally. S2 evenly and weakly convex on disc, then more curved and sloping basally; basal margin with shallow longitudinal furrow not exceeding sloping part; apically with short lamellar margin, similar to T2.

Sculpture and vestiture. Clypeus with a silky shine, finely microsculptured and with few barely visible punctures at extreme base and apex. Frons and vertex with deep punctures, interspaces flattened and 0.5–1.5 × as long as puncture diameter, shiny and very finely micropunctate; gena punctured like vertex but interspaces larger. Scape shagreened and matte, with extremely fine micropunctures. Punctures of mesosoma similar to frons but larger, in part exceeding half ocellar diameter; interspaces about half as long as puncture diameter, becoming larger on posterior part of pronotum, anterior half of scutellum, metanotum and mesepisternum; epicnemium and mesosternum shagreened, deep puncture on posterior half of mesosternum; metaepisternum shagreened and matte, dorsal plate finely striate, ventral plate with some punctures along anterior margin; dorsal faces of propodeum with large flat-bottomed punctures and irregular interspaces, posterior face punctate in upper half and striate in lower half, lateral faces sculpted like metaepisternum but with small deep punctures. T1 mostly smooth, with scattered deep rounded punctures, anterior vertical face impunctate; T2 punctured similar to T1 but punctures smaller basally and becoming larger apically, with preapical series of coarse punctures spaced in middle and touching laterally; T3–6 shagreened and preapically punctate; T7 finely shagreened with few fine punctures on disc. S1 matte and irregularly sculpted on basal petiole, shiny and irregularly ridged in posterior part; S2 with deep punctures, denser on disc, size of punctures variable but always much larger than on T2; S3–6 similar to respective tergites but with fewer punctures; S7 shiny and very finely shagreened. Head and mesosoma with very short silvery pubescence and some short appressed setae, vestiture mostly sparse but denser on clypeus, frons, gena, sides of mesosoma and most of propodeum; longer white setae

on lower half of propodeum; metasoma with dust-like pale pubescence, few very short setae at apex of T2 and S1 and following segments.

Coloration. Black; following parts red: clypeus, mandible, scape, flagellum ventrally, gena, pronotum on anterior and lateral face, anterior and posterior margins of dorsal face of pronotum, tegula, dorsal faces of propodeum and part of posterior face, sides of T1–2, most of T3–5, S1 and most of S2, legs; following parts orange: basal and apical margins of clypeus, interantennal space connected to transverse spot above, lower part of inner eye margin up to bottom of ocular sinus, base of mandible, anterior margin of pronotum, apex of T3–4 and most of T5–7 and respective sternites; following parts pale yellow: narrow and regular apical bands on T1–2 and S2, large basal spots on S2, most of mid and hind coxae, stripe on anterior face of fore tibia, apex of mid and hind tibiae. Wings hyaline, slightly infuscate along costal margin.

**Female**

Unknown.

**Distribution**

Zimbabwe.

***Afrepipona clonata*** sp. nov.

urn:lsid:zoobank.org:act:269939CF-34D2-44D2-8F05-3592215E3865

Figs 5, 27C

**Diagnosis**

Similar to *A. angusta* but differing as follows: male clypeus 1.3 × as wide as long, apical teeth bluntly carinate (Fig. 5B); gena depressed in ventral third, forming crenate furrow along high occipital carina; occipital carina incomplete on vertex; male vertex 1.9 × as long as distance between posterior ocellus and inner eye margin; clypeus finely and sparsely punctate; metanotum marked with yellow. Also similar to *A. punctatissima*, differing as follows: carinae of clypeus shorter and not exceeding the lamellate apical margin, apical emargination deeper; posterior ocelli closer to eyes than to each other; F11 reaching apex of F8 (Fig. 5C); pronotal lamella about ⅓ × as long as ocellar diameter; interspaces on mesoscutum variable but up to one puncture diameter posteriorly; preapical margin of T2 flattened, punctures slightly larger than on rest of tergite but of equal density; apical decolorate margin of T3 longer than that on T2 (Fig. 5D); largely marked with red on mesosoma. Genitalia in Fig. 27C.

**Etymology**

The specific epithet is in reference to the strong similarity to *A. punctatissima* and *A. angusta*.

**Type material**

**Holotype**

KENYA • ♂; Nairobi, Karen; 3 May 1967; C.D. Michener leg.; MSNVE.

**Description**

**Male**

Measurements. Body length 8.0 mm; fore wing length 7.0 mm.

Morphology. Head 1.2 × as wide as long in frontal view. Clypeus 1.3 × as wide as long, apical margin emarginate with pointed and shortly carinate lateral teeth, 0.25 × as wide as maximum width of clypeus, emargination 0.2 × as deep as wide; clypeus weakly and evenly convex in lateral view. Vertex 1.9 × as

long as distance between posterior ocellus and inner eye margin; gena 0.85 × as wide as eye at bottom of ocular sinus, depressed in lower third and forming a furrow along occipital carina; occipital carina complete, fine and irregular on vertex, strong and lamellate on gena, angled in lower third. F1 1.3 × as long as wide and 1.37 × as long as F2, F2 and F9 slightly longer than wide, F3 and F8 subquadrate, F4–7 transverse, F11 small and finger-shaped, reaching apex of F8 and almost straight in lateral view, parallel-sided with rounded apex in dorsal view. Mesosoma 1.4 × as long as wide. Sides of pronotum straight and slightly converging anteriorly, anterior margin nearly straight except slightly produced humeri; pronotal carina complete and shortly lamellate, becoming lower medially, as long as 0.33 × ocellar diameter on humeri; pretegular carina fine but sharp and sinuate. Mesoscutum 0.95 × as long as wide, evenly convex in lateral view. Scutellum barely convex, almost on same level of mesoscutum; anterior margin crenate with a larger pit in the middle. Metanotum slightly produced anteriorly. Tegula short and not equaling parategula, outer margin evenly rounded, posterior lobe subtriangular and shallowly depressed; parategula small and right-angled. Epicnemial carina very fine and shallow, barely visible. Propodeum in lateral view shallowly convex and completely oblique; posterior face shallowly concave and not clearly separated from dorsal faces; lateral faces flattened; dorsal, lateral and inferior carinae absent, propodeum entirely rounded. T1 short bell-shaped, 0.6 × as long as wide, sides slightly diverging posteriorly; apically with a duplicated lamellar margin. T2 0.9 × as long as wide in dorsal view, 1.35 × as wide as T1 and separated from it by a constriction; apical translucent margin longer than that on T1, sharply separated from rest of surface by sudden change in coloration and sculpture. Apical margin of T3 with translucent apical margin, about twice as long as margin of T2. S2 flattened on disc, then sloping basally; basal longitudinal furrow barely indicated; apical margin lamellate with basal pigmented digitations. S3 with translucent margin similar to S2.

Sculpture and vestiture. Clypeus shiny and shallowly punctate, punctures finer and sparser on sides, becoming larger and denser on disc. Frons and vertex with deep rounded punctures, interspaces shallowly convex and shiny with sparse micropunctures, reaching up to one ocellar diameter; gena punctured like vertex but interspaces exceeding puncture diameter. Scape shagreened and with sparse fine punctures. Punctures of mesosoma similar to frons but larger; punctures denser on pronotum and metanotum with interspaces narrower than half puncture diameter, sparser on mesoscutum, scutellum and mesepisternum with interspaces reaching and partly exceeding one puncture diameter; epicnemium and mesosternum shiny and shallowly shagreened and micropunctate; metaepisternum with few scattered shallow punctures; dorsal faces of propodeum with flat-bottomed polygonal cells, arranged in irregular transverse series, interspaces sharp ridge-like, posterior face invaded by sculpture of dorsal faces in upper half and very finely striate in lower half, lateral faces sparsely microstriate with sparse flat-bottomed rounded punctures. T1 with deep rounded punctures, sparser on sides and denser on disc, interspaces ranging from half to several puncture diameters, leaving a smooth apical margin; T2 similar to T1 but punctures more oblique and slightly finer on disc, becoming coarser preapically; T3–6 similar to preapical area of T2, but sculpture becoming progressively smaller and sparser; T7 shagreened with very small dense punctures and scattered larger shallow punctures. S1 matte and shagreened on basal petiole, shiny with longitudinal ridges on posterior part; S2 with deep punctures arranged in transverse or oblique series, distance between series 1–3 puncture diameters, shallower punctures preapically; S3–6 similar to respective tergites; S7 shiny with dense fine punctures. Head and mesosoma with very short pale pubescence and short erected setae, some setae on frons strongly bent toward clypeus, long setae on lower part of propodeum; clypeus with dense silvery pubescence and appressed white setae; metasoma with dust-like pale pubescence and scattered suberect setae.

Coloration. Black; following parts red: mandible, antenna, gena and posterior margin of vertex, pronotum except ventral corners of lateral faces, tegula, scutellum except anterior and posterior margins, anterior half of metanotum, upper plate of mesepisternum, dorsal faces and margin of other faces of propodeum, suffused spots on sides of T1, suffused spots covering lateral thirds of T2, S1 and most of

S2; following parts ferruginous-orange: inverse cross-shaped marking connecting clypeus to anterior ocellus, inner eye margin reaching lateral ocelli, legs, most of T4–7 and S4–7; following parts pale yellow: clypeus, basal triangle of mandible, lower face of scape, anterior margin of pronotum, anterior and posterior spots on tegula, parategula, anterior margin of metanotum, spot at apex of fore and mid femora and all tibiae, apical band on T1–4, wider on T2, apical sinuate band on S2–3 and lateral spots on S4. Wings hyaline with yellowish reflections, marginal cell infuscate with purplish reflections.

**Female**

Unknown.

**Distribution**

Kenya.

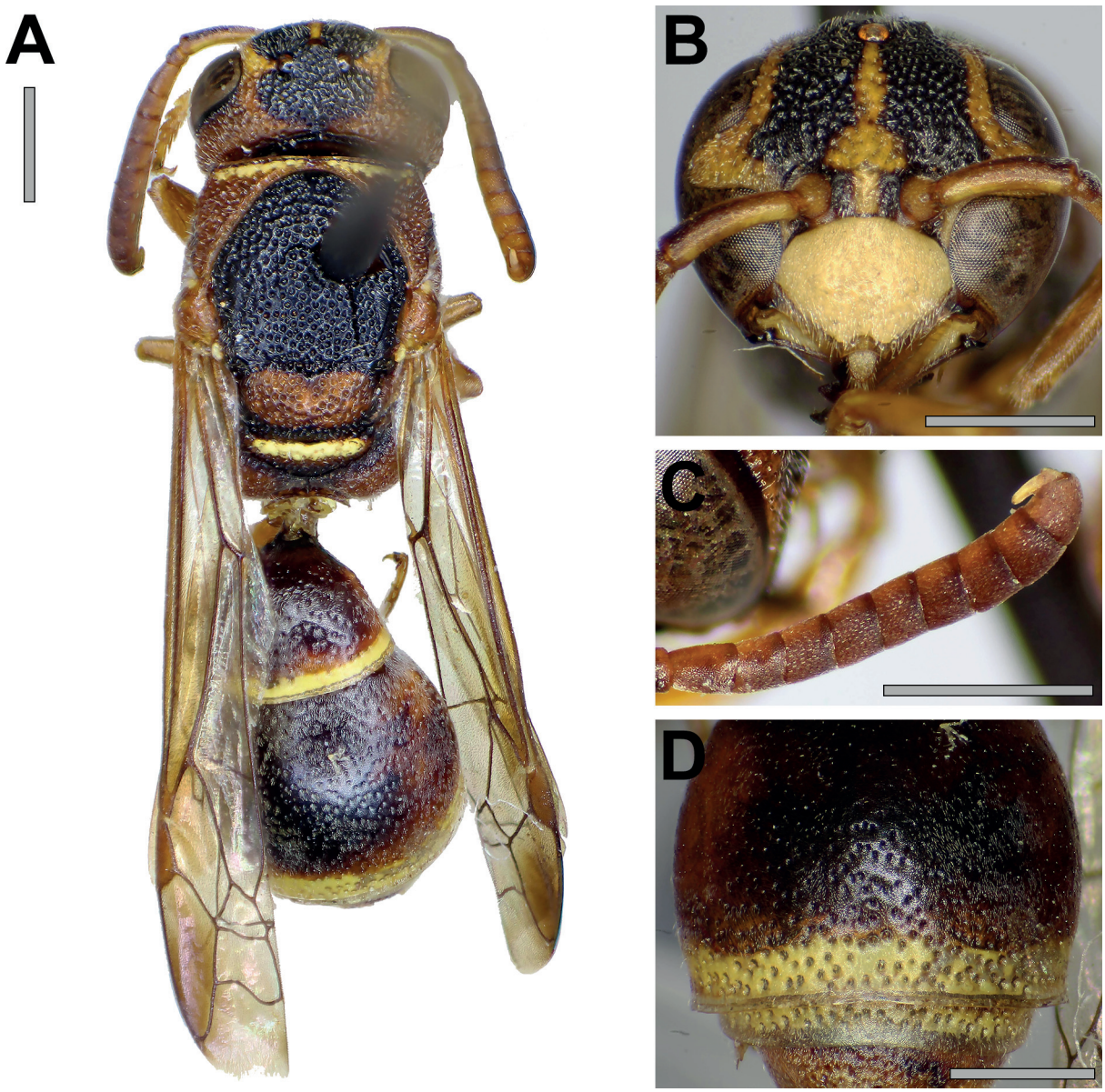


**Fig. 5.** *Afrepipona clonata* sp. nov., ♂, holotype from Nairobi (MSNVE). **A**. Habitus, dorsal view. **B**. Head, frontal view. **C**. Flagellum, lateral view. **D**. T2–3, dorsal view. Scale bars = 1 mm.

***Afrepipona cuprea*** sp. nov.
urn:lsid:zoobank.org:act:8EC11FFC-F7BE-45AD-AEB2-1FCA3B080A3F
Figs 6, 27D

**Diagnosis**

Similar to *A. macrocephala* and *A. meridionalis*, but differing as follows: male clypeus 1.35 × as wide as long (Fig. 6B); vertex of male 2.1 × as long as distance between posterior ocellus and inner eye margin; mesosoma of male 1.25–1.3 × as long as wide; head and mesosoma with bright coppery reflections, punctures sparse and interspaces mostly as long as puncture diameter; dorsal face of propodeum mostly impunctate laterally; apical translucent margin of T2 slightly longer than that on T1, preceded by deep punctures forming a step (Fig. 6D). Genitalia in Fig. 27D.

**Etymology**

The specific epithet derives from the Latin adjective 'cupreus' (= 'coppery'), in reference to the coppery coloration of the head and mesosoma.

**Type material**

**Holotype**

KENYA • ♂; Malindi, Watamu; 2 Dec. 1972; A. Mochi leg.; MSNVE.

**Paratypes**

KENYA • 1 ♂; Malindi, Watamu; 6 Dec. 1972; A. Mochi leg.; MSVI • 1 ♂; Kambe NW Mombasa; 12 Mar. 2022; J. Schwarz leg.; MJSK.

**Description**

**Male**

Measurements. Body length 5.8–7.5 mm (holotype 6.8 mm); fore wing length 5.0–6.0 mm (holotype 5.5 mm).

Morphology. Head 1.25 × as wide as long in frontal view. Clypeus 1.35 × as wide as long, apical margin truncate with slightly projecting pointed teeth, 0.3 × as wide as maximum width of clypeus; weakly and evenly convex in lateral view. Vertex 2.1 × as long as distance between posterior ocellus and inner eye margin; gena mostly flattened, 0.65 × as wide as eye at bottom of ocular sinus; occipital carina complete, very fine and barely visible on vertex, high and sharp on gena and becoming lamellar on ventral third, strongly bent in lower half of gena. F1 1.3 × as long as wide and 1.35 × as long as F2, F2–8 transverse, F9 longer than wide, F11 large and finger-shaped, reaching middle of F8 and barely curved in lateral view, parallel-sided with rounded apex in dorsal view, apex slightly flattened dorsoventrally and housed by incision on apical margin of F8. Mesosoma 1.25 × as long as wide (1.3 in the paratype). Sides of pronotum straight and almost parallel-sided, anterior margin straight; pronotal carina complete and lamellate, as long as half ocellar diameter on humeri, barely lower medially; pretegular carina sharp but disappearing above. Mesoscutum 0.9 × as long as wide, evenly convex in lateral view. Scutellum flattened and smoothly passing into mesoscutum and metanotum; anterior margin with deep regular furrow (crenate in the paratype). Metanotum flattened. Tegula short and not equaling parategula, outer margin evenly curved and slightly reflexed posteriorly, posterior lobe subtriangular and pointed; parategula strongly curved, forming a quarter of circumference. Epicnemial carina shallow and short, restricted to lower half and not reaching epipleural suture. Propodeum in lateral view steeply falling just behind metanotum, convex at dorsal margin; posterior face shallowly concave and not separated from dorsal faces; lateral faces flattened; carinae absent, propodeum entirely rounded. T1 semicircular, 0.5 × as long as wide, sides converging anteriorly and smoothly passing into curved anterior margin; apical

margin weakly reflexed and translucent, when seen in posterior view it is thickened and duplicated in two lamellae. T2 0.8 × as long as wide in dorsal view, apical translucent margin slightly longer than that on T1, weakly reflexed and preceded by series of coarse punctures forming shallow step between lamella and rest of tergite. Apical margin of T3 similar to T2, translucent part longer. S2 evenly convex from base to apex; basal longitudinal furrow shallow but sharp, about ⅓ × as long as S2. Apical margin of S2–3 similar to respective tergites, but translucent part shorter.

Sculpture and vestiture. Clypeus finely and sparsely punctate, all interspaces exceeding 1.5 puncture diameter. Frons and vertex with deep punctures, interspaces shorter than one puncture diameter on disc of frons and becoming wider laterally, mid-line of frons impunctate, exceeding one puncture diameter on vertex; gena punctured similar to vertex but punctures becoming finer ventrally. Scape matte and densely micropunctate, with sparse fine punctures. Punctures of mesosoma similar to vertex but larger, interspaces ranging from half to one puncture diameter, reaching up to 2.5 puncture diameters on scutellum and mesepisternum; epicnemium and mesosternum shiny and shallowly shagreened and micropunctate, with shallow punctures in posterior half; metaepisternum mostly smooth with scattered fine punctures

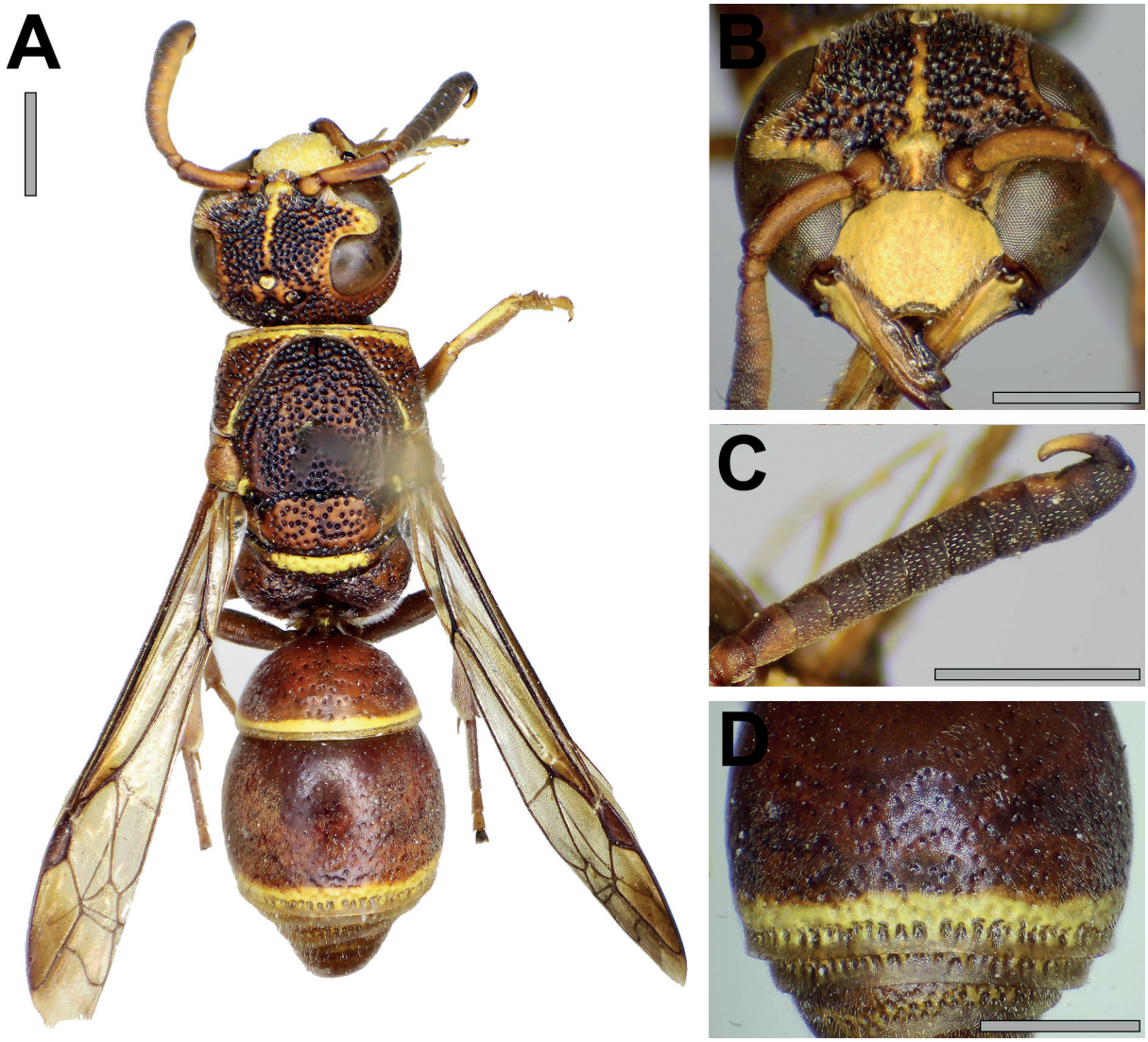


**Fig. 6.** *Afrepipona cuprea* sp. nov., ♂, paratype from Malindi (MSVI). **A**. Habitus, dorsal view. **B**. Head, frontal view. **C**. Flagellum, lateral view. **D**. T2–3, dorsal view. Scale bars = 1 mm.

in lower plate; dorsal faces of propodeum with large flat-bottomed punctures in medial third, median third impunctate and smaller punctures in lateral third, posterior face mostly smooth with some small punctures in upper half and irregular wrinkles ventrally, lateral faces with dense small punctures and very fine transverse striae in lower half. T1–2 with fine and shallow punctures, circular and well-marked on T1 and disc of T2, becoming progressively more oblique toward apex of T2, interspaces as long as several puncture diameters, preapical area of T2 with a series of coarse large and deep punctures preceding apical lamella; T3 similar to apical area of T2; T4 with deep small punctures, becoming slightly larger preapically; T5–7 shagreened with few scattered fine punctures. S1 shiny, irregularly sculpted on basal petiole, irregularly ridged and deeply punctate on posterior part; S2 with deep rounded punctures, becoming larger and denser laterally, apical lamella preceded by a series of coarse deep punctures; S3–7 similar to respective tergites, but punctures finer. Head and mesosoma with very short pale setae, longer on lower part of propodeum; clypeus, gena and sides of mesosoma with dust-like white pubescence; metasoma with brownish dust-like pubescence and scattered short appressed setae.

Coloration. Reddish-orange, black punctures and coppery reflections on head and mesosoma; following parts black: upper half of hypostoma, mesosternum and some sutures on mesosoma; following parts pale yellow: clypeus, mandible except teeth, inner eye margin, line connecting interantennal space with anterior ocellus, line along pronotal carina and humeri, short line on posterior corner of pronotum, anterior and posterior spot on tegula, parategula, anterior margin of metanotum, apical spot on fore coxa, ventral face of mid and hind coxae, line on outer face of fore tibia, apical spot on mid tibia, apical margin of T1–4, most of S1, apical margin of S2–3. Wings hyaline with barely indicated brownish spot on marginal cell.

**Female**

Unknown.

**Distribution**

Kenya.

***Afrepipona lamellata*** sp. nov.

urn:lsid:zoobank.org:act:0B5D75BA-A8CC-48BB-A9DA-57BC5E79C6C6

Fig. 7

**Diagnosis**

Similar to *A. tertia* in the following characters: robust appearance; sharply carinate and strongly protruding interantennal space; occipital carina strong on gena and absent on vertex (Fig. 7A); pronotal carina forming a high lamella; lateral face of pronotum with a longitudinal carina; T1 much wider than long; barely noticeable apical translucent margin of T2 (Fig. 7D); head and mesosoma with punctures of variable density, but mostly with flattened interspaces, T1 and T2 nearly impunctate. Distinguished from it by outer margin of tegula emarginate anteriorly, punctures on mesosoma larger and denser, especially in posterior half of mesoscutum interspaces at most as long as puncture diameter, posterior margin of scutellum with more series of punctures and interspaces reduced to ridges.

**Etymology**

The specific epithet is in reference to the highly lamellate pronotal carina.

**Type material**

**Holotype**

IVORY COAST • ♀; Tai National Park, IET Station; 5°50′00″ N, 7°20′31″ W; 24–25 Feb. 1997; R. Longair leg.; MSNVE.

**Description**

**Female**

Measurements. Body length 6.5 mm; fore wing length 6.0 mm.

Morphology. Head 1.25 × as wide as long in frontal view. Clypeus 1.3 × as wide as long, apical margin weakly convex between lateral teeth, 0.4 × as wide as maximum width of clypeus; apical teeth right-angled with barely developed short carinae; disc and lower half of clypeus shallowly depressed, clypeus in lateral view almost flattened, barely convex in upper half. Interantennal space sharply carinate and strongly produced in dorsal view. Vertex 2.2 × as long as distance from posterior ocellus to inner eye margin; cephalic foveae very small and close to each other, almost equidistant from posterior ocelli and occipital margin, placed in a smooth and shiny depression about as large as one ocellus but not well-delimited; gena 0.75 × as wide as eye at bottom of ocular sinus; occipital carina incomplete, strong on gena but disappearing at level of dorsal lobe of eye, vertex completely ecarinate and depressed in the middle of posterior margin. F1 1.2 × as long as wide and 1.3 × as long as F2, F2–9 transverse. Fifth tooth of mandible small and subtriangular with rounded apex. Mesosoma 1.15 × as long as wide. Sides of pronotum sinuate in dorsal view, slightly depressed behind humeri; anterior margin completely straight; pronotal carina complete and forming a high smooth and shiny lamella on dorsal face, rounded on humeri; pretegular carina very dull and rounded; lateral face of pronotum with vertical carina as continuation of epicnemial carina. Mesoscutum 0.9 × as long as wide, barely convex in lateral view. Scutellum weakly convex and smoothly passing into mesoscutum and metanotum, forming single even curve; anterior margin coarsely crenate with 9 pits, median one about twice as large as others. Metanotum flattened with shallowly projecting anterior margin. Tegula equaling parategula, outer margin straight in anterior third and strongly rounded in posterior two thirds, posterior lobe more or less right-angled; parategula small and strongly bent, almost semicircular. Mesepisternum angularly bulging posteriorly; epicnemial carina strong but dull, almost reaching margin of pronotum; furrows strongly crenate. Propodeum extended horizontally behind metanotum for a length equal to half metanotum, then falling vertically; posterior face almost flattened and separated from dorsal faces by weak dorsal carinae, made irregular by coarse sculpture; lateral faces flattened; lateral and inferior carinae absent. T1 almost semicircular, 0.45 × as long as wide in dorsal view; apical margin with short hyaline lamella, longer on sides. T2 0.75 × as long as wide in dorsal view, apically with very short and barely visible lamellar margin, hyaline medially and translucent laterally. S2 evenly convex from base to apex, apically with lamellar margin slightly longer than that on T2.

Sculpture and vestiture. Clypeus shiny with large shallow oblique punctures, disappearing on basal corners, interspaces flattened and variable in size from half to three puncture diameters. Frons and vertex with deep punctures, interspaces flattened and finely micropunctate, shorter than half puncture diameter on frons and reaching one and half puncture diameters on vertex, disappearing near occipital margin; gena punctured like vertex but interspaces wider and shiny, punctures disappearing on yellow spot. Scape shiny with very shallow shagreen and scattered fine punctures. Most of mesosoma with punctures similar to those on vertex, but larger on mesoscutum and mesepisternum; punctures on pronotum variable in size and density, finer and denser posteromedially and becoming larger and denser anterolaterally, lateral faces of pronotum coarsely striate and punctate; mesoscutum with interspaces micropunctate and mostly shorter than one puncture diameter, but reaching up to one puncture diameter, posterior half with three large impunctate areas; scutellum mostly smooth with very fine and irregular micropunctures, very few scattered punctures near anterior margin and two to three rows of close punctures on posterior margin

arranged in longitudinal series; coarse punctures on mesepisternum, interspaces very variable, ranging from half puncture diameter to being reduced to sharp ridges, epicnemium and mesosternum matte with coarse punctures posteriorly; metaepisternum matte and shagreened; dorsal faces of propodeum with very large flat-bottomed punctures, interspaces mostly reduced to sharp ridges, some interspaces flattened and matte due to very fine shagreen and microstriation; posterior face dull due to microsculpture similar to interspaces of dorsal faces and with some polygonal cells along upper margin; lateral faces matte due to fine microstriation, shiny at bottom of large flat-bottomed punctures in posterior half. T1 finely shagreened with silky shine, bearing very scattered shallow punctures, more evident on disc; T2 similar to


**Fig. 7.** *Afrepipona lamellata* sp. nov., ♀, holotype from Tai National Park (MSNVE). **A**. Habitus, dorsal view. **B**. Head, frontal view. **C**. Head, dorsal view. **D**. T2–3, dorsal view. Scale bar = 1 mm.

T1 but punctures more evident, becoming suddenly larger and deeper on preapical area; T3–6 punctured like preapical area of T2, but punctures becoming progressively finer and sparser; S1 shagreened with silky shine, some shallow irregular punctures along posterior margin; S2 with large deep punctures not reaching preapical area, interspaces larger than puncture diameter, preapically with series of fine punctures delimiting apical lamellar margin; S3–5 similar to respective tergites but punctures finer, interspaces with progressively denser micropunctures; S6 densely micropunctate with some scattered larger punctures. Head and mesosoma with sparse and very short white pubescence, slightly denser on basal margin of clypeus and lower half of frons, and some barely visible appressed pale setae; longer setae present on mesepisternum and lateral angles of propodeum; metasoma with dense brownish dust-like pubescence, sparse erect setae on apical margin of T2–5 and most of T6 and S1–6.

Coloration. Black; following parts ferruginous: clypeus, mandible except teeth, interantennal space, part of scape, tegula, propodeal valvula, most of legs, sides of T1, whole S1; following parts pale yellow: irregular basal spot on mandible, broad basal band on clypeus medially interrupted, spear-shaped marking on interantennal space, space between eye and antennal insertion, narrow line at bottom of ocular sinus, lower face of scape, elongate spot on gena at height of ocular sinus, paired transverse spot on anterior margin of pronotum extending on pronotal carina, anterior corner of tegula, parategula, anterior half of metanotum, narrow apical margin on T1–2 and S2, spots on mid and hind coxa, apical half of outer face of fore and mid femora, outer face of fore tibia except elongate brown median mark, outer face of mid and hind tibia except base and apex. Wings weakly and evenly infuscate.

**Male**

Unknown.

**Distribution**

Ivory Coast.

***Afrepipona lamptoensis*** Giordani Soika, 1965
Figs 8, 27E

*Afrepipona lamptoensis* Giordani Soika, 1965: 46, figs 1–2.

**Diagnosis**

Recognized by the following characters: clypeus of female 1.35 × as wide as long, apical margin narrow, 0.2 × as wide as clypeus (Fig. 8B); occipital carina evenly curved on gena; vertex of female 1.85–1.95 × as long as distance between posterior ocellus and inner eye margin, cephalic foveae mixed with punctures and not placed in depression (Fig. 8E); mesosoma 1.2–1.3 × as long as wide; pronotal carina shortly lamellate for whole length, at most ⅓ × as long as ocellar diameter; T1 2.2–2.3 × as wide as long, T2 1.2–1.25 × as wide as long; apical translucent margin of T2 separated from rest of tergite by large punctures with pigmented interspaces, margin reflexed and duplicated by raised lamella (Fig. 8D); head and mesosoma finely and sparsely punctate, punctures on mesoscutum half as long as ocellar diameter, dorsal face of propodeum entirely and coarsely punctured, S2 finely and shallowly punctate; mesosternum with dense silvery pubescence. Genitalia in Fig. 27E.

**Type material**

**Holotype**

IVORY COAST • ♀; Lamto, Toumodi; MNHN EY35370.

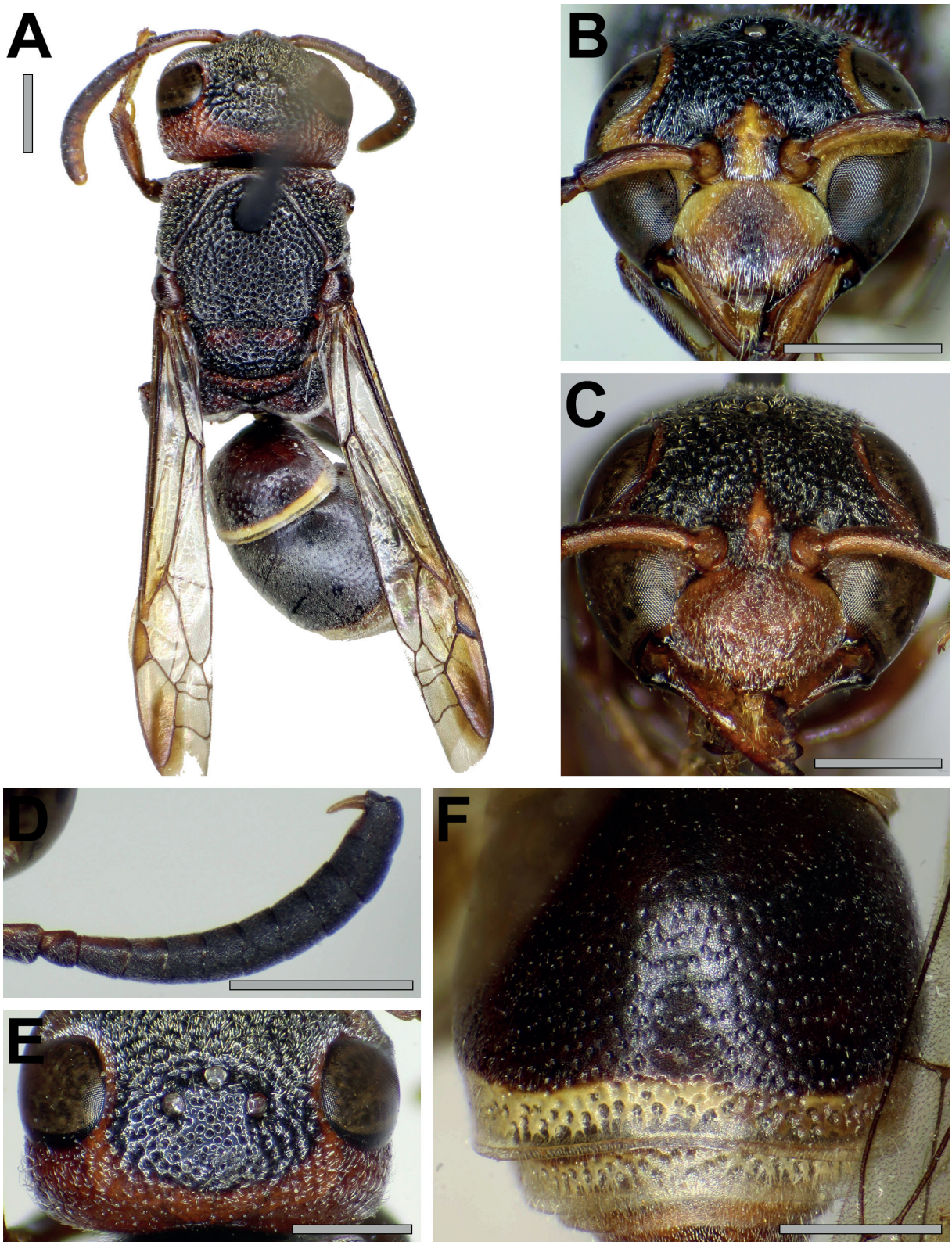


**Fig. 8.** *Afrepipona lamptoensis* Giordani Soika, 1965. **A**, **C**, **E**–**F**. ♀, paratype from Lamto (MSNVE). **B**, **D**. ♂ from Lamto (AMNH). **A**. Habitus, dorsal view. **B**–**C**. Head, frontal view. **D**. Flagellum, lateral view. **E**. Head, dorsal view. **F**. T2–3. dorsal view. Scale bars = 1 mm.

**Paratype**

IVORY COAST • 1 ♀; Lamto, Toumodi; MSNVE.

**Other material examined**

IVORY COAST • 1 ♀; Lamto; 6 Oct. 1969; Darchen leg.; MSVI • 1 ♂; Lamto; 9 Dec. 1988; R. Longair leg.; AMNH.

**Distribution**

Ivory Coast (Giordani Soika 1965).

**Remarks**

Gusenleitner (2012) synonymized this species under *Afrepipona angusta*, but the examination of both species, including the holotype of *A. lamptoensis*, showed that they are very different and come from different areas of Africa. The distinctive characters are summarized in the key.

The records from the Democratic Republic of Congo, Zambia and Zimbabwe (Gusenleitner 2011) are considered doubtful.

***Afrepipona lamptula*** sp. nov.
urn:lsid:zoobank.org:act:31A1F822-8931-4016-94ED-A50F80F16C5E
Fig. 9

**Diagnosis**

Similar to *Afrepipona lamptoensis*, but differing as follows: apical margin of clypeus wider, 0.3 × as maximum width of clypeus (Fig. 9B); occipital carina strongly curved in lower half of gena; cephalic foveae placed in a depression with raised posterior margin (Fig. 9C); T2 less reflexed, apical margin thickened but not duplicate (Fig. 9D); punctures on mesoscutum ⅓ × as long as ocellar diameter, interspaces on disc exceeding one puncture diameter, dorsal face of propodeum finely punctate and with impunctate areas, punctures on T2 not oblique and not flat-bottomed, S2 with sparser and finer punctures; mesosternum nearly bare.

**Etymology**

The specific epithet is in reference to the similarity to *A. lamptoensis*.

**Type material**

**Holotype**

CENTRAL AFRICAN REPUBLIC • ♀; Ombella-Mpono, 75 km NNE of Bangui; 5–6 and 8–11 Apr. 2020; A. Kudrna Jr leg.; MSNVE.

**Description**

**Female**

Measurements. Body length 7.0 mm; fore wing length 5.8 mm.

Morphology. Head 1.2 × as wide as long in frontal view. Clypeus 1.35 × as wide as long, apical margin truncate between lateral teeth, 0.3 × as wide as maximum width of clypeus; apical teeth dull and barely projecting, with blunt basally diverging carinae; clypeus in lateral view almost flattened, barely convex dorsally. Vertex 1.95 × as long as distance from posterior ocellus to inner eye margin; cephalic foveae very small and close to each other, placed in a smooth and shiny depression as large as one ocellus and

with carinate posterior margin; gena 0.9 × as wide as eye at bottom of ocular sinus; occipital carina complete, very weak on vertex and shortly lamellate on gena, more or less evenly curved on gena. F1 1.15 × as long as wide and 1.3 × as long as F2, F2–9 transverse. Fifth tooth of mandible projecting but apically rounded. Mesosoma 1.2 × as long as wide. Sides of pronotum almost straight in dorsal view; anterior margin completely straight; pronotal carina complete and very shortly lamellate, projecting but rounded on humeri; pretegular carina dull and barely visible dorsally; lateral faces of pronotum depressed and clearly separated from dorsal face, but without a distinct humeral carina. Mesoscutum 0.95 × as long as wide, evenly convex in lateral view. Scutellum weakly convex and smoothly passing into mesoscutum and metanotum; anterior margin coarsely crenate with a series of 10 pits, median one

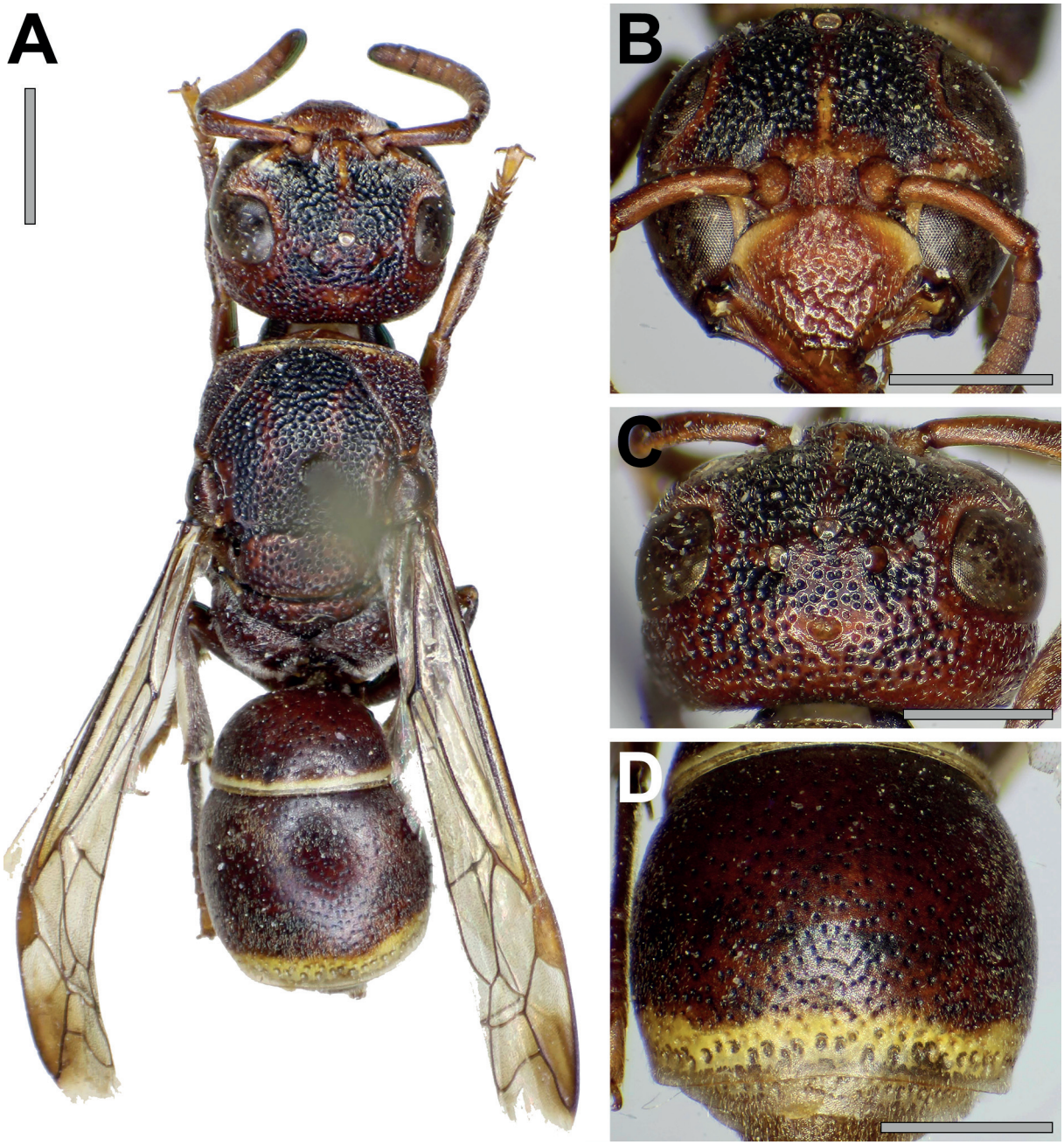


**Fig. 9.** *Afrepipona lamptula* sp. nov., ♀, holotype from near Bangui (MSNVE). **A**. Habitus, dorsal view. **B**. Head, frontal view. **C**. Head, dorsal view. **D**. T2–3, dorsal view. Scale bars = 1 mm.

about twice as large as others. Metanotum weakly and evenly convex in lateral view. Tegula almost equaling parategula, outer margin more convex in anterior half; parategula small and strongly bent, right-angled. Epicnemial carina sharp and reaching epipleural suture but disappearing on mesosternum. Propodeum falling almost vertically behind metanotum in lateral view; posterior face small and shallowly concave, smoothly and regularly passing into dorsal faces; lateral faces very shallowly concave; all carinae absent. T1 irregularly trapezoidal, with lateral margins passing into rounded anterior margin, 0.45 × as long as wide in dorsal view; posterior margin weakly thickened with a short translucent margin of regular length. T2 0.85 × as long as wide in dorsal view, apical margin thickened but not duplicated, with a translucent lamella separated from rest of surface by a series of irregular coarse punctures. T3 with apical translucent lamella similar to that on T2. S2 almost flattened and then convex basally, basally with a short deep longitudinal furrow, apically with a lamellar margin similar to T2. S3 with short shagreened apical lamella.

Sculpture and vestiture. Clypeus shiny with shallow punctures, large and dense on disc and apically, very fine and sparse on basal corners, interspaces with very scattered micropunctures. Head with deep punctures, interspaces slightly convex and shiny, distance between punctures equal to puncture diameter on frons and becoming larger on vertex and gena. Scape weakly shiny with dense micropunctures and sparse fine punctures. Most of mesosoma sculpted like vertex, punctures larger and sparser on scutellum and mesepisternum; lateral faces of pronotum with dull striae; punctures on scutellum sparser laterally and anteriorly; punctures on mesepisternum becoming sparse and smaller ventrally, very fine and sparse on mesosternum, epicnemium shallowly shagreened and shiny, with fine punctures ventrally; dorsal faces of propodeum with large flat-bottomed punctures, interspaces large and flattened with fine microstriation; posterior face shiny, smooth with sparse punctures dorsally and finely striate ventrally; lateral faces irregularly shagreened and microstriate, weakly shiny, with flat-bottomed shallow punctures becoming denser posteriorly. T1 finely shagreened and weakly shiny, with very sparse deep small punctures, barely denser on disc; T2 similar to T1, with a preapical series of large and coarse punctures; T3–4 similar to T2, but punctures smaller; T5–6 micropunctate with very sparse fine punctures; S1 smooth and shiny with some punctures, basal petiole partly shagreened; S2–3 similar to respective tergites, but punctures sparser and larger, preapical series on S2 with smaller and more regular punctures; S4–6 densely micropunctate with very sparse fine punctures. Head and mesosoma with short silvery pubescence, very sparse and mostly arising from punctures, more abundant and denser on frons and sides of mesosoma, almost absent on epicnemium and mesosternum; clypeus mostly bare, with silvery pubescence on basal and lateral margins and curved erect setae; frons and mesepisternum with thick curved setae; propodeum almost entirely covered in short white pubescence, angles with fine long setae; metasoma with brownish dust-like pubescence, short sub-erect setae on T3–6 and S2–6.

Coloration. Dark red; following parts black: frons up to anterior ocellus, margins of mandible, flagellum above, part of lower face of head, three broad stripes on mesoscutum, mesosternum and lower margin of mesepisternum, anterior margin of metaepisternum, preapical band on S2; following parts ferruginous-orange: clypeus, mandible, inner eye margin, longitudinal line above interantennal space, scape, apical segments of tarsi, T5–6 and S5–6; following parts pale yellow: basal spot on mandible, interrupted basal band on clypeus, inner margin of ventral lobe of eye, anterior margin of pronotum, parategula, narrow and regular apical band on T1, broad and irregular apical bands on T2–4 and S3, medially interrupted apical band on S2, irregular spots on mid and hind coxae, outer face of mid and hind tibia except basal third, narrow line on outer face of hind basitarsus. Wings hyaline with weakly infuscate apical spot.

**Male**

Unknown.

**Distribution**

Central African Republic.

***Afrepipona lobulata*** sp. nov.
urn:lsid:zoobank.org:act:5262B202-0C03-4C31-A5E2-672CDCB71A89
Figs 10, 27F

**Diagnosis**

Readily distinguished from all other species of *Afrepipona* by submarginal carina of propodeum developed in triangular lobe above propodeal valvula. Genitalia in Fig. 27F.

**Etymology**

The specific epithet derives from the Latin adjective 'lobulatus' (= 'with lobes'), in reference to the small lobes formed by submarginal carina.

**Type material**

**Holotype**

DEMOCRATIC REPUBLIC OF CONGO • ♂; Belgian Congo, Katanga, Lubumbashi; 11°45′ S, 27°40′ E; 8 Apr. 1911; Bequaert leg.; AMNH, AMNH_IZC00418846.

**Description**

**Male**

Measurements. Body length 6.2 mm; fore wing length 5.9 mm.

Morphology. Head 1.25 × as wide as long in frontal view. Clypeus 1.3 × as wide as long, apical margin truncate with slightly projecting right-angled teeth, 0.25 × as wide as maximum width of clypeus; weakly and evenly convex in lateral view. Vertex 1.5 × as long as distance between posterior ocellus and inner eye margin; gena 0.85 × as wide as eye at bottom of ocular sinus; occipital carina complete, very fine on vertex, shortly lamellate on gena, evenly curved on gena. F1 1.25 × as long as wide and 1.25 × as long as F2, F2 subquadrate, F3–8 transverse and becoming progressively wider, F9 longer than wide, F11 finger-shaped, reaching base of F9 and barely curved in lateral view, parallel-sided with rounded apex in dorsal view. Mesosoma 1.3 × as long as wide. Sides of pronotum straight and weakly converging, humeri slightly obtuse; pronotal carina complete and lamellate, about as long as ⅓ of ocellar diameter on humeri, slightly lower medially; pretegular carina blunt, disappearing at upper margin. Mesoscutum 0.95 × as long as wide, evenly convex in lateral view. Scutellum weakly convex; anterior margin regularly crenate. Metanotum oblique and slightly projecting at anterior margin. Tegula short and not equaling parategula, outer margin evenly curved and slightly reflexed posteriorly, posterior lobe subtriangular and pointed; parategula right-angled. Epicnemial carina distinct and moderately sharp above, reaching epipleural suture. Propodeum in lateral view steeply falling just behind metanotum, almost vertical; posterior face shallowly concave and not clearly separated from dorsal faces; lateral faces flattened; lateral carinae present but very weak and confused with ridged interspaces of sculpture; submarginal carina produced in short subtriangular lobe above propodeal valvula, slightly reflexed upward. T1 semicircular, 0.5 × as long as wide; apical margin translucent, when seen in posterior view it is strongly thickened and duplicated in two lamellae. T2 0.85 × as long as wide in dorsal view, apical translucent margin about twice as long as that on T1, slightly depressed but not reflexed, preceded by series of coarse punctures. Apical margin of T3–5 similar to T2, translucent margin becoming progressively less evident. S2 strongly convex basally, then weakly and evenly convex to apex; basal

longitudinal furrow very shallow, barely visible. Apical margin of S2–4 similar to respective tergites but translucent part shorter.

Sculpture and vestiture. Clypeus coarsely and densely punctate, interspaces at most equal to diameter of punctures. Frons and vertex with deep punctures, interspaces ridge-like on frons and becoming slightly wider posteriorly; gena punctured similar to vertex but punctures becoming sparser ventrally. Scape matte and densely micropunctate. Punctures of mesosoma similar to vertex but larger and denser, interspaces mostly ridge-like; punctures slightly sparser on mesepisternum, interspaces more shiny; epicnemium and mesosternum shagreened and almost matte, with small deep punctures in posterior half; metaepisternum mostly shagreened with scattered fine punctures in lower plate, shortly striate along anterior margin; dorsal faces of propodeum with coarsely and densely punctate, interspaces reduced to sharp ridges, posterior face mostly oblique striate with deep punctures in upper half, lateral faces with

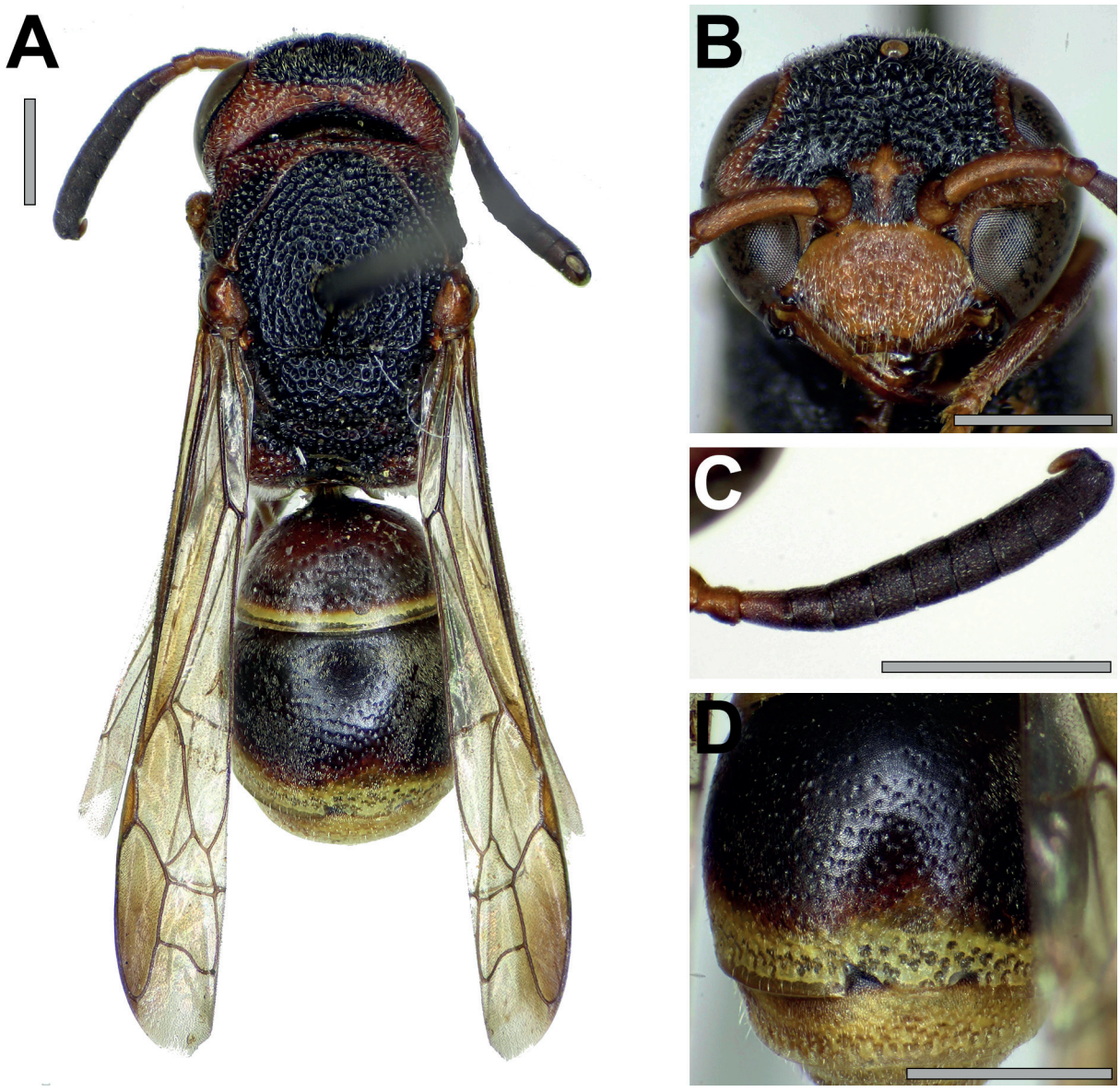


**Fig. 10.** *Afrepipona lobulata* sp. nov., ♂, holotype from Lubumbashi (AMNH). **A**. Habitus, dorsal view. **B**. Head, frontal view. **C**. Flagellum, lateral view. **D**. T2–3, dorsal view. Scale bars = 1 mm.

sparse flat-bottomed punctures and very fine transverse microstriae. T1–2 with fine and deep punctures, circular and well-marked on T1 and disc of T2, becoming progressively more oblique toward apex and sides of T2, interspaces as long as 2–3 punctures on disc and becoming wider laterally, preapical area of T2 with series of coarse large and deep punctures preceding apical lamella; T3–5 similar to apical area of T2 but punctures much smaller and becoming progressively shallower and sparser; T6–7 shagreened with barely visible micropunctures. S1 shiny, smooth on basal petiole, irregularly ridged and deeply punctate on posterior part; S2 with deep rounded punctures, larger and denser on disc, apical lamella preceded by a series of coarse deep punctures; S3–7 shagreened and impunctate, except for series of coarse punctures preceding apical lamella on S3–4. Head and mesosoma with short silvery pubescence, mostly arising from punctures, more abundant and denser on clypeus, frons and sides of mesosoma, almost absent on epicnemium and mesosternum; clypeus with curved suberect setae; frons and mesepisternum with apically bent setae; propodeum almost entirely covered in short white pubescence, angles with dense and fine long setae; metasoma with brownish dust-like pubescence, short sub-erect setae on T3–7 and S2–7.

Coloration. Black; following parts red: clypeus, mandible except margins, T-shaped spot on interantennal space, scape, pedicel, F1, inner eye margin, whole gena, posterior third of vertex, broad band on anterior margin of pronotum, narrow line on posterior margin of pronotum, tegula, parategula, most of dorsal faces of propodeum, most of T1, sides and preapical margin of T2, most of S1–2, legs with brownish tinges; following parts from yellow to ivory: projections of submarginal carina, narrow apical margin of T1, wide apical bands on T2–6, slightly narrower bands on S2–5, anterior face of mid and hind coxa, apex of mid tibia, line on outer face of hind tibia; apex of metasoma ferruginous. Wings subhyaline with weak brownish tinge, apex of marginal cell weakly infuscate.

**Female**

Unknown.

**Distribution**

Democratic Republic of Congo.

***Afrepipona macrocephala*** (Gribodo, 1894)
Figs 11, 27G

*Odynerus macrocephalus* Gribodo *in* Emery *et al.* 1894: 60.

**Diagnosis**

Recognized by the following characters: clypeus 1.5 × (female) or 1.4 × (male) as wide as long (Fig. 11B–C); vertex 2.1 × (female) and 1.9 × (male) as long as distance between posterior ocellus and inner eye margin (Fig. 11E); mesosoma 1.3 × as long as wide; pronotal carina highly lamellate on whole length, exceeding half ocellar diameter on humeri; apical translucent margin of T2 twice as long as that on T1, separated from rest of tergite by large shallow punctures, pigmented digitations running between punctures (Fig. 11F); head and mesosoma with matte brassy reflections, sparsely punctured and interspaces mostly equal to puncture diameter, dorsal face of propodeum mostly impunctate laterally, punctures on T1–2 fine and shallow. Genitalia in Fig. 27G.

**Type material**

**Holotype**

MOZAMBIQUE • ♀; shore of Magnarra river; 1848; Fornasini leg.; MZUB.

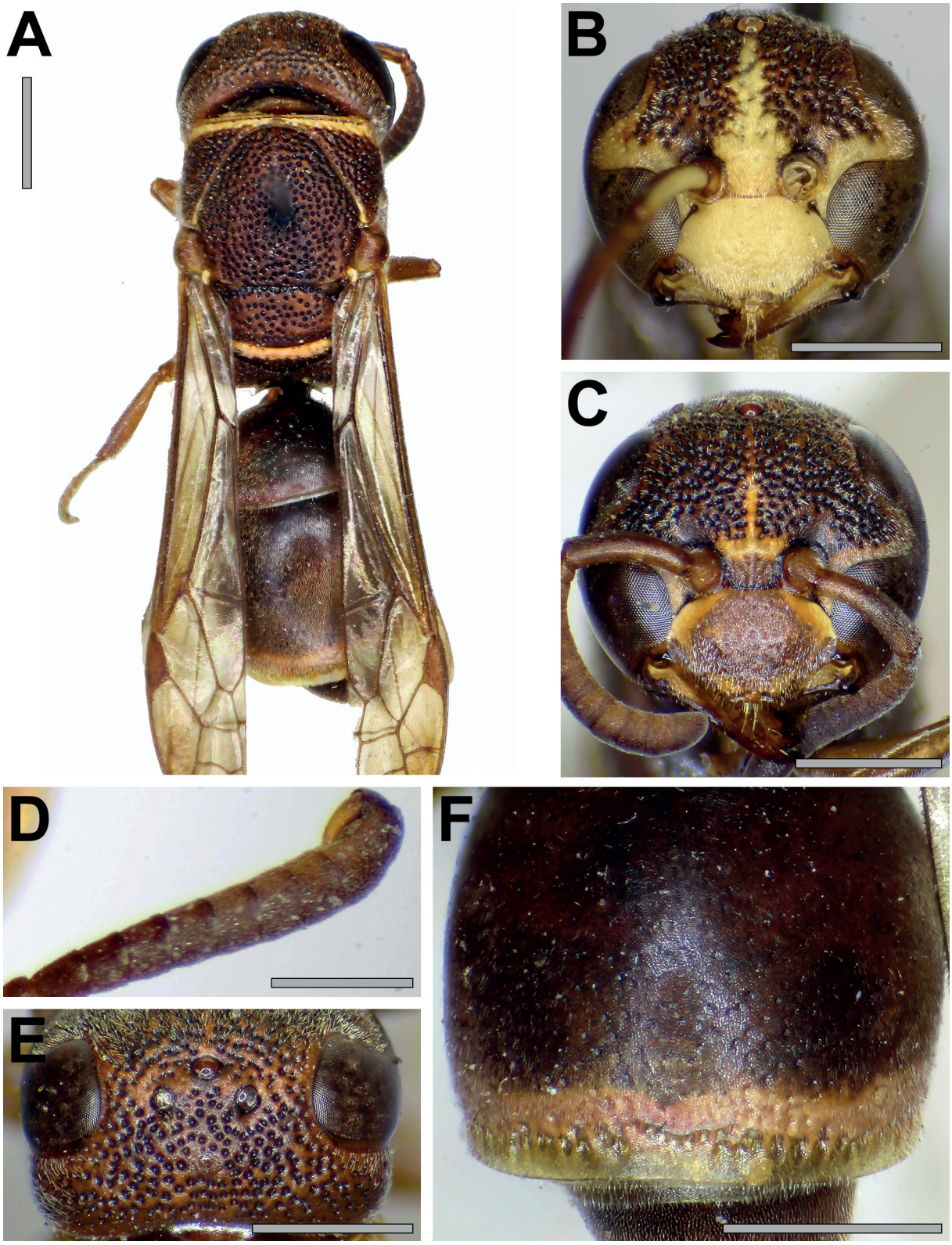


**Fig. 11.** *Afrepipona macrocephala* (Gribodo, 1894). **A**, **C**, **E–F**. ♀ from Mozambique (MSNVE). **B**, **D**. ♂ from Delagoa (MSNVE). **A**. Habitus, dorsal view. **B–C**. Head, frontal view. **D**. Flagellum, lateral view. **E**. Head, dorsal view. **F**. T2–3. dorsal view. Scale bars: A–C, E–F = 1 mm; D = 0.5 mm.

**Other material examined**

MOZAMBIQUE • 1 ♂; Delagoa, Rikatla; Junod leg.; MSNVE • 1 ♀; Mozambique; Muir leg.; MSNVE.

**Distribution**

Mozambique (Gribodo 1894).

**Remarks**

The records from Ethiopia published by Giordani Soika (1952: 82) refer to the newly described *Afrepipona orientalis* sp. nov.

The male described and imaged by Gusenleitner (2011) is an *Antodynerus* de Saussure, 1855, probably *A. kelneri* Giordani Soika, 1965 or a closely related species. It's to be noted that the provenance of that male specimen is uncertain, as Gusenleitner only listed three females in the examined material. Given this misidentification, the records of females from Kenya and Tanzania are here omitted.

***Afrepipona meridionalis*** sp. nov.
urn:lsid:zoobank.org:act:391E608E-E328-4284-949B-2F3740C8C695
Figs 12, 27H

**Diagnosis**

Similar to *A. macrocephala* and *A. cuprea*, but differing as follows: clypeus 1.4 × (female) or 1.5 × (male) as wide as long (Fig. 12B–C); vertex 2.3 × (female) and 2 × (male) as long as distance between posterior ocellus and inner eye margin (Fig. 12E); mesosoma longer, 1.5 × (female) or 1.4 × (male) as long as wide; apical translucent margin of T2 3 × as long as that on T1, preceded by shallow punctures (Fig. 12F); head shiny but not metallic, densely punctured with interspaces shorter than puncture diameter; dorsal face of propodeum very coarsely punctured medially, with small impunctate areas laterally; T1–2 with large and deep punctures. Genitalia in Fig. 27H.

**Etymology**

The specific epithet comes from the Latin adjective 'meridionalis' (= 'southern'), being the southernmost known species of the genus.

**Type material**

**Holotype**

SOUTH AFRICA • ♂; Natal, Durban, beach; 4 Oct. 1919; C.N. Barker leg.; MSNVE.

**Paratype**

SOUTH AFRICA • 1 ♀; Natal, Durban, Bluff; 18 Mar. 1922; C.N. Barker leg.; MSNVE.

**Description**

**Male**

Measurements. Body length 7.4 mm; fore wing length 6.3 mm.

Morphology. Head 1.2 × as wide as long in frontal view. Clypeus 1.5 × as wide as long, apical margin subtruncate with weakly projecting acute lateral teeth, 0.3 × as wide as maximum width of clypeus; clypeus evenly convex in lateral view. Vertex 2 × as long as distance between posterior ocellus and inner eye margin; gena 0.85 × as wide as eye at bottom of ocular sinus; occipital carina complete, barely visible on vertex, strong and lamellate on gena, strongly bent in lower half. F1 1.4 × as long as

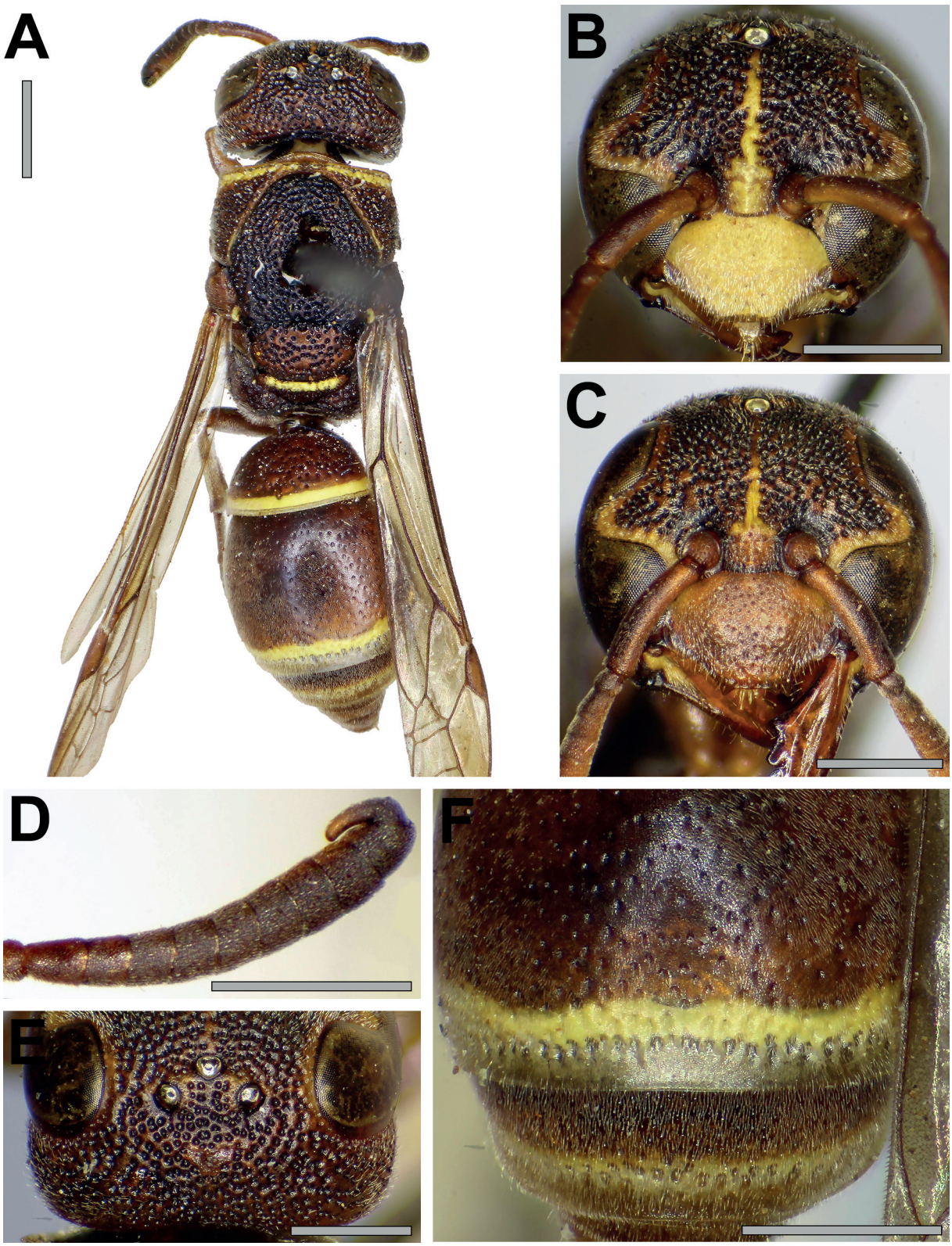


**Fig. 12.** *Afrepipona meridionalis* sp. nov. **A–B**, **D**. ♂, holotype from Durban (MSNVE). **C**, **E–F**. ♀, paratype from Durban (MSNVE). **A**. Habitus, dorsal view. **B–C**. Head, frontal view. **D**. Flagellum, lateral view. **E**. Head, dorsal view. **F**. T2–3. dorsal view. Scale bars = 1 mm.

wide and 1.5 × as long as F2, F2–3 subquadrate, F4–8 transverse, F9 about as long as basally wide, F11 finger-shaped, almost reaching middle of F8 and weakly curved in lateral view, sides barely converging to rounded apex in dorsal view. Mesosoma 1.4 × as long as wide. Sides of pronotum almost parallel-sided and straight in dorsal view; pronotal carina complete and lamellate on dorsal face, more than half as long as ocellar diameter on humeri; pretegular carina fine and visible just above pronotal lobe only; transition between dorsal and lateral faces of pronotum distinctly angled but lacking humeral carina. Mesoscutum as long as wide, evenly convex in lateral view. Scutellum almost flattened, smoothly passing into mesoscutum anteriorly; anterior margin crenate with a series of seven pits, the median one larger. Metanotum flattened with slightly projecting anterior margin in lateral view. Tegula short and almost equaling parategula, outer margin evenly rounded, posterior lobe more or less right-angled and blunt; parategula small, strongly curved and depressed, apex pointing medially. Epicnemial carina short and dull, visible only for a short length in middle of mesepisternum, not reaching epipleural suture and mesosternum. Propodeum in lateral view falling vertically just below metanotum; posterior face very shallowly concave, almost flattened, clearly separated from dorsal faces but without dorsal carinae; lateral faces flattened, with a deep incision above propodeal valvula; all carinae absent. T1 more or less semicircular, 0.55 × as long as wide and anteriorly evenly rounded in dorsal view; apical margin duplicate, with a translucent apical lamella. T2 0.9 × as long as wide in dorsal view, apical translucent margin about 3 × as long as that on T1, preceded by large punctures forming a shallow step. T3 with a lamellar margin similar to that on T2. S2 evenly convex from base to apex in lateral view, basally with a short but deep longitudinal furrow. S2–3 with lamellar margins similar to respective tergites but shorter.

Sculpture and vestiture. Clypeus weakly shiny, almost matte due to very fine irregular shagreen, with very shallow punctures finer and denser basally, becoming larger and sparser apically. Frons and vertex with deep punctures, interspaces mostly shorter than puncture diameter and with few very sparse micropunctures, mid-line of frons without large punctures, some interspaces on vertex exceeding one puncture diameter; punctures on gena smaller and much sparser than on vertex, interspaces up to several puncture diameters on lower part and more shiny. Scape matte and very finely micropunctate, with some sparse fine punctures. Punctures on mesosoma similar to vertex but larger; interspaces much shorter than puncture diameter on mesoscutum, becoming larger on pronotum and scutellum, equaling several puncture diameters on mesepisternum; epicnemium micropunctate and shiny, with fine deep punctures on mesosternum; metaepisternum shagreened with silky shine, scattered small deep punctures; dorsal faces of propodeum with large flat-bottomed punctures variable in size, interspaces reduced to sharp ridges in median third, flattened and very large laterally, matte due to very fine microstriation, posterior face shiny with some irregular punctures in upper half, lateral faces with some very fine striation and shallow irregular punctures. T1–2 very finely and shallowly micropunctate, weakly shiny, with well-marked deep oblique punctures, larger and denser on T1, T2 with a preapical series of coarser but shallow punctures; T3–4 sculpted similar to T2 but smaller punctures; T5–7 shagreened with sparse very small and fine punctures. S1 weakly shiny, with irregular punctures and ridges; punctures on S2 larger and denser than on respective tergite; S3–6 densely micropunctate, macropunctures small and becoming progressively finer; S7 shiny and finely shagreened, with sparse fine punctures. Head and mesosoma with dense short brownish setae; silvery pubescence on clypeus, frons, gena and sides of mesosoma; longer curved white setae on clypeus, mesepisternum and propodeum; metasoma with very short brownish pubescence, short erect setae on T4–7 and S1–7.

Coloration. Red with black bottom of punctures; most of mesoscutum and mesosternum black; following parts yellow: clypeus, base of mandible, inner eye margin, line connecting clypeus and anterior ocellus, anterior and humeral margin of pronotum, narrow posterior margin of pronotum, parategula, anterior margin of metanotum, regular apical band on T1, sinuate apical band on T2–4 and S2–3, most of lower face of mid and hind coxae, narrow line on outer face of all tibiae, shorter on mid tibia; apical tergites ferruginous-orange. Wings hyaline, weakly infuscate along costal margin.

**Female**

Measurements. Body length 8.7 mm; fore wing length 7.0 mm.

Differing from male as follows: clypeus 1.4 × as wide as long, apical teeth more strongly projecting, matte due to shagreen and micropunctures, small deep punctures with interspaces equal to several puncture diameters; vertex 2.3 × as long as distance between posterior ocellus and inner eye margin, cephalic foveae very small and almost touching, placed in barely depressed subtriangular area smaller than one ocellus; mesosoma more elongate, 1.5 × as long as wide; pronotal lamella higher; punctures on T2 finer; clypeus ferruginous, tegula with posterior yellow spots, yellow markings on mesosoma and T1–2 wider, yellow markings on legs less developed.

**Distribution**

South Africa: KwaZulu-Natal.

***Afrepipona occidentalis*** sp. nov.
urn:lsid:zoobank.org:act:DBDD4B09-3911-474E-8415-87F0E7BB58ED
Figs 13, 27I

**Diagnosis**

Similar to *Afrepipona lamptoensis*, but differing as follows: clypeus narrower, 1.3 × as wide as long, apical margin truncate with projecting teeth (Fig. 13B–C); vertex longer, 2.2–2.25 × as long as distance between posterior ocellus and inner eye margin, cephalic foveae placed in large elliptical depression, wider than one ocellar diameter (Fig. 13E); slenderer appearance, mesosoma 1.35–1.45× as long as wide, T1 0.5–0.55 × as long as wide; T2 0.9–1.0 × as long as wide (Fig. 13F); T3 widely lamellate at apex; interspaces on frons and mesoscutum shorter than half puncture diameter, punctures on mesepisternum in part touching and forming longitudinal series. Genitalia in Fig. 27I.

**Etymology**

The specific epithet derives from the Latin adjective ‘occidentalis’ (= ‘western’), this species being diffused in western Africa.

**Type material**

**Holotype**

IVORY COAST • ♀; Lamto; 6 Oct. 1969; Darchen leg.; MSNVE.

**Paratypes**

IVORY COAST • 1 ♂; Lamto; 8 Oct. 1969; Darchen leg.; MSNVE.

SENEGAL • 1 ♀; “Seneg”; MSVI.

**Description**

**Female**

Measurements. Body length 8.0–8.3 mm (holotype 8.0 mm); fore wing length 6.0–7.0 mm (holotype 6.0 mm).

Morphology. Head 1.2 × as wide as long in frontal view. Clypeus 1.3 × as wide as long, apical margin truncate with projecting lateral teeth, 0.25 × as wide as maximum width of clypeus; apical teeth subtriangular and apically rounded, bluntly carinate; clypeus in lateral view barely convex in dorsal half. Vertex 2.2 × as long as distance from posterior ocellus to inner eye margin; cephalic foveae small

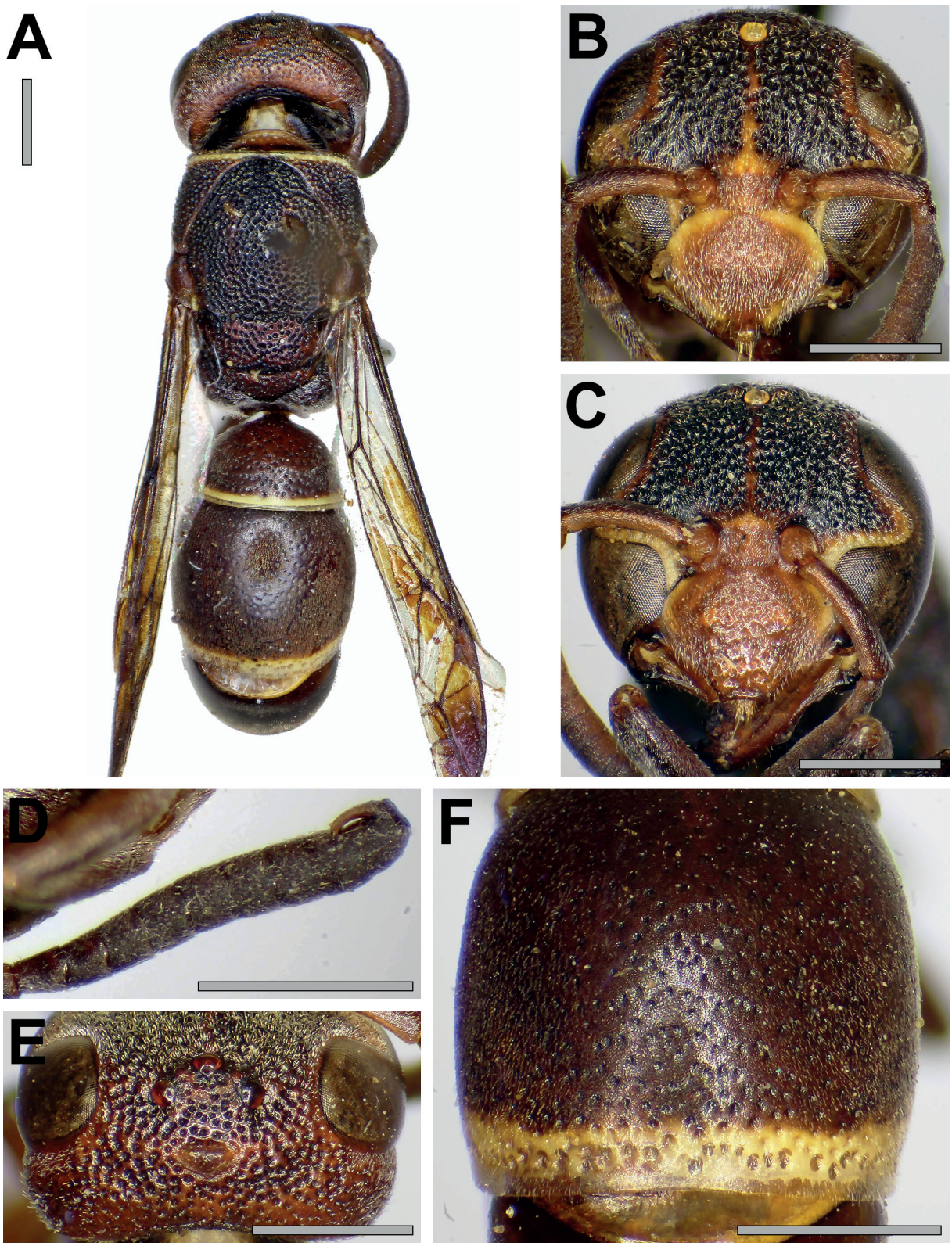


**Fig. 13.** *Afrepipona occidentalis* sp. nov. **A**, **C**, **E–F**. ♀, holotype from Lamto (MSNVE). **B**, **D**. ♂, paratype from Lamto (MSNVE). **A**. Habitus, dorsal view. **B–C**. Head, frontal view. **D**. Flagellum, lateral view. **E**. Head, dorsal view. **F**. T2–3. dorsal view. Scale bars = 1 mm.

and close to each other, placed in a smooth and shiny depression of elliptical shape, about as wide as two ocellar diameters, posterior margin carinate and sharp; gena 0.85 × as wide as eye at bottom of ocular sinus; occipital carina complete, very weak and irregular on vertex, strong on gena but dull dorsally and sharp ventrally, distinctly bent in lower half. F1 1.3 × as long as wide and 1.35 × as long as F2, F2–9 transverse and becoming proportionally shorter apically. Fifth tooth of mandible projecting and pointed. Mesosoma 1.35–1.45 × as long as wide. Sides of pronotum almost straight in dorsal view; pronotal carina complete and shortly lamellate, projecting but rounded on humeri; pretegular carina dull and barely visible dorsally; lateral faces of pronotum depressed and clearly separated from dorsal face, but without a humeral carina. Mesoscutum as long as wide, evenly convex in lateral view. Scutellum weakly convex; anterior margin coarsely crenate with slightly larger median pit. Metanotum weakly and evenly convex in lateral view. Tegula not equaling parategula, outer margin slightly more convex in anterior half; parategula small and rounded. Epicnemial carina very weak and barely visible, reaching epipleural suture and mesosternum. Propodeum falling almost vertically behind metanotum in lateral view; posterior face shallowly concave, distinctly separated from dorsal faces but separation not carinate; lateral faces very shallowly depressed, distinctly separated from dorsal faces. T1 more or less semicircular, 0.5–0.55 × as long as wide in dorsal view; posterior margin thickened with a short translucent margin of regular length. T2 0.9–1.0 × as long as wide in dorsal view, apical margin weakly thickened, translucent and lamellate with a basal series of coarse punctures. T3 with translucent margin longer than that on T2. S2 almost flattened and then convex basally, with short shallow longitudinal furrow basally, apically with lamellar translucent margin. S3 slightly decolorate at apex, less than respective tergite.

Sculpture and vestiture. Clypeus shiny with shallow punctures, large and dense on disc and apically, becoming finer basally, interspaces with very fine micropunctures. Head with deep punctures, interspaces slightly convex and shiny, distance between punctures shorter than puncture diameter on frons and most of vertex and gena, becoming suddenly larger on posterior third of vertex and gena. Scape weakly shiny with dense micropunctures and sparse fine punctures. Most of mesosoma sculpted like frons, punctures sparser on anterior third of scutellum; lateral faces of pronotum with dull striae; punctures on mesepisternum slightly larger than on mesoscutum, in part touching and forming irregular series, interspaces becoming wider posteroventrally; epicnemium and mesosternum finely shagreened and shiny, with small punctures on mesosternum; dorsal faces of propodeum with large flat-bottomed punctures, interspaces from smaller to equal to puncture diameter; posterior face weakly shiny and almost entirely striate, striae finer dorsally and becoming stronger ventrally, some very shallow punctures along margins; lateral faces irregularly shagreened and microstriate, matte with weak silky shine, with flat-bottomed shallow punctures becoming denser posteriorly. T1 finely shagreened and shiny, with sparse moderately deep oblique punctures, denser on disc and much sparser laterally; T2 similar to T1 but punctures finer and shallower, with a preapical series of large and coarse punctures; T3–4 similar to apical part of T2, but punctures smaller; T5–6 micropunctate with very sparse fine punctures; S1 shiny and longitudinally ridged, basal petiole partly shagreened; S2 with large deep punctures, most interspaces as wide as several puncture diameters; S3–6 similar to respective tergite, but punctures finer. Head and mesosoma with short brassy pubescence, sparse and mostly arising from punctures, more abundant and denser on frons and mesepisternum, almost absent on epicnemium and mesosternum; clypeus with silvery pubescence and curved erect setae; frons with short decumbent setae; mesepisternum with erect apically bent setae; propodeum almost entirely covered in short white pubescence, angles with fine long setae; metasoma with brownish dust-like pubescence, short sub-erect setae on T3–6 and S2–6.

Coloration. Dark red; following parts black: frons, broad longitudinal lines on mesoscutum, sutures on sides of mesosoma, mesosternum; following parts pale yellow: short lines on basal corners of clypeus, basal spot on mandible, inner eye margin from clypeus to bottom of sinus, anterior margin of pronotum, anterior and posterior spots on tegula, parategula, posterior spot on metaepisternum, narrow apical margin on T1–3 and S1–4 (obscure on T3 and S3–4), small basal corners of S2, lower face of mid and

hind coxae, small spot at apex of mid tibia, abbreviated lines on outer face of hind tibia and femur. Wings hyaline with infuscate apical spot.

**Male**

Measurements. Body length 6.7 mm; fore wing length 5.5 mm.

Differing from female as follows: clypeus 1.25 × as wide as long, apical teeth less projecting, less shiny and punctures finer; vertex 1.9 × as long as distance from posterior ocellus to inner eye margin; F11 more or less claw-shaped and reaching middle of F8, parallel-sided with rounded apex in dorsal view, flattened with pointed apex in lateral view; punctures on mesosoma slightly sparser; punctures on metasoma deeper and larger, but sparser; lamellar margins on T2 and S2 longer; S7 shiny and finely punctate; clypeus ferruginous with yellow margins.

**Distribution**

Ivory Coast, Senegal.

***Afrepipona orientalis*** sp. nov.
urn:lsid:zoobank.org:act:58CF3DFF-7445-4458-B23E-4FF5ABF77251
Fig. 14

non *Afrepipona macrocephala* – Giordani Soika 1952: 82.

**Diagnosis**

Similar to *Afrepipona lamptoensis*, but differing as follows: clypeus narrower, 1.3 × as wide as long, apical margin evenly concave (Fig. 14B); vertex longer, 2.2–2.25 × as long as distance between posterior ocellus and inner eye margin, cephalic foveae placed in small circular depression, narrower than one ocellar diameter (Fig. 14C); slenderer appearance, 1.35–1.45× as long as wide, T1 1.8–1.9 × as wide as long; T2 1.0–1.1 × as wide as long; T3 widely lamellate at apex (Fig. 14D); interspaces on frons and mesoscutum reaching one puncture diameter, punctures on mesepisternum always separated by flattened interspaces.

**Etymology**

The specific epithet derives from the Latin adjective ‘orientalis’ (= ‘eastern’), this species being diffused in eastern Africa.

**Type material**

**Holotype**

ETHIOPIA • ♀; Sagan-Omo, Caschei; 18 Jul. 1939; E. Zavattari leg.; MSNVE.

**Paratypes**

ETHIOPIA • 1 ♀; A.O.I., Sagan-Omo; 1939; E. Zavattari leg.; MSVI • 1 ♀; Sagan-Omo, Caschei; 10 Aug. 1939; E. Zavattari leg.; AMNH.

**Description**

**Female**

Measurements. Body length 7.0–7.3 mm (holotype 7.0 mm); fore wing length 5.9–6.1 mm (holotype 5.9 mm).

Morphology. Head 1.25 × as wide as long in frontal view. Clypeus 1.3 × as wide as long, apical margin truncate between lateral teeth, 0.3 × as wide as maximum width of clypeus; apical teeth subtriangular with rounded apex, clearly projecting from apical margin; clypeus weakly convex in lateral view. Vertex 2.2 × as long as distance from posterior ocellus to inner eye margin; cephalic foveae very small and close to each other, placed in a smooth and shiny depression about as large as one ocellus and with


**Fig. 14.** *Afrepipona orientalis* sp. nov., ♀. **A**. Paratype from Sagan-Omo (MSVI). **B–D**. Holotype from Caschei (MSNVE). **A**. Habitus, dorsal view. **B**. Head, frontal view. **C**. Head, dorsal view. **D**. T2–3, dorsal view. Scale bars = 1 mm.

V-shaped carinate posterior margin; gena 0.85 × as wide as eye at bottom of ocular sinus; occipital carina complete, very weak on vertex and shortly lamellate on gena, more or less evenly curved on gena. F1 1.1 × as long as wide and 1.3 × as long as F2, F2 subquadrate, F3–9 transverse. Fifth tooth of mandible projecting but apically rounded. Mesosoma 1.45 × as long as wide. Sides of pronotum straight and weakly converging in dorsal view; pronotal carina complete and very shortly lamellate, rounded on humeri; pretegular carina dull and barely visible; lateral faces of pronotum depressed and clearly separated from dorsal face. Mesoscutum as long as wide, posteriorly flattened in lateral view. Scutellum barely convex and smoothly passing into mesoscutum and metanotum; anterior margin crenate with a series of small pits, median one markedly larger than others. Metanotum weakly and evenly convex in lateral view. Tegula almost equaling parategula, outer margin evenly convex; parategula small and strongly bent, right-angled. Epicnemial carina weak and reaching epipleural suture but disappearing on mesosternum. Propodeum falling almost vertically behind metanotum in lateral view; posterior face small and shallowly concave, smoothly passing into dorsal faces; lateral faces flattened and separated from dorsal faces but without a distinct carina. T1 nearly semicircular, 0.55 × as long as wide in dorsal view; posterior margin thickened with a short translucent margin of regular length. T2 0.9 × as long as wide in dorsal view, apical margin translucent and lamellate, separated from rest of surface by a series of irregular coarse punctures. T3 with translucent margin longer than that on T2. S2 almost flattened and then convex basally, with a deep longitudinal furrow, apically with short lamellar margin. S3 with very short lamellar margin.

Sculpture and vestiture. Clypeus shiny with shallow punctures, larger and denser on disc and apically, barely visible and much sparser basally, interspaces finely and densely micropunctate. Head with deep punctures, interspaces slightly convex and shiny, distance between punctures mostly equal to puncture diameter on frons and becoming larger on vertex and gena. Scape weakly shiny with dense micropunctures and sparse very fine punctures. Most of mesosoma sculpted like vertex but punctures larger; lateral faces of pronotum with dull striae; punctures on scutellum sparser; punctures on mesepisternum becoming sparse and smaller ventrally, very fine and sparse on mesosternum, epicnemium shallowly shagreened and shiny; dorsal faces of propodeum with large flat-bottomed punctures, interspaces large and flattened with fine microstriation, about as large as puncture diameter; posterior face shiny, smooth with sparse punctures, finely striate in middle of lower fourth; lateral faces irregularly shagreened and microstriate, weakly shiny, with flat-bottomed shallow punctures becoming denser posteriorly. T1 finely shagreened and weakly shiny, with sparse deep small punctures, denser on disc; T2 similar to T1 but punctures finer, with a preapical series of larger and coarse punctures; T3 similar to T2, but punctures smaller; T4 with sparse very fine punctures and a preapical series of slightly coarser small punctures; T5–6 micropunctate with very sparse fine punctures; S1 smooth and shiny with irregular ridges, basal petiole partly shagreened; S2 similar to respective tergite but punctures sparser and larger, preapical series made of smaller and more regular punctures; S3–6 similar to respective tergites but more finely sculpted. Head and mesosoma with short pale pubescence, mostly arising from punctures, more abundant and denser on frons and sides of mesosoma, silvery and dense on epicnemium and mesosternum; clypeus with short silvery pubescence, denser on basal and lateral margins and mixed with short erect setae; mesepisternum with erect curved setae; propodeum almost entirely covered in short white pubescence, angles with fine long setae; metasoma with brownish dust-like pubescence, short sub-erect setae on T3–6 and S2–6.

Coloration. Ferruginous-red; black markings reduced to some sutures of mesosoma and bottom of some punctures; following parts pale yellow: most of clypeus except large median spot, base of mandible, cross-shaped spot between antennal insertions, inner eye margin, lower corner of gena, anterior margin of pronotum, posterior spot on tegula, parategula, anterior margin of metanotum, narrow posterior margin of T1, broad sinuate bands on T2–3, large basal spots and narrow sinuate band on S2, narrow apical band on S3, ventral face of mid and hind coxae, dorsal line and ventral apical spot on fore tibia,

short apical line on mid and hind femora, abbreviated line on outer face of mid and hind tibiae. Wings hyaline with weakly infuscate apical spot.

**Male**

Unknown.

**Distribution**

Ethiopia.

***Afrepipona punctatissima*** sp. nov.
urn:lsid:zoobank.org:act:C2642C50-2E68-4CA3-97DA-636714881D1F
Figs 15, 27J

**Diagnosis**

Similar to *A. angusta* but differing as follows: male clypeus 1.3 × as wide as long, apical teeth bluntly carinate (Fig. 15B); gena depressed in ventral third, forming a crenate furrow along high occipital carina; occipital carina incomplete on vertex; male vertex 1.8 × as long as distance between posterior ocellus and inner eye margin; clypeus finely and sparsely punctate; metanotum marked with yellow. Also similar to *A. clonata*, differing as follows: carinae of clypeus longer and slightly diverging, reaching middle of clypeus, apical emargination shallower; posterior ocelli as distant from eyes as to each other; F11 not reaching apex of F8 (Fig. 15C); pronotal lamella about ½ × as long as ocellar diameter; interspaces on mesoscutum shorter than half puncture diameter; preapical margin of T2 shallowly depressed with denser and larger punctures; apical decolorate margin of T3 shorter than that on T2 (Fig. 15D); very little red markings. Genitalia in Fig. 27J.

**Etymology**

The specific epithet refers to the deep and dense punctation of this species.

**Type material**

**Holotype**

KENYA • ♂; Samburu, 7 mi SW of Maralal, Laragei Springs; 17–22 Jan. 1973; J.P. Donahue leg.; MSNVE.

**Description**

**Male**

Measurements. Body length 8.0 mm; fore wing length 7.1 mm.

Morphology. Head 1.2 × as wide as long in frontal view. Clypeus 1.3 × as wide as long, apical margin shallowly emarginate with pointed lateral teeth, 0.25 × as wide as maximum width of clypeus, emargination 0.1 × as deep as wide, apical teeth carinate, carinae sharp apically and reaching middle of clypeus as blunt ridges; clypeus evenly convex in lateral view. Vertex 1.8 × as long as distance between posterior ocellus and inner eye margin; gena 0.9 × as wide as eye at bottom of ocular sinus, depressed in lower third and forming a furrow along occipital carina; occipital carina almost complete, fine and medially interrupted on vertex, strong and lamellate on gena, curved in lower half. F1 1.4 × as long as wide and 1.5 × as long as F2, F2–3 and F9 subquadrate, F4–8 transverse, F11 small and elliptical, not reaching basal margin of F9, depressed dorsoventrally and nearly flattened in lateral view, parallel-sided with rounded apex in dorsal view. Mesosoma 1.4 × as long as wide. Sides of pronotum straight and slightly converging anteriorly; pronotal carina complete and lamellate, slightly depressed medially, about half as long as ocellar diameter; pretegular carina fine and sharp near tubercle, duller dorsally.

Mesoscutum as long as wide, posteriorly flattened in lateral view. Scutellum flattened, smoothly passing into mesoscutum; anterior margin deeply crenate with a larger pit in middle. Metanotum slightly produced anteriorly. Tegula short and not equaling parategula, outer margin evenly rounded, posterior lobe subtriangular and shallowly depressed; parategula small and right-angled. Epicnemial carina very fine and shallow, barely visible. Propodeum in lateral view shallowly convex and completely oblique; posterior face shallowly concave and not clearly separated from dorsal faces; lateral faces flattened; dorsal, lateral and inferior carinae absent, propodeum entirely rounded. T1 short bell-shaped, 0.6 × as long as wide, sides slightly diverging posteriorly; apically with a duplicated lamellar margin. T2 0.95 × as long as wide in dorsal view, 1.3 × as wide as T1 and separated from it by a constriction; apical translucent margin longer than that on T1, sharply separated from rest of surface by sudden change in coloration and sculpture; preapical area of T2 shallowly depressed. Apical margin of T3 with translucent apical margin, shorter and less defined than that on T2. S2 flattened on disc, then sloping basally; basal

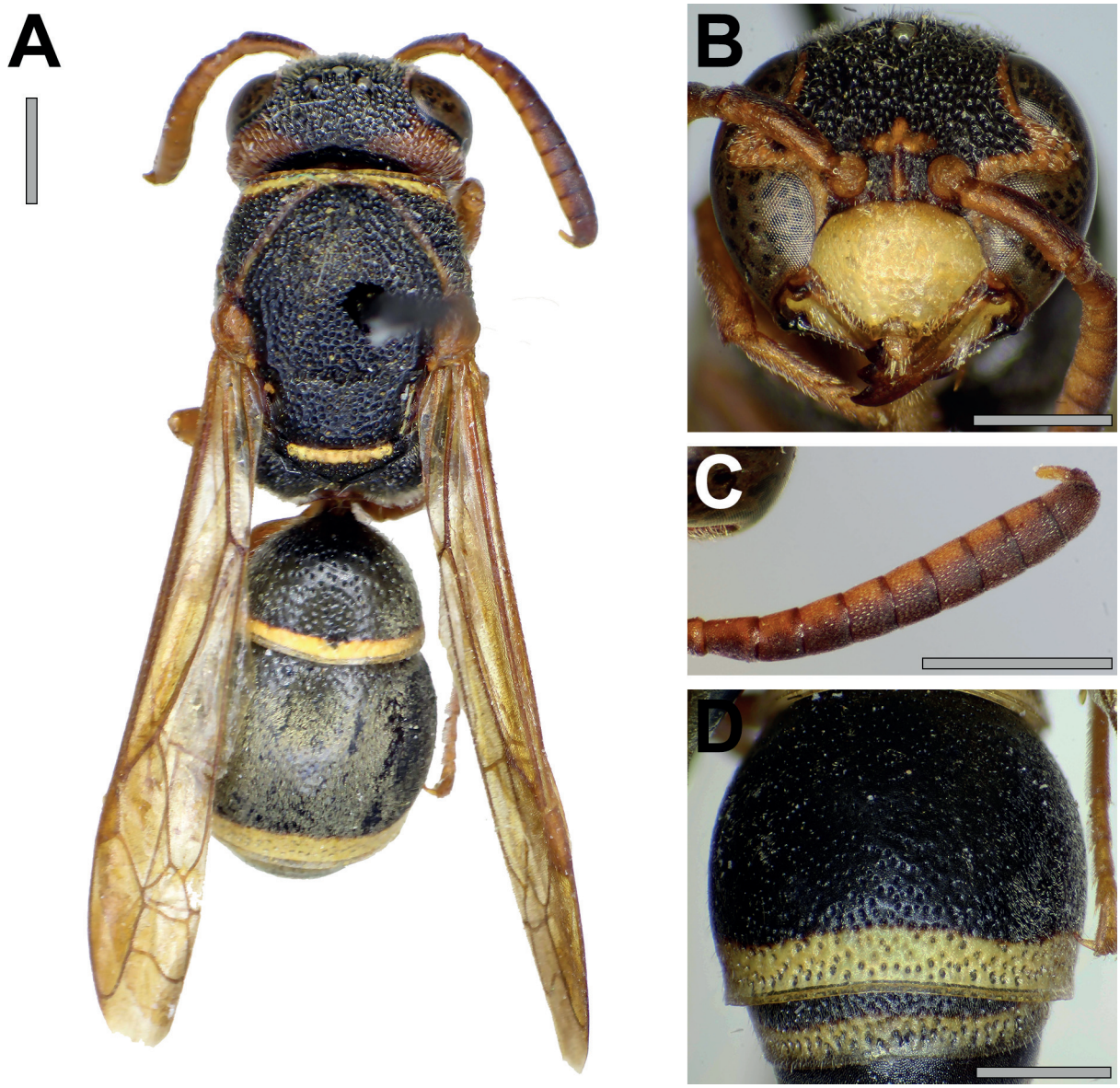


**Fig. 15.** *Afrepipona punctatissima* sp. nov., ♂, holotype from Samburu (MSNVE). **A**. Habitus, dorsal view. **B**. Head, frontal view. **C**. Flagellum, lateral view. **D**. T2–3, dorsal view. Scale bars: = 1 mm.

longitudinal furrow barely indicated; apical margin lamellate with basal pigmented digitations. S3 with translucent margin similar to S2.

Sculpture and vestiture. Clypeus shiny, punctures denser and deeper on sides, becoming shallow and sparse on disc, interspaces finely micropunctate. Frons and vertex with deep rounded punctures, interspaces shallowly convex and shiny with sparse micropunctures, rarely reaching one puncture diameter; gena punctured like vertex but interspaces shinier and exceeding puncture diameter. Scape shagreened with sparse fine punctures. Punctures of mesosoma similar to frons but larger, interspaces narrower than puncture diameter, reaching one puncture diameter on mesepisternum; epicnemium and mesosternum shiny and shallowly shagreened and micropunctate, with deep small punctures posteriorly; metaepisternum with few scattered shallow punctures. Dorsal faces of propodeum with coarse deep punctures, partly arranged in irregular transverse series, interspaces sharp ridge-like; posterior face invaded by sculpture of dorsal faces in upper half and finely striate in lower half; lateral faces sparsely microstriate with dense deep punctures. T1 with deep rounded punctures, sparser on sides and denser on disc, interspaces ranging from half to four puncture diameters, preapical yellow part with some punctures on sides; T2 similar to T1 but punctures more oblique and finer on disc, becoming coarser and very dense preapically; T3–5 similar to T2, but punctures becoming progressively smaller and sparser; T6–7 shagreened and micropunctate, T6 with scattered shallow punctures. S1 matte and shagreened on basal petiole, shiny with irregular longitudinal ridges on posterior part; S2 similar to respective tergite but punctures larger and deeper, not becoming coarser preapically; S3–6 similar to respective tergites but with finer punctures; S7 shiny with dense fine punctures. Head and mesosoma with dense and short pale yellow setae, mixed with many longer right-angled setae; clypeus and lower half of frons with weakly golden pubescence and appressed pale setae; propodeum with dense and long white setae, some of them strongly bent apically; metasoma with dust-like brassy pubescence, scattered erect setae on T1, T7, S1 and S7, other segments with shorter and more appressed setae.

Coloration. Black; following parts orange to red: mandible, antenna, inner eye margin, cross-shaped marking in interantennal space, gena and sides of vertex, anterior and posterior margin, humeral region and lobe of pronotum, tegula, parategula, lateral margins of T1–3, sides of T4, most of T5–7 and S5–7, legs; following parts yellow: clypeus, base of mandible, narrow line along pronotal carina, anterior margin of metanotum, narrow apical line of T1, broad apical bands on T2–4 becoming progressively narrower, apical half of S1, sinuate apical band on S2–4, irregular spots on mid and hind coxae, small apical spots on mid femur and mid and hind tibiae. Wings hyaline with pale yellowish tinge.

**Female**

Unknown.

**Distribution**

Kenya.

***Afrepipona scabra*** sp. nov.

urn:lsid:zoobank.org:act:1374A70F-122C-4A55-AE6F-0B692F755077

Figs 16, 27K

**Diagnosis**

Recognized by the following characters: apical margin of clypeus subtruncate with produced lateral teeth, clypeus 1.35 × (♀) and 1.3 × (♂) as wide as long (Fig. 16B–C); vertex of male 2.05 × as long as distance between posterior ocellus and inner eye margin; pronotal carina sharp but not lamellate, apical translucent margin separated from rest of tergite by large punctures, pigmented digitations

running between punctures (Fig. 16F); mesosoma matte and densely punctate, scutellum and area between parapsidal furrows with punctures touching each other and forming irregular series. Genitalia in Fig. 27K.

**Etymology**

The specific epithet comes from the Latin adjective 'scaber, scabra, scabrum' (= 'rough'), in reference to the rough sculpture of the head and mesosoma.

**Type material**

**Holotype**

DEMOCRATIC REPUBLIC OF CONGO • ♀; Tshuapa, Bokuma; 1953; R.P. Lootens leg.; MSNVE.

**Paratypes**

DEMOCRATIC REPUBLIC OF CONGO • 1 ♀; Elisabethville; Oct. 1934; P. Quarré leg.; MSVI • 1 ♂; Lualaba, Kabongo; 5 Jan. 1953; Cg. Sydel leg.; MSNVE.

**Description**

**Female**

Measurements. Body length 7.6–8.0 mm (holotype 8.0 mm); fore wing length 6.5–6.8 mm (holotype 6.8 mm).

Morphology. Head 1.2 × as wide as long in frontal view. Clypeus 1.35 × as wide as long, apical margin truncate between lateral teeth, 0.25 × as wide as maximum width of clypeus; apical teeth bluntly subtriangular with rounded apex; clypeus weakly convex in lateral view. Vertex 2 × as long as distance from posterior ocellus to inner eye margin; cephalic foveae small and close to each other but separated by more than their diameter, placed in smooth depression about as large as one ocellus and with V-shaped carinate posterior margin; gena 0.9 × as wide as eye at bottom of ocular sinus; occipital carina incomplete, very weak and irregular on vertex, sharp on gena, more or less evenly curved on ventral half. F1 1.25 × as long as wide and 1.4 × as long as F2, F2–9 transverse and becoming proportionally shorter apically. Fifth tooth of mandible projecting but apically rounded. Mesosoma 1.4 × as long as wide. Sides of pronotum weakly convex, almost straight and slightly converging in dorsal view; pronotal carina complete and sharp but not lamellate, rounded on humeri; pretegular carina absent; lateral faces of pronotum depressed and clearly separated from dorsal face. Mesoscutum as long as wide, posteriorly flattened in lateral view. Scutellum flattened and on same level of mesoscutum; anterior margin crenate with a series of small pits, median one markedly larger than other pits. Metanotum weakly and evenly convex in lateral view, slightly projecting anteriorly. Tegula not equaling parategula, outer margin evenly rounded; parategula small and right-angled. Epicnemial carina weak and reaching epipleural suture but disappearing on mesosternum. Propodeum falling almost vertically behind metanotum in lateral view; posterior face shallowly concave, distinct from dorsal faces but not sharply separated; lateral faces flattened and separated from other faces but without distinct carinae. T1 semicircular, 0.5 × as long as wide in dorsal view; posterior margin shallowly thickened with a very short translucent margin disappearing medially. T2 0.85 × as long as wide in dorsal view; preapical area very shallowly depressed. Apical margins of T2–4 translucent and lamellate, separated from rest of surface by a series of irregular coarse punctures; lamella short on T2, becoming progressively longer on T3 and T4. S2 almost flattened and then convex basally, with a sharp longitudinal furrow basally. S2–4 with lamellar margin shorter than on respective tergites but more sharply separated from rest of surface.

Sculpture and vestiture. Clypeus shiny with shallow punctures, larger and denser on disc and apically, much finer basally, interspaces finely and densely micropunctate. Head with deep punctures, interspaces slightly convex and weakly shiny, interspaces much shorter than puncture diameter, becoming partly

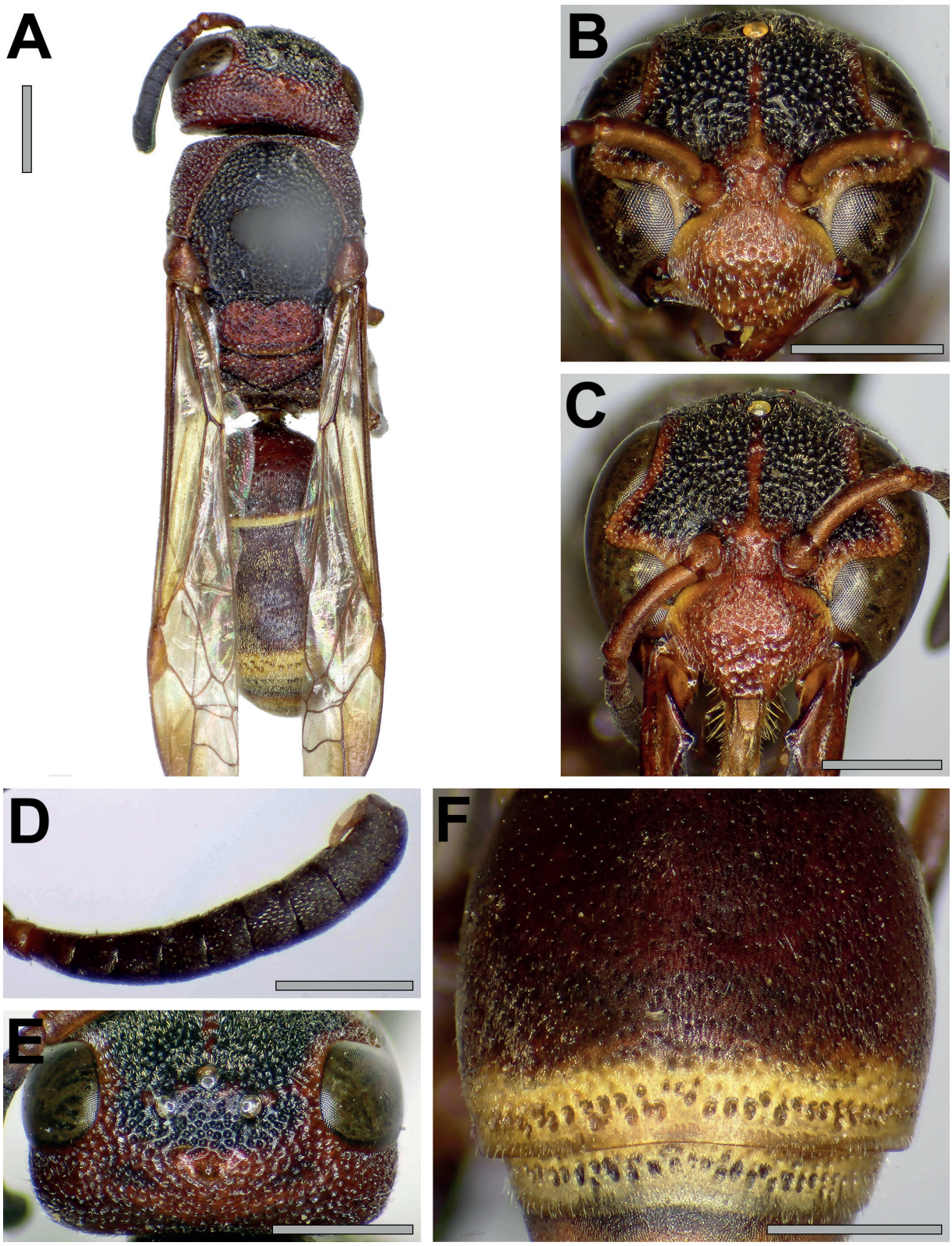


**Fig. 16.** *Afrepipona scabra* sp. nov. **A**, **C**, **E–F**. ♀, holotype from Bokuma (MSNVE). **B**, **D**. ♂, paratype from Kabongo (MSNVE). **A**. Habitus, dorsal view. **B–C**. Head, frontal view. **D**. Flagellum, lateral view. **E**. Head, dorsal view. **F**. T2–3. dorsal view. Scale bars: A–C, E–F = 1 mm; D = 0.5 mm.

large and shiny on gena. Scape weakly shiny with dense micropunctures and sparse very fine punctures. Most of mesosoma sculpted like vertex but interspaces mostly ridge-like; lateral faces of pronotum with dull and short striae; posterior half of mesoscutum with very dense punctures touching and forming irregular series; punctures on scutellum larger with some flattened interspaces; punctures on mesepisternum larger and sparse dorsally, becoming smaller and denser ventrally, fine and sparse on mesosternum, epicnemium shallowly shagreened and shiny; dorsal faces of propodeum with large and deep flat-bottomed punctures, interspaces reduced to sharp ridges; posterior face weakly shiny, mostly with fine oblique striae, invaded by punctures of dorsal faces on upper third; lateral faces with dense flat-bottomed cells, some interspaces flattened and matte due to shagreen. T1 finely shagreened and weakly shiny, with sparse deep small punctures, denser on disc; T2 similar to T1 but punctures finer, with a preapical series of larger and coarse punctures; T3 similar to T2, but punctures smaller; T4–5 shagreened, T4 with a preapical series of small coarse punctures; T6 densely micropunctate with some fine sparse punctures; S1 shiny with irregular ridges and punctures; S2 similar to respective tergite but punctures much larger and deeper; S3–6 micropunctate with very fine punctures becoming progressively sparser. Head and mesosoma with short pale brown pubescence with metallic reflections, mostly arising from punctures, denser on frons and sides of mesosoma, much denser and dust-like on mesosternum; clypeus with dust-like silvery pubescence along basal margin and curved whitish setae; mesepisternum with apically bent pale setae; propodeum almost entirely covered in short white pubescence, with brownish tinge on upper part, angles with fine long setae; metasoma with brassy dust-like pubescence, short sub-erect setae on T3–6 and S2–6.

Coloration. Red; following parts black: most of frons, anterior face and lower corners of pronotum, mesoscutum except sides, anterior margin of scutellum, mesepisternum and mesosternum except large dorsal spot, most of metaepisternum, extreme base of S2; following parts yellow: lines on basal corners of clypeus, small basal spot on mandible, lower half of inner eye margin, tip of parategula, narrow apical margin of T1, sinuate apical bands on T2–4 and S2–4, irregular spots on ventral face of mid and hind coxa. Wings hyaline with yellowish tinge along costal margin and weakly infuscate apical spot.

**Male**

Measurements. Body length 6.8 mm; fore wing length 6.0 mm.

Differing from the female as follows: clypeus 1.3 × as wide as long, apical teeth less projecting but more acute, punctures more regular and deeper; vertex 2.05 × as long as distance from posterior ocellus to inner eye margin; F11 finger-shaped and reaching middle of F8, parallel-sided with rounded apex in dorsal view, barely curved in lateral view; punctures on head and mesosoma slightly sparser, interspaces more shiny; punctures on metasoma larger but sparser.

**Distribution**

Democratic Republic of Congo.

***Afrepipona segregata*** sp. nov.
urn:lsid:zoobank.org:act:90504DFF-CDEF-4D56-B474-6B5EC17CCC8B
Figs 17, 27L

**Diagnosis**

Similar to the group of *A. cuprea*, *A. macrocephala* and *A. meridionalis* due to the morphology of the apical lamella of T2 (Fig. 17F) and pronotal carina, but differing by lateral carinae of propodeum present and female clypeus 1.15 × as wide as long (Fig. 17C). Genitalia in Fig. 27L.

**Etymology**

The specific epithet derives from the Latin adjective 'segregatus' (= 'segregated'), as this is the only known Malagasy species of the genus.

**Type material**

**Holotype**

MADAGASCAR • ♂; Tulear, Garten Bistro du Sud; 19–21 Oct. 1996; M. Madl leg.; NHMW.

**Paratype**

MADAGASCAR • 1 ♀; same data as for holotype; NHMW.

**Description**

**Male**

Measurements. Body length 6.3 mm; fore wing length 5.0 mm.

Morphology. Head 1.2 × as wide as long in frontal view. Clypeus 1.35 × as wide as long, apical margin truncate with slightly projecting pointed teeth, 0.3 × as wide as maximum width of clypeus; weakly and evenly convex in lateral view. Vertex 2 × as long as distance between posterior ocellus and inner eye margin; gena 0.8 × as wide as eye at bottom of ocular sinus; occipital carina complete, very fine on vertex, high and sharp on gena, strongly bent in lower half of gena. F1 1.3 × as long as wide and 1.5 × as long as F2, F2–8 transverse and becoming progressively wider, F9 longer than wide, F11 finger-shaped and shallowly flattened dorsoventrally, reaching middle of F8 and barely curved in lateral view, parallel-sided with rounded apex in dorsal view, apex housed by large pit covering most of ventral side of F8. Mesosoma 1.3 × as long as wide. Sides of pronotum straight and weakly converging, anterior margin slightly projecting on humeri; pronotal carina complete and lamellate, about as long as half ocellar diameter on humeri, slightly lower medially; pretegular carina blunt and barely visible in lower half, disappearing above. Mesoscutum 0.9 × as long as wide, evenly convex in lateral view. Scutellum weakly convex; anterior margin weakly and irregularly crenate. Metanotum flattened and very oblique. Tegula short and equaling parategula, outer margin evenly curved and slightly reflexed posteriorly, posterior lobe subtriangular and pointed; parategula obtusely angled basally. Epicnemial carina distinct but blunt, reaching epipleural suture. Propodeum in lateral view steeply falling just behind metanotum, almost vertical; posterior face shallowly concave and not clearly separated from dorsal faces; lateral faces flattened; lateral carinae present but very weak and confused with ridged interspaces of sculpture. T1 semicircular, 0.55 × as long as wide; apical margin translucent, when seen in posterior view it is strongly thickened and duplicated in two lamellae. T2 0.85 × as long as wide in dorsal view, apical translucent margin about twice as long as that on T1, slightly depressed but not reflexed, preceded by a series of coarse punctures forming a shallow step between lamella and rest of tergite. Apical margin of T3–5 similar to T2, translucent margin becoming progressively shorter. S2 evenly convex from base to apex; basal longitudinal furrow shallow but distinctly marked. Apical margin of S2–4 similar to respective tergite but translucent part shorter.

Sculpture and vestiture. Clypeus finely and sparsely punctate, all interspaces exceeding 1.5 puncture diameter. Frons and vertex with deep punctures, interspaces shorter than one puncture diameter on disc of frons and becoming wider laterally, mid-line of frons impunctate, becoming irregular on vertex; gena punctured similar to vertex but punctures becoming finer ventrally. Scape matte and densely micropunctate. Punctures of mesosoma similar to vertex but larger and more irregular, interspaces mostly ridge-like but some reaching up to one puncture diameter; punctures sparser on mesepisternum, interspaces more shiny; epicnemium and mesosternum shiny and shallowly shagreened and micropunctate, with shallow punctures in posterior half; metaepisternum mostly smooth with scattered fine punctures in lower plate,

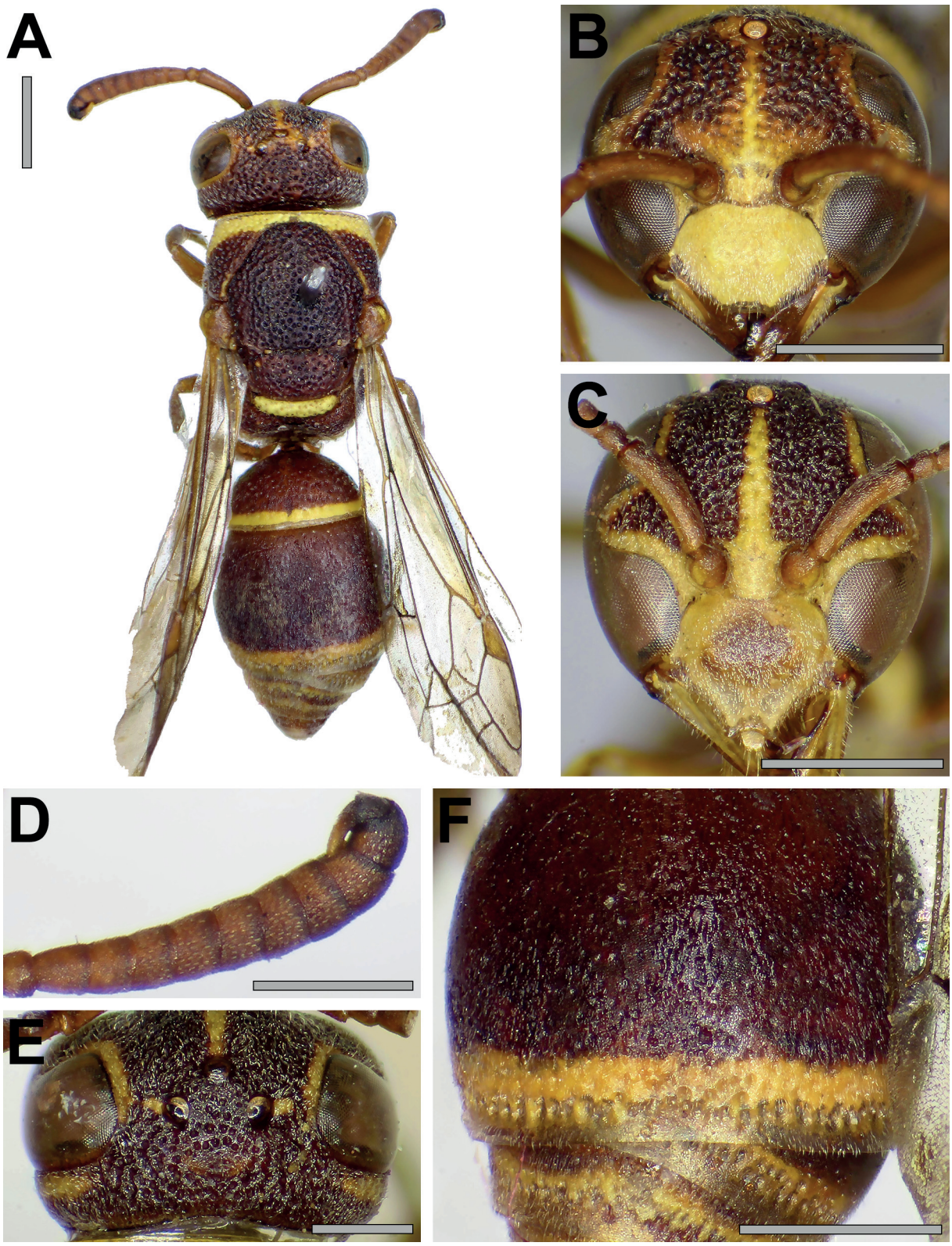


**Fig. 17.** *Afrepipona segregata* sp. nov. **A**–**B**, **D**, **F**. ♂, holotype from Tulear (NHMW). **C**, **E**. ♀, paratype from Tulear (NHMW). **A**. Habitus, dorsal view. **B**–**C**. Head, frontal view. **D**. Flagellum, lateral view. **E**. Head, dorsal view. **F**. T2–3. dorsal view. Scale bars: A–C, F = 1 mm; D–E = 0.5 mm.

shortly striate along anterior margin; dorsal faces of propodeum with large flat-bottomed punctures in medial third, interspaces visible only in lateral two thirds and finely microstriate, posterior face mostly smooth with some shallow punctures in upper half and irregular wrinkles ventrally, lateral faces with dense flat-bottomed punctures and very fine transverse microstriae. T1–2 with fine and shallow punctures, circular and well-marked on T1 and disc of T2, becoming progressively more oblique toward apex and sides of T2, interspaces as long as 2–3 punctures on disc and becoming narrower at apex and laterally, preapical area of T2 with a series of coarse large and deep punctures preceding apical lamella; T3–5 similar to apical area of T2 but punctures much smaller and becoming progressively shallower; T6–7 shagreened with barely visible micropunctures. S1 shiny, smooth on basal petiole, irregularly ridged and deeply punctate on posterior part; S2 with deep rounded punctures, becoming larger and denser laterally, apical lamella preceded by a series of coarse deep punctures; S3–7 shagreened and impunctate, except for series of coarse punctures preceding apical lamella on S3–4. Head and mesosoma with short pale setae, longer on lower part of propodeum; clypeus, gena and sides of mesosoma with short white pubescence and some long curved setae; metasoma with pale brownish dust-like pubescence and scattered short appressed setae.

Coloration. Reddish, punctures on head and mesosoma with darker bottom; following parts from pale yellow to yellowish-orange: clypeus, basal triangle of mandible, interantennal space and line reaching up to anterior ocellus, complete line bordering all margins of eye, spot on outer margin of posterior ocellus, broad anterior band on pronotum reaching ventral corners of lateral faces, short line on posterior margin of pronotum just in front of tegula, indistinct spots on tegula, parategula, small points on anterior corners of scutellum, anterior half of metanotum, rounded spot in middle of posterior margin of mesepisternum, upper margin of metaepisternum, large spot running from propodeal valvula to dorsal face of propodeum, large spots on mid and hind coxae, narrow preapical band on T1, broader regular band and very small anterior points on T2, preapical band on T3–6, posterior corners of S1, large oblique basal spots and sinuate preapical band on S2, preapical band and median oblique spots on S3–4. Wings subhyaline with weak brownish tinge, apex of marginal cell barely infuscate.

**Female**

Measurements. Body length 6.1 mm; fore wing length 5.0 mm.

Differing from male as follows: head more elongate, 1.1 × as wide as long; clypeus 1.1 × as wide as long, apical margin narrower (0.25 × as wide as width of clypeus) and evenly concave; vertex 2.1 × as long as distance between posterior ocellus and inner eye margin, cephalic foveae very small and placed in a barely differentiated elliptical area; mesosoma more elongate, 1.5 × as long as wide; posterior face of propodeum almost flattened, lateral carinae more distinct; apical lamella shorter on T2 and not very distinct on following tergites; sculpture on head and mesosoma smaller and sparser, all interspaces flattened and more shiny; punctures on S2 much finer and sparser; all markings pale yellow, not turning to orange-yellow anywhere, clypeus yellow with large median red spot, line along eye margin interrupted on vertex, gena mostly yellow, tegula almost entirely bordered with yellow, all femora and fore tibia with yellow lines of various extent, basal spots on T2 much smaller, T3–6 and S3–6 almost entirely yellow.

**Distribution**

Madagascar: Atsimo-Andrefana.

**Remarks**

Although collected together and matching in most characters, the two examined specimens show some differences in sculpture and morphology. The differences are tentatively regarded as sexual dimorphism, but more material is needed to confirm it.

***Afrepipona tertia*** Gusenleitner, 2011
Figs 18, 27M

*Afrepipona tertius* Gusenleitner, 2011: 423, 426, 428 (key to males), figs 9–12 (partim, nec 427, 428 (key to females), fig. 13).

**Diagnosis**

Recognized by the following characters: robust appearance; sharply carinate and strongly protruding interantennal space; occipital carina strong on gena and absent on vertex; pronotal carina forming high lamella; lateral face of pronotum with longitudinal carina; outer face of tegula evenly rounded; T1 much wider than long; barely noticeable apical translucent margin of T2 (Fig. 18D); head and mesosoma with sparse punctures and flattened interspaces, punctures on thorax fine and sparse with interspaces

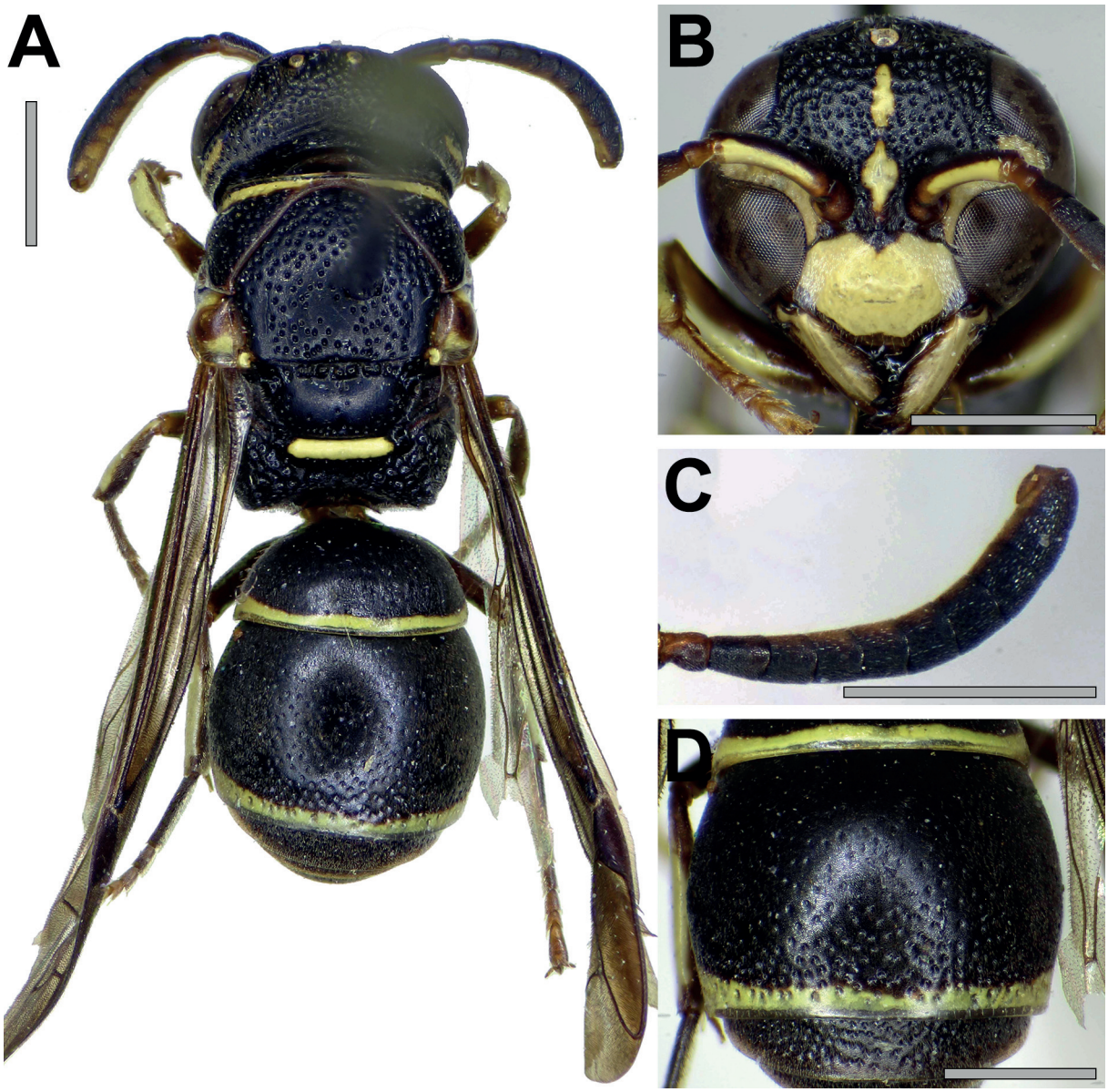


**Fig. 18.** *Afrepipona tertia* Gusenleitner, 2011, ♂, holotype from Bangui (OLML). **A**. Habitus, dorsal view. **B**. Head, frontal view. **C**. Flagellum, lateral view. **D**. T2–3, dorsal view. Scale bars = 1 mm.

as long as several puncture diameters and sparser on posterior half of mesoscutum, posterior margin of scutellum with series of fine punctures, T1 and T2 nearly impunctate. Genitalia in Fig. 27M.

**Type material**

**Holotype**

CENTRAL AFRICAN REPUBLIC • ♂; 90 km NNE of Bangui; 05°03′ N, 18°47′ E; elev. 380 m; 14 Mar. 2010; J. Halada leg.; OLML.

**Distribution**

Central African Republic (Gusenleitner 2011).

**Remarks**

Gusenleitner (2011) originally named this species *A. tertius* without providing the etymology of the name. The Latin word '*tertius*' can be considered both an adjective ('*tertius*', meaning 'third') and a noun in apposition ('*Tertius*', translated to 'Terzo', a masculine proper noun). In this case Gusenleitner evidently named the species referring to it as the third described species in the genus, making clear that '*tertius*' was used as an adjective. Since *Afrepipona* is a feminine generic name, the correct specific name is *Afrepipona tertia*, as an adjective must agree in gender with the generic name.

Examination of a part of the typical series showed that the male holotype and one female paratype belong to different species, with the holotype belonging to *Afrepipona* and the paratype to an undescribed species in the newly established genus *Afrepsilon* gen. nov., described below as *Afrepsilon pictum* gen. et sp. nov. The female clypeus shown in the original description (Gusenleitner 2011: fig. 13) belongs to the latter, while the male pictures (Gusenleitner 2011: figs 9–12) belong to a paratype, probably conspecific with the holotype.

The lateral "spines" of S7, mentioned and pictured in the original description, are in fact two dense tufts of setae.

***Afrepipona ulterior*** sp. nov.
urn:lsid:zoobank.org:act:2B5C7312-5F26-4DE4-8708-96DDC20A405F
Figs 19, 27N

**Diagnosis**

Similar to *Afrepipona lamptoensis*, but differing as follows: clypeus narrower, 1.3 × as wide as long, apical margin truncate with projecting teeth and median longitudinal carina, more marked in male (Fig. 19B); vertex of female longer, 2.1 × as long as distance between posterior ocellus and inner eye margin, cephalic foveae placed in small circular depression, narrower than one ocellar diameter (Fig. 19C); slenderer appearance, mesosoma 1.4 × as long as wide, T1 0.5 × as long as wide; T2 as long as wide (Fig. 13F); T3 shortly lamellate at apex, lamella about as long as that on T2; interspaces on frons and mesoscutum shorter than half puncture diameter, punctures on mesepisternum forming longitudinal series but not touching each other; T1 and most of T2 with few indistinct punctures. Genitalia in Fig. 27N.

**Etymology**

The specific epithet derives from the Latin adjective 'ulterior' (= 'ulterior'), as this new species was found after the completion of the present revision, making an ulterior addition necessary.

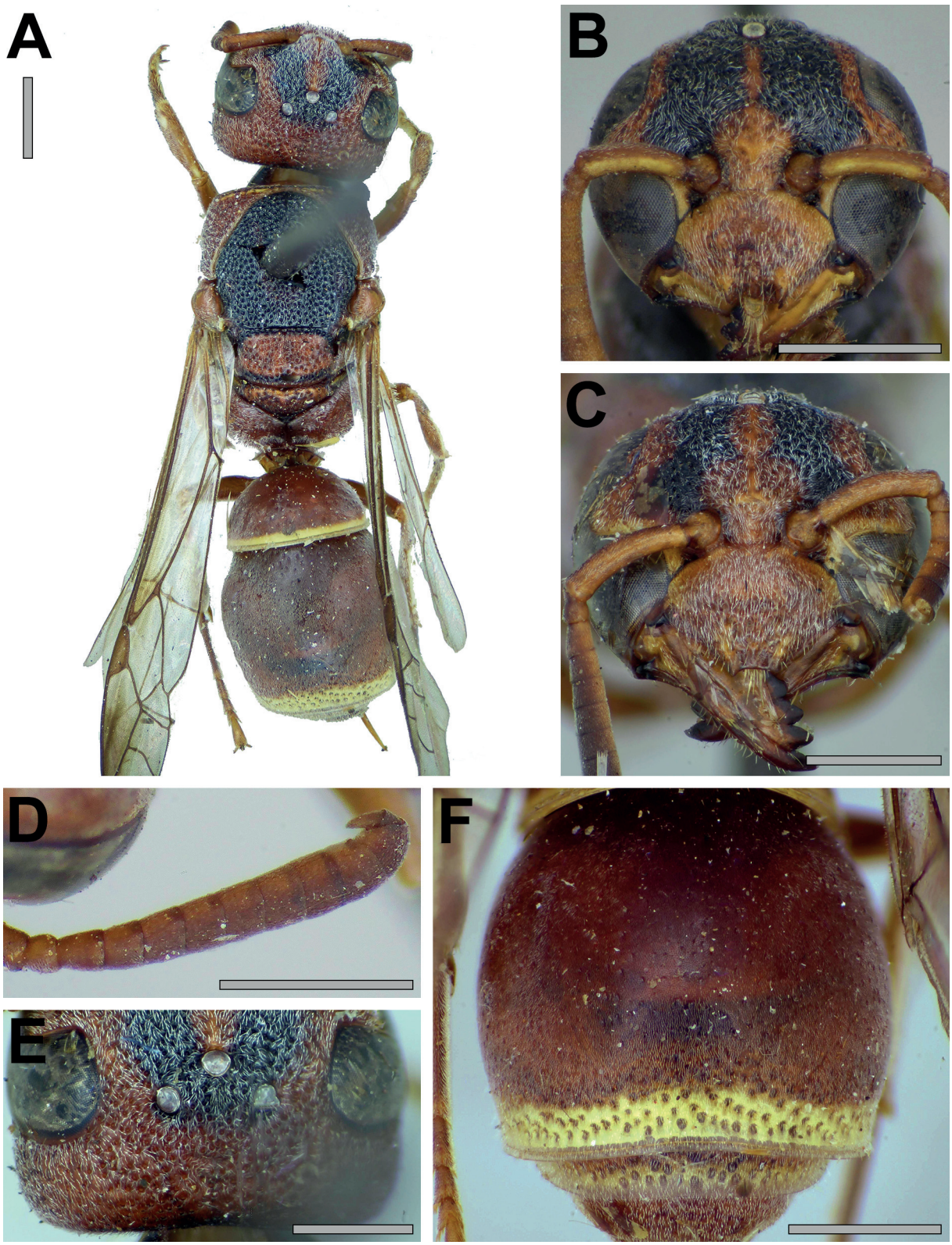


**Fig. 19.** *Afrepipona ulterior* sp. nov. **A**, **C**, **E–F**. ♀, holotype from Bulawayo (AMNH). **B**, **D**. ♂, paratype (from Pretoria, MSVI). **A**. Habitus, dorsal view. **B–C**. Head, frontal view. **D**. Flagellum, lateral view. **E**. Head, dorsal view. **F**. T2–3. dorsal view. Scale bars = 1 mm.

**Type material**

**Holotype**

ZIMBABWE • ♀; Bulawayo; 4 Dec. 1919; AMNH, AMNH_IZC00419254.

**Paratypes**

SOUTH AFRICA • 1 ♂; Pretoria; 2 Oct. 1933; G. van Son leg.; MSVI • 1 ♀; Strubens V., Florida tvl.; 25 Jan. 1966; H.N. Empey leg.; MSNVE.

**Description**

**Female**

Measurements. Body length 8.7 mm; fore wing length 7.0 mm.

Morphology. Head 1.2 × as wide as long in frontal view. Clypeus 1.3 × as wide as long, apical margin truncate with projecting lateral teeth, 0.25 × as wide as maximum width of clypeus, middle of apical margin with a short and dull longitudinal carina; apical teeth subtriangular and apically pointed, bluntly carinate; clypeus in lateral view almost entirely flattened. Vertex 2.1 × as long as distance from posterior ocellus to inner eye margin; cephalic foveae small and close to each other, placed in small and ill-defined depression of elliptical shape, narrower than one ocellar diameter, posterior margin carinate; gena as wide as eye at bottom of ocular sinus; occipital carina complete, very weak and almost disappearing on vertex, strong on gena and shortly lamellate ventrally, distinctly bent in lower half. F1 1.15 × as long as wide and 1.45 × as long as F2, F2–9 transverse and becoming proportionally shorter apically. Fifth tooth of mandible projecting and pointed. Mesosoma 1.4 × as long as wide. Sides of pronotum weakly convex in dorsal view; pronotal carina complete and shortly lamellate, projecting but rounded on humeri; pretegular carina dull and visible in a short portion above pronotal tubercle only; lateral faces of pronotum depressed and clearly separated from dorsal face, but without a humeral carina. Mesoscutum as long as wide, evenly convex in lateral view. Scutellum almost flattened; anterior margin crenate with barely larger median pit. Metanotum weakly and evenly convex in lateral view. Tegula equaling parategula, outer margin slightly more convex in anterior half, posterior lobe long and pointed with depressed surface; parategula small and rounded. Epicnemial carina very weak and barely visible, reaching epipleural suture and mesosternum. Propodeum falling almost vertically behind metanotum in lateral view; posterior face shallowly concave and smoothly passing into dorsal faces without any separation; lateral faces very shallowly depressed, distinctly separated from dorsal faces; propodeal valvula posterodorsally angulate. T1 more or less semicircular, 0.5 × as long as wide in dorsal view; posterior margin thickened with short translucent margin of regular length. T2 0.95 × as long as wide in dorsal view, apical margin weakly thickened, translucent and lamellate with a basal series of coarse punctures. T3 with a translucent margin about as long as that on T2. S2 almost flattened and then convex basally, with a short deep longitudinal furrow basally, apically with lamellar translucent margin. S3 slightly decolorate at apex, not forming distinct lamella.

Sculpture and vestiture. Clypeus shiny with shallow punctures, large and dense on disc and apically, becoming finer basally, interspaces with very fine micropunctures. Head with deep punctures, interspaces slightly convex and shiny, distance between punctures shorter than puncture diameter on frons and most of vertex, becoming much wider on gena. Scape silky-shiny with barely visible sculpture. Most of mesosoma sculpted like frons, punctures sparser on anterior third of scutellum and metanotum; lateral faces of pronotum with deep punctures touching each other in ventral corner; punctures on mesepisternum slightly larger than on mesoscutum, forming irregular series but never touching each other, interspaces becoming wider posteroventrally; epicnemium and mesosternum finely shagreened and shiny, with small punctures on mesosternum; dorsal faces of propodeum with small deep punctures, interspaces flattened and mostly wider than puncture diameter; posterior face shiny and almost entirely smooth, some very shallow punctures along margins; lateral faces irregularly shagreened, silky shiny with deep

punctures becoming denser posteriorly. T1 finely shagreened and silky shiny, almost entirely impunctate except for few very shallow punctures on disc and sides; T2 similar to T1 on disc, punctures well-defined and deep on extreme base and sides, preapical area with series of larger and coarse punctures; T3–4 similar to apical part of T2, but punctures progressively smaller; T5–6 micropunctate with very sparse fine punctures; S1 shiny and irregularly ridged, basal petiole partly shagreened; S2 with large deep punctures sparser on disc, most interspaces as wide as several puncture diameters; S3–6 similar to respective tergite, but punctures finer. Head and mesosoma with short silvery pubescence, sparse and mostly arising from punctures, more abundant and denser on frons and mesepisternum, dust-like on epicnemium and mesosternum; clypeus with dense silvery pubescence and curved erect setae; frons with short decumbent setae; mesepisternum with erect apically bent setae; propodeum almost entirely covered in short white pubescence, angles with fine long setae; metasoma with brownish dust-like pubescence, short sub-erect setae on T3–6 and S2–6.

Coloration. Bright red with ferruginous legs; following parts black: ocellar triangle and broad bands connecting it to antennal insertions, most of mesoscutum and mesosternum, narrow lines on sutures on sides of mesosoma; following parts yellow-orange: inner eye margin, longitudinal line in middle of frons, basal margin of clypeus, basal triangle of mandible; following parts pale yellow: narrow and irregular anterior margin of pronotum, narrow apical bands on T1–3 and S2–3, regular on T1–2 and sinuate on T3 and S2–3, apical spot on fore tibia, line on outer face of mid and hind tibia. Wings hyaline with weakly infuscate apical spot.

**Male**

Measurements. Body length 7.2 mm; fore wing length 6.0 mm.

Differing from female as follows: clypeus 1.45 × as wide as long, apical teeth more projecting, carinate and acute, median carina of apical margin pointed, surface less shiny and punctures finer; vertex 2 × as long as distance from posterior ocellus to inner eye margin; F11 more or less conical and reaching apex of F8, almond-shaped in dorsal view; punctures on metasoma deeper and larger; S7 shiny and finely punctate; clypeus ferruginous with yellow margins.

**Distribution**

South Africa: Gauteng; Zimbabwe.

**Remarks**

The female paratype in MSNVE was labeled by Giordani Soika as the holotype of *Afrepipona tridentata*, a nomen nudum.

***Afrepipona vulcanica*** sp. nov.
urn:lsid:zoobank.org:act:D5A51213-5E70-41C8-BDA6-52900196D364
Figs 20, 27O

**Diagnosis**

Close to *Afrepipona scabra* sp. nov. in the following characters: pronotal carina sharp but not lamellar, apical translucent margin of T2 separated from rest of tergite by large punctures, pigmented digitations running between punctures (Fig. 20F); mesosoma matte and densely punctate. Differing as follows: apical margin of clypeus evenly concave, clypeus 1.5 × (female) and 1.4 × (male) as wide as long (Fig. 20B–C); vertex of male 1.85 × as long as distance between posterior ocellus and inner eye margin; punctures on mesoscutum and scutellum not touching and not arranged in series. Genitalia in Fig. 27O.

**Etymology**

The specific epithet refers to the provenance of the two specimens, Mount Kilimanjaro, a dormant volcano.

**Type material**

**Holotype**

TANZANIA • ♀; Mount Kilimanjaro; 27 Dec. 2014; MSNVE.

**Paratypes**

TANZANIA • 1 ♂; same data as for holotype; MSVI.

**Description**

**Female**

Measurements. Body length 8.0 mm; fore wing length 6.5 mm.

Morphology. Head 1.2 × as wide as long in frontal view. Clypeus 1.5 × as wide as long, apical margin shallowly and evenly concave, 0.25 × as wide as maximum width of clypeus; apical teeth subtriangular with rounded apex and bluntly carinate; clypeus weakly convex in lateral view. Vertex 2 × as long as distance from posterior ocellus to inner eye margin; cephalic foveae small and close to each other, placed in a depression smaller than one ocellus and slightly raised posteriorly; gena 0.85 × as wide as eye at bottom of ocular sinus; occipital carina incomplete, very weak and irregular on vertex, sharp on gena, more or less evenly curved in ventral half. F1 1.3 × as long as wide and 1.4 × as long as F2, F2 subquadrate, F3–9 transverse and becoming proportionally shorter apically. Fifth tooth of mandible projecting but apically rounded. Mesosoma 1.4 × as long as wide. Sides of pronotum weakly convex, almost straight and slightly converging in dorsal view; pronotal carina complete and sharp but not lamellate, rounded on humeri; pretegular carina absent; lateral faces of pronotum depressed and clearly separated from dorsal face. Mesoscutum as long as wide, posteriorly flattened in lateral view. Scutellum flattened and on same level of mesoscutum; anterior margin crenate with series of small pits, median one markedly larger than other pits. Metanotum nearly flattened in lateral view, slightly projecting anteriorly. Tegula not equaling parategula, outer margin evenly rounded; parategula small and right-angled. Epicnemial carina weak and reaching epipleural suture but disappearing on mesosternum. Propodeum falling almost vertically behind metanotum in lateral view; posterior face shallowly concave, distinct from dorsal faces but not sharply separated; lateral faces flattened and separated from other faces but without distinct carinae. T1 nearly semicircular, 0.55 × as long as wide in dorsal view; posterior margin shallowly thickened with a very short translucent margin disappearing medially. T2 0.85 × as long as wide in dorsal view; preapical area very shallowly depressed. Apical margins of T2–4 translucent and lamellate, separated from rest of surface by series of irregular coarse punctures; lamella short on T2, becoming progressively longer on T3 and T4. S2 strongly and evenly convex in lateral view. S2–3 with lamellar margins shorter than on respective tergites but more sharply separated from rest of surface.

Sculpture and vestiture. Clypeus shiny with shallow punctures, larger and denser on disc and apically, deeper and finer basally, interspaces finely and densely micropunctate. Head with deep punctures, interspaces flattened and weakly shiny, interspaces much shorter than puncture diameter, becoming larger and shinier on gena and posterior half of vertex. Scape weakly shiny with dense micropunctures and sparse very fine punctures. Most of mesosoma sculpted like frons but punctures slightly larger; lateral faces of pronotum with irregular deep punctures; punctures on scutellum larger and denser, some interspaces reduced to ridges; interspaces on mesepisternum more shiny and large dorsally, small punctures on mesosternum, epicnemium shallowly shagreened and shiny; dorsal faces of propodeum with large and deep punctures, interspaces reduced to sharp ridges medially and becoming flattened

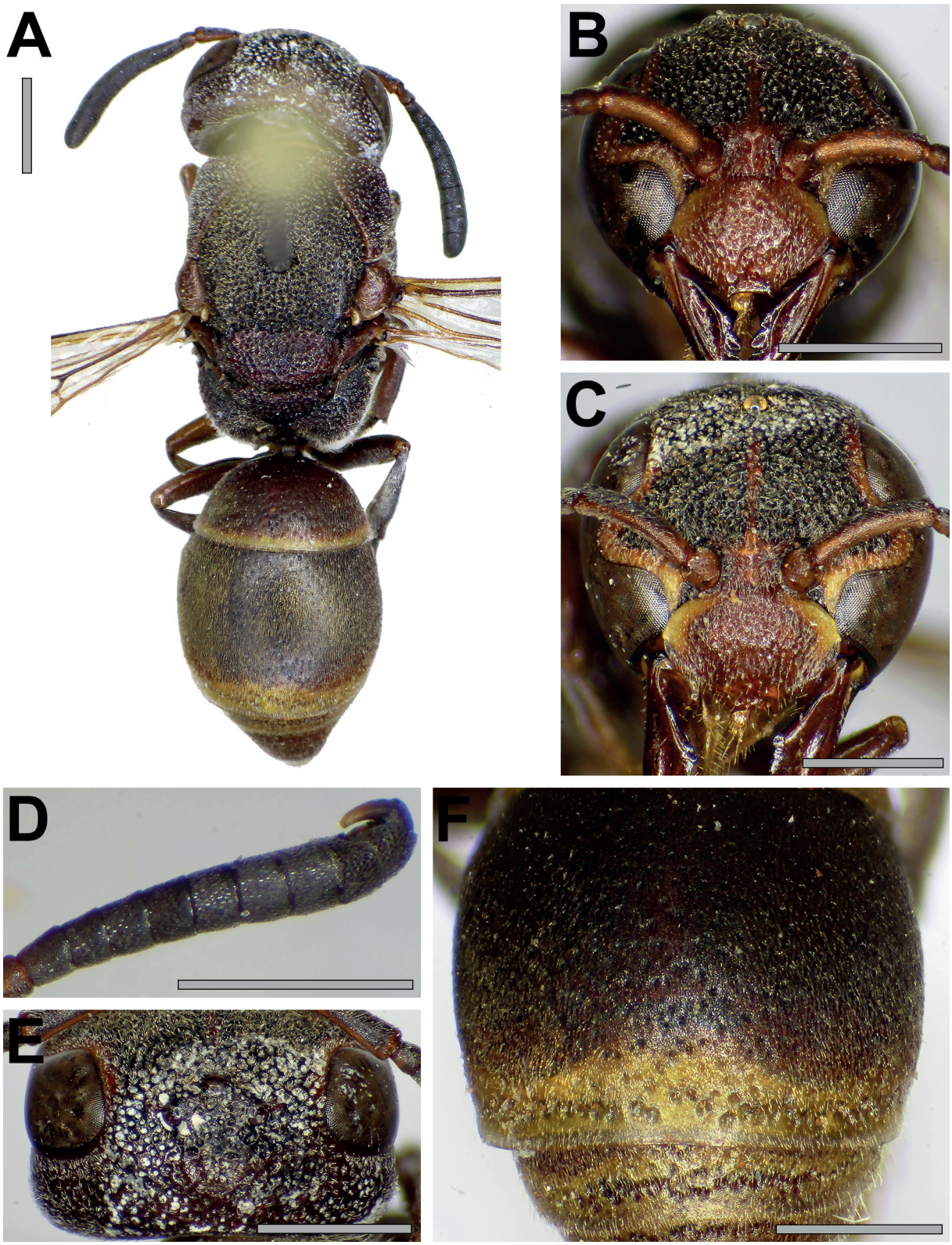


**Fig. 20.** *Afrepipona vulcanica* sp. nov. **A**, **C**, **E–F**. ♀ holotype from Mount Kilimanjaro (MSNVE). **B, D**. ♂, paratype from Mount Kilimanjaro (MSVI). **A**. Habitus, dorsal view. **B–C**. Head, frontal view. **D**. Flagellum, lateral view. **E**. Head, dorsal view. **F**. T2–3, dorsal view. Scale bars = 1 mm.

laterally; posterior face shiny, with sparse deep punctures in upper half; lateral faces with small flat-bottomed cells, interspaces flattened and matte due to shagreen. T1 finely shagreened and weakly shiny, with sparse oblique small punctures, denser on disc; T2 similar to T1 but punctures shallow and more oblique, with preapical series of larger and coarse punctures; T3 similar to T2, but punctures smaller; T4–5 shagreened, T4 with preapical series of small coarse punctures; T6 densely micropunctate with some fine sparse punctures; S1 shiny with irregular ridges; S2 with large deep punctures, interspaces exceeding puncture diameter; S3–6 micropunctate with very fine punctures becoming progressively sparser. Head and mesosoma with short pale pubescence with metallic reflections, mostly arising from punctures, denser on frons and sides of mesosoma, much denser and dust-like on mesosternum; clypeus with dust-like silvery pubescence in basal two thirds and curved whitish setae; mesepisternum with apically bent pale setae; propodeum almost entirely covered in short white pubescence, with brownish tinge on upper part, angles with fine long setae; metasoma with brassy dust-like pubescence, short sub-erect setae on T3–6 and S2–6.

Coloration. Dark red-brown; following parts black: most of frons, lower face of head, flagellum, anterior face and lower corners of pronotum, mesoscutum, anterior margin of scutellum, mesepisternum and mesosternum except large dorsal spot and posterior third of mesepisternum, most of metaepisternum, extreme base of S2; following parts yellow: lines on basal corners of clypeus, basal spot on mandible, inner eye margin, parategula, narrow apical margin of T1, sinuate apical bands on T2–4 and S2–4, most of ventral face of mid and hind coxa, apical spots on hind femur and mid and hind tibiae. Wings hyaline with weakly infuscate apical spot.

**Male**

Measurements. Body length 7.2 mm; fore wing length 6.5 mm.

Differing from female as follows: clypeus 1.35 × as wide as long, apical teeth more acute, punctures more regular and deeper; vertex 1.85 × as long as distance from posterior ocellus to inner eye margin; F11 finger-shaped and reaching apex of F8, parallel-sided with rounded apex in dorsal view, weakly curved in lateral view; punctures on head and mesosoma slightly larger and denser; punctures on metasoma larger but sparser.

**Distribution**

Tanzania.

## *Species erroneously placed in Afrepipona Giordani Soika, 1965*

***Antodynerus unifasciatus*** (Gusenleitner, 2012) comb. nov.

*Afrepipona unifasciata* Gusenleitner, 2012: 523, 525, figs 5–7.

**Type material**

**Holotype**

CENTRAL AFRICAN REPUBLIC • ♀; 60 km SE of Bouar; 05°42′ N, 16°00′ E; elev. 860 m; 30 Mar. 2010; J. Halada leg.; OLML.

**Paratype**

CENTAL AFRICAN REPUBLIC • 1 ♂; same data as for holotype; OLML.

**Remarks**

This species was described as *Afrepipona unifasciata* by Gusenleitner (2012), but the examination of the holotype and a paratype showed that this species clearly belongs to the genus *Antodynerus*, as it

has an elongate clypeus, eyes with dorsal lobe shorter than ventral lobe, tegulae exceeding parategulae, a semicircular metanotum with a distinct transverse carina and long translucent apical margin of T1. It is to be noted that the female holotype and the male paratype show marked differences in the pronotal carina, elongation and convexity of mesosoma, shape and sculpture of tegulae, shape and vestiture of propodeum and punctation of metasoma. One of the authors (MS) examined another couple of *Antodynerus* from Central African Republic, with the male being identical to the paratype of *Afrepipona unifasciata* and the female matching with the male in the above mentioned characters. The two male specimens were compared with the holotype of *Antodynerus kelneri* Giordani Soika, 1965, and show a remarkable similarity to it, but also some differences in the shape of the clypeus and coloration, so they could either represent a different species or just a geographical variant of *A. kelneri*. Resolving this issue is beyond the scope of this paper and requires the examination of more material, therefore it will be treated separately in a dedicated paper. To summarize, the holotype and the paratype of the species described by Gusenleitner belong to two distinct species, with the male probably belonging to *Antodynerus kelneri*.

Pictures of the holotype are available at ZOBODAT (2022a), and of the paratype at ZOBODAT (2022b).

### *Key to the species of Afrepipona Giordani Soika, 1965*

1. Apical translucent margin of T2 very short and barely noticeable, not clearly separated from rest of tergite ..... 2
– Apical translucent margin of T2 clearly distinct and separated from rest of tergite, either sharply or by a series of large irregular punctures ..... 4

2. Elongate appearance, mesosoma 1.4 × as long as wide, T1 about as long as wide in dorsal view. Head and mesosoma very coarsely and densely punctured, interspaces mostly reduced to sharp irregular ridges; T1 and base of T2 with deep rounded punctures. Occipital carina complete; vertex shorter, 1.4 × as long as distance between posterior ocellus and inner eye margin. Interantennal space bluntly carinate, rounded when seen from above. Pronotal carina sharp, shortly lamellate on humeri only; lateral face of pronotum without longitudinal carina, epicnemial carina weak. Female clypeus matte, with dense punctures and interspaces densely micropunctate; apical margin much narrower than interantennal distance and very shallowly concave, almost truncate; apical corners of clypeus with short thick carinae, connecting on apical margin and forming a U-shaped ridge. Burundi .....***A. anomala*** sp. nov.
– Robust appearance, mesosoma 1.15 × as long as wide, T1 much wider than long in dorsal view. Head and mesosoma with sparse punctures, interspaces mostly flattened and shiny; T1 and base of T2 nearly impunctate, with barely visible fine punctures. Occipital carina abruptly interrupted behind dorsal lobe of eye, completely absent on vertex; vertex longer, 2.2 × as long as distance between posterior ocellus and inner eye margin. Interantennal space very sharply carinate, angularly producing when seen from above. Pronotal carina developed in a high and sharp lamella for whole length; lateral face of pronotum with sharp longitudinal carina, continuing in strong epicnemial carina. Female clypeus shiny, with sparse deep punctures; apical margin much larger than interantennal distance, weakly convex between right-angled lateral teeth; apical corners not distinctly carinate (female not known in *A. tertia*) ..... 3

3. Punctures on pronotum and mesoscutum larger and denser, interspaces reaching puncture diameter at most, becoming denser on posterior half of mesoscutum where punctures connect in irregular series. Posterior margin of scutellum with two to three series of dense coarse punctures, separated by sharp ridges. Outer margin of tegula slightly concave in anterior third, strongly convex behind. Ivory Coast .....***A. lamellata*** sp. nov.

– Punctures on pronotum and mesoscutum finer and sparser, interspaces exceeding puncture diameter, becoming sparser on posterior half of mesoscutum. Posterior margin of scutellum with a single series of fine punctures, separated by short flattened interspaces. Outer margin of tegula evenly convex. Central African Republic .....***A. tertia*** Gusenleitner, 2011

4. T1 and T2 separated by a constriction, T1 appearing narrower than T2. Apical translucent margin of T2 separated from rest of surface by a sharp change in sculpture and coloration, not preceded by a series of very large punctures. S2 with basal longitudinal furrow absent or barely indicated. Clypeus of female longer, 1.2 × as wide as long; vertex of female shorter, 1.8 × as long as distance between posterior ocellus and inner eye margin ..... 5
– T1 and T2 not sharply separated, T1 about as wide as T2. Apical translucent margin of T2 separated from rest of surface by a series of irregular large punctures, with pigmented digitations running between punctures and invading the translucent area. S2 with furrow variable in length and depth, but always well-marked. Clypeus of female shorter, 1.3–1.5 × as wide as long (except *A. segregata*); vertex of female longer, 1.9–2.3 × as long as distance between posterior ocellus and inner eye margin ..... 7

5. Clypeus with deep punctures and apical teeth sharply carinate, more markedly in the female. Posterior half of gena not depressed in ventral third, occipital carina of same height for whole length of gena; occipital carina dull but complete on vertex, placed on the transition between vertex and the posterior face of head. Metanotum entirely black. T2 with a preapical depressed area bearing dense and coarse punctures, interspaces narrower than punctures and ridge-like. S2 with larger and denser punctures. Male: clypeus 1.2 × as wide as long, vertex 1.55 × as long as distance between posterior ocellus and inner eye margin. East Africa (Eritrea and Ethiopia) ....***A. angusta*** (de Saussure, 1863)
– Clypeus with sparse fine punctures and apical teeth bluntly carinate. Posterior half of gena depressed in ventral third, occipital carina higher and crenate in the portion bordering the depression; occipital carina disappearing in middle of vertex, placed slightly below the transition between the vertex and the posterior face of head. Metanotum with a yellow line along anterior margin. S2 with smaller and sparser punctures. Male: clypeus about 1.3 × as wide as long, vertex 1.8–1.9 × as long as distance between posterior ocellus and inner eye margin. Females unknown. Kenya ..... 6

6. Apical teeth of clypeus bearing long carinae forming rounded ridges, slightly diverging and reaching middle of clypeus. Clypeus more shallowly emarginate. Posterior ocelli as distant from eyes as to each other; vertex 1.8 × as long as distance between posterior ocellus and inner eye margin. F11 not reaching apex of F8. Pronotal lamella higher, about half as long as ocellar diameter. Interspaces on mesoscutum at most half as long as puncture diameter. Scutellum flattened, completely on same plane of posterior half of mesoscutum. Preapical margin of T2 slightly depressed, with punctures larger and denser than on rest of surface. Apical decolorate margin of T3 shorter than that of T2. Red markings on mesosoma limited to tegula and pronotal margins ..... ***A. punctatissima*** sp. nov.
– Apical teeth of clypeus shortly carinate, carinae not exceeding lamellate apical margin. Clypeus more deeply emarginate. Posterior ocelli closer to eyes than to each other; vertex 1.9 × as long as distance between posterior ocellus and inner eye margin. F11 reaching apex of F8. Pronotal lamella lower, about 1/3 × as long as ocellar diameter. Interspaces on mesoscutum variable in size, reaching puncture diameter in posterior half. Scutellum slightly convex, with posterior half placed below level of mesoscutum. Preapical margin of T2 not depressed, with punctures slightly larger but non denser than on the rest of the surface. Apical decolorate margin of T3 longer than that of T2. Red markings on mesosoma covering most of pronotum, scutellum, metanotum, propodeum, tegula and dorsal plate of mesepisternum .....***A. clonata*** sp. nov.

7. Pronotal carina sharp but not lamellate. Mesosoma matte, punctures on scutellum and posterior half of mesoscutum dense, interspaces narrow and ridge like ..... 8
– Pronotal carina with a variably developed but always distinct lamella. Mesosoma shiny or weakly metallic, punctures on scutellum and posterior half of mesoscutum sparse, interspaces always distinct and flattened ..... 9

8. Apical margin of clypeus evenly concave, clypeus 1.5 × (♀) and 1.4 × (♂) as wide as long. Vertex of male 1.85 × as long as distance between posterior ocellus and inner eye margin. Scutellum and area between parapsidal furrows with punctures not touching and not forming series. Tanzania ..... ***A. vulcanica*** sp. nov.
– Apical margin of clypeus subtruncate with producing lateral teeth, clypeus 1.35 × (♀) and 1.3 × (♂) as wide as long. Vertex of male 2.05 × as long as distance between posterior ocellus and inner eye margin. Scutellum and area between parapsidal furrows with punctures touching each other and forming irregular series. Democratic Republic of Congo ..... ***A. scabra*** sp. nov.

9. Submarginal carina of propodeum forming short but distinct triangular lobe, well separated from propodeal valvula. Democratic Republic of Congo .....***A. lobulata*** sp. nov.
– Submarginal carina of propodeum not developed in lobe above propodeal valvula, at most valvula itself forming a small posterodorsal angle in *A. lamptoensis* and *A. ulterior* ..... 10

10. Lamella of pronotal carina high and translucent on whole length, at least as long as half ocellar diameter on humeri. Clypeus of female shorter, 1.4–1.5 × as wide as long (except *A. segregata*) .11
– Lamella of pronotal carina lower and becoming shorter in the middle, at most ⅓ × as long as ocellar diameter on humeri. Clypeus of female longer, 1.3–1.35 × as wide as long ..... 13

11. Lateral carinae of propodeum blunt but distinct; propodeum with large yellow markings above valvulae. Clypeus of female 1.15 × as wide as long. Madagascar ..... ***A. segregata*** sp. nov.
– Lateral carinae of propodeum absent; propodeum lacking yellow markings above valvulae. Clypeus of female 1.4–1.5 × as wide as long ..... 12

The following three species are very similar and recognized by different combinations of characters, therefore they are included in a single passage of the key.

12. Head and mesosoma with sparser punctures, interspaces always flattened and mostly as large as puncture diameter; tegument with bright matte coppery reflection. Dorsal face of propodeum without coarse punctures, interspaces always large and flattened, lateral two thirds mostly impunctate. Punctures on disc of T1–2 fine and shallow, circular and well-marked; preapical punctures on T2 deep and forming a step, apical lamella slightly longer than apical decolorate margin of T1. Male clypeus 1.35 × as wide as long. Vertex of male 2.1 × as long as distance between posterior ocellus and inner eye margin. Mesosoma shorter, 1.25–1.3 × as long as wide in male. Female unknown. Kenya.....***A. cuprea*** sp. nov.
– Head and mesosoma with denser punctures, most interspaces shorter than puncture diameter; tegument shiny but without metallic reflections. Dorsal face of propodeum with very coarse punctures in the medial third, interspaces reduced to ridges, lateral 2/3 with smaller impunctate areas. Punctures on disc of T1–2 large and deep, oblique and well-marked; preapical punctures on T2 shallow and forming a shallow step, apical lamella about 3 × as long as apical decolorate margin of T1. Male clypeus 1.5 × as wide as long; female clypeus 1.4 × as wide as long, apical margin straight between strongly projecting apical teeth. Vertex 2.3 × (♀) and 2 × (♂) as long as distance between posterior ocellus and inner eye margin. Mesosoma longer, 1.4 × in male and 1.5 × in female as long as wide. South Africa .....***A. meridionalis*** sp. nov.

– Head and mesosoma with sparser punctures, interspaces always flattened and mostly as large as puncture diameter; tegument with obscure matte brassy reflection. Dorsal face of propodeum with interspaces large and flattened and lateral two thirds mostly impunctate, but medial third with coarse punctures in male. Punctures on disc of T1–2 fine and shallow, larger on T1 and barely evident on T2; preapical punctures on T2 shallow and not forming a step, apical lamella about twice as long as apical decolorate margin of T1. Male clypeus 1.4 × as wide as long; female clypeus 1.5 × as wide as long, apical margin evenly rounded between barely projecting apical teeth. Vertex 2.1 × (♀) and 1.9 × (♂) as long as distance between posterior ocellus and inner eye margin. Mesosoma shorter, 1.3 × as long as wide in both sexes. Mozambique ..... ***A. macrocephala*** (Gribodo, 1894)

13. Head and mesosoma with very large and deep punctures, those on disc of mesoscutum much larger than 0.5 × ocellar diameter. Pronotal lamella disappearing in median third of pronotum. S2 with very large and deep punctures. Male clypeus shorter, 1.4 × as wide as long, with few barely visible punctures in basal third. Zimbabwe ..... ***A. cellularis*** sp. nov.
– Head and mesosoma with finer and shallower punctures, those on disc of mesoscutum at most 0.5 × ocellar diameter. Pronotal lamella present on whole length of pronotal carina, at most slightly depressed on mid-line. S2 with smaller and shallower punctures. Male clypeus longer, 1.2 × as wide as long, with distinct punctures on whole surface (except *A. ulterior*, 1.45 × as wide as long) .... 14

14. Bulkier appearance: mesosoma 1.2–1.3 × as long as wide, T1 0.4–0.45 × as long as wide, T2 0.75–0.85 × as long as wide. Clypeus of female 1.35 × as wide as long; vertex of female 1.85–1.95 × as long as distance between posterior ocellus and inner eye margin ..... 15
– Slenderer appearance: mesosoma 1.35–1.45 × as long as wide, T1 0.5–0.55 × as long as wide; T2 0.9–1 × as long as wide. Clypeus of female 1.3 × as wide as long; vertex of female 2.1–2.25 × as long as distance between posterior ocellus and inner eye margin ..... 16

15. Cephalic foveae not placed in a depression, mixed with the punctures of vertex. Apical margin of clypeus narrower, 0.2 × as maximum width of clypeus. Occipital carina evenly curved on gena. Punctures on mesoscutum larger, half as long as mid-ocellar diameter; interspaces on disc at most half as long as puncture diameter. Dorsal faces of propodeum entirely covered in coarse punctures, impunctate areas smaller than punctures; posterior face of propodeum nearly entirely striate, with deep punctures in dorsal third. Mesosternum densely covered in silvery pubescence, densely punctate with shagreened and matte interspaces. T2 more reflexed, apical margin distinctly duplicated by raised lamella when seen from behind; punctures on T2 oblique and flat-bottomed; punctures on S2 coarser and denser. Ivory Coast ..... ***A. lamptoensis*** Giordani Soika, 1965
– Cephalic foveae placed in a shallow but well-defined pit with raised posterior margin, about as large as anterior ocellus. Apical margin of clypeus wider, 0.25 × as maximum width of clypeus. Occipital carina strongly curved in ventral half of gena. Punctures on mesoscutum smaller, ⅓ × as long as mid-ocellar diameter; interspaces on disc exceeding one puncture diameter. Dorsal face of propodeum with finer punctures, impunctate areas larger than punctures; posterior face of propodeum striate in ventral half, smooth with deep punctures in dorsal half. Mesosternum almost bare, sparsely punctate with micropunctate and shiny interspaces. T2 less reflexed, apical margin thickened but not duplicated when seen from behind; punctures on T2 not oblique and not flat-bottomed; punctures on S2 finer and sparser. Central African Republic ..... ***A. lamptula*** sp. nov.

16. Apical margin of clypeus with a median longitudinal carina, blunt in female and sharp in male. Tegula with posterior lobe acute and elongate, equaling parategula. Propodeal valvula posterodorsally angulate. Apical margin of T3 shortly lamellate and translucent, about as T2. South Africa, Zimbabwe ..... ***A. ulterior*** sp. nov.

– Apical margin of clypeus without median longitudinal carina. Tegula with posterior lobe short and not equaling parategula. Propodeal valvula evenly rounded. Apical margin of T3 widely lamellate and translucent, more than T2 ..... 17

17. Cephalic foveae placed in a small circular depression, transverse diameter shorter than ocellar diameter. Apical margin of clypeus evenly concave. Punctures on head and mesosoma sparser; interspaces on frons and mesoscutum reaching one puncture diameter; punctures on mesepisternum always separated by large flattened interspaces. Ethiopia .....***A. orientalis*** sp. nov.
– Cephalic foveae placed in a large elliptical depression, transverse diameter larger than ocellar diameter. Apical margin of clypeus truncate, with weakly projecting apical teeth. Punctures on head and mesosoma denser; interspaces on frons and mesoscutum at most 1/2 × as long as puncture diameter; punctures on mesepisternum touching each other and forming longitudinal series, especially on ventral third. Western Africa (Ivory Coast and Senegal) .....***A. occidentalis*** sp. nov.

### *Updated checklist of the species of the genus Afrepipona Giordani Soika, 1965*

1. *Afrepipona angusta* (de Saussure, 1863)
2. *Afrepipona anomala* sp. nov.
3. *Afrepipona cellularis* sp. nov.
4. *Afrepipona clonata* sp. nov.
5. *Afrepipona cuprea* sp. nov.
6. *Afrepipona lamellata* sp. nov.
7. *Afrepipona lamptoensis* Giordani Soika, 1965
8. *Afrepipona lamptula* sp. nov.
9. *Afrepipona lobulata* sp. nov.
10. *Afrepipona macrocephala* (Gribodo, 1894)
11. *Afrepipona meridionalis* sp. nov.
12. *Afrepipona occidentalis* sp. nov.
13. *Afrepipona orientalis* sp. nov.
14. *Afrepipona punctatissima* sp. nov.
15. *Afrepipona scabra* sp. nov.
16. *Afrepipona segregata* sp. nov.
17. *Afrepipona tertia* Gusenleitner, 2011
18. *Afrepipona ulterior* sp. nov.
19. *Afrepipona vulcanica* sp. nov.

## Genus ***Afrepsilon*** gen. nov.

urn:lsid:zoobank.org:act:3D4F4E28-A50F-4F14-BD2F-F308F42B4AC4

Fig. 21

**Type species**

*Afrepsilon ferrugineoaureum* gen. et sp. nov.

**Etymology**

The genus name is derived from the combination of ‘Afro’ and ‘*Epsilon*’. The first comes from the Latin adjective ‘*afer*, *afra*, *afrum*’ (= ‘African’), referring to the distribution of the genus, while the second refers to the similarity to the Indo-Australian genus *Epsilon* de Saussure, 1855.

**Diagnosis**

Distinguished from other Afrotropical genera of Eumeninae by the following combination of characters: head markedly transverse; clypeus apically emarginate and lacking longitudinal carinae, apical margin about as wide as interantennal distance (Fig. 21A); mandible long and narrow with five teeth, apical teeth about as long as basally wide, fifth tooth small and almost completely fused with fourth in single cutting edge, basal smooth part of mandible longer than apical dentate part (Fig. 21B); palpal formula 6:4, labial palpi short and robust and densely setose, first segment of labial palpi robust and strongly expanding and third segment with thick subapical seta (Fig. 21D); vertex short, 1.2–1.4 × as long as distance between ocellus and eye, with sharp occipital carina, cephalic foveae of female placed in a barely depressed area (except *A. pictum*) (Fig. 21C); gena narrow, shorter than dorsal lobe of eye in dorsal view, and more or less parallel-sided in lateral view, strongly crenate along occipital carina in male (Fig. 21E); anterior face of pronotum smooth and without pits or foveae, pronotal carina forming even curve on humeri; epicnemial carina distinct but dull; metanotum not carinate and evenly sloping from scutellum to propodeum (Fig. 21F); tegula with short posterior lobe not equaling parategula, axillary fossa small and oval; prestigma shorter than half pterostigma, second submarginal cell sessile and with acute basal angle, second recurrent vein interstitial (Fig. 21G); propodeum short and not extended behind metanotum, dorsal faces placed below level of rest of mesosoma, propodeum without dorsal and lateral carinae (with weak dorsal carina in *A. pictum*), submarginal carina weakly developed above valvula and completely fused with it, posterior face of propodeum with long longitudinal carina connected to basal depressed subtriangular sclerite (Fig. 21F); metasoma sessile; T1 not carinate and with short hyaline apical margin; apical margin of T2 shortly translucent and with transverse lamellar ridge along basal margin of translucent part, appearing duplicate (Fig. 21H); aedeagus apically bifid and with very large ventral lobes sharply separated from rest of base (Fig. 27P–Q).

**Differential diagnosis**

The new genus is morphologically similar to the Indo-Australian genus *Epsilon* de Saussure, 1855, but differs in the following aspects [characters of *Epsilon* in brackets]: male F11 finger-shaped with rounded apex and long [subtriangular with pointed apex and very short], mesosoma weakly elongate [short and robust, squat-bodied], posterior lobe of tegula blunt and not equaling parategula [sharply pointed and equaling parategula], parategulae narrow and curved or straight [wide and angled], epicnemial carina exceeding epipleural suture above and disappearing on mesosternum below [not exceeding epipleural suture above and touching contralateral carina on mid-line of mesosternum], basal triangular sclerite of propodeum depressed [flattened with two lateral pits], submarginal carina barely produced above valvula [forming a rounded lobe above valvula], S2 normally convex in middle of the base [depressed in middle of the base].

Following the key written by Gusenleitner and published in Carpenter *et al.* (2009), it is difficult to correctly place the genus *Afrepsilon* gen. nov.

Couplet 1 divides the genera with the second recurrent vein interstitial or received in the third submarginal cell from those with the vein received in the second submarginal cell. *Afrepsilon* gen. nov., having the interstitial second recurrent vein, would fall into the first group, which however in the key includes only the genera attributed to the so-called "Raphiglossini", a group well characterized and clearly distinguished from *Afrepsilon* for numerous characters (e.g., antenna of the male not modified at apex, second submarginal cell obtuse at the base, strongly elongated mouthparts in *Raphiglossa* Saunders and *Elisella* Giordani Soika). The interstitial second recurrent vein is actually also found in various other genera of Eumeninae, such as some species of *Alastor* Lepeletier, or in the genus *Epsilon* outside of the African fauna; the position of the vein therefore cannot be used as the sole diagnostic character and *Afrepsilon* runs to couplet 4.

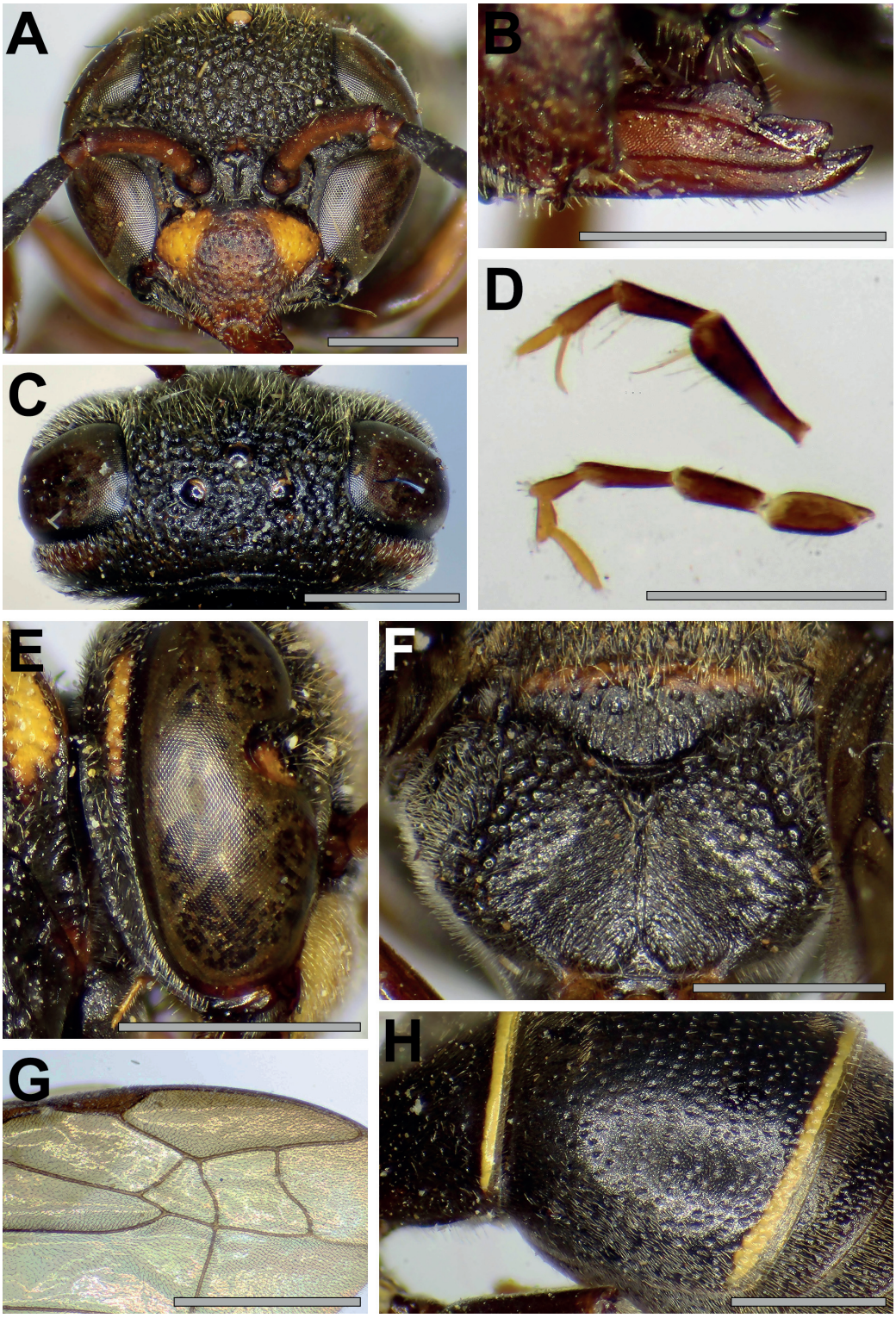


**Fig. 21.** Diagnostic characters of *Afrepsilon* gen. nov. **A–C, F**. *A. hybridum* gen. et sp. nov., ♀, holotype from Umtali (MSNVE). **D, H**. *A. aterrimum* gen. et sp. nov., ♀, holotype from Uganda (SNVE). **E, G**. *A. ferrugineoaureum* gen. et sp. nov., ♂, paratype from Berea (MSVI). **A**. Head, frontal view. **B**. Mandible, frontal view. **C**. Head, dorsal view. **D**. Palpi, lateral view. **E**. Head, lateral view. **F**. Metanotum and propodeum, posterior view. **G**. Apex of wing, dorsal view. **H**. T1–2, dorsolateral view. Scale bars: A–C, E–H = 1 mm; D = 0.5 mm.

Couplet 45 distinguishes Eumeninae with a translucent apical margin on T1 (*Euodynerus* Dalla Torre, 1904 and related genera) from those with a non-translucent margin. *Afrepsilon* gen. nov. has a differentiated apical margin, which appears very thin, almost hyaline and separated from the rest of the tergite by a shallow step, while in *Euodynerus* and related genera the apical margin is clearly more developed, translucent and in continuity with the rest of the tergite. *Afrepsilon* then runs to couplet 54.

At couplet 58, *Afrepsilon* gen. nov. corresponds to the second choice due to the prestigma being shorter than half of the pterostigma, but the character relating to the axillary fossa could leave some doubts. The couplet distinguishes between slit-like fossa and rounded fossa but does not take into account the genera with an intermediate morphology, consisting of a very narrow oval pit. This is one of the weakest and least reliable characters of the key, as there are numerous exceptions that do not allow the couplet to be used adequately (e.g., some *Antodynerus* have a significantly narrower pit than some *Rhynchium* Spinola, 1806). In any case, *Afrepsilon* runs to couplet 69, showing no affinity with the genera considered to have a "slit-like" fossa.

The blunt epicnemial carina in *Afrepsilon* gen. nov. could cast doubt at couplet 78, which distinguishes a genus without epicnemial carina, *Postepipona* Giordani Soika, 1974, from those with the carina. The examination of the type species of *Postepipona*, *P. socotrae* Giordani Soika, 1974, has actually shown that the epicnemial carina is present, although very short and weak. However, this does not pose problems, as *Postepipona* is a junior synonym of *Antepipona* de Saussure, 1855 (this synonymy will be treated in more depth in another paper), a genus immediately distinguished from *Afrepsilon* by numerous characters, including the submarginal carina of the propodeum forming a pointed lobe above the propodeal valvula and the narrow and posteriorly pointed tegula.

Finally, *Afrepsilon* gen. nov. runs to couplet 81, the last of the key, in which the genera *Allepipona* Giordani Soika, 1987 and *Stellepipona* Giordani Soika, 1973 are distinguished, on the basis of the morphology of the metanotum. *Afrepsilon* is immediately distinguished from both genera by numerous characters, among which the most evident are the gena (very narrow in *Afrepsilon*, wide in *Allepipona* and *Stellepipona*), the metanotum (sloping in *Afrepsilon*, almost vertical in *Allepipona*), the axillary fossa (smaller than an ocellus and with strongly widened lateral lamella in *Afrepsilon*, larger than an ocellus and with moderately widened lamella in *Stellepipona*, as large as the antennal torulus and with thin lamella in *Allepipona*), the tegula (short and wide with blunt posterior lobe in *Afrepsilon*, long and narrow with variably acute lobe in *Allepipona* and *Stellepipona*), the dorsal faces of propodeum (almost at same level as metanotum and strongly bordered posteriorly in *Afrepsilon*, well below level of metanotum and smoothly passing into posterior face in *Allepipona* and *Stellepipona*) and the submarginal carina of the propodeum (barely developed in *Afrepsilon*, forming a short but clearly evident lobe in *Allepipona*).

It is evident that *Afrepsilon* gen. nov. does not coincide with any of the genera currently known for the Afrotropical fauna and included in the mentioned key, from which it can be easily distinguished on the basis of the characters reported in the diagnosis above and shown in Fig. 21.

***Afrepsilon aterrimum*** gen. et sp. nov.
urn:lsid:zoobank.org:act:A1F9227A-514E-48DB-821D-C48B99D0ABFA
Figs 21D, H, 22

**Diagnosis**

Recognized by the following characters: clypeus sparsely micropunctate with large and flat-bottomed punctures (Fig. 22B); vertex evenly punctate, with foveae separated by more than their diameter and placed in a shallow depression (Fig. 22C); pronotum, mesoscutum and scutellum with sparse and not

coalescent punctures, interspaces flattened; posterior lobe of tegula depressed and apically rounded; dorsal carinae of propodeum absent; metasoma covered by sparse brownish pubescence, not hiding surface of tergites; preapical ridge of T2 sharp but not lamellate and short, not covering lamellate apical margin, which is about as long as half ocellar diameter (Fig. 22D); apical margin of T3–4 brownish but not translucent; body with very reduced yellow markings on head, metanotum, legs and T1–2.

**Etymology**

The specific epithet refers to the deep-black coloration of most of the body.

**Type material**

**Holotype**

UGANDA • ♀; between Seziwa River and Kampala; 27–31 Aug. 1911; S.A. Neave leg.; MSNVE.

**Description**

**Female**

Measurements. Body length 7.0 mm; fore wing length 6.5 mm.

Morphology. Head 1.3 × as wide as long in frontal view. Clypeus 1.25 × as wide as long, apical margin evenly emarginate between apical teeth, 0.25 × as wide as maximum width of clypeus, emargination 0.2 × as deep as wide; apical teeth subtriangular, with slightly pointing out rounded apex, with short longitudinal fold but not carinate; clypeus in lateral view very slightly convex. Vertex 1.3 × as long as distance from posterior ocellus to inner eye margin; cephalic foveae very small and separated by more than their diameter, placed in a small barely depressed area with different sculpture; gena 0.5 × as wide as eye at bottom of ocular sinus; occipital carina complete, sharp but not raised on vertex, raised in a sharp ridge on gena, evenly curved in lower third: F1 1.4 × as long as wide and 1.3 × as long as F2, F2–3 subquadrate, F4–9 transverse and becoming progressively shorter. Mesosoma 1.3 × as long as wide. Sides of pronotum in dorsal view convex and converging in dorsal view, weakly sinuate behind humeri; pronotal carina complete, sharp and raised but not lamellate, evenly rounded on humeri; pretegular carina complete and sharp even if weak; lateral faces of pronotum smoothly passing into dorsal face, weakly depressed in lower half. Mesoscutum 0.9 × as long as wide, evenly convex in lateral view. Scutellum weakly convex; anterior margin crenate with very large pits, median one slightly larger. Metanotum very weakly convex in lateral view. Tegula not equaling parategula, outer margin strongly convex in the middle, posterior lobe very short and blunt, shallowly depressed with raised posterior margin; parategula small and curved. Epicnemial carina strong and distinct but dull, exceeding epipleural suture and reaching mesosternum. Propodeum falling almost vertically behind metanotum in lateral view; posterior face shallowly concave but sharply separated from other faces; lateral faces distinctly depressed with strongly convex posterodorsal margin. T1 semicircular, 0.5 × as long as wide in dorsal view; posterior margin thin with a short hyaline lamellar margin. T2 0.85 × as long as wide in dorsal view, apical margin lamellate and brownish-hyaline, transition between tergite and lamella marked by a very short lamellar ridge. S2 evenly convex in lateral view.

Sculpture and vestiture. Clypeus matte, finely shagreened with very fine sparse micropunctures and shallow rounded punctures, latter smaller basally and larger apically with interspaces always wider than one puncture diameter. Frons with shallow flat-bottomed polygonal cells, touching and separated by irregular interspaces reduced to narrow ridges, cells with shiny bottom and interspaces matte; vertex shiny with barely visible shagreen and sparse shallow punctures, gena densely micropunctate and very shiny with punctures mostly restricted to anterior margin. Scape matte, shagreened and with dense fine punctures. Pronotum, mesoscutum and scutellum with dense deep punctures; interspaces mostly flattened and some reduced to narrow ridges, narrower than puncture diameter on pronotum and mesoscutum,

scutellum more sparsely punctate and with an impunctate median area; lateral faces of pronotum micropunctate and shiny with some shallow striae. Metanotum with coarse oblique punctures in median area, more finely punctate laterally. Mesepisternum with large flat-bottomed punctures, very dense along epicnemial carina and becoming sparser posteriorly, posterior third almost entirely impunctate and finely shagreened; epicnemium and mesosternum finely shagreened and shiny, with sparse fine punctures on mesosternum. Dorsal faces of propodeum with very large and coarse punctures, interspaces mostly reduced to very narrow and sharp raised ridges, anterior third with some shiny and micropunctate flattened interspaces; posterior face densely shagreened with short oblique striation near mid-line, some large shallow punctures along dorsal margin; metaepisternum and lateral faces of propodeum finely shagreened and striate, suddenly replaced by large flat-bottomed punctures along posterodorsal

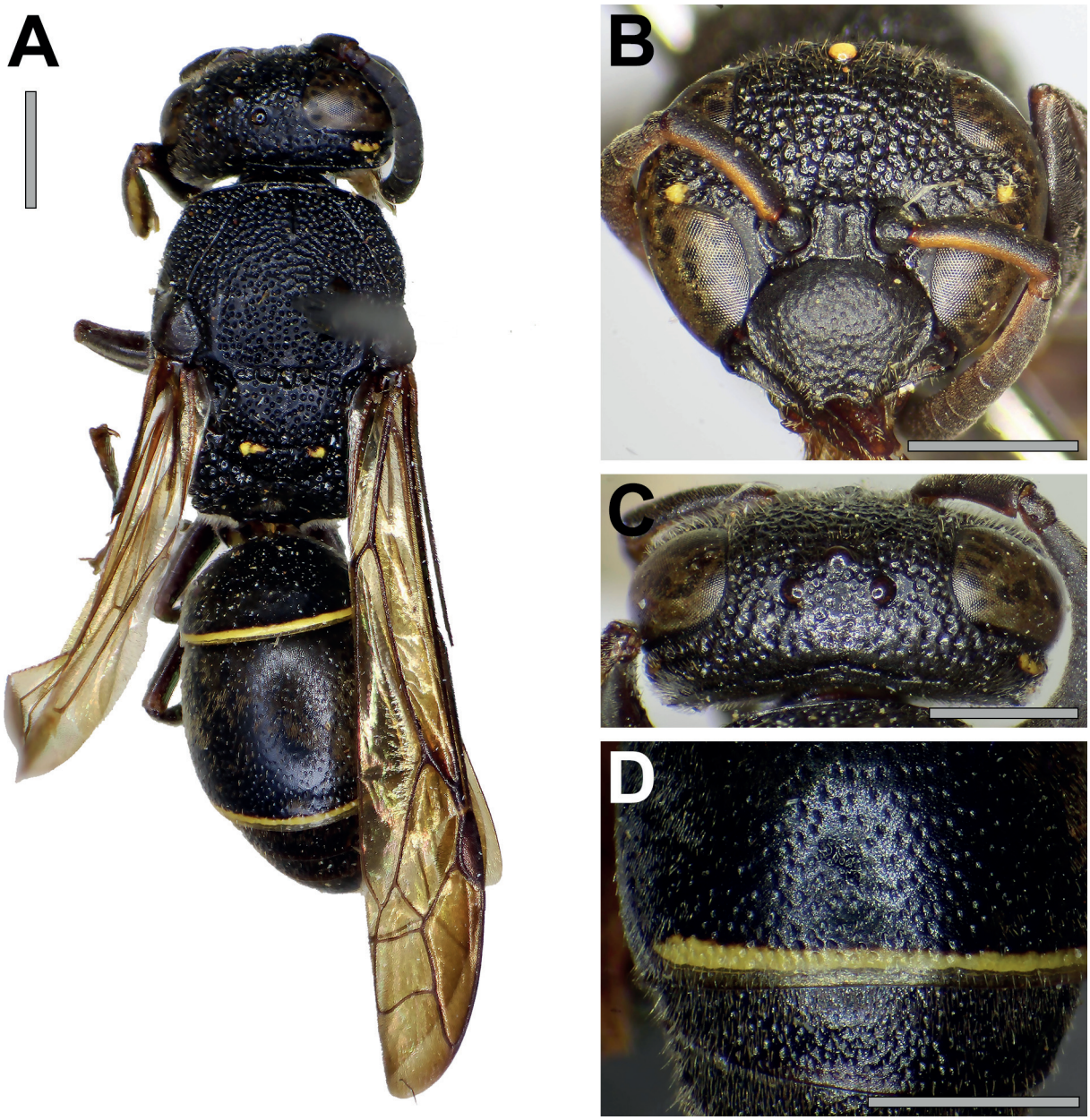


**Fig. 22.** *Afrepsilon aterrimum* gen. et sp. nov., ♀, holotype from Uganda (MSNVE). **A**. Habitus, dorsal view. **B**. Head, frontal view. **C**. Head, dorsal view. **D**. T2–3, dorsal view. Scale bars = 1 mm.

margin of propodeum. T1 finely shagreened and micropunctate, silky shiny, with sparse shallow oblique punctures; T2 similar to T1 but punctures and micropunctures deeper and denser, interspaces more shiny; T3–4 shagreened with coarse and dense oblique punctures; T5–6 shagreened and micropunctate, with very sparse fine punctures; S1 matte and irregularly sculpted; S2 similar to T2 but punctures much larger and deeper, forming a dense preapical series; S3–6 similar to respective tergites but with finer sculpture. Head and mesosoma with pale brownish suberect setae; clypeus, lower third of frons, gena and sides of mesosoma with dense pale pubescence; propodeum covered in very short white pubescence, denser on lateral faces and present only on margins of posterior face, corners with longer setae; metasoma with dense short brownish setae with reddish tinge, T2–6 and S2–5 with preapical series of suberect longer setae.

Coloration. Black; following parts yellow: lower face of scape, spot at bottom of ocular sinus, short line on upper part of gena, spots on anterior corners of metanotum, narrow apical band on T1–2. Wings weakly infuscate, with slight brassy reflections.

**Male**

Unknown.

**Distribution**

Uganda.

***Afrepsilon ferrugineoaureum*** gen. et sp. nov.
urn:lsid:zoobank.org:act:47B039EE-3696-4FCA-8677-3F042BAEC3BE
Figs 21E, G, 23, 27P

**Diagnosis**

Recognized by the following characters: occipital carina angled in the middle of vertex and followed by a striated depression, punctures on pronotum, mesoscutum and scutellum very dense and mostly coalescent, interspaces reduced to sharp irregular ridges; metanotum oblique, long and semicircular when seen from above; dorsal faces of propodeum smoothly passing into posterior face; metasoma covered by dense and long brownish pubescence, partly hiding surface of tergites; preapical ridge of T2 lamellate and long, completely covering lamellate apical margin in middle and partly on extreme sides (Fig. 23F); apical margin of T3 and some of following tergites ferruginous and translucent; body largely marked with red and yellow, mesosoma including propodeum with yellow and red markings. Genitalia in Fig. 27P.

**Etymology**

The specific epithet was found on a red label pinned under the holotype of this species, handwritten by Giordani Soika. It probably refers to the coloration of this species.

**Type material**

**Holotype**

SOUTH AFRICA • ♀; Pondoland, Port St. John; 6–25 Feb. 1924; R.E. Turner leg.; MSNVE.

**Paratypes**

SOUTH AFRICA • 1 ♂; Marley, Berea; 14 Mar. 1918; MSVI.

**Description**

**Female**

Measurements. Body length 7.5 mm; fore wing length 8.0 mm.

Morphology. Head 1.3 × as wide as long in frontal view. Clypeus 1.3 × as wide as long, apical margin evenly emarginate between apical teeth, 0.3 × as wide as maximum width of clypeus, emargination 0.2 × as deep as wide; apical teeth subtriangular, with slightly pointing out rounded apex, with short longitudinal carinae; clypeus in lateral view very slightly convex. Vertex 1.6 × as long as distance from posterior ocellus to inner eye margin; cephalic foveae very small and separated by less than their diameter, placed in a small barely depressed area with different sculpture; gena 0.5 × as wide as eye at bottom of ocular sinus, depressed along posterior margin; occipital carina complete, sharp but not raised on vertex and angulate in the middle, raised in a sharp ridge on gena, evenly and weakly curved in lower half; area behind middle of occipital carina with a shallow striate depression. F1 1.4 × as long as wide and 1.5 × as long as F2, F2–3 subquadrate, F4–9 transverse and becoming progressively shorter. Mesosoma 1.3 × as long as wide. Sides of pronotum in dorsal view convex and weakly converging in dorsal view; pronotal carina complete, shortly lamellate, evenly rounded on humeri; pretegular carina complete and sharp; lateral faces of pronotum smoothly passing into dorsal face, weakly depressed in lower half. Mesoscutum about as long as wide, evenly convex in lateral view. Scutellum weakly convex; anterior margin crenate, median pit larger and deeper than others. Metanotum very weakly convex in lateral view. Tegula not equaling parategula, outer margin strongly convex in the middle, posterior lobe very short and blunt, shallowly depressed with raised posterior margin; parategula small and curved. Epicnemial carina barely visible, reaching epipleural suture and mesosternum. Propodeum falling almost vertically behind metanotum in lateral view; posterior face shallowly concave but not sharply separated from other faces; lateral faces flattened; submarginal carina shallowly produced above valvula. T1 more or less trapezoidal, 0.45 × as long as wide in dorsal view; horizontal face barely depressed on disc; posterior margin thin with a short hyaline lamellar margin. T2 0.8 × as long as wide in dorsal view, apical margin shortly lamellate and yellow-hyaline, transition between tergite and lamella marked by a raised lamellar ridge completely covering the real apical margin in the middle and partially on sides. T3–4 with lamellar apical margin. S2 evenly convex in lateral view.

Sculpture and vestiture. Clypeus matte, finely shagreened with very fine sparse micropunctures and shallow rounded punctures, latter smaller basally and larger apically with interspaces always wider than one puncture diameter. Frons with shallow flat-bottomed polygonal cells, touching and separated by irregular interspaces reduced to narrow ridges, cells with shiny micropunctate bottom and interspaces matte; vertex shiny with barely visible shagreen and deep punctures, gena densely micropunctate and very shiny with punctures mostly restricted to anterior margin. Scape matte, shagreened with dense fine punctures. Pronotum, mesoscutum and scutellum with dense deep punctures; interspaces mostly reduced to narrow ridges, partly flattened but narrower than puncture diameter on scutellum; lateral faces of pronotum micropunctate and shiny with sparse shallow punctures and some fine striae. Metanotum with coarse oblique punctures in median area, more finely punctate laterally. Mesepisternum with rounded punctures, deeper on upper plate and shallow with flat bottom on lower plate, denser along epicnemial carina and becoming sparser posteriorly, leaving a narrow impunctate area on posterior sloping part; epicnemium and mesosternum finely shagreened and shiny, with sparse fine punctures on mesosternum. Dorsal faces of propodeum with very large and coarse punctures, interspaces mostly reduced to very narrow and sharp raised ridges, anterior third with some shiny and micropunctate flattened interspaces; posterior face very finely micropunctate and shiny, with very fine oblique striae on lower fourth, some shallow punctures along dorsal margin; metaepisternum finely shagreened and impunctate, lateral faces of propodeum striate, gradually replaced by elongate flat-bottomed punctures along posterodorsal margin of propodeum. T1 finely shagreened and micropunctate, silky shiny, with sparse barely visible punctures; T2 similar to T1 but micropunctures denser and more evident, macropunctures barely deeper

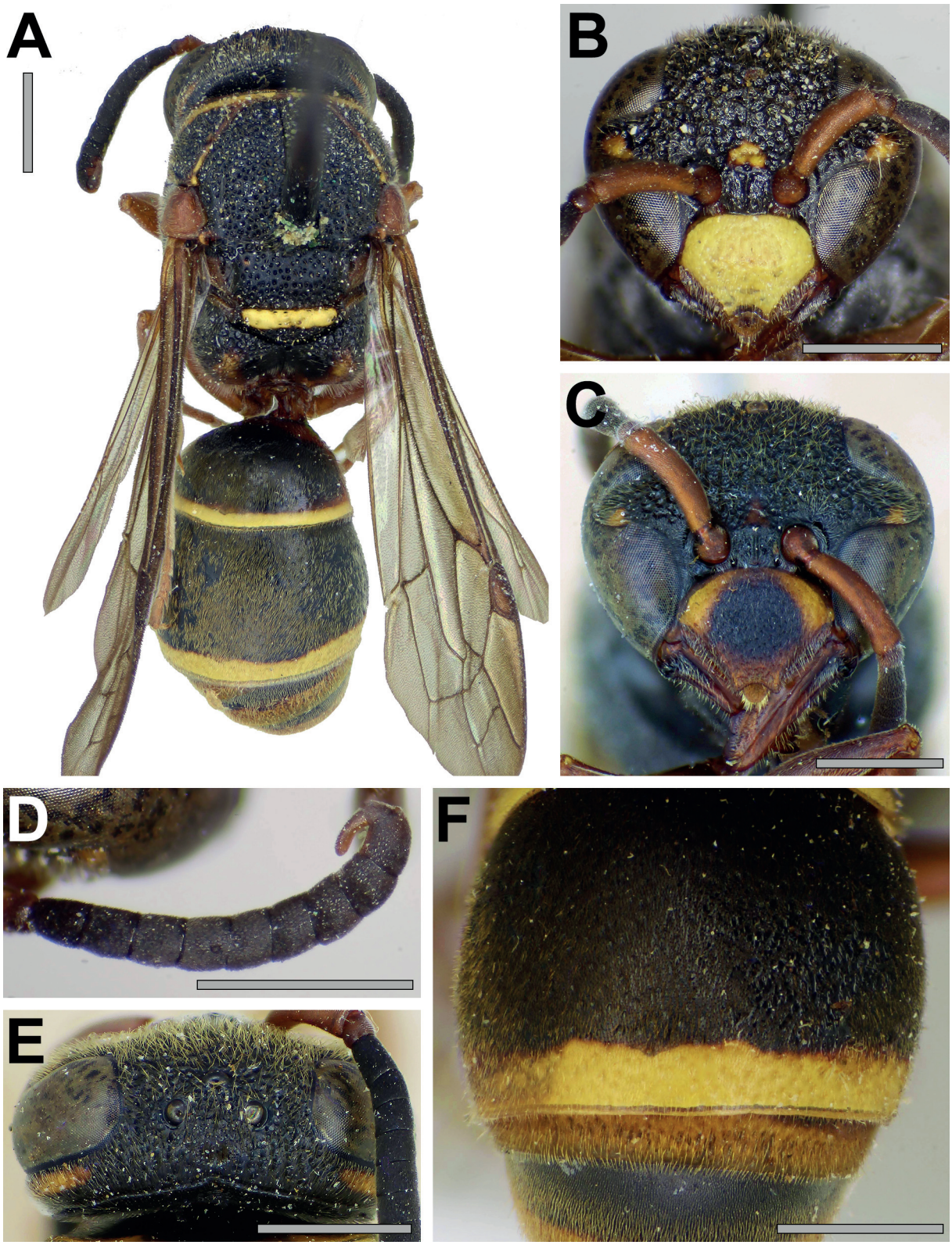


**Fig. 23.** *Afrepsilon ferrugineoaureum* gen. et sp. nov. **A–B, D**. ♂, paratype from Berea (MSVI). **C, E–F**. ♀, holotype from Port St. John (MSNVE). **A**. Habitus, dorsal view. **B–C**. Head, frontal view. **D**. Flagellum, lateral view. **E**. Head, dorsal view. **F**. T2–3, dorsal view. Scale bars: 1 mm.

but more evident; T3–4 shagreened with coarse and dense oblique punctures; T5–6 shagreened and micropunctate, with very sparse fine punctures; S1 matte and irregularly sculpted; S2 similar to T2 but punctures well marked and deep; S3–6 similar to respective tergites. Head and mesosoma with pale brassy suberect setae; clypeus, lower third of frons, gena and sides of mesosoma with dense whitish pubescence; dorsal and posterior faces of propodeum covered in short white setae, longer on lateral corners; metasoma with dense appressed brownish pubescence, T2–6 and S2–5 with preapical series of suberect longer setae.

Coloration. Black; following parts red: apical margin of clypeus, mandible, scape, spots at bottom of ocular sinus, small interantennal spot, part of posterior margin of pronotum, pronotal lobe, tegula, area around yellow spots on propodeum, base and sides of T1, apical margin of T3–6, whole S1, margins of S2–6, outer margin of mid and hind coxae, all legs; following parts yellow: basal margin of clypeus, line behind dorsal lobe of eye, anterior and posterior margin of pronotum, parategula, anterior half of metanotum, large spots on posterolateral corners of propodeum, sinuate preapical bands on T1–4, narrower on T1, subtriangular spots on posterior corners of S2. Wings fusco-hyaline with weak brassy reflections.

**Male**

Measurements. Body length 7.2 mm; fore wing length 7.0 mm.

Differing from female as follows: clypeus 1.3 × as wide as long, more convex in lateral view, microsculpture less evident and punctures deeper; vertex 1.45 × as long as distance from posterior ocellus to inner eye margin, gena 0.4 × as wide as eye at bottom of ocular sinus and strongly crenate along occipital carina; F11 finger-shaped and reaching base of F8, parallel sided with rounded apex in dorsal view, curved and weakly depressed in lateral view; punctures on pronotum, mesoscutum and scutellum slightly sparser, punctures on T1–2 deeper and more evident; following parts yellow: clypeus, spots at bottom of ocular sinus and on interantennal space.

**Distribution**

South Africa.

***Afrepsilon hybridum*** gen. et sp. nov.
urn:lsid:zoobank.org:act:5F3345B9-29DD-46CF-8FEA-122A8F4B1082
Figs 21A–C, F, 24

**Diagnosis**

Recognized by the following characters: occipital carina rounded in the middle of vertex, punctures on pronotum, mesoscutum and scutellum very dense and mostly coalescent, interspaces reduced to sharp irregular ridges; metanotum oblique, long and semicircular when seen from above; dorsal faces of propodeum weakly but markedly separated from posterior face; metasoma covered by dense and long golden pubescence, hiding surface of tergites; preapical ridge of T2 lamellate and long, largely but not completely covering lamellate apical margin in middle (Fig. 24D); apical margin of T3 and some of following tergites ferruginous and translucent; body largely marked with red and yellow, mesosoma with red markings only and propodeum entirely black.

**Etymology**

This is the first species of *Afrepsilon* gen. nov. observed by the first author, who initially mistook it for an *Afrepipona* with characters similar to *Epsilon*, as if it was a strange hybrid between two different genera.

**Type material**

**Holotype**

ZIMBABWE • ♀; S. Rhodesia, Umtali; 25 Sep. 1931; P.A. Sheppard leg.; MSNVE.

**Description**

**Female**

Measurements. Body length 8.0 mm; fore wing length 7.0 mm.

Morphology. Head 1.25 × as wide as long in frontal view. Clypeus 1.3 × as wide as long, apical margin evenly emarginate between apical teeth, 0.25 × as wide as maximum width of clypeus, emargination 0.2 × as deep as wide; apical teeth subtriangular, with slightly pointing out rounded apex, with short longitudinal fold but not carinate; clypeus in lateral view very slightly convex. Vertex 1.35 × as long as distance from posterior ocellus to inner eye margin; cephalic foveae very small and separated by less than their diameter, placed in a small barely depressed area with different sculpture; gena 0.55 × as wide as eye at bottom of ocular sinus, depressed along posterior margin; occipital carina complete, sharp but not raised on vertex, raised in a sharp ridge on gena, evenly and weakly curved in lower half. F1 1.45 × as long as wide and 1.5 × as long as F2, F2–3 subquadrate, F4–9 transverse and becoming progressively shorter. Mesosoma 1.25 × as long as wide. Sides of pronotum in dorsal view convex and converging in dorsal view, weakly sinuate behind humeri; pronotal carina complete, sharp and raised but not lamellate, evenly rounded on humeri; pretegular carina disappearing in upper third; lateral faces of pronotum smoothly passing into dorsal face, weakly depressed in lower half. Mesoscutum 0.9 × as long as wide, evenly convex in lateral view. Scutellum weakly convex; anterior margin crenate, median pit slightly larger than others. Metanotum very weakly convex in lateral view. Tegula not equaling parategula, outer margin strongly convex in the middle, posterior lobe very short and blunt, shallowly depressed with raised posterior margin; parategula small and curved. Epicnemial carina strong and distinct but dull, exceeding epipleural suture and reaching mesosternum. Propodeum falling almost vertically behind metanotum in lateral view; posterior face shallowly concave but sharply separated from other faces; lateral faces distinctly depressed with convex posterodorsal margin; submarginal carina shallowly produced above valvula. T1 more or less trapezoidal, 0.45 × as long as wide in dorsal view; horizontal face weakly depressed on disc; posterior margin thin with a short hyaline lamellar margin. T2 0.85 × as long as wide in dorsal view, apical margin shortly lamellate and yellow-hyaline, transition between tergite and lamella marked by raised lamellar ridge mostly covering the true apical margin medially but disappearing laterally. T3–4 with lamellar apical margin. S2 evenly convex in lateral view.

Sculpture and vestiture. Clypeus matte, finely shagreened with very fine sparse micropunctures and shallow rounded punctures, latter smaller basally and larger apically with interspaces always wider than one puncture diameter. Frons with shallow flat-bottomed polygonal cells, touching and separated by irregular interspaces reduced to narrow ridges, cells with shiny micropunctate bottom and interspaces matte; vertex shiny with barely visible shagreen and sparse shallow punctures, gena densely micropunctate and very shiny with punctures mostly restricted to anterior margin. Scape matte, shagreened with dense fine punctures. Pronotum, mesoscutum and scutellum with dense deep punctures; interspaces mostly reduced to narrow ridges, partly flattened but narrower than puncture diameter on scutellum; lateral faces of pronotum micropunctate and shiny with sparse shallow punctures. Metanotum with coarse oblique punctures in median area, more finely punctate laterally. Mesepisternum with large flat-bottomed punctures, denser along epicnemial carina and becoming sparser posteriorly, leaving a narrow impunctate area on posterior sloping part; epicnemium and mesosternum finely shagreened and shiny, with sparse fine punctures on mesosternum. Dorsal faces of propodeum with very large and coarse punctures, interspaces mostly reduced to very narrow and sharp raised ridges, anterior third with some shiny and micropunctate flattened interspaces; posterior face very finely micropunctate and shiny, with very fine oblique striae on lower fourth, some shallow punctures along dorsal margin; metaepisternum

and lateral faces of propodeum finely shagreened and striate, gradually replaced by elongate flat-bottomed punctures along posterodorsal margin of propodeum. T1 finely shagreened and micropunctate, silky shiny, with sparse barely visible punctures; T2 similar to T1 but micropunctures denser and more evident, macropunctures barely deeper, interspaces more shiny; T3–4 shagreened with coarse and dense oblique punctures; T5–6 shagreened and micropunctate, with very sparse fine punctures; S1 matte and irregularly sculpted; S2 similar to T2 but punctures well marked and deep; S3–6 similar to respective tergites. Head and mesosoma with pale brassy suberect setae; clypeus, lower third of frons, gena and sides of mesosoma with dense whitish pubescence; dorsal and posterior faces of propodeum covered in short white setae, longer on lateral corners; metasoma with dense appressed brassy pubescence, T2–6 and S2–5 with preapical series of suberect longer setae.

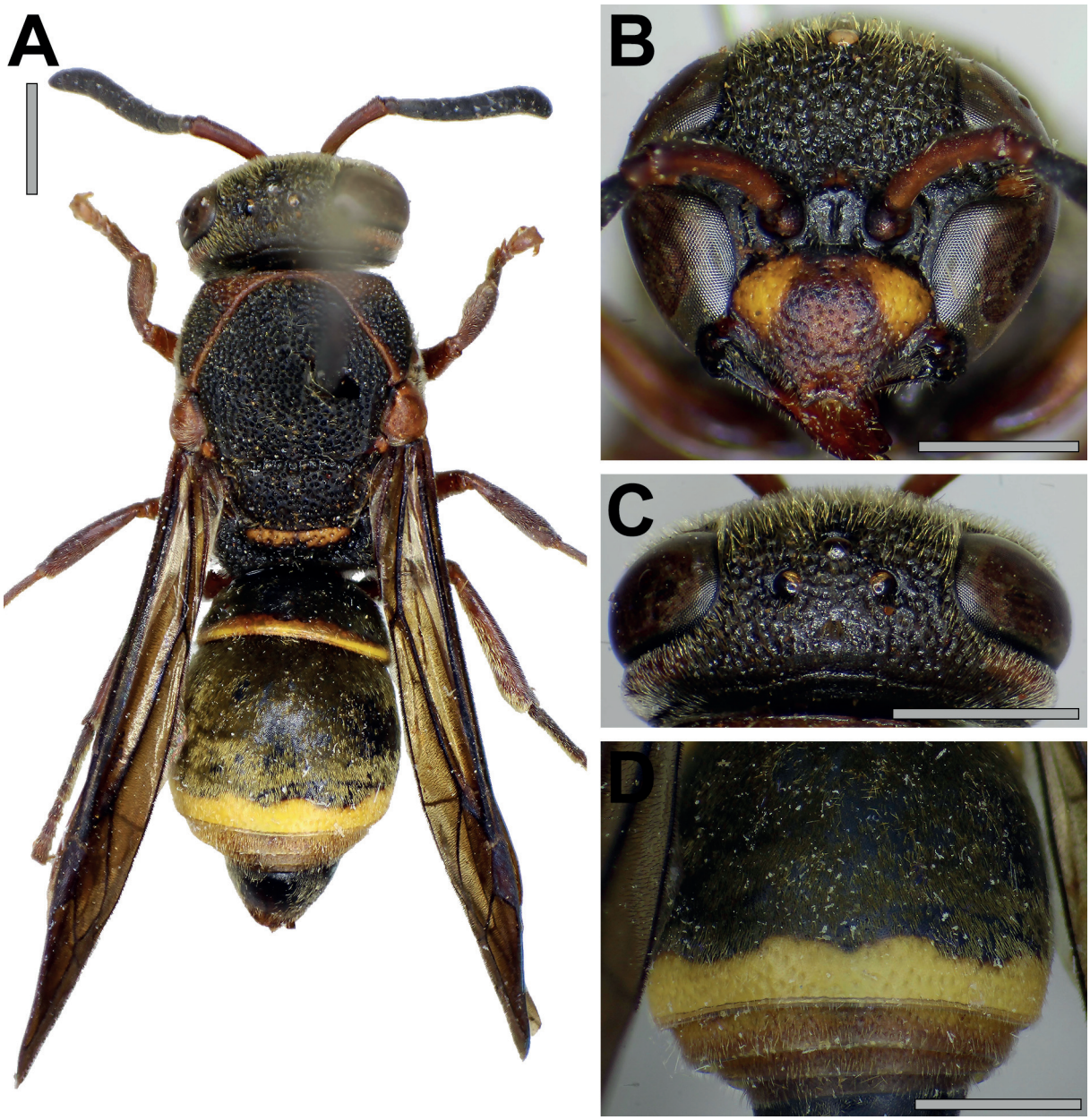


**Fig. 24.** *Afrepsilon hybridum* gen. et sp. nov., ♀, holotype from Umtali (MSNVE). **A**. Habitus, dorsal view. **B**. Head, frontal view. **C**. Head, dorsal view. **D**. T2–3, dorsal view. Scale bars: 1 mm.

Coloration. Black; following parts red: most of clypeus and mandible, scape, spots at bottom of ocular sinus, small interantennal spot, line behind dorsal half of eye, anterior and posterior margin of pronotum, pronotal lobe, tegula, parategula, anterior margin of metanotum, apical margin of T3–4 and S1–6, outer margin of mid and hind coxae, all legs; following parts yellow-orange: large triangular spots on basal corners of clypeus, sinuate preapical bands on T1–4, narrower on T1. Wings brownish infuscate with brassy reflections on basal half and purplish reflections on apical half.

**Male**

Unknown.

**Distribution**

Zimbabwe.

***Afrepsilon minor*** gen. et sp. nov.
urn:lsid:zoobank.org:act:7CE814A2-9BE8-4104-B764-891F97185B20
Figs 25, 27Q

**Diagnosis**

Recognized by the following characters: punctures on pronotum, mesoscutum and scutellum dense but with flattened and distinct interspaces; metanotum nearly vertical, short and subrectangular when seen from above; metasoma with brownish short pubescence, not hiding surface of tergite; preapical ridge of T2 lamellate but short, in middle covering basal half of lamellate apical margin (Fig. 25D); apical margin of T3 and some of following tergites ferruginous and translucent; body largely marked with red and yellow. Genitalia in Fig. 27Q.

**Etymology**

The specific epithet refers to this species being similar to *Afrepsilon ferrugineoaureum* gen. et sp. nov. and *A. hybridum* gen. et sp. nov. but smaller in body length and size of F11.

**Type material**

**Holotype**

TANZANIA • ♂; Mount Kilimanjaro; 03°20′06.2″ S, 37°29′31.9″ E; elev. 1275 m; 17 Oct. 2014; OLML.

**Paratypes**

TANZANIA • 2 ♂♂; same data as for holotype; JMU, MSVI.

**Description**

**Male**

Measurements. Body length 6.3–7.5 mm (holotype 6.3 mm); fore wing length 6.0–7.0 mm (holotype 6.0 mm).

Morphology. Head 1.35 × as wide as long in frontal view. Clypeus 1.15 × as wide as long, apical margin evenly emarginate between apical teeth, 0.3 × as wide as maximum width of clypeus, emargination 0.2 × as deep as wide; apical teeth subtriangular, rounded at apex, with short longitudinal fold but not distinctly carinate; clypeus in lateral view distinctly convex at base. Vertex 1.4 × as long as distance from posterior ocellus to inner eye margin; gena 0.55 × as wide as eye at bottom of ocular sinus, deeply depressed along occipital carina; occipital carina complete, sharp but not raised on vertex, shortly lamellate on gena, evenly curved in lower half. F1 1.6 × as long as wide and 1.25 × as long as F2, F2–3 subquadrate, F4–7 wider than long, F8–9 subquadrate, F11 finger-shaped, reaching base of F9 and weakly curved in lateral

view, parallel-sided with rounded apex in dorsal view, apex weakly depressed dorsoventrally. Mesosoma 1.2 × as long as wide. Sides of pronotum in dorsal view convex and converging in dorsal view, weakly sinuate behind humeri; pronotal carina complete, sharp and raised but not lamellate dorsally, shorter on sides, evenly rounded on humeri; pretegular carina distinct but not sharp, disappearing above; lateral faces of pronotum smoothly passing into dorsal face, weakly depressed in lower half. Mesoscutum 0.8 × as long as wide, evenly convex in lateral view. Scutellum weakly convex; anterior margin crenate, median pit larger than others. Metanotum almost vertical and flattened in lateral view, with slightly raised anterior margin. Tegula not equaling parategula, outer margin strongly convex the middle, posterior lobe very short and blunt, shallowly depressed; parategula small and curved. Epicnemial carina strong and distinct but dull, reaching epipleural suture above and mesosternum below. Propodeum falling vertically behind metanotum in lateral view; posterior face shallowly concave but sharply separated from other faces; lateral faces distinctly depressed with convex posterodorsal margin; submarginal carina shallowly

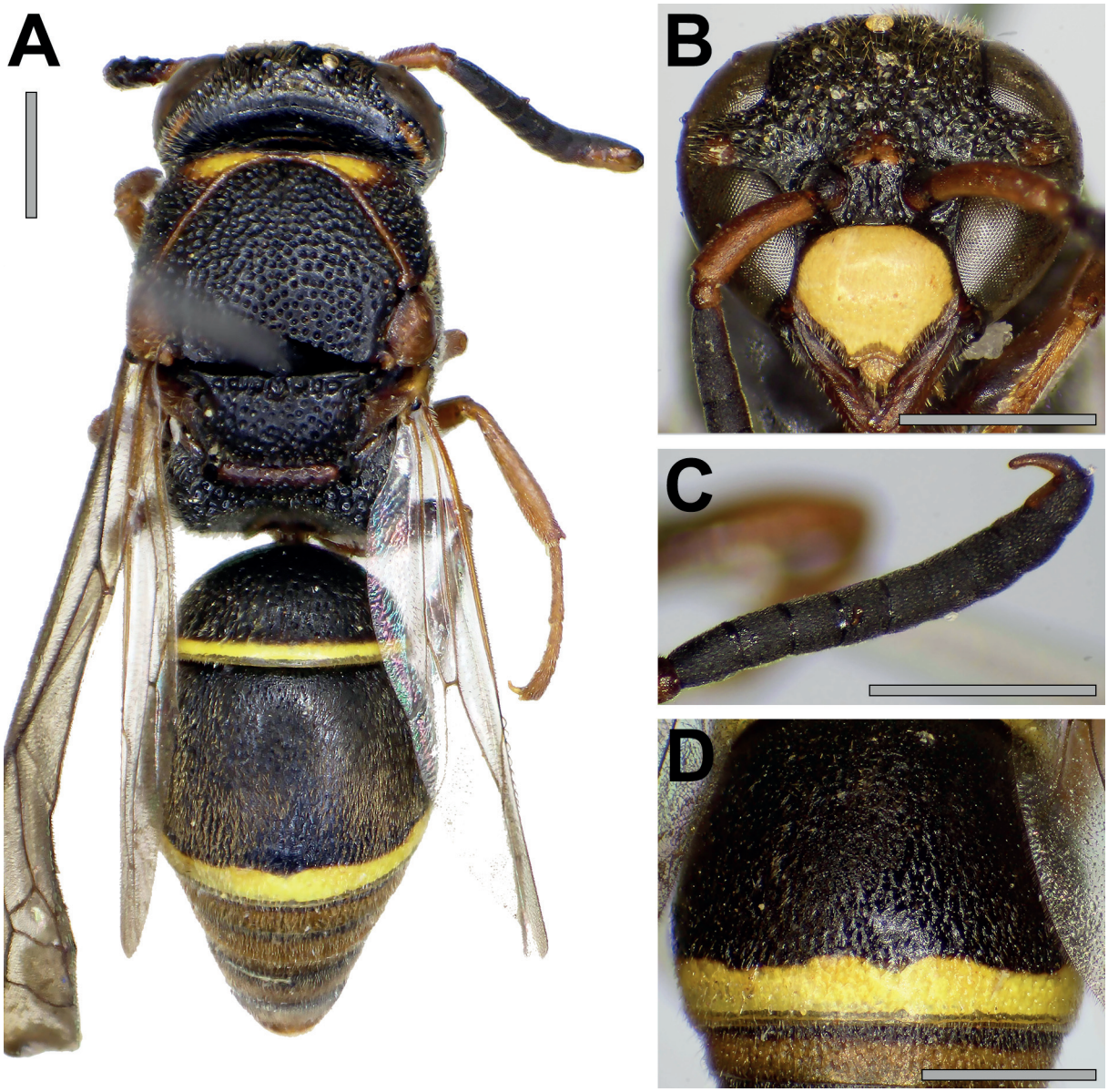


**Fig. 25.** *Afrepsilon minor* gen. et sp. nov., ♂, paratype from Mount Kilimanjaro (MSVI). **A**. Habitus, dorsal view. **B**. Head, frontal view. **C**. Flagellum, lateral view. **D**. T2–3, dorsal view. Scale bars = 1 mm.

produced above valvula. T1 almost semicircular, 0.45 × as long as wide in dorsal view; horizontal face shallowly depressed on disc; posterior margin thin with a short hyaline lamellar margin. T2 0.8 × as long as wide in dorsal view, apical margin shortly lamellate, transition between tergite and lamella marked by a raised lamellar ridge covering about half of the true apical margin, making the apex duplicate. T3–5 lamellate apically, lamella not distinctly separated from rest of tergite. S2 evenly convex in lateral view.

Sculpture and vestiture. Clypeus silky shiny, with sparse barely visible punctures almost disappearing in basal half. Frons with shallow flat-bottomed polygonal cells, touching and separated by irregular interspaces reduced to narrow ridges, cells with shiny micropunctate bottom and interspaces matte; vertex shiny with barely visible shagreen and sparse deep punctures, gena densely micropunctate and very shiny with punctures mostly restricted to anterior margin. Scape matte, shagreened with dense very fine punctures. Pronotum, mesoscutum and scutellum with dense deep punctures; interspaces weakly shiny, partly reduced to narrow ridges and partly flattened, but always at most as long as one puncture diameter; lateral faces of pronotum shagreened with shallow punctures, more shiny. Metanotum with coarse oblique punctures in median area, more finely punctate laterally and on anterior margin. Mesepisternum with large flat-bottomed punctures, denser along epicnemial carina and becoming sparser posteriorly, leaving narrow impunctate area on posterior sloping part; epicnemium and mesosternum finely shagreened and shiny, with sparse fine punctures on mesosternum. Dorsal faces of propodeum with very large and coarse punctures, interspaces mostly reduced to very narrow and sharp raised ridges; posterior face very shiny, with very fine oblique striae on lower fourth and some shallow punctures along dorsal margin; metaepisternum and lateral faces of propodeum finely shagreened, lateral faces with very fine sparse striae gradually replaced by elongate flat-bottomed punctures along posterodorsal margin of propodeum. T1 finely shagreened, shiny, with sparse moderately deep punctures, slightly denser on disc; T2 similar to T1 but micropunctate, macropunctures finer, interspaces more shiny; T3–5 with small deep preapical punctures, becoming progressively sparser; T6–7 finely shagreened and micropunctate; S1 silky shiny and irregularly sculpted; S2 similar to T2 but punctures well marked and larger; S3–7 similar to respective tergites. Head and mesosoma with pale brassy suberect setae; clypeus, lower third of frons, gena and sides of mesosoma with dense whitish pubescence; dorsal and posterior faces of propodeum covered in short white setae, longer on lateral corners; metasoma with appressed but not very dense brownish pubescence, T2–7 and S2–6 with preapical series of suberect longer setae.

Coloration. Black; following parts red: most of mandible, scape, spot at bottom of ocular sinus, anterior and posterior margin of pronotum, anterior margin of metanotum, tegula and parategula, legs; following parts yellow to orange-yellow: interantennal spot, transverse spots near middle of pronotum, narrow preapical band on T1, sinuate preapical band on T2–6, small transverse spots on apical corners of S2; clypeus pale yellow except narrow black basal margin and translucent orange emargination; margins of S2–7 ferruginous-orange. Wings subhyaline, weakly fuscous along costal margin.

**Female**

Unknown.

**Distribution**

Tanzania.

***Afrepsilon pictum*** gen. et sp. nov.
urn:lsid:zoobank.org:act:0724418C-4A6A-445E-BFB7-3B67AFB1DDBA
Fig. 26

*Afrepipona tertius* – Gusenleitner 2011: 427–428 (key to females), fig. 13 (partim, nec 426, 428 (key to males), figs 9–12).

**Diagnosis**

Recognized by the following characters: clypeus densely micropunctate with fine macropunctures (Fig. 26B); vertex largely impunctate, with foveae separated by about their diameter and not placed in differentiated area (Fig. 26C); pronotum, mesoscutum and scutellum with sparse and not coalescent punctures, interspaces flattened; posterior lobe of tegula apically pointed; dorsal carinae of propodeum present; metasoma covered by sparse brownish pubescence, not hiding surface of tergites; preapical ridge of T2 sharp but not lamellate and short, not covering lamellate apical margin, which is shorter than half ocellar diameter (Fig. 26D); apical margin of T3–4 brownish but not translucent; body with more extensive pale yellow markings.

**Etymology**

The specific epithet refers to the pale yellow markings on black background.

**Type material**

**Holotype**

CENTRAL AFRICAN REPUBLIC • ♀; 50 km SW of Bangui; 04°04′ N, 18°14′ E; elev. 380 m; 29 Apr. 2010; J. Halada leg.; OLML.

**Description**

**Female**

Measurements. Body length 8.0 mm; fore wing length 6.8 mm.

Morphology. Head 1.3 × as wide as long in frontal view. Clypeus 1.3 × as wide as long, apical margin evenly emarginate between apical teeth, 0.25 × as wide as maximum width of clypeus, emargination 0.2 × as deep as wide; apical teeth subtriangular, with slightly pointing out rounded apex, with short longitudinal blunt carinae; clypeus in lateral view very slightly convex. Vertex 1.45 × as long as distance from posterior ocellus to inner eye margin; cephalic foveae barely visible and separated by less than their diameter, not placed in a differentiated area; gena 0.5 × as wide as eye at bottom of ocular sinus; occipital carina complete, fine and sharp on vertex, raised in a sharp ridge on gena, evenly curved in lower third: F1 1.45 × as long as wide and 1.35 × as long as F2, F2–3 subquadrate, F4–9 transverse and becoming progressively shorter. Mesosoma 1.25 × as long as wide. Sides of pronotum convex and converging in dorsal view, weakly sinuate behind humeri; pronotal carina complete, sharp and raised in very short lamella, evenly rounded on humeri; pretegular carina very weak and replaced in ventral half by a very deep furrow, anteriorly margined by a vertical ridge continuing epicnemial carina; lateral faces of pronotum smoothly passing into dorsal face, weakly depressed in lower half. Mesoscutum 0.9 × as long as wide, evenly convex in lateral view. Scutellum very weakly convex; anterior margin crenate with very large pits, median one much larger. Metanotum very weakly convex in lateral view. Tegula almost equaling parategula, outer margin strongly convex in the middle, posterior lobe short and pointed, more or less right-angled; parategula small and straight with rounded apex. Epicnemial carina strong and distinct but dull, reaching pronotal margin above and mesosternum below. Propodeum falling almost vertically behind metanotum in lateral view; posterior face shallowly concave but sharply separated from other faces; lateral faces distinctly depressed with strongly convex posterodorsal margin; dorsal carinae strong in median half and disappearing laterally. T1 semicircular, 0.45 × as long as wide in dorsal view; posterior margin thin with short hyaline lamellar margin. T2 0.8 × as long as wide in dorsal view, apical margin lamellate and hyaline, transition between tergite and lamella marked by a very short lamellar ridge. S2 evenly convex in lateral view.

Sculpture and vestiture. Clypeus matte, finely shagreened with very fine dense micropunctures and shallow rounded punctures, latter smaller basally and larger apically with interspaces equal to two

puncture diameters at least. Frons with shallow flat-bottomed polygonal cells, touching and separated by irregular interspaces reduced to narrow ridges, cells with shiny bottom and interspaces matte; vertex shiny with barely visible shagreen and largely impunctate in posterior half, gena irregularly microsculpted and very shiny with punctures mostly restricted to anterior margin. Scape matte, densely micropunctate with few very sparse fine punctures. Pronotum, mesoscutum and scutellum with dense deep punctures; interspaces mostly flattened and some reduced to narrow ridges, mostly narrower than puncture diameter on pronotum and mesoscutum, scutellum more sparsely punctate in anterior half; lateral faces of pronotum micropunctate and shiny with some shallow striae. Metanotum with few shallow oblique punctures in median area, almost impunctate laterally. Mesepisternum with large flat-bottomed punctures, very dense along epicnemial carina and becoming sparser posteriorly,

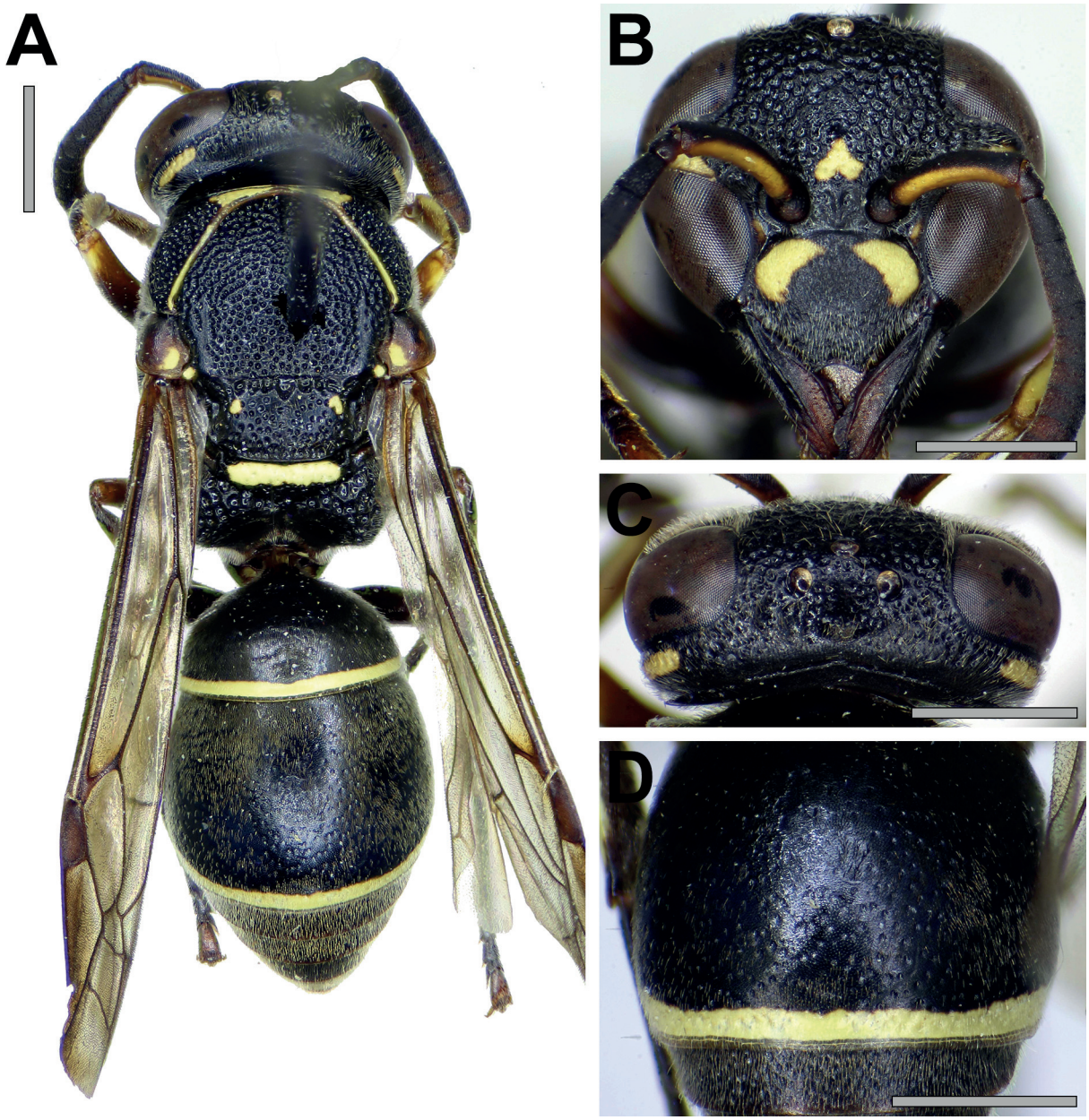


**Fig. 26.** *Afrepsilon pictum* gen. et sp. nov., ♀, holotype from near Bangui (OLML). **A**. Habitus, dorsal view. **B**. Head, frontal view. **C**. Head, dorsal view. **D**. T2–3, dorsal view. Scale bars = 1 mm.

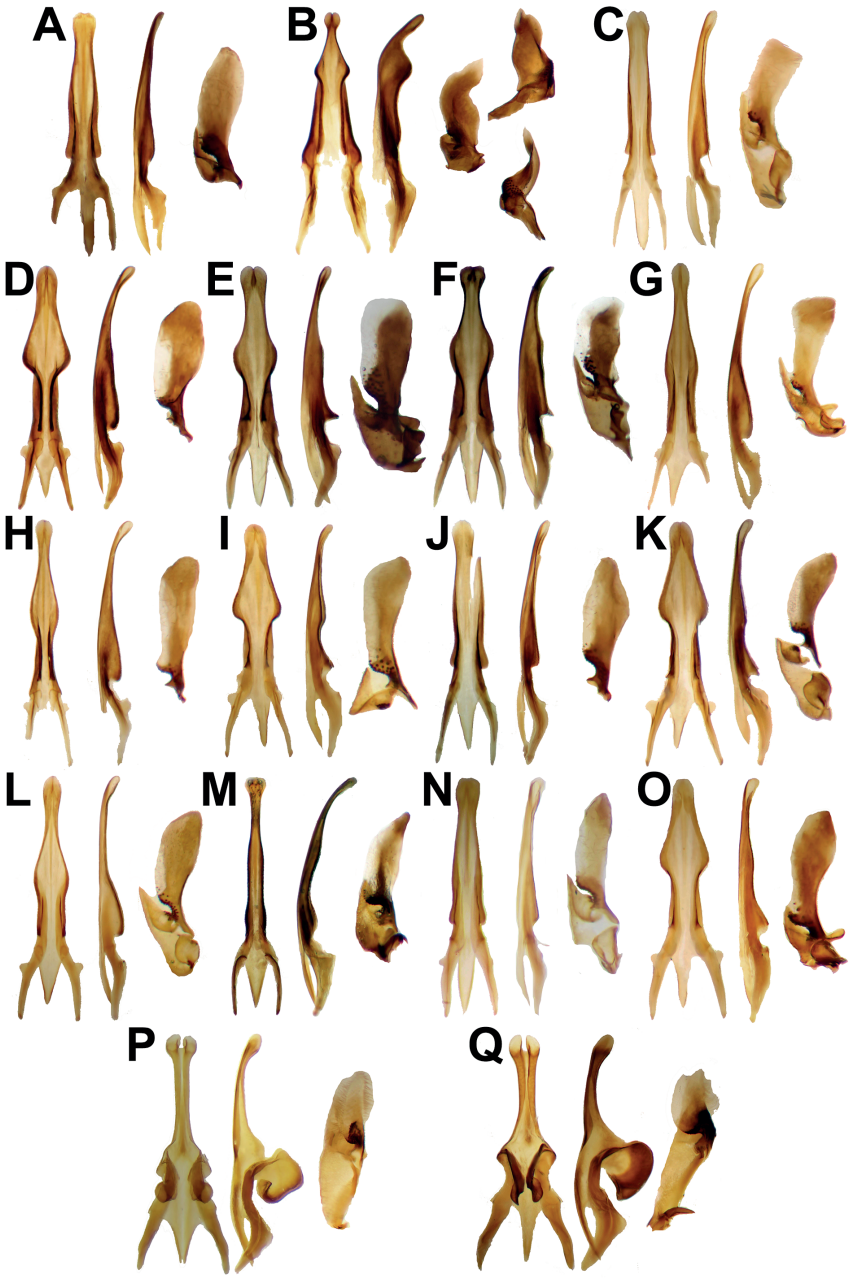


**Fig. 27.** Male genitalia: aedeagus in ventral view, aedeagus in lateral view, digitus. **A**. *Afrepipona angusta* (de Saussure, 1863) from Adi Keyh (MSVI). **B**. *Afrepipona cellularis* sp. nov., holotype from Nyamandhlovu (MSNVE). **C**. *Afrepipona clonata* sp. nov., holotype from Nairobi (MSNVE). **D**. *Afrepipona cuprea* sp. nov., paratype from Malindi (MSVI). **E**. *Afrepipona lamptoensis* Giordani Soika, 1965 from Lamto (AMNH). **F**. *Afrepipona lobulata* sp. nov., holotype from Lubumbashi (AMNH). **G**. *Afrepipona macrocephala* (Gribodo, 1894) from Delagoa (MSNVE). **H**. *Afrepipona meridionalis* sp. nov., holotype from Durban (MSNVE). **I**. *Afrepipona occidentalis* sp. nov., paratype from Lamto (MSNVE). **J**. *Afrepipona punctatissima* sp. nov., holotype from Maralal (MSNVE). **K**. *Afrepipona scabra* sp. nov., paratype from Kabongo (MSNVE). **L**. *Afrepipona segregata* sp. nov., holotype from Tulear (NHMW). **M**. *Afrepipona tertia* Gusenleitner, 2011, holotype from Bangui (OLML). **N**. *Afrepipona ulterior* sp. nov., paratype from Pretoria (MSVI). **O**. *Afrepipona vulcanica* sp. nov., paratype from Mount Kilimanjaro (MSVI). **P**. *Afrepsilon ferrugineoaureum* gen. et sp. nov., paratype from Berea (MSVI). **Q**. *Afrepsilon minor* gen. et gen. et sp. nov., holotype from Mount Kilimanjaro (OLML).

posterior third almost entirely impunctate and finely shagreened; epicnemium and mesosternum finely shagreened and shiny, with sparse fine punctures on mesosternum. Dorsal faces of propodeum with very large and coarse punctures, interspaces mostly reduced to very narrow and sharp raised ridges, anterior third with some flattened interspaces; posterior face densely shagreened with barely visible short striae near mid-line, very few shallow punctures along dorsal margin; metaepisternum and lateral faces of propodeum finely shagreened and with some striae posteriorly converging to form large shallow punctures. T1 finely shagreened and micropunctate, silky shiny, with very sparse and barely visible oblique punctures; T2 similar to T1 but punctures and micropunctures deeper and denser, interspaces more shiny; T3–4 shagreened with coarse oblique punctures; T5–6 shagreened and micropunctate, with very sparse fine punctures; S1 matte and irregularly sculpted; S2 similar to T2 but punctures much larger and deeper, forming a dense preapical series; S3–6 similar to respective tergites but with finer sculpture. Head and mesosoma with pale brownish suberect setae; clypeus, lower third of frons, gena and sides of mesosoma with dense pale pubescence; propodeum covered in very short white pubescence, denser on lateral faces and present only on margins of posterior face, leaving a median bare area, corners with longer setae; metasoma with dense short brownish setae with reddish tinge, T2–6 and S2–5 with preapical series of suberect longer setae.

Coloration. Black; apical half of mandible and last segment of tarsi dark red; following parts pale yellow: large semicircular spots on basal corners of clypeus, small spot in antennocular space, lower half of ocular sinus, inverted heart-shaped spot above interantennal space, lower face of scape, line behind upper eye lobe, laterally abbreviated line on anterior margin of pronotum, narrow posterior margin of pronotum, posterior spot on tegula, parategula, anterior corners of scutellum, anterior half of metanotum, narrow and regular lines at apex of T1–2, apical spot on outer face of fore and mid femora, inner face of fore tibia, basally abbreviated line on outer face of all tibiae, line on basal half of fore basitarsus. Wings subhyaline with slightly infuscate marginal cell.

**Male**

Unknown.

**Distribution**

Central African Republic.

**Remarks**

As already said above, the holotype of this species was originally described as the female of *Afrepipona tertia*.

## *Key to the species of Afrepsilon gen. nov.*

1. Preapical ridge of T2 very short, not forming a distinct lamella and not covering the lamellate apical margin. T3 and following tergites without translucent apical margin, entirely dark and opaque. Body entirely black with thin yellowish markings. Females known only ..... 2
– Preapical ridge of T2 short or long, but at least forming a short lamella covering the basal half of the lamellate apical margin. T3 and some of following tergites with translucent apical margin, forming a shagreened lamella. Body largely marked with red and yellow ..... 3

2. Punctures of clypeus larger and flat-bottomed, interspaces sparsely micropunctate. Vertex more or less evenly punctate, foveae small but distinct and placed in a shallow differentiated depression, separated by more than their diameter. Posterior lobe of tegula depressed and apically rounded. Dorsal carina of propodeum absent, sculpture of dorsal face passing into upper third of posterior

face. Apical lamella of T2 in the middle about as long as half ocellar diameter. Pale yellow markings limited to ocular sinus, gena, metanotum and T1–2 .....***A. aterrimum*** gen. et sp. nov.
– Punctures of clypeus finer and mostly not flat-bottomed, interspaces densely micropunctate. Vertex largely impunctate, foveae weakly developed and not placed in a differentiated area, separated by about their diameter. Posterior lobe of tegula flattened and apically pointed. Dorsal carina of propodeum present, sculpture of dorsal face not passing into posterior face. Apical lamella of T2 in the middle shorter than half ocellar diameter. Pale yellow markings more extensive ***A. pictum*** gen. et sp. nov.

3. Mesoscutum mostly with flattened interspaces. Metanotum almost vertical, short and subrectangular when seen from above. T1–2 with short brownish pubescence, not covering the surface of tergites. Preapical ridge of T2 covering the basal half of lamellate apical margin in the middle .....***A. minor*** gen. et sp. nov.
– Mesoscutum with interspaces reduced to thin ridges. Metanotum distinctly oblique, longer and semicircular when seen from above. T1–2 with longer pubescence partly concealing the surface of tergites, either brownish or golden. Preapical ridge of T2 covering whole lamellate apical margin or nearly so in the middle ..... 4

4. Occipital carina angular in the middle of vertex and posteriorly followed by a shallowly striate depression. Dorsal faces of propodeum smoothly passing into posterior face. Metasoma with sparser brownish pubescence; preapical ridge of T2 completely covering lamellate apical margin in the middle and partly on extreme sides. Mesosoma with yellow and red markings, propodeum with yellow markings surrounded by red .....***A. ferrugineoaureum*** gen. et sp. nov.
– Occipital carina rounded in the middle of vertex and not followed by a depression. Dorsal faces of propodeum weakly but markedly separated from posterior face. Metasoma with denser golden pubescence; preapical ridge of T2 leaving extreme apex of apical margin unconcealed and completely disappearing at extreme sides. Mesosoma with red markings only, propodeum entirely black .....***A. hybridum*** gen. et sp. nov.

### *Checklist of the species of the genus Afrepsilon gen. nov.*

1. *Afrepsilon aterrimum* gen et sp. nov.
2. *Afrepsilon ferrugineoaureum* gen. et sp. nov.
3. *Afrepsilon hybridum* gen et sp. nov.
4. *Afrepsilon minor* gen et sp. nov.
5. *Afrepsilon pictum* gen. et sp. nov.

## Discussion

Although rich in species and subject of tens of contributions published in the last century, our knowledge on the Sub-Saharan Eumeninae is still far from satisfactory, mainly due to the absence of recent and updated monographic works dealing with most genera. Research dealing with Afrotropical Eumeninae published in the past few years (Selis 2020, 2023; Selis & Carpenter 2022, 2023) showed the existence of great inconsistencies both at specific and generic level in the current classification, even in apparently well-known groups such as *Anterhynchium* de Saussure, 1863 and *Synagris* Latreille, 1802. It is therefore no surprise that *Afrepipona*, one of the less studied genera in all of Africa, concealed a large number of undescribed species and taxonomic problems.

This taxonomic revision of the genus *Afrepipona* began as an attempt to identify some specimens, as part of the study of unidentified material housed in the Giordani Soika collection, comparing them with material identified by Giordani Soika himself. The study of that material revealed that Giordani Soika had a very broad concept of *A. macrocephala*, under which he placed specimens belonging to more than

10 different species (e.g., *A. orientalis* in Giordani Soika 1952). Examination of external characters allowed to readily identify several morphospecies, which were then confirmed by dissection of male genitalia whenever male specimens were available. The study of male genitalia, never attempted before in *Afrepipona* and rarely in Eumeninae in general, revealed the existence of evident differences even between closely related species, providing important characters for species identification and information for future phylogenetic studies. Subsequent examination of the species described by Gusenleitner unexpectedly revealed the existence of an undescribed genus, previously misidentified as the female of *Afrepipona tertia*. Examination of other unidentified material from different institutions provided us other four species belonging to this previously unknown group, here described as *Afrepsilon* gen. nov.

All species of *Afrepipona* are known based on one or very few specimens, typically of one sex only, therefore a robust subgeneric or species-groups classification cannot be made in the context of this revision; however, some groups can be tentatively identified:

1) *angusta*, *clonata* and *punctatissima* in Eastern Africa
2) *tertia* and *lamellata* in Western and Central Africa
3) *macrocephala*, *cuprea* and *meridionalis* along the Eastern coast of Africa from Kenya to South Africa, together with *segregata* from Madagascar
4) *lamptoensis*, *lamptula*, *occidentalis* and *orientalis* in the area just south of the Sahara, from Senegal to Ethiopia, *lobulata* in the southernmost part of Democratic Republic of Congo, and *ulterior* in northeastern South Africa and Zimbabwe
5) *scabra* and *vulcanica* in the Equatorial area of Central and Eastern Africa
6) two relatively isolate species, *anomala* from Burundi (maybe related to group 2) and *cellularis* from Zimbabwe (maybe related to group 4)

It is interesting to notice how, in most cases, species from the same group tend to live in different parts of the continent, a clear example of vicariance. The only exceptions are *clonata* and *punctatissima*, both from Kenya, and *lamptoensis* and *occidentalis*, both known from Lamto in Ivory Coast. The same situation is observed in the newly established genus *Afrepsilon* gen. nov., whose known species are vicariant.

Further research in the field and in collections is expected to show the existence of other undescribed species both in *Afrepipona* and in *Afrepsilon* gen nov., especially in poorly sampled areas of Africa, like the southwestern area. In addition to reconstructing a phylogeny of the species, new material and molecular data will be useful for understanding the phylogenetic position of *Afrepipona* and *Afrepsilon* within the subfamily Eumeninae, as neither of them is included in the recently published phylogenies of the subfamily (Bank *et al.* 2017; Piekarski *et al.* 2018). Morphological comparison of *Afrepipona* with all other available genera did not show any evident affinity, but strong similarities were found comparing it with the description and the drawings of *Mitrodynerus* van der Vecht, 1981 published by van der Vecht (1981: 444, 445). *Mitrodynerus* is a monotypic genus endemic from Sri Lanka and shares with *Afrepipona* several aspects in morphology of head and mesosoma (e.g., elongate upper lobe of eye, short and robust mandible, elongate vertex with central cephalic foveae, mid line of propodeum with basal furrow), although it has an apparently very different metasoma; given the past connections of southern India and Sri Lanka with the African continent, and the biogeographic similarities between the two regions, an affinity between the two genera cannot be excluded a priori. Unfortunately, no specimens of *Mitrodynerus* were available for us to perform a thorough morphological comparison of the two taxa. On the other hand, the affinities of *Afrepsilon* with other genera are immediately evident: as already explained in its description, *Afrepsilon* is clearly related to the Indo-Australian genus *Epsilon*. Strong similarities are also found in a small group of aberrant species currently included in the Neotropical genus *Ancistroceroides* de Saussure (e.g., *Ancistroceroides soikai* Grandinete & Carpenter), but often

informally referred to with the unpublished name "*Crassodynerus*" (Garcete-Barrett 2014). This Neotropical group shares with *Epsilon* and *Afrepsilon* several important characters, most notably: very short gena, peculiar sculpture of frons, structure of mouthparts, position of cephalic foveae, squat-bodied mesosoma, propodeal morphology and shortly lamellate apex of T1 and T2. At the same time, "*Crassodynerus*" also presents several characters not observed in *Epsilon* and *Afrepsilon* but common in other genera, like the strongly convex scutellum, the sharply carinate metanotum and propodeum, and the transversely carinate T1. A complete phylogenetic analysis is required to confirm the relationships between *Epsilon*, *Afrepsilon* and "*Crassodynerus*".

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