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Afrachilini trib. nov. of Achilidae from Southern Africa (Hemiptera: Fulgoromorpha: Fulgoroidea)

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Abstract. This paper describes a new species of *Afrachilus* Fennah, 1965 (Hemiptera: Fulgoromorpha) – *Afrachilus montanifynbosensis* sp. nov., from the tribe Afrachilini trib. nov., subfamily Myconinae, found in the West Cape of South Africa. This region is one of the Earth's biologically most diverse areas, also characterized by the phylogenetic antiquity of its invertebrates. A brief discussion is provided on the host plant records of the Afrachilini trib. nov. Morphological peculiarities and diagnostic features of the new tribe are discussed, especially a modification of the head capsule with a subdivision of the frontal area, which is unique in Achilidae, the presence of platellae on the first two metatarsomeres, open cell C1 on tegmen, and the presence of two terminals of CuA on the hind wing, as well as the presence of a subvaginal plate in females, which is another peculiar feature not commonly present among Achilidae. Further distributional data on *Achiplecton stilleri* (Achiplectini) are provided herein.

Keywords. Afrachilini trib. nov., *Afrachilus montanifynbosensis* sp. nov., planthopper, new species, new tribe, distribution, South Africa.

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Introduction

The family Achilidae Stål, 1866 is one of the most widespread families of planthoppers, currently present on all continents, with the exception of Arctica and Antarctica. It is distinguished by its high level of diversity, particularly in the northern regions of the subtropics and across moderate climates. The family encompasses a total of 164 genera and 525 species, classified into 12 extant and 3 extinct tribes. The extinct representatives of this family are found in fossil resins (amber) deposits and as adpression fossils in sedimentary rocks (Bourgoin 2024; Brysz *et al.* 2024; Deng *et al.* 2024). The classification, content and concepts of the groups within the family are subjects of vivid and ongoing discussion

(Brysz *et al.* 2024; Deng *et al.* 2024). The family Achilidae in South Africa has received only limited attention from researchers, with eight genera and nine species documented to date, the majority of which are endemic. The following taxa are representative of the Achilidae family found in South Africa: Apatesoninae Metcalf, 1938: Ilvini Emeljanov, 1991 – *Ilva nigrosignata* Stål, 1866; Mycarini Emeljanov, 1991 – *Katbergella griseobrunnea* Fennah, 1950, *K. bastet* Emeljanov, 2005; Myconinae Fennah, 1950: Plectoderini Fennah, 1950 – *Caffropyrrhyllis bicuspidata bicuspidata* Fennah, 1950 and *Caffropyrrhyllis bicuspidata epona* Fennah, 1958, *Cnidus variegatus* (Stål, 1855), *Phypia albipennis* (Stål, 1855); tribal placement of *Brachypyrrhyllis* Fennah, 1967a, placed once in Plectoderini is questionable. The Myconinae tribe Achiplectini Brysz, Stroiński & Szwedo, 2024 has been added recently, along with *Achiplecton stilleri* Brysz, Stroiński & Szwedo, 2024. The Afrachilini trib. nov. is herein described, with *Afrachilus mirabilis* Fennah, 1965 and *Afrachilus montanifynbosensis* sp. nov., completing the list of taxa already reported. The present contribution serves to broaden our understanding of the taxonomic diversity and morphological disparity of the modern Achilidae, thereby augmenting our knowledge of the endemicity of insects in the Cape Floristic Region (CFR), which is biologically the most diverse area on Earth (Cowling *et al.* 1992; Allsop *et al.* 2014).

Material and methods

Observations and documentation were conducted at the Laboratory of Evolutionary Entomology and Museum of Amber Inclusions at the University of Gdańsk in Gdańsk, and at the Museum and Institute of Zoology at the Polish Academy of Sciences in Warsaw. The observations and documentation were conducted utilising stereoscopic microscopes, namely the Leica M205A equipped with the Leica DM6000 camera, the Olympus SZX10 with the EP50 camera attached, and the Olympus BX51 with the Canon EOS 90D camera. The photographs of the habitus and internal structures were captured using a stereo microscope Leica MZ 16 with an IC3 D camera. The final images were subjected to adjustments using Helicon. The software in question is ver. 5.0, and the Adobe Photoshop software is ver. 7.0. The compositions were rendered using CorelDRAWX7 software. The SEM photographs of uncoated specimens were taken in the Laboratory of Scanning Microscopy, MIZ PAS (Warsaw), using a scanning electron microscope HITACHI S-3400N under low vacuum conditions. In order to reveal the genital structures, it was necessary to excise the whole abdomen of the specimen examined and then clear it for 30 minutes in a warm (50°C) 10% potassium hydroxide (KOH) solution, with the addition of a few drops of black chlorazol (CAS No. 1937-37-7) for the staining of the ectodermic genital structures. This method was based on the technique introduced by Carayon (1969). The dissection and cleansing of the genital structures was conducted in distilled water.

The utilisation of morphological terminology in this context is consistent with the proposals of Anufriev & Emeljanov (1988), Emeljanov (1995), Bartlett *et al.* (2014), and Asche (2015). Differences in terminology used in the Emeljanov's descriptions and interpretations of head topological structures (Emeljanov 1991, 1992; Dmitriev 2009) are as follows: coryphe = vertex auct.; metope = frons auct.; upper portion of 'frons' separated by carinations – acrometope; lower section of 'frons' – eumetope. The nomenclature of the fore wing (tegmen) follows the interpretation proposed by Bourgoin *et al.* (2015) and Stroiński (2020), for hind wings after Anufriev & Emeljanov (1988) and Emeljanov (1991, 1992). The nomenclature of the antennal structures is in accordance with Stroiński *et al.* (2011). The terminology of the genitalia follows proposals of Bourgoin (1993) and Asche (2015) for the female.

The quotations from the examined material labels are verbatim and are enclosed in double quotation marks.

Repositories

Material is deposited in:

MAIG = collection of the Laboratory of Evolutionary Entomology and Museum of Amber Inclusions, University of Gdańsk

SANC = Southern African Collection of Insects, Pretoria
TMP = Ditsong National Museum of Natural History (formerly Transvaal Museum), Pretoria, Southern Africa

Results

Systematics

Class Insecta Linnaeus, 1758
Order Hemiptera Linnaeus, 1758
Suborder Fulgoromorpha Evans, 1946
Superfamily Fulgoroidea Latreille, 1807
Family Achilidae Stål, 1866

Subfamily **Myconinae** Fennah, 1950

Diagnostic characters (modified after Emeljanov 1991)

Coryphe visibly exceeding anterior margin of the eyes. Lora visible in ventral view. Compound eye with an indentation. Metatibial subgenual lateral spine present. Tegmina at rest folded flat with membranes overlapping, postcostal area narrow, vein MP_{3+4} usually not branched. Hind wing vein ScP+R and MP veins never exit basal cell far apart, vein A_2 usually widened apically, never reaches wing margin, median fold usually reaching wing margin.

Composition

Achiplectini Brysz, Stroiński & Szwedo, 2024: [*Achiplecton* Brysz, Stroiński & Szwedo, 2024]; Afrachilini trib. nov. [*Afrachilus* Fennah, 1965]; Amphignomini Emeljanov, 1991: [*Amphignoma* Emeljanov, 1991; †*Amphignokachinia* Brysz & Szwedo, 2023]; Mycarini Emeljanov, 1991: [*Acocarinus* Emeljanov, 1991; *Emeljanocarinus* Bourgoin & Soulier-Perkins, 2006; *Katbergella* Fennah, 1950; *Mycarinus* Emeljanov, 1991; *Mycarus* Emeljanov, 1991]; Myconini Fennah, 1950: [*Ganachilla* Wang & Huang, 1989; *Haicixidia* Wang, 1989; *Myconellus* Fennah, 1950; *Myconus* Stål, 1862]; †Niryasaburniini Wang & Bourgoin, 2024 in Deng *et al.* 2024: [†*Niryasaburnia* Szwedo, 2004, †*Sinuovenaxius* Wang & Bourgoin, 2024 in Deng *et al.* 2024]; Plectoderini Fennah, 1950: [*Abas* Fennah, 1950; *Agandecca* White, 1879; *Akotropis* Matsumura, 1914; *Amblycratus* Uhler, 1895; *Aphypia* Melichar, 1908; *Argeleusa* Kirkaldy, 1906; *Aristyllis* Kirkaldy, 1906; *Ballomarius* Jacobi, 1941; *Bathycephala* Fennah, 1950; *Benella* Kirkaldy, 1906; *Betatropis* Matsumura, 1914; *Caffropyrrhyllis* Fennah, 1950; *Calerda* Signoret, 1863; *Callichlamys* Kirkaldy, 1907; *Callinesia* Kirkaldy, 1907; *Caristianus* Distant, 1916; *Catonia* Uhler, 1895 (subgen. *Catonia* Uhler, 1895; subgen. *Pyren* Fennah, 1950); *Catonoides* Metcalf, 1938; *Cenophron* Fennah, 1969; *Cernea* Williams, 1977; *Chroneba* Stål, 1859; *Cionoderella* Fennah, 1950; *Clidonisma* Fennah, 1969; *Clusivius* Distant, 1917; *Cnidus* Stål, 1866; *Cocottea* Williams, 1977; *Cythna* Kirkaldy, 1906; *Deferunda* Distant, 1912 (subgen. *Deferunda* Distant, 1912; subgen. *Tugaia* Dlabola, 1961); *Epirama* Melichar, 1903; *Epiusana* Fennah, 1950; *Epiusanella* Synave, 1959; *Eudeferunda* Chen, Yang & Wilson, 1989; *Eurynomella* Fennah, 1967b; *Eurynomeus* Kirkaldy, 1906; *Francesca* Kirkaldy, 1906; *Gongistes* Fennah, 1969; *Gordiacea* Metcalf, 1948; *Haitiana* Dozier, 1936; *Hamba* Distant, 1907; *Hemiplectoderes* Fennah, 1950; *Horcomotes* Fennah, 1969; *Indorupex* Fennah, 1965; *Isodaemon* Fennah, 1969; *Juniperthia* O'Brien, 1985; *Kardopocephalus* Metcalf, 1938; *Kawanda* Fennah, 1950; *Kawandella* Synave, 1959; *Kempiana* Muir, 1922; *Koloptera* Metcalf, 1938; *Kosalya* Distant, 1906; *Kurandella* Fennah, 1950; *Lanuvia* Stål, 1866 (subgen. *Lanuvia* Stål, 1866; subgen. *Nulavia* Emeljanov & Gnezdilov, 2023); *Magadha* Distant, 1906; *Magadhaideus* Long & Chen, 2017; *Mahuna* Distant, 1907; *Martorella* Caldwell & Martorell, 1951; *Metalticeps* Dmitriev, 2020; *Mlanjella* Fennah, 1950; *Momar* Fennah, 1950; *Moraballia* Fennah, 1950; *Neoacus* Dmitriev, 2020; *Nephelesia* Fennah, 1965; *Nephelia* Kirkaldy, 1907; *Nyonga* Synave, 1959; *Opsiplanon* Fennah, 1945; *Paracatonia* Fennah, 1950; *Paraclusivius* Fennah,

1950; *Paragandecca* Fennah, 1950; *Parakosalya* Distant, 1917; *Paraphypia* Synave, 1960; *Parargeleusa* Fennah, 1950; *Paratangia* Melichar, 1903; *Phenelia* Kirkaldy, 1906; *Phypia* Stål, 1862; *Plectoderes* Spinola, 1839 (subgen. *Plectoderes* Spinola, 1839; subgen. *Plectoderella* Fennah, 1950); *Plectoderoides* Matsumura, 1914; *Plectoringa* Fennah, 1950; *Prosagandecca* Fennah, 1950; *Pseudhelicoptera* Fowler, 1904; *Pyrrhyllis* Kirkaldy, 1906; *Quadrana* Caldwell & Martorell, 1951; *Remosachilus* Fennah, 1950; *Rhinocolura* Fennah, 1950; *Rhotaloides* Fennah, 1965; *Rupex* Fennah, 1950; *Salemina* Kirkaldy, 1906; *Semibetatropis* Chen, Yang & Wilson, 1989; *Spino* Fennah, 1950; *Symplegadella* Fennah, 1950; *Synecdoche* O'Brien, 1971; *Taloka* Distant, 1907; *Tangina* Melichar, 1903; *Thectoceps* Williams, 1977; *Usana* Distant, 1906; *Williamsus* Özdikmen & Demir, 2007; *Xerbus* O'Brien, 1971; *Zathauma* Fennah, 1949; Rhotalini Fennah, 1950: [*Errada* Walker, 1870; *Errotasa* Emeljanov, 2005; *Hebrotasa* Melichar, 1914: *Rhotala* Walker, 1857; *Taractellus* Metcalf, 1948]; †Waghildini Szwedo, 2006: [†*Waghilde* Szwedo, 2006].

Key to the tribes of Myconinae Fennah, 1950

1. Subantennal carina present on genae; mesonotum mediolateral carinae absent; tegmen RP vein with 1 terminal, CuA with 3 terminals; hind wing median carina not exceeding *mp-cua* crossvein .... **Amphignomini** Emeljanov, 1991
– Subantennal carina absent; mesonotum mediolateral carinae present; tegmen RP vein with more than 1 terminal, CuA never with 3 terminalia; hind wing median carina exceeding *mp-cua* crossvein .. 2

2. Body flattened laterally; coryphe extremely elongated, triangular; tegmen held curved over body, longitudinal veins carinated or frosted depending on wing region .... **Achiplectini** Brysz, Stroiński & Szwedo, 2024
– Body flattened dorso-ventrally; coryphe not extremely elongated, never triangular; tegmen held flat over body, longitudinal veins smooth 3

3. Acrometope with lateral compartments; eumetope with reduced median carina; tibia without lateral spines (including subgenual one); tegmen's cell C1 cell open ..... **Afrachilini** trib. nov.
– Acrometope without lateral compartments; eumetope with full median carina; tibia with at least 1 lateral spine; tegmen's cell C1 cell closed 4

4. Tegmen with vein RP with 3 terminals; hind wing veins ScP+R and MP leaving basal cell from the same point 5
– Tegmen with vein RP with 2 terminals; hind wing veins ScP+R and MP leaving basal cell close to each other but not from the same point 6

5. Pronotum narrowed; tibia with 2–3 lateral spines and a subgenual one; tegmen with vein MP with 6+ terminals, vein CuA with 4 to 5 terminals; hind wing median fold singular .... **Myconini** Fennah, 1950
– Pronotum streamer-like; tibia with 1 lateral spine, subgenual one absent; tegmen with MP vein with 3 terminals, vein CuA with 2 terminals; hind wing median fold branched .... **Plectoderini** Fennah, 1950

6. Coryphe not strongly elongated, anterior margin never rounded; pronotum narrowed; tibia with 1–3 lateral spines (not including the subgenual one); tegmen with vein CuA with 2 terminalia 7
– Coryphe strongly elongated with a rounded anterior margin; pronotum robust, trapezoidal; tibia with 5–7 lateral spines and a subgenual one; tegmen with vein CuA vein with 5+ terminalia 8

7. Tibia with 2–3 lateral spines; tegmen with vein MP with 4 terminalia; hind wing median fold reaching wing margin ..... **Mycarini** Emeljanov, 1991

– Tibia with 1 lateral spine; tegmen with vein MP vein with 3 terminalia; hind wing median fold not reaching wing margin ..... **Niryasaburniini** Wang & Bourgoin, 2024 in Deng *et al.* 2024

8. Body flattened laterally; acrometope with lateral compartments; pronotum not strongly elongated into coryphe, postocular carinae absent; tegmen RP vein with 3+ terminalia, CuA with 5 terminalia; subapical platellae present on apical teeth of metatarsomeres I and II .... **Waghildini** Szwedo, 2006
– Body flattened dorso-ventrally; acrometope without lateral compartments; pronotum strongly elongated into coryphe, postocular carinae present; tegmen RP vein with 2 terminalia, CuA with 2–3 terminalia; subapical platellae present only on apical teeth of metatarsomere II .... **Rhotalini** Fennah, 1950

Tribe **Afrachilini** trib. nov.
urn:lsid:zoobank.org:act:1D612C99-2D0B-47BB-9888-746E967990EE

Type genus

Afrachilus Fennah, 1965, here designated.

Diagnosis

The body distinctly dorso-ventrally flattened, fore wings (tegmina) membranes overlapping. The head capsule with separated acrometope; lateral carinae of frons (eumetope) incomplete, obsolete in lower portion; frons (eumetope) divided by complete transverse carination into upper portion (aneumetope) and lower portion (kateumetope); lateral carinae of postclypeus absent (as in Amphignomini), postclypeus, lora and maxillary plates fused, loral suture partly preserved, anteclypeus wedged in between lora; postclypeus and anteclypeus without median and lateral carinae; ocellus in touch with lower margin of compound eye. The tegmen with open cell C1 (exclusive character among Achilidae); stem MP very long, forked distinctly apicad of claval apex (similar pattern is to be observed in some Plectoderini, stem MP forked beyond claval apex in Achiplectini, Amphignomini and Niryasaburniini); claval fold directed to tornus, not reaching tornal veinlet; clavus open. The hind wing with basal cell (present in Plectoderini, basal cell absent in Achiplectini), median fold simple, not intersecting cubital area (median fold forked and intersecting cubital area in Plectoderini), CuA_1 single (forked in other tribes). The metatibia without subgenual and lateral spines, basimetatarsomere and midmetatarsomere with subapical platellae. The female terminalia with subvaginal plate; bursa copulatrix single pouched, ornamented, without sclerite.

Distribution

Afrotropical region, Southern Africa, the Cape.

Composition

Only type genus so far.

Genus ***Afrachilus*** Fennah, 1965

Afrachilus Fennah, 1965: 81, figs 11–16 [described, female].

Afrachilus – Fennah 1967a: 659, fig. 2a–e [described, male]; 1969: 87, 115. — O'Brien 1971: 4. — Koçak & Kemal 2010: 11. — Dmitriev 2022: 12.

Type species

Afrachilus mirabilis Fennah, 1965; by original designation and monotypy.

Revised diagnosis

Superficially resembles *Haitiana* Dozier, 1936 (Plectoderini) by virtue of its elongated antennae and deep incision on lower margin of its compound eye. The head with acrometope, and eumetope distinctly separated by transverse carination; eumetope subdivided into upper portion (aneumetope) and lower portion (kateumetope), differing in sculpture and coloration. The lora lying almost in same plane as disc of postclypeal part of the face. The rostrum surpassing the mesocoxae but not reaching the metacoxae. Compound eyes deeply incised ventrally. Pronotum with at least one carina placed laterally on each side between eye and tegula; pustulae present between lateral margin of disc and carina collateralis. Metatibiae laterally unarmed, apically with seven or eight teeth.

Male terminalia (after type species *Afrachilus mirabilis* in Fennah 1967a: 659): anal segment of male in dorsal view more than twice as long as broad at apex, lateral margins straight, diverging distally, apical margin truncate or very shallowly convex, anal foramen at apex, anal style long, longer than pygofer, in dorsal view about twice as long as broad at widest part, in lateral view depressed. Pygofer relatively short, dorsolateral angles produced caudad; no medioventral process developed. Aedeagus long, subequal in width throughout, shallowly curved upward distad, tapering to a point at apex; a pair of slender spinose processes emerging ventrolaterally, directed dorsocaudad. Genital styles rather more than twice as long as broad, ventral margin convex, apical margin truncate, dorsal margin thickly callused, produced laterad at one quarter from apex in a short spinose process, and mesad in a broad thumb-shaped lobe.

Diversity and distribution

The genus *Afrachilus* and its two known so far species: *A. mirabilis* Fennah, 1965 and *A. montanifynbosensis* sp. nov. are known from localities in Western and Eastern Cape Province, Republic of Southern Africa.

Afrachilus montanifynbosensis sp. nov.
urn:lsid:zoobank.org:act:EDA72A64-A1E4-44D3-8C7B-9D27F50BDCA2
Figs 1–11

Diagnosis

Smaller than *Afrachilus mirabilis*; anterior margin of head arcuate (anterior margin of the head more acute in *A. mirabilis*); mesonotum with median carina present in anterior and median section (anterior carina present only in median section of mesonotum in *A. mirabilis*), metatibio-tarsal formula is 8 : 8 : 8 (metatibio-tarsal formula 9 : 9 : 9 in *A. mirabilis*); subvaginal plate subquadrate (subvaginal plate subrectangular with distinctly rounded apex in *A. mirabilis*).

Etymology

Specific epithet derived from the habitat wherefrom the examined material originates.

Type material

Holotype

SOUTH AFRICA • ♀; "Western Cape, Gifberg Pass summit, Vanrhynsdorp; 31°45′ S, 18°42′ E; 360 m a.s.l.; 9 Oct. 2002; M. Stiller leg.; sweeping, low grass, forbs & restios, at FM tower; National Coll., of Insects, Pretoria, S. Afr."; SANC.

Paratypes (9 ♀♀)

SOUTH AFRICA – **Northern Cape** • 1 ♀; "Northern Cape, Vanrhyns Pass, summit view, Nieuwoudtville; 31°22′ S, 19°01′ E; 7.x.2002; 832 m a.s.l.; leg. M. Stiller leg.; Sweeping grass, forbs, shrubs, around parking, area at view point; National Coll. of Insects, Pretoria, S. Afr."; SANC • 1 ♀; "Van

RHYN'S-, PASS; 4-5.11'33; leg. G. van Son"; TMP. – **Western Cape** • 1 ♀; same data as for holotype; SANC • 1 ♀; "Western Cape, Prov. Wiedouw, Farm foot, Gifberg Pass, SE Vanrhynsdorp; 31°44′ S, 18°46′ E; 3–10.x.Oct. 2002; 120 m; leg. M. Stiller; swept off *Dicerothamnus rhinocerotis*, Asteraceae; National Coll. of Insects, Pretoria, S. Afr."; SANC • 1 ♀; same data as for preceding; MAIG • 1 ♀; same data as for preceding; "Swept off *Nylandtia scoparia*, Polygalaceae; National Coll. of Insects, Pretoria, S. Afr."; SANC • 1 ♀; same data as for preceding; "Swept off *Diosma hirsute*, Rutaceae; National Coll. of Insects, Pretoria, S. Afr."; SANC • 1 ♀; same data as for preceding; "Swept off, *Galenia africana*, AIZOACEAE; National Coll. of Insects, Pretoria, S. Afr.; SANC • 1 ♀; "Western Cape, Prov. Driehoek, Farm Cedarberg, SE of Clanwilliam; 32°26′ S, 18°13′ E; 1200 m; 13.x.2002; leg. M. Stiller leg.; Swept off *Leucadendron pubescens*, Proteaceae; National Coll. of Insects, Pretoria, S. Afr."; SANC.

Note

The coordinates on the label of the specimen collected 13 Oct. 2002 are wrong. The correct coordinates are 32°26′ S, 19°11′ E (M. Stiller pers. com.)

Description

Coloration (Fig. 1A–F). General coloration brownish-ochraceous, with darker anterior part of body: head, pronotum and mesonotum. Vertex with anterior section dirty apricot hue to light penny brown, median and posterior section dark blackish-brown; lateral margins in posterior section ivory, two ivory stains at anterolateral angles, posterior margin ivory medially to brownish posteriad; acrometope caramel, aneumetope light caramel, kateumetope ivory, with two light tawny fuzzy stains; upper portion of postclypeus ivory, lower portion tawny, anteclypeus tawny mediad, lighter laterad; lora ivory in upper section, more tawny in lower section, margins light caramel; lateral portion of head capsule and antennal fovea ivory, scapus ivory at base with caramel ring in upper section, pedicel dark caramel. Pronotum with disc blackish in anterior section, penny brown near posterior margin; median and lateral carinae of pronotum ivory, lateral portions of pronotum blackish-penny brown posteriad, pustulae ivory; pectoral lobes light caramel dorsally to ivory ventrad. Mesonotum, tar-black, with five elongated stains of a burnt orange hue located along the posterior margins and at the tip of the scutellum. Tegmina semitransparent, veins with alternation of walnut brownish-ivory and whitish hues, costal area and anterior apical cells with oblique, alternate tawny – whitish transparent stains, membrane light tawny, fourth apical cell with irregular chocolate colored elongated spot. Legs dark straw to tawny, apical teeth of metatibia and basi- and midmetatarsomere dark chocolate-blackish. Abdominal sternites ranging from dark-straw to light tawny laterad, median portions chockolate brown, posterior margins ivory to light straw; median section of pregenital sternite with subtriangular caramel stain and caramel lateral portions; subvaginal plate dirty ivory; gonoplacs light tawny, anal tube light tawny-caramel.

Measurements. Body with wings 4.2–5.4 mm in length.

Appearance. Body distinctly dorso-ventrally flattened, tegminal membranes overlapping. Head with compound eyes, slightly narrower than pronotum. Coryphe (vertex) with same wide at posterior and at anterior lateral angles and 1.46–1.63 times as wide as long in mid line slated.

Head (Figs 1A–D, 2A–F, 3A–F, 4A–F). Anterior margin of coryphe angulately convex, lateral margins sinusoidal, converging anteriad; posterior margin slightly concave, elevated, reaching ⅔ of the compound eye length; all margins carinate; disc of vertex concave, divergently strigate, with median carina almost reaching anterior margin. The acrometope with two lateral compartments, elongately triangular, lower margin of acrometope distinctly arcuate, almost fused with upper carina between acrometope and coryphe (vertex). The frons (eumetope) divided by transverse carination; upper portion, aneumetope with subvertically costulate sculpture; lower portion, kateumetope with strigate sculpture; kateumetope with arcuate incision above the frontoclypeal suture, and median eminence, prolonged to postclypeus.

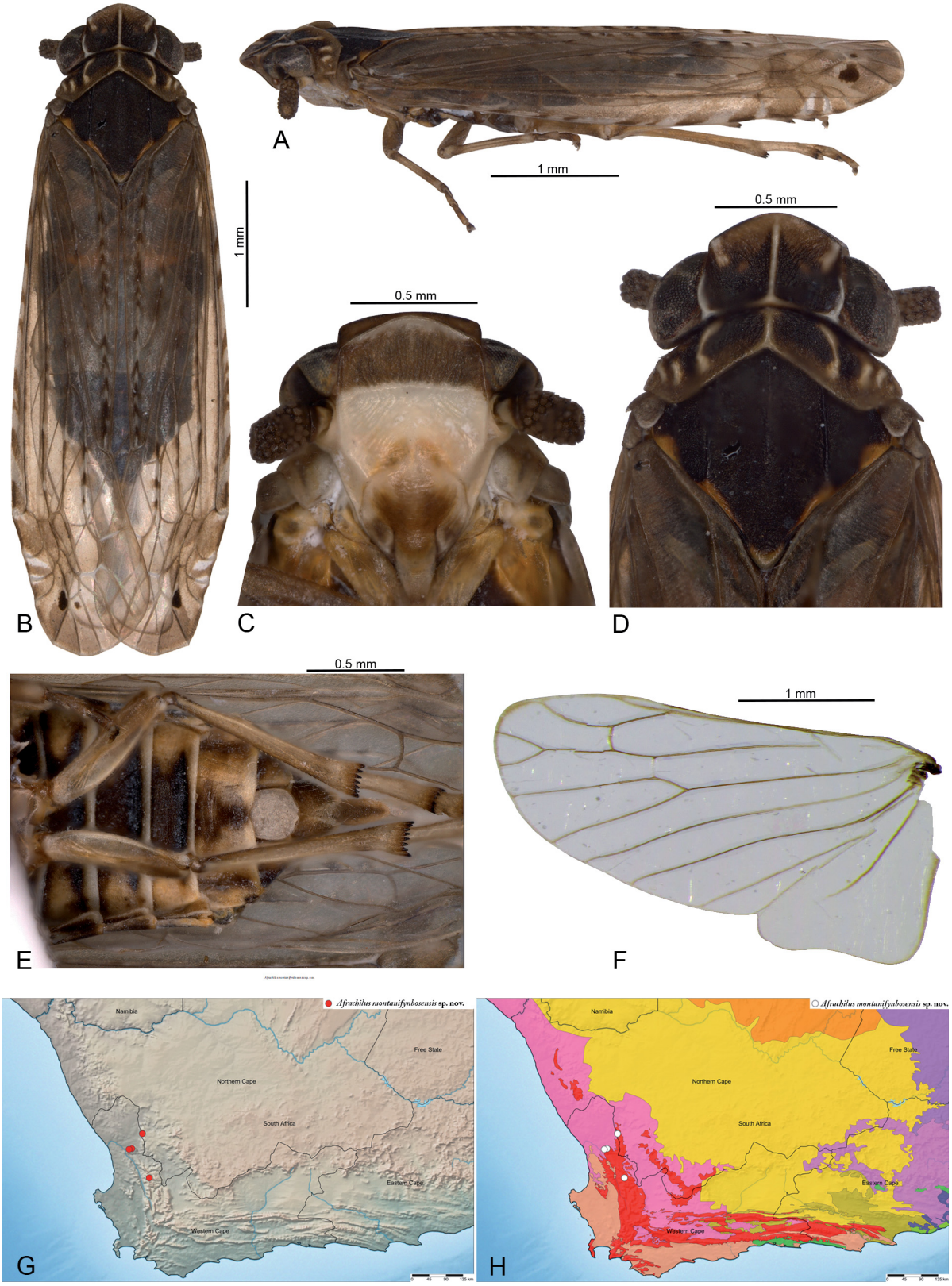

Fig. 1. *Afrachilus montanifynbosensis* sp. nov., holotype, ♀ (SANC). **A**. Habitus, lateral view. **B**. Habitus, dorsal view. **C**. Anterior part of body, frontal view. **D**. Anterior part of body, dorsal view. **E**. Hind legs and abdomen, ventral view. **F**. Hind wing. **G**. Distribution map, physical. **H**. Distribution map, ecoregions.

The genal suture indistinct, posterior margins of lora marked by coloration. The frontoclypeal suture angulately-arcuate. The postclypeus subhexagonal, convex, weakly and sparsely striolate; the anteclypeus about twice as long as wide at base, more convex in upper section, the clypellus elongately triangular. The rostrum reaching to the anterior margin of metacoxae, apical segment shorter than subapical, apical segment more than 3 times as long as wide. The compound eye kidney-like, with median indentation to half of its width, without subocular callosity; lateral ocellus adjacent to compound eye, behind its anterior

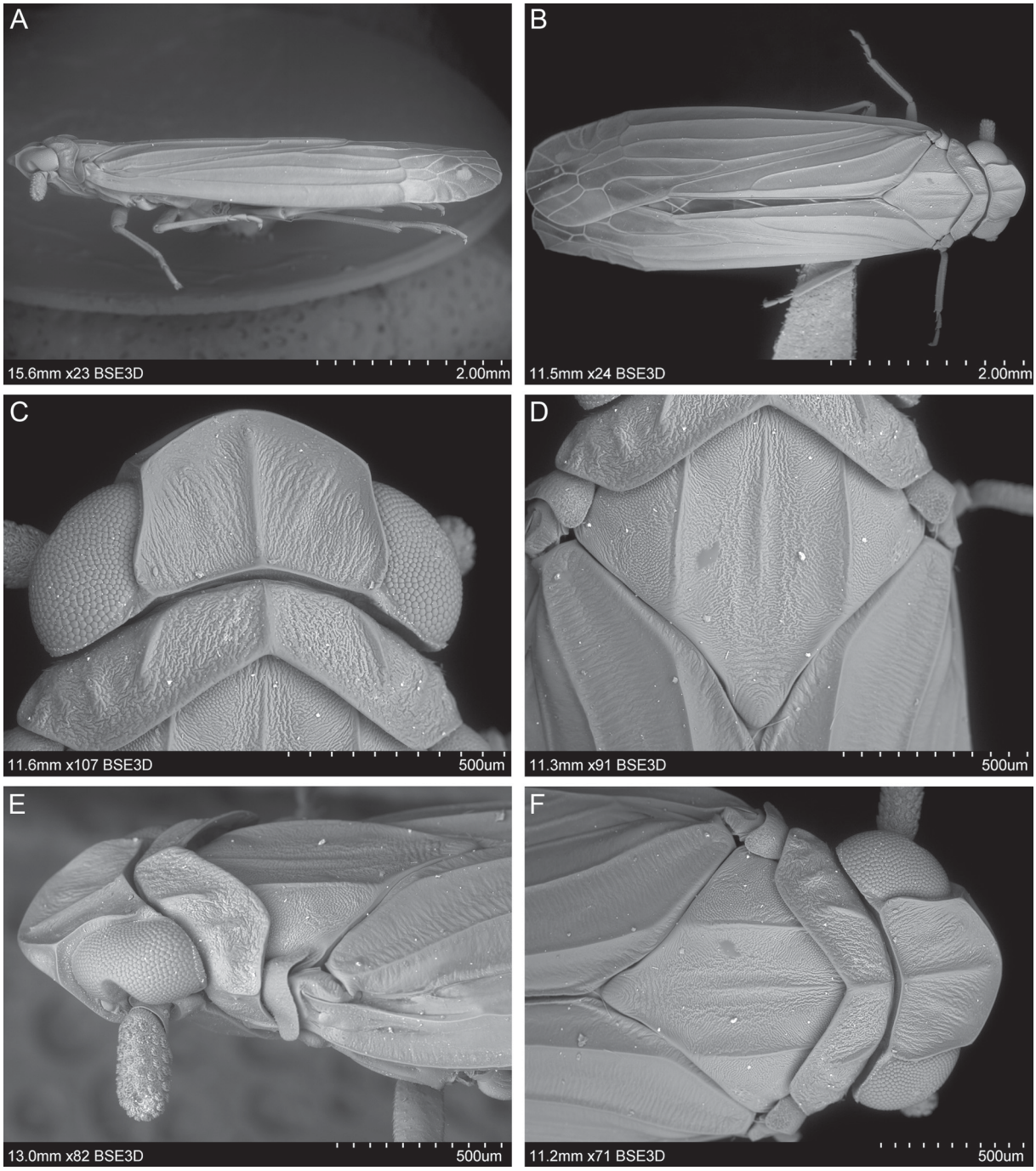

Fig. 2. *Afrachilus montanifynbosensis* sp. nov., holotype, ♀ (SANC), SEM photographs. **A**. Habitus, lateral view. **B**. Habitus, dorsal view. **C**. Head and pronotum, dorsal view. **D**. Mesonotum, dorsal view. **E**. Anterior part of body, latero-dorsal view. **F**. Anterior part of body, dorsal view.

margin. Base of antenna elevated below compound eye, adjacent to it; scapus short; pedicel with plate organs with elevated spikes on its whole length; flagellum about as long as pedicel.

Pronotum (Figs 1B, D, 2B–C, E–F, 3C, F). Slightly wider than head with compound eyes, measurements: total length in middle 0.15–0.16 mm. Disc of pronotum more than twice as wide as long in middle, median carina complete, the lateral carinae of disc not reaching posterior margin, diverging posteriad,

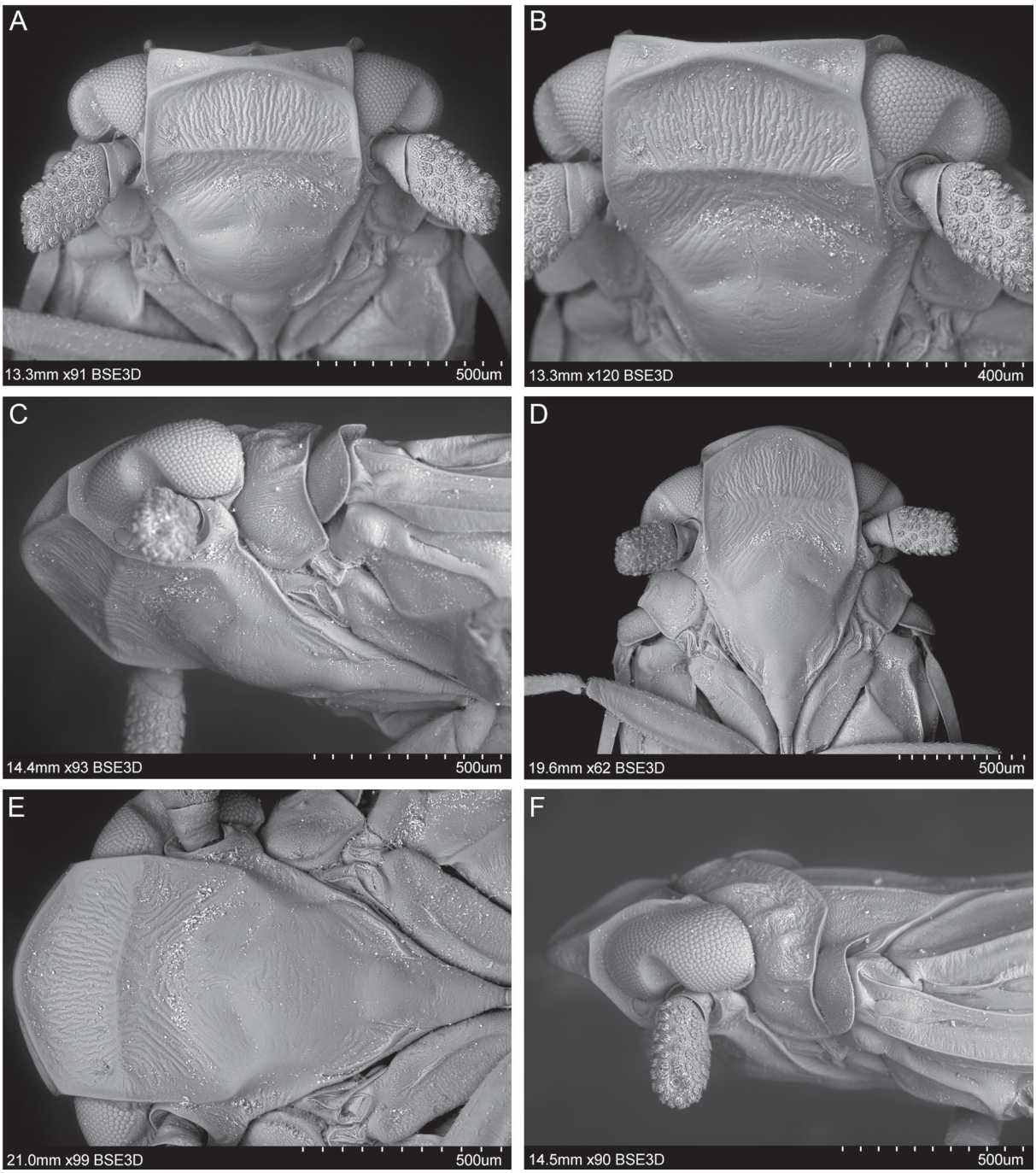

Fig. 3. *Afrachilus montanifynbosensis* sp. nov., holotype, ♀ (SANC), SEM photographs. **A**. Head, frontal view. **B**. Head, fronto-lateral view. **C**. Head, ventro-lateral view. **D**. Head, fronto-ventral view. **E**. Head, ventral view. **F**. Anterior part of body, lateral view.

disc of pronotum rugulate; lateral portions declivous, rugulate, with pustules, laterad of lateral carinae of disc; carina collateralis not distinct behind the compound eyes, reaching posterior margin, area pectoralis (‘pronotal lobe’ auct.) shagreened, minutely granulate, anteroventral margin slightly thickened; posterior margin slightly elevated, in higher plane than disc of vertex (coryphe).

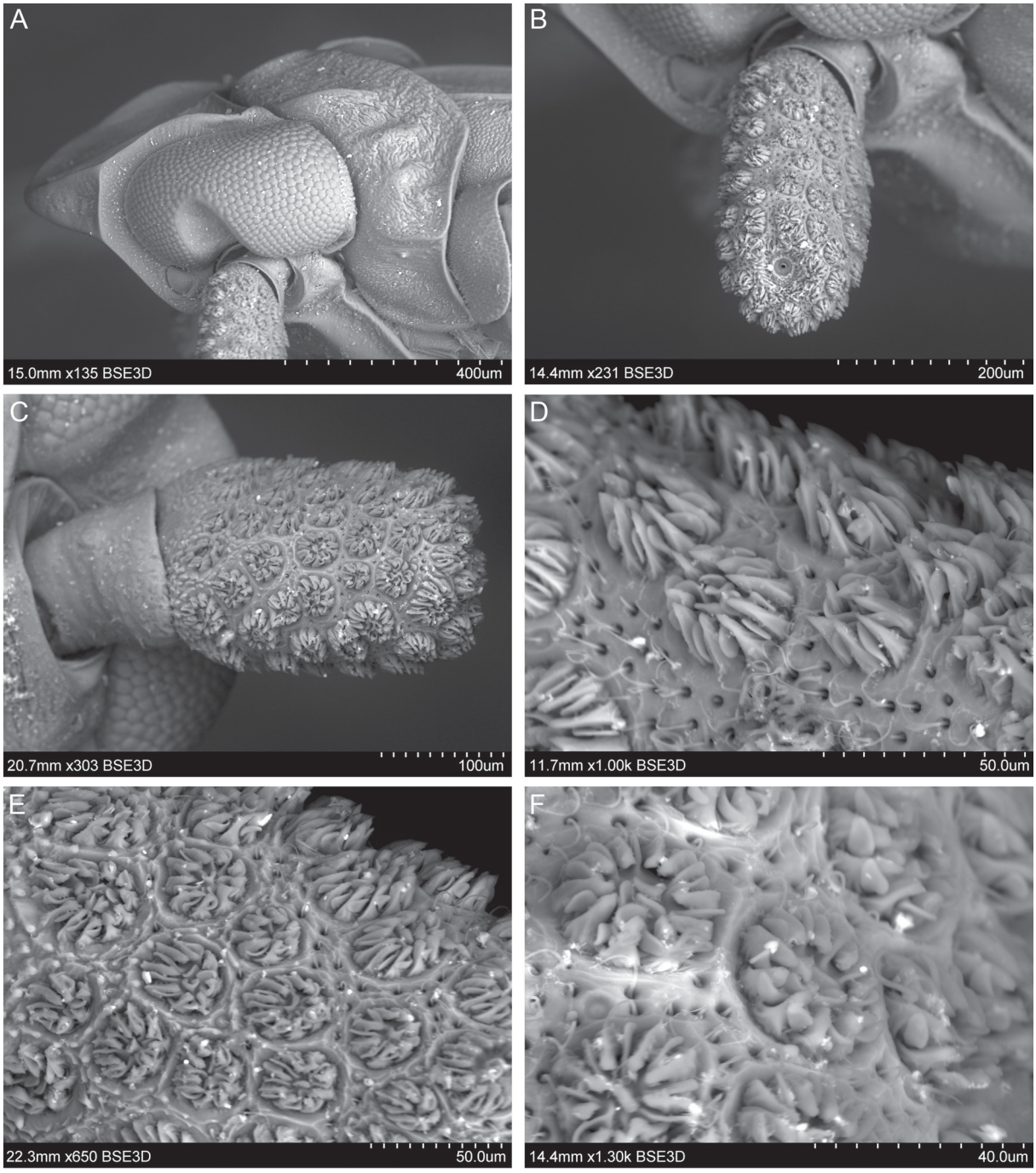

Fig. 4. *Afrachilus montanifynbosensis* sp. nov., holotype, ♀ (SANC), SEM photographs. **A**. Compound eyes and antenna, lateral view. **B**. Pedicel, latero-dorsal view. **C**. Antenna, frontal view. **D–F**. Plate organs on the pedicel.

Mesonotum (Figs 1B, D, 2B, D–F). Measurements: length 0.9–1.1 mm, width 0.87–1.03 mm at the level of lateral angles, diamond-shaped, disc flattened, in slightly lower plane than disc of pronotum; disc of pronotum reticulate-scabrous-verruculate anteriorly, rugulate between lateral carinae, transversely wrinkled apicad, near mesoscutellum, the mesoscutellum wrinkled; the lateral margins of mesonotum declivous, reticulate-scabrous-verruculate; the median carina almost complete, obsolete in posterior portion; the lateral carinae subparallel, reaching posterior margin of mesonotum.

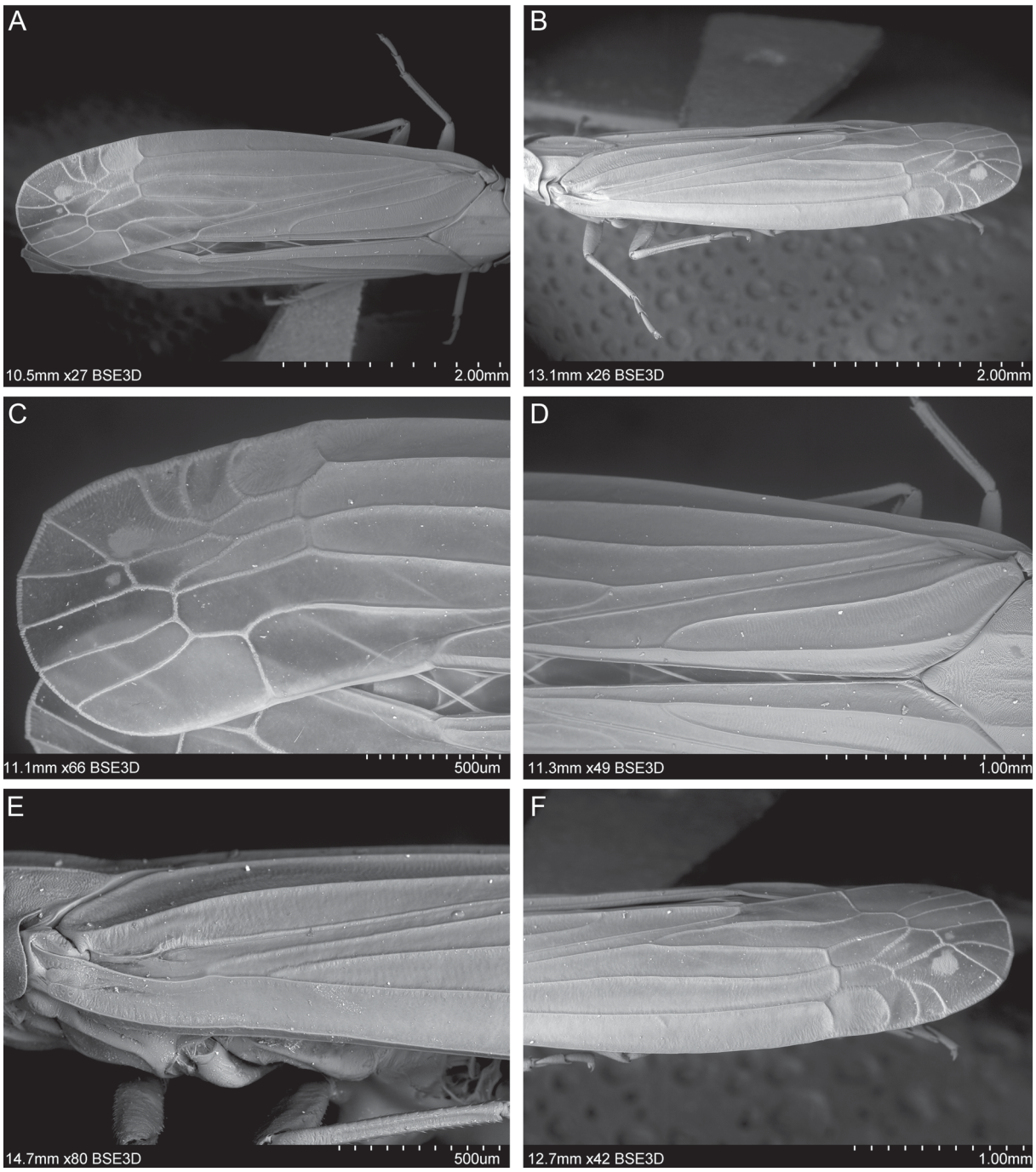

Fig. 5. *Afrachilus montanifynbosensis* sp. nov., holotype, ♀ (SANC), SEM photographs. **A**. Tegmen (forewing), dorsal view. **B**. Tegmen (forewing), lateral view. **C**. Apical part of tegmen. **D**–**E**. Basal part of tegmen. **F**. Apical part of tegmen.

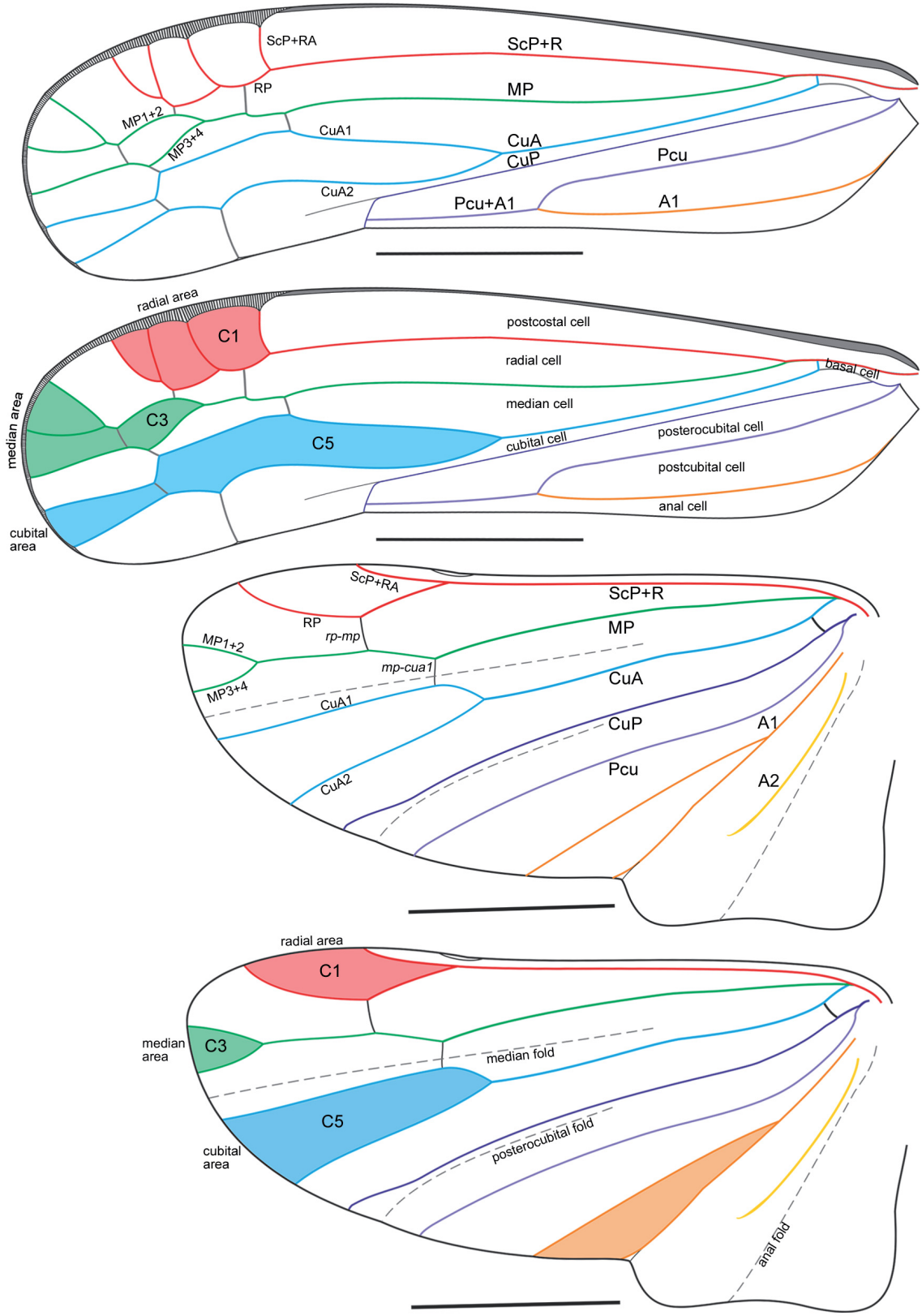

Fig. 6. *Afrachilus montanifynbosensis* sp. nov., holotype, ♀ (SANC), drawings. **A**. Tegmen, venation pattern. **B**. Tegmen with areas marked. **C**. Hing wing, venation pattern. **D**. Hing wing with areas marked.

Tegula. Short, ecarinate.

Legs (Figs 1A, E, 7C–F). The metacoxa with distinct conical meracanthus; metafemur shorter than metatibia, laterally flattened. The metaleg circular in cross section, widening apicad, no subgenual or lateral spine, apical row of 8 teeth in line; basimetatarsomere the longest, longer than combined length

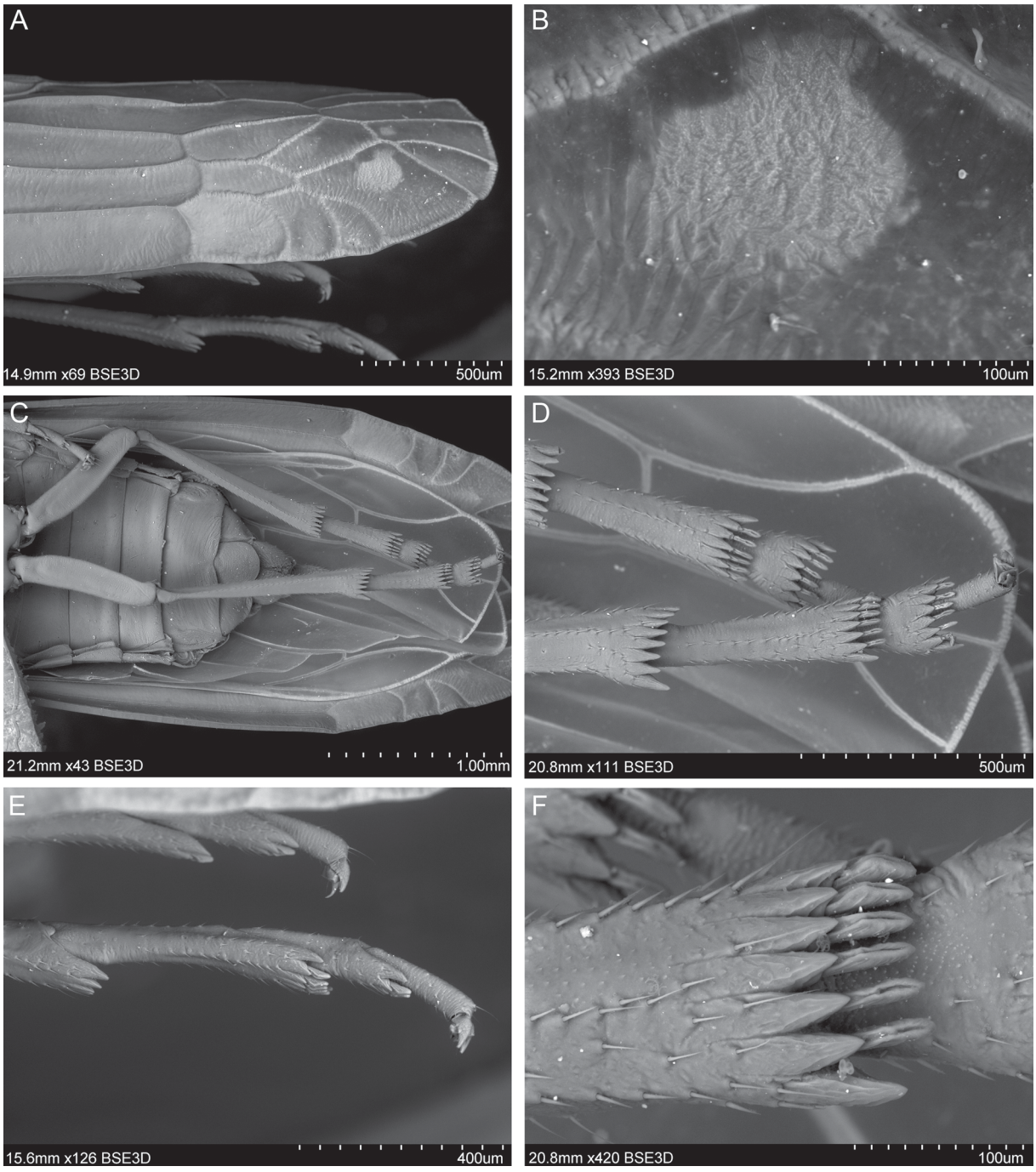

Fig. 7. *Afrachilus montanifynbosensis* sp. nov., holotype, ♀ (SANC), SEM photographs. **A**. Apical part of tegmen with sclerotized dot, lateral view. **B**. Sclerotized dot on tegmen, dorsal view. **C**. Hind legs, ventral view. **D**. Apical part of metatibia and metatarsomeres, ventral view. **E**. Apical part of metatibia and metatarsomeres, lateral view. **F**. Apical teeth and platellae on the basimetatarsomere, ventral view.

of mid- and apical metatarsomeres, with 8 apical teeth with subapical platellae, except the lateral ones; midmetatarsomere about as long as apical metatarsomere, with 8 apical teeth with subapical platellae, except the lateral ones; apical metatarsomere with small claws and wide pulvillus.

Tegmen (Figs 1A–B, 2A–B, 5A–F, 6A–C, 7A–B). Measurements 4.15–4.45 mm long, 0.95–1.05 mm wide at apex of clavus; the costal margin slightly thickened, merely curved at base; anteroapical angle obtusely

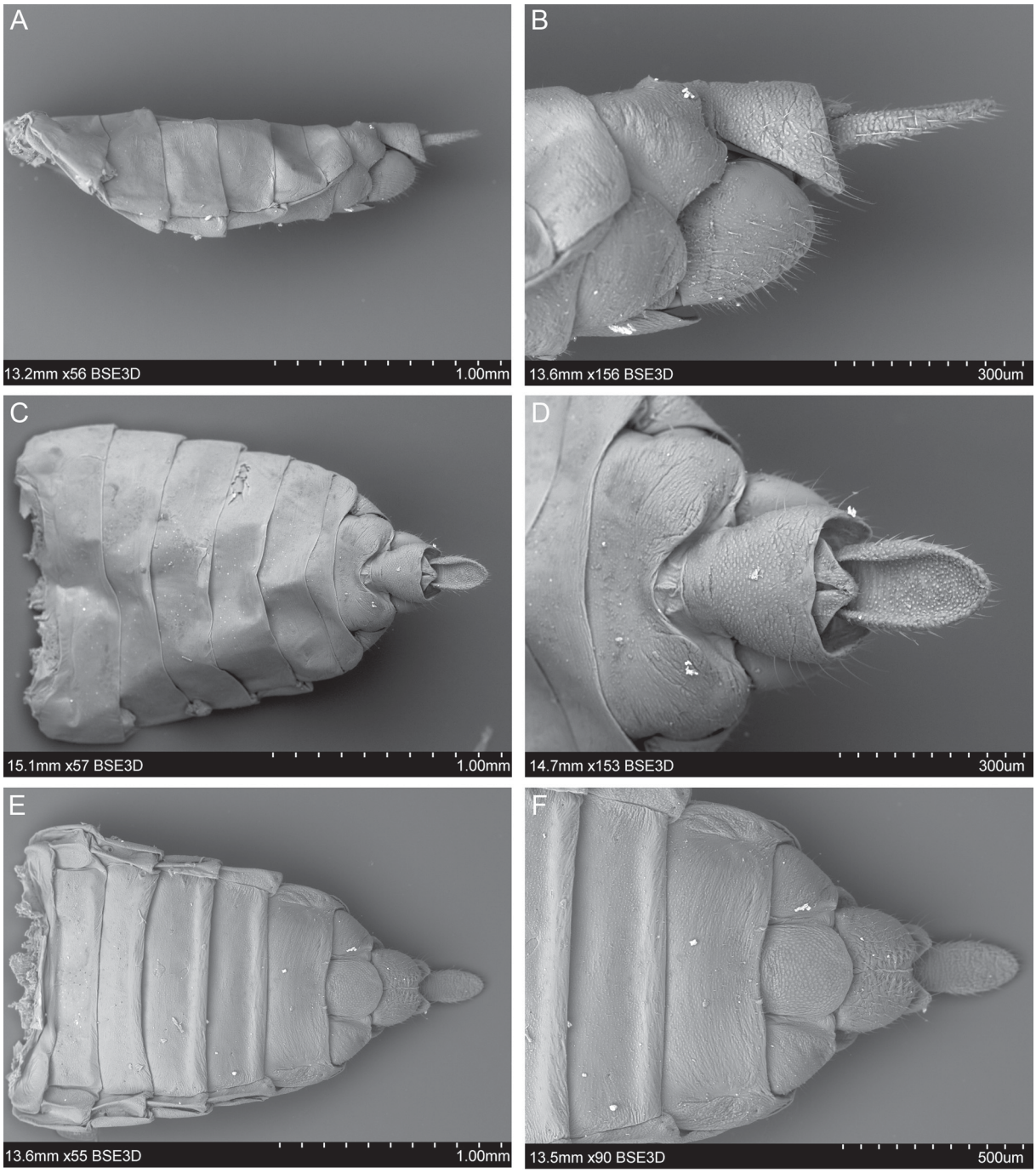

Fig. 8. *Afrachilus montanifynbosensis* sp. nov., holotype, ♀ (SANC), SEM photographs. **A**. Abdomen and terminalia, lateral view. **B**. Terminalia, lateral view. **C**. Abdomen and terminalia, dorsal view. **D**. Terminalia, dorsal view. **E**. Abdomen and terminalia, ventral view. **F**. Terminalia, ventral view.

rounded, apical margin widely rounded, posteroapical angle obtusely rounded, tornus straight, claval margin straight, the angle between A_2 and tornus ca 165°; apex of clavus not reaching ⅔ of tegmen length; the basal cell narrow, about 8 times as long as wide; the stem ScP+R+MP leaving basal cell at same point, with a short stalk, less than half of the basal cell length; the stem ScP+R subparallel to costal margin, merely diverging mediad, first branching of ScP+RA distinctly apicad of apex of clavus, slightly apicad of *mp-cua* veinlet; branch RP with arcuate base, reaching margin with 3 terminals, basad of anteroapical angle of tegmen; the stem MP slightly sigmoid, forked on membrane, distinctly apicad of apex of clavus, apicad of ScP+R forking, branch MP_{1+2} arcuate, with two terminals reaching margin at anteroapical angle, branch MP_{3+4} not forked, reaching apical margin; the stem CuA straight, parallel to claval margin, forked slightly apicad of claval veins junction; branch CuA_1 directed mediad, then, after *mp-cua* veinlet, posteriad with shift on membrane reaching margin basad of posteroapical angle; branch CuA_2, sigmoid, then shifted on membrane, reaching margin at posteroapical angle; claval vein CuP distinct, claval fold prolonged on membrane, not reaching veinlet *icu*; claval veins Pcu and A_1 fused apicad of half of clavus length, apicad of ⅔ of tegmen length; apex of clavus obtuse; appendix with transverse wrinkles, wider in anterior and apical portion of membrane; postcostal and radial cell of similar width; cell C1 open, call C3 short, closed with apical *imp* veinlet on membrane; cell C5 long, nearly 4 times as long as cell C3, closed by apical veinlet *icu* on membrane; first veinlet *rp-mp* on membrane, apicad of claval apex, second veinlet $rp\text{-}mp_{1+2}$ short, apicad of stem MP forking; first veinlet $mp\text{-}cua_1$, apicad of apex of clavus, slightly basad of stem ScP+R forking; sclerotised macula on fourth apical cell.

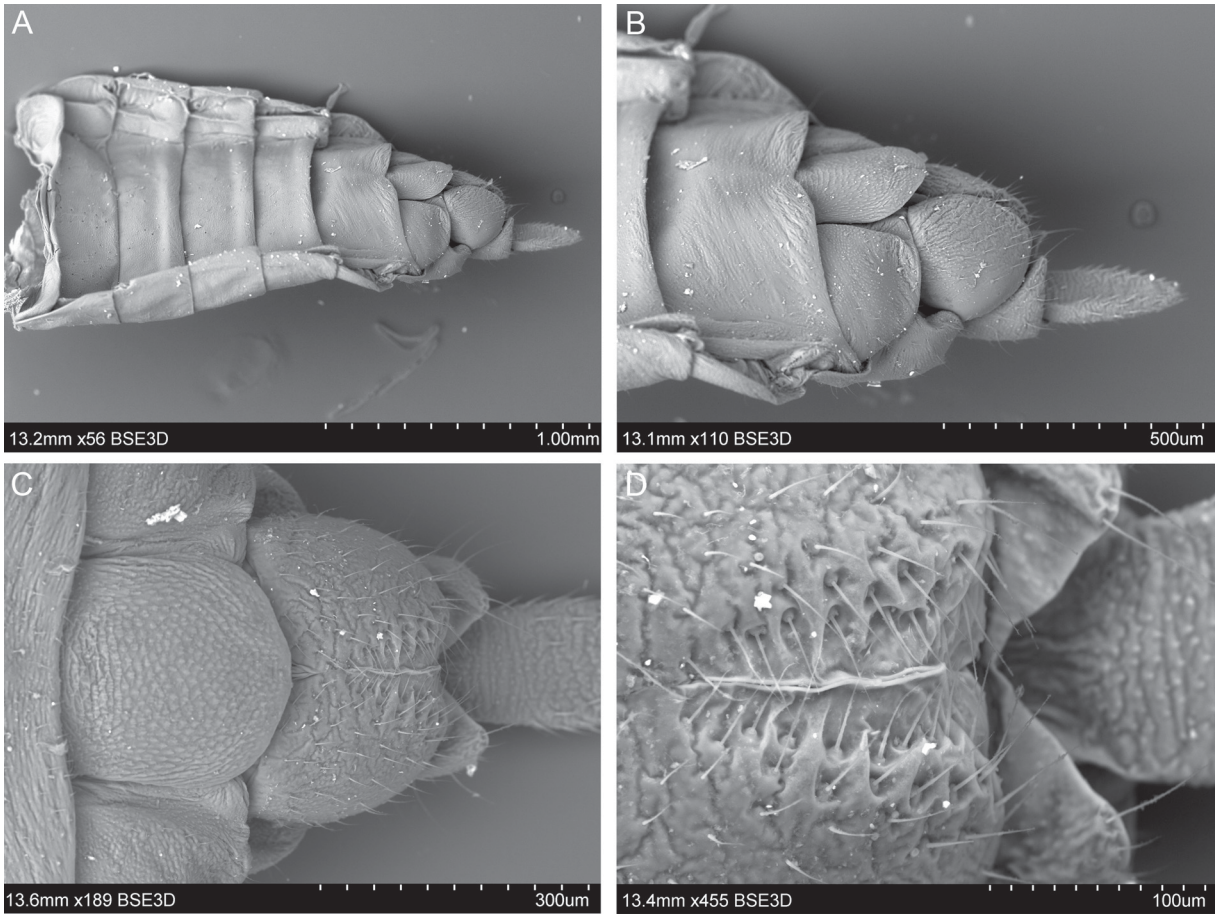

Fig. 9. *Afrachilus montanifynbosensis* sp. nov., holotype, ♀ (SANC), SEM photographs. **A**. Abdomen and terminalia, latero-ventral view. **B**. Terminalia, latero-ventral view. **C**. Terminalia, ventral view. **D**. Median part of gonoplac, ventral view.

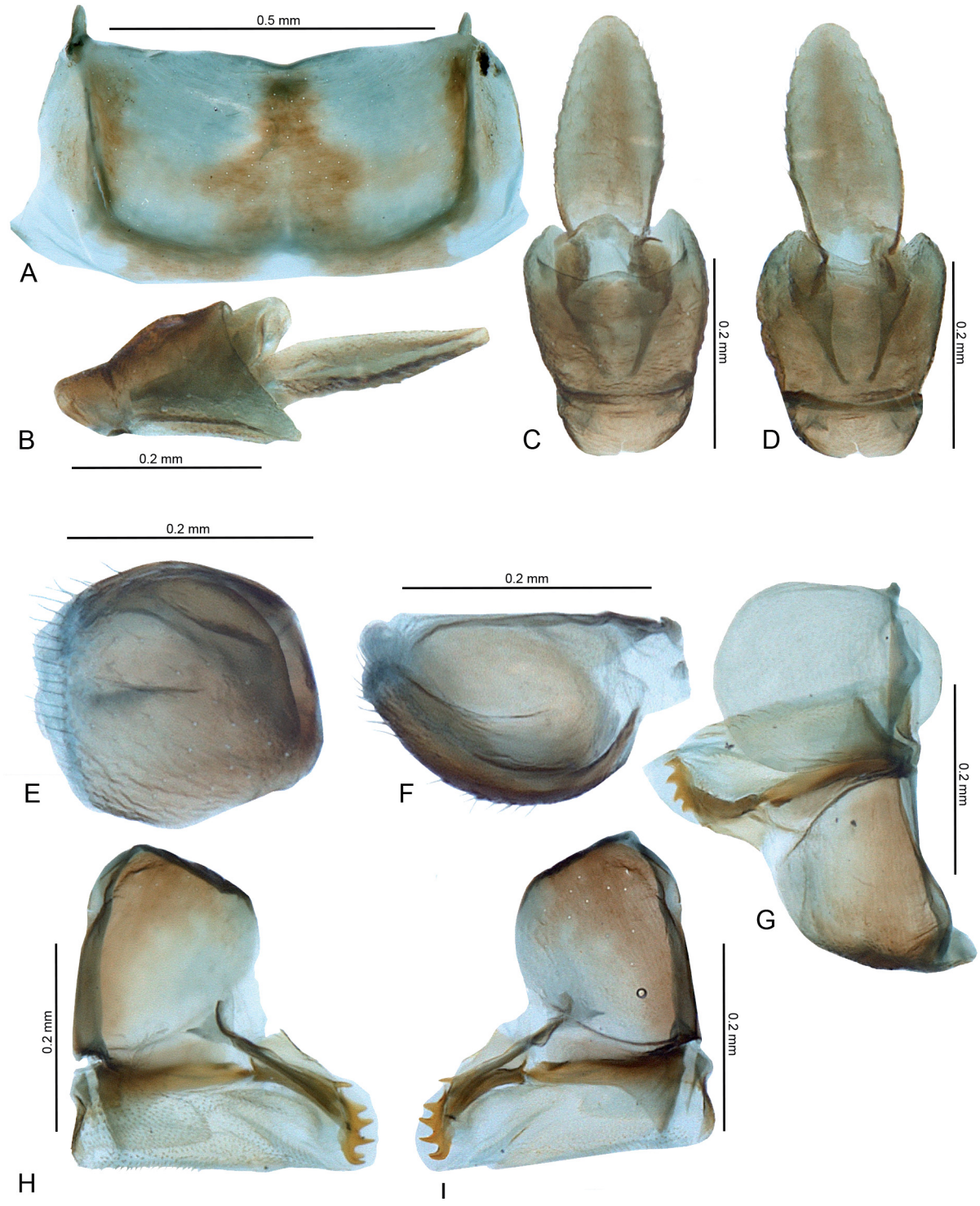

Fig. 10. *Afrachilus montanifynbosensis* sp. nov., holotype, ♀ (SANC). **A**. Pregenital sternit (flattened) ventral view. **B**. Anal tube, lateral view. **C**. Anal tube, dorsal view. **D**. Anal tube, ventral view. **E**. Gonoplac, lateral view. **F**. Gonoplac, dorsal view. **G**. Subvaginal plate and gonapophysis VIII with endogonocoxal process, ventral view. **H**. Gonapophysis VIII and endogonocoxal process, lateral external view. **I**. Gonapophysis VIII and endogonocoxal process, lateral internal view.

Hing wing (Figs 1F, 6D). Membranous, shorter than fore wing, with distinct anal lobe, separated by incision; costal margin arcuate at base then almost straight, with the small connecting apparatus lobe at level of ScP+R forking; basal cell present; the stems ScP+R and MP leaving basal cell at point, the stem ScP+R parallel to costal margin, forked in apicad ⅓ of hind wing length; branch ScP+RA short reaching margin well basad of apex; branch RP shifted mediad, then curved, reaching margin basad of hind wing apex; the stem MP straight, diverging mediad, then shifted, reaching margin with two terminals, forked well apicad of veinlets *rp-mp* and *mp-cua*$_1$; stem CuA forked slightly apicad of half of hind wing length, with the two terminals CuA_1 and CuA_2 reaching margin; stem CuP slightly sinuate, diverging in apical section from postcubital fold; Pcu sinuate, A_1 forked at ⅓ of its length, A_2 arcuate, slightly thickened, not reaching margin of anal lobe, median field present, intersecting *mp-cua*$_1$ veinlet; cell C1 open, longer than cell C3; cell C3 subtriangular, slightly longer than wide; cell C5 the largest and the longest, open, with margins distinctly diverging towards margin.

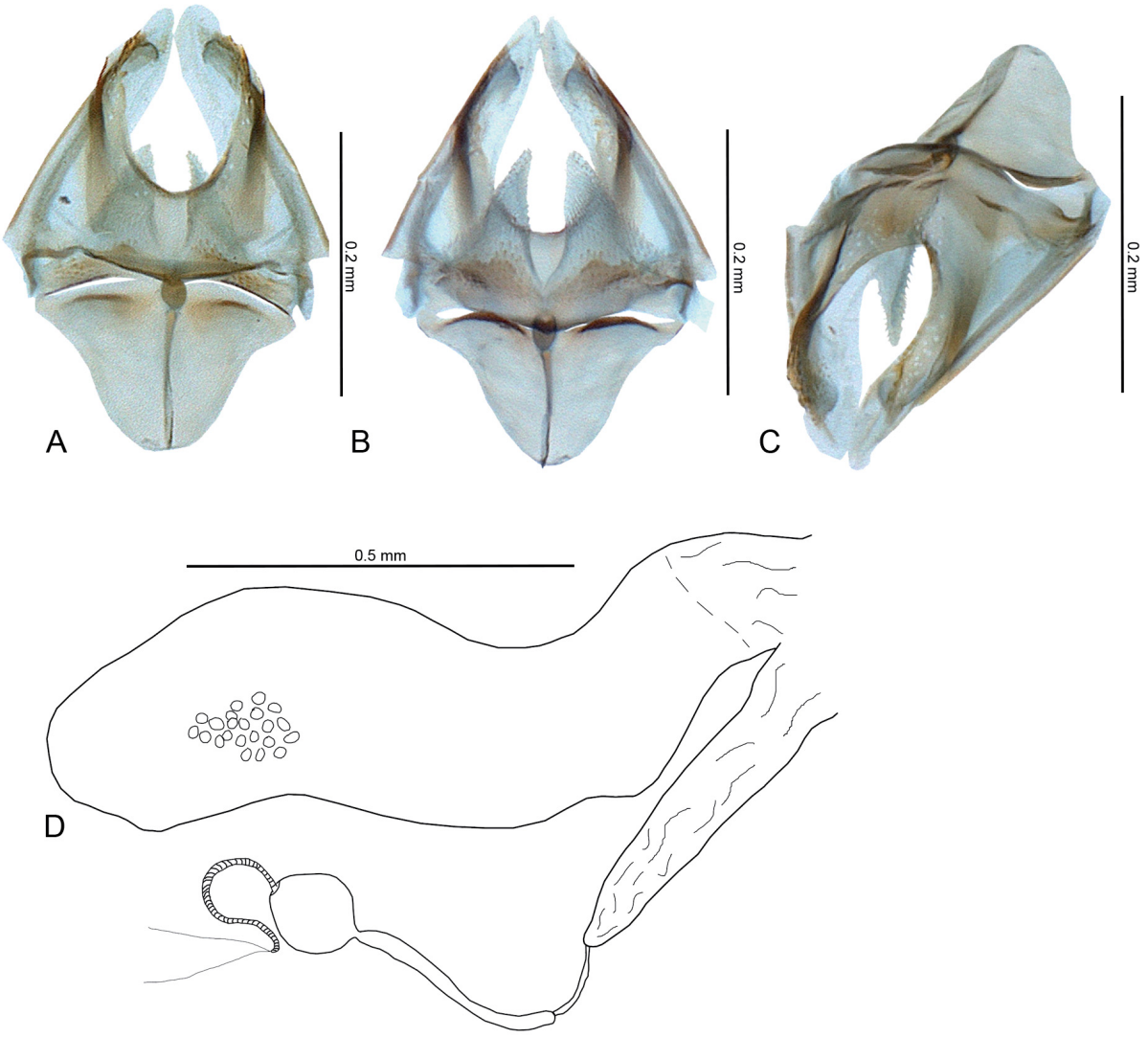

Fig. 11. *Afrachilus montanifynbosensis* sp. nov., holotype, ♀ (SANC). **A**. Gonapophyses IX and gonospiculum bridge, dorsal view. **B**. Gonapophyses IX and gonospiculum bridge, ventral view. **C**. Gonapophyses IX and gonospiculum bridge, fronto-latero-dorsal view. **D**. Bursa copulatrix and spermatheca, lateral view.

Abdomen. Flattened, with sternites not divided medially.

Male terminalia. Male unknown.

Female terminalia (Figs 8–11). The pregenital sternite (Figs 8E–F, 9A–B, 10A), almost rectangular in ventral view, with anterior margin almost straight with small wide incision medially; posterior margin almost straight. The anal tube (Figs 8A–D, 10B–D), in lateral view triangular and bit extending posterior margin of gonoplac; in dorsal view cup-like, upper posterior margin weakly concave, medially shallowly convex; posterior-ventral margin deeply concave; the epiproct distinctly shorter than the paraproct, in dorsal view triangular with median split, not extending ventro-posterior margin of anal tube; the paraproct fusiform, distinctly longer than epiproct and distinctly extending posterior-ventral margin of anal tube; anus placed distinctly after the middle. Whole anal tube and with numerous long setae. Gonoplac (Figs 8A–B, 9B–D, 10E–F) unilobate, well sclerotized, fully covering gonapophysis VIII; posterior margin with numerous setae (bristles) and membranous part forming close line/margin. Gonapophysis VIII (Fig. 10 G–I) wide, distinctly tapering distally; anterior connective lamina (ACL) with two strongly sclerotized arms, apically with 5 strong teeth of similar sizes, apical part strongly curved ventrad. Endogonocoxal process as long as gonapophysis, unilobate; endogonocoxal lobe narrowly sclerotized apically with short bluntly process oriented basally. Gonospiculum as in Fig. 11A–C. Subvaginal plate (Figs 8E–F, 9A–C, 10G) well sclerotised, in ventral view, subquadrate with posterior margin widely arcuate. Bursa copulatrix (Fig. 11D) with membranous single elongate pouch, without visible cell but with sclerotized plates on whole wall; sclerite of bursa absent. Spermatheca well developed; ductus receptaculi narrow and smooth, distinctly shorter than diverticulum ductus; diverticulum ductus with very long smooth and narrow (but wider than ductus receptaculi) ductus and with ovoid and smooth bulla apically (Fig. 11D).

Additional localities for *Achiplecton stilleri* Brysz, Stroiński & Szwedo, 2024

Note: utilising the data collated through citizen science initiatives, notably iNaturalist, we have successfully identified supplementary locations for the species that were documented in the preceding year. Photographs of live specimens of *Achiplecton stilleri* taken in the wild indicate a wider occurrence of this species in the Western Cape Province. Concurrently, the colouration of the examined dead specimens (Fig. 12A–B) indicates a stable colouration of this species when compared to living specimens. All photographs were taken by Cecile Roux and published with her permission. The original description of *Achiplecton stilleri* (Brysz *et al.* 2023) demonstrated that this species occurs in the Montane Fynbos and Renosterveld ecoregion (AT1203). Newly obtained data indicate the occurrence of this taxon in the Lowland Fynbos and Renosterveld ecoregion (AT1202). However, its distribution remains confined to the Western Cape Province and the Cape Floristic Region.

SOUTH AFRICA – **Western Cape Province**, **West Coast district** • Swartland Municipality; 33°28′12.0″ S, 18°44′14.5″ E; 23 Sep. 2024; Klipkoppie Nature Reserve [https://www.inaturalist.org/observations/244140803] • Bergriver Municipality; 32°36′57.8″ S, 18°18′04.4″ E; 21 Sep. 2024; Rocherpan Nature Reserve [https://www.inaturalist.org/observations/243927735] • Bergriver Municipality; 32°41′18.4″ S, 18°14′14.9″ E; 8 Oct. 2023; Berg River [https://www.inaturalist.org/observations/187225824] • Saldanha Bay Municipality; 33°00'38.9″ S, 18°21′24.7 E; 24 Sep. 2024; Hopefield [https://www.inaturalist.org/observations/243745437].

Discussion

The above newly described tribe Afrachilini trib. nov. represents the third endemic tribe of Achilidae for the Cape Province (following Ilvini Emeljanov, 1991 and Achiplectini Brysz, Stroiński & Szwedo, 2024) and exhibits a distinctive set of characters clearly separating it from other Myconinae tribes. A new tribe, Afrachilini trib. nov., with its sole genus *Afrachilus* Fennah, 1965 somewhat resembles

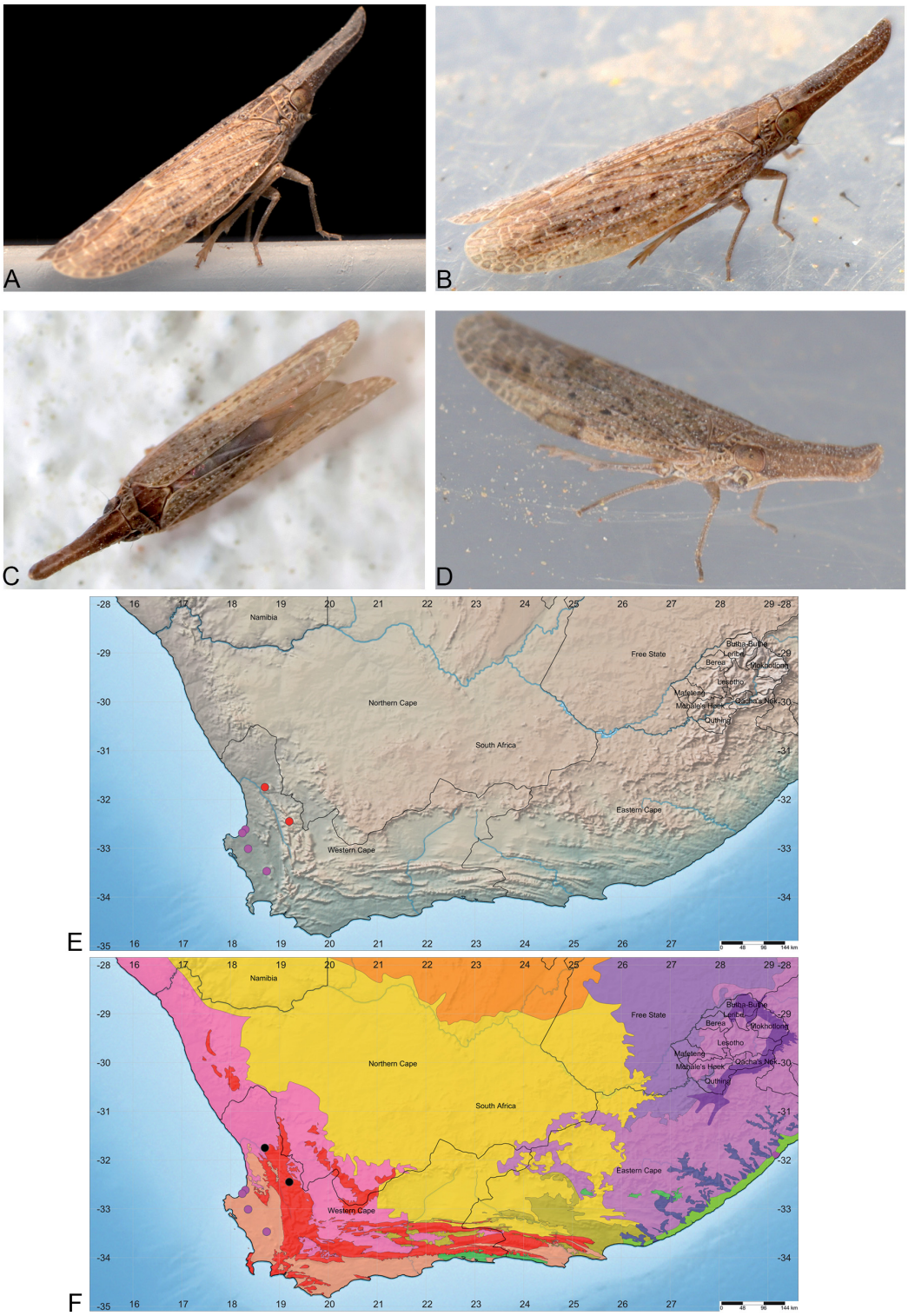

Fig. 12. *Achiplecton stilleri* Brysz, Stroiński & Szwedo, 2024. **A–D**. Photos of living specimens. **A**. Specimen from Klipkoppie Nature Reserve. **B**. Specimen from Rocherpan Nature Reserve. **C**. Specimen from Berg River. **D**. Specimen from Hopefield. **E**. Distribution map, physical. **F**. Distribution map, ecoregions. Colors in physical map: red dots = original records; purple dots = new records. Colors in ecoregions map: black dots = original records; purple dots = new records; red color of ecoregions = Montane Fynbos and Renosterveld ecoregion; pink color of ecoregion = Lowland Fynbos and Renosterveld.

some representatives placed in the tribe Plectoderini (e.g., genus *Haitiana* Dozier, 1936) by the elongated antennae and the lower margin of compound eye deeply incised. The head capsule with separated acrometope and eumetope constitutes a unique attribute, not common among other Achilidae (except *Haitiana*). The postclypeus without lateral carinae (another exceptional feature) is also to be found in the Amphignomini Emeljanov, 1991 and the extinct Waghildini Szwedo, 2006. The fusion of postclypeus with lora is a rather exceptional feature, present in Amphignomini (also in extinct Ptychoptilini Emeljanov, 1990 of incertae sedis position in Achilidae); however, it is also observed in a few other planthoppers, e.g., in some Flatidae: *Antillormenis* Fennah, 1942 and *Flatoidinus* Melichar, 1923. Tegmina with an open cell C1 is a very exceptional character, not known among the Achilidae. The hind wing with only two terminals of CuA is a feature of the Afrachilini shared with the extinct Niryasaburniini Wang & Bourgoin, 2024 in Deng *et al.* (2024). The structure of hind tibiae with subapical platellae is the same as in Achiplectini. The subapical setae, which vary in their modification among the Achilidae, present on basi- and midmetatarsomeres are observed, e.g., in Achilini: Cixidiina Emeljanov, 1992 – in form of platellae – *Cixidia* Fieber, 1866, extinct *Gedanochila* Brysz & Szwedo, 2022, extinct *Waghilde* Szwedo, 2006 (Waghildini Szwedo, 2006) (Asche 2005; Szwedo 2006; Brysz *et al.* 2022), as platellae in Tropiphlepsini Emeljanov, 1991, as setae in Seviini Emeljanov, 1991 (Emeljanov 1992) and extinct genera of Achilini: *Protomenocria* Emeljanov & Shcherbakov, 2009, *Psycheona* Emeljanov & Shcherbakov, 2009, *Protepiptera* Usinger, 1939 (Emeljanov & Shcherbakov 2009) from the Eocene amber of the Gulf of Gdańsk. As recently the structure of metatibiae and tarsal structures have been redefined among Cixiidae (Brożek *et al.* 2024), the same comparative structures are necessary to clear the patterns and models among the Achilidae.

Fennah (1950) provided a definition of the subvaginal plate as a sclerotized structure, typically manifesting as a moderately broad, transverse plate of the membrane situated between the pregenital sternite and the external orifice of the vagina. This structure is not frequently observed among the known Achilidae and achilid-related taxa (see Table 1). It is present in the genus *Afrachilus* Fennah, 1965 as a distinct, large structure, much more developed than in other genera (see Fennah 1950, 1967a). The subvaginal plate is a distinctive feature present in a number of taxa, but is predominantly in these distributed in the New World (Table 1).

The vast majority of the specimens described above were collected in 2002 by Michael Stiller in the western part of the Republic of South Africa, by sweeping the vegetation. The single specimen of *Afrachilus montanifynbosensis* sp. nov. was collected in 1933. The area of collecting has been classified as the Montane Fynbos and Renosterveld (AT1203) ecoregion (World Wildlife Fund 2021a, 2021b), which is part of the Cape Floristic Region (CFR). That region is widely acknowledged to be one of the biologically most diverse areas on Earth (Cowling *et al.* 1992; Allsop *et al.* 2014). The specimens were collected on five plants of the families Fabaceae Lindl., Polygalaceae Hoffmanns. & Link (Fabales), Asteraceae Bercht. & J.Presl (Asterales), Proteaceae Juss. (Proteales) and Rutaceae Juss. (Sapindales). According to the synopsis of the host plants of Achilidae (Bourgoin 2024), these are the first records for the order Proteales, family Proteaceae and family Polygalaceae of Fabales (Table 2). The distribution of Afrachilini trib. nov. coincides with that of Achiplectini (Brysz *et al.* 2024) and with the Cape Faunal Center (CFC), a discrete zoogeographic zone characterized by the phylogenetic antiquity of much of its invertebrate fauna (Struckenberg 1962).

The level of knowledge concerning Achilidae in the African continent, the Afrotropical region, and the adjacent Madagascan region remains inadequate. The subfamily Achilinae Stål, 1866 is represented by Achilini Stål, 1866 incertae sedis genus *Mabira* Fennah, 1950 with 4 species, Achillini Emeljanov, 1991 genera *Achilla* Haglund, 1899 with 3 species and monospecific genus *Maurisca* Emeljanov, 2005. The subfamily Apatesoninae Metcalf, 1938 is represented by the tribe Ilvini Emeljanov, 1991 with monospecific genus *Ilva* Stål, 1866. The largest subfamily Myconinae Fennah, 1950 may be not

Table 1. Distribution of the subvaginal plate in Achilidae Stål, 1866.

Genus	Distribution
Derbidae: Breddiniolinae	
Breddiniola Muir, 1934	Cameroon
Achilidae: Achilinae: Achilini	
Paraphradmon Fennah, 1950	Brazil
Parelidiptera Fennah, 1950	Brazil
Achilidae: Myconinae: Plectoderini	
Amblycratus Uhler, 1895	Mesoamerica and the Caribbean
Bathycephala Fennah, 1950	Guyana
Catonia Uhler, 1895	New World
Hemiplectoderes Fennah, 1950	Trinidad and Tobago
Kurandella Fennah, 1950	Australia (Queensland)
Mlanjella Fennah, 1950	Africa Democratic Republic of the Congo, Malawi
Paracatonia Fennah, 1950	Dominica, Grenada
Paraclusivius Fennah, 1950	Ghana, Sierra Leone
Remosachilus Fennah, 1950	Indonesia (Western New Guinea) (Irian Jaya; Papua New Guinea)
Symplegadella Fennah, 1950	Mesoamerica
Achilidae: Myconinae: Afrachilini trib. nov.	
Afrachilus Fennah, 1965	South Africa
Achilidae: Myconinae incertae sedis	
Brachypyrrhyllis Fennah, 1967a	South Africa

monophyletic (Brysz *et al.* in prep.), as well as some lower rank units delimited within this subfamily. The distribution of the two tribes, Achiplectini Brysz, Stroiński & Szwedo, 2024 and Afrachilini trib. nov., is confined to the Southern Africa. The tribe Mycarini Emeljanov, 1991 is represented by *Katbergella* Fennah, 1950 with 2 species from South Africa and Madagascan monospecific genera *Acocarinus* Emeljanov, 1991, *Emeljanocarinus* Bourgoin & Soulier-Perkins, 2006, *Mycarinus* Emeljanov, 1991 and *Mycarus* Emeljanov, 1991. The Plectoderini Fennah, 1950 may not be monophyletic, its African representatives covers single species of the genus *Akotropis* Matsumura, 1914, *Aphypia* Melichar, 1908 with 31 species, *Ballomarius* Jacobi, 1941 with 21 species, monospecific *Bathycephala* Fennah, 1950, monospecific *Caffropyrrhyllis* Fennah, 1950, *Cnidus* Stål, 1866 with 12 species, *Epiusana* Fennah, 1950 with 2 species, monospecific genera *Epiusanella* Synave, 1959, *Kawanda* Fennah, 1950 and *Kawandella* Synave, 1959, *Lanuvia* Stål, 1866 with 5 species, *Mlanjella* Fennah, 1950 with 7 species, monospecific genera *Moraballia* Fennah, 1950, *Nyonga* Synave, 1959 and *Paraclusivius* Fennah, 1950, *Paraphypia* Synave, 1960 with 4 species, *Phypia* Stål, 1862 with 2 species, and monospecific *Prosagandecca* Fennah, 1950. The placement of the monospecific genus *Brachypyrrhyllis* Fennah, 1967a, from South Africa, in the subfamily Plectoderini is, at this time, uncertain. It can, therefore, be provisionally placed in the subfamily Myconinae incertae sedis. Some other genera, *Leptarciella* Fennah, 1958 with 9 species and monospecific genera *Parasabecoides* Synave, 1965 and *Sabecoides* Fennah, 1958, are to be placed as Achilidae incertae sedis. In addition several monospecific genera of Plectoderini reported from the Madagascan region must be noted: *Cernea* Williams, 1977, *Metalticeps* Dmitriev, 2020 and *Thectoceps*

Table 2. List of the host plants of *Afrachilus montanifynbosensis* sp. nov.

Order	Family	Species	Common names
Fabales Bromhead	Fabaceae Lindl.	*Aspalathus costulata* Benth.	Ribbed Rooibos Strandtee, Bokkeveld Tee, Burger Tee, Oranjerivier Tee
Fabales Bromhead	Polygalaceae Hoffmanns. & Link	*Nylandtia scoparia* (Eckl. & Zeyh.) Goldblatt & J.C. Manning	Tortoise Berry, Dune-berry, Skilpadbessie, Duinebessie
Asterales Link	Asteraceae Bercht. & J. Presl	*Dicerothamnus rhinocerotis* (L.f.) Koek.	rhinoceros bush, rhenoster bush, Renosterbos, rhenosterbos
Proteales Juss. ex Bercht. & J. Presl	Proteaceae Juss.	*Leucadendron pubescens* R. Br.	Silky Conebush, knokkerbos, pitjiebos, knopbos, Syhaartolbos, pitjieknopbos, syhaar-tolbos
Sapindales Juss. ex Bercht. & J. Presl	Rutaceae Juss.	*Diosma hirsuta* L.	wild buchu, rooiboegoe, rooi Buchu wildeboegoe, Hottentotsboegoe
Caryophyllales Juss. ex Bercht. & J. Presl	Aizoaceae Martinov	*Galenia africana* L.	Brakkraalbossie, Geelbos, Iqina, Kraalbos, Kraalbossie, Kraalbrak, Kraalgeelbos, Muisbos, Muisgeelbos, Perdebos, Waterpensbos, Waterpensbossie, Yellow Bush

Williams, 1977 from Mauritius, *Clusivius* Distant, 1917 reported from Mauritius and the Seychelles, *Cocottea* Williams, 1977 with 3 species from Mauritius, and *Williamsus* Özdikmen & Demir, 2007 reported from Mauritius and Reunion. Therefore, South African records of the Achilidae embrace the tribes Achiplectini (1 genus with 1 species; Western Cape Province), Afrachilini trib. nov. (1 genus with 2 species; Western Cape Province, Eastern Cape Province), Ilvini (1 genus with 1 species; Western Cape Province), Plectoderini (4 genera with 5 species; Western Cape Province, Eastern Cape Province, KwaZulu-Natal) and Myconinae incertae sedis genus *Brachypyrrhyllis* Fennah, 1967a (1 species; Western Cape Province).

The description of a new tribe of Achilidae, the third endemic to Southern Africa, showing specific, uncommon morphological features, enriches our knowledge of the classification and morphology of this insect family. Simultaneously, this study gives rise to additional inquiries concerning the diversification of the Achilidae fauna and ecology on the African continent, the morphological adaptations exhibited by these planthoppers, and the similarities and phylogenetic affinities observed among them.

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Authors' declarations

AS, AMB and JS designed the research, made the observations, documentation and illustrations, and prepared the draft and final manuscript; AS and JS conducted the analysis of results, adjusted the illustrations, prepared the draft and final manuscript; AS, AMB and JS commented on the drafts and final manuscript. The authors declare no conflict of interest.

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