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Couverture / *Cover* :
View of Mitaraka massif (photo: Maurice Leponce). In medallion: *Tafalisca hugeli* n. sp., adult male (photo: Sylvain Hugel).

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The Paroecanthini crickets (Orthoptera: Grylloidea: Gryllidae: Oecanthinae) from French Guiana

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ABSTRACT
The crickets of the tribe Paroecanthini Gorochov, 1986 (Orthoptera, Grylloidea, Gryllidae, Oecanthinae) present in the collections of the Muséum national d'Histoire naturelle, Paris, are studied, including those collected during the "La Planète Revisitée – Mitaraka 2015" biological survey. Two species are redescribed, i.e., *Tafalisca elongata elongata* (Chopard, 1912) n. comb. and *Brazitrypa maroniensis* (Chopard, 1930) n. comb. Nine species new to science are also described, i.e., *Adenophallusia legendrei* n. sp., *Adenophallusia aratayensis* n. sp., *Brazitrypa cornuta* n. sp., *Cylindrogryllus* (*Apterotrypa*) *mitarakensis* n. sp., *Cylindrogryllus* (*Apterotrypa*) *guyanensis* n. sp., *Perutrella septentrionalis* n. sp., *Stenoecanthus planixiphus* n. sp., *Tafalisca hugeli* n. sp. and *Tafalisca ansoi* n. sp. The diversity of the Paroecanthini in French Guiana is discussed considering the huge morphological diversity observed in this tribe. The identification key presented elsewhere for Brazilian Paroecanthini (Campos *et al.* 2020) is extended to Guyanese species.

KEY WORDS
Neotropics, French Guiana, diversity, new synonyms, new combinations, new species.

RÉSUMÉ
Les grillons de la tribu des Paroecanthini (Orthoptera: Grylloidea: Gryllidae: Oecanthinae) de Guyane.
Les grillons de la tribu des Paroecanthini Gorochov, 1986 (Orthoptera, Grylloidea, Gryllidae, Oecanthinae) présents dans les collections du Muséum national d'Histoire naturelle, Paris, sont étudiés, y compris ceux collectés lors de l'expédition "La Planète Revisitée – Mitaraka 2015". Deux espèces sont redécrites, i.e., *Tafalisca elongata elongata* (Chopard, 1912) n. comb. et *Brazitrypa maroniensis* (Chopard, 1930) n. comb. Neuf espèces nouvelles pour la science sont également décrites, i.e., *Adenophallusia legendrei* n. sp., *Adenophallusia aratayensis* n. sp., *Brazitrypa cornuta* n. sp., *Cylindrogryllus*

MOTS CLÉS
Région néotropicale,
Guyane,
diversité morphologique,
synonymie nouvelle,
combinaisons nouvelles,
espèces nouvelles.

(*Apterotrypa*) *mitarakensis* n. sp., *Cylindrogryllus* (*Apterotrypa*) *guyanensis* n. sp., *Perutrella septentrionalis* n. sp., *Stenoecanthus planixiphus* n. sp., *Tafalisca hugeli* n. sp. et *Tafalisca ansoi* n. sp. La diversité des Paroecanthini en Guyane est discutée par rapport à la diversité, très forte, de la morphologie attestée désormais dans la tribu. La clé d'identification établie dans un autre article pour les Paroecanthini du Brésil (Campos *et al*. 2020) est étendue aux espèces guyanaises.

INTRODUCTION

With more than 16 000 species described (Gargominy *et al.* 2017), French Guiana, located in northern South America, includes two ecoregions: Guianan Lowland moist forests and Guianan Highlands moist forests (Dinerstein *et al.* 2017). Over the last decade, the knowledge on insect diversity in this region increased due to the work of taxonomists and the amateur community (Touroult *et al.* 2018). However, the real richness of French Guiana is far from being fully known (around 20%) (Brûlé & Touroult 2014).

Orthoptera is relatively well-studied in French Guiana (Brûlé & Touroult 2014), but a strong unbalance exists in our knowledge of orthopteran clades. Although Guianese grasshoppers (Caelifera) have been intensively studied and are quite well-known nowadays, as shown by Pocco & Cigliano (2020), few studies and records are available for crickets (Grylloidea). The most abundant species of crickets living in the leaf litter or on tree trunks, and thus relatively easy to collect during the day or at night, have been described only in the 1990's (Desutter-Grandcolas 1992a, b, 1993), apart from the classic works of Chopard (1912, 1920). Things are worse for species living in the canopy, which are very badly known, from the point of view of their systematics and of their biology. As an example, within the Neotropical tribe Paroecanthini Gorochov, 1986, which includes 17 genera and 119 species in the Neotropical region, only two genera and four species are presently recorded from the region (Cigliano *et al.* 2020). The diversity of this group is clearly underestimated, considering the great diversity of the Neotropical region, the poor sampling of these nocturnal crickets and their probable sensitivity to environmental degradation (Campos *et al.* 2020).

Here, we studied the Paroecanthini of the Muséum national d'Histoire naturelle (MNHN), Paris, collected in French Guiana over the last 30 years, including during the "Planète revisitée" 2015 Expedition in the Mitaraka area, the large unexplored southwestern corner of French Guiana, close to Suriname and Brazil.

Paroecanthini are presently divided into two subtribes (Paroecanthina Gorochov, 1986 and Tafaliscina Desutter, 1988) (Cigliano *et al.* 2020), which representatives are usually found on leaves of different heights of shrubs and trees during the night (Fig. 1). The morphological diversity of this clade is remarkably huge for such a small cricket clade: from small and slender to large and robust bodies; male genital structures regressed or not; hindlegs long or short, with or without spines; all species, however, show an ovipositor flattened dorso-ventrally (Desutter 1988; Gorochov 2017), except perhaps *Stenoecanthus* Chopard, 1912, which classification is still uncertain (see below).

The most notable diversity of paroecanthine crickets lays in their forewings, which are deeply involved in communication modalities in crickets: they can be absent or reduced (*Cylindrogryllus* Saussure, 1878), elongated with longitudinal veins (*Tafalisca* Walker, 1869 and *Brazitrypa* Gorochov, 2011), with or without a complete stridulatory apparatus, with significant differences between the shape of the veins (e.g. *Adenophallusia* de Mello, 1990; *Paroecanthus* Saussure, 1859; *Selvagryllus* Otte, 2006; *Veredatrypa* Campos, 2020). This diversity most certainly shows a wide diversity of behaviors, which are totally unexplored, regarding their modalities of communication (acoustic, vibratory), use of habitats, and sexual behavior. Thus, these crickets may be excellent models to test hypotheses about the evolution of morphology, communication, and life habits (Campos *et al.* 2020), provided their diversity are well-sampled and their phylogeny attested on a sound ground.

In this paper, we increase the knowledge of Paroecanthini diversity from French Guiana by redescribing two species and describing nine new species of six different genera: *Adenophallusia legendrei* n. sp., *Adenophallusia aratayensis* n. sp., *Brazitrypa cornuta* n. sp., *Brazitrypa maroniensis* (Chopard, 1930) n. comb., *Cylindrogryllus* (*Apterotrypa*) *mitarakensis* n. sp., *Cylindrogryllus* (*Apterotrypa*) *guyanensis* n. sp., *Perutrella septentrionalis* n. sp., *Stenoecanthus planixiphus* n. sp., *Tafalisca elongata elongata* (Chopard, 1912) n. comb., *Tafalisca hugeli* n. sp. and *Tafalisca ansoi* n. sp. We also compare our results to what is known today in Brazil (Campos *et al.* 2020), discuss the diversity and origin of Guianese representatives of Paroecanthini and extend the identification key proposed for Brazilian Tafaliscina (Campos *et al.* 2020) to Guianese taxa of Paroecanthini.

Although we use here the definition of the Paroecanthini tribe by Cigliano *et al.* (2020), with two subtribes, we follow the phylogenetic results of Chintauan-Marquier *et al.* (2013, 2016) and classify the Paroecanthini in the Oecanthinae, not in the Podoscirtinae Saussure, 1878 (see also Campos *et al.* 2020): the relationships between *Oecanthus* Serville, 1831 and the Paroecanthini are actually well-supported in the molecular phylogeny presented by Chintauan-Marquier *et al.* (2013, 2016), and supported by further phylogenetic analyses (Campos pers. obs.). The genus *Stenoecanthus* Chopard, 1912, presently classified within the Podoscirtinae, is consequently moved to the Oecanthinae, but not yet attributed to a definite tribe: its position will be tested with a wide-scale phylogeny of the "Podoscirtinae clade F" of Chintauan-Marquier *et al.* (2013, 2016) using both molecular and morphological characters.

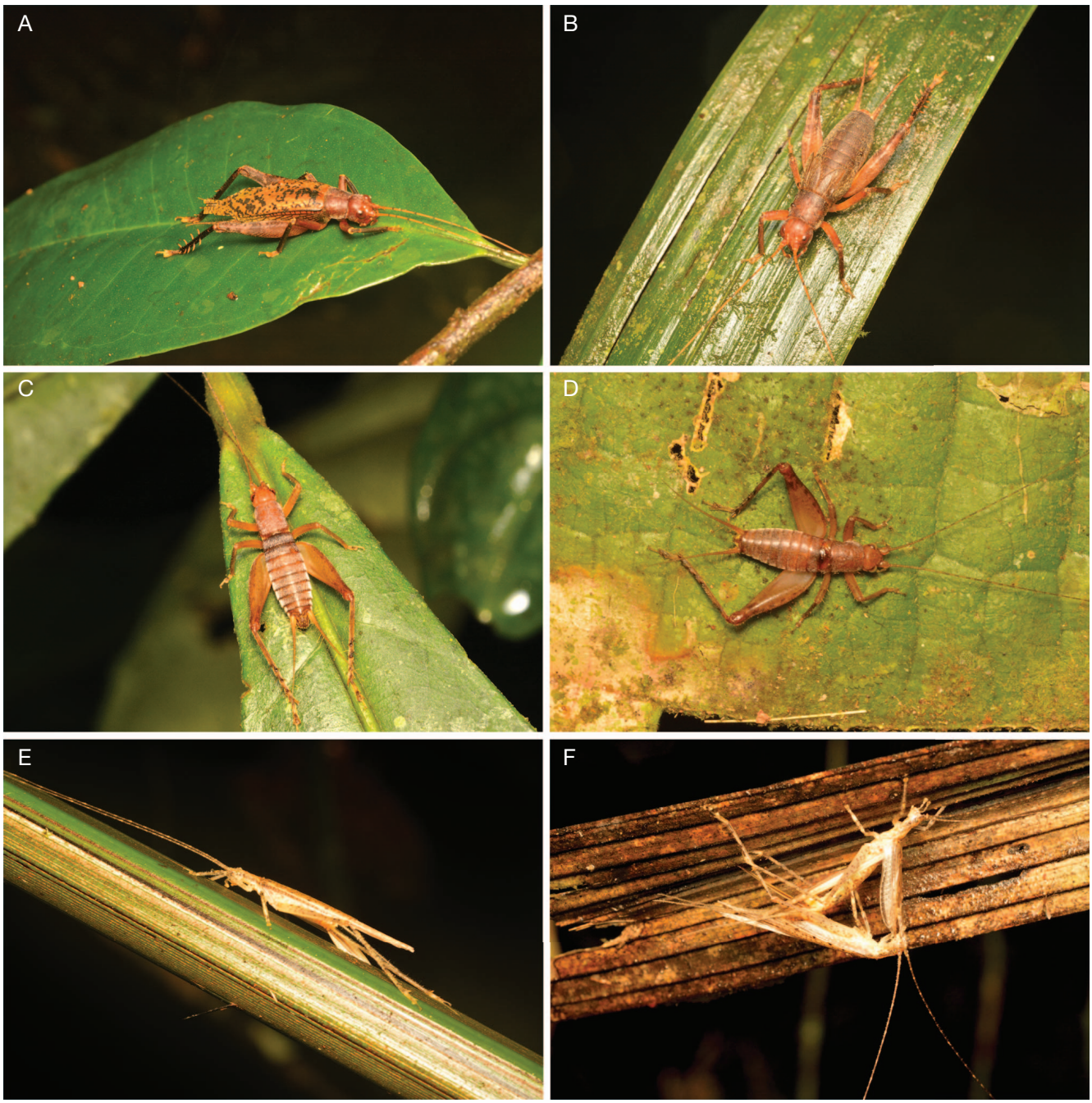

Fig. 1. — Living habitus: **A**, *Tafalisca hugeli* n. sp., adult male; **B**, *Tafalisca hugeli* n. sp., nymph; **C**, *Cylindrogryllus* (*Apterotrypa*) *mitarakensis* n. sp., adult male; **D**, *Cylindrogryllus* (*Apterotrypa*) *guyanensis* n. sp., adult male; **E**, *Stenoecanthus planixiphus* n. sp., adult female; **F**, *Stenoecanthus planixiphus* n. sp., adult male and female, mating. Photos: © Sylvain Hugel.

Many species of Paroecanthina are available in the MNHN collection. They will not be described here as they do not increase our knowledge of Paroecanthini morphological diversity.

MATERIAL AND METHODS

The specimens were analyzed, compared and described using a Wild M3Z stereomicroscope. Drawings of male genitalia and forewings were also made under a Wild M3Z stereomicroscope coupled with a camera lucida. The external morphology photographs were taken with a Canon 60D camera with a 100 mm and a 65 mm 1-5x macro lens attached, using the software Helicon Remote. The photographs of male genitalia and female copulatory papilla were photographed immersed in hand sanitizer (Su 2016), under a Nikon SMZ1500 stereomicroscope with a Canon 60D attached.

Male phallic complexes were removed and treated with aqueous solution 10% KOH for few hours to remove muscular tissues and to clarify sclerites and membranes, stored in

vial with glycerin and pinned with the respective specimen. The female copulatory papillae were also dissected, stored in small vials with glycerin and pinned with the respective specimen. Genitalia morphology follows Desutter (1987) and Desutter-Grandcolas (2003). Forewings venation follows Desutter-Grandcolas *et al.* (2017) modified by Schubnel *et al.* (2019).

The taxa described here have been compared with all Paroecanthini genera (available in MNHN collection), except the genera *Eubezverkhovia* Gorochov & Izerskyy, 2020 and *Mexitrypa* Gorochov, 2011 for which only the original description and images were available.

Distribution data of Paroecanthini species from French Guiana were plotted on a map and edited in the software Quantum-gis 3.4 (QGIS Development Team, 2020).

ABBREVIATIONS

General morphology

I, II, III	anterior, median, posterior (leg, tarsomere);
DD	dorsal disc of pronotum;
F	femur;
FW	forewing;
iad, iam, iav	dorsal, median, ventral apical spurs of hind tibia on inner side;
L	lateral lobe of pronotum;
oad, oam, oav	dorsal, median and ventral apical spurs of hind tibia on outer side;
T	tibia;

TIII subapical and apical spurs formula indicated inner/outer respectively, counted from distal spurs upwards.

Male genitalia

Arc	ectophallic arc;
EctAp	ectophallic apodeme;
EctF	ectophallic fold;
EndAp	endophallic apodeme;
EndSc	endophallic sclerite;
LLophi	lateral lophi of pseudepiphallus;
m	membrane (figured with dots);
MLophi	median lophi of pseudepiphallus;
PsP	pseudepiphallic paramere;
R	rami.

Male's forewing venation

CuP	posterior branch of cubital vein;
CuPa	anterior branch of CuP;
CuPb	posterior branch of CuP;
PCu	postcubital vein.

Measurements

FWL	forewing length;
FWW	forewing width (at midline);
HW	head width;
HWL	hindwing length;
IOD	inter ocular distance;
LBtarsIII	length of basitarsomere III;
LFIII	length of hind femur;
LTIII	length of hind tibia;
OL	ovipositor length.
PL	pronotum length;
PW	pronotum width (at midline);
WFIII	width of hind femur;

Repositories

MNHN	Muséum national d'Histoire naturelle, Paris;
MNRJ	Museu Nacional, Rio de Janeiro, Rio de Janeiro.

TYPE MATERIAL

The holotypes and allotypes will be deposited in MNHN. Paratypes will be deposited in MNHN and MNRJ as designed in "material examined" and "type material".

The specimens collected during the "Our Planet Revisited" Mitaraka 2015 Survey in the Tumuc Humac Mountains, French Guiana (Fig. 1), co-organized by the Muséum national d'Histoire naturelle (MNHN) and the NGO Pro-Natura International (Touroult et al. 2018), were collected under the access and benefit sharing agreement "APA973-1". The type specimens deposited in the Arthropod collection of the MNHN can be traced with its inventory number, MNHN-EO-ENSIFXXXX, in the collection data base of the MNHN at the following address, https://science.mnhn.fr/institution/mnhn/collection/eo/search

SYSTEMATICS

Order OTHOPTERA Olivier, 1789
Superfamily GRYLLOIDEA Laicharting, 1781
Family GRYLLIDAE Laicharting, 1781
Subfamily OECANTHINAE Blancard, 1845
Tribe PAROECANTHINI Gorochov, 1986
Subtribe TAFALISCINA Desutter, 1988

Genus *Tafalisca* Walker, 1869

Tafalisca Walker, 1869: 52.

Metrypa Brunner von Wattenwyl, 1873: 671.

Metrypus Saussure, 1878: 168.

Pseudogryllus Chopard, 1912: 411, **n. syn.** (first synonymized by Chopard (1968) with *Tafalisca*, and resurrected by Gorochov (2011) as a valid genus).

TYPE SPECIES. — *Tafalisca lurida* Walker, 1869.

EMENDED DIAGNOSIS. — FWs with only parallel and longitudinal veins in males and females, not specialized for producing sounds in males (sometimes bearing only a stridulatory file), inner and outer tympana absent, fore and mid tibiae with small dorsal protuberances (not present in all species). Male genitalia: pseudepiphallic sclerite divided into MLophi (bilobate) and LLophi, both connected by membranes, apex of R curved inwards, EctF somewhat membranous, EndSc short, EndAp very short (sometimes almost no discernible).

Tafalisca elongata elongata (Chopard, 1912) n. comb.
(Figs 2-4)

Pseudogryllus elongatus Chopard, 1912: 412.

Tafalisca elongata – Chopard 1968: 416.

Pseudogryllus elongatus elongatus – Gorochov 2011: 268.

TYPE LOCALITY. — Nouveau Chantier, French Guiana.

DISTRIBUTION. — French Guiana.

TYPE MATERIAL. — **Holotype. French Guiana** • ♀; Nouveau Chantier; Collection Le Moult; MNHN-EO-ENSIF6594; MNHN.
MATERIAL EXAMINED. — **French Guiana** • 1♂; Inselberg, Mitaraka Nord PL; 54°52.908"N, 02°27.613"O; 670 m; 28.X.2004-3 XI.2004; J.-P. Champenois leg.; Molec 2014 LDG499; MNHN-EO-ENSIF10876; MNHN. • 1♀; P[i]st[e] [de] KAW, Patawa;15.X. 2005; J.-A. Cerda leg.; Malaise; MNHN.

DIAGNOSIS. — This species is separated from the other species of *Tafalisca* by the following characters: occiput dark brown; pronotum DD light brown surrounded by a thin line medium to dark brown, with two median maculae horizontally drop-shaped and dark brown; FWs light brown, with dark brown veins, lateral margin of dorsal field dark brown. Male genitalia: LLophi apex curved inwards; MLophi almost as long as LLophi in dorsal view; EctAp reaching the anterior margin of pseudepiphallic sclerite, upcurved in lateral view. Female: lateral margins of ovipositor apex serrulated, posterior tip almost straight. Female genitalia: copulatory papilla opened ventrally, anterior margin convex in dorsal view; with a median projection flattened dorso-ventrally, curved upwards in lateral view.

REDESCRIPTION

General morphology

Body. Size large, general coloration light brown, body covered by small, light bristles, except FWs and HWs.

Head. Occiput and vertex covered by small bristles; occiput dark brown, vertex light brown. Fastigium as long as wide, pubescent, dark brown (Fig. 2A-E). Three ocelli, the median slightly elliptical, under the line of lateral ones in frontal view; lateral ocelli rounded, larger than median ocellus. Frons smooth, central region with few bristles, light brown (Fig. 2E). Eyes longer than wide in lateral view, ommatids reddish-brown to dark brown (Fig. 2B, D). Antennal scape as long as wide, light brown, inner margin with brown bristles; antennomeres light brown. Gena light brown in frontal and lateral views. Mandibles yellowish brown, apex dark brown. Epistomal suture and clypeus light brown; labrum light brown, apex dark brown (Fig. 2E). Maxillary palpi slightly pubescent, article 5 enlarged, articles 3 and 4 almost same-sized, light brown.

Pronotum. DD slightly wider than long, with short bristles, light brown, surrounded by a thin line medium to dark brown; with two dark brown median maculae horizontally drop-shaped in dorsal view. DD cephalic margin slightly concave; caudal margin slightly convex, dark brown (Fig. 2A, C). LL light brown; ventro-cephalic angle rounded; ventro-caudal angle gradually ascendant in lateral view (Fig. 2B, D).

Wings. FWs covering entire abdomen; FWs somewhat translucent, light brown, with dark brown veins; lateral margin of dorsal field dark brown (Fig. 2A-D). HWs longer than FWs in dorsal and lateral views.

Legs. Legs I and II with yellowish bristles. FI and FII light brown, apical margin dark brown. TI and TII with small protuberance on dorsal side of proximal region, without bristles (arrow on Fig. 2B); tympana absent. TI and TII medium to dark brown. TI with three apical spurs: two ventral same-sized; one dorsal, inner, almost as long as ventral ones. TII with two ventral spurs, same-sized, two dorsal spurs smaller than ventral ones. FIII longer than TIII; with yellowish bristles, light brown, reddish-brown to dark brown apically; dorsal part with a median dark brown macula, outer side divided by a dark brown stripe (Fig. 2B, D). TIII reddish-brown to dark brown, with yellowish bristles. TIII subapical spurs 5/4, with one spine between each inner and outer pair of successive spurs, three or four spines above uppermost outer subapical spur, two or three spines above uppermost inner subapical spurs. TIII apical spurs 3/3, longer on inner side; inner apical spurs: dorsal longest (iad), median shorter than dorsal (iam), ventral smallest (iav) (iad>iam>iav); outer apical spurs: median longest (oam), dorsal slightly shorter (oad), ventral almost as long as dorsal (oav) (oam>oad>oav). TIII subapical spurs, spines and apical spurs reddish-brown, apex dark brown almost black (Fig. 2B, D). Basitarsus dorsal spines 3/1, apical spine the longest; inner apical spur longer than basitarsus, outer apical spur slightly smaller than outer apical spur. Basitarsus reddish-brown.

Abdomen. Tergites slightly pubescent, medium to dark brown. Cerci pubescent, dark brown, with medium to dark brown setae. Supra anal plate with yellowish bristles, dark brown; posterior margin almost straight (Fig. 2G).

Male

Morphology. Metanotum without projections, antero-lateral regions inflated, with bristles; medio-posterior region somewhat elevated (Fig. 2F). FWs bearing 8-9 parallel veins, dorsal field without stridulatory apparatus; PCu vein slightly curved inwards on anterior region (arrow on Fig. 2A), without stridulatory teeth ventrally. Lateral field with *c*. 15 parallel veins, dark brown. Subgenital plate posterior margin rounded, strongly pubescent; dark brown with yellow bristles. (Fig. 2H).

Male genitalia (Figs 3A-C, 4). Pseudepiphallus: pseudepiphallic sclerite apex upcurved in lateral view, anterior margin concave in dorsal view; MLophi and LLophi thin in dorsal view. LLophi wider than MLophi in ventral view; apex curved inwards, inner margin of anterior region somewhat rounded in ventral view. MLophi almost as long as LLophi in dorsal view. PsP well sclerotized, shorter than pseudepiphallic sclerite, not surpassing its posterior margin; anterior half curved outwards, thinner than posterior half in ventral view; posterior half longer than wide, posterior margin rounded. R elongated, almost as long as pseudepiphallic sclerite; anterior half slightly rounded, wider than posterior half. Ectophallic invagination: EctAp reaching the anterior margin of pseudepiphallic sclerite, upcurved in lateral view; Arc not complete; ventral projections of ectophallic invagination almost as long as EctAp in ventral view. EctF shorter than EndSc, membranous, posterior margin rounded in ventral view. Endophallus: EndSc well sclerotized, longer than wide, shorter than EctAp, somewhat triangular in ventral view; posterior margin rounded, lateral margins folded ventrally. EndAp shorter than EndSc.

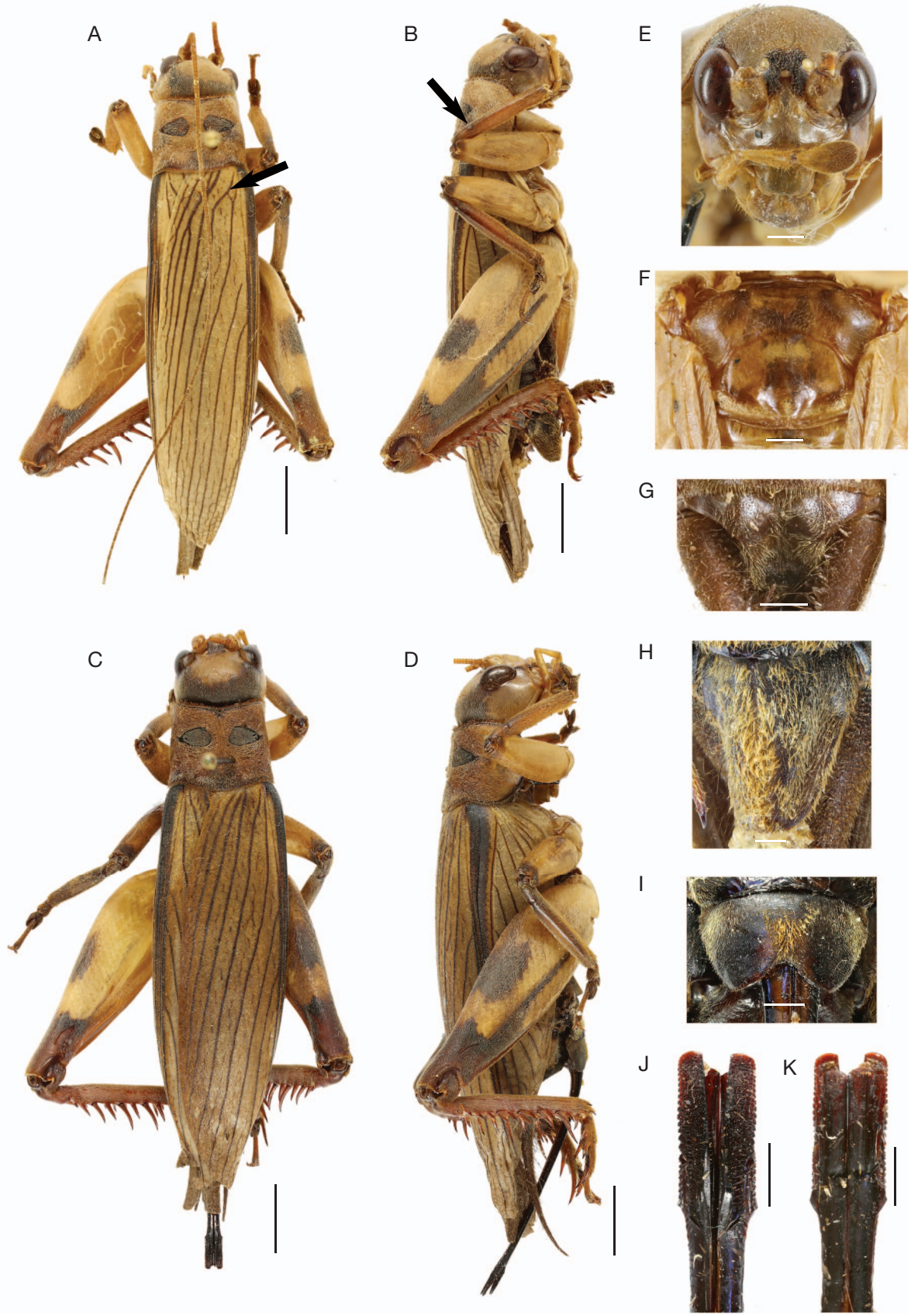

FIG. 2. — *Tafalisca elongata elongata* (Chopard, 1912) n. comb., male and female: **A**, male habitus, dorsal; **B**, male habitus, lateral; **C**, female habitus, dorsal; **D**, female habitus, lateral; **E**, male head, frontal; **F**, male metanotum, dorsal; **G**, male supra anal plate; **H**, male subgenital plate; **I**, female subgenital plate; **J**, ovipositor apex, dorsal; **K**, ovipositor apex, ventral. Scale bars: A-D, 5 mm; E-K, 1 mm.

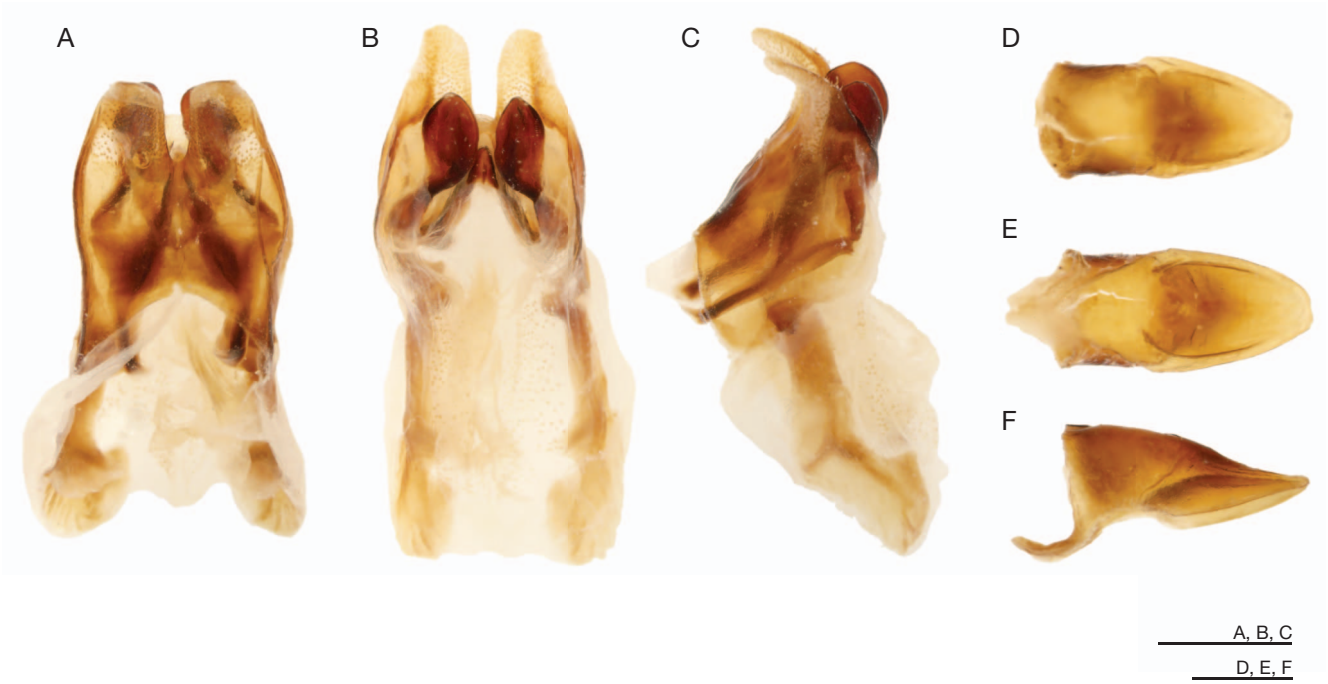

FIG. 3. — *Tafalisca elongata elongata* (Chopard, 1912) n. comb., male phallic complex: **A**, dorsal; **B**, ventral; **C**, lateral. Female copulatory papilla: **D**, dorsal; **E**, ventral; **F**, lateral. Scale bars: A-C, 1 mm; D-F, 0.5 mm.

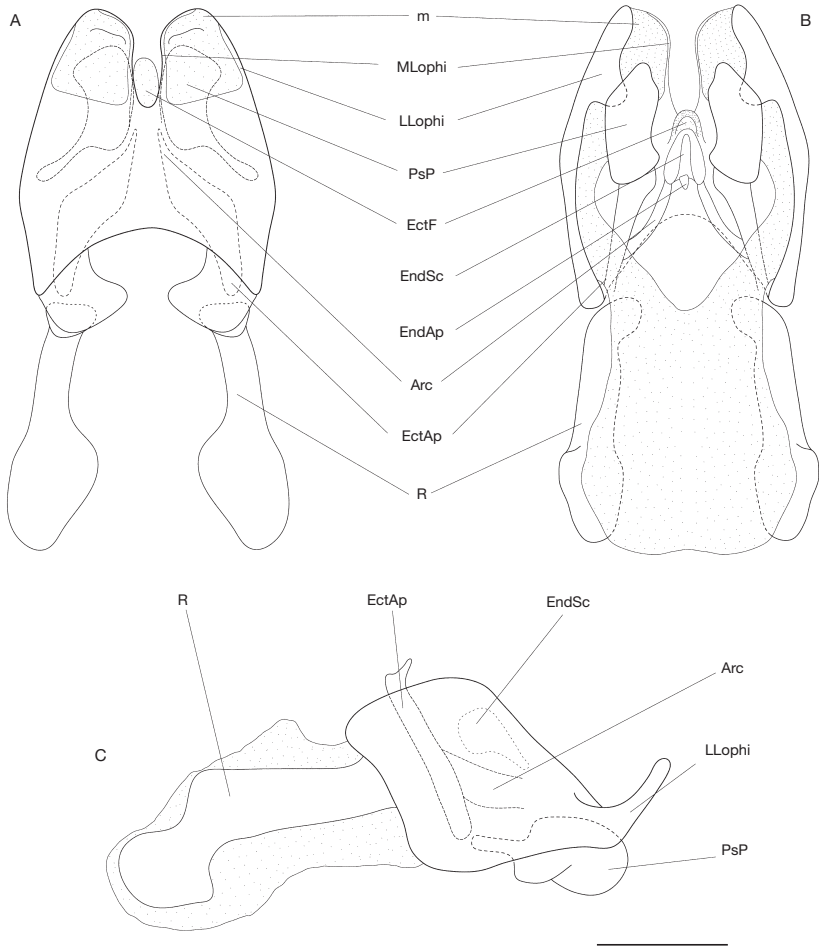

FIG. 4. — *Tafalisca elongata elongata* (Chopard, 1912) n. comb., male phallic complex: **A**, dorsal; **B**, ventral; **C**, lateral. Abbreviations: see Material & Methods. Scale bar: 1 mm.

Female

Morphology. Body larger than male, general coloration similar to male (Fig. 2C, D). Subgenital plate wider than long, posterior margin concave medially; dark brown almost black, median region reddish-brown, covered by yellowish bristles (Fig. 2I). Ovipositor upcurved, dark brown (Fig. 2D); lateral margins serrulated at apex, posterior tip almost straight, reddish-brown (Fig. 2J, K).

Female genitalia (Fig. 3D-F). Copulatory papilla longer than wide, somewhat cylindrical, with a ventral aperture; posterior half lateral margins slightly curved inwards in dorsal and ventral views, posterior margin rounded in dorsal and ventral views. Anterior margin convex in dorsal view; with a median projection flattened dorso-ventrally, curved upwards in lateral view.

REMARKS

The holotype (female) of *Pseudogryllus elongatus* Chopard, 1912 and specimens collected close to its type locality were analyzed (male and female). This species has all the diagnostic characters of *Tafalisca*, and there are no remarkable characters to support the genus *Pseudogryllus* Chopard, 1912. Thus, *Pseudogryllus* is considered a junior synonym of *Tafalisca*. The subspecies *Tafalisca elongata gigas* (Gorochov, 2011) from Colombia was also described by a single female. Because of the geographical distance and the diversity of *Tafalisca* genus, both subspecies probably correspond to different species. However, without at least the description of the copulatory papilla of *T. elongata gigas*, it is not possible to compare both taxa properly and propose taxonomic rearrangements. Holotype images and more information of *Pseudogryllus elongatus* Chopard, 1912 are available in MNHN collection website (http://coldb.mnhn.fr/catalognumber/mnhn/eo/ensif6594).

Measurements (mm)

Male (n = 1, non-type): HW, 6.5; IOD, 3; PL, 5.1; PW, 7; FWL, 28.2; FWW, 7; HWL, 29; LFIII, 19.3; WFIII; 6.2; LTIII, 12.6; LBtarsIII, 2.5.

Female (n = 1, non-type): HW, 7.2; IOD, 3; PL, 6.1; PW, 7.4; FWL, 30.9; FWW, 7.2; HWL, 32; LFIII, 20.7; WFIII, 6.9; LTIII, 13.2; LBtarsIII, 2.2; OL, 18.7.

Tafalisca hugeli n. sp.
(Figs 1A, B; 5-7)

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TYPE LOCALITY. — Mitaraka, French Guiana.

ETYMOLOGY. — Species dedicated to our colleague and friend Sylvain Hugel (CNRS, Strasbourg), who collected crickets during the 2015 "Planète revisitée" expedition in the Tumuc-Humac mountains.

TYPE MATERIAL. — **Holotype. French Guiana** • ♂; Monts Tumuc-Humac, Massif du Mitaraka; 54°44.768"O, 2°23.5494"N; C100; 350 m – 54°44'19"O, 2°23'3664"N; C 1000; 415 m; 23.II.2015-10.III.2015; F. Legendre & S. Hugel leg.; night; Planète revisitée Guyane 2015, 2015 GUY SH 188; Molec 2016 LDG 553; MNHN-EO-ENSIF10877; MNHN.
Paratypes. 3♂. **French Guiana** • 1♂; same data as for holotype; 2015 GUY SH 167; MNHN-EO-ENSIF10878; MNHN • 1♂; Monts Tumuc-Humac, Massif du Mitaraka, vers sommet en Cloche; 54°45'41"O, 2°23'49"N; 370 m – 54°46'46"O, 2°23'29"N; 470 m; 23.II.2015-10.III.2015; F. Legendre & S. Hugel leg., night; Planète revisitée Guyane 2015, 2015 GUY SH 414; MNHN-EO-ENSIF10879; MNHN • 1♂; same data as for previous paratype, 2015 GUY SH 374; MNHN-EO-ENSIF10880; MNHN.

DIAGNOSIS. — This species is separated from the other species of *Tafalisca* by the following characters: antennomeres yellowish with some isolated dark brown ones. Male: FWs light brown with several dark brown, almost black, spots; TIII apical and subapical spurs and spines yellow with dark brown apex and basis; metanotum with two median projections, drop-shaped with rounded tip in dorsal view; PCu vein with *c.* 20 very tiny stridulatory teeth ventrally. Male genitalia: MLophi very short, posterior margin rounded; PsP inclined inwards in ventral view, posterior half larger than anterior; EndSc longer than wide, posterior margin rounded, lateral margins folded ventrally.

DESCRIPTION

General morphology.

Body. Medium to large size, general coloration reddish-brown with black brown spots, covered by bristles.

Head. Occiput and vertex covered by small bristles, reddish-brown. Fastigium as long as wide, pubescent, reddish-brown (Fig. 5A-C). Three ocelli, median very reduced, almost in the same line as lateral ones in frontal view; lateral ocelli rounded. Frons median region covered by yellowish bristles, reddish-brown (Fig. 5C). Eyes almost as long as wide in lateral view, marginal ommatids light brown, others dark brown almost black (Fig. 5B, C). Antennal scape longer than wide, inner margin with yellowish bristles, light reddish-brown; antennomeres yellowish with some isolated dark brown ones. Gena reddish-brown in frontal and lateral views. Mandibles medium brown, apex darker. Epistomal suture, clypeus, and labrum medium brown (Fig. 5C). Maxillary palpi pubescent, covered by yellowish bristles; articles reddish-brown, apex light brown; article 5 larger than other articles; articles 5, 4, and 3 almost same-sized.

Pronotum. DD slightly wider than long, covered by whitish bristle, reddish-brown. DD cephalic margin slightly concave, with brownish bristles; caudal margin somewhat convex, with brownish bristles (Fig. 5A). LL reddish-brown; ventro-cephalic angle rounded; ventro-caudal angle gradually ascendant in lateral view (Fig. 5B).

Wings. FWs covering the entire abdomen; covered by tiny bristles, light brown with several dark brown almost black spots, veins light to medium brown. Lateral field with dark brown veins (Fig. 5A, B). HWs longer than FWs in dorsal and lateral views.

Legs. Legs I and II with yellowish bristles. FI and FII light reddish-brown, apical margins darker. TI and TII with small

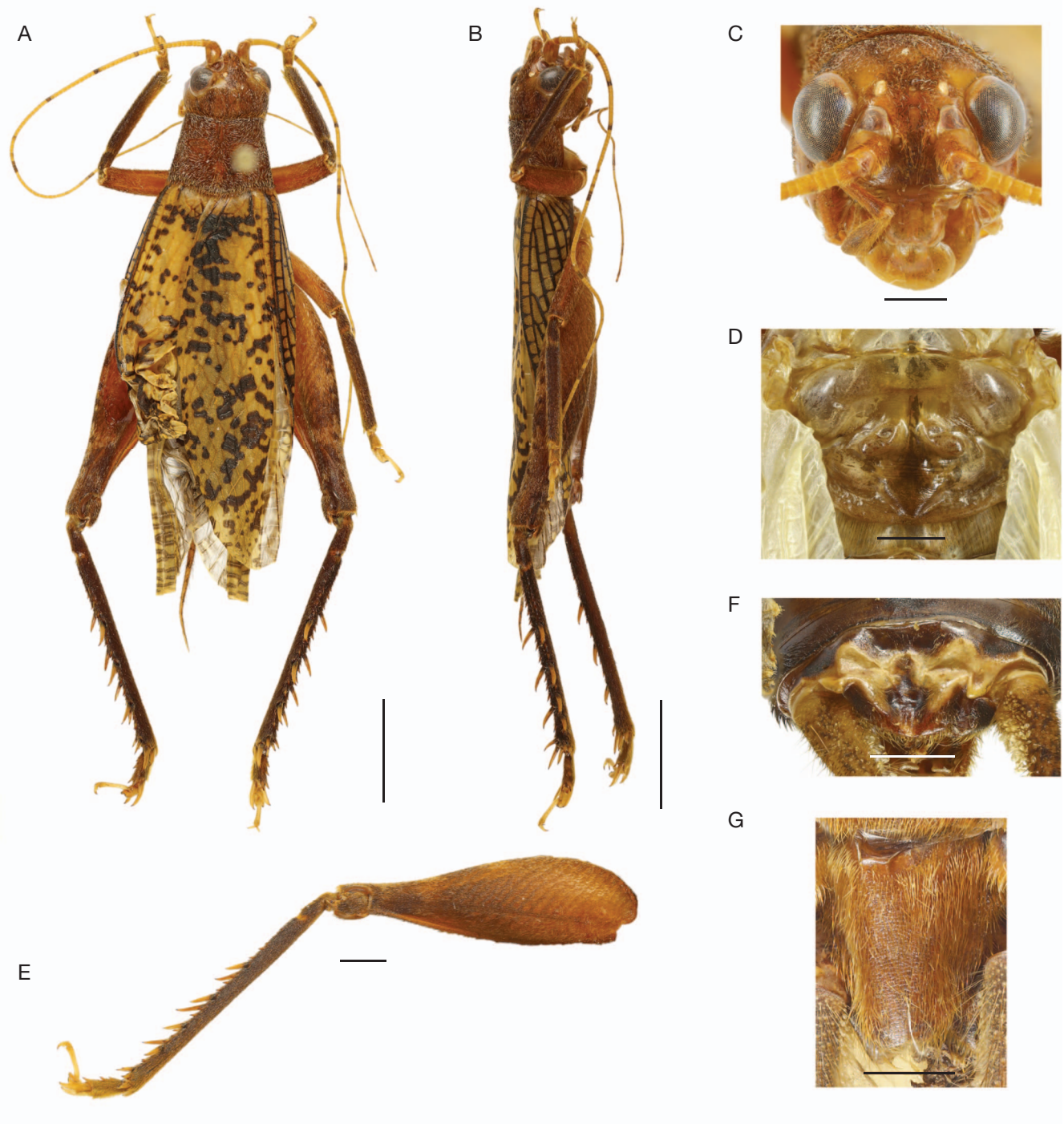

FIG. 5. — *Tafalisca hugeli* n. sp.: **A**, male habitus, dorsal; **B**, male habitus, lateral; **C**, male head, frontal; **D**, male metanotum, dorsal; **E**, male hindleg, lateral; **F**, male supra anal plate; **G**, male subgenital plate. Scale bars: A, B, 5 mm; E, 2 mm; C, D, F, G, 1 mm.

area not covered by bristles, lighter that TI on dorsal side of proximal region; inner and outer tympana absent. TI and TII dark brown. TI with three apical spurs: two ventral same-sized; one dorsal, inner, longer than ventral spurs. TII with three apical spurs: two ventral, same-sized; one dorsal, inner, longer than ventral spurs. FIII longer than TIII; with yellowish bristles, light reddish-brown, darker apically (Fig. 5E). TIII dark brown, with yellowish bristles. TIII subapical spurs 5/4, with three spines between each inner and outer pair of successive spurs, sometimes two spines between first two spurs; seven spines above subapical spurs on both inner and outer TIII margins; apex of TIII subapical spurs slightly curved. TIII apical spurs 3/3, longer on inner side; inner apical spurs: dorsal the longest (iad), median shorter than dorsal (iam),

Fig. 6. — *Tafalisca hugeli* n. sp., male phallic complex: **A**, dorsal; **B**, ventral; **C**, lateral. Scale bar: 1 mm.

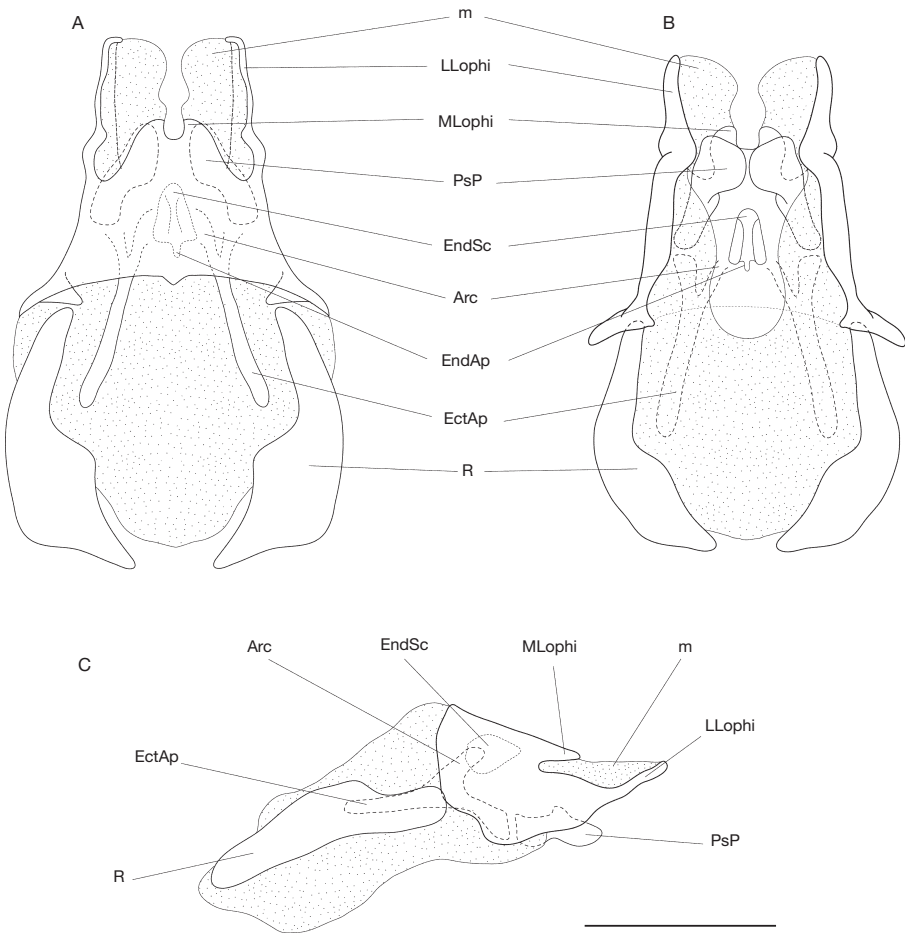

Fig. 7. — *Tafalisca hugeli* n. sp., male phallic complex: **A**, dorsal; **B**, ventral; **C**, lateral. Abbreviations: see Material & Methods. Scale bar: 1 mm.

ventral the smallest (iav) (iad>iam>iav); outer apical spurs: median longest (oam), dorsal slightly shorter (oad), ventral almost same size of dorsal (oav) (oam>oad>oav). TIII apical and subapical spurs and spines yellow with apex and basis dark brown (Fig. 5A, B, E). Basitarsus dorsal spines 3/1, apical spine the longest; inner apical spur almost as long as basitarsus, outer apical spur slightly shorter than inner apical spur. Basitarsus medium brown.

Abdomen. Tergites slightly pubescent, medium brown. Cerci pubescent, medium brown, marbled dark brown. Supra anal plate dark brown crossed horizontally by a medium light brown band; posterior margin rounded (Fig. 5F).

Male

Morphology. Metanotum with two median projections, drop-shaped in dorsal view, tip rounded; antero-lateral regions inflated, without bristles; medio-posterior region somewhat elevated as in *Tafalisca elongata elongata* n. comb. (Fig. 5D). FWs bearing 7-8 parallel veins, reticulated; dorsal field without stridulatory apparatus; PCu vein curved inwards on anterior region, with *c*. 20 vestigial stridulatory teeth ventrally. Lateral field with *c*. 7 parallel veins, parallel to dorsal field in lateral view. Subgenital plate longer than wide, posterior margin somewhat concave, strongly pubescent; medium brown with yellow bristles (Fig. 5G).

Male genitalia (Figs 6, 7). Pseudepiphallus: pseudepiphallic sclerite apex slightly upcurved in lateral view, anterior margin concave in dorsal view. LLophi thinner than MLophi in ventral view, their apex curved inwards, inner margin of anterior region somewhat rounded in ventral view. MLophi very short, shorter than LLophi in dorsal view, posterior margin rounded. PsP well sclerotized, inclined inwards in ventral view, shorter than pseudepiphallic sclerite, not surpassing its posterior margin; posterior half larger than anterior, inner margins rounded. R elongated, flattened laterally, longer than pseudepiphallic sclerite, anterior half wider than posterior half. Ectophallic invagination: EctAp surpassing the anterior margin of pseudepiphallic sclerite, almost straight in lateral view. Arc not complete, directed posteriorly in dorsal and ventral views; ventral projections of ectophallic invagination shorter than EctAp in ventral view. EctF membranous almost no discernible. Endophallus: EndSc longer than wide, shorter than EctAp, posterior margin rounded, lateral margins folded ventrally; EndAp shorter than EndSc.

Female

Unknown.

Measurements (mm)

Males (n = 4, holotype and paratypes): HW, 4.3 ± 0.2 (4-4.7); IOD, 2; PL, 3.72 ± 0.2 (3.5-3.9); PW, 4.4 ± 0.2 (4-4.6); FWL, 16.75 ± 0.95 (16-18) ; FWW, 4.37 ± 0.37 (4-4.9); HWL, 18.6 ± 0.8 (17.9-19.7); LFIII, 12.5 ± 0.36 (12.1-12.9); WFIII, 3.87 ± 0.32 (3.4-4.1); LTIII, 11.67 ± 0.25 (11.4-12); LBtarsIII, 1.82 ± 0.23 (1.5-2).

Tafalisca ansoi n. sp.
(Figs 8-10)

urn:lsid:zoobank.org:act:2713E14F-5090-43A0-BA8C-AF8CF4F0CE84

TYPE LOCALITY. — Patawa, French Guiana.

ETYMOLOGY. — Species dedicated to Jérémy Anso, who studied Guianese crickets during his Master.

TYPE MATERIAL. — **Holotype. French Guiana** • ♂; Patawa, Route de Kaw, PK 32; 20.VII.2011; L. Desutter-Grandcolas & J. Anso leg.; on plant at night; Molec 2012 LDG 109; MNHN-EO-ENSIF3276; MNHN.
Paratype. 1♂. French Guiana • 1♂; Mont[agne] de Kaw, PK 37, arbre 3; 17.VII.1994; Roubaud leg.; MNHN-EO-ENSIF10881; MNHN.

DIAGNOSIS. — This species is separated from the other species of *Tafalisca* by the following characters: FWs medium brown with light brown veins. TIII with three spines between each inner and outer pair of successive spurs; TIII apical and subapical spurs and spines dark brown with dark yellow apex. Male genitalia: PsP elongated, almost as long as LLophi, anterior half bilobate, apex of outer lobe rounded, apex of inner lobe straight connected to ventral projection of ectophallic invagination by membranes.

DESCRIPTION

General morphology.

Body. Medium to large size, general coloration reddish-brown, covered by small bristles.

Head. Occiput and vertex covered by small bristles, reddish-brown. Fastigium as long as wide, pubescent, reddish-brown (Fig. 8A-C). Three ocelli, the median very reduced, almost in the same line as lateral ones in frontal view; lateral ocelli rounded. Frons median region covered by brownish bristles, reddish-brown (Fig. 8C). Eyes almost as long as wide in lateral view, dorsal ommatids light brown, the others reddish-brown to medium brown (Fig. 8B, C). Antennal scape longer than wide, inner margin with bristles dark brown, light reddish-brown; antennomeres dark yellow. Gena reddish-brown in frontal and lateral views. Mandibles medium brown, apex darker. Epistomal suture and clypeus medium brown; labrum dark brown (Fig. 8C). Maxillary palpi pubescent, covered by yellowish bristles; articles light reddish-brown, darker apically; article 5 shorter than articles 3 and 4.

Pronotum. DD slightly wider than long, covered with dark brown and yellowish bristles, reddish-brown. DD cephalic margin slightly concave, with brownish bristles; caudal margin somewhat convex, with brownish bristles (Fig. 8A). LL reddish-brown; ventro-cephalic angle rounded; ventro-caudal angle gradually ascendant in lateral view (Fig. 8B).

Wings. FWs covering the entire abdomen; covered by tiny yellowish bristles; medium brown with light brown veins. Lateral field with light brown veins. (Fig. 8A, B). HWs longer than FWs in dorsal and lateral views.

Legs. Legs I and II with brownish bristles. FI and FII reddish-brown, apical margins darker. TI and TII with small area not

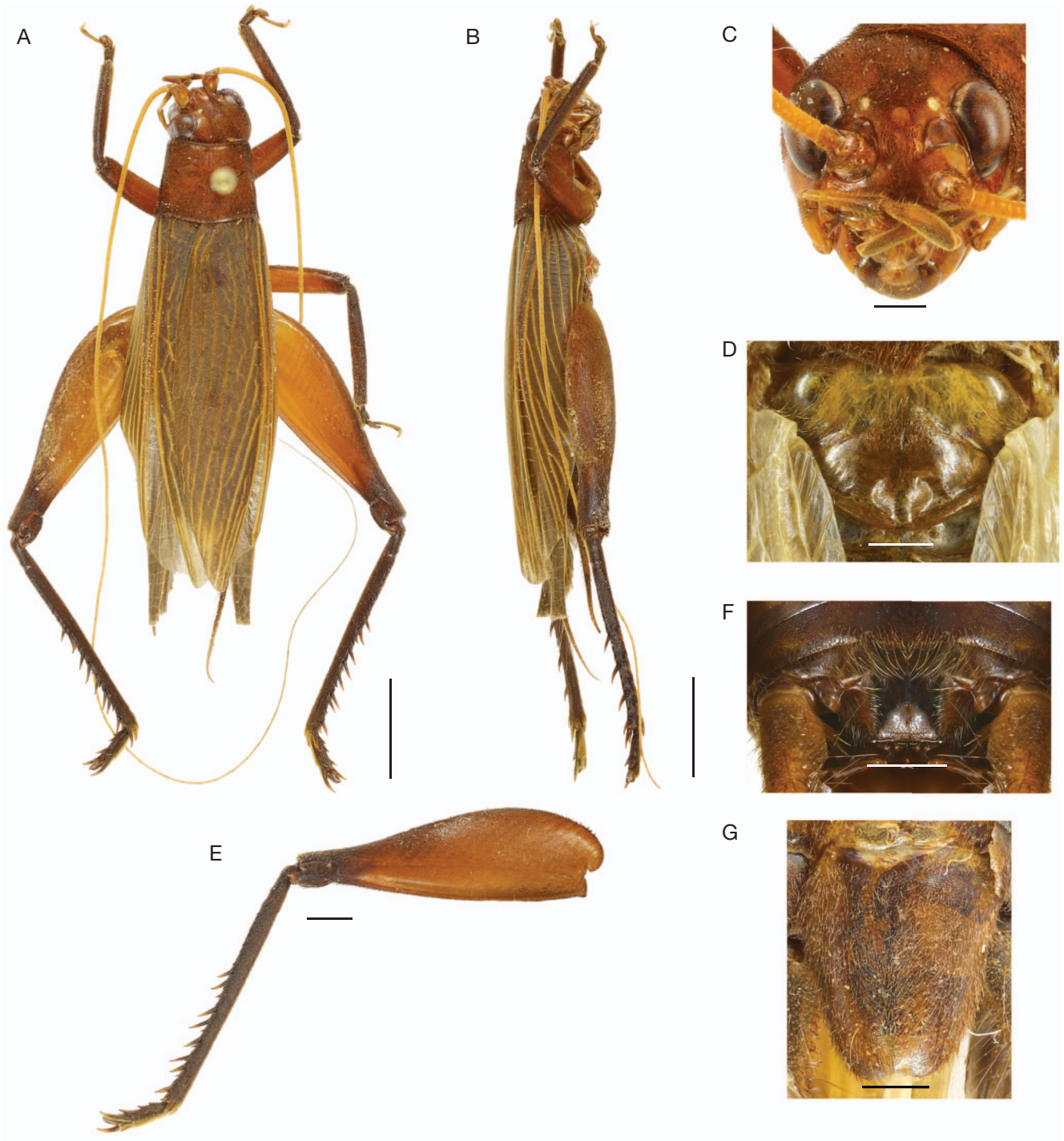

FIG. 8. — *Tafalisca ansoi* n. sp.: **A**, male habitus, dorsal; **B**, male habitus, lateral; **C**, male head, frontal; **D**, male metanotum, dorsal; **E**, male hindleg, lateral; **F**, male supra anal plate; **G**, male subgenital plate. Scale bars: A, B, 5 mm; E, 2 mm; C, D, F, G, 1 mm.

covered by bristles on dorsal side of proximal region; TI and TII dark brown. TI with three apical spurs: two ventral, same-sized; one dorsal, inner, longer than ventral spurs. TII with four apical spurs: two ventral, same-sized; two dorsal, same-sized, longer than ventral spurs. FIII longer than TIII; with brownish and yellowish bristles, light reddish-brown; apical region dark brown (Fig. 8E). TIII dark brown, with brownish bristles. TIII subapical spurs 5/4, with three spines between each inner and outer pair of successive spurs, sometimes two spines between the first two subapical spurs; seven spines above inner and outer subapical spurs; TIII apical spurs 3/3, longer on inner side; inner apical spurs: dorsal the longest (iad), median shorter than dorsal (iam),

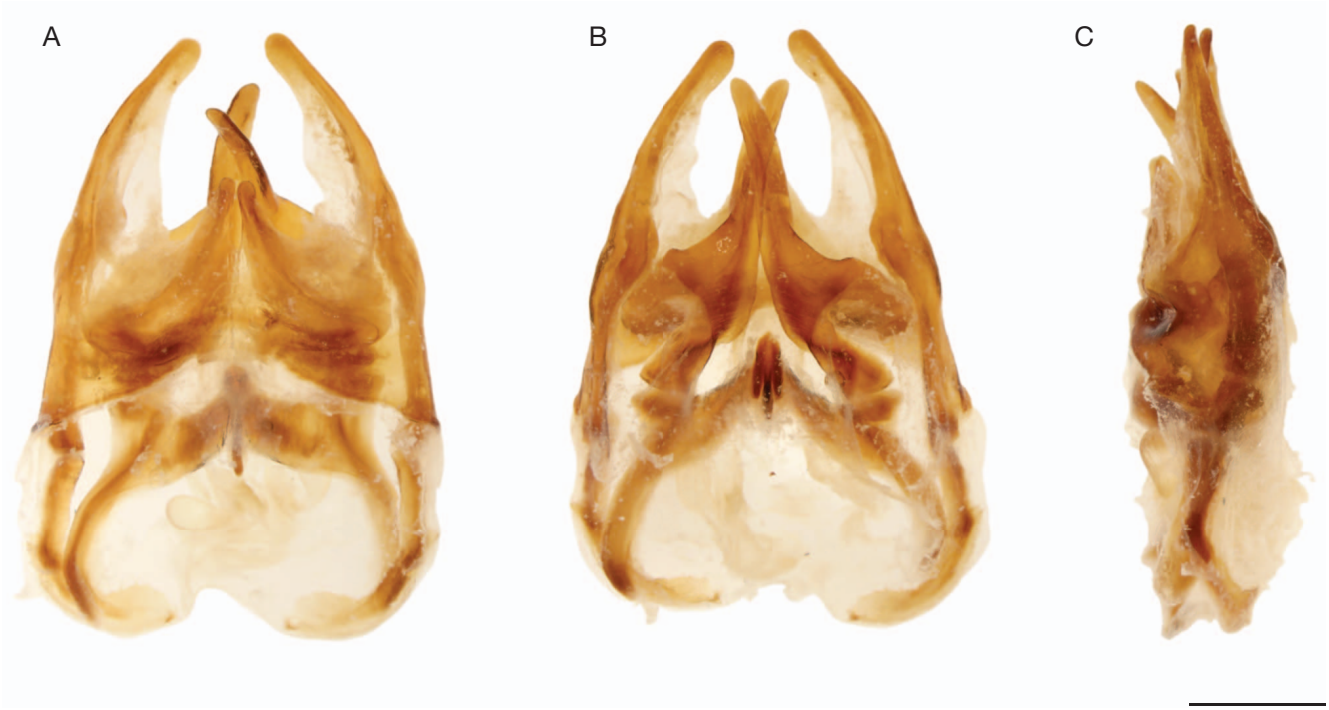

Fig. 9. — *Tafalisca ansoi* n. sp., male phallic complex: **A**, dorsal; **B**, ventral; **C**, lateral. Scale bar: 1 mm.

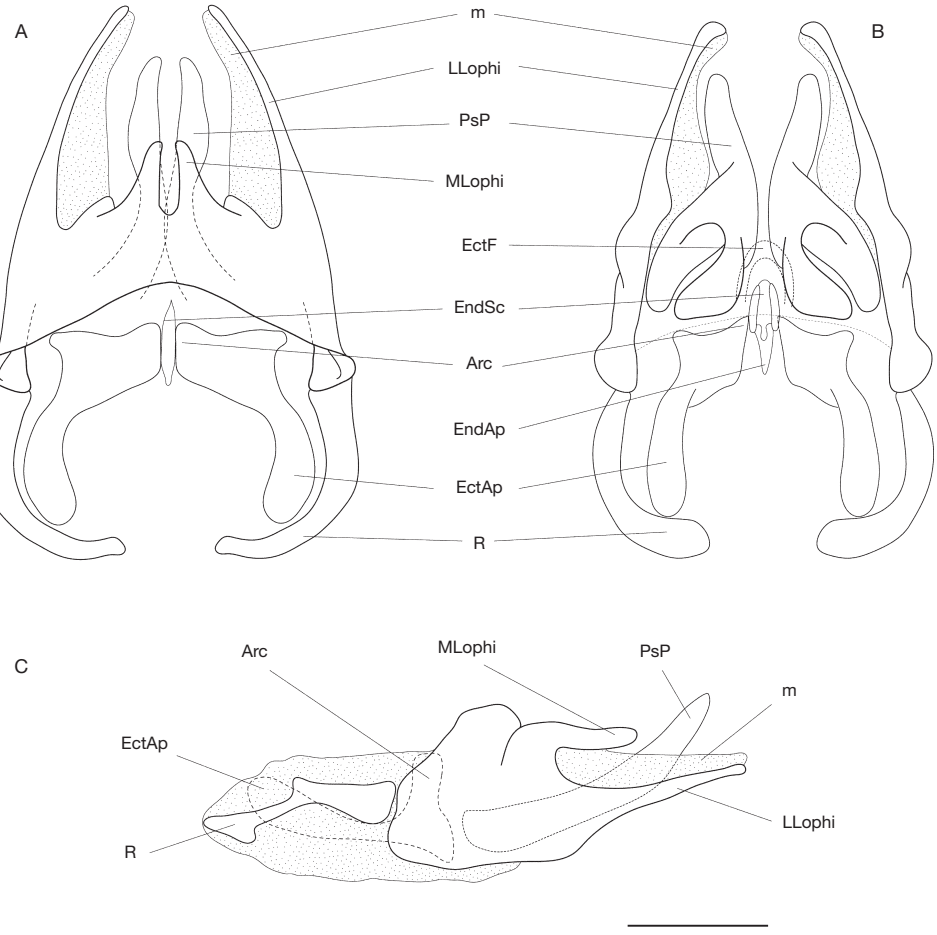

Fig. 10. — *Tafalisca ansoi* n. sp., male phallic complex: **A**, dorsal; **B**, ventral; **C**, lateral. Abbreviations: See Material and methods. Scale bar: 1 mm.

ventral the smallest (iav) (iad>iam>iav); outer apical spurs: median longest (oam), dorsal slightly shorter (oad), ventral almost same size of dorsal (oav) (oam>oad>oav). TIII apical and subapical spurs and spines dark brown with dark yellow apex (Fig. 8A, B, E). Basitarsus dorsal spines 3/1, apical spine the longest; inner apical spur almost as long as basitarsus, outer apical spur slightly shorter than inner apical spur. Basitarsus dark brown.

Abdomen. Tergites slightly pubescent, medium to dark brown. Cerci pubescent, dark brown. Supra anal plate dark brown, posterior margin almost straight (Fig. 8F).

Male

Morphology. Metanotum without projections; antero-lateral regions inflated, with bristles; medio-posterior region somewhat elevated as in *Tafalisca elongata elongata* n. comb. (Fig. 8D). FWs bearing 7-8 parallel veins, reticulated; dorsal field without stridulatory apparatus; PCu vein curved inwards on anterior region, without stridulatory teeth ventrally. Lateral field with *c.* 10 parallel veins, parallel to dorsal field in lateral view. Subgenital posterior margin slightly concave, pubescent; medium brown, anterior portion dark brown (Fig. 8G).

Male genitalia (Figs 9, 10). Pseudepiphallus: pseudepiphallic sclerite almost straight in lateral view, anterior margin concave in dorsal view. LLophi thinner than MLophi in ventral view, elongated, curved inwards, inner margin of anterior region rounded in ventral view; apex rounded. MLophi short, thin, straight, not surpassing LLophi and PsP in dorsal view. PsP elongated, almost as long as LLophi (similar to *Tafalisca duckeana* Campos, Souza-Dias & Nihei, 2020); posterior portion thinner than anterior, curved inwards, upcurved in lateral view; anterior portion bilobate, apex of external lobe rounded, apex of internal lobe straight connected with ventral projection of ectophallic invagination by membranes. R elongated, similar length of pseudepiphallic sclerite, flattened laterally, anterior region curved inwards. Ectophallic invagination: EctAp elongated, curved inwards in dorsal and ventral views; surpassing the anterior margin of pseudepiphallic sclerite. Arc not complete, flattened dorso-ventrally, slightly directed posteriorly in dorsal and ventral views; ventral projections of ectophallic invagination very short, almost no discernible. EctF weakly sclerotized, posterior margin rounded. Endophallus: EndSc well sclerotized, longer than wide, shorter than EctAp, posterior margin rounded, lateral margins folded ventrally; EndAp shorter than EndSc.

Female

Unknown.

Measurements

Males (n = 2, holotype and paratype): HW, 4.1; IOD, 2; PL, 4.2; PW, 5; FWL, 20.05 ± 0.07 (20-20.1) ; FWW, 5.05 ± 0.07 (5-5.1); HWL, 21.8 ± 0.2 (21.6-22); LFIII, 13.5 ± 0.3 (13.5-14); WFIII, 4.3; LTIII, 12.15 ± 0.21 (12-12.3); LBtarsIII, 2.

Genus Adenophallusia de Mello & de Camargo e Mello, 1996

Type species. — *Adenophallusia naiguatana* de Mello & de Camargo e Mello, 1996.

Diagnosis. — TI with inner auditory tympanum; HWs completely covered by FWs. Male: FWs apical field reduced; supra anal plate bearing a median spine. Male genitalia: LLophi apex bilobate; EndSc flattened dorso-ventrally, EndAp absent. Female: lateral margins of ovipositor apex serrulated.

Adenophallusia legendrei n. sp. (Figs 11-13)

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Type locality. — Mitaraka, French Guiana.

Etymology. — Species dedicated to our colleague and friend Frédéric Legendre (MNHN), who collected crickets during the 2015 "Planète revisitée" expedition in the Tumuc-Humac mountains.

Type material. — **Holotype. French Guiana** • ♂; Monts Tumuc-Humac, Massif du Mitaraka, Prox Borne 1; 54°43'65"O, 2°22'69"N; 300 m – 54°43'55"O, 2°21'25"N; 445 m; 23.II.2015-10.III.2015, night; F. Legendre & S. Hugel leg.; Planète revisitée Guyane 2015; 2015 GUY SH 365; MNHN-EO-ENSIF10882; MNHN.
Allotype. French Guiana • ♀; same data as for holotype; 2015 GUY SH 367; MNHN-EO-ENSIF10883, MNHN.
Paratypes. 1♂, 1♀. French Guiana • 1♂; Monts Tumuc-Humac, Massif du Mitaraka vers sommet en Cloche, 54°45'41"O, 2°23'49"N; 370 m – 54°46'46"O, 2°23'29"N; 470 m; 23II.2015.-10.III.2015; night; F. Legendre & S. Hugel leg.; Planète revisitée Guyane 2015; 2015 GUY SH 501; MNHN-EO-ENSIF10884; MNHN. • 1♀; same data as for holotype; 2015 GUY SH 366; MNHN-EO-ENSIF10885; MNHN. • 1♀; same data as for holotype; 2015 GUY SH 368; Molec 2015 LDG 520; MNHN-EO-ENSIF10886; MNHN.

Diagnosis. — This species is separated from the other species of *Adenophallusia* by the following characters: metanotum with two median projections rounded in dorsal view; first abdominal tergite with a depression resembling an inverted heart in dorsal view. Male: FWs covering the entire abdomen; stridulatory with *c.* 56 stridulatory teeth; harp crossed by three diagonal veins; median spine of supra anal plate with base enlarged. Male genitalia: both lobes of LLophi with apex of pointed; EndSc oval in dorsal and ventral views, anterior and posterior margins rounded. Female: FWs covering abdomen but not supra anal plate; posterior tip of ovipositor pointed. Female genitalia: posterior margin of copulatory papilla with a median rounded projection in dorsal view.

Description

General morphology.

Body. Medium to small size, covered by bristles, general coloration medium brown, legs light brown.

Head. Occiput and vertex covered by yellowish bristles, medium brown. Fastigium as long as wide, pubescent, dark brown (Fig. 11A, E). Lateral ocelli small, rounded; median ocellus absent. Frons without bristles, dark brown (Fig. 11E). Eyes longer than wide in lateral view, dorsal ommatids whitish,

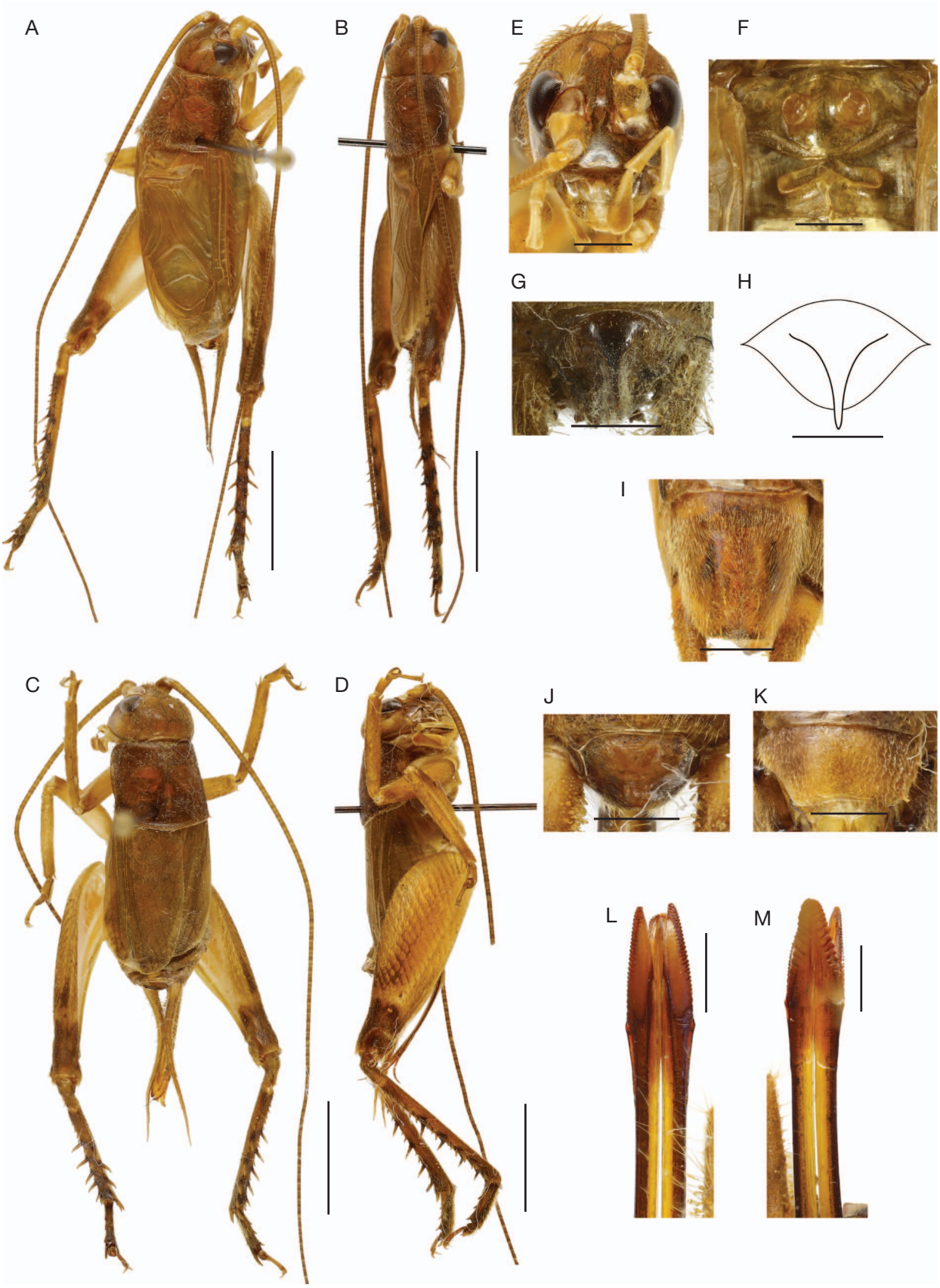

FIG. 11. — *Adenophallusia legendrei* n. sp., male and female: **A**, male habitus, dorsal; **B**, male habitus, lateral; **C**, female habitus, dorsal; **D**, female habitus, lateral; **E**, male head, frontal; **F**, male metanotum, dorsal; **G**, male supra anal plate; **H**, male supra anal plate; **I**, male subgenital plate; **J**, female supra anal plate; **K**, female subgenital plate; **L**, ovipositor apex, dorsal; **M**, ovipositor apex, ventral. Scale bars: A-D, 5 mm; E-M, 1 mm.

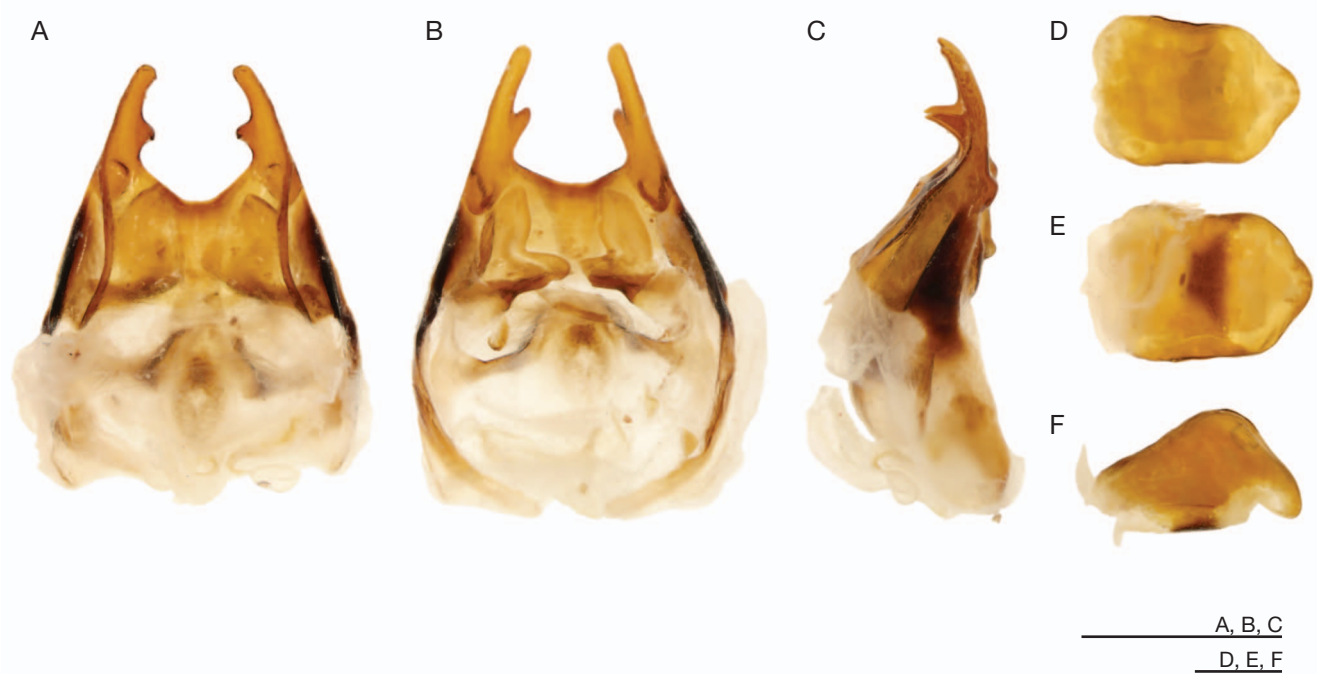

FIG. 12. — *Adenophallusia legendrei* n. sp., male phallic complex: **A**, dorsal; **B**, ventral; **C**, lateral. Female copulatory papilla: **D**, dorsal; **E**, ventral; **F**, lateral. Scale bars: A-C, 1 mm; D-F, 0.5 mm.

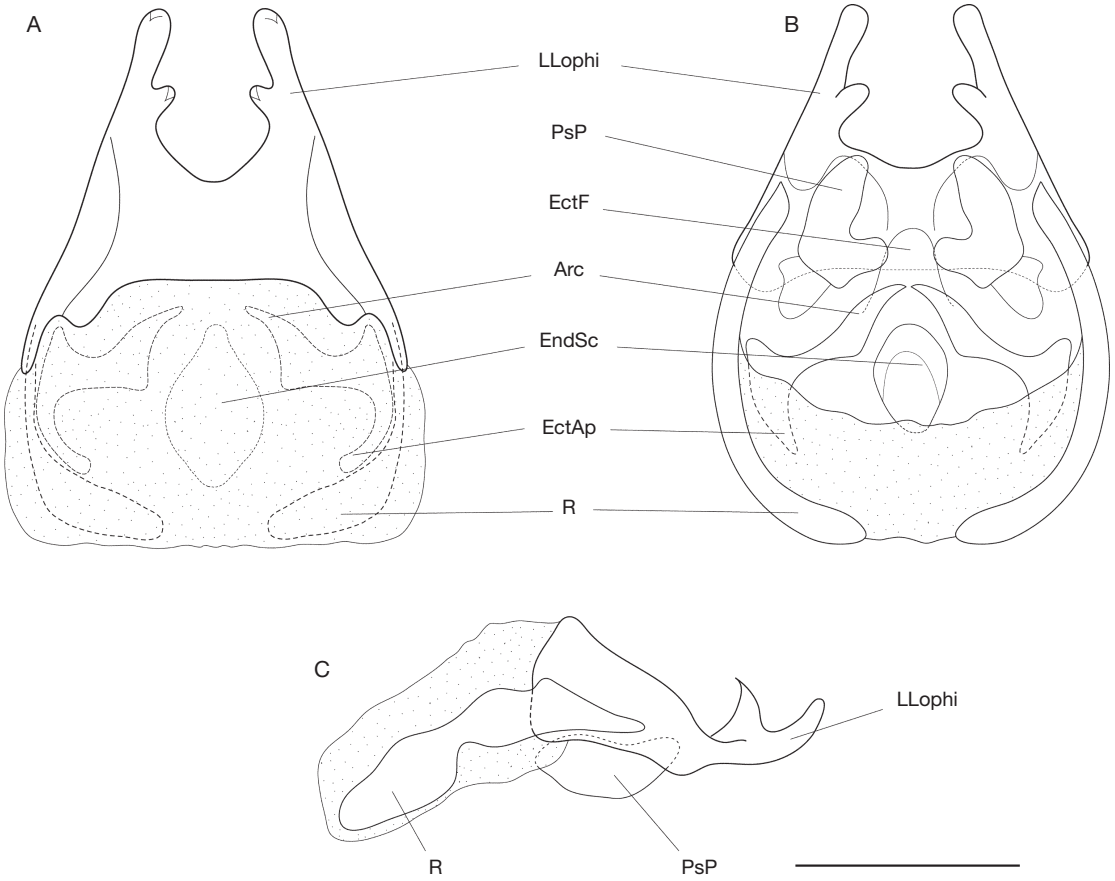

FIG. 13. — *Adenophallusia legendrei* n. sp., male phallic complex: **A,** dorsal; **B,** ventral; **C,** lateral. Abbreviations: see Material and Methods. Scale bar: 1 mm.

others black (Fig. 11B, E). Antennal scape longer than wide, inner margin with yellowish bristles, light brown, marbled dark brown; antennomeres medium brown. Gena medium brown in frontal view, light brown in lateral view. Mandibles dorsal half dark brown, ventral half light brown, apex darker (Fig. 11E). Epistomal suture medium brown; clypeus light to medium brown, dark brown punctuated; labrum light brown, dark brown punctuated laterally (Fig. 11E). Maxillary palpi slightly pubescent with yellowish bristles; articles light brown, article 5 darker; articles 3-5 almost same-sized; article 5 clavate.

Pronotum. DD slightly wider than long, covered by bristles light yellow; medium brown. DD cephalic margin slightly concave, with reddish-brown bristles; caudal margin somewhat convex, with reddish-brown bristles (Fig. 11 A, C). LL medium to dark brown; ventro-cephalic angle rounded; ventro-caudal angle gradually ascendant in lateral view (Fig. 11B, D).

Wings. FWs not covered by bristles, light to medium brown, somewhat translucent; veins light brown (Fig. 11A, C).

Legs. Legs I and II with yellowish and brownish bristles. FI and FII light brown. TI and TII light brown. TI with oval inner tympanum; no outer tympanum. TI with three apical spurs: two ventral, one dorsal, inner. TII with three apical spurs: two ventral, one dorsal, inner. FIII longer than TIII; with yellowish bristles, medium brown; apical region dark brown (Fig. 11D). TIII medium to dark brown, with yellowish bristles. TIII subapical spurs 5/4, with two spines between most proximal spurs, one spine between the other spurs; seven spines above inner spurs, five or six spines above outer subapical spur. TIII apical spurs 3/3, longer on inner side; inner apical spurs: dorsal (iad) and median (iam) with same length, ventral the smallest (iav) (iad=iam>iav); outer apical spurs: median longest (oam), dorsal slightly shorter (oad), ventral almost same size of dorsal (oav) (oam>oad>oav). TIII apical and subapical spurs and spines dark brown with apex medium brown (Fig. 11A, C). Basitarsus dorsal spines 3/3, apical spine the longest; inner and outer apical spur same-sized, shorter than basitarsus. Basitarsus dark brown.

Abdomen. Tergites slightly pubescent, medium to dark brown. Cerci pubescent, dark brown.

Male

Morphology. Metanotum with two median projections rounded in dorsal view; antero-lateral regions inflated, without bristles. First abdominal tergite with a depression resembling an inverted heart in dorsal view (Fig. 11F). FWs covering the abdomen; PCu curved on anterior region, bearing a stridulatory file with *c.* 56 stridulatory teeth on ventral side. Harp crossed by three diagonal veins, connected to CuPa, second and third connected apically; CuPb short; mirror divided on the middle by a curved vein (Fig. 11A). Lateral field with *c.* 12 parallel veins, perpendicular to dorsal field in lateral view. Supra anal posterior margin rounded; plate bearing a median spine, its base enlarged; dark brown, (Fig. 11G, H). Subgenital plate longer than wide, posterior margin straight, strongly pubescent; medium brown, with two longitudinal dark brown bands. Bristles yellow (Fig. 11I).

Male genitalia (Figs 12A-C, 13). Phallic complex not glandular (different from type species). Pseudepiphallus: pseudepiphallic sclerite general shape triangular in dorsal and ventral views, upcurved in lateral view, anterior margin almost straight in dorsal view; MLophi absent. LLophi curved inwards in dorsal view; apex outer lobe longer than inner lobe; apex of both lobes pointed. PsP almost as long as LLophi, not surpassing their tip; forming two lobes, one inner, one posterior; tips of posterior and inner lobes rounded. R elongated, long as pseudepiphallic sclerite, flattened laterally, anterior region curved inwards. Ectophallic invagination: EctAp shorter than LLophi, curved inwards in dorsal and ventral views; surpassing the anterior margin of pseudepiphallic sclerite. Arc not complete, flattened dorso-ventrally, not connected region slightly curved posteriorly in dorsal and ventral views; ventral projections of ectophallic invagination very short, almost no discernible. EctF membranous, posterior margin rounded. Endophallus: EndSc weakly sclerotized, longer than wide, oval in dorsal and ventral views, anterior and posterior margins rounded.

Female

Morphology. Body larger than male, general coloration similar to male (Fig. 11C, D). FWs covering abdomen but not supra anal plate; bearing five longitudinal veins. Supra anal plate anterior margin rounded, medium brown, laterals dark brown (Fig. 11J). Subgenital plate wider than long, posterior margin concave medially; light brown, lateral region medium to dark brown, covered by yellowish bristles (Fig. 11K). Ovipositor, upcurved, medium to dark brown (Fig. 11D); apex posterior tip pointed (Fig. 11L, M).

Female genitalia (Fig. 12D-F). Copulatory papilla longer than wide, downcurved in lateral view, not open ventrally; posterior margin with a median rounded projection in dorsal view; anterior margin almost straight.

Measurements (mm)

Males (n = 2, holotype and paratype). HW, 3.1 ± 0.14 (3-3.2); IOD, 1.5; PL, 3.5; PW, 3.7 ± 0.28 (3.5-3.9); FWL, 9; FWW, 3.75 ± 0.35 (3.5-4); LFIII, 10.25 ± 1.06 (9.5-11); WFIII, 3.1 ± 0.14 (3-3.2); LTIII, 7± 0.14 (6.9-7.1); LBtarsIII, 1.75 ± 0.35 (1.5-2).

Females (n = 3, allotype and paratypes). HW, 3.86 ± 0.05 (3.8-3.9); IOD, 1.9 ± 0.1 (1.8-2); PL, 4.13 ± 0.05 (4.1-4.2); PW, 4.23 ± 0.2 (4-4.4); FWL, 7.36 ± 0.64 (6.9-8.1); FWW, 3.3 ± 0.26 (3-3.5); LFIII, 11.03 ± 0.23 (10.9-11.3); WFIII, 3.53 ± 0.32 (3.3-3.9); LTIII, 7.86 ± 0.23 (7.6-8); LBtarsIII, 1.96 ± 0.05 (1.9-2); OL, 6.73 ± 0.55 (6.1-7.1).

Adenophallusia aratayensis n. sp.
(Figs 14-16)

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TYPE LOCALITY. — Arataye, French Guiana.

ETYMOLOGY. — Species named after the type locality.

TYPE MATERIAL. — **Holotype. French Guiana** • ♂; Arataye Affl. Approuague, aval du Saut Parare; 13.VII.1988; L. Desutter & P. Grandcolas leg.; beating at night, n°10 Plateau, MNHN-EO-ENSIF10887, MNHN.
Allotype. French Guiana • ♀; Arataye Affl. Approuague, 8 km NE pied Saut Parare; 13.VI.1988; L. Desutter & P. Grandcolas leg.; plateau forest, night; MNHN-EO-ENSIF10888; MNHN.
Paratypes. 3♀. **French Guiana** • 1♀; Montagne de Kaw, Piste pk 36; 24.VII. 91; P. Grandcolas leg.; low forest (xerophytic); plant at night; Molec 2019 lbr_330; MNHN-EO-ENSIF10889; MNHN. • 2♀; same data as for allotype, MNHN-EO-ENSIF10890-10891; MNHN.

DIAGNOSIS. — This species is separated from the other species of *Adenophallusia* by the following characters: ocelli absent. Male: FWs covering the entire abdomen, but not supra anal plate; harp crossed by four diagonal veins; median spine of supra anal plate with base not enlarged. Male genitalia: pseudepiphallic sclerite elongated; only inner lobe of LLophi with apex pointed. Female: FWs not covering the last three abdominal tergites. Female genitalia: copulatory papilla cylindrical, posterior half thinner than anterior, unpigmented.

DESCRIPTION

General morphology.

Body. Medium to small size, covered by bristles, general coloration medium brown, legs light brown.

Head. Occiput and vertex covered by light bristles, medium brown. Fastigium as long as wide, pubescent, medium brown (Fig. 14A, C, E). Ocelli absent. Frons with some yellowish bristles on median region, medium to dark brown (Fig. 14E). Eyes longer than wide in lateral view, ommatids dark yellow with some sparse black ones. Antennal scape longer than wide, inner margin with yellowish bristles, medium to light brown, antennomeres medium brown. Gena medium brown in frontal view, light brown in lateral view. Mandibles medium brown, apex darker (Fig. 14E). Epistomal suture dark yellow; clypeus and labrum light to medium brown (Fig. 14E). Maxillary palpi pubescent with light bristles; articles light brown; articles 3-5 almost same-sized; article 5 clavate.

Pronotum. DD slightly longer than wide, covered by bristles; reddish-brown. DD cephalic margin slightly concave, with reddish-brown bristles; caudal margin somewhat convex, with reddish-brown bristles (Fig. 14A, C). LL medium to dark brown; ventro-cephalic angle rounded; ventro-caudal angle gradually ascendant in lateral view (Fig. 14B, D).

Wings. FWs covered by tiny bristles, somewhat translucent, medium brown; veins medium brown.

Legs. Legs I and II with yellowish and brownish bristles. FI and FII light brown. TI and TII light brown. TI with oval inner tympanum. TI with three apical spurs: two ventral, one dorsal, inner. TII with three apical spurs: two ventral, one dorsal, inner. FIII longer than TIII; with yellowish and brownish bristles, light brown; apical region medium brown (Fig. 14B, D). TIII medium brown, with yellowish bristles. TIII subapical spurs 5/4, with two spines between uppermost spurs, one spine between the others; seven spines above the inner spurs, five or six spines above outer subapical spurs. TIII apical spurs 3/3, longer on inner side; inner apical spurs: dorsal (iad) and median (iam) with same length, ventral the smallest (iav) (iad=iam>iav); outer apical spurs: median longest (oam), dorsal slightly shorter (oad), ventral almost same size of dorsal (oav) (oam>oad>oav). TIII apical and subapical spurs and spines light brown with apex medium brown (Fig.14A-D). Basitarsus dorsal spines 3/3, apical spine the longest; inner and outer apical spur same size, shorter than basitarsus. Basitarsus medium brown.

Abdomen. Tergites slightly pubescent, medium brown.

Male

Morphology. FWs covering abdomen but not supra anal plate; PCu vein curved on anterior region, bearing a stridulatory file. Harp crossed by four diagonal veins, connected to CuPa, third and fourth connected apically; CuPb short; mirror divided on the middle by a curved vein (Fig. 14A). Lateral field with *c.* 13 parallel veins, perpendicular to dorsal field in lateral view. Supra anal plate bearing a median spine, posterior margin rounded; dark brown, median region black (Fig. 14F, G). Subgenital plate posterior margin straight, strongly pubescent; medium brown, bristles yellow (Fig. 14H).

Male genitalia (Figs 15A-C, 16). Phallic complex not glandular (different from type species). Pseudepiphallus: pseudepiphallic sclerite general shape triangular in dorsal and ventral views, longer than in *Adenophallusia legendrei* n. sp., slightly upcurved in lateral view, anterior margin concave in dorsal view. MLophi absent. LLophi slightly curved inwards in dorsal view; outer lobe longer than inner lobe; apex of outer lobe rounded, apex of inner lobe pointed. PsP almost same size as LLophi, not surpassing their tip; with two lobes, outer and inner; tips of outer lobe rounded, tip of inner lobe rounded; outer lobe longer than inner lobe. R elongated, shorter than pseudepiphallic sclerite, flattened laterally, anterior region curved inwards. Ectophallic invagination: EctAp almost same size as LLophi, almost straight in dorsal and ventral views; surpassing the anterior margin of pseudepiphallic sclerite. Arc not complete, flattened dorso-ventrally, median apex slightly curved posteriorly in dorsal and ventral views; ventral projections of ectophallic invagination short, as long as half Arc. EctF membranous, posterior margin rounded. Endophallus: EndSc weakly sclerotized, longer than wide, oval in dorsal and ventral views, anterior and posterior margins rounded.

Female

Morphology. Body larger than male, general coloration similar to male (Fig. 14C, D). FWs not covering the last three

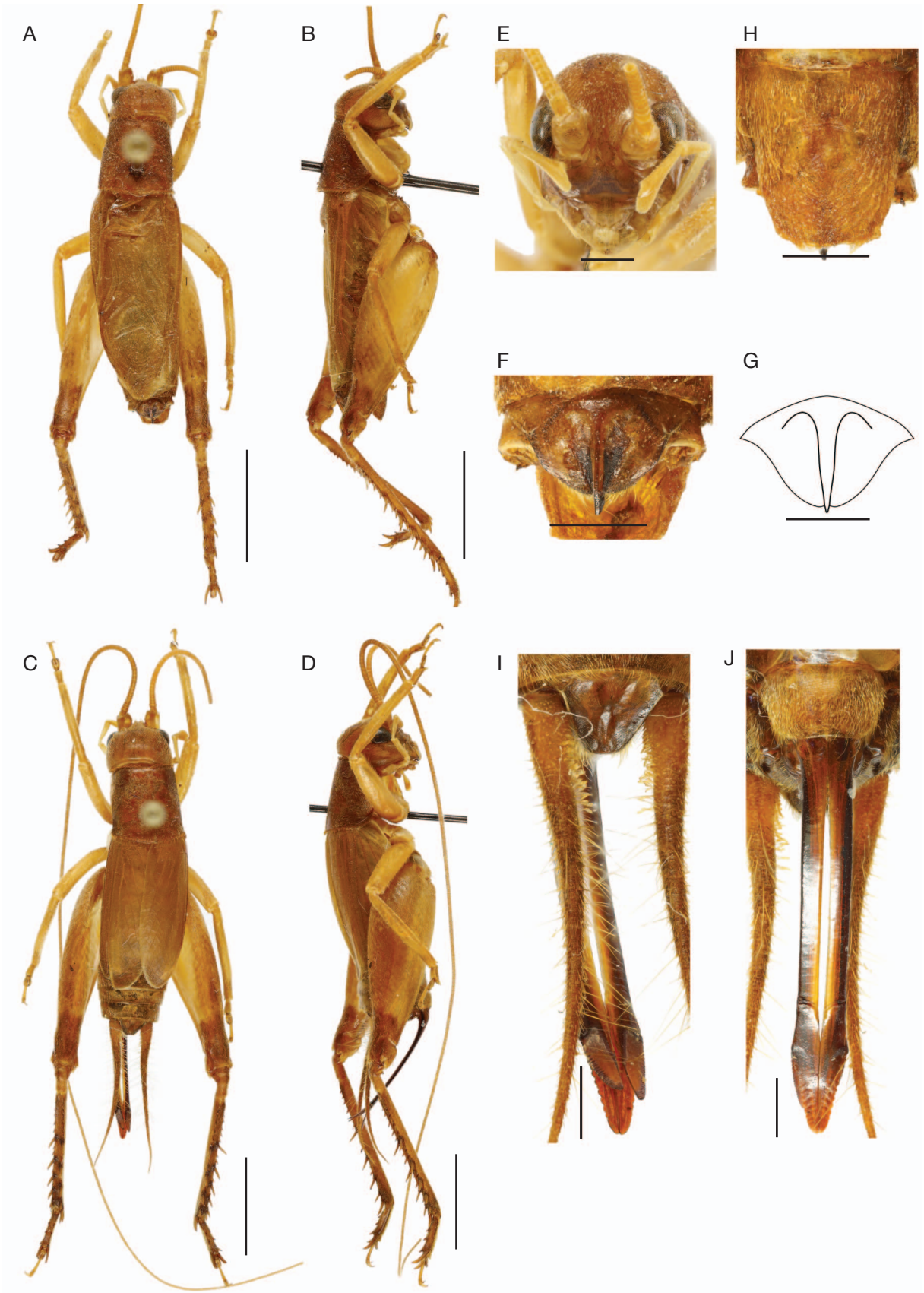

FIG. 14. — *Adenophallusia aratayensis* n. sp., male and female: **A**, male habitus, dorsal; **B**, male habitus, lateral; **C**, female habitus, dorsal; **D**, female habitus, lateral; **E**, male head, frontal; **F**, male supra anal plate; **G**, male supra anal plate; **H**, male subgenital plate; **I**, female supra anal plate and ovipositor; **J**, female subgenital plate and ovipositor. Scale bars: A-D, 5 mm; E-J, 1 mm.

FIG. 15. — *Adenophallusia aratayensis* n. sp., male phallic complex: **A**, dorsal; **B**, ventral; **C**, lateral. Female copulatory papilla: **D**, dorsal; **E**, ventral; **F**, lateral. Scale bars: A-C, 1 mm; D-F, 0.5 mm.

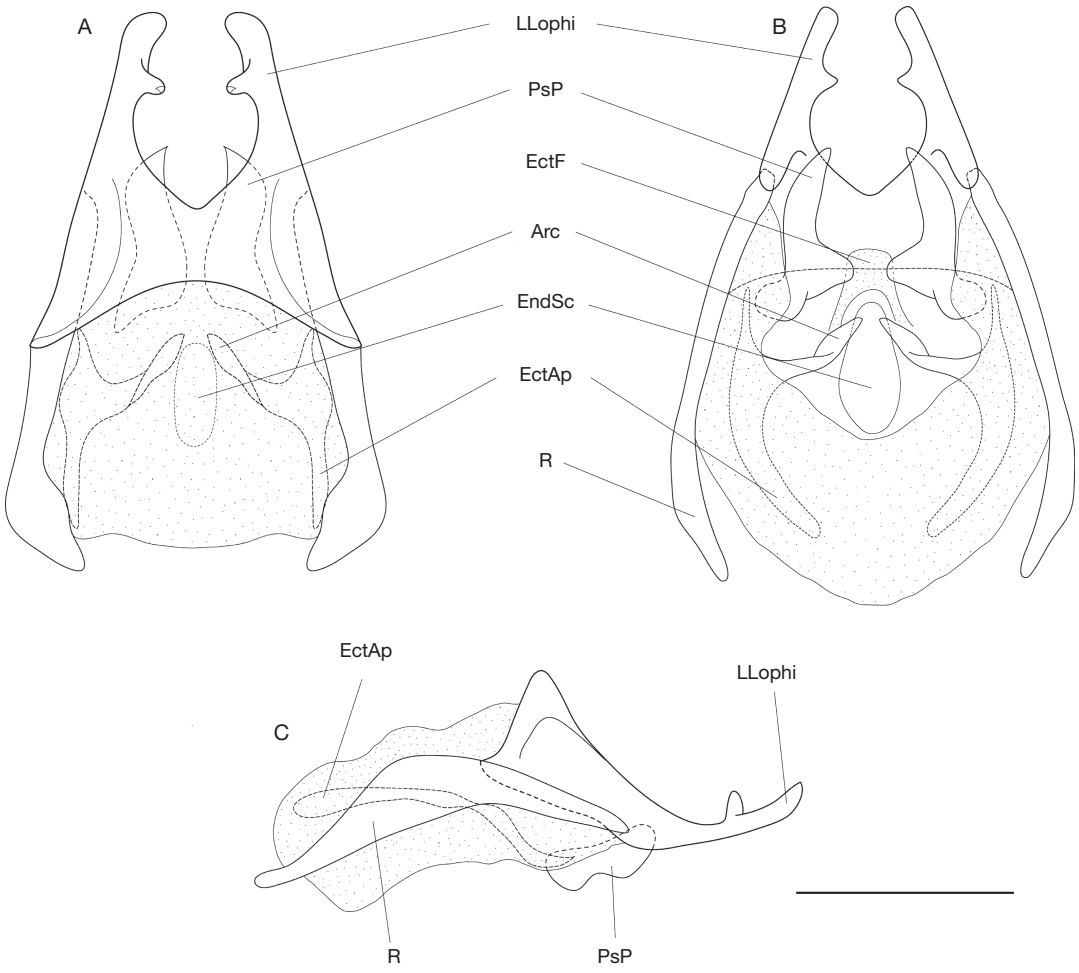

FIG. 16. — *Adenophallusia aratayensis* n. sp., male phallic complex: **A**, dorsal; **B**, ventral; **C**, lateral. Abbreviations: See Material and methods. Scale bar: 1 mm.

abdominal tergites; bearing six longitudinal veins. Supra anal plate anterior margin rounded, medium brown, laterals dark brown (Fig. 14I). Subgenital plate wider than long, posterior margin concave medially; light brown, covered by yellowish bristles (Fig. 14J). Ovipositor upcurved, medium to dark brown; apex tip pointed (Fig. 14I, J).

Female genitalia (Fig. 15D-E). Copulatory papilla longer than wide, cylindrical, almost straight in lateral view, without ventral aperture; posterior half thinner than anterior, unpigmented; posterior margin straight, anterior margin convex in dorsal view.

Measurements (mm)
Male (n = 1, holotype). HW, 3.2; IOD, 1.8; PL, 3.3; PW, 3.2; FWL, 9.5; FWW, 4.2; LFIII, 9.8; WFIII; 3; LTIII, 8; LBtarsIII, 2.

Females (n = 4, allotype and paratypes). HW, 3.62 ± 0.38 (3.2-4); IOD, 1.9 ± 0.14 (1.7-2); PL, 3.92 ± 0.22 (3.6-4.1); PW, 3.97 ± 0.05 (3.9-4); FWL, 7.67 ± 0.71 (6.6-8.1); FWW, 2.72 ± 0.26 (2.5-3); LFIII, 10.52 ± 0.55 (10-11); WFIII, 3.5 ± 0.4 (3-4); LTIII, 8.37 ± 1.12 (7.4-10); LBtarsIII, 1.95 ± 0.05 (1.9-2); OL, 6.85 ± 0.36 (6.3-7.1).

REMARKS
The only male specimen available has glued FWs, that could not be opened to describe the metanotum or count stridulatory teeth.

Genus *Brazitrypa* Gorochov, 2011

TYPE SPECIES. — *Brazitrypa longiapex* Gorochov, 2011.

EMENDED DIAGNOSIS. — Ocelli regressed or absent; TI auditory tympana absent. Male: FWs without stridulatory apparatus; PCu vein not curved, without stridulatory teeth; metanotum and first abdominal tergite with projections. Male genitalia: MLophi absent; PsP apex divided in two lobes; EndAp absent. Female: ovipositor apex pointed, lateral margins smooth, posterior tip pointed; apex of dorsal valves wrinkled, apex of ventral valves smooth. Female genitalia: copulatory papilla triangular in dorsal and ventral views.

Brazitrypa maroniensis (Chopard, 1930) n. comb. (Fig. 17)

Tafalisca maroniensis Chopard, 1930: 530.

TYPE LOCALITY. — French Guiana, Maroni.

TYPE MATERIAL. — **Holotype. French Guiana** • ♀; Maroni, Guyane; MNHN-EO-ENSIF6596; MNHN.

EMENDED DIAGNOSIS. — This species is separated from the other species of *Brazitrypa* by the following characters: HWs as long as FWs in dorsal view. TIII subapical spurs with two spines between each inner and outer pair of successive spurs, the first one the longest; four spines above inner and outer subapical spurs. Female genitalia: copulatory straight in lateral view; anterior margin convex in dorsal view and pointed in ventral view.

REDESCRIPTION
General morphology
Body. Medium size, general coloration medium to light brown, body covered by bristles, except FWs and HWs (Fig. 17A-C).

Head. Occiput and vertex with bristles, medium brown. Fastigium as long as wide, pubescent, medium brown. Frons light brown, with dark brown band under the eyes (Fig. 17D). Eyes longer than wide in lateral view, ommatids black (Fig. 17B). Antennal scape almost as long as wide, light brown; antennomeres medium brown. Gena light brown in frontal and lateral views. Mandibles medium brown, with dorsal maculae dark brown in frontal view. Epistomal suture light brown; clypeus medium brown; labrum medium brown, darker ventrally (Fig. 17D).

Pronotum. DD longer than wide, pubescent, medium to dark brown, DD cephalic margin slightly concave with yellowish bristles; caudal margin convex, with yellowish bristles (Fig. 17A). LL ventro-cephalic angle rounded, light brown; ventro-caudal angle gradually ascendant, medium brown in lateral view (Fig. 17B).

Wings. FWs covering entire abdomen; FWs somewhat translucent, light brown, with veins medium brown (Fig. 17A). HWs as long as FWs in dorsal and lateral views.

Legs. Legs I and II with yellowish bristles. FI and FII light brown. TI and TII light brown. TI with three apical spurs: two ventral same-sized; one dorsal, inner, longer than ventral ones. FIII longer than TIII, light brown, apex dark brown (Fig. 17B). TIII dark brown, with yellowish bristles. TIII subapical spurs 5/4, with two spines between them, the first one the longest; four spines above inner and outer subapical spurs. TIII apical spurs 3/3, longer on inner side; inner apical spurs: dorsal longest (iad), median shorter than dorsal (iam), ventral smallest (iav) (iad>iam>iav); outer apical spurs: median longest (oam), dorsal slightly shorter (oad), ventral almost same size of dorsal (oav) (oam>oad>oav). TIII subapical spurs and spines and apical spurs dark brown (Fig. 17A, B). Basitarsus dorsal spines 3/2, apical spine the longest; inner and outer apical spurs shorter than basitarsus. Basitarsus dark brown.

Abdomen. Tergites slightly pubescent, medium to dark brown. Cerci pubescent, medium brown, with light brown setae.

Female
Morphology. Subgenital plate wider than long, posterior margin slightly concave; medium to dark brown, covered by bristles (Fig. 17C). Ovipositor upcurved, dark brown (Fig. 17B).

Female genitalia (Fig. 17E-G). Copulatory papilla straight in lateral view, without ventral aperture; posterior margin acuminated. Anterior margin convex in dorsal view and pointed in ventral view.

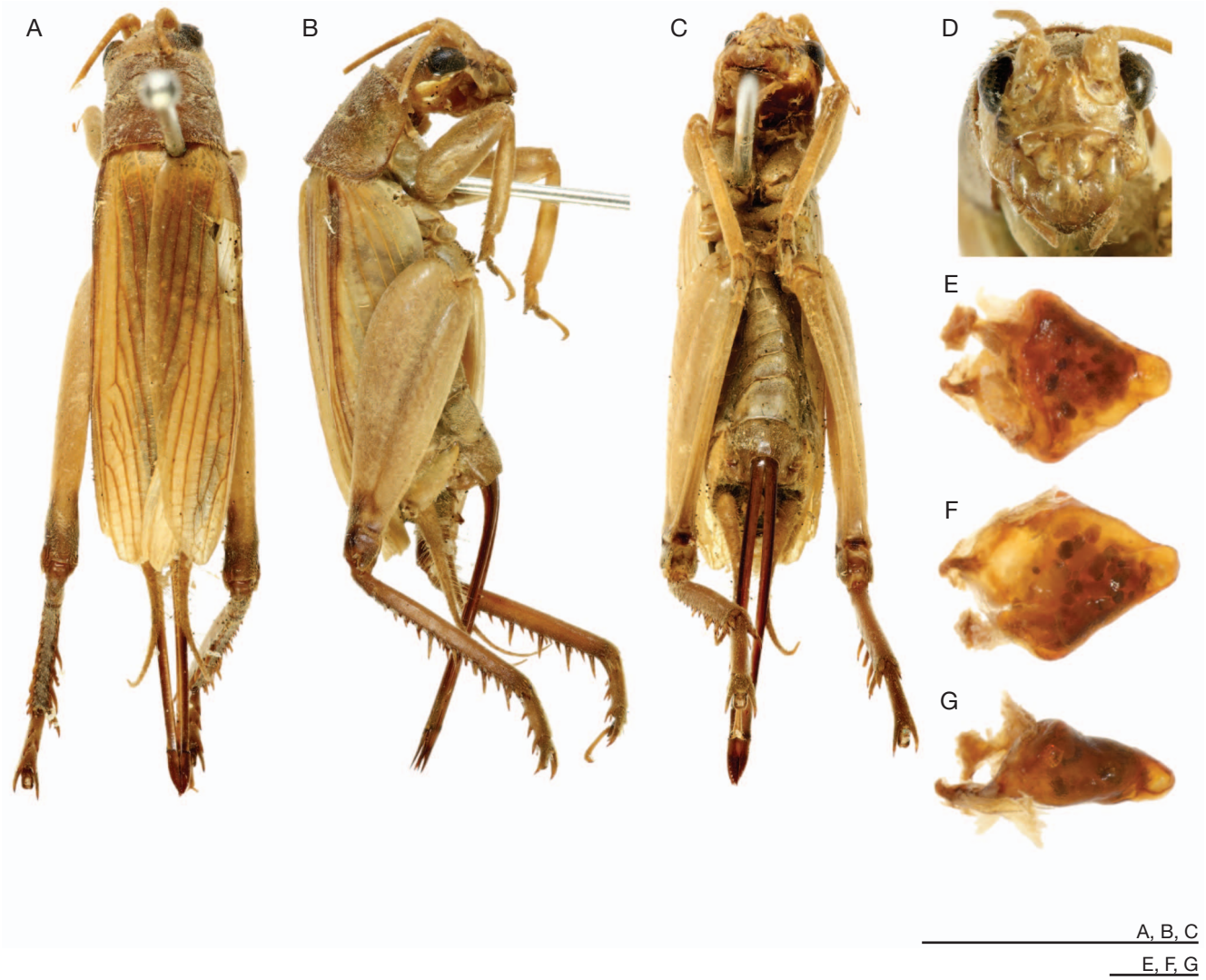

Fig. 17 — *Brazitrypa maroniensis* (Chopard, 1930) n. comb. Female: **A**, dorsal; **B**, lateral; **C**, ventral; **D**, head, frontal. Copulatory papilla. **E**, dorsal; **F**, ventral; **G**, lateral. Scale bars: A-C, 1 cm; E-G, 0.5 mm. Figures A-D available at https://science.mnhn.fr/institution/mnhn/collection/eo/item/ensif6596.

Male
Unknown.

Measurements (mm)
Female (n = 1, holotype). HW, 4; IOD, 2; PL, 4.8; PW, 4.2; FWL, 15; FWW, 3.6; HWL, 15; LFIII, 11.6; WFIII, 3.4; LTIII, 8; LBtarsIII, 2; OL, 11.2.

Remarks
This species has the following characters that are characteristics to *Brazitrypa* and differ from *Tafalisca*: ocelli absent, absence of small protuberances on dorsal side of fore and mid tibias, ovipositor apex pointed, copulatory papilla triangular and flattened dorso-ventrally. The male of *Brazitrypa maroniensis* n. comb. is unknown, however, the features above mentioned are enough to transfer this species to *Brazitrypa.* See also (below) step 7 of "Key to Guianese Paroecanthini".

Brazitrypa cornuta n. sp.
(Figs 18-20)

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Type locality. — French Guiana, Kaw mountain, Roura.

Etymology. — From Latin 'cornutus' means 'with horns', referring to the apex of LLophi of this species.

Type material. — **Holotype. French Guiana** • ♂; Mont[agne] de Kaw, PK 39, arbre 7; 13.VIII.1994; Roubaud leg.; MNHN-EO-ENSIF10892; MNHN.
Allotype. French Guiana • ♀; Mont[agne] de Kaw, PK 39, arbre 5; 19.VIII.1994; Roubaud leg.; MNHN-EO-ENSIF10893; MNHN.
Paratypes. 3♂, 7♀. French Guiana • 1♂; same data as for allotype; Molec. 2019 lbr_168; MNHN-EO-ENSIF10894; MNHN. • 1♂; same data as for allotype, MNHN-EO-ENSIF10895; MNHN. • 1♂; Mont[agne] de Kaw, PK 37, arbre 4; 18.VIII.1994; Roubaud leg.; MNRJ. • 1♀; Mont[agne] de Kaw, PK 39, arbre 7; 23.VIII.1994; Roubaud rec.; MNHN-EO-ENSIF10896; MNHN. • 2♀; Mont[agne]

de Kaw, PK 37, arbre 4; 18.VIII.1994; Roubaud leg.; MNHN-EO-ENSIF10897; MNHN; and Molec 2019 lbr_068; MNHN-EO-ENSIF10898, MNHN. • 1♀; Mont[agne] de Kaw, PK 37, arbre 3; 17.VIII.1994; Roubaud leg.; MNHN-EO-ENSIF10899; MNHN. • 1♀; Arataye Affl. Approuague, 8 km NE pied Saut Parare; 10.VI.1988; L. Desutter & P. Grandcolas leg.; lamp; MNRJ. • 1♀; Arataye Affl. Approuague, aval du Saut Parare; 13.VII.1988; L. Desutter & P. Grandcolas leg.; beating during the day, Coumou palm trees, n° 12 and 13; MNHN-EO-ENSIF10900; MNHN. • 1♀; Arataye Affl. Approuague, 8 km NE pied Saut Parare; 24.VI.1988; L. Desutter & P. Grandcolas leg; crest forest, plant, night; MNHN-EO-ENSIF10901; MNHN.

DIAGNOSIS. — This species is separated from the other species of *Brazitrypa* by the following characters: FIII light brown; male metanotum with a trapezoid elevation on the middle; first abdominal tergite with two anteromedial projections and rounded tip. Male genitalia: LLophi inner margin rounded, somewhat membranous, outer margin well sclerotized, hook shaped; EctF lightly sclerotized, posterior margin acuminated. Female: ovipositor apex reddish brown.

DESCRIPTION

General morphology.

Body. Medium size, general coloration medium to light brown, body covered by bristles, except FWs and HWs.

Head. Occiput and vertex with bristles, medium brown. Fastigium as long as wide, pubescent, medium brown (Fig. 18A, C, E). Frons with yellowish bristles, light brown, with medial medium brown macula, and a dark brown band under the eyes (Fig. 18E). Eyes longer than wide in lateral view, ommatids black, dorsal ommatids whitish (Fig. 18B, E). Antennal scape longer than wide, inner margin with yellow bristles, light brown; antennomeres light brown. Gena light brown in frontal and lateral views. Mandibles yellowish brown, apex darker. Epistomal suture and clypeus light brown; labrum medium brown (Fig. 18E). Maxillary palpi slightly pubescent, article 3 longer than articles 4 and 5, article 5 clavate, light brown.

Pronotum. DD slightly longer than wide, pubescent, reddish-brown, divided by a yellowish-brown sagittal line. DD cephalic margin slightly concave with brownish bristles; caudal margin slightly convex, with brownish bristles (Fig. 18A, C). LL light brown; ventro-cephalic angle rounded; ventro-caudal angle gradually ascendant in lateral view (Fig. 18B, D).

Wings. FWs covering entire abdomen; FWs somewhat translucent, light brown, with dark brown veins (Fig. 18A-D). HWs slightly longer than FWs in dorsal and lateral views.

Legs. Legs I and II with yellowish bristles. FI and FII light brown. TI and TII light brown. TI with three apical spurs: two ventral same-sized; one dorsal, inner, longer than ventral ones. TII with two ventral spurs same-sized, and two dorsal spurs smaller than ventral ones. FIII longer than TIII; with short bristles, light brown, darker apically (Fig. 18B). TIII light brown, with yellowish bristles. TIII subapical spurs 5/4, with one spine between each inner and outer pair of successive spurs, uppermost spurs with two spines between them, five or six spines above outer subapical spurs, four or five spines above inner subapical spurs. TIII apical spurs 3/3, longer on inner side; inner apical spurs: dorsal longest (iad), median shorter than dorsal (iam), ventral smallest (iav) (iad>iam>iav); outer apical spurs: median longest (oam), dorsal slightly shorter (oad), ventral almost same size of dorsal (oav) (oam>oad>oav). TIII subapical spurs and spines and apical spurs light brown, apex reddish-brown (Fig. 18A-D). Basitarsus dorsal spines 3/2, apical spine the longest; inner apical spur shorter than basitarsus, outer and inner apical spurs same-sized. Basitarsus light brown.

Abdomen. Tergites slightly pubescent, medium brown. Cerci pubescent, light brown, with yellow setae. Supra anal plate with yellowish bristles, posterior margin straight; light brown, posterior margin medium brown (Fig. 18G).

Male

Morphology. Metanotum with a trapezoid elevation on the middle; antero-lateral regions inflated without bristles. First abdominal tergite with two anteromedial projections, its tips rounded (Fig. 18F). FW dorsal field bearing 7-8 parallel veins, without stridulatory apparatus; PCu vein not curved inwards on anterior region (Fig. 18A), without stridulatory teeth ventrally. Lateral field with *c.* 8 parallel veins, parallel to dorsal field, medium brown. Subgenital plate longer than wide, posterior margin rounded, strongly pubescent; medium to dark brown with yellow bristles. (Fig. 18H).

Male genitalia (Figs 19A-C, 20). Pseudepiphallus: pseudepiphallic sclerite apex slightly upcurved in lateral view, anterior margin straight in dorsal view. LLophi shorter than PsP, inner margin rounded, somewhat membranous, outer margin well sclerotized hook shaped. PsP not surpassing posterior margin of pseudepiphallic sclerite, curved inwards in dorsal and ventral views. R elongated, longer than pseudepiphallic sclerite, flattened laterally. Ectophallic invagination: EctAp slightly longer than LLophi, straight and inclined outwards in dorsal and ventral views; surpassing the anterior margin of pseudepiphallic sclerite. Arc not complete, curved posteriorly in dorsal and ventral views; ventral projections of ectophallic invagination shorter than EctAp. EctF lightly sclerotized, posterior margin acuminated. Endophallus: EndSc weakly sclerotized, flattened dorso-ventrally, longer than wide, anterior and posterior margins rounded.

Female

Morphology. Body larger than male, general coloration similar to male (Fig. 18C, D). Subgenital plate wider than long, posterior margin slightly concave medially; light brown, covered by yellowish bristles (Fig. 18J). Ovipositor upcurved, medium to dark brown (Fig. 18D); apex reddish-brown (Fig. 18I, J).

Female genitalia (Fig. 19D-F). Copulatory papilla curved downwards in lateral view, without a ventral aperture; posterior margins acuminated, whitish in dorsal view. Anterior margin concave in dorsal view.

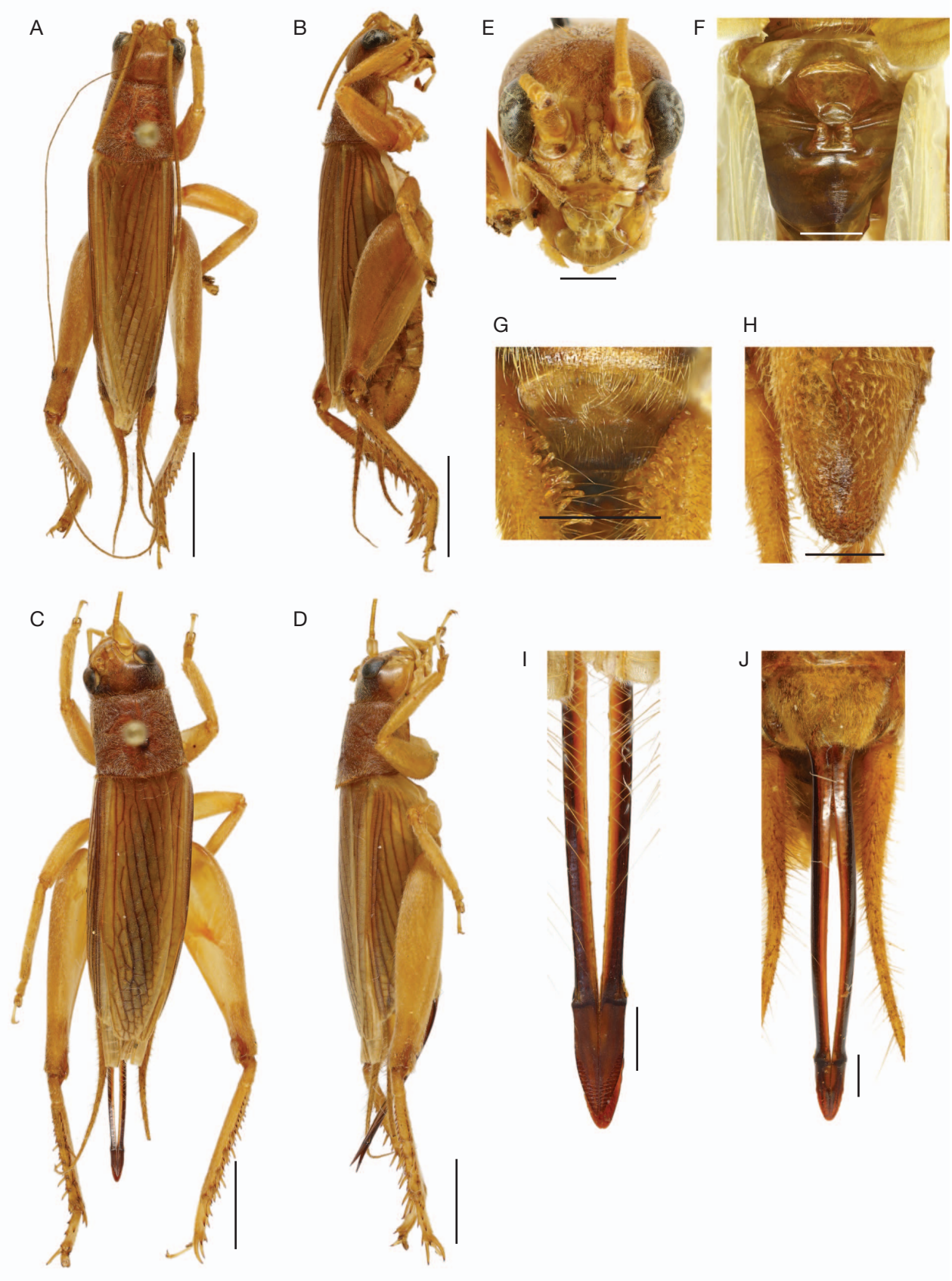

FIG. 18. — *Brazitrypa cornuta* n. sp. Male and female: **A**, male habitus, dorsal; **B**, male habitus, lateral; **C**, female habitus, dorsal; **D**, female habitus, lateral; **E**, male head, frontal; **F**, male metanotum, dorsal; **G**, male supra anal plate; **H**, male subgenital plate; **I**, ovipositor apex, dorsal; **J**, female subgenital plate and ovipositor. Scale bars: A-D, 5 mm; E-J, 1 mm.

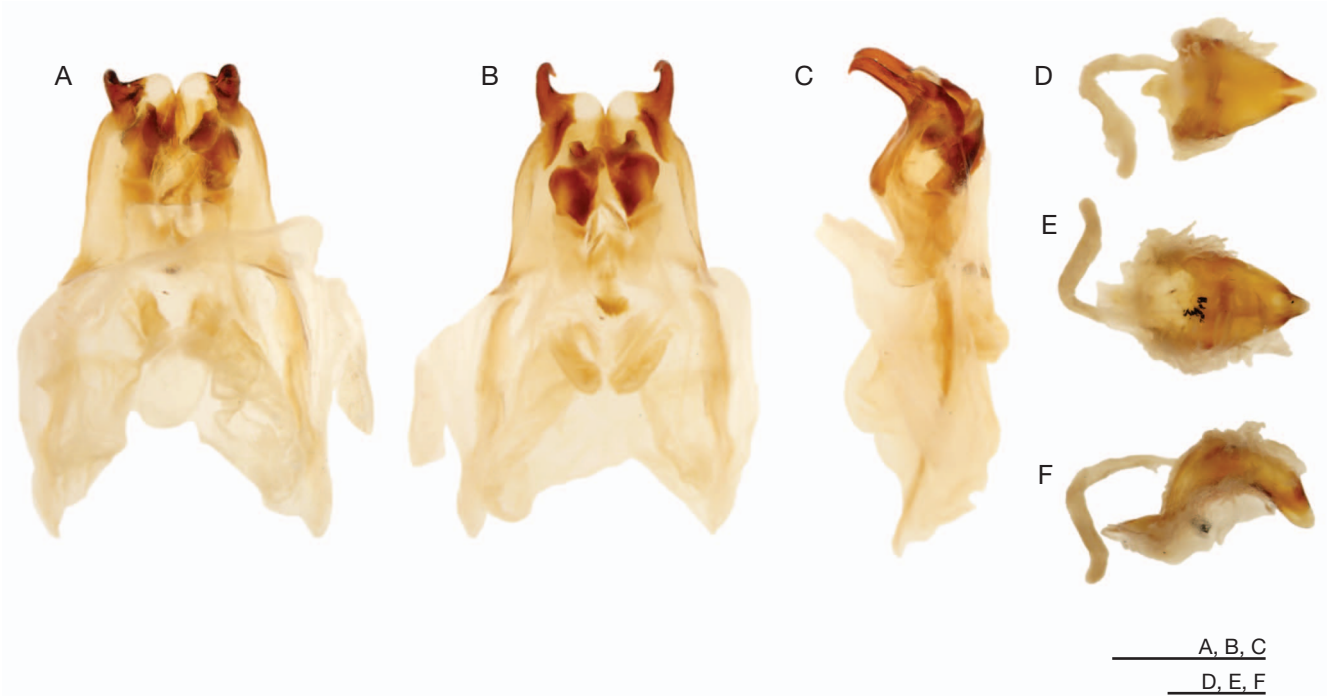

Fig. 19. — *Brazitrypa cornuta* n. sp., male phallic complex: **A**, dorsal; **B**, ventral; **C**, lateral. Female copulatory papilla: **D**, dorsal; **E**, ventral; **F**, lateral. Scale bars: A-C, 1 mm; D-F, 0.5 mm.

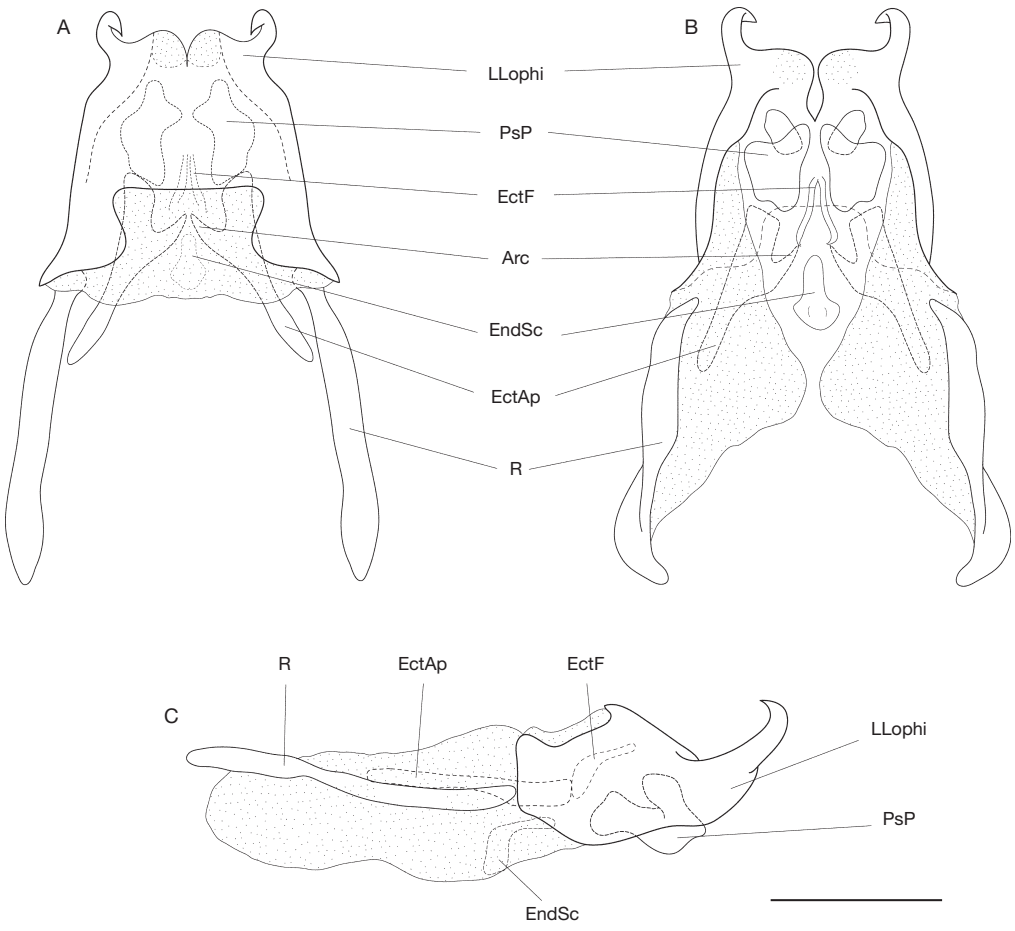

Fig. 20. — *Brazitrypa cornuta* n. sp., male phallic complex: **A**, dorsal; **B**, ventral; **C**, lateral. Abbreviations: see Material and Methods. Scale bar: 1 mm.

Measurements (mm)
Males (n = 4, holotype and paratypes). HW, 3.65 ± 0.46 (3.4-3.8); IOD, 1.65 ± 0.12 (1.5-1.8); PL, 3.85 ± 0.25 (3.6-4.2); PW, 3.8 ± 0.3 (3.3-4.2); FWL, 12.12 ± 0.1 (12-12.2); FWW, 3.15 ± 0.54 (2.5-3.8); HWL, 12.75 ± 0.4 (12.2-13.1); LFIII, 9.92 ± 1.13 (9-11.9); WFIII, 3.3 ± 0.3 (3-3.8); LTIII, 6.3± 0.3 (5.9-6.6); LBtarsIII, 1.8 ± 0.2 (1.5-2).

Females (n = 8, allotype and paratypes). HW, 4.56 ± 0.33 (4.1-5); IOD, 2.06 ± 0.17 (2-2.5); PL, 4.83 ± 0.21 (4.4-5); PW, 4.73 ± 0.42 (4-5.2); FWL, 14.86 ± 0.72 (14-16.1); FWW, 4 ± 0.3 (3.5-4.6); HWL, 15.86 ± 0.68 (15-17); LFIII, 12.81 ± 1.54 (11.6-16.1); WFIII, 4.01 ± 0.03 (4-4.1); LTIII, 7.94 ± 0.74 (6.7-8.9); LBtarsIII, 2.1 ± 0.1 (2-2.4); OL, 10.82 ± 0.41 (10.2-11.4).

Genus *Cylindrogryllus* Saussure, 1878

Subgenus *Cylindrogryllus* (*Apterotrypa*) Gorochov, 2017

TYPE SPECIES. — *Cylindrogryllus* (*Apterotrypa*) *noeli* Gorochov, 2017.

EMENDED DIAGNOSIS. — Wings absent; metanotum covered by posterior margin of DD; TI without auditory tympana. Male genitalia: MLophi absent; LLophi triangular, slightly curved inwards, inner margin membranous; PsP apex bilobate. Female: apex of ovipositor triangular. Female genitalia: copulatory papilla cylindrical; posterior apex tapered.

Cylindrogryllus (Apterotrypa) mitarakensis n. sp.
(Figs 1C, 21-23)

urn:lsid:zoobank.org:act:C27AA1D3-FC9D-4F94-9114-6D049B2B8ED9

TYPE LOCALITY. — Mitaraka, French Guiana.

ETYMOLOGY. — Species named after type locality.

TYPE MATERIAL. — **Holotype. French Guiana** • ♂; Monts Tumuc-Humac, Massif du Mitaraka; 54°45.112"O, 2°23.478"N (D2); 300 m; 23/II.2015-10.III.2015; F. Legendre & S. Hugel leg.; night; Planète revisitée Guyane 2015; 2015 GUY SH 017; Molec. 2015 LDG 514; MNHN-EO-ENSIF10902; MNHN.
Allotype. French Guiana • ♀; same data as for holotype; 2015 GUY SH 079; MNHN-EO-ENSIF10903; MNHN.
Paratypes. 3♀. **French Guiana** • 1♀; same data as for holotype; 2015 GUY SH 122; MNHN-EO-ENSIF10904; MNHN. • 1♀; Arataye Affl. Approuagues, aval du Saut Parare; 8.VII.1988; L. Desutter & P. Grandcolas leg.; night; MNHN-EO-ENSIF10905; MNHN. • 1♀; Montagne de Kaw, Piste pk 36; 27.VII.91; P. Grandcolas leg.; low forest (xerophytic); trunk; night; MNHN-EO-ENSIF10906; MNHN.

DIAGNOSIS. — This species is separated from the other species of *Cylindrogryllus* (*Apterotrypa*) by the following characters: male last abdominal tergite constricted medially in dorsal view, shape like supra anal plate. Male genitalia: LLophi inner margin bearing strong bristles; PsP with two posterior lobes; outer lobe longer than inner lobe, the tip of both lobes rounded; EndSc anterior portion sinuous in lateral view. Female genitalia: copulatory papilla cylindrical, slightly curved downwards in lateral view posterior margin whitish in dorsal view.

DESCRIPTION
General morphology.
Body. Small size, general coloration medium brown, covered by bristles.

Head. Occiput and vertex with bristles, medium brown. Fastigium wider than long, pubescent, medium brown (Fig. 21A, C, E). Three ocelli, the median rounded, under the line of lateral ones in frontal view; lateral ocelli rounded, larger than median ocellus. Frons smooth, light brown (Fig. 21E). Eyes longer than wide in lateral view, ommatids black (Fig. 21B). Antennal scape longer than wide, inner margin with bristles brown, light brown; antennomeres light brown with some isolated ones dark brown. Gena light brown in frontal and lateral views. Mandibles light brown. Epistomal suture dark yellow; clypeus and labrum light brown (Fig. 21E). Maxillary palpi slightly pubescent, articles 3-5 same sized, light brown; article 5 clavate, apex medium brown.

Pronotum. DD longer than wide, pubescent, reddish-brown. DD cephalic margin sub-straight with brownish bristles; caudal margin slightly convex, with brownish bristles (Fig. 21A, C). LL light brown; ventro-cephalic angle rounded; ventro-caudal angle gradually ascendant in lateral view (Fig. 21B, D).

Legs. Legs I and II with yellow and brown bristles. FI and FII light brown. TI and TII light brown. TI with three apical spurs: two ventral same-sized; one dorsal, inner, longer than ventral ones. TII with two ventral spurs same-sized, two dorsal spurs smaller than ventral ones. FIII longer than TIII; with short bristles, light brown (Fig. 21B, D). TIII light brown, with yellowish bristles; region of spurs insertion medium brown. TIII subapical spurs 5/4, with two spines between each inner and outer pair of successive spurs, uppermost spurs with one spine between them, eight or nine spines above the subapical spurs. TIII apical spurs 3/3, longer on inner side; inner apical spurs: dorsal longest (iad), median shorter than dorsal (iam), ventral smallest (iav) (iad>iam>iav); outer apical spurs: median longest (oam), dorsal slightly shorter (oad), ventral almost same size of dorsal (oav) (oam>oad>oav). TIII subapical spurs and spines and apical spurs apex curved, light brown, base medium to dark brown (Fig. 21A-D). Basitarsus dorsal spines 3/1, apical spine the longest; inner apical spur shorter than basitarsus, outer and inner apical spurs same-sized. Basitarsus light brown.

Abdomen. Tergites slightly pubescent, medium to dark brown. Cerci pubescent, medium brown. Supra anal plate with yellowish bristles, posterior margin rounded; medium brown (Fig. 21F, I).

Male
Morphology. Last abdominal tergite constricted medially in dorsal view, having same shape as supra anal plate (Fig. 21F, G). Subgenital plate longer than wide, posterior margin rounded, pubescent; medium brown, posterior margin dark brown (Fig. 21H).

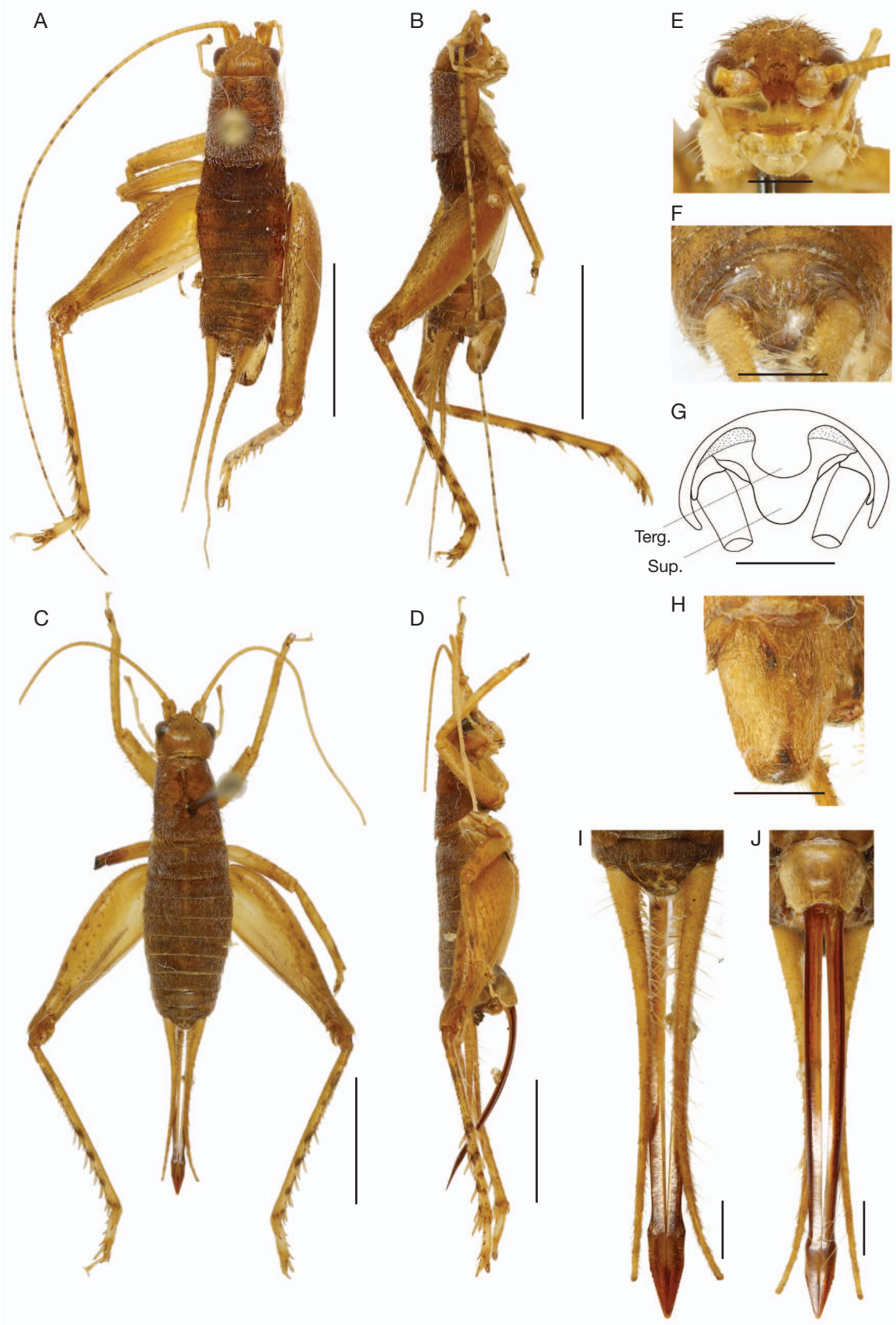

FIG. 21. — *Cylindrogryllus* (*Apterotrypa*) *mitarakensis* n. sp., male and female: **A**, male habitus, dorsal; **B**, male habitus, lateral; **C**, female habitus, dorsal; **D**, female habitus, lateral; **E**, male head, frontal; **F**, male supra anal plate; **G**, male supra anal plate and last abdominal tergite; **H**, male subgenital plate; **I**, female supra anal plate and ovipositor; **J**, female subgenital plate and ovipositor. Abbreviations: **Sup.**, supra anal plate; **Terg.**, tergite. Scale bars: A-D, 5 mm; E-J, 1 mm.

FIG. 22. — *Cylindrogryllus* (*Apterotrypa*) *mitarakensis* n. sp, male phallic complex: **A**, dorsal; **B**, ventral; **C**, lateral. Female copulatory papilla: **D**, dorsal; **E**, ventral; **F**, lateral. Scale bars: A-C, 1 mm; D-F, 0.5 mm.

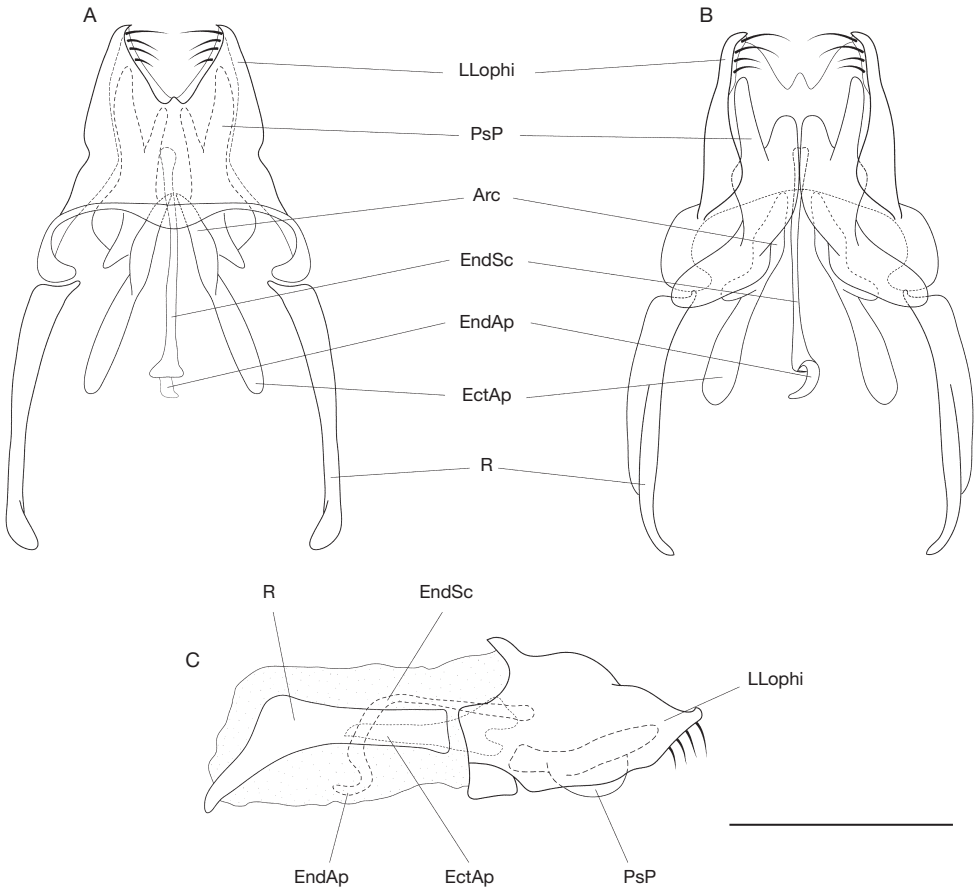

FIG. 23. — *Cylindrogryllus* (*Apterotrypa*) *mitarakensis* n. sp., male phallic complex: **A**, dorsal; **B**, ventral; **C**, lateral. Abbreviations: see Material and methods. Scale bar: 1 mm.

Male genitalia (Figs 22A-C, 23). Pseudepiphallus: pseudepiphallic sclerite apex straight in lateral view, anterior margin convex in dorsal view. LLophi shorter than PsP, inner margin bearing strong bristles. PsP almost reaching posterior margin of pseudepiphallic sclerite, with two posterior lobes; outer lobe longer than inner lobe, the tip of both lobes rounded. R elongated, longer than pseudepiphallic sclerite, flattened laterally, anterior region slightly curved inwards. Ectophallic invagination: EctAp longer than LLophi, straight and inclined outwards in dorsal and ventral views; surpassing the anterior margin of pseudepiphallic sclerite. Arc not complete, inclined posteriorly in dorsal and ventral views; ventral projections of ectophallic invagination shorter than EctAp. EctF membranous almost no discernible. Endophallus: EndSc sclerotized, thin, elongated, anterior portion sinuous. EndAp short.

Female

Morphology. Body larger than male, general coloration similar to male (Fig. 21C, D). Subgenital plate wider than long, posterior margin slightly concave medially; light brown, covered by yellowish bristles (Fig. 21J). Ovipositor upcurved, medium to dark brown (Fig. 21D); apex lateral margins slightly serrulated, posterior tip pointed (Fig. 21I, J).

Female genitalia (Fig. 22D-F). Copulatory papilla slightly curved downwards in lateral view, without ventral aperture; posterior margin whitish in dorsal view. Anterior margin concave in dorsal view.

Measurements

Male (n = 1, holotype). HW, 10.5; IOD, 1; PL, 2.8; PW, 2.3; LFIII, 7; WFIII; 2.5; LTIII, 6.7; LBtarsIII, 1.2.

Females (n = 3, allotype and paratypes). HW, 2.53 ± 0.05 (2.5-2.6); IOD, 1.33 ± 0.23 (1.2-1.6); PL, 3.36 ± 0.25 (3.1-3.6); PW, 2.96 ± 0.05 (2.9-3); LFIII, 9.13 ± 0.25 (8.9-9.4); WFIII, 2.86 ± 0.05 (2.8-2.9); LTIII, 8.06 ± 0.2 (7.9-8.3); LBtarsIII, 1.53 ± 0.11 (1.4-1.6); OL, 7.93 ± 0.9 (7-8.8).

REMARKS

The DD caudal margin covering the metanotum does not allow the observation of the metanotum in male.

Cylindrogryllus (Apterotrypa) guyanensis n. sp.
(Fig. 1D, 24-26)

urn:lsid:zoobank.org:act:DA155DCC-2DAC-4F51-B033-8F984C00CDE2

TYPE LOCALITY. — Tumuc-Humac, Massif du Mitaraka, French Guiana.

ETYMOLOGY. — Species named after its large distribution in French Guiana.

TYPE MATERIAL. — **Holotype. French Guiana** • ♂; 2015 GUY SH 208; Planète revisitée Guyane 2015, Monts Tumuc-Humac, Massif du Mitaraka; 54°45.112"O, 2°23.478"N (D2); 300 m; 23.II.2015-10.III.2015; F. Legendre & S. Hugel leg.; night; Molec 2019 lbr_131; MNHN-EO-ENSIF10907; MNHN.

Allotype. French Guiana • ♀; Sinnamary, Piste de St Elie, PK15; 4.VIII.1988; L. Desutter & P. Grandcolas leg.; night; MNHN-EO-ENSIF10908; MNHN.

Paratypes. 3♀. **French Guiana** • 1♀; Arataye Affl. Approuague, 8 km NE pied Saut Parare; 5.VI.1988; L. Desutter & P. Grandcolas leg.; night; MNHN-EO-ENSIF10909; MNHN. • 1♀; Station des Nouragues, camp Inselberg; 4°05'N, 52°41'W; 11.VII. 2011; L. Desutter-Grandcolas & J. Anso leg.; on shrub; P1_14; MNHN-EO-ENSIF10910; MNHN. • 1♀; Station des Nouragues, camp Inselberg; 4°05'N, 52°41'W; 18.VII. 2011; L. Desutter-Grandcolas & J. Anso leg.; on shrub; P1_67; MNHN-EO-ENSIF10911; MNHN.

DIAGNOSIS. — This species is separated from the other species of *Cylindrogryllus* (*Apterotrypa*) by the following characters: ocelli absent; TIII medium brown with dark brown bands on the base of spurs, another band dark brown on proximal region. Male genitalia: LLophi inner margin bearing a membrane; EndSc sclerotized, as long as wide, anterior margin rounded; lateral margins folded ventrally; EndAp short. Female genitalia: copulatory papilla dorsal side three times longer than ventral side; posterior margin with a ventral aperture, whitish in dorsal view.

DESCRIPTION

General morphology

Body. Small size, general coloration medium to dark brown, body covered by bristles.

Head. Occiput and vertex with dark brown bristles, medium brown. Fastigium wider than long, pubescent, medium brown (Fig. 24A, C, E). Ocelli absent. Frons smooth, light brown (Fig. 24E). Eyes longer than wide in lateral view, ommatids black. Antennal scape longer than wide, inner margin with bristles brown, medium brown; antennomeres light brown with dark brown bands of three articles. Gena medium brown in frontal and lateral views. Mandibles medium brown. Epistomal suture dark yellow; clypeus medium brown; labrum light brown, ventral margin dark brown (Fig. 24E). Maxillary palpi slightly pubescent, article 3 longer than articles 4 and 5, article 5 clavate; articles medium brown, article 5 apex darker.

Pronotum. DD longer than wide, pubescent, reddish-brown. DD cephalic margin sub-straight with brownish bristles; caudal margin almost straight, with brownish bristles (Fig. 24A, C). LL reddish-brown; ventro-cephalic angle rounded; ventro-caudal angle gradually ascendant in lateral view (Fig. 24B, D).

Legs. Legs I and II with yellow and brown bristles. FI and FII light brown, punctuated dark brown. TI and TII light brown, punctuated dark brown. TI with three apical spurs: two ventral same-sized; one dorsal, inner, longer than ventral ones. TII with two ventral spurs same-sized, two dorsal spurs smaller than ventral ones. FIII longer than TIII; with short bristles, medium brown, dorsal and apical margins darker (Fig. 24B, D). TIII medium brown with dark brown bands on base of spurs, another band dark brown on proximal region. TIII subapical spurs 5/4, with two spines between them, uppermost spurs with one spine between them, eight or nine spines above the subapical spurs. TIII apical spurs 3/3, longer on inner side; inner apical spurs: dorsal longest (iad), median shorter than dorsal (iam), ventral smallest (iav) (iad>iam>iav);

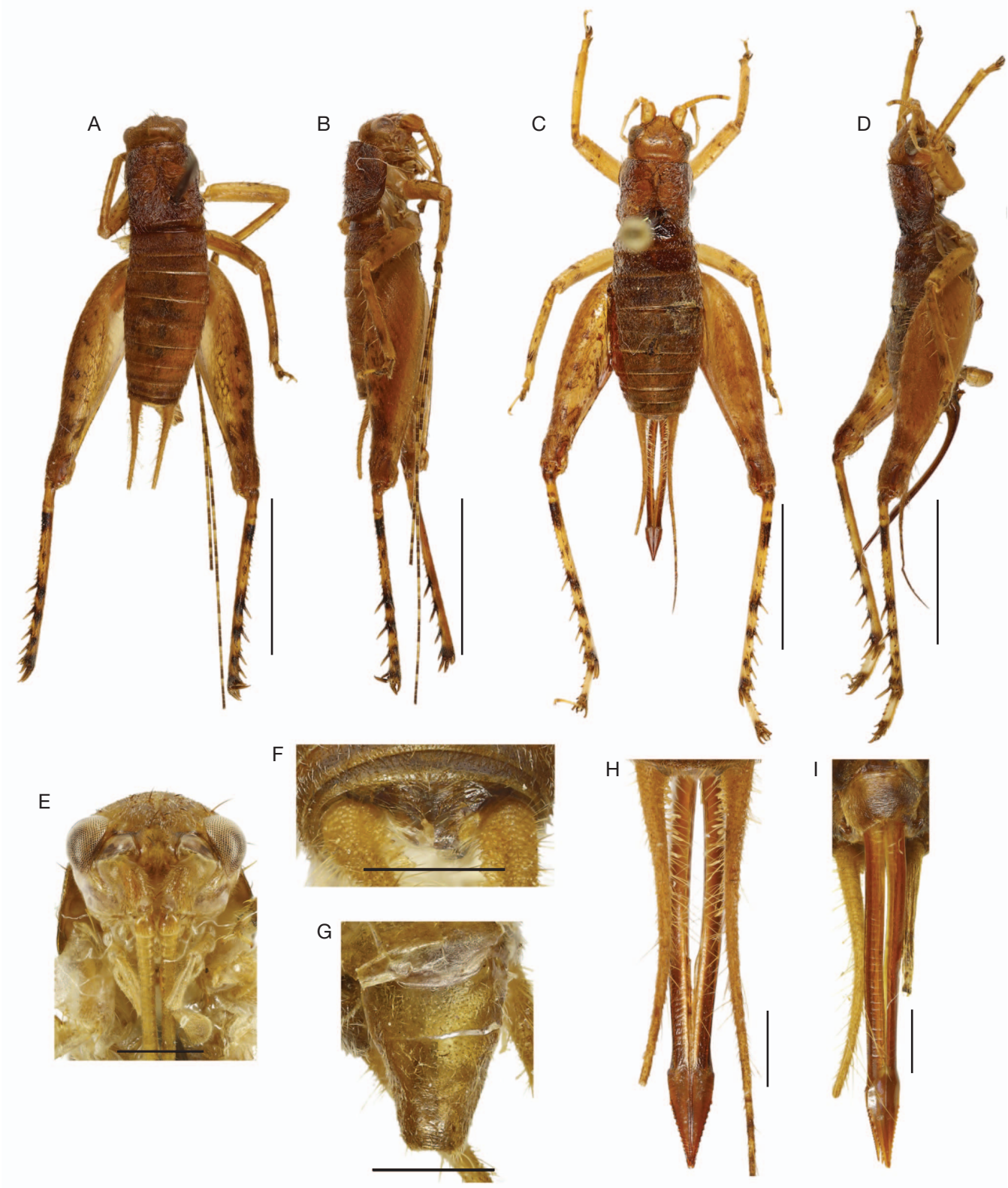

FIG. 24. — *Cylindrogryllus* (*Apterotrypa*) *guyanensis* n. sp., male and female: **A**, male habitus, dorsal; **B**, male habitus, lateral; **C**, female habitus, dorsal; **D**, female habitus, lateral; **E**, male head, frontal; **F**, male supra anal plate; **G**, male subgenital plate; **H**, female ovipositor, dorsal; **I**, female subgenital plate and ovipositor. Scale bars: A-D, 5 mm; E-I, 1 mm.

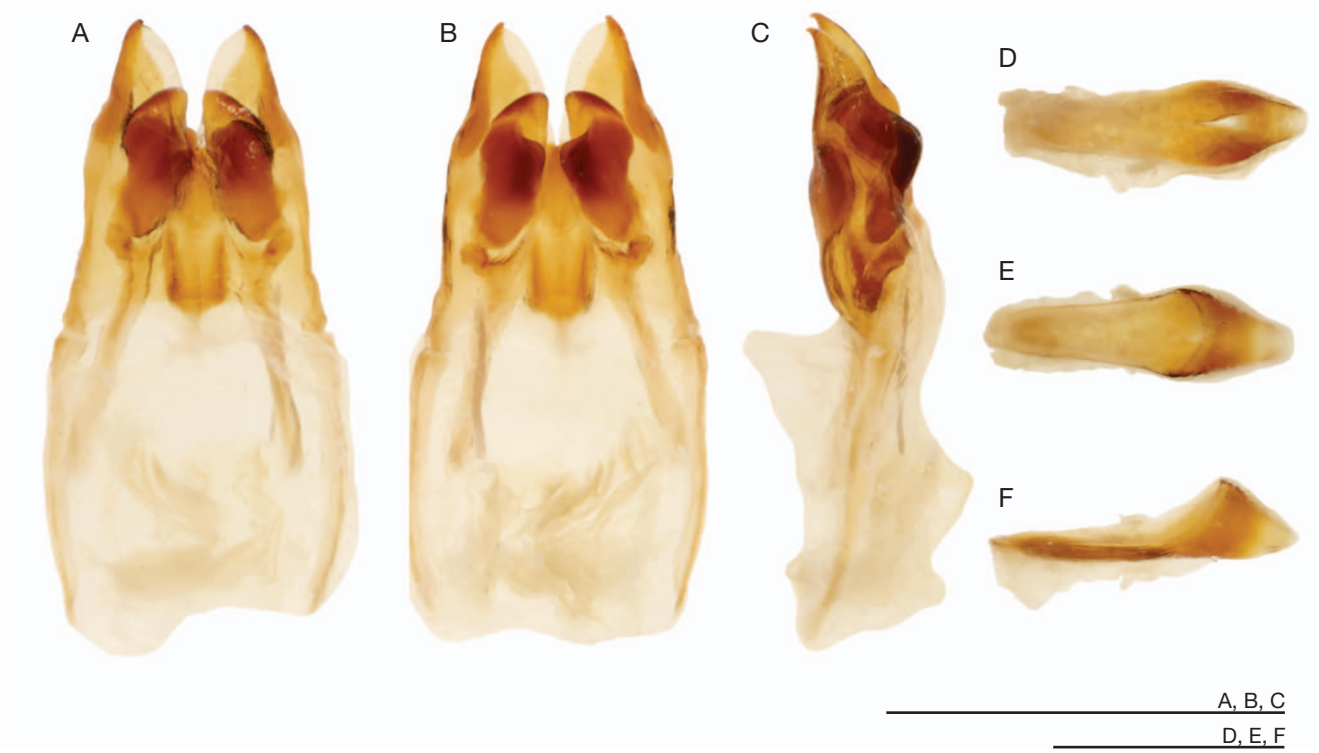

FIG. 25. — *Cylindrogryllus* (*Apterotrypa*) *guyanensis* n. sp., male phallic complex: **A**, dorsal; **B**, ventral; **C**, lateral. Female copulatory papilla: **D**, dorsal; **E**, ventral; **F**, lateral. Scale bars: A-C, 1 mm; D-F, 0.5 mm.

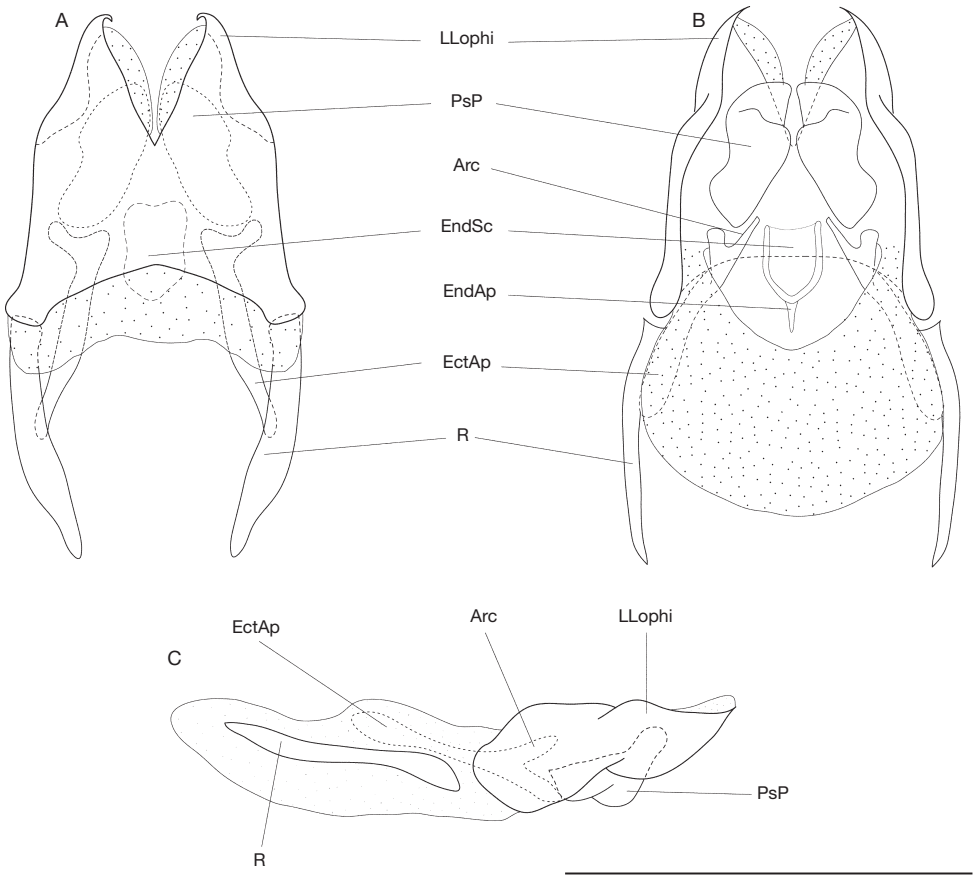

FIG. 26. — *Cylindrogryllus* (*Apterotrypa*) *guyanensis* n. sp., male phallic complex: **A**, dorsal; **B**, ventral; **C**, lateral. Abbreviations: See Material and Methods. Scale bar: 1 mm.

outer apical spurs: median longest (oam), dorsal slightly shorter (oad), ventral almost same size of dorsal (oav) (oam>oad>oav). TIII subapical spurs and spines and apical spurs apex curved, light brown, base dark brown (Fig. 24A-D). Basitarsus dorsal spines 3/1, apical spine the longest; inner apical spur shorter than basitarsus, outer and inner apical spurs same-sized. Basitarsus medium brown.

Abdomen. Tergites slightly pubescent, medium brown to reddish-brown. Cerci pubescent, medium brown. Supra anal plate with yellowish bristles, posterior margin almost straight; dark brown (Fig. 24F).

Male

Morphology. Last abdominal tergite not modified. Subgenital plate longer than wide, posterior margin rounded, pubescent; medium brown, posterior margin darker (Fig. 24G).

Male genitalia (Figs 25A-C, 26). Pseudepiphallus: pseudepiphallic sclerite apex straight in lateral view, anterior margin concave in dorsal view. LLophi apex pointed, shorter than PsP, inner margin bearing a membrane. PsP almost not reaching posterior margin of pseudepiphallic sclerite, with two posterior lobes; one dorsal longer, one ventral shorter. R elongated, almost same size of pseudepiphallic sclerite, flattened laterally, anterior region not curved. Ectophallic invagination: EctAp longer than LLophi, straight and inclined outwards in dorsal and ventral views; surpassing the anterior margin of pseudepiphallic sclerite. Arc not complete, inclined posteriorly in dorsal and ventral views; ventral projections of ectophallic invagination very short, shorter than EctAp. EctF membranous almost no discernible. Endophallus: EndSc strongly sclerotized, as long as wide, anterior margin rounded; lateral margins folded ventrally. EndAp short.

Female

Morphology. Body larger than male, general coloration similar to male (Fig. 24C, D). Subgenital plate wider than long, posterior margin slightly concave medially; medium to dark brown, covered by yellowish bristles (Fig. 24I). Ovipositor upcurved, medium to dark brown (Fig. 24D); apex lateral margins slightly serrulated, posterior tip pointed (Fig. 24H, I).

Female genitalia (Fig. 25D-F). Copulatory papilla straight in lateral view; dorsal side three times as long as ventral side; posterior margin with a ventral aperture, whitish in dorsal view. Anterior margin convex in dorsal view.

Measurements

Male (n = 1, holotype): HW, 2; IOD, 1; PL, 2.4; PW, 2.3; LFIII, 7.1; WFIII; 2.4; LTIII, 6.5; LBtarsIII, 1.3.

Females (n = 2, allotype and paratype). HW, 2.25 ± 0.21 (2.1-2.4); IOD, 1.2; PL, 2.3 ± 0.14 (2.2-2.4); PW, 2.65 ± 0.07 (2.6-2.7); LFIII, 8.3 ± 0.28 (8.1-8.5); WFIII, 2.65 ± 0.21 (2.5-2.8); LTIII, 7.6 ± 0.28 (7.4-7.8); LBtars, 1.25 ± 0.21 (1.1-1.4); OL, 6.85 ± 1.76 (5.6-8.1).

REMARKS

The DD caudal margin covering the metanotum does not allow the observation of structures on the metanotum of the male.

Subtribe PAROECANTHINA Gorochov, 1986

Genus *Perutrella* Gorochov, 2011

TYPE SPECIES. — *Perutrella originalis* Gorochov, 2011.

EMENDED DIAGNOSIS. — Antennomeres banded; auditory tympana present on both sides of TI, oval; FIII two times longer than TIII. Male: PCu portion close to lateral field sinuous; apical field developed. Male genitalia: MLophi, bilobate, very short; LLophi elongated, upcurved, inner margins membranous; EndSc well sclerotized, short. Female: ovipositor lateral margins serrulated.

Perutrella septentrionalis n. sp.
(Figs 27-29)

urn:lsid:zoobank.org:act:40D9B8B0-9CE1-45FF-8BCF-EF7775E8EF93

TYPE LOCALITY. — French Guiana, St Laurent du Maroni.

ETYMOLOGY. — Species named after its distribution in the northern part of French Guiana.

TYPE MATERIAL. — **Holotype. French Guiana** • ♂; St. Laurent du Maroni, 26.VIII.1976; J. P. Orvoen leg.; forest track, MNHN-EO-ENSIF10912; MNHN.
Allotype. French Guiana • ♀; Saut Maripa Oyapock; 26.XI.1969; B. Gruner leg.; Guyane Mission; light trap; MNHN-EO-ENSIF10913; MNHN.
Paratype. 1♂. **French Guiana** • 1♂; A. De la Rüe, Saut de Maripa; 1.XII.1948; MNHN-EO-ENSIF10914; MNHN.

DIAGNOSIS. — This species is separated from the other species of *Perutrella* by the following characters: pronotum DD light brown with dark brown median macula resembling an inverted "Y"; basitarsus dorsal spines 5/3. Male: antero-median region of metanotum with cluster of bristles; subgenital plate with dark brown median longitudinal band. Male genitalia: MLophi very short, three times shorter than LLophi in dorsal view; EndSc triangular in ventral view, posterior portion acuminated, antero-lateral margins folded ventrally; EndAp very short, almost no discernible. Female: ovipositor apex tip slightly concave.

DESCRIPTION

General morphology.

Body. Medium size, covered by bristles, general coloration light brown with some regions dark brown.

Head. Occiput and vertex with yellow and brown bristles; occiput light brown; vertex light brown with two small dark brown maculae. Fastigium wider than long, slightly pubescent, light brown (Fig. 27A, C, E). Lateral ocelli rounded, above antennal socket in frontal view; median ocellus absent. Frons smooth, dark brown (Fig. 27E). Eyes slightly longer than wide in lateral view, dorsal ommatids medium brown, ventral ommatids dark brown (Fig. 27B, D). Antennal scape longer than wide, inner margin with yellowish bristles, light brown, marbled dark brown; antennomeres dark brown, with some bands of three antennomeres medium brown on proximal region. Gena dark brown

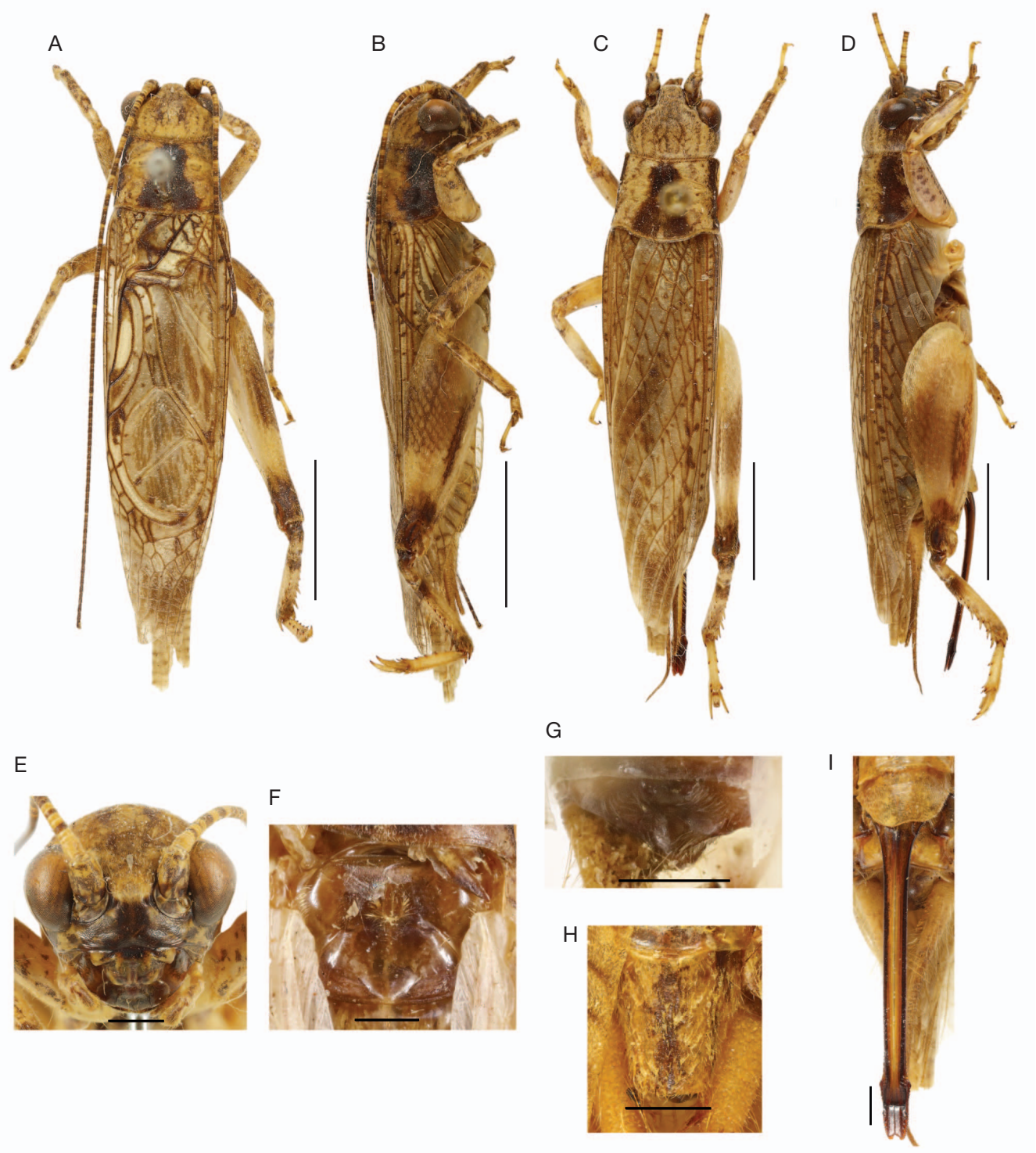

FIG. 27. — *Perutrella septentrionalis* n. sp., male and female: **A**, male habitus, dorsal; **B**, male habitus, lateral; **C**, female habitus, dorsal; **D**, female habitus, lateral; **E**, male head, frontal; **F**, male metanotum, dorsal; **G**, male supra anal plate; **H**, male subgenital plate; **I**, female subgenital plate and ovipositor. Scale bars: A-D, 5 mm; E-I, 1 mm.

in frontal and lateral views. Mandibles dark brown. Epistomal suture dark brown; clypeus dark brown, margins light brown; labrum dark brown (Fig. 27E). Maxillary palpi pubescent with yellowish bristles, light brown, dark brown marbled; article 5 longer than articles 3 and 4, article 4 the smallest; article 5 dorsal margin straight, ventral margin rounded.

Pronotum. DD wider than long, with some bristles brown; light brown with a dark brown median macula resembling an inverted "Y". DD cephalic margin slightly concave, with bristles brown; caudal margin somewhat convex, with brown bristles (Fig. 27A, C). LL dark brown; ventro-cephalic angle rounded; ventro-caudal angle gradually ascendant in lateral view (Fig. 27B, D).

FIG. 28. — *Perutrella septentrionalis* n. sp., male phallic complex: **A**, dorsal; **B**, ventral; **C**, lateral. Female copulatory papilla: **D**, dorsal; **E**, ventral; **F**, lateral. Scale bars: A-C, 1 mm; D-F, 0.5 mm.

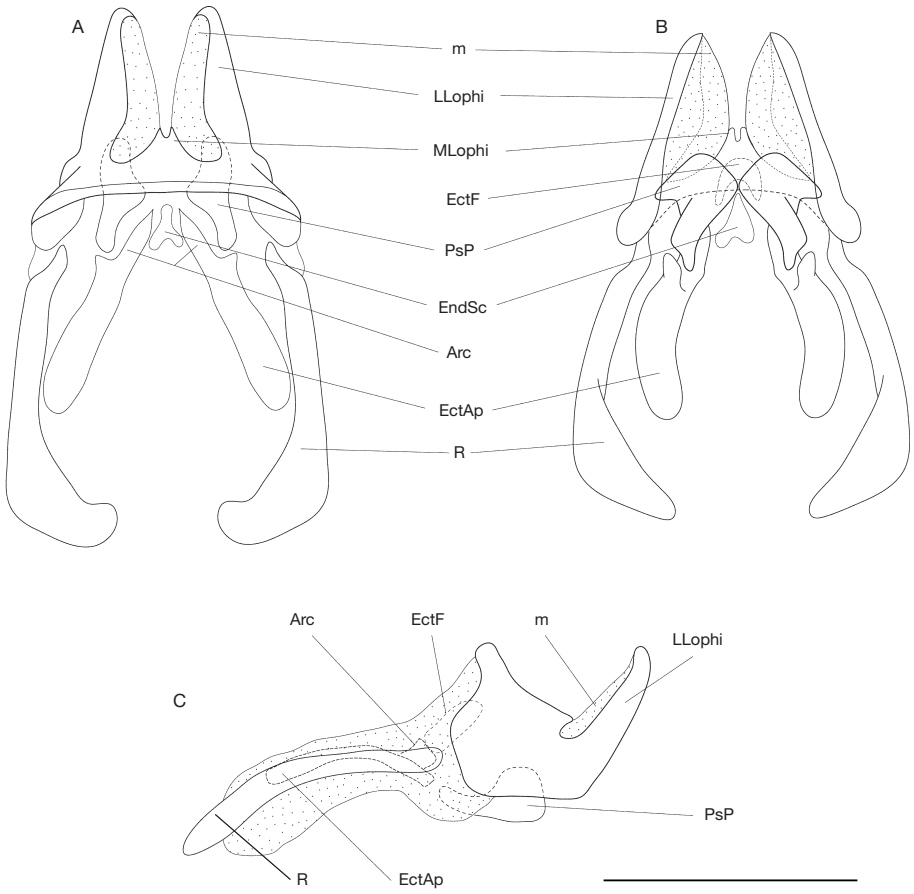

FIG. 29. — *Perutrella septentrionalis* n. sp., male phallic complex: **A**, dorsal; **B**, ventral; **C**, lateral. Abbreviations: See Material and methods. Scale bar: 1 mm.

Wings. FWs not covered by bristles, light to medium brown, somewhat translucent; veins light, medium and dark brown (Fig. 27A-D). HWs longer than FWs in dorsal view.

Legs. Legs I and II with yellowish and brownish bristles. FI and FII light brown, punctuated medium to dark brown. TI and TII light brown, punctuated medium to dark brown. TI with oval inner and outer tympana. TI with three apical spurs: two ventral, one dorsal, inner. TII with three apical spurs: two ventral, one dorsal, inner. FIII twice longer than TIII; light brown, with a median dark brown band on outer side, apical region dark brown (Fig. 27B, D). TIII light brown, proximal and distal regions dark brown. TIII subapical spurs 4/3, without spines between spurs, three or four spines above the spurs. TIII apical spurs 3/3, longer on inner side; inner apical spurs: dorsal (iad) and median (iam) with same length, ventral the smallest (iav) (iad=iam>iav); outer apical spurs: median longest (oam), dorsal slightly shorter (oad), ventral almost same size of dorsal (oav) (oam>oad>oav). TIII apical and subapical spurs and spines medium to dark brown (Fig. 27A-D). Basitarsus dorsal spines 5/3, apical spine the longest; inner and outer apical spur same size, shorter than basitarsus. Basitarsus light brown.

Abdomen. Tergites slightly pubescent, medium to dark brown. Supra anal plate posterior margin rounded, dark brown. Cerci pubescent, medium brown, marbled dark brown.

Male

Morphology. Metanotum without projections; median region with cluster of bristles; antero-lateral regions inflated, with bristles; medio-posterior region somewhat elevated (Fig. 27F). FWs covering the whole abdomen; PCu vein curved on anterior region, portion close to lateral field sinuous; bearing a stridulatory file with *c.* 53 stridulatory teeth on ventral side. Harp crossed by four diagonal veins, connected to CuPa, first one very short, third and fourth connected apically; CuPb short; mirror divided on the middle by one vein curved; apical field developed, with seven columns of cells (Fig. 27A). Lateral field with *c.* 17 parallel veins, perpendicular to dorsal field in lateral view. Subgenital plate longer than wide, posterior margin almost straight, strongly pubescent; medium brown, with a dark brown median longitudinal band, with yellow bristles (Fig. 27H).

Male genitalia (Figs 28A-C, 29). Pseudepiphallus: pseudepiphallic sclerite anterior margin almost straight in dorsal view. MLophi and LLophi connected by membrane. LLophi wider than MLophi in ventral view, its apex curved inwards in dorsal view. MLophi, very short, three times shorter than LLophi in dorsal view, posterior margin acute. PsP well sclerotized, inclined inwards in ventral view, shorter than pseudepiphallic sclerite, not surpassing its posterior margin; posterior half wider than anterior, inner margins rounded. R elongated, flattened laterally, longer than pseudepiphallic sclerite, anterior portion curved inwards. Ectophallic invagination: EctAp surpassing the anterior margin of pseudepiphallic sclerite, curved inwards in ventral view. Arc not complete, directed posteriorly in dorsal and ventral views; ventral projections of ectophallic invagination very short. EctF weakly sclerotized, posterior margin rounded. Endophallus: EndSc triangular in ventral view, shorter than EctAp, posterior portion acuminated, antero-lateral margins folded ventrally; EndAp very short, almost no discernible.

Female

Morphology. Body larger than male, general coloration similar to male (Fig. 27C, D). FWs covering abdomen; bearing nine longitudinal veins, with small veins between them. Subgenital plate wider than long, posterior margin slightly concave medially; light brown, covered by yellowish bristles (Fig. 27I). Ovipositor slightly upcurved, medium to dark brown (Fig. 27D); apex lateral margins serrulated, posterior tip slightly concave (Fig. 27C, I).

Female genitalia (Fig. 28D-F). Copulatory papilla cylindrical, posterior portion downcurved in lateral view, without ventral aperture; posterior margin rounded; anterior margin concave in dorsal view.

Measurements (mm)

Males (n = 2, holotype and paratype). HW, 3.65 ± 0.49 (3.3 4); IOD, 1.75 ± 0.07 (1.7-1.8); PL, 2.75 ± 0.21 (2.6-2.9); PW, 3.8 ± 0.28 (3.6-4); FWL, 15.3 ± 2.4 (13.6-17); FWW, 4.3 ± 0.42 (4-4.6); HWL, 17 ± 1.41 (16-18); LFIII, 8.55 ± 0.77 (8-9.1); WFIII, 2.8 ± 0.42 (2.5-3.1); LTIII, 4.2± 0.42 (3.9-4.5); LBtarsIII, 2.1 ± 0.14 (2-2.2).

Female (n = 1, allotype). HW, 4; IOD, 2; LP, 3.3; PW, 4.2; FWL, 17; FWW, 4; HWL, 18; LFIII, 9.2; WFIII, 3; LTIII, 4.8; LBtarsIII, 2.1; OL, 7.1.

Oecanthinae *incertae sedis*

Genus *Stenoecanthus* Chopard, 1912

Type species. — *Stenoecanthus gracillimus* Chopard, 1912.

Emended diagnosis. — Body slender, legs elongated and punctuated; ocelli absent; pronotum longer than wide; TI with both inner and outer auditory tympana present, well-developed. Male: metanotum without structures or projections; harp with two veins. Male genitalia: MLophi absent; LLophi apex rounded, with bristles; R longer than pseudepiphallic sclerite. Female: slightly larger than male, similar coloration. Female genitalia: copulatory papilla cylindrical; with a ventral aperture.

Stenoecanthus planixiphus n. sp.
(Figs 1E, F; 30-32)

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Type locality. — Mitaraka, French Guiana.

Etymology. — Species named after the flat lateral expansions of its ovipositor dorsal valves.

Type material. — **Holotype. French Guiana • ♂**; Monts Tumuc-Humac, Massif du Mitaraka, Layon A; 54°45'09"O, 2°23'57"N;

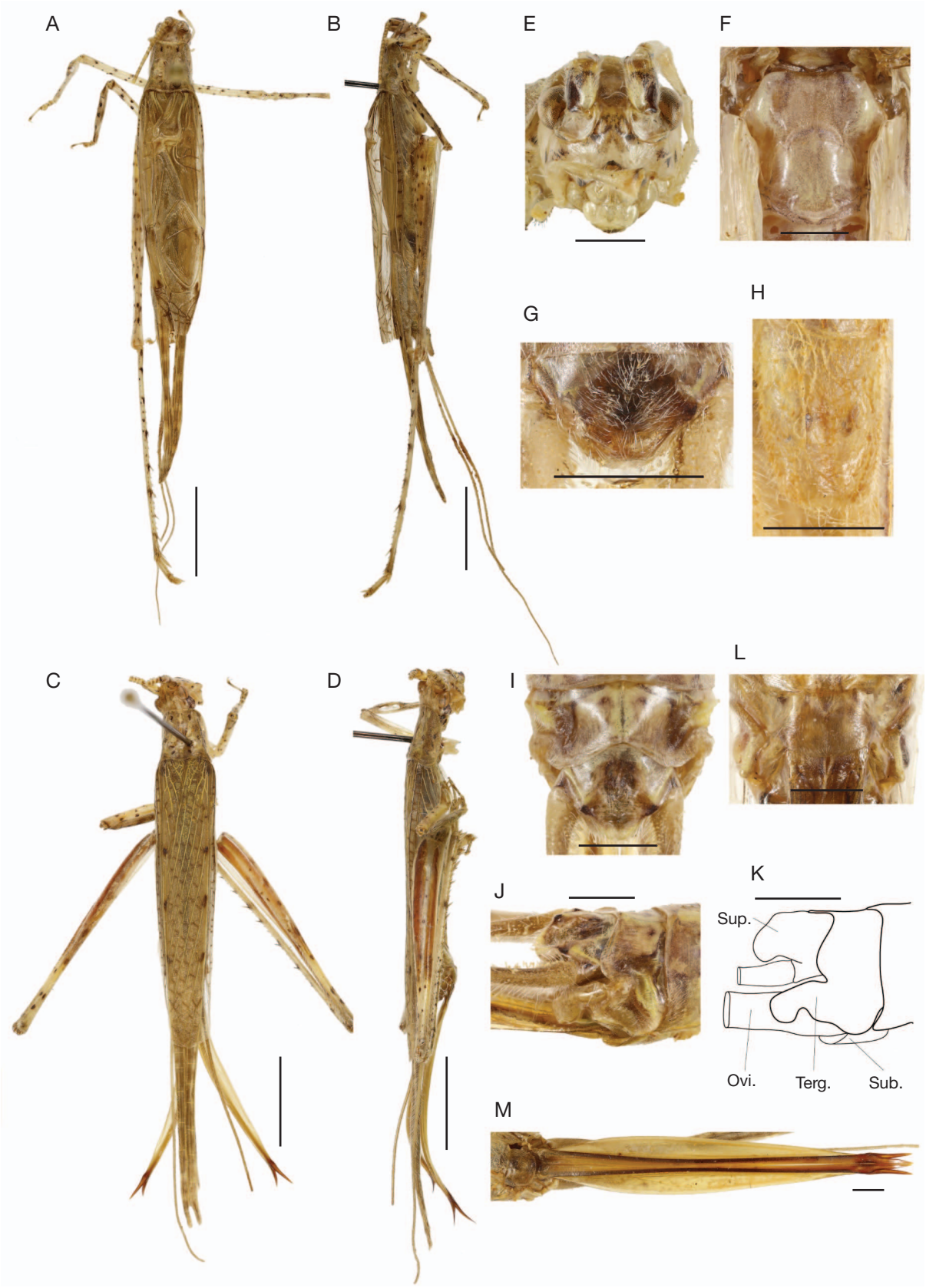

FIG. 30. — *Stenoecanthus planixiphus* n. sp., male and female: **A**, male habitus, dorsal; **B**, male habitus, lateral; **C**, female habitus, dorsal; **D**, female habitus, lateral; **E**, male head, frontal; **F**, male metanotum, dorsal; **G**, male supra anal plate; **H**, male subgenital plate; **I**, female supra anal plate; **J**, female terminalia, lateral; **K**, female terminalia, lateral; **L**, female subgenital plate; **M**, ovipositor, ventral. Abbreviations: **Sup.**, supra anal plate; **Sub.**, subgenital plate; **Ovi.**, ovipositor; **Terg.**, tergite. Scale bars: A-D, 5 mm; M, 2 mm; E-K, 1 mm.

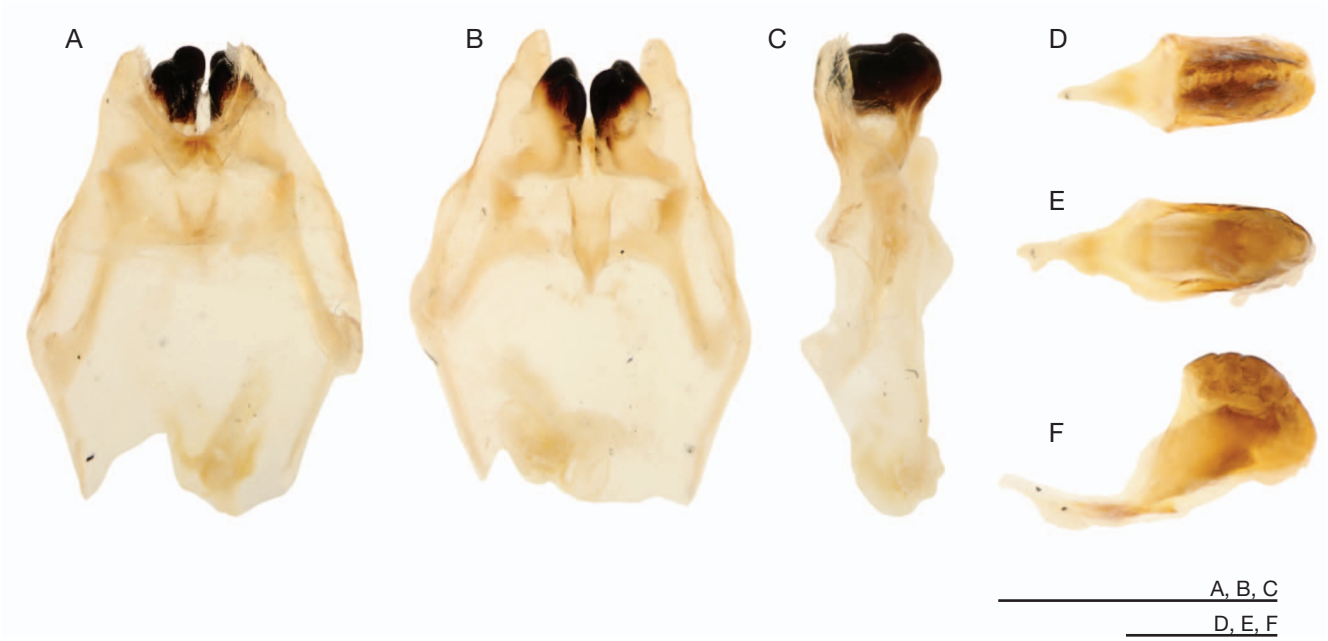

FIG. 31. — *Stenoecanthus planixiphus* n. sp., male phallic complex: **A**, dorsal; **B**, ventral; **C**, lateral. Female copulatory papilla: **D**, dorsal; **E**, ventral; **F**, lateral. Scale bars: A-C, 1 mm; D-F, 0.5 mm.

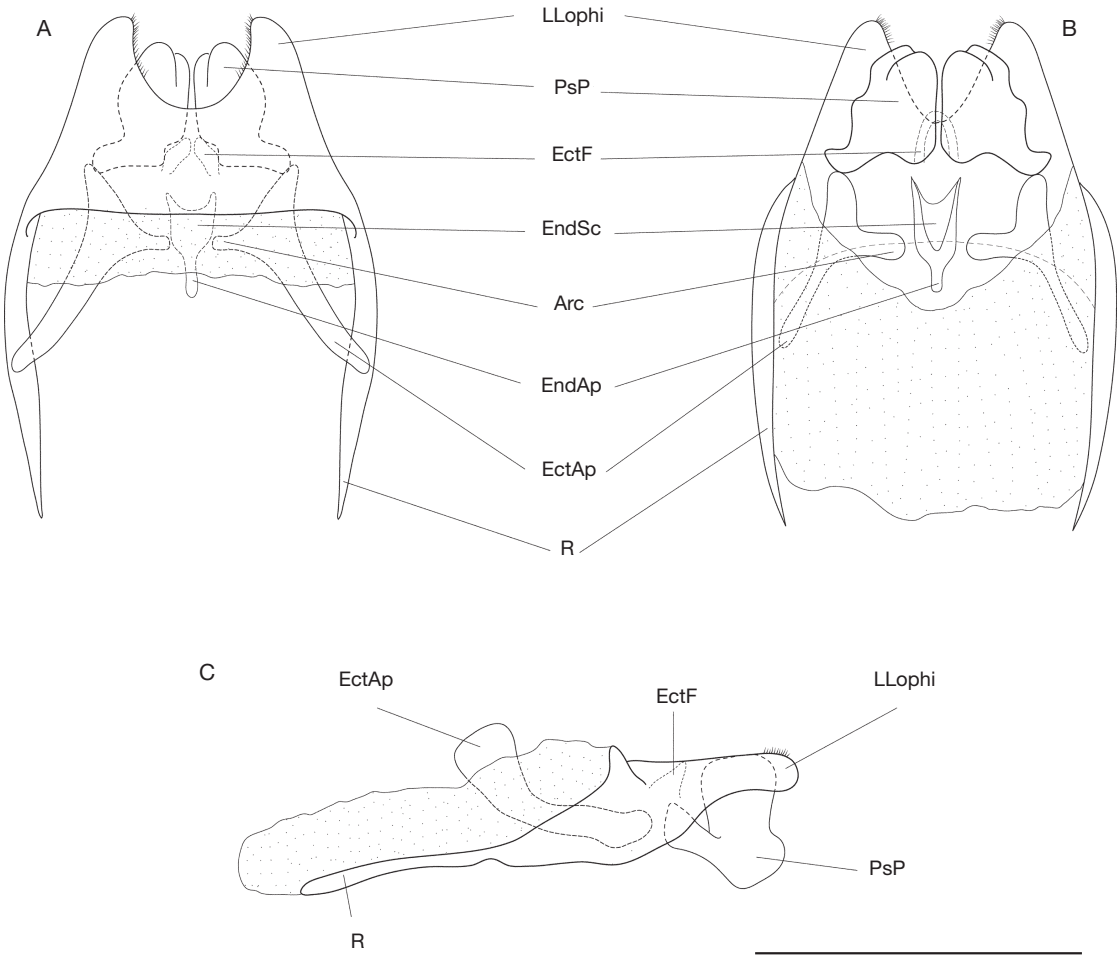

FIG. 32. — *Stenoecanthus planixiphus* n. sp., male phallic complex: **A**, dorsal; **B**, ventral; **C**, lateral. Abbreviations: See Material and methods. Scale bar: 1 mm.

280 m – 54°45'47"O, 2°24'05"N; 365 m; 23.II.2015-10.III.2015; F. Legendre & S. Hugel leg.; night; specimen photographed in copula (Fig. 1F); Planète revisitée Guyane 2015; 2015 GUY SH 551; MNHN-EO-ENSIF10915; MNHN.

Allotype. **French Guiana** • ♀; Monts Tumuc-Humac, Massif du Mitaraka; 54°44.768"O, 2°23.549"N (C100); 350 m – 54°44'19"O, 2°23'366"N (C1000); 415 m; 23.II.2015-10.III.2015, F. Legendre & S. Hugel leg; night; specimen photographed in copula (Fig. 1F); Planète revistée Guyane 2015; 2015 GUY SH 169; Molec 2015 LDG 518; MNHN-EO-ENSIF10916; MNHN.

Paratype. 1♂, 2♀. **French Guiana** • 1♂; Sinnamary; Jul. 1977; M. Descamps leg.; MNHN-EO-ENSIF10917; MNHN. • 1♀; Monts Tumuc-Humac, Massif du Mitaraka, Layon A; 54°45'09"O, 2°23.57"N; 280 m – 54°45.47"O, 2°24.05"N; 365 m; 23.II.2015-10.III.2015; F. Legendre & S. Hugel leg.; night; Planète revisitée Guyane 2015; 2015 GUY SH 552; Molec 2016 LDG 552; MNHN-EO-ENSIF10918; MNHN. • 1♀; Arataye Affl. Approuague, aval du Saut Parare; 12 Jul. 1988; beating during the day, no. 6, Patawa Palm; MNHN-EO-ENSIF10919; MNHN.

DIAGNOSIS. — This species is separated from the other species of *Stenoecanthus* by the following characters: Fastigium outer margin bent up; LL with a median spot dark brown. Male: stridulatory file with *c.* 49 teeth. Male genitalia: PsP very sclerotized; anterior portion thin, inclined inwards, almost parallel to anterior margin of pseudepiphallic sclerite; EndSc longer than wide, posterior margin concave in dorsal and ventral views, antero-lateral margins folded ventrally. Female: FWs lateral margin with three spots dark brown in dorsal view; last abdominal tergite posterior margin concave, with latero-posterior regions somewhat elongated and inflated in dorsal and lateral views, with bristles; ovipositor dorsal valves laterally expanded resembling a leaf, involving dorsal region of ventral valves.

DESCRIPTION

General morphology.

Body. Generally slender, medium size, general coloration light brown (Fig. 30A-D).

Head. Occiput and vertex with few yellowish bristles; occiput light brown with dark brown band behind eyes; vertex light brown with two median medium brown stripes. Fastigium longer than wide, light brown; antennal socket inner margin bent up in frontal view (Fig. 30A, E). Frons smooth, light brown with a dark brown median macula somewhat triangular (Fig. 30E). Eyes as long as wide in lateral view, ommatids medium brown; crossed by a dark brown horizontal line (Fig. 30B, D). Antennal scape longer than wide, inner margin with whitish bristles, light brown, outer margin dark brown; antennomeres light brown, with medium brown bands of two or three antennomeres. Gena light brown with transversal dark brown band below eyes in frontal and lateral views. Mandibles light brown. Epistomal suture dark yellow; clypeus light brown, upper margin medium to dark brown; labrum light brown (Fig. 30E). Maxillary palpi slightly pubescent with whitish bristles, light brown, articles 3-5 almost same-sized; article 5 apex upcurved.

Pronotum. DD wider than long, with some whitish bristles; light brown with two dark brown lateral short stripes on anterior region. DD cephalic margin concave; caudal margin convex wider than cephalic margin. LL light to medium brown with a dark brown median spot; ventro-cephalic angle slightly rounded; ventro-caudal angle rounded in lateral view (Fig. 30A, C). FWs not covered by bristles, light brown, translucent; veins light and medium brown (Fig. 30A, C). HWs longer than FWs in dorsal and lateral views.

Legs. Legs I and II with whitish bristles. FI and FII light brown, punctuated dark brown. TI and TII light brown, punctuated dark brown. TI with both inner and outer tympana; inner tympanum longer than outer, both oval shape. TI with two ventral apical spurs. TII with three apical spurs: two ventral, one dorsal, internal. FIII and TIII almost same-sized; FIII light brown, punctuated dark brown. TIII light brown, punctuated dark brown (Fig. 30A, C). TIII subapical spurs 3/6, with three spines between spurs; three spines above outer subapical spurs, *c.* 20 spines above inner subapical spurs. TIII apical spurs 3/3, longer on inner side; inner apical spurs: dorsal (iad) slightly longer than median (iam), ventral the smallest (iav) (iad>iam>iav); iad and iam inflated; outer apical spurs: median longest (oam), dorsal slightly shorter (oad), ventral almost same size of dorsal (oav) (oam>oad>oav). TIII apical and subapical spurs and spines medium brown, apex dark brown. Basitarsus dorsal spines 4/2, apical spine the longest; inner and outer apical spur same size, shorter than basitarsus. Basitarsus light brown.

Abdomen. Tergites medium to dark brown with two dark brown median spots on each tergite. Cerci pubescent, longer than TIII, light brown.

Male

Morphology. Metanotum without projections, antero-lateral regions inflated, without bristles (Fig. 30F). FWs covering entire abdomen; PCu curved on anterior region; bearing a stridulatory file ventrally with *c.* 49 stridulatory teeth. Harp crossed by two transverse veins, connected apically and connected to CuPa; CuPb short; mirror divided on the middle by a curved vein; apical field poorly developed, with four columns of cells (Fig. 30A). Lateral field with *c.* 17 parallel veins, perpendicular to dorsal field in lateral view. Supra anal plate posterior margin rounded, dark brown (Fig. 30G). Subgenital plate longer than wide, posterior margin straight, pubescent; light brown, with darker median region, bristles whitish (Fig. 30H).

Male genitalia (Figs 31A-C; 32). Pseudepiphallus: pseudepiphallic sclerite apex straight in lateral view, anterior margin almost straight in dorsal view; MLophi absent. LLophi occupying posterior half of pseudepiphallic sclerite, posterior margin rounded, inner margin with bristles. PsP very sclerotized; anterior portion thin, inclined inwards, almost parallel to anterior margin of pseudepiphallic sclerite in dorsal and ventral views; posterior margin somewhat globular. R longer than pseudepiphallic sclerite, straight in dorsal and ventral views, anterior margin pointed. Ectophallic invagination: EctAp surpassing anterior margin of pseudepiphallic sclerite, curved outwards in ventral view. Arc not complete, straight in dorsal and ventral views; ventral projections of ectophallic invagination shorter than EctAp, inclined outwards. EctF

weakly sclerotized, posterior margin rounded. Endophallus: EndSc longer than wide, shorter than EctAp, posterior margin concave in dorsal and ventral views, antero-lateral margins folded ventrally; EndAp short.

Female

Morphology. Size and coloration as in male (Fig. 30B, D). FWs covering abdomen; bearing nine longitudinal veins, with small transverse connective veins between them; lateral margin with three dark brown spots in dorsal view. Supra anal plate light brown, median region darker, latero-posterior regions with a dark spot; posterior margin rounded (Fig. 30I) Subgenital plate wider than long, posterior margin rounded; medium brown (Fig. 30H). Last abdominal tergite posterior margin concave, with latero-posterior regions somewhat elongated and inflated in dorsal and lateral views, with bristles (Fig. 30J, K). Ovipositor flattened dorso-ventrally, downcurved; dorsal valves laminar, laterally expanded, resembling a leaf, involving dorsal region of ventral valves, yellow (Fig. 30M); ventral valves medium brown; apex lateral margins smooth, posterior tip pointed.

Female genitalia (Fig. 31D-E). Copulatory papilla cylindrical, with ventral aperture; posterior margin rounded in dorsal view; anterior margin acuminated in dorsal and ventral views.

Measurements (mm)

Males (n = 2, holotype and paratype). HW, 2.15 ± 0.21 (2-2.3); IOD, 1; PL, 3; PW, 2.3 ± 0.4 (2-2.6); FWL, 14 ± 0.1 (13.9-14.1); FWW, 3.25 ± 0.35 (3-3.5); HWL, 22.55 ± 0.63 (22.1-23); LFIII, 12; WFIII, 1.9 ± 0.1 (1.8-2); LTIII, 11.45 ± 2 (10-12.9); LBtarsIII, 1.5.

Females (n = 2, allotype and paratype). HW, 2.45 ± 0.1 (2.4-2.5); IOD, 1; PL, 3; PW, 2.4 ± 0.14 (2.3-2.5); FWL, 16; FWW, 2.5; HWL, 24.15 ± 1.6 (23-25.3); LFIII, 13.4 ± (12.8-14); WFIII, 1.65 ± 0.2 (1.5-1.8); LTIII, 14 ± 1.7 (12.8-15.2); LBtarsIII, 1.9 ± 0.1 (1.8-2); OL, 12.6 ± 0.8 (12-13.2).

Key to Guianese Paroecanthini Gorochov, 1986
Key adapted from Campos *et al.* (2020) for Guianese species.

1. Body not robust, slightly flattened; FWs covering the whole abdomen; male FW stridulatory apparatus complete, PCu vein bisinuous; auditory tympana present on both sides of TI, rarely absent on inner side; male genital sclerites generally regressed ..... Paroecanthina Gorochov, 1986 (2)
— Body robust or not, not flatenned; apterous, brachypterous, or with developed FWs; males with developed FWs with longitudinal veins, only with PCu curved, or with developed stridulatory apparatus; when curved, PCu vein not bisinuous; auditory tympana absent, present only on inner side of TI, or present only on outer side of TI; male genital sclerites developed ..... Tafaliscina Desutter, 1988 (3)

2. TI inflated; outer tympanum covered by a sclerotized tab; FIII as long as TIII; TIII subapical spurs 5/4; female ovipositor apex margins smooth, ovipositor tip pointed ..... *Angustitrella vicina* (Chopard, 1912)
— TI not inflated; outer tympanum exposed; FIII twice longer than TIII; TIII subapical spurs 4/3; female ovipositor apex margins serrulated, ovipositor tip slightly concave ..... *Perutrella septentrionalis* n. sp.

3. Small size; FWs absent .....*Cylindrogryllus* (*Apterotrypa*) Gorochov, 2017 (4)
— Medium to large size; FWs present 5

4. Ocelli present; TIII without a dark brown band on proximal region; male last abdominal tergite constricted medially similar to supra anal plate; male genitalia LLophi inner margin bearing strong bristles; EndSc elongate; copulatory papilla dorsal and ventral side almost same-sized..... *C.* (*Apterotrypa*) *mitarakensis* n. sp.
— Ocelli absent; TIII with a dark brown band well discernible on proximal region; male last abdominal tergite not modified; male genitalia LLophi inner margin without bristles; EndSc short; copulatory papilla dorsal side three times longer than ventral side ..... *C.* (*Apterotrypa*) *guyanensis* n. sp.

5. FWs with stridulatory apparatus; male supra anal plate bearing a median spine; male genitalia LLophi apex bifid ..... *Adenophallusia* de Mello & de Camargo e Mello, 1996 (6)
— FWs only with longitudinal veins, sometimes with PCu curved; male supra anal plate without spine; male genitalia LLophi apex not divided 7

6. Male FWs covering the supra anal plate; harp crossed by three diagonal veins; median spine of supra anal plate with base enlarged; both lobes of LLophi of male genitalia with pointed apex; Female FWs covering abdomen but not supra anal plate; copulatory papilla not cylindrical, posterior margin with a median rounded projection ..... *Adenophallusia legendrei* n. sp.
— Male FWs not covering the supra anal plate; harp crossed by four diagonal veins; median spine of supra anal plate with base not enlarged; inner lobe of LLophi of male genitalia with pointed apex; Female FWs not covering the last three abdominal tergites; copulatory papilla cylindrical, posterior margin without a median rounded projection. ..... *Adenophallusia aratayensis* n. sp.

7. Ocelli generally absent, reduced when present; PCu not curved, without teeth ventrally; metanotum with median region elevated; absence of small dorsal protuberances on fore and mid tibiae; male genitalia only with LLophi. Female apex of ovipositor pointed, smooth laterally; copulatory papilla triangular in dorsal and ventral views ..... *Brazitrypa* Gorochov, 2011 (8)
— Ocelli present, well developed; PCu vein curved, sometimes with teeth ventrally; metanotum without projections, or with two lateral projections; presence of small dorsal protuberances on fore and mid tibiae, sometimes absent; male genitalia with MLophi and LLophi. Female apex of ovipositor truncated or slightly acuminated, serrulated laterally; copulatory papilla cylindrical ..... *Tafalisca* Walker, 1869 (9)

8. DD reddish brown; hindleg light brown; copulatory papilla curved downwards in lateral view; male genitalia LLophi hook-shaped ..... *Brazitrypa cornuta* n. sp.
— DD medium to dark brown; FIII anterior region light brown, distal portion dark brown, TIII dark brown; copulatory papilla straight in lateral view. Male unknown: . *Brazitrypa maroniensis* (Chopard, 1930) n. comb.

9. General coloration light brown, DD light brown, caudal margin dark brown, with two median maculae drop-shaped horizontally dark brown; FWs veins medium to dark brown; PCu curved reaching middle region of FW; male genitalia LLophi curved upwards in lateral view..... *Tafalisca elongata elongata* (Chopard, 1912) n. comb.
— General coloration reddish brown, DD reddish brown, without maculae; FWs veins light brown; PCu curved almost reaching inner margin of FW; male genitalia LLophi straight or slightly curved upwards in lateral view 10

10. Flagellum with sparse dark brown antennomeres; FWs light brown with dark brown spots; claws yellow; metanotum with two lateral projections; male genitalia MLophi very short ..... *Tafalisca hugeli* n. sp.
— Flagellum without dark brown antennomeres; FWs medium brown without dark brown spots; claws medium to dark brown; metanotum without projections; male genitalia MLophi elongate, almost half size of LLophi 11

11. Flagellum reddish brown; TIII subapical spurs dark brown; PCu vein with stridulatory teeth ventrally; male genitalia LLophi outer margin with bristles; PsP anterior margin larger than posterior in ventral view; R distal half twice wider than anterior half in lateral view ..... *Tafalisca vestigialis* Campos, Souza-Dias & Nihei, 2020
— Flagellum yellowish; TIII subapical spurs apex yellow; PCu vein without stridulatory teeth ventrally; male genitalia LLophi outer margin without bristles; PsP anterior margin thinner than posterior in ventral view; R distal and anterior half almost same width in lateral view ..... *Tafalisca ansoi* n. sp.

DISCUSSION

The Paroecanthini in the Neotropics

The Neotropical tribe Paroecanthini is relatively poorly known considering all the extension and diversity of the Neotropical region (Antonelli & Sanmartín 2011; Antonelli *et al.* 2018). Recently, one new genus and five new species from Brazil and French Guiana were described (Campos *et al.* 2020). In the present paper, we describe nine new species from French Guiana, a relatively small territory (~83 500 km²) compared to South America (*c.* 17 840 000 km²), or the whole Neotropical region. According to *The Orthoptera Species File* (OSF), the tribe comprises 17 genera and 119 species (Cigliano *et al.* 2020). That means that more than 10% of Paroecanthini diversity has been described in less than one year. As already mentioned for Tafaliscina, a subtribe within Paroecanthini, the diversity of this group is totally underestimated, considering their nocturnal habits, habitat (living in plants and trees canopies), and low population densities. These life habits make Paroecanthini crickets quite hard to find and collect (Campos *et al.* 2020); for Oecanthinae as for most tropical crickets in general, none of the passive or attractive traps usually used to collect insects is efficient, and only visual collecting is effective to find these species. Thus, we expect that many additional new taxa will be discovered in the next future.

The Paroecanthini in French Guiana

The morphological diversity of Paroecanthini crickets is remarkable. This diversity includes several aspects of their morphology, and particularly the forewings. In French Guiana we find all the forewing diversity documented in the Paroecanthini, except for the brachyptery as displayed by subgenera *Cylindrogryllus* (*Cylindrogryllus*) Saussure, 1878 and *Cylindrogryllus* (*Neometrypus*) Desutter, 1988, known from Argentina, Brazil, and Peru. However, this does not mean that they are absent in this region. As already mentioned, this group of crickets is far from well-sampled and the real diversity of this taxa in French Guiana or even South America is far from being comprehensively understood.

Besides forewings diversity, Paroecanthini also varies in the morphology of male metanotum, with projections, bristles and concavities. These structures are involved in mating, producing nutritious secretions which are offered to the females. The female is entertained licking the secretions and sometimes biting structures of male metanotum during copulation, meanwhile the male transfers the spermatophore to female. This behavior was already described for other crickets, including *Oecanthus* Serville, 1831, *Truljalia* Gorochov, 1985 (Podoscirtinae Saussure, 1878) and phalangopsid crickets (Walker & Gurney 1967; Ono *et al.* 2004; Prado 2006; Zefa *et al.* 2008). Usually, metanotal structures are covered

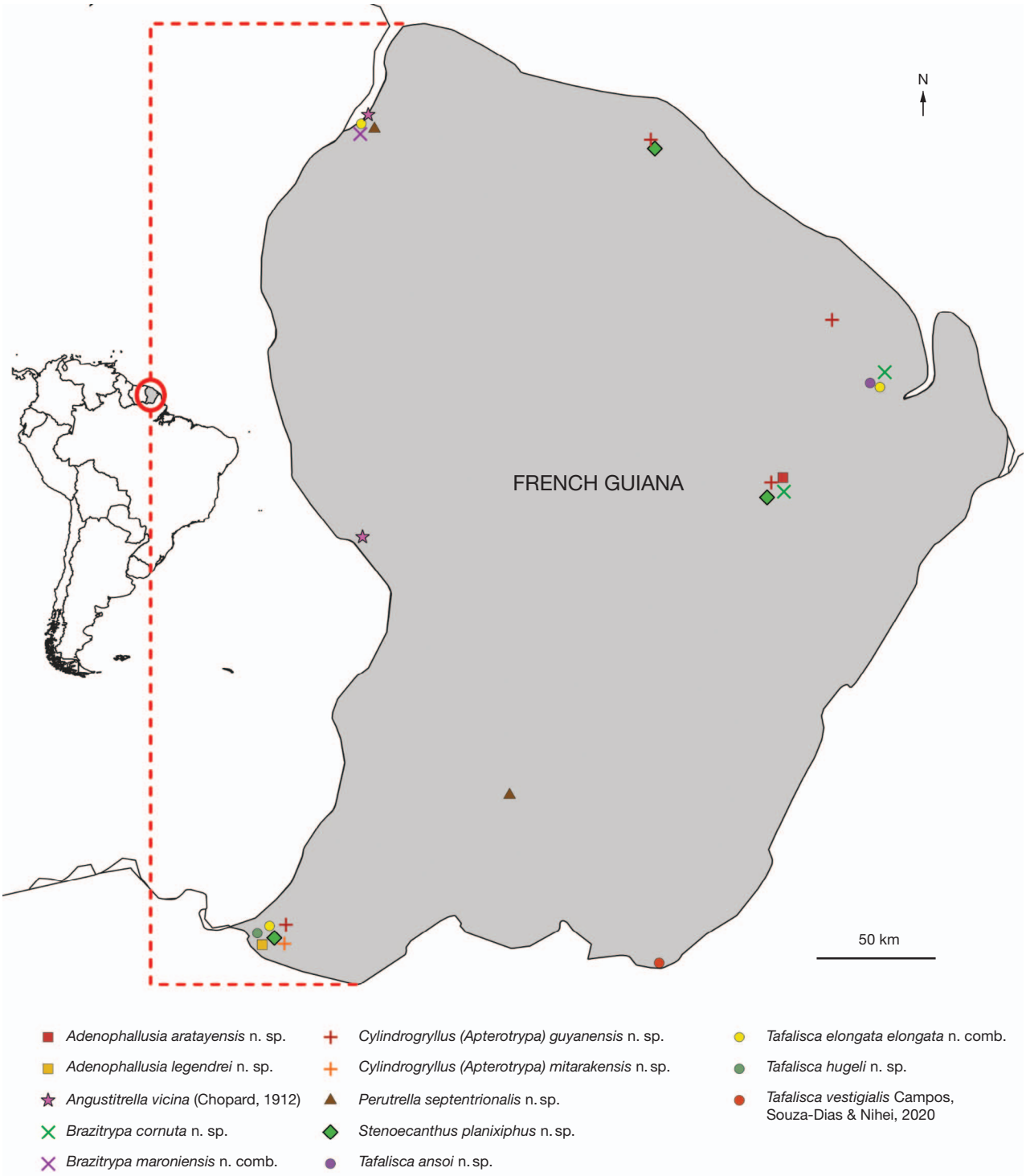

FIG. 33. — Distributional map of Paroecanthini taxa from French Guiana.

by the forewings, as shown in some Paroecanthini crickets (e.g. some species of *Tafalisca*, *Adenophallusia, Angustitrella*). The apterous *Cylindrogryllus* (*Apterotrypa*) *guyanensis* n. sp. may however have also metanotal structures, as shown in Fig. 1D of a living male in which there are some structures on the metanotum, but the only holotype available has not been dissected to check this character. A similar condition appears in *Cylindrogryllus* (*Cylindrogryllus*), *Cylindrogryllus* (*Neometrypus*) and *Brazitrypa*.

We have also noticed similar structures on the dorsum of the first abdominal tergites in two Guianese taxa: *Adenophallusia legendrei* n. sp. (Fig. 11F) and *Brazitrypa cornuta* n. sp. (Fig. 18F). As their positions are almost similar to that of the metanotal structures, it can be hypothesized that these tergal

structures could be complementary to the metanotal structures for mating. This is the first time that structures on tergites are documented in the Paroecanthini, but they have been described in phalangopsid crickets, e.g. *Anomaloterga mantiqueirae* De Mello & Bolfarini, 2010 and *Ectecous segregatus* Gorochov, 1996 (Bolfarini & De Mello 2010; Fernandes *et al.* 2016), and the Odontogryllini *Yarrubura nigricephala* De Mello & Campos, 2014 (Campos & De Mello 2014).

By contrast, the Guianese species of *Tafalisca* lack both metanotal/tergal structures (except *Tafalisca hugeli* n. sp. with metanotal structures present) and a developed stridulatory apparatus. They may have a vestigial stridulatory file in symmetrical forewings, like in *Tafalisca lineatipes* Bruner, 1916, which would suggest that these forewings could be used to produce some kind of weak and low sound (Campos *et al.* 2020), or be a source for vibrational signals, as these species do not have auditory tympana.

This diversity of forms and structures is probably related to different behaviors and life habits. However, no observations on natural history, behavior, or acoustic communication have been described so far for these species. The photo on Fig. 1F shows the mating position in *Stenoecanthus planixiphus* n. sp., where the female mounts the male, while the male raised its forewings and initiate copulation. These observations mean that at least some Paroecanthini exhibit a cricket mating already documented in other Oecanthinae and Podoscirtinae crickets (Bell 1980; Ono *et al.* 2004).

The genus *Stenoecanthus*

Since we consider move Paroecanthini out of Podoscirtinae (Cigliano *et al.* 2020), grouping it into Oecanthinae according to strong phylogenetic evidence (Chintauan-Marquier *et al.* 2013, 2016), the genus *Stenoecanthus* is consequently transferred to this latter subfamily. However, we do not place it in any tribe inside this group, as its relationships remain uncertain. The morphological features of this genus raise many questions about its systematic position. The harp veins are parallel to the PCu (stridulatory file), a putative synapomorphy of the Hapithini Gorochov, 1986 but the ectophallic fold of male genitalia is not well-developed, almost not sclerotized. Finally, the female ovipositor is flattened dorso-ventrally, as in all Paroecanthini. These important characteristics do not allow us to place this genus in one or another Oecanthinae group right now. Besides that, the female of *Stenoecanthus planixiphus* n. sp. has remarkable features, never described in a cricket before. The ovipositor dorsal valves are laterally expanded, dorso-ventrally flattened and reinforced with transverse veinlets, resembling a leaf, and covering the ventral valves (Fig. 30M). The shape of ovipositors is generally related to the site of oviposition (Gwynne 2001) and *Stenoecanthus planixiphus* n. sp. particular ovipositor may facilitate oviposition inside the parenchyma of leaves for example, as shown on a photograph of a female (Fig. 1E). Species ovipositing in fresh leaves are known in katydids, but these species usually have a laterally flattened, curved ovipositor (Gwynne 2001).

The second original feature of the female of *S. planixiphus* n. sp. is a morphological modification in the last abdominal tergite (Fig. 30I, J, K). These structures are expanded laterally and have some bristles, indicating that it could be a glandular structure, which function is not known today.

Distribution of Guyanese Paroecanthini

None of the Paroecanthini species described from French Guiana are documented in other regions, except for *Tafalisca vestigialis*, which is also from Brazil Northern Region, State of Para (Campos *et al.* 2020). The lack of sampling in the Guianese region prevent us to consider those species as endemics to French Guiana.

From the point of view of the genera, we observed very diverse situations, which call for additional sampling in the whole Neotropics. As a few examples, *Tafalisca* has a wide distribution in the northern Neotropics, being present in the Amazonian region, Central America, Caribbean, Mexico and south of Florida. Except the Amazon Rainforest, there are no records of this genus in other South American regions. In the same habitat, we found *Brazitrypa* in the Atlantic Forest. *Adenophallusia* shows a distribution more restricted than *Tafalisca*, being known presently in Northern South America only, with *Adenophallusia naiguata* de Mello & de Camargo e Mello, 1996 recorded from Naiguata, Venezuela, *Adenophallusia legendrei* n. sp. and *Adenophallusia aratayensis* n. sp. described herein from French Guiana. Finally, *Perutrella* is recorded from Peru by its type species, *Perutrella originalis* Gorochov, 2011, and we attest its presence in French Guiana with the description of *Perutrella septentrionalis* n. sp. (Fig. 33).

CONCLUSION

The classification of Oecanthinae, in which we include the Paroecanthini (Campos *et al.* 2020), is somewhat unorganized today. The molecular data presented in Chintauan-Marquier *et al.* (2013, 2016) helped to clarify the situation and lead for a complete reanalysis of the "traditional classification" of several cricket groups, considered as families/subfamilies according to the authors, i.e. Podoscirtinae, Hapithinae Gorochov, 1986, Euscyrtinae Gorochov, 19855, Pentacentrinae Saussure, 1878, and Oecanthinae (Bruner 1916; Chopard 1949, 1968; Desutter 1988; Gorochov 1986). The molecular studies of Chintauan-Marquier *et al.* (2013, 2016), who sampled the whole cricket clade using 206 terminals, were however not based on enough taxa to test the monophyly and relationships of all these groups, which were gathered in a "Clade F" without formal classificatory proposal. A phylogeny based morphological and molecular data is being developed to test the monophyly of these groups and to facilitate future evolutionary studies of this diverse clade of crickets.

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