

The cricket subfamily Podoscirtinae (Orthoptera: Gryllidae) in Peru Сверчки подсемейства Podoscirtinae (Orthoptera: Gryllidae) в Перу

A.V. GOROCHOV

А.В. ГОРОХОВ

A.V. Gorochov, Zoological Institute, Russian Academy of Sciences, 1 Universitetskaya Emb., St Petersburg 199034, Russia. E-mail: orthopt@zin.ru

At present, 86 species and subspecies of the cricket subfamily Podoscirtinae are registered in Peru, and 46 of them are found in the territory covered by the Peruvian project on invertebrate fauna of the Ene and Tambo River Basins. From this territory, 16 taxa are here described as new to science: *Perutrella ashaninka* sp. nov.; *Bezverkhovia lydia* gen. et sp. nov.; *Angustitrella superuncus* sp. nov.; *A. nigella* sp. nov.; *Aphonomorphus* (*Aphonomorphus*) *paramutus* sp. nov.; *A. (A.) hamatus* sp. nov.; *A. (A.) proximus tambo* subsp. nov.; *A. (A.) pichiguia* sp. nov.; *A. (A.) stipatus longifurca* subsp. nov.; *A. (Euaphonus) problematicus* sp. nov.; *A. (E.) firmus* sp. nov.; *A. (?) brachyphallus* sp. nov.; *Spiraphonus asymmetricus longiapex* subsp. nov.; *Phyllogryllus crassus* sp. nov.; *Diatrypa (?) intersecta* sp. nov. For *A. (A.) venado* Gor., *D. (Diatrypa) signata* Gor., *D. (D.) decora decora* Gor. and *D. (Latispeculum) venado* Gor., previously unknown females are described. New data on distribution and systematical position of some taxa are also given.

К настоящему времени в Перу зарегистрированы 86 видов и подвидов сверчков подсемейства Podoscirtinae, и 46 из них обнаружены на территории, покрываемой перуанским проектом по изучению фауны беспозвоночных бассейнов рек Ене и Тамбо. Шестнадцать таксонов с этой территории описаны здесь как новые для науки: *Perutrella ashaninka* sp. nov.; *Bezverkhovia lydia* gen. et sp. nov.; *Angustitrella superuncus* sp. nov.; *A. nigella* sp. nov.; *Aphonomorphus* (*Aphonomorphus*) *paramutus* sp. nov.; *A. (A.) hamatus* sp. nov.; *A. (A.) proximus tambo* subsp. nov.; *A. (A.) pichiguia* sp. nov.; *A. (A.) stipatus longifurca* subsp. nov.; *A. (Euaphonus) problematicus* sp. nov.; *A. (E.) firmus* sp. nov.; *A. (?) brachyphallus* sp. nov.; *Spiraphonus asymmetricus longiapex* subsp. nov.; *Phyllogryllus crassus* sp. nov.; *Diatrypa (?) intersecta* sp. nov. Для *A. (A.) venado* Gor., *D. (Diatrypa) signata* Gor., *D. (D.) decora decora* Gor. и *D. (Latispeculum) venado* Gor. описаны ранее неизвестные самки. Приведены также новые сведения по распространению и систематическому положению некоторых таксонов.

Key words: crickets, faunistics, taxonomy, Peru, Orthoptera, Gryllidae, Podoscirtinae, new taxa

Ключевые слова: сверчки, фаунистика, таксономия, Перу, Orthoptera, Gryllidae, Podoscirtinae, новые таксоны

INTRODUCTION

This paper is the first preliminary synthesis of data on the faunistics and taxonomy of the cricket subfamily Podoscirtinae in Peru. It is based on a series of my previous articles, devoted to the taxonomy of American Podoscirtinae (Gorochov, 2010, 2011, 2013, 2017), as well as other literary sources

and new material collected in 2017. The paper is also one of the intermediate results of a large project on the invertebrate fauna of the Ene and Tambo river basins under the general supervision of the well-known Peruvian and Ukrainian entomologist Volodymyr Izersky (Zoocriadero "Victoria SAC", Satipo). This project is founded by the National System of Natural State Protected

Areas (Servicio Nacional de Áreas Naturales Protegidas) of Peru (Proyecto de Conservación de la Biodiversidad de la Selva Amazónica: Identificación taxonómica de la fauna invertebrada en la cuenca del Río Ene y Río Tambo). Peruvian territory in the framework of this project is mainly covered by primary and secondary tropical forests, but there are also numerous anthropogenic and mountain landscapes. All species registered from this territory are marked with **asterisks** in the text.

The American fauna of Podoscirtinae includes representatives of three tribes: Paroecanthini, Hapithini and Aphonoidini (Gorochov, 2017). The first two tribes are endemic for America and consist of a few subtribes, but the latter tribe is represented in America by only one endemic subtribe. All these higher taxa are recorded in Peru and include numerous tropical and subtropical species living mainly on the leaves of forest trees and shrubs and usually having oviposition in plant tissue. The new material used in this paper is deposited at the Zoological Institute, Russian Academy of Sciences, St. Petersburg (ZIN). All the specimens are dry and pinned; photographs of their morphological structures were made with a Leica M216 stereomicroscope. The internet-catalogue Orthoptera Species File (Cigliano et al., 2017) is cited here as OSF.

ANNOTATED LIST OF SPECIES

Tribe **PAROECANTHINI** Gorochov, 1986

Subtribe **TAFALISCINA** Desutter, 1988

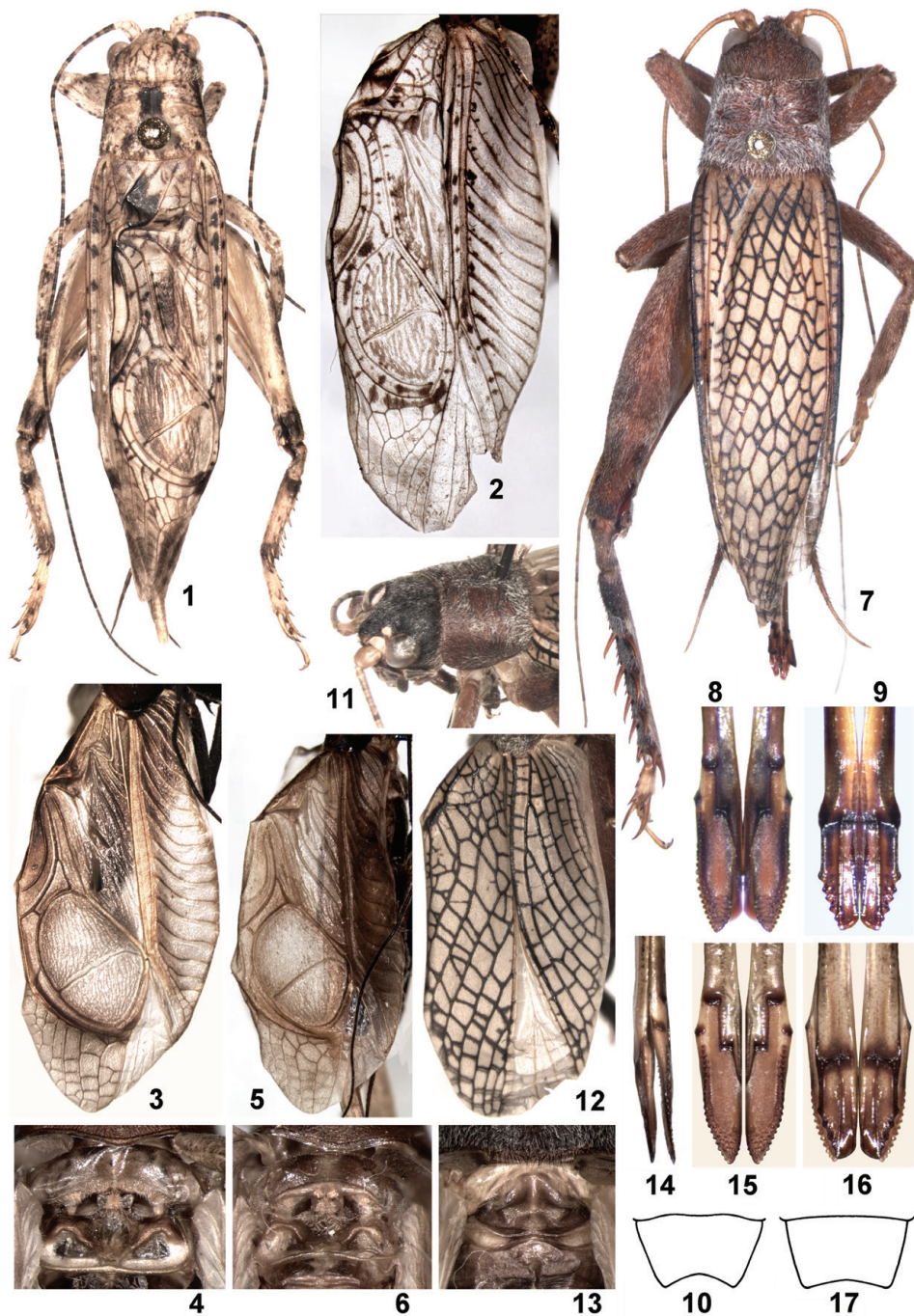
***Perutrella ashaninka** sp. nov.

(Figs 1, 18–22)

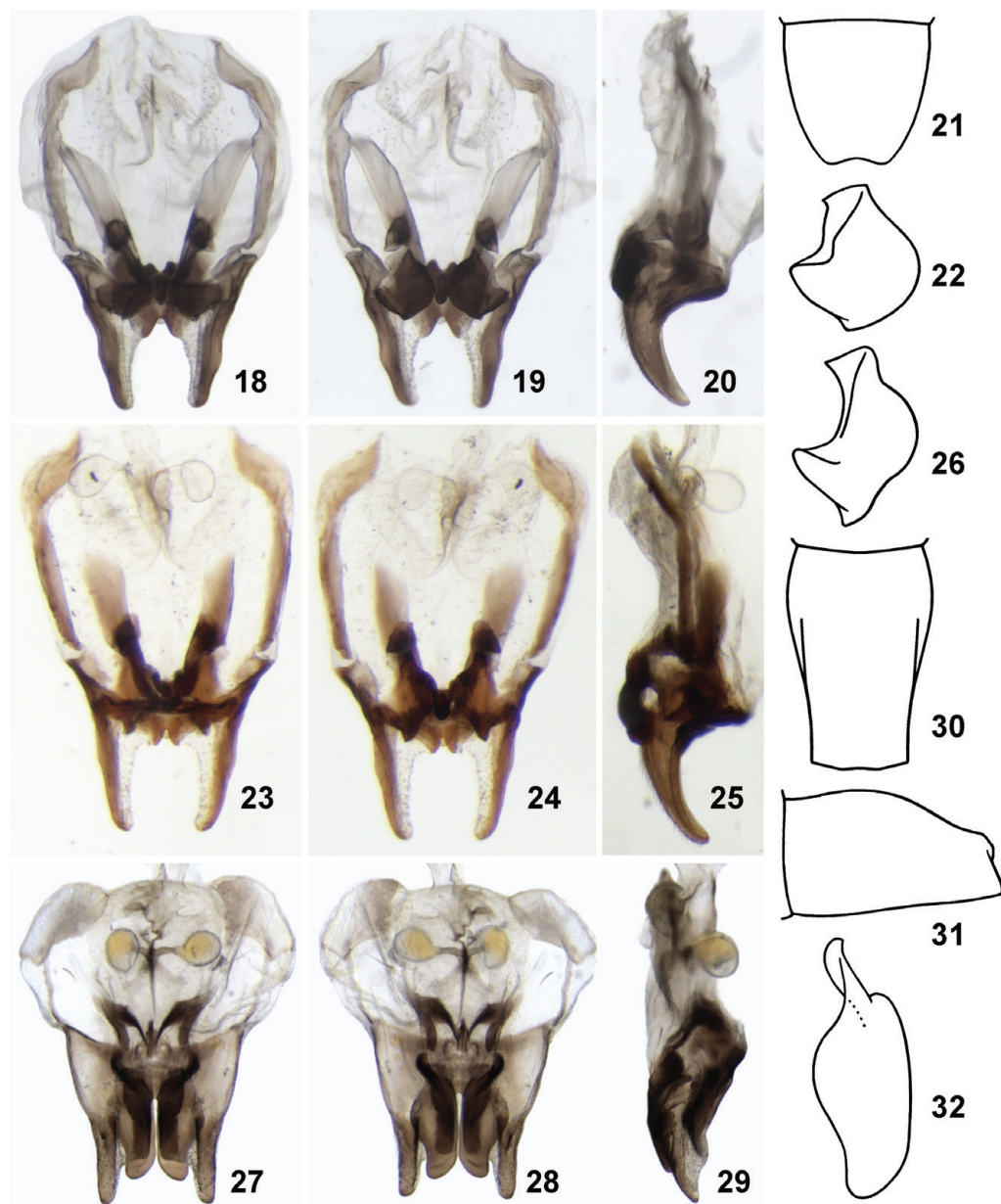
Holotype. Male, **Peru**, Junin Department, Satipo Prov., Río Tambo Distr., 6 km N of Pichiguia Vill., protected area “Reserva Comunal Ashaninka”, 11.358244°S, 74.0320473°W, ~500 m, primary forest, at light, 14–23.XI.2017, A. Gorochov, G. Irisov (ZIN).

Description. Male (holotype). General appearance similar to that of *P. originalis*

Gor. Colouration of head and pronotum light yellowish grey with several irregular and thin as well as partly longitudinal greyish brown lines on head dorsum behind ocelli, slightly darkened rostral apex, a pair of short dark brown lines along medial edges of antennal cavities, a few dark spots behind eyes and on genae, a pair of blackish dots in dorsolateral corners of clypeus, small and sparse darkish marks on palpi and maxillae as well as on scapes, numerous dark brown and light brownish grey to brownish grey spots on each antennal flagellum (but pedicel light), one very distinct blackish area on anteromedian part of pronotal disc, a pair of brownish grey spots somewhat behind this area, a row of smaller darkish dots along posterior edge of this disc, longitudinal dark brown stripe along dorsal edge of each lateral pronotal lobe, a pair of rather small darkish spots under this stripe (in anterior and posterior parts of pronotal lobe), and moderately sparse and very small dots around these spots and stripes; tegmina semitransparent, light greyish with darker (from blackish to light brown) venation of both fields and marks on dorsal field (Fig. 1) as well as brown dots between bases of *Sc* branches; visible (posterior) parts of hind wings uniformly light; legs light yellowish grey with small dark spots and dots on femora (but each hind femur with two darkened transverse bands: middle and distal ones), brown transverse band on each tibia near its base (this band on fore tibia poorly developed), lighter (brownish grey) marks on rest parts of fore and middle tibiae, slightly darkened apical part of hind tibia, darkish areas and spots on fore and middle tarsi as well as ventral mark on apical segment of hind tarsus (Fig. 1); abdomen also light but with slightly darkened spot on each of posterior sternites. Structure of body very similar to that of *P. originalis* (see Gorochov, 2011), but: tegmina slightly shorter and with somewhat smaller mirror (for comparison see Figs 1 and 2); tegminal *Sc* with 17–18 branches; genital plate as in Fig. 21; genitalia with posteromedian (sclerotized)



Figs 1–17. Paroecanthini: 1, *Perutrella ashaninka* sp. nov.; 2, *P. originalis* Gor.; 3, 4, *Angustitrella superuncus* sp. nov.; 5, 6, *A. trivialis* Gor.; 7–10, *Bezverkhovia? huanchaca* (Gor.); 11–17, *B. lydia* sp. nov. Male (1) and female (7) bodies from above; male right tegmen (2, 3, 5, 12); male metanotal gland from above/behind (4, 6) and from above (13); distal part of ovipositor (reconstructed view) from above but without lower valves (8, 15), from below but without upper valves (9), and from below (16); female genital plate from below (10, 17); distal part of ovipositor from side (14). [2, 5, 7–10, after Gorochov (2011, 2017)].



Figs 18–32. Paroecanthini, male: 18–22, *Perutrella ashaninka* sp. nov.; 23–26, *P. originalis* Gor.; 27–32, *Bezverkhovia lydia* sp. nov. Genitalia from above (18, 23, 27), from below (19, 24, 28), and from side (20, 25, 29); genital plate from below (21, 30) and from side (31); right ectoparamere from below (22, 26, 32).

part of epiphallus having distinctly wider posteromedian notch, and with ectoparameres clearly shorter (see Figs 18–20, 22 and 23–26).

Female unknown.

Length in mm. Body 15.5; body with wings 21; pronotum 2.9; tegmina 16; hind femora 9; hind tibiae 4.2.

Comparison. The new species differs from the closely related *P. originalis* (previ-

ously it was a single species of this genus) in the more contrasting colouration of body, slightly shorter wings, smaller mirror in the male tegmen, wider posteromedian epiphallic notch, and clearly shorter ectoparameres.

Etymology. The new species is named after the protected area “Reserva Comunal Ashaninka”.

***Perutrella originalis** Gorochov, 2011
(Figs 2, 23–26)

Material studied. **Peru:** 1 male (holotype), Junin Department, Satipo Prov., ~25 km SE of Satipo Town, environs of Rio Venado Vill., ~1200 m, partly primary and partly secondary forest, at light, 20–23 Oct. 2008; coll. A. Gorochov, M. Berezin, L. Anisyutkin, E. Tkatsheva & V. Izerskiy (ZIN).

Note. Only one specimen (holotype) of this species is known (Gorochov, 2011).

Amblyrhethus? nodifer Chopard, 1956
(Figs 53–56)

Note. This species was described from the two Peruvian specimens: male (holotype), “Chanchamayo, Department of Junin, Peru, elevation 1,200 meters, May 4, 1948, Schunke (USNM 62084)”; female (paratype), “Tingo Maria, Peru, November 1949, Allard” (Chopard, 1956). It was not redescribed or indicated for other localities. Its generic position is questionable (Gorochov, 2011).

Genus **Bezverkhovia** gen. nov.

Type species *Bezverkhovia lydia* sp. nov.

Diagnosis. Body medium-sized, rather stout. Head almost semiglobular: barely flattened, with short rostrum which roundly and obtusely angular in profile; scape almost equal to space between antennal cavities in width; eyes moderately large, shortly oval; lateral ocelli also rather large, round; median ocellus indistinct; palpi rather short, with apical segment of maxillary palpus moderately thin and almost equal to third segment of this palpus in length (Fig. 11).

Pronotum almost quadratic, with rather high lateral lobes, rounded edges between these lobes and disc, and almost straight but barely convex ventral edges of lateral lobes (Fig. 11); metanotal gland developed (Fig. 13). Tegmina without stridulatory apparatus in both sexes (but with traces of such apparatus near base of male dorsal field; Fig. 12), extending slightly behind apices of hind femora, with several straight but slightly oblique longitudinal veins in dorsal field, with rather narrow *Sc-R* and *R-M* areas, with numerous obliquely longitudinal (and slightly arcuated) *Sc* branches, and with moderately numerous normal (almost regular) crossveins between all these veins (Fig. 12); hind wings barely protruding beyond tegminal apices. Legs rather short and moderately robust, especially hind ones; tympana completely absent; hind femora rather wide (thick), insignificantly longer than hind tibiae; each hind tibia with five outer and four inner articulated spines (these spines moderately long; distal outer spine located very near nearest apical spur); six apical spurs of this tibia from moderately long to very short; denticles of hind tibia rather numerous and situated before and between preapical spines of this tibia; tarsi with short basitarsi which not longer than second tarsal segments, with a pair of large subapical denticles on each hind basitarsus (near its spurs) and a few dorsolateral denticles on this basitarsus. Anal plate simple, with truncated apex; male genital plate somewhat longer than anal plate, almost semitubular, narrowing to apex in profile, and truncated posteriorly (Figs 30, 31); female genital plate short, widely trapezoidal and with concave posterior edge (Fig. 17). Male genitalia with large and almost plate-like epiphallus having heavily sclerotized posteromedian part and very deep and narrow posteromedian notch, with epiphallic posterolateral lobes semisclerotized and rather narrow (not inflated), with ectoparameres large and almost plate-like, with endoparameres located in middle part of genitalia, with formula very small (short), and

with rami clearly widened anteriorly (Figs 27–29, 32); ovipositor distinctly shorter than hind femur, with distal part strongly dorsoventrally flattened (but not acute in dorsal or ventral views) and with numerous denticles on lateral edges of valves (Figs 14–16).

Included species. Type species and possibly *Tafalisca? huanchaca* Gorochov, 2017 from Bolivia (Figs 7–10).

Comparison. The new genus is most similar to *Tafalisca* Walk. (distributed from Central America and Caribbean Islands to Ecuador) and *Brazitrypa* Gor. (Brazil) in the general appearance, but it is distinguished from *Tafalisca* by the male genitalia with simple (narrow, not inflated) posterolateral epiphallic lobes, and from *Brazitrypa*, by the epiphallic anterior part simple (not curved upwards/backwards), endoparameres situated in the middle part of male genitalia, and formula of these genitalia (together with its possible apodeme) much shorter. From *Mexitrypa* Gor. (Mexico) and *Pseudogryllus* Chop. (from Colombia and French Guiana to possibly Caribbean Islands), also somewhat similar to the new genus, *Bezverkhovia* differs in the more or less normal (regular) crossvenation between the main longitudinal veins of dorsal tegminal field (in *Mexitrypa* and *Pseudogryllus*, this crossvenation is reticular, i.e. consisting of numerous small and irregular cells).

Etymology. The new genus is named in honor of Yu.A. Bezverkhov who initiated this study and provided the necessary support for it in 2017.

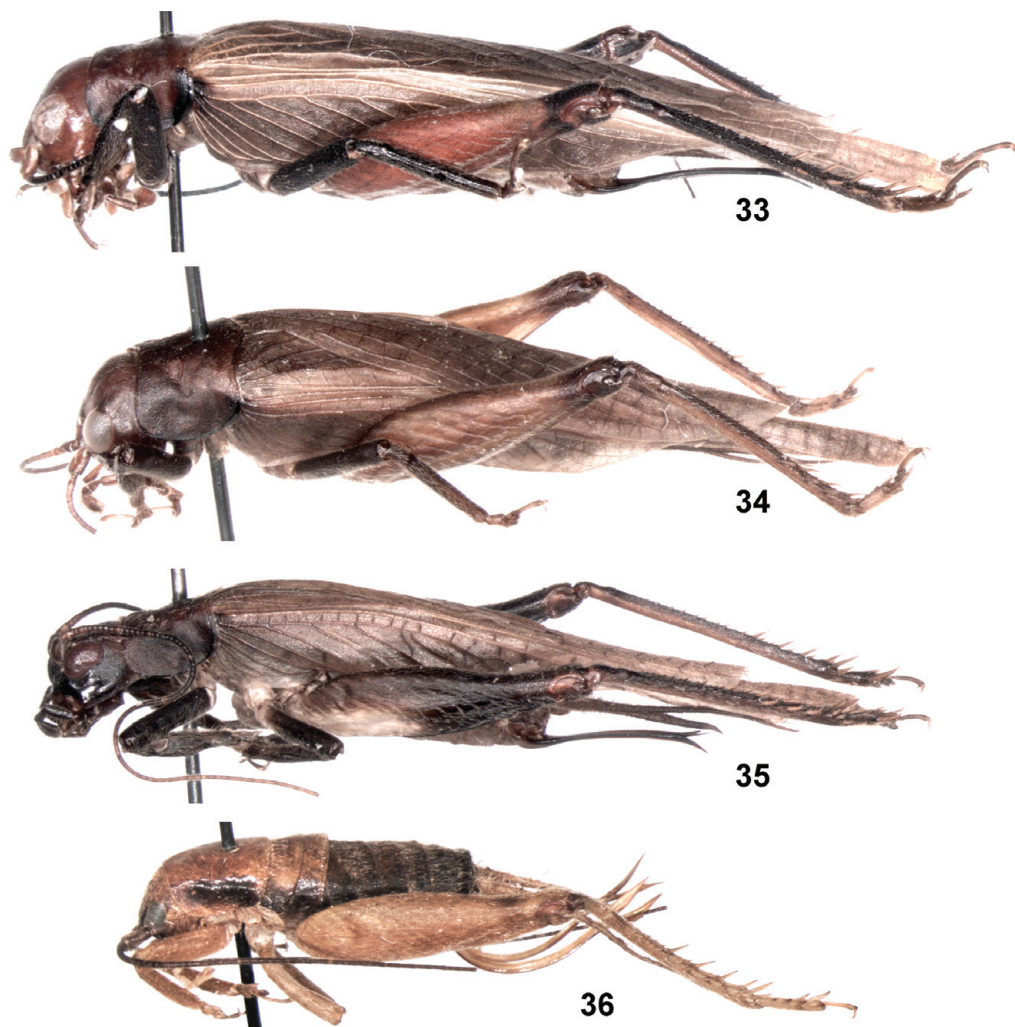
****Bezverkhovia lydia* sp. nov.**
(Figs 11–17, 27–32)

Holotype. Male, **Peru**, Junin Department, Satipo Prov., Rio Tambo Distr., 6 km N of Pichiguia Vill., protected area “Reserva Comunal Ashaninka”, 11.358244°S, 74.0320473°W, ~500 m, primary forest, on leaf of bush at night, 14–23.XI.2017, A. Gorochov, G. Irisov (ZIN).

Paratypes. Male, same data as for holotype (ZIN); female, same province, 18 km N of Satipo Town, forest in environs of waterfall “Cinco

Cascadas” near Paratushali Vill., 11.283812°S, 74.713915°W, ~800 m, on leaf of bush at night, 28–30.XI.2017, A. Gorochov, G. Irisov (ZIN).

Description. Male (holotype). Epicranium uniformly blackish but with greyish eyes, yellowish lateral ocelli and membranes of antennal cavities, brow to dark brown lower epicranial part under these cavities and eyes, and a pair of light brown small marks on lateral parts of rostral apex; mouthparts light brown with brown upper half of clypeus, a pair of marks on central part of lower clypeal half, areas on subgenae and on proximal parts of mandibles, and most part of maxillary palpi (but their basal part lighter, and two distal segments dark brown); antennae yellowish with rather numerous greyish brown spots on flagellum; pronotum uniformly brown (almost dark red) and with very short but dense whitish pubescence (Fig. 11); tegmina light yellowish grey with dark brown to greyish brown venation (Fig. 12); hind wings almost whitish with barely darkened distal parts (these parts having slight pattern similar to that of apical part of dorsal tegminl field); legs reddish brown with darker apical part of femora (hind femur with this part larger, and with additional dark brown area located before previous part but near ventral edge of femur), dark brown most part of tibiae, light brown small mark near base of each tibia as well as ventral surfaces and apical parts of fore and middle tibiae (hind tibia with light brown spines and spurs), and all tarsi darkened but having lighter: proximal halves of apical segments, and spines and spurs of hind basitarsus; mesonotum yellowish; metanotum and anterior abdominal tergite as well as all pleurites light brown; other tergites from brown in anterior abdominal part to dark brown in posterior one; sternites and genital plate reddish brown with darker marks in lateral and posterior parts (in genital plate, posterior dark mark long and with a pair of oblique anterolateral stripes); anal plate dark brown (almost blackish); each cercus dark greyish brown with yellowish



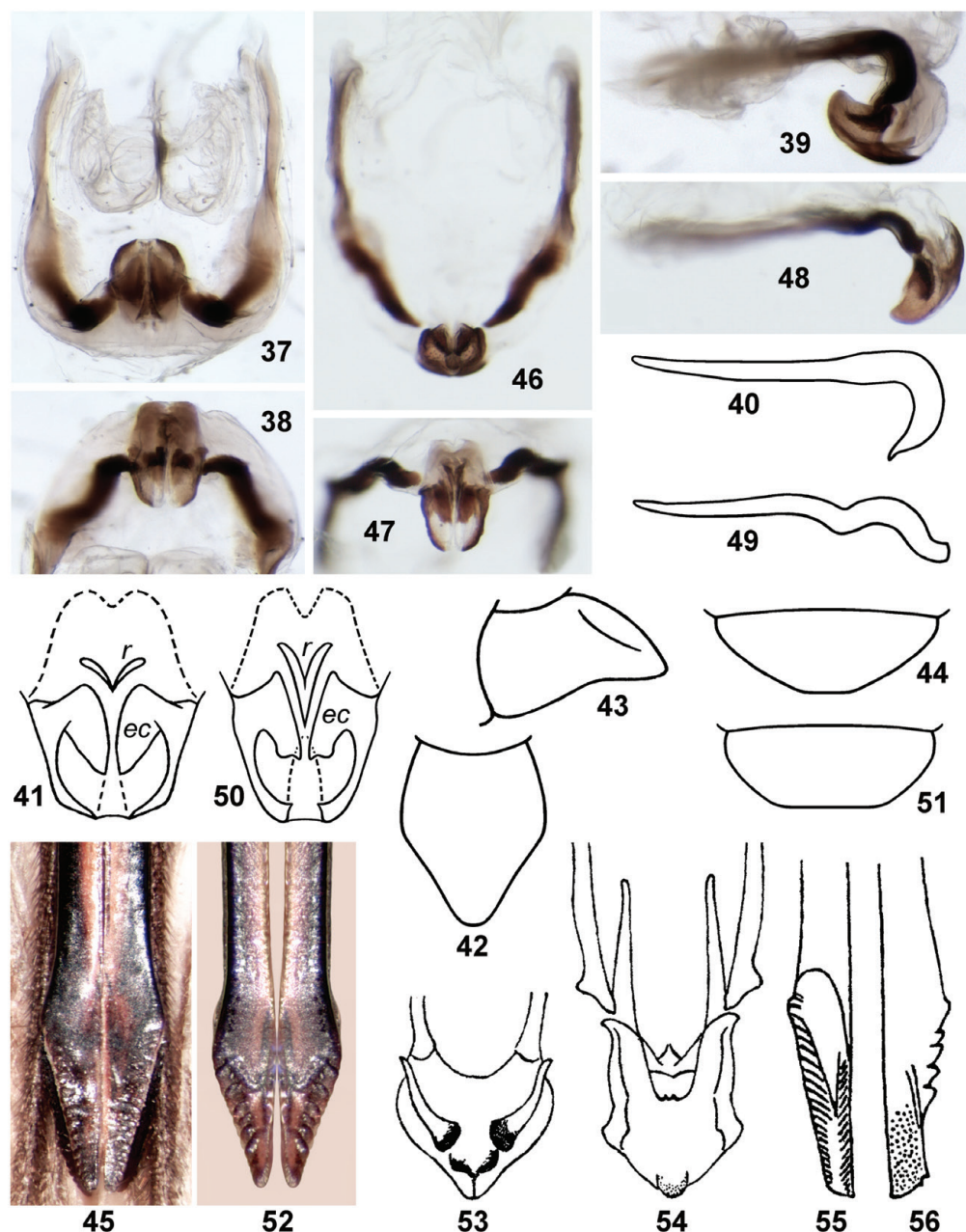
Figs 33–36. Paroecanthini, female body from side: 33, *Angustitrella superuncus* sp. nov.; 34, *A. trivialis* Gor.; 35, *A. nigella* sp. nov.; 36, *Cyllindrogryllus signatus* Gor.

lowish distal half and small light brown spot at base. Shape of head and pronotum as in Fig. 11; metanotal gland with characteristic central projection but lacking hairs (Fig. 13); tegmina with proximal part of dorsal field having traces of stridulatory apparatus (stridulatory vein, plectrum, chords) but lacking stridulatory teeth, and with rest of venation as in Fig. 12; genital plate and genitalia as in Figs 27–32.

Variations. Second male with a pair of light brown spots on epicranium under medial parts of antennal cavities, and with barely lighter membranes of both tegmina.

Female. General appearance as in male paratype, but light brown spots on epicranium under antennal cavities larger and almost in contact with each other, metanotal gland absent, tegmina without traces of stridulatory apparatus, genital plate (Fig. 17) brown with lighter apical part, ovipositor rather light (yellowish with greyish longitudinal stripe on each lateral side) but with light brown distal part (Figs 14–16).

Length in mm. Body: male 14.5–15.5, female 12.5; body with wings: male 17–18, female 20; pronotum: male 3–3.2, female 3.5; tegmina: male 13.2–13.8, female 14; hind



Figs 37–56. Paroecanthini: 37–45, *Angustitrella superuncus* sp. nov.; 46–50, *A. trivialis* Gor.; 51, 52, *A. nigella* sp. nov.; 53–56, *Amblyrhethus? nodifer* Chop. Male genitalia from below (37, 46), from below and slightly in front (38) as well as from behind and slightly below (47) but without anterior parts, and from side (39, 48); ramus from side (40, 49); epiphallus with ectoparameres and rachis from above and slightly behind (41) as well as in front and slightly from above (50); male (42, 43) and female (44, 51) genital plates from side (43) and from below (42, 44, 51); male genitalia without anterior half from below (53) and without anterior part from above (54); distal part of ovipositor from below (45, 52, original and reconstructed views, respectively) as well as its left half from above (55) and from below (56). Abbreviations: *ec*, ectoparamere; *r*, rachis. [46–48, 50, after Gorochov (2011); 53–56, after Chopard (1956)].

femora: male 9.2–9.5, female 10.2; hind tibiae: male 7.8–8, female 8.3; ovipositor 7.7.

Comparison. The new species differs from *B. huanchaca* **comb. nov.** in the smaller body, shorter wings, darker head (in *B. huanchaca*, head is reddish brown), slightly shallower posteromedian notch in the female genital plate, and somewhat lighter distal part of ovipositor.

Etymology. The new species is named in honor of L.E. Bezverkhova, the wife of Yu.A. Berzverkhov.

Cylindrogryllus (Neometrypus) amazonus (Desutter, 1988)

Note. This apterous or almost apterous species was described from a Peruvian male (type locality: “département du Loreto, région de l’Ampiyacu, Brillo Nuevo, en av. confl. des rios Zumun et Yahuasyacu”) and recorded from Colombia (Desutter, 1988).

****Cylindrogryllus* (subgenus?) *signatus*** Gorochov, 2017 (Fig. 36)

Material studied. **Peru:** 2 females (holotype and paratype), Junin Department, Satipo Prov., ~25 km SE of Satipo Town, environs of Rio Venado Vill., ~1200 m, primary/secondary forest, at light, 20–23.X.2008, A. Gorochov, M. Berezin, L. Anisyutkin, E. Tkatsheva, V. Izerskiy (ZIN).

Note. This species was described from two females only (Gorochov, 2017). It is unknown in other localities and clearly differs from *C. (N.) amazonus* in the scapes and pronotum more contrastingly coloured (Fig. 36), and in the hind tibiae almost uniform (without distinct dark spots on the dorsal surface).

Subribe **PAROECANTHINA**
Gorochov, 1986

****Angustitrella superuncus* sp. nov.**
(Figs 3, 4, 33, 37–45)

Holotype. Male, **Peru**, Junin Department, Satipo Prov., ~25 km SE of Satipo Town, environs of Rio Venado Vill., 11.11552°S, 74.46307°W,

1000–1200 m, primary/secondary forest, at light, 6–9.XII.2017, A. Gorochov, G. Irisov (ZIN).

Paratypes. Three females, same data as for holotype (ZIN).

Description. Male (holotype). General appearance similar to that of *A. trivialis* Gor., but body slightly larger. Colouration rather dark: head uniformly reddish brown with greyish eyes, whitish lateral ocelli, transparent membranes of antennal cavities, light brown (almost yellow) labrum, dark brown antenna (having scape and pedicel reddish brown) and mark on distal part of mandible as well as large area on maxillary palpus (from middle part of third segment to base of fifth segment); pronotum with reddish brown disc and dark red each lateral lobe having blackish stripe along its anterior, ventral and posterior edges; tegmina light greyish (almost transparent) with rather wide brownish stripe along medial (anal) edge of each tegmen (except for its apical area) and along posteromedial edge of each mirror (Fig. 3); hind wings whitish (also more or less transparent); fore and middle legs uniformly blackish with transparent tympanal membranes and dark brown tarsi; hind leg with reddish brown femur having somewhat lighter large inner proximal area and blackish apical area, and with blackish to dark brown tibia and tarsus; meso- and metanotum yellowish to light brown; rest tergites brown with light brown dorsal surface of first–eighth abdominal tergites and dark brown two posterior tergites including anal plate; sternites greyish brown but with dark brown posterior ones; genital plate dark brown; cerci dark greyish brown. Structure of body very similar to that of *A. trivialis* (see Gorochov, 2011), but metanotal gland with anterior transverse fold of metanotum having short hairs along its entire posterior edge (this fold in *A. trivialis* with hairs only in median and lateral parts of this edge; for comparison see Figs 4 and 6), dorsal tegminal field with slightly larger mirror (see Figs 3 and 5), lateral tegminal field with 19–20 branches of *Sc* (their shape as in Fig. 3), anal plate roundly truncated

(not rounded) at apex, genital plate as in Figs 42 and 43, and genitalia more hooked in profile (epiphallus directed almost forwards, and posterior parts of rami strongly curved downwards; *vs.* epiphallus directed downwards, and posterior parts of rami sinuated) and with ectoparameres having their posteromedial parts located less far from epiphallic apex (see Figs 37–41 and 46–50).

Female. Colouration and structure of body as in male, but: metanotal gland absent; tegmina without traces of stridulatory apparatus; dorsal tegminal field greyish brown with light brown both small basal part and stripe along lateral edge; this field also with 9–10 straight but barely oblique longitudinal veins and numerous more or less regular crossveins; lateral tegminal field from greyish brown to light greyish brown but always with dark brown spot at base; tegminal areas between *Sc* and *R* as well as between *R* and *M* rather narrow and approximately equal to each other in width (their crossveins moderately numerous and rather regular); tegminal *Sc* with 14–15 oblique branches (crossveins between them very sparse; Fig. 33); anal plate with rounded apex. Genital plate short (transverse) and posteriorly almost rounded, but its apex rather narrowly truncated (Fig. 44); ovipositor dark, with distal part as in Fig. 45.

Length in mm. Body: male 14, female 14.5–16; body with wings: male 21, female 22–24; pronotum: male 2.9, female 2.8–3; tegmina: male 15, female 16–16.5; hind femora: male 8, female 8.5–9; hind tibiae: male 7.3, female 7.2–7.8; ovipositor 5.8–6.

Comparison. The new species is distinguished from the most related *A. trivialis* by the characters listed above; from *A. matakuru* Gor. and *A. maculata* Gor., by the more hook-like male genitalia; from *A. columbia* Gor., by the clearly narrower epiphallus and different shape of ectoparameres; and from all the other true and possible congeners, by the male tegminal mirror larger or smaller, different shape of this mirror, peculiarities of body colouration, and/or not hook-like shape of male genitalia.

Etymology. The new species is named by the Latin word “superuncus” (superhook) in connection with the shape of its male genitalia which are very strongly hooked in the profile.

****Angustitrella nigella* sp. nov.**
(Figs 35, 51, 52)

Holotype. Female, **Peru**, Junin Department, Satipo Prov., Rio Tambo Distr., 6 km N of Pichiguia Vill., protected area “Reserva Comunal Ashaninka”, 11.358244°S, 74.0320473°W, ~500 m, primary forest, at light, 14–23.XI.2017, A. Gorochov, G. Irisov (ZIN).

Paratypes. Four females, same data as for holotype (ZIN); 1 female, same province, 12 km N of Satipo Town, protected area “Concesion de Conservacion de la Universitaria”, 11.2031563°S, 74.61914062°W, ~600 m, secondary/primary forest, at light, 25–27.XI.2017, A. Gorochov, G. Irisov (ZIN).

Description. Female (holotype). General appearance more or less similar to that of *A. superuncus* and *A. trivialis*, but colouration of body somewhat different: head dark brown (almost blackish) with yellowish lateral ocelli as well as reddish brown eyes, lower half of clypeus, labrum, pedicel, distal two thirds of antennal flagellum, and dorsal surface of epicranium behind rostral apex; pronotum with dark brown lateral lobes and reddish brown (but barely darker than epicranial dorsum) disc; tegmina greyish brown (slightly lighter than pronotal disc) with barely darker venation and majority of membranes in lateral field; colouration of distal parts of hind wings almost as that of dorsal tegminal field; legs uniformly dark greyish brown with more or less light coxae and trochanters, with almost blackish femora (however, middle femur with whitish small proximal part, and hind femur with whitish large area on ventroproximal half of outer surface and very large proximal area on inner surface) and fore and middle tibiae, and with brown ventral half of hind tibia and its spines and spurs; sternites from light greyish brown in thorax to greyish brown in abdomen; genital plate, cerci and other structures of abdominal apex also more or

less greyish brown (Fig. 35). Structure of body very similar to that of two above-mentioned congeners, but tegmina with 10–11 longitudinal veins in dorsal field and 12–13 branches of *Sc* (Fig. 35), genital plate more widely truncated at apex (Fig. 51), and ovipositor with distal part as in Fig. 52.

Variations. Some females with scape and short proximal part of antennal flagellum reddish brown, with more or less dark brown ventral half of hind tibia, or with almost light greyish brown abdominal sternites and genital plate.

Male unknown.

Length in mm. Body 12–14; body with wings 21.5–23; pronotum 2.4–2.7; tegmina 13–14; hind femora 7.5–8; hind tibiae 7–7.5; ovipositor 5–5.3.

Comparison. The new species differs from the other Peruvian congeners (*A. superuncus* and *A. trivialis*) in the different colouration of middle and hind femora having distinct light areas in the proximal halves. From *A. roosevelti* (Rehn) similar to the new species in the colouration, *A. nigella* is distinguished by the inner tympanum distinctly shorter (in *A. roosevelti*, this tympanum is almost equal to the space between its distal edge and tibial apex in the length; but in *A. nigella*, this space is almost 1.5 times as long as this tympanum); from *A. andensis* Gor., *A. maculata* Gor. and *A. hespera* (Heb.), by the less large light areas on the middle and hind femora as well as by the completely dark fore femur; and from the other true and possible congeners, in the general colouration of body clearly darker and/or in the proximal halves of middle and hind femora contrastingly coloured (not almost uniformly dark or reddish).

Etymology. The new species name is the Latin word “nigella” (blackish).

****Angustitrella trivialis*** Gorochov, 2011
(Figs 5, 6, 34, 46–50)

Material studied. **Peru:** 1 male (holotype), Loreto Department, bank of Morona River near its mouth (not far from Puerto Morona Town),

~200 m, primary forest, at light, 20–23.I.2010, A. Gorochov (ZIN); 1 female (paratype), Ucayali Department, ~35 km NWW of Atalaya Town on Ucayali River, environs of Sapani Vill., ~300 m, primary forest, at light, 26–31.X.2008, A. Gorochov, M. Berezin, L. Anisyutkin, E. Tkatsheva, V. Izerskiy (ZIN). **Ecuador:** 1 female (paratype); bank of Morona River near border with Peru, environs of Puerto Morona Vill., ~300 m, primary forest, at light, 5–15.I.2010, A. Gorochov (ZIN); 1 male (paratype), Eastern Ecuador, 70 km SE of Lago Agrio Town, environs of S. Pablo de Kantesiya Vill. on Aguarico River, lowlying primary forest, on leave, 10–17.XI.2005, A. Gorochov, A. Ovtshinnikov (ZIN).

Note. This species is known from the above-listed type material only (Gorochov, 2011).

Tribe **HAPITHINI** Gorochov, 1986

Subtribe **APHONOMORPHINA**

Desutter, 1988

Eneopteroides chopardi Gorochov, 2010

Note. This species was described as *E. flavifrons* from Peru (Chopard, 1956: “Pucallpa, Rio Ucayali”), but this name turned out to be a secondary homonym of *E. flavifrons* (Saussure, 1897) from Mexico. *Eneopteroides chopardi* is known from its type locality only.

Eneopteroides lorentensis

Desutter-Grandcolas, 2003

Note. The species is known only from its type locality (Desutter-Grandcolas, 2003: “Peru, Loreto, Région de l’Ampiyacu, en aval du confluent des rios Zumun et Yahuaryacu”).

****Aphonomorphus (Aphonomorphus)***

***paramutus* sp. nov.**

(Figs 57, 58, 72–74)

Holotype. Male, **Peru**, Junin Department, Satipo Prov., 18 km N of Satipo Town, forest in environs of waterfall “Cinco Cascadas” near Paratushali Vill., 11.283812°S, 74.713915°W, ~800 m, at light, 28–30.XI.2017, A. Gorochov, G. Irisov (ZIN).

Description. Male (holotype). General appearance typical of this subgenus (Gorochov, 2010, 2017). Body light brownish grey with following marks: ocelli and small marks between them as well as between lateral ocelli and eyes whitish; base of head rostrum behind ocelli greyish brown; lower part of epicranium and genae behind eyes with yellowish white areas; spots on mouth-parts and antennal flagellum also yellowish white (these antennal spots small and numerous, often interspersed with barely darker marks) (Fig. 57); pronotum with a few very light spots on disc and several dark dots on posterior pronotal half; tegmina almost transparent, with yellowish venation, with numerous small greyish brown marks along some of longitudinal veins of dorsal field, with several brown and brownish dots along lateral edge of this field and on lateral field; legs very light with numerous small darkish marks and dots on femora and tibiae; meso- and metanotum also light; abdominal tergites and anal plate greyish brown; sternites greyish; genital plate and cerci light with slightly darkened median part of this plate and numerous darkish dots on cerci. Scape almost equal to space between antennal cavities in width; ocelli medium-sized, rounded; median ocellus slightly smaller than lateral ocelli; metanotal gland as in Fig. 58; tegmina slightly protruding beyond femoral apices of hind legs, with 11–12 more or less regular but slightly S-shaped longitudinal veins in dorsal field, with numerous and almost irregular crossveins between them, with 9–10 branches of *Sc*, and with numerous but somewhat more regular crossveins between these branches; hind wings distinctly protruding beyond tegminal apices; outer tympanum absent; inner tympanum immersed, partly opened, elongated, slightly shorter than maximal

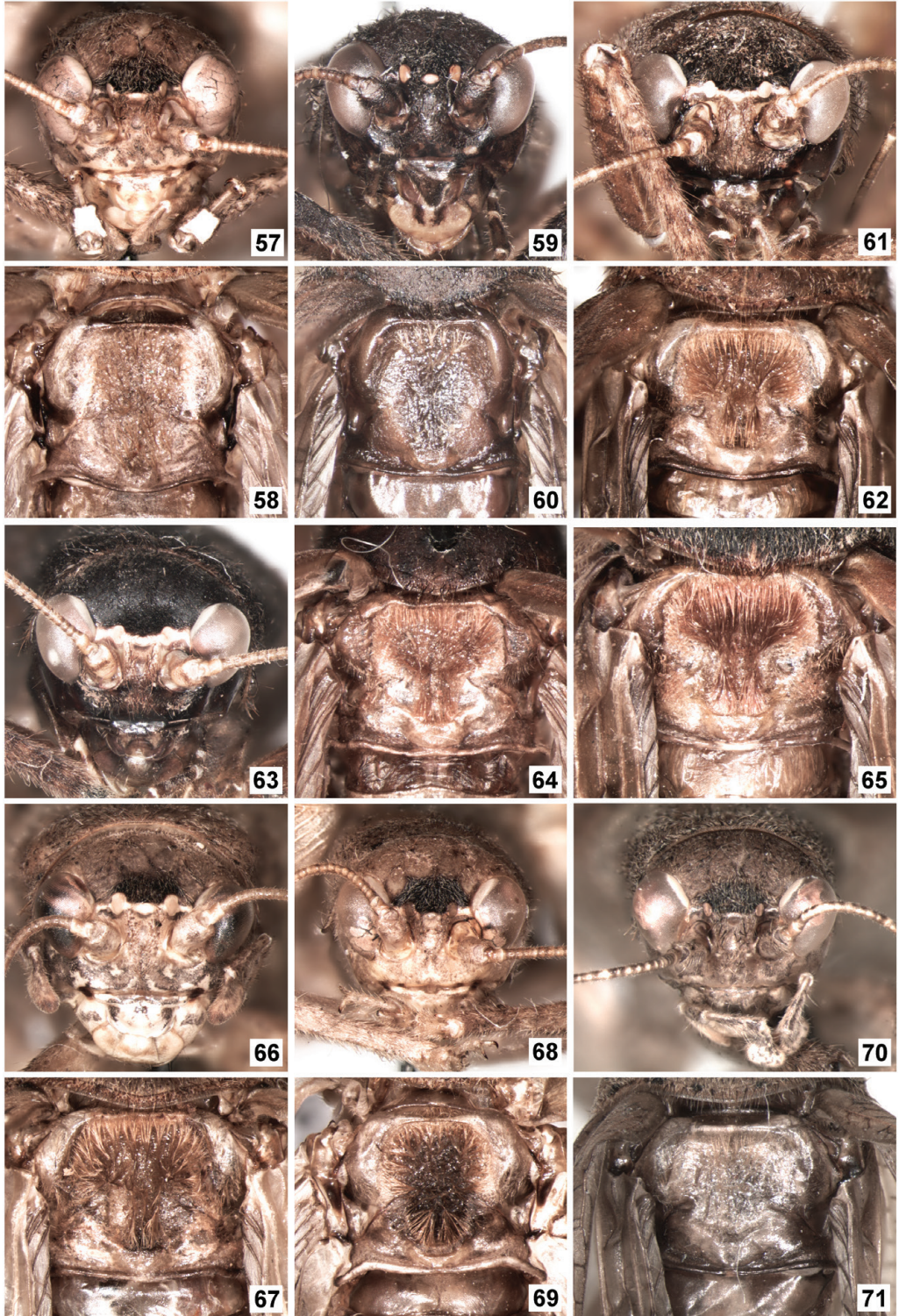
width of fore tibia; anal plate almost triangular, but with roundly truncated apex and median concavity on dorsum; genital plate distinctly larger, elongated, with distal part narrowing to rather narrow apex having very narrow and moderately deep postero-medial notch. Genitalia narrow and very long, with moderately short epiphallus; dorsoapical epiphallic lobules rather high, having apices slightly curved forwards; additional apical epiphallic processes long and thin, directed obliquely downwards and having distal parts slightly curved forwards; first (true) ectoparameres with spine-like medial branches (these branches more or less straight and rather long) and short lateral branches (they in shape of rounded semisclerotized lobes); second ectoparameres (= articulated distal lobes of rachis) with sclerotized distal half (this half lamellar, distally widened, apically rounded but somewhat hooked in profile) and semimembranous proximal half having convex ventral edge; formula located in posterior half of genitalia, with apodeme clearly longer than rest part of formula (Figs 72–74).

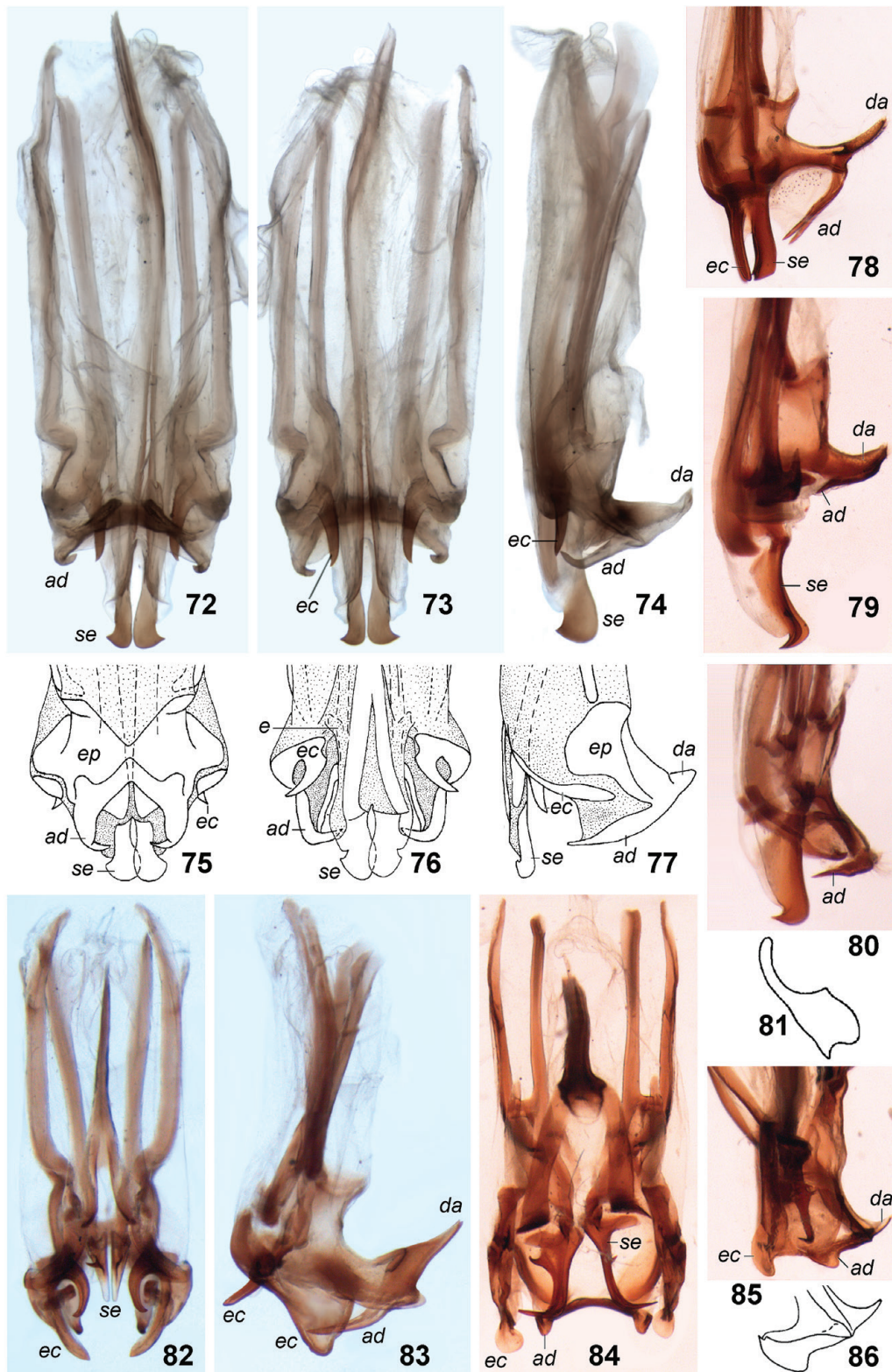
Female unknown.

Length in mm. Body 21; body with wings 28; pronotum 3; tegmina 20; hind femora 12.3; hind tibiae 11.8.

Comparison. The new species is most similar to *A. (A.) mutus* (Sauss.) from “Le Guyane” (Saussure, 1874) in the male genitalia (their structure in *A. mutus* is here understood in accordance with Desutter, 1987), but *A. paramutus* differs from the latter species in the dorsoapical epiphallic lobules much higher, additional apical epiphallic processes with the distal parts curved forwards, and ectoparameral spines longer (for comparison see Figs 72–74 and 75–77). From *A. (A.) ecuador* Gor. and *A. (A.) ucayali* Gor., the new species is distinguished by

Figs 57–71. Hapithini: 57, 58, *Aphonomorphus (Aphonomorphus) paramutus* sp. nov.; 59, 60, *A. (A.) hamatus* sp. nov.; 61, 62, *A. (A.) proximus tambo* subsp. nov.; 63–65, *A. (A.) venado* Gor. (64, holotype); 66, 67, *A. (A.) pichiguia* sp. nov.; 68, 69, *A. (A.) stipatus longifurca* subsp. nov.; 70, 71, *A. (?) brachyphallus* sp. nov. Head of male (57, 59, 61, 66, 68, 70) and female (63) in front; male metanotal gland from above (58, 60, 62, 64, 65, 67, 69, 71).





the second ectoparameres with their distal parts narrower or wider (see Figs 74 and 78); from *A. (A.) sympatricus* Gor. and *A. (A.) humilis* Gor., by the clearly longer additional apical epiphallic processes or dorsoapical epiphallic lobules (Figs 74, 79, 80); from *A. (A.) segregus* Gor., by the different shape of all ectoparameres (Figs 73, 74, 82, 83); and from all the other species of this subgenus, by the very different structure of second ectoparameres (Figs 72–129).

Etymology. This species is named after *A. mutus* in connection with their similarity in the male genitalia.

****Aphonomorphus (Aphonomorphus) hamatus* sp. nov.**

(Figs 59, 60, 87–91)

Holotype. Male, Peru, Junin Department, Satipo Prov., 12 km N of Satipo Town, protected area “Concesion de Conservacion de la Universitaria”, 11.2031563°S, 74.61914062°W, ~600 m, secondary/primary forest, at light, 25–27.XI.2017, A. Gorochov, G. Irisov (ZIN).

Paratype. One female, same data as for holotype (ZIN).

Description. Male (holotype). General appearance similar to that of *A. (A.) paramutus* but with following differences: epicranium completely blackish with grey eyes and light brown ocelli; mouthparts also blackish with light yellowish grey labrum and marks on clypeus as well as with lightish areas on mandibles, maxillae and labium; antennae with blackish scape and pedicel (Fig. 59) as well as with numerous greyish brown and light brown spots on flagellum; pronotum and tibiae uniformly dark brown (almost blackish); tegmina greyish brown with dark crossveins and smaller spots on

dorsal field (along middle parts of longitudinal veins and along lateral edge of this field); distal parts of hind wings dark greyish brown; femora greyish brown with numerous small darker but poorly distinct spots in fore and middle legs and with blackish distal part in hind leg; tarsi dark with lightish proximal half of apical segment; sternites, tergites, cerci, genital and anal plates dark brownish grey with slightly lighter spots on distal parts of cerci; lateral ocelli rather large and elongately oval, almost twice as great as median ocellus (latter ocellus almost transversally oval); metanotal gland as in Fig. 60; tegmina with several more or less irregular longitudinal veins in dorsal field (these veins together with numerous crossveins between them forming almost reticular venation) and 12–13 branches of *Sc*; inner tympanum slightly larger, almost as long as maximal width of fore tibia; genital plate barely narrowing behind middle part (in ventral view) and with somewhat widened and roundly truncated apex (posterior edge of this plate barely concave). Genitalia not very long, with epiphallus strongly widened posteriorly; dorsoapical epiphallic lobules rather short; additional apical epiphallic processes almost as long as these lobules but thin and hooked (these processes located near these lobules but widely separated from each other); each first ectoparamere heavily sclerotized, with lateral branch long and strongly arcuated (this branch almost hook-like and directed upwards), and with medial branch shorter and insignificantly arcuated (this branch almost spine-like and directed more or less backwards); second ectoparameres elongately lamellar, roundly widened in distal part and with barely hooked ven-

Figs 72–86. Hapithini, male: 72–74, *Aphonomorphus (Aphonomorphus) paramutus* sp. nov.; 75–77, *A. (A.) mutus* (Sauss.); 78, *A. (A.) ucayali* Gor.; 79, *A. (A.) sympatricus* Gor.; 80, 81, *A. (A.) humilis demissus* Gor.; 82, 83, *A. (A.) segregus* Gor.; 84–86, *A. (A.) peru* Gor. Genitalia from above (72), from below (73, 82, 84) and from side (74, 83); posterior half of genitalia from above (75), from below (76) and from side (77–80, 85); right ectoparamere from side (81); *da* and *ad* from side (86). Abbreviations: *ad*, additional process of epiphallic apex; *da*, dorsoapical spine (lobule) of epiphallic apex; *e*, endoparamere; *ec*, first ectoparamere (= ectoparamere); *ep*, epiphallus; *se*, second ectoparamere (= articulated posterolateral lobe of rachis). [75–77, after Desutter (1987); 78–86, after Gorochov (2010, 2017)].

troopical part; formula with apodeme almost as long as rest part of formula (Figs 87–91).

Female. Colouration and structure of body as in male, but head and pronotum barely lighter (their general color greyish brown, and pronotal disc with a pair of lightish spots), abdominal sternites dark brown, genital plate blackish, tegminal Sc with 13 branches, genital plate short (somewhat transverse) and narrowing to widely rounded apex (this apex with small and shallow posteromedian notch, and with rather widely rounded and short lobes around this notch), and ovipositor yellowish with black areas at base and strongly darkened distal part (structure of this part typical of this subgenus).

Length in mm. Body: male 23, female 22; body with wings: male 32, female 36; pronotum: male 3.3, female 3.5; tegmina: male 23.5, female 26; hind femora: male 13.7, female 15.5; hind tibiae: male 13.4, female 15; ovipositor 20.

Comparison. The new species differs from all the other species of this subgenus in the additional apical epiphallic processes thin, short and directed backwards/downwards in combination with the first ectoparameres having the lateral branches long, strongly arcuated and directed upwards.

Etymology. The new species name is the Latin word “hamatus” (hooked, hook-like) in connection with the shape of its first ectoparameres.

****Aphonomorphus (Aphonomorphus) ucayali*** Gorochov, 2010
(Fig. 78)

Material studied. **Peru:** 1 male (holotype), Ucayali Department, Atalaya Prov., ~35 km NWW of Atalaya Town on Rio Ucayali, environs

of Sapani Vill., ~300 m, primary forest, at light, 26–31.X.2008, A. Gorochov, M. Berezin, L. Anisyutkin, E. Tkatsheva, V. Izerksyy (ZIN).

Note. This species is known only from its type locality.

Aphonomorphus (Aphonomorphus) humilis demissus Gorochov, 2010
(Figs 80, 81)

Material studied. **Ecuador:** 3 males (holotype and paratypes), Morona Santiago Prov., bank of Rio Morona near border with Peru, environs of Puerto Morona Vill., ~300 m, primary forest, at light, 5–15.I.2010, A. Gorochov (ZIN).

Note. This subspecies was collected in the locality situated almost on the border between Ecuador and Peru, and it must be distributed in Peru also.

****Aphonomorphus (Aphonomorphus) segregus*** Gorochov, 2017
(Figs 82, 83)

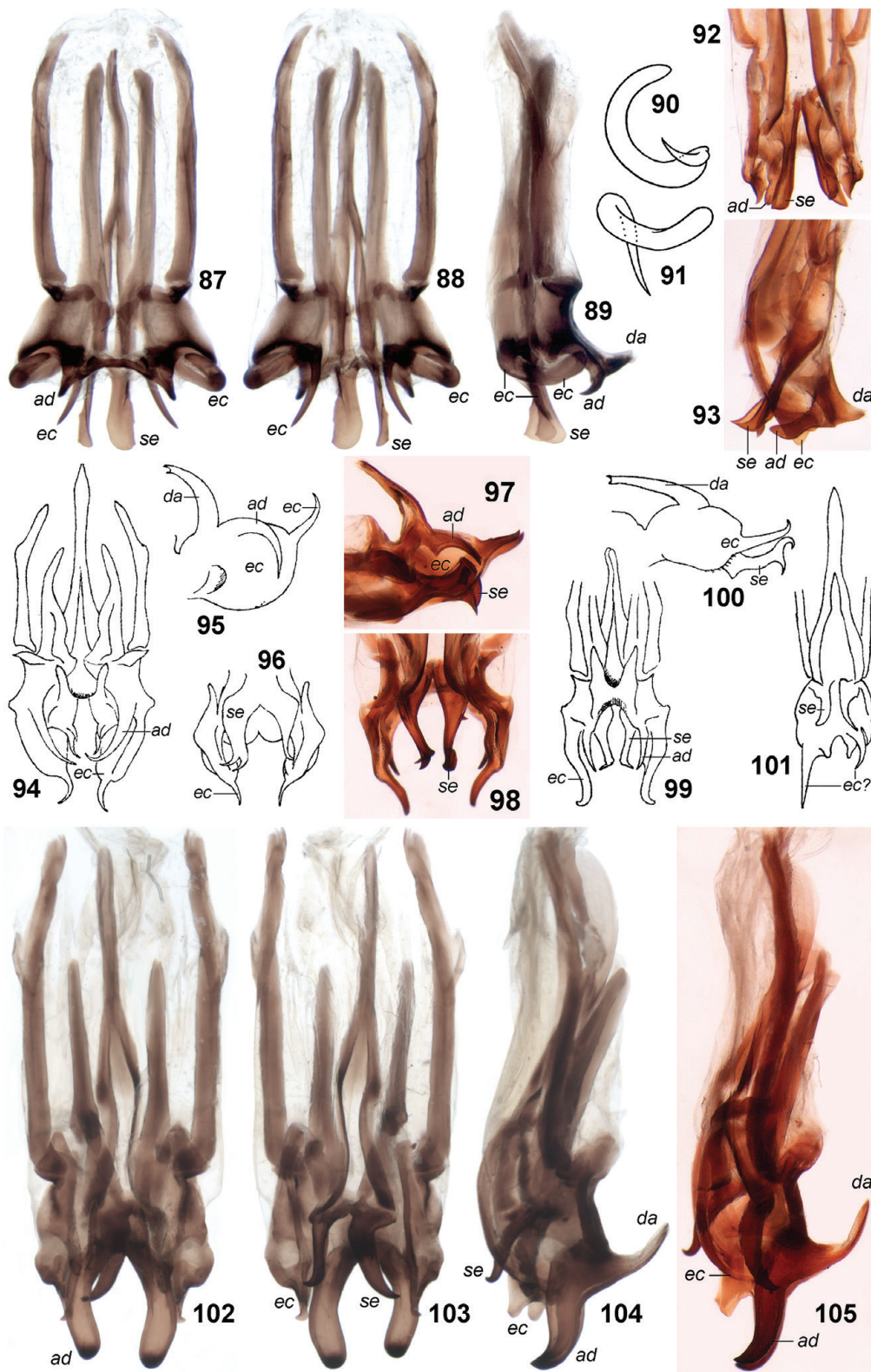
Material studied. **Peru:** 1 male (holotype), Ucayali Department, Atalaya Prov., ~35 km NWW of Atalaya Town on Ucayali River, environs of Sapani Vill., ~300 m, primary / secondary forest, at light, 26–31.X.2008, A. Gorochov, M. Berezin, L. Anisyutkin, E. Tkatsheva, V. Izerksyy (ZIN).

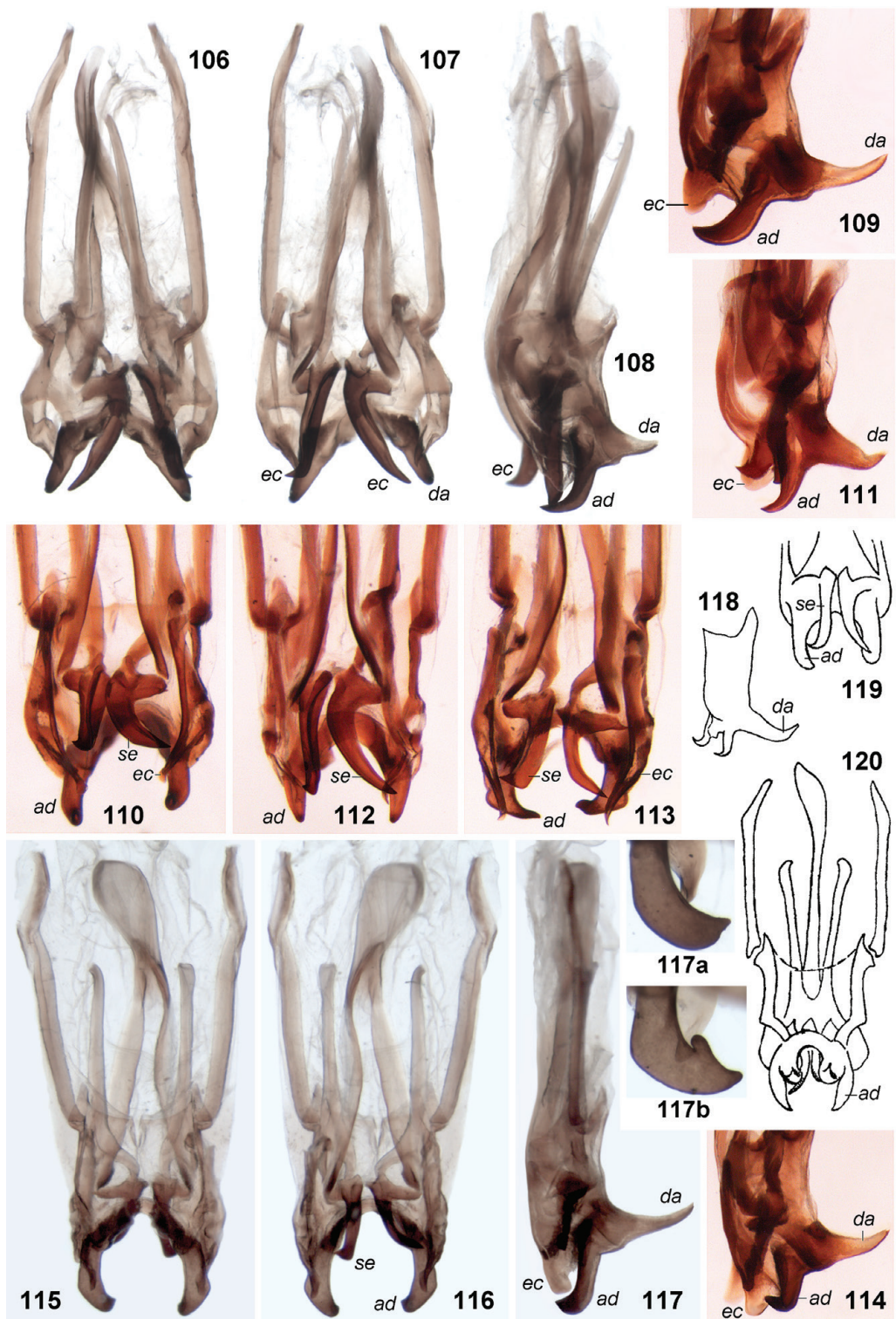
Note. This species is known from the type locality only.

****Aphonomorphus (Aphonomorphus) peru*** Gorochov, 2010
(Figs 84–86)

Material studied. **Peru:** 1 male (holotype), Ucayali Department, Atalaya Prov., ~35 km NWW of Atalaya Town on Rio Ucayali, environs of Sapani Vill., ~300 m, primary forest, at light,

Figs 87–105. Hapithini, male: 87–91, *Aphonomorphus (Aphonomorphus) hamatus* sp. nov.; 92, 93, *A. (A.) solitarius solitarius* Gor.; 94–96, *A. (A.) adjunctus* Chop.; 97, 98, *A. (A.) morona* Gor.; 99, 100, *A. (A.) schunkei* Chop.; 101, *A. (A.) socius* Chop.; 102–105, *A. (A.) venado* Gor. (105, holotype). Genitalia from above (87, 94, 99, 102), from below (88, 101, 103) and from side (89, 104, 105); right ectoparamere from behind (90) and from side (91); posterior half of genitalia from below (92, 96, 98) and from side (93, 95, 97, 100). Abbreviations as in Figs 72–86. [92, 93, 97, 98, 105, after Gorochov (2010); 94–96, 99–101, after Chopard (1956)].





26–31.X.2008, A. Gorochov, M. Berezin, L. Anisyutkin, E. Tkatsheva, V. Izersky (ZIN).

Note. This species is known only from its type locality.

Aphonomorphus (Aphonomorphus) solitarius solitarius Gorochov, 2010 (Figs 92, 93)

Material studied. Ecuador: 1 male (holotype), Morona Santiago Prov., bank of Rio Morona near border with Peru, environs of Puerto Morona Vill., ~300 m, primary forest, at light, 5–15.I.2010, A. Gorochov (ZIN).

Note. This subspecies was described as a species from the locality situated almost on the border between Ecuador and Peru (Gorochov, 2010). Later, the second subspecies from Colombia (which was originally described as a separate species) was included in this species (Cadena-Castañeda et Noriega, 2015; Gorochov, 2017). Thus, the nominotypical subspecies must be distributed in Peru also.

Aphonomorphus (Aphonomorphus) schunkei Chopard, 1956 (Figs 99, 100)

Note. This species is known only from its type locality (“Pucallpa, Rio Ucuyali”) in Peru (Chopard, 1956).

Aphonomorphus (Aphonomorphus) adjunctus Chopard, 1956 (Figs 94–96)

Note. This species is also known only from the same locality in Peru (Chopard, 1956: “Pucallpa, Rio Ucuyali”).

Aphonomorphus (Aphonomorphus) morona Gorochov, 2010 (Figs 97, 98)

Material studied. Ecuador: male (holotype), Morona Santiago Prov., bank of Rio Morona near border with Peru, environs of Puerto Morona Vill., ~300 m, primary forest, 5–15.I.2010, A. Gorochov (ZIN).

Note. This species is related to *A. (A.) adjunctus*. It was collected in the locality situated almost on the border between Ecuador and Peru; thus, *A. (A.) morona* must be distributed in Peru also.

Aphonomorphus (Aphonomorphus) socius Chopard, 1956 (Fig. 101)

Note. This species is known only from the type locality (“Tingo Maria”) in Peru (Chopard, 1956). It clearly differs from all the other species of this subgenus in the very asymmetrical male genitalia.

****Aphonomorphus (Aphonomorphus) venado*** Gorochov, 2010 (Figs 63–65, 102–105)

Material studied. Peru: 1 male (holotype), Junin Department, Satipo Prov., ~25 km SE of Satipo Town near Rio Venado Vill., ~1200 m, primary/secondary forest, at light, 20–23.X.2008, A. Gorochov, M. Berezin, L. Anisyutkin, E. Tkatsheva, V. Izersky (ZIN); 8 males, 5 females, same province, Rio Tambo Distr., 6 km N of Pichiguia Vill., protected area “Reserva Comunal Ashaninka”, 11.358244°S, 74.0320473°W, ~500 m, primary forest, at light, 14–23.XI.2017, A. Gorochov, G. Irisov (ZIN).

Brief redescription. Female (nov.). General appearance similar to that of male

Figs 106–120. Hapithini, male: 106–108, *Aphonomorphus (Aphonomorphus) proximus tambo* subsp. nov.; 109, 110, *A. (A.) robustus* Gor.; 111, 112, *A. (A.) p. proximus* Gor.; 113, 114, *A. (A.) solitus* Gor.; 115–117, *A. (A.) pichiguia* sp. nov. (117a, holotype; 117b, paratype); 118–120, *A. (A.) ?telskii* (Sauss.). Genitalia from above (106, 115, 120), from below (107, 116) and from side (108, 117); posterior half of genitalia from side (109, 111, 114, 118) and from below (110, 112, 113, 119); left additional apical epiphallic process, dorsomedial view (117a, 117b). Abbreviations as in Figs 72–86. [109–114, after Gorochov (2010); 118–120, after Chopard (1956)].

(Gorochov, 2010). Body large and rather dark: head and pronotum blackish with greyish eyes (sometimes eyes dark brown with two transverse yellowish lines on upper half), yellowish ocelli as well as small marks between them and between lateral ocelli and eyes, almost light brown rostral apex, greyish brown to light greyish brown areas on mouthparts (palpi greyish brown), and light brown antennae having more or less visible darkish spots on flagellum (Fig. 63); tegmina dark brown with barely lighter (reddish brown) venation and yellowish line along lateral edge of each dorsal field (this line crossed by numerous small black spots); distal parts of hind wings dark greyish brown; legs almost uniformly greyish brown to brown but with darker distal part of hind femur, several blackish spots on hind tibia, and dark greyish brown most part of two proximal segments of each tarsus; sternites from light greyish brown to greyish brown; genital plate brown; lateral parts of apical tergites, paraprocts and areas at base of ovipositor blackish; cerci greyish brown to dark greyish brown; rest of ovipositor light brown with dark brown to blackish small distal part. Scape approximately equal to space between antennal cavities in width; lateral ocelli rather large, rounded, almost twice as great as transversally oval median ocellus; wings long (hind wings distinctly protruding beyond tegminal apices); tegminal dorsal field with more or less irregular (almost reticular) venation having numerous irregular crossveins; tegminal lateral field with 12–14 oblique branches of *Sc* and numerous almost irregular crossveins between them; fore tibia with only inner tympanum which moderately large, immersed, partly opened, elongately oval and rather narrow; genital plate almost as wide as long, narrowing to moderately narrow apex having comparatively wide and rounded but shallow posteromedian notch as well as a pair of short and roundly angular lobes around it; ovipositor with distal part typical of this subgenus (Gorochov, 2017: figs XXII: 8, 9).

Male. Colouration and external structure of body slightly varied: from slightly lighter to slightly darker than in females; metanotal gland as in Fig. 64 or with barely denser pubescence in central part (Fig. 65). Genitalia in males from “Reserva Comunal Ashaninka” with additional apical epiphallic processes slightly shorter than in holotype, and with dorsoapical epiphallic lobules less curved forwards than in this specimen (see Figs 102–105).

Length in mm. Body: male 20–27, female 18–28; body with wings: male 34–38, female 36–39; pronotum: male 3.7–4, female 3.8–4.2; tegmina: male 26–28, female 26–29; hind femora: male 14–15.5, female 15–16; hind tibiae: male 13.5–15, female 14.5–15.5; ovipositor 18.5–20.

Remark. This species, described from a single male, is here indicated also from another locality of the same province. All the males from “Reserva Comunal Ashaninka” are very similar to the holotype in the general appearance and genital structure, but the additional apical epiphallic processes in these males are somewhat shorter, and their dorsoapical epiphallic lobules are less strongly curved forwards (for comparison see Figs 104 and 105). Perhaps there are two subspecies of the same species, but this question may be resolved only after studying additional males from the type locality.

****Aphonomorphus (Aphonomorphus) proximus tambo* subsp. nov.**
(Figs 61, 62, 106–108)

Holotype. Male, **Peru**, Junin Department, Satipo Prov., Rio Tambo Distr., 6 km N of Pichiguia Vill., protected area “Reserva Comunal Ashaninka”, 11.358244°S, 74.0320473°W, ~500 m, primary forest, at light, 14–23.XI.2017, A. Gorochov, G. Irisov (ZIN).

Paratype. One male and 1 female, same data as for holotype (ZIN).

Description. Male (holotype). General appearance similar to that of *A. (A.) venado*, but body somewhat smaller and with colouration barely lighter: pronotum

and head behind eyes (i.e. upper parts of genae and posterior half of vertex) greyish brown (Fig. 61); tegmina light greyish brown with most part of venation darker (from light brown to greyish brown), with some longitudinal veins almost yellow, and with rather numerous and small blackish spots on lateral edge of dorsal field; legs slightly darker than tegminal membranes, with very small dark marks along outer ventral keel of hind femur, with somewhat larger dark spots at base of spines of hind tibia, and with distal part of this tibia darkened; sternites and cerci light brown, but with several small darkish marks on each cercus; genital plate light with darkened apical part. External structure of body also very similar to that of this species (including shape and colouration of ocelli and interspaces between them and between ocelli and eyes); metanotal gland as in Fig. 62; tegmina with dorsal field having 10–12 longitudinal veins (these veins somewhat S-shaped and irregular in distal part) and numerous irregular crossveins, and with lateral field having 12–13 oblique *Sc* branches and numerous almost irregular crossveins between them; hind wings strongly protruding beyond tegminal apices; inner tympanum not large (its length almost equal to maximal width of fore tibia), elongately oval and slightly immersed; genital plate with rather large rectangular notch at apex as well as with a pair of rounded and moderately long lobules around it. Genitalia very similar to those of nominotypical subspecies, but dorsoapical epiphallal lobules slightly shorter and directed strictly dorsally (not slightly backwards) as well as with very short (very low) but distinct posteroproximal convexity in profile, additional apical epiphallal processes slightly thicker in distal half and somewhat more hook-like (for comparison see Figs 106–108, 111, 112).

Variations. Second male with pronotum and posterior part of epicranium slightly lighter (almost reddish brown) but with small dark area in posteroventral corner of

each pronotal lateral lobe; its abdominal sternites barely darker, and genital plate with longer median darkening in posterior half.

Female. Size, colouration and structure of body very similar to those of holotype, but: body (including tegminal membranes) barely darker; genital plate completely light, slightly transverse and narrowing to widely truncated (almost shallowly notched) apex. Ovipositor with blackish marks at base and longitudinal line on each lateral side, and with darkened apical part (this part typical of *Aphonomorphus* s. str. in shape).

Length in mm. Body: male 21–23, female 20; body with wings: male 30–32, female 33; pronotum: male 3.4–3.7, female 3.8; tegmina: male 22–23, female 23.5; hind femora: male 14.8–15.2, female 15.3; hind tibiae: male 14.2–14.7, female 14.7, ovipositor 18.5.

Comparison. The new subspecies is distinguished from *A. (A.) p. proximus* Gor. by the male genital characters listed above. From *A. (A.) robustus* Gor. and *A. (A.) solitarius* Gor. having the dorsoapical epiphallal lobules with similar posteroproximal convexities, *A. (A.) p. tambo* differs in the first ectoparameres distinctly longer (from the first species), or in the epiphallus having the dorsoapical lobules shorter, additional apical processes less hooked, and first ectoparameres somewhat different in the shape.

Etymology. The new subspecies is named after the Rio Tambo Province.

****Aphonomorphus (Aphonomorphus) proximus proximus* Gorochov, 2010**
(Figs 111, 112)

Material studied. **Peru:** 1 male (holotype), 1 female (paratype), Junin Department, Satipo Prov., ~25 km SE of Satipo Town near Rio Venado Vill., ~1200 m, primary/secondary forest, 20–23.X.2008, A. Gorochov, M. Berezin, L. Anisyutkin, E. Tkatsheva, V. Izerskiy (ZIN).

Note. This subspecies is described from another district of the Satipo Province (Gorochov, 2010).

Aphonomorphus (Aphonomorphus) ?telskii (Saussure, 1874)
(Figs 118–120)

Note. This species was described by Saussure (1874) from Peru (without more exact locality) and from Brazil (“province de Santa-Cruz”); later it was recorded from Bolivia (“Tumupasa”) by Chopard (1956). The male genitalia, pictured by Chopard as belonging to this species, are here given in Figs 118–120. However, these determinations are in need of examination.

****Aphonomorphus (Aphonomorphus) robustus*** Gorochov, 2010
(Figs 109, 110)

Material studied. **Peru:** 3 males (holotype and paratypes), 1 female (paratype), Junin Department, Satipo Prov., ~25 km SE of Satipo Town near Rio Venado Vill., ~1200 m, primary/secondary forest, at light, 20–23.X.2008, A. Gorochov, M. Berezin, L. Anisyutkin, E. Tkatsheva, V. Izersky (ZIN); 1 male (paratype); same province, environs of Satipo Town, ~800 m, secondary forest in environs of waterfall “Cinco Cascadas” near Paratushali Vill. (18 km N of Satipo Town), 4–5.XI.2008, A. Gorochov, M. Berezin, L. Anisyutkin, E. Tkatsheva, V. Izersky (ZIN).

Note. This species is known from two localities in the Satipo Province (Gorochov, 2010). It is related and similar to *A. (A.) proximus* but with the second ectoparameres much shorter and more robust.

****Aphonomorphus (Aphonomorphus) solitus*** Gorochov, 2010
(Figs 113, 114)

Material studied. **Peru:** 2 males (holotype and paratype), Ucayali Department, Atalaya Prov., ~35 km NWW of Atalaya Town on Rio Ucayali, environs of Sapani Vill., ~300 m, primary forest, at light, 26–31.I.2008, A. Gorochov, M. Berezin, L. Anisyutkin, E. Tkatsheva, V. Izersky (ZIN). **Ecuador:** 1 male (paratype), Morona Santiago Prov., bank of Rio Morona near border with Peru, environs of Puerto Morona Vill., ~300 m, primary forest, at light, 5–15.I.2010, A. Gorochov (ZIN).

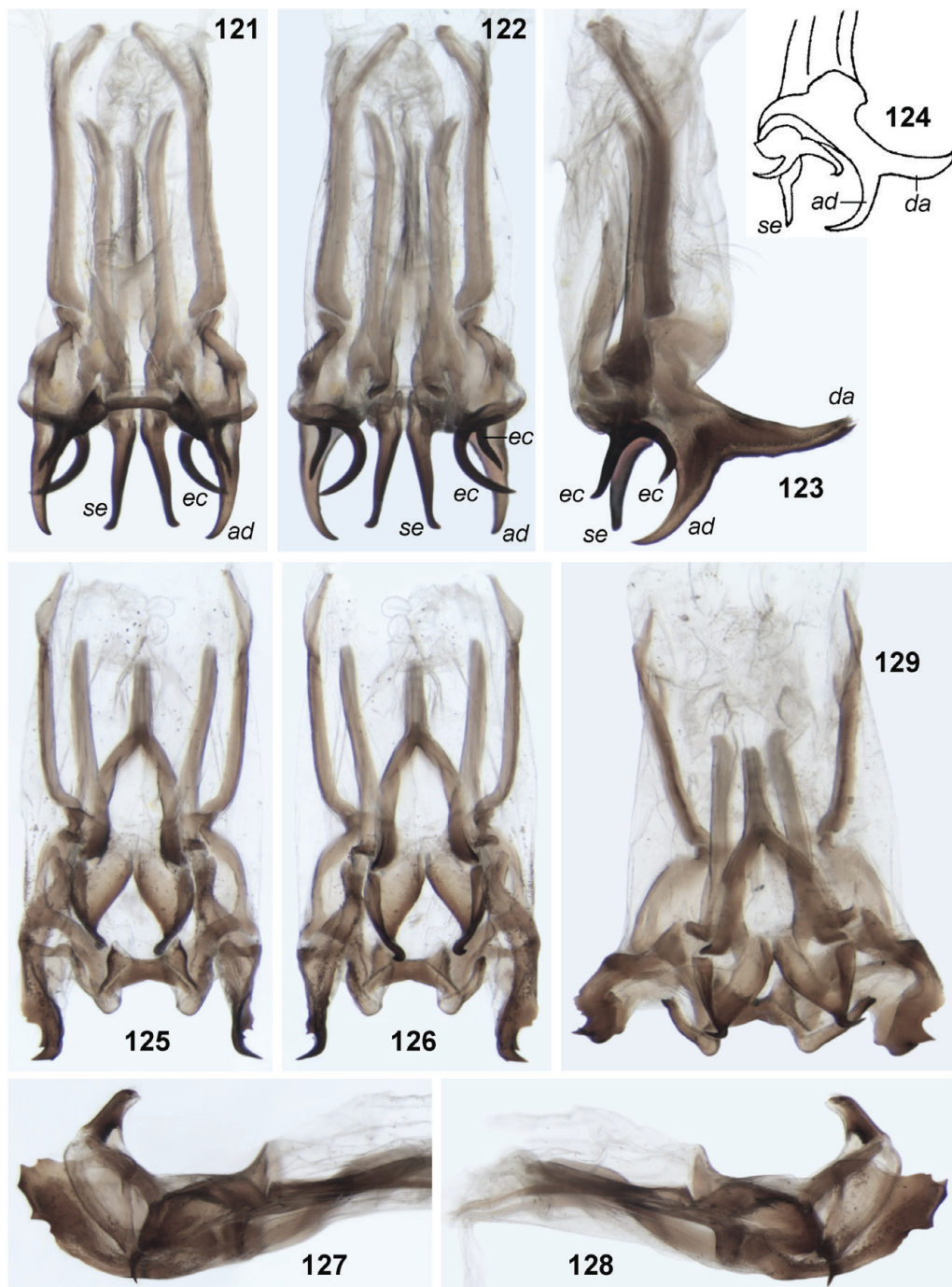
Note. This species was described from two localities (Gorochov, 2010). One of these localities is in Ecuador but almost on the border between Ecuador and Peru.

****Aphonomorphus (Aphonomorphus) pichiguia sp. nov.***
(Figs 66, 67, 115–117)

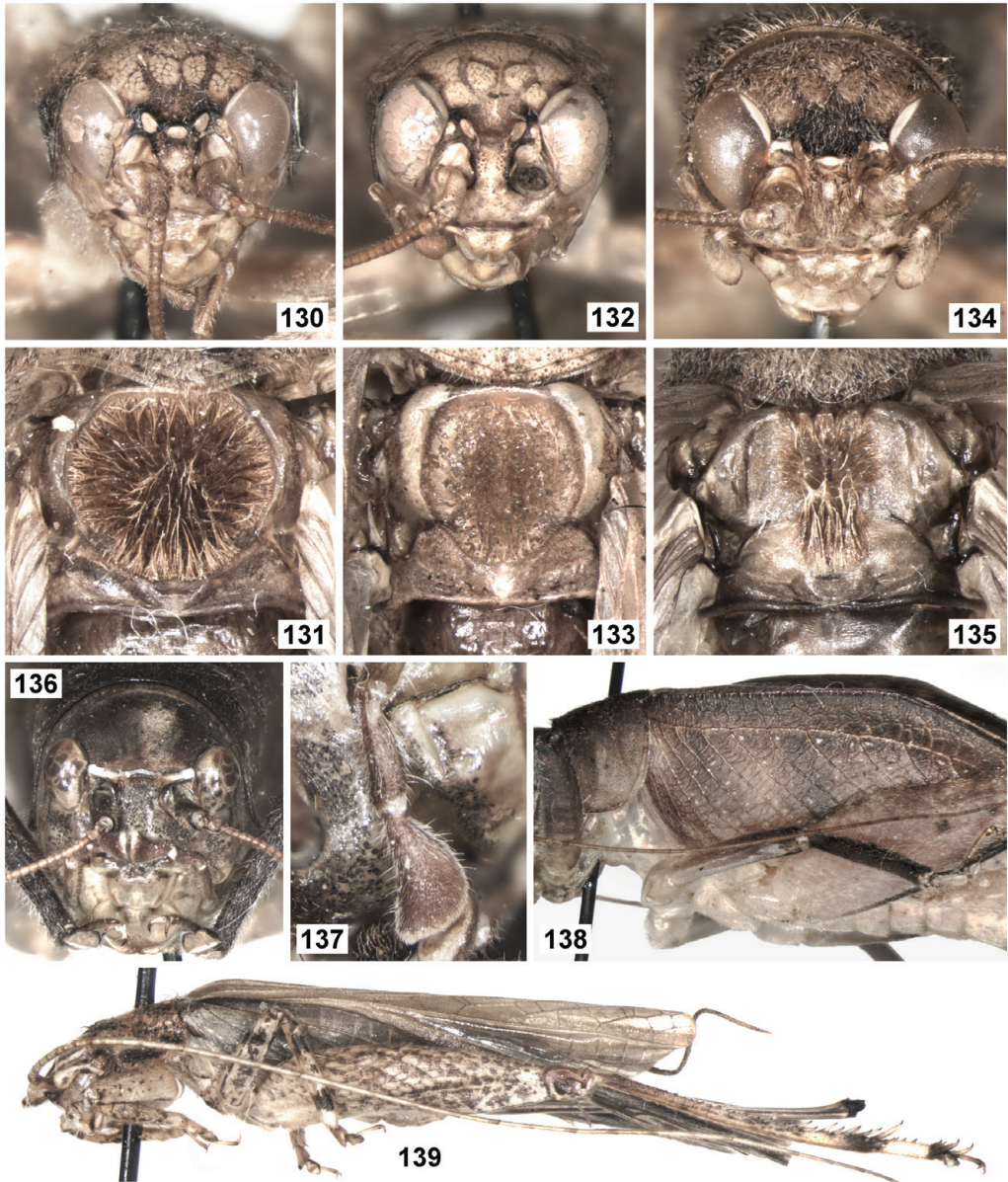
Holotype. Male, **Peru**, Junin Department, Satipo Prov., Rio Tambo Distr., 6 km N of Pichiguia Vill., protected area “Reserva Comunal Ashaninka”, 11.358244°S, 74.0320473°W, ~500 m, primary forest, at light, 14–23.XI.2017, A. Gorochov, G. Irisov (ZIN).

Paratypes. Seven males, same data as for holotype (ZIN).

Description. Male (holotype). General appearance typical of thus subgenus. Body moderately large. Colouration light greyish brown with following marks: head with greyish brown eyes (having two transverse lightish stripes on upper half) and moderately small area between them but behind ocelli, with yellowish white ocelli and small marks between them as well as between lateral ocelli and eyes, with whitish mouthparts having a few small greyish marks on clypeus and middle parts of mandibles as well as spots on maxillary palpi, and with whitish antennal scape and pedicel (flagellum almost uniformly light brown) as well as very small marks on anteroventral part of epicranium (under eyes and antennal cavities) (Fig. 66); pronotum almost uniform but with several darkish dots along anterior and posterior edges as well as between disc and lateral lobes; tegmina with yellowish venation, but all crossveins of lateral field and some crossveins of dorsal field greyish brown (small parts of membranes along middle parts of some longitudinal veins of dorsal field and most part of membranes in *Sc-R* area somewhat darkened), as well as one vein along lateral edge of dorsal field whitish and crossed by rather numerous blackish dots; distal parts of hind wings greyish brown; legs with rather numerous darkish dots on femora and tibiae, but hind leg with dark greyish brown three longitu-



Figs 121–129. Hapithini, male: 121–123, *Aphonormorphus (Aphonormorphus) stipatus longifurca* subsp. nov.; 124, *A. (A.) s. stipatus* Chop.; 125–129, *A. (?) brachyphallus* sp. nov. (125–128, holotype). Genitalia from above (121, 125), from below (122, 126, 129), from side (123, 128) and from side but without anterior half or anterior part (124, 127). [124, after Chopard (1956)].



Figs 130–139. Hapithini (130–138) and Aphonoidini (139): 130, 131, *Aphonomorphus (Euaphonus) problematicus* sp. nov., male; 132, 133, *A. (E.) firmus* sp. nov., male; 134, 135, *Spiraphonus asymmetricus longiapex* subsp. nov., male; 136–138, *Phyllogryllus crassus* sp. nov., female; 139, *Diatrypa (?) intersecta* sp. nov., female. Head in front (130, 132, 134, 136); metanotal gland from above (131, 133, 135); distal half of maxillary palpus from side (137); body without anterior and posterior parts from side (138); body from side (139).

dinal rows of dots on femur (dorsal, outer median and outer ventral rows) and spots at bases of tibial spines; pterothoracic and abdominal tergites almost yellowish but

with small brownish spots on abdominal ones; most part of anal plate greyish brown; sternites somewhat darkened but with yellowish lateral parts on abdomen; genital

plate yellowish with median longitudinal band darkish; cerci light with several small darkish marks. Structure of body similar to that of *A. (A.) proximus*, but metanotal gland as in Fig. 67, genital plate long and gradually narrowing to narrow apex (this apex having rather deep and narrow posteromedian notch and a pair of elongated lobules around it), and genitalia (Figs 115–117 including 117a) distinguished from those of most related *A. (A.) solitus* by distinctly longer additional apical epiphallic processes (their apices located clearly behind ectoparameral apices, but in *A. solitus*, ectoparameral apices located barely behind apices of these processes; for comparison see Figs 117 and 114) and somewhat shorter second ectoparameres (see Figs 113 and 116).

Variations. Paratypes insignificantly varied in colouration of head rostrum (from barely darker to slightly lighter) and in number of longitudinal veins and their branches. One paratype with additional apical epiphallic processes slightly more angularly curved and having distinct small tubercle on their ventromedial surface (Fig. 117b).

Female unknown.

Length in mm. Body 20–24; body with wings 32–34; pronotum 3.8–4.2; tegmina 22–24; hind femora 14.5–15.5; hind tibiae 14.5–15.

Comparison. The new species is most similar to *A. (A.) solitus* in the male genital structure but distinguished from it by the characters of male genitalia listed above. From all the other similar congeners, *A. (A.) pichiguia* differs in the shape of additional apical epiphallic processes having a short but almost angular projection on their outer surface, and in the structure of their second ectoparameres (narrower than in *A. robustus* but clearly shorter than in *A. proximus*; Figs 110, 112, 116).

Etymology. The new species is named after the Pichiguia Village situated near its type locality.

****Aphonomorphus (Aphonomorphus) stipatus longifurca* subsp. nov.**
(Figs 68, 69, 121–123)

Holotype. Male, **Peru**, Junin Department, Satipo Prov., Rio Tambo Distr., 6 km N of Pichiguia Vill., protected area “Reserva Comunal Ashaninka”, 11.358244°S, 74.0320473°W, ~500 m, primary forest, at light, 14–23.XI.2017, A. Gorochov, G. Irisov (ZIN).

Paratypes. Two males, same data as for holotype (ZIN).

Description. Male (holotype). Body moderately small. Colouration light greyish brown with following marks: head with greyish brown dorsum and apex of rostrum, dark greyish brown area between eyes near (behind) ocelli, yellowish mouthparts and lower part of epicranium under eyes and antennal cavities, and light grey antennae having small and numerous but poorly distinct lighter spots (Fig. 68); pronotum with thin dark line along ventral edges of lateral lobes and with darkish disc having a pair of lighter spots in middle part and a pair of rather dark dots near its posterior edge; tegmina with barely darker (greyish brown) crossveins in lateral field and yellowish vein along lateral edge of dorsal field crossed by small and numerous blackish marks; hind wings greyish with distal parts slightly darker than tegmina; legs light greyish with numerous barely darker dots on femora and tibiae (some of dots on hind femur more distinct); dorsum of pterothorax and abdomen greyish with barely lighter metanotum and slightly darker (almost greyish brown) anal plate; rest of body (including pleurites and lateral parts of abdominal tergites) whitish to yellowish with a few darkish dots on distal half of cerci. Structure of body very similar to that of *A. (A.) pichiguia*, but inner tympanum slightly larger (its length slightly greater than maximal width of fore tibia), metanotal gland as in Fig. 69, tegmina with 10–11 oblique longitudinal veins in dorsal field and dense irregular (reticular) crossvenation between them as well as with 13–14 oblique branches of *Sc* and numerous and almost irregular crossveins between them, genital

plate with almost parallel lateral sides and moderately small (but distinct and rather narrow) posteromedian notch, and genitalia (Figs 121–123) very similar to those of nominotypical subspecies but distinguished by epiphallus somewhat shorter before its dorsoapical spine and by hooks of first ectoparameres longer and directed more backwards (in *A. s. stipatus* Chop., one of these hooks directed downwards, but other hook, almost upwards; for comparison see Figs 123 and 124).

Variations. Paratypes with slightly lighter posterior part of head dorsum; sometimes pronotal disc slightly lighter, and pronotal lateral lobes without darkened line along ventral edges.

Female unknown.

Length in mm. Body 19–20; body with wings 30–31; pronotum 3.2–3.4; tegmina 21–22; hind femora 13–13.3; hind tibiae 12.6–13.

Comparison. The new subspecies differs from *A. (A.) s. stipatus* (Bolivia) in the male genital characters listed above. From all the other species of this subgenus, *A. (A.) s. longifurca* differs in the first ectoparameres deeply bifurcated.

Etymology. Name of this species consists of the Latin words “longus” (long) and “furca” (fork) in connection with the characteristic shape of ectoparameres.

Aphonomorphus (Aphonomorphus) luteicornis Chopard, 1954

Note. The species was described from one Peruvian male (Chopard, 1954: “Süd-Peru: Esperanza”). Judging by Chopard’s pictures of its genitalia, *A. luteicornis* belongs to the nominotypical subgenus, because it has a pair of the additional apical epiphallic processes which are strong, directed backwards and hooked (similar to those of *A. venado*, *A. robustus*, *A. proximus* and *A. solitus*). However, the ventrodistal processes of its genitalia (first ectoparameres?) are almost spine-like and reach the apices of the above-mentioned (more dorsal) processes, and its

second ectoparameres are small and spinose; these characters are not characteristic of the other representatives of this subgenus. This type specimen is lost (OSF).

****Aphonomorphus* (subgenus?)
brachyphallus sp. nov.**
(Figs 70, 71, 125–129)

Holotype. Male, **Peru**, Junin Department, Satipo Prov., Rio Tambo Distr., 6 km N of Pichiguia Vill., protected area “Reserva Comunal Ashaninka”, 11.358244°S, 74.0320473°W, ~500 m, primary forest, at light, 14–23.XI.2017, A. Gorochov, G. Irisov (ZIN).

Paratypes. Two males, same data as for holotype (ZIN).

Description. Male (holotype). Body rather small. Colouration grey with following marks: eyes light greyish; ocelli yellowish; area between eyes but behind (near) ocelli dark grey; lower half of head light grey with small darkish dots on maxillary palpi; antennae whitish with numerous small darkish and greyish brown spots on scape and flagellum (in distal half of flagellum, darkened spots larger than light ones) (Fig. 70); pronotum with a few dark and darkish dots along all edges; tegmina light grey with greyish yellow most part of venation, brownish grey some crossveins in lateral field, whitish vein along lateral edge of dorsal field crossed by several small dark spots, and darkened small areas along middle parts of some longitudinal veins of dorsal field; hind wings with grey distal parts; legs light grey with numerous darkish dots on fore and middle femora as well as on hind tibia, with sparse darker dots on hind femur, and with very small darkish dots on hind basitarsus; meso- and meta-notum greyish, rather light; sternites, most part of abdominal tergites, anal plate and cerci brownish grey; pleurites, genital plate and lateral parts of abdominal tergites light yellowish grey with darkish dots on these parts of tergites and a pair of longitudinal lines on venter of distal half of genital plate (these lines located very near each other). External structure of body typical of this

genus but with some characteristic features: scape slightly narrower than space between antennal cavities; ocelli rather small but distinct, rounded (almost oval); pronotum somewhat widening to pterothorax, with anterior edge of disc almost straight, and with posterior one sinuated (this edge with short and widely rounded posteromedian lobe); metanotal gland as in Fig. 71; wings significantly protruding beyond abdominal apex and apices of hind femora; tegminal dorsal field with 10–11 S-shaped and partly irregular longitudinal veins as well as with dense and also irregular (narrowly reticular) crossvenation between them; tegminal lateral field with 11–12 oblique branches of *Sc* and numerous and moderately irregular crossveins between them; legs with rather large and narrowly oval inner tympanum only (its length barely greater than maximal width of fore tibia); anal plate with rather narrow and rounded distal part; genital plate elongated, narrowing to rather narrowly rounded apex (but this apex with distinct and very narrow notch), and with median fold (rather wide groove) on distal half of ventral surface. Genitalia very characteristic: moderately short, with rather short dorsoapical epiphallal lobules directed upwards/forwards, without distinct additional apical epiphallal processes (but anteroventral edge of each lateral epiphallal part more sclerotized than rest of this part and having small denticle at ventral apex of this edge; this edge and this denticle possibly rudiments of additional apical process diagnostic for subgenus *Aphonomorphus*), with large lamellar first ectoparameres having more or less crenulated distal part, and with triangular (plate-like but almost semitubular) second ectoparameres having clearly hooked distal part (Figs 125–128).

Variations. Sometimes head dorsum lighter (almost uniformly grey), cerci light but with darkish marks, genital plate without darkenings, and genitalia in one male with posterior part deformed (possibly erected; Fig. 129).

Female unknown.

Length in mm. Body 15–16.5; body with wings 24.5–26; pronotum 2.8–3.1; tegmina 18–19; hind femora 11.5–12; hind tibiae 11–11.5.

Comparison. The new species differs from all the species of *Aphonomorphus* s. str. in the absence of distinct additional apical epiphallal processes; from subgenus *Furcaphonus* Gor., in the first ectoparameres not distinctly bifurcated; from subgenus *Euaphonus* Heb., in the inner tympanum not slit-like and in all the ectoparameres symmetrical; from all the other subgenera of *Aphonomorphus* s. l., in the absence of characteristic posteromedian epiphallal lobe, rather narrow (not widely lobe-like) dorsoapical epiphallal lobules, and rachis completely divided into a pair of sclerites (second ectoparameres).

Etymology. Name of the new species consists of the Lanitized Greek prefix “brachy-” (short) and morphological term “phallus”.

****Aphonomorphus (Euaphonus) problematicus* sp. nov.**

(Figs 130, 131, 140–146)

Holotype. Male, **Peru**, Junin Department, Satipo Prov., Rio Tambo Distr., 6 km N of Pichiguia Vill., protected area “Reserva Comunal Ashaninka”, 11.358244°S, 74.0320473°W, ~500 m, primary forest, at light, 14–23.XI.2017, A. Gorochov, G. Irisov (ZIN).

Paratypes. Eleven males, same data as for holotype (ZIN).

Description. Male (holotype). Body medium-sized for this subgenus. Colouration light yellowish grey with following pattern: epicranium with brown area located on dorsal half of rostral base and between middle parts of eyes, with four darkish longitudinal lines on more distal part of epicranial dorsum (these lines fused with previous brown area anteriorly), with large darkish spot on upper part of each gena (behind eye), and with almost whitish ocelli and anteroventral part of epicranium (under eyes and antennal cavities); mouthparts and antennal scapes yellowish, but scapes with barely darkened apices; antennal flagellum and

pedicel uniformly light brown (Fig. 130); pronotum with somewhat darkened (greyish brown) lateral lobes; tegmina with yellowish grey venation of dorsal field, with numerous dark dots on vein located along lateral edge of dorsal field, with lateral field barely darker than dorsal one as well as having slightly darker (than in dorsal field) venation and rather dark (greyish brown) longitudinal band between *Sc* and yellowish *R* in proximal half of tegmen; hind wings with greyish distal parts; legs almost uniform, but hind femur with darkened distoventral part and with a few darkish dots in median part of outer surface of distal femoral half; meso- and metanotum brownish grey but rather light; abdomen with dark brown most part of tergites, brown anal plate, and light brown rest of abdomen (but sternites and genital plate with median part barely darkened); thoracic sternites slightly darkened. External structure of body almost as in other representatives of *Euaphonus*: rostral apex slightly narrower than scape; ocelli large, oval and located very near each other (Fig. 130); pronotum with postero-median lobe almost angular and not very short; metanotal gland as in Fig. 131; wings very long; dorsal tegminal field with 10–11 strongly S-shaped and almost irregular longitudinal veins and with dense irregular (narrowly reticular) crossvenation; lateral tegminal field with 13–15 branches of *Sc* and numerous and more or less irregular crossveins; hind wings much protruding beyond tegminal apices; fore tibia with only inner tympanum which clearly slit-like and rather long (its length clearly greater than maximal width of this tibia); anal and genital plates similar to those of *A. brachyphallus*, but apex of genital plate with slightly larger and almost angular posteromedian notch. Genitalia with dorsoapical epiphallid

lobules articulated, not long and directed almost forwards (Figs 140, 142, 143); first ectoparameres rather deeply bifurcated and weakly asymmetrical (right ectoparamere with ventral arm thin, long and somewhat curved downwards, but left one with this arm shorter, widened distally and having upper and lower angular projectons; Figs 142–145); second ectoparameres plate-like but strongly asymmetrical (right ectoparamere wider and with large angular lobe situated near apex and directed upwards/laterally, but left one narrower, acute at apex, with angular lobe smaller and situated near base of this ectoparamere as well as directed almost upwards; Figs 140, 141, 146).

Variations. Paratypes slightly varied in colouration (from barely darker to barely lighter) and in number of longitudinal veins and their branches in tegmina; sometimes dorsal arms of first ectoparameres somewhat longer than in holotype.

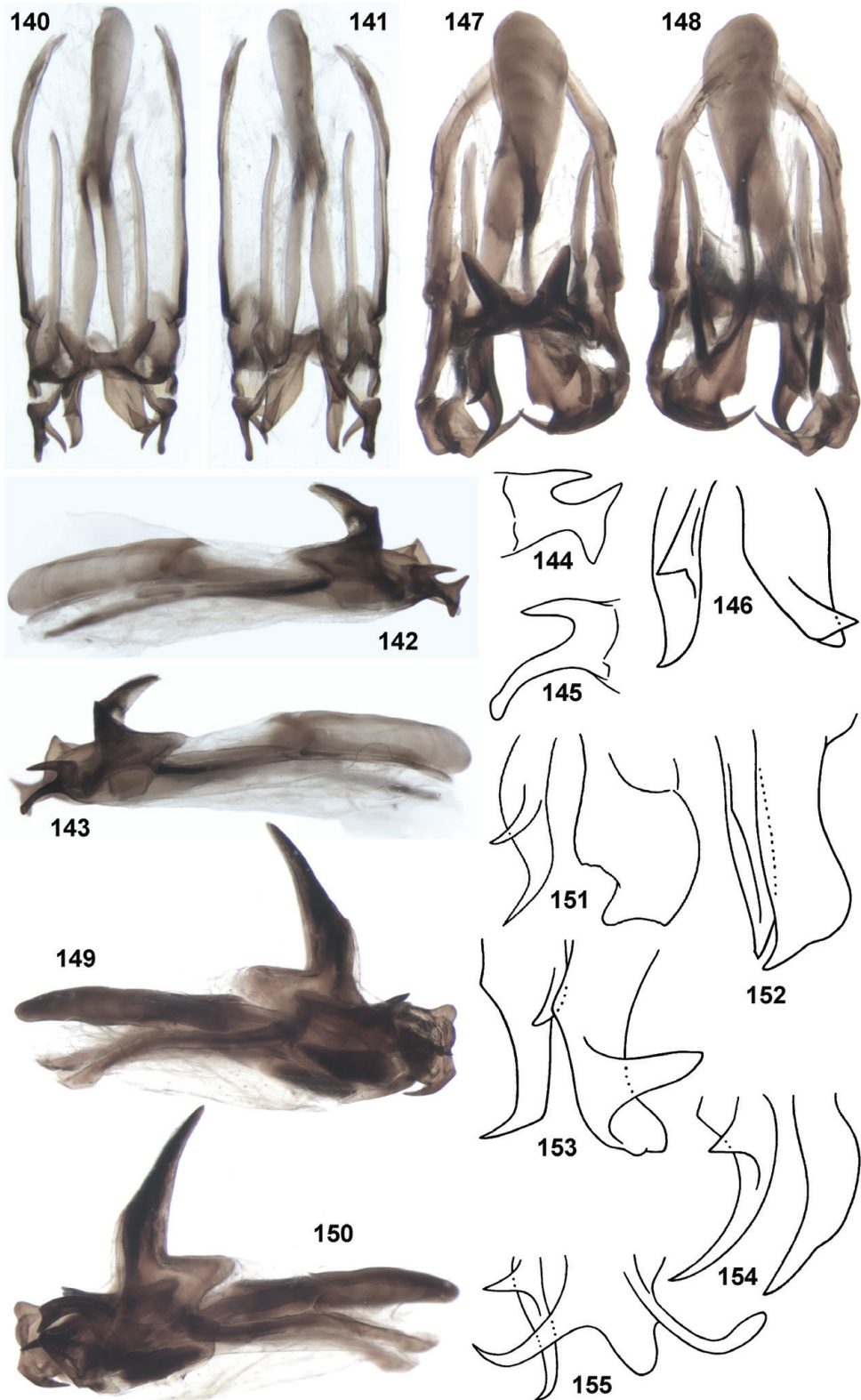
Female unknown.

Length in mm. Body 17–19; body with wings 30–32; pronotum 3–3.3; tegmina 20.5–22; hind femora 12–13; hind tibiae 12–12.8.

Comparison. Male of the new species differs from all the known males of this subgenus in the first ectoparameres rather deeply bifurcated and moderately asymmetrical. From *A. (E.) atalaya* Gor. (Peru) with only female known, the new species differs in the clearly smaller and lighter body. From the representatives of *Furcaphonus* also having first ectoparameres deeply bifurcated, *A. (E.) problematicus* is distinguished by the strongly asymmetrical second ectoparameres (this character is characteristic of *Euaphonus* species).

Etymology. Name of the new species is the Latin word “problematicus” (problematical), because its male genitalia have simi-

Figs 140–155. Hapithini, male: 140–146, *Aphonomorphus (Euaphonus) problematicus* sp. nov.; 147–151, *A. (E.) firmus* sp. nov.; 152, *A. (E.) dilutus* Gor.; 153, *A. (E.) cusco* Gor.; 154, *A. (E.) peruvianus* (Sauss.); 155, *A. (E.) fuscus* Gor. Genitalia from above (140, 147), from below (141, 148) and from side (142, 143, 149, 150); left (144) and right (145) first ectoparameres from side; parts of left and right second ectoparameres visible behind epiphallus from above (146, 151–155).



larity to those of two subgenera (*Euaphonus* and *Furcaphonus*).

****Aphonomorphus (Euaphonus) firmus*
sp. nov.**

(Figs 132, 133, 147–151)

Holotype. Male, **Peru**, Junin Department, Satipo Prov., Rio Tambo Distr., 6 km N of Pichiguia Vill., protected area “Reserva Comunal Ashaninka”, 11.358244°S, 74.0320473°W, ~500 m, primary forest, at light, 14–23.XI.2017, A. Gorochov, G. Irisov (ZIN).

Paratypes. One female, same data as for holotype (ZIN).

Description. Male (holotype). Body rather small. Colouration very light (almost whitish) with following marks: head with greyish brown area between each eye, antennal cavity and lateral ocellus (this area continuing slightly behind this ocellus and having small yellowish convexity between lateral ocellus and eye), with brownish area between lateral ocelli and posterior edge of median ocellus, with a few darkish dots on rostral apex, with whitish lower part of epicranium and some parts of clypeus and of mandibles, and with light brown antenna having scape yellowish (Fig. 132); pronotum with darkish small dots along anterior edge and very small dots on posteromedian part of disc; tegmina with light (almost greyish) membranes, yellowish venation, several very small darkish spots on distal half of vein running along lateral edge of dorsal field, and greyish (but barely darker than membranes) area between proximal halves of *Sc* and *R*; hind wings with distal parts similar to latter area in colour; legs uniformly light but with slightly darkened marks in apical part of hind femur and on hind tibia (ventral surface of this tibia also somewhat darkened); pterothoracic tergites, pleurites, sternites, genital plate and cerci from whitish to yellowish; abdominal tergites with light lateral parts, greyish brown dorsum of anterior abdominal tergites and dorsum of last tergite as well as dark brown dorsum of rest abdominal tergites. Structure of body very similar to that of *A. (E.) problemati-*

cus, however: ocelli barely larger; metanotal gland as in Fig. 133; tegmina with irregular but dense and narrowly reticular venation in dorsal field as well as with 11–12 oblique branches of *Sc* and numerous and more or less irregular crossveins between them; inner tympanum slightly shorter (almost as long as maximal width of fore tibia) but with somewhat more strongly inflated dorsal lobe of this tympanum; anal plate with rather deep posteromedian concavity on dorsum; genitalia with dorsoapical epiphallic lobules long, directed upwards and not articulated (Figs 147, 149, 150), with first ectoparameres large, strongly asymmetrical, hook-like but not bifurcated (Figs 147–150), and with second ectoparameres very strongly asymmetrical (left ectoparamere narrower, S-shaped, having hooks on proximal and apical parts, but right ectoparamere significantly widened, lacking distinct hooks and clearly posteromedially notched; Figs 147, 148, 151).

Female. General appearance similar to that of male, but: body slightly larger and barely darker; dark area on head dorsum larger and continuing slightly behind eyes; this dorsum also with greyish brown band along its posterior edge; tegmina with 13–14 almost brown branches of *Sc*; genital plate light brown, slightly transverse and roundly narrowing to moderately wide and not very deep apical notch (this notch roundly angular, similar to that of *A. atalaya*). Ovipositor more or less similar to that of *A. (A.) proximus tambo* but with blackish distal part.

Length in mm. Body: male 17, female 19; body with wings: male 28, female 33; pronotum: male 2.8, female 3.3; tegmina: male 19, female 23; hind femora: male 11, female 13.5; hind tibiae: male 11.5, female 13.7; ovipositor 16.5.

Comparison. The new species is more or less similar to *A. (E.) peruvianus* (Sauss.), *A. (E.) fuscus* Gor., *A. (E.) cusco* Gor. and *A. (E.) andreae* Cadena-Castañeda et Noriega in the shape of first ectoparameres, but it is distinguished from them by the right second ectoparamere strongly

widened, not arcuated and lacking hooks or large projections (see Figs 151 and 153–155). From *A. (E.) problematicus*, the new species differs in the first ectoparameres not bifurcated, and right second ectoparamere lacking hooks or projections (Figs 146 and 151); from *A. (E.) dilutus*, in the very different shape of both second ectoparameres (Figs 151 and 152) as well as absence of additional processes on the first ectoparameres; and from the other similar congeners, in its body size and colouration.

Etymology. Name of the new species is the Latin word “firmus” (solid, firm) in connection with its heavily sclerotized ectoparameres.

****Aphonomorphus (Euaphonus) peruvianus*** (Saussure, 1874)
(Fig. 154)

Material examined. Peru: 1 male, Junin Department, Satipo Prov., ~25 km SE of Satipo Town, environs of Rio Venado Vill., ~1200 m, primary/secondary forest, at light, 20–23.X.2008, A. Gorochov, M. Berezin, L. Anisyutkin, E. Tkatsheva, V. Izersky (ZIN); 3 males, same locality, but 13.XI–4.XII.2017, A. Gorochov, G. Irisov (ZIN); 1 male, same province, garden in outskirts of Satipo Town, 11.26528563°S, 74.65072632°W, ~660 m, at light, 13.XI–4.XII.2017, A. Gorochov, G. Irisov, V. Izersky (ZIN); 2 males, same province, 12 km N of Satipo Town, protected area “Concesion de Conservacion de la Universitaria”, 11.2031563°S, 74.61914062°W, ~600 m, primary/secondary forest, at light, 25–27.XI.2017, A. Gorochov, G. Irisov (ZIN). **Ecuador:** 2 females, Morona Santiago Prov., bank of Rio Morona near border with Peru, environs of Puerto Morona Vill., ~300 m, primary forest, at light, 5–15.I.2010, A. Gorochov (ZIN).

Note. This species was described from “Tarma” in Peru (Saussure, 1874). Later, it was recorded from some other localities by Chopard (1956: “Chanchamayo” and “Pucallpa” in Peru) and Gorochov (2010: three above-mentioned specimens collected in 2008 and 2010), and its male genitalia were pictured in Chopard’s paper and by Desutter (1988). Here and in the cited paper of

Gorochov, this species is understood in accordance with these pictures.

Aphonomorphus (Euaphonus) fuscus

Gorochov, 2010

(Fig. 155)

Material studied. Ecuador: 1 male (holotype), Morona Santiago Prov., bank of Rio Morona near border with Peru, environs of Puerto Morona Vill., ~300 m, primary forest, 5–15.I.2010, A. Gorochov (ZIN).

Note. This species was described from one male collected almost on the border with Peru.

Aphonomorphus (Euaphonus) cusco

Gorochov, 2017

(Fig. 153)

Material studied. Peru: 1 male (holotype), Cusco Department, 10 km N of Marcapata, 13° 25’S, 70°54.3’W, 1265 m, at light, 7–8.XII.2010, V. Sinyaev, S. Sinyaeva, Ju. Bezverkhov (ZIN).

Note. The species is known only from its type locality.

****Aphonomorphus (Euaphonus) atalaya***

Gorochov, 2010

Material studied. Peru: 1 female (holotype), Ucayali Department, Atalaya Prov., ~35 km NWW of Atalaya Town on Rio Ucayali, environs of Sapani Vill., ~300 m, primary forest, at light, 26–31.X.2008; A. Gorochov, M. Berezin, L. Anisyutkin, E. Tkatsheva, V. Izersky (ZIN).

Note. This species is known from one female only (Gorochov, 2010). It has the slit-like inner tympana which are characteristic of *Euaphonus*, but *A. (E.) atalaya* clearly differs from the other species of this subgenus in the larger body, darker or lighter coloration, and almost transverse (not clearly oblique) but poorly visible stripes on the dorsal tegminal fields.

****Aphonomorphus (Furcaphonus) satipo***

Gorochov, 2010

Material studied. Peru: 2 males (holotype and paratype), Junin Department, Satipo Prov., ~25 km SE of Satipo Town, environs of Rio

Venado Vill., ~1200 m, partly primary / partly secondary forest, 20–23.X.2008, A. Gorochov, M. Berezin, L. Anisyutkin, E. Tkatsheva & V. Izersky (ZIN).

Note. The species is known only from its type locality.

Aphonomorphus (Furcaphonus) vulgatus
Gorochov, 2010

Material studied. Ecuador: 1 male (paratype), Morona Santiago Prov., bank of Rio Morona near border with Peru, environs of Puerto Morona Vill., ~300 m, primary forest, 5–15.I.2010, A. Gorochov (ZIN).

Note. This species was described from two Ecuadorian males; one of them was collected almost on the border with Peru (see above).

Aphonomorphus (Furcaphonus) simulator
Gorochov, 2010

Material studied. Ecuador: 1 male (holotype), Morona Santiago Prov., bank of Rio Morona near border with Peru, environs of Puerto Morona Vill., ~300 m, primary forest, 5–15.I.2010, A. Gorochov (ZIN).

Note. The species was described from one male collected almost on the border with Peru.

Aphonomorphus (Furcaphonus) amazon
Gorochov, 2010

Material studied. Peru: 1 male (holotype), Loreto Department, 50–60 km S of Ikitos City, forest between San Juaquin Vill. on Rio Amazon and Puente Itaya [bridge on Rio Itaya], 3.II.2006, N. Kluge (ZIN).

Note. The species is known only from its type locality.

****Aphonomorphus (Furcaphonus) elongatus***
Gorochov, 2010

Material studied. Peru: 2 males (holotype and paratype), Junin Department, Satipo Prov., ~25 km SE of Satipo Town, environs of Rio Venado Vill., ~1200 m, partly primary / partly secondary forest, 20–23.X.2008, A. Gorochov, M. Berezin, L. Anisyutkin, E. Tkatsheva, V. Izersky (ZIN).

Note. The species is known only from its type locality.

Aphonomorphus (Furcaphonus) fasciatus
Gorochov, 2010

Material studied. Ecuador: 2 males (holotype and paratype), Morona Santiago Prov., bank of Rio Morona near border with Peru, environs of Puerto Morona Vill., ~300 m, primary forest, 5–15.I.2010, A. Gorochov (ZIN).

Note. The species is known only from its type locality situated on the border with Peru.

Aphonomorphus (Lobaphonus) distinctus distinctus
Gorochov, 2010

Material studied. Ecuador: 1 male (holotype), Morona Santiago Prov., bank of Rio Morona near border with Peru, environs of Puerto Morona Vill., ~300 m, primary forest, 5–15.I.2010, A. Gorochov (ZIN).

Note. This subspecies is described from one male collected almost on the border with Peru.

****Aphonomorphus (Lobaphonus) distinctus calabaza***
Gorochov, 2017

Material studied. Peru: 1 male (holotype), Junin Department, environs of Calabaza Vill., 11°26.7'S, 74°46.4'W, 1492 m, 22.XII.2010, V. Sinyaev, S. Sinyaeva, V. Izersky (ZIN).

Note. This subspecies is described from the one male mentioned above.

Aphonomorphus (Lobaphonus) mirus
Gorochov, 2010

Material studied. Peru: 1 male (holotype), Loreto Department, bank of Rio Morona near its mouth and not far from Puerto America Town, ~200 m, primary/secondary forest, 20–23.I.2010, A. Gorochov (ZIN).

Note. The species is known from its type locality only.

Aphonomorphus (Neoaphonus) deviatus
Gorochov, 2010

Material studied. Peru: 1 male (holotype), Loreto Department, bank of Rio Morona near

its mouth and not far from Puerto America Town, ~200 m, primary/secondary forest, 20–23.I.2010, A. Gorochov (ZIN).

Note. The species is known from its type locality only.

****Aphonomorphus (Nigrapthonus) obscurus*** Chopard, 1956

Material studied. **Peru:** Male, Ucayali Department, Atalaya Prov., ~35 km NWW of Atalaya Town on Rio Ucayali, environs of Sapani Vill., ~300 m, primary forest, at light, 26–31.X.2008, A. Gorochov, M. Berezin L. Anisyutkin, E. Tkatsheva, V. Izersky (ZIN).

Note. This species was originally described from Bolivia (Chopard, 1956). Later it was recorded from Peru and Ecuador (Gorochov, 2010), and designated as a type species of the subgenus *Nigrapthonus* described by Cadena-Castañeda & Noriega (2015). I cannot exclude that this species is represented in these countries by more than one subspecies, but this question is in need of an additional study.

Aphonomorphus (Nigrapthonus) parobscurus Gorochov, 2010

Material studied. **Ecuador:** 1 female (holotype), Morona Santiago Prov., bank of Rio Morona near border with Peru, environs of Puerto Morona Vill., ~300 m, primary forest, at light, 5–15.I.2010, A. Gorochov (ZIN).

Note. Type locality of this species is situated almost on the border between Peru and Ecuador. Thus, it must be distributed in Peru also.

Aphonomorphus? elegans Chopard, 1956

Note. This species is known from one female collected in “Tingo Maria, Peru” (Chopard, 1956).

Its author indicated that this species differs from the other congeners in “its slender general shape, its long and narrow posterior femora, and the armature of the posterior tibiae” (these tibiae with five external and nine internal spines as well as with “den-

ticulations at base and between the spines very weak, scarcely visible among abundant pubescence”). Possibly, this species does not belong to this genus.

Aphonomorphus? duplovenatus
Chopard, 1937

Note. This species was described from one Peruvian female (Chopard, 1937: “Chanchamayo”). However, it possibly also belongs to another genus of Podoscirtinae, because its hind femur is very slender for the genus *Aphonomorphus* (see photographs in OSF).

****Spirapthonus asymmetricus longiapex***
subsp. nov.
(Figs 134, 135, 156, 157)

Holotype. Male, **Peru**, Junin Department, Satipo Prov., Rio Tambo Distr., 6 km N of Pichiguia Vill., protected area “Reserva Comunal Ashaninka”, 11.358244°S, 74.0320473°W, ~500 m, primary forest, at light, 14–23.XI.2017, A. Gorochov, G. Irisov (ZIN).

Paratypes. Four males and 3 females, same data as for holotype (ZIN).

Description. Male (holotype). Body typical of *Spirapthonus* Gor. and similar to that of *Aphonomorphus* representatives in general appearance. Colouration light greyish brown with some marks: area between middle parts of eyes and behind (near) ocelli dark greyish brown; ocelli and a pair of small spots between lateral ocelli and eyes whitish (Fig. 134); mouthparts and lower part of epicranium almost yellowish with barely distinct darkish marks on maxillary palpi; antennal flagellum barely darker than light scape and pedicel but with numerous small whitish spots; tegmina with dark spot at base of each dorsal field, numerous small darkish marks on longitudinal vein running along lateral edge of this field, and slightly darkened parts of veins along subdistal part of costal edge; legs almost uniformly light but with darkish dots on femora and tibiae (most part of these dots poorly visible); pterothoracic dorsum light brown; abdomi-

nal tergites and genital plate greyish brown with yellowish lateral parts; sternites slightly darkened (brownish/greyish) but with yellowish lateral parts of abdominal sternites; rest of body light with darkish narrow median stripe on proximal two thirds of genital plate and sparse and very small marks on cerci. Scape and antennal cavity almost equal in width; ocelli medium-sized (almost equal to each other in size); pronotum with disc having barely concave anterior and distinctly convex posterior edges; metanotal gland as in Fig. 135; wings long; tegmina with dense and narrowly reticular venation (longitudinal veins irregular) in dorsal field, with 11–12 branches of *Sc* and with numerous and rather irregular crossveins between them; fore tibia with only inner tympanum which moderately large and partly opened but clearly immersed; anal plate almost triangular but with more or less truncated apex; genital plate rather long, gradually narrowing to rounded apex, and with distinct but narrow posteromedian notch; genitalia very similar to those of *S. a. asymmetricus* Gor. (Fig. 160) and *S. a. napo* Gor. (both from Ecuador) but distinguished by notch of epiphallallic apex narrower, and apical (curved) part of rachis longer (see Figs 156, 157 and 158, 159, 161).

Variations. Sometimes darkened area on head dorsum lighter or almost absent, and hind femur with more distinct (darker) dots on ventral part.

Female. Colouration and structure of body similar to those of males, but: tegmina with 11–12 branches of *Sc* and sometimes with slightly darker crossveins between them; abdominal tergites and sternites with distinct darkish dots on lateral parts; genital plate completely light, transverse (short) and distinctly narrowing to widely truncated apex (sometimes this apex widely but slightly notched). Ovipositor as in *Aphonomorphus* species previously considered here, but very long (almost 1.5 times as long as hind femur).

Length in mm. Body: male 19–22, female 20–22; body with wings: male 29–32,

female 32–34; pronotum: male 3.1–3.3, female 3.7–3.9; tegmina: male 19–22, female 22–24; hind femora: male 13–14, female 14.5–15.5; hind tibiae: male 12–13.2, female 14–14.5; ovipositor 21.3–23.

Comparison. This new subspecies differs from the both other subspecies of *S. asymmetricus* in the male genital characters listed in its description. From *S. deceptor* (Chop.) and *S. spiralis* Gor., it is distinguished by the clearly shorter rachis with the apical part less widened and not spiral-like (see Figs 157 and 162–164, 166), and from *S. dissimilar* (Chop.), by the much shorter rachis and different (not clearly hooked) apex of left ectoparamere.

Etymology. The new species is named “longiapex” (in Latin) due to the shape of its rachis.

Spiraphonus asymmetricus asymmetricus

Gorochov, 2010

(Figs 158–160)

Material studied. **Ecuador:** 2 males (holotype and paratype), Morona Santiago Prov., bank of Rio Morona near border with Peru, environs of Puerto Morona Vill., ~300 m, primary forest, 5–15.I.2010, A. Gorochov (ZIN).

Note. The taxon was described as a species from three Ecuadoran males. Two of them were collected on the Peruvian border.

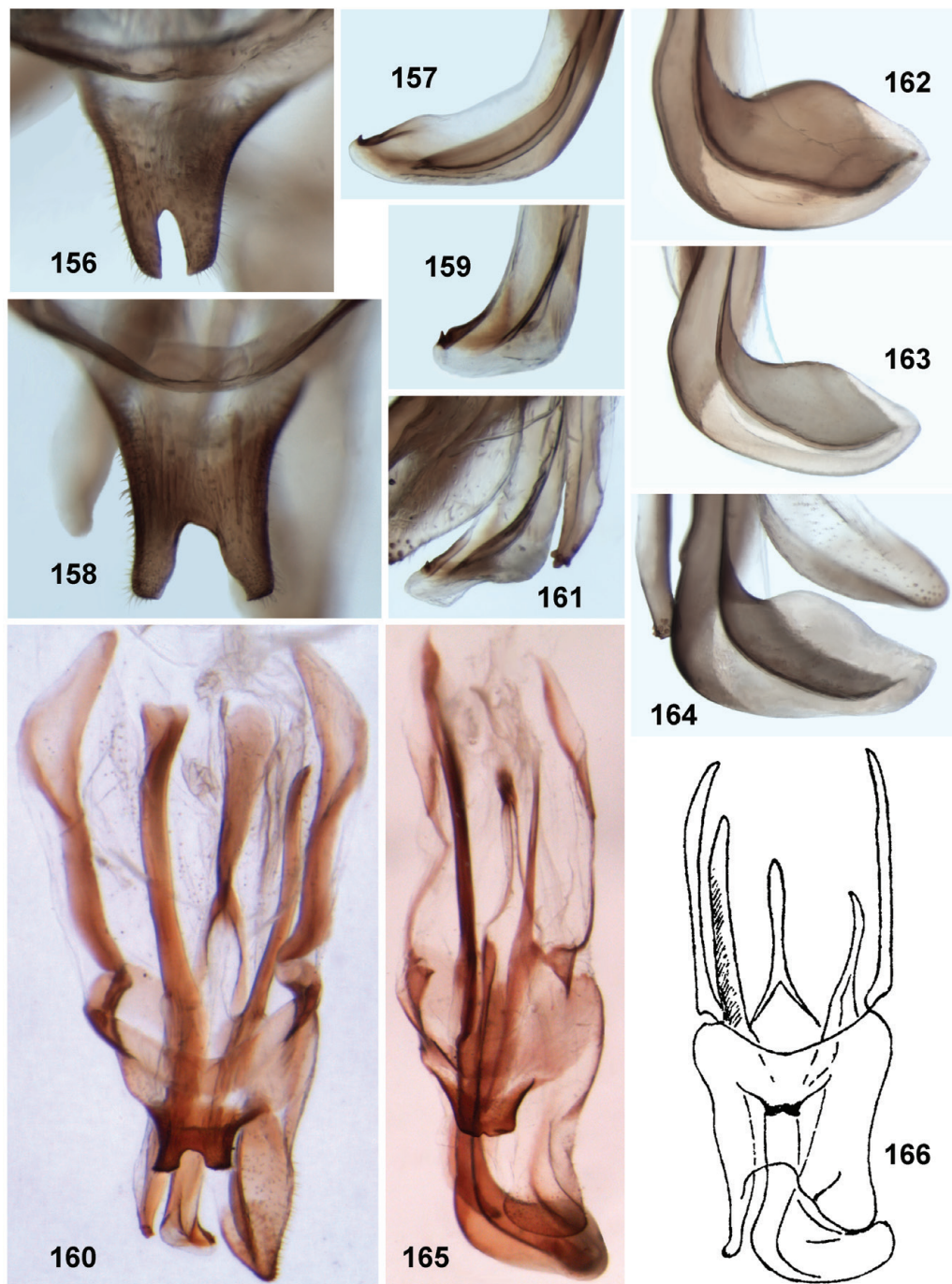
****Spiraphonus spiralis junin***

Gorochov, 2010

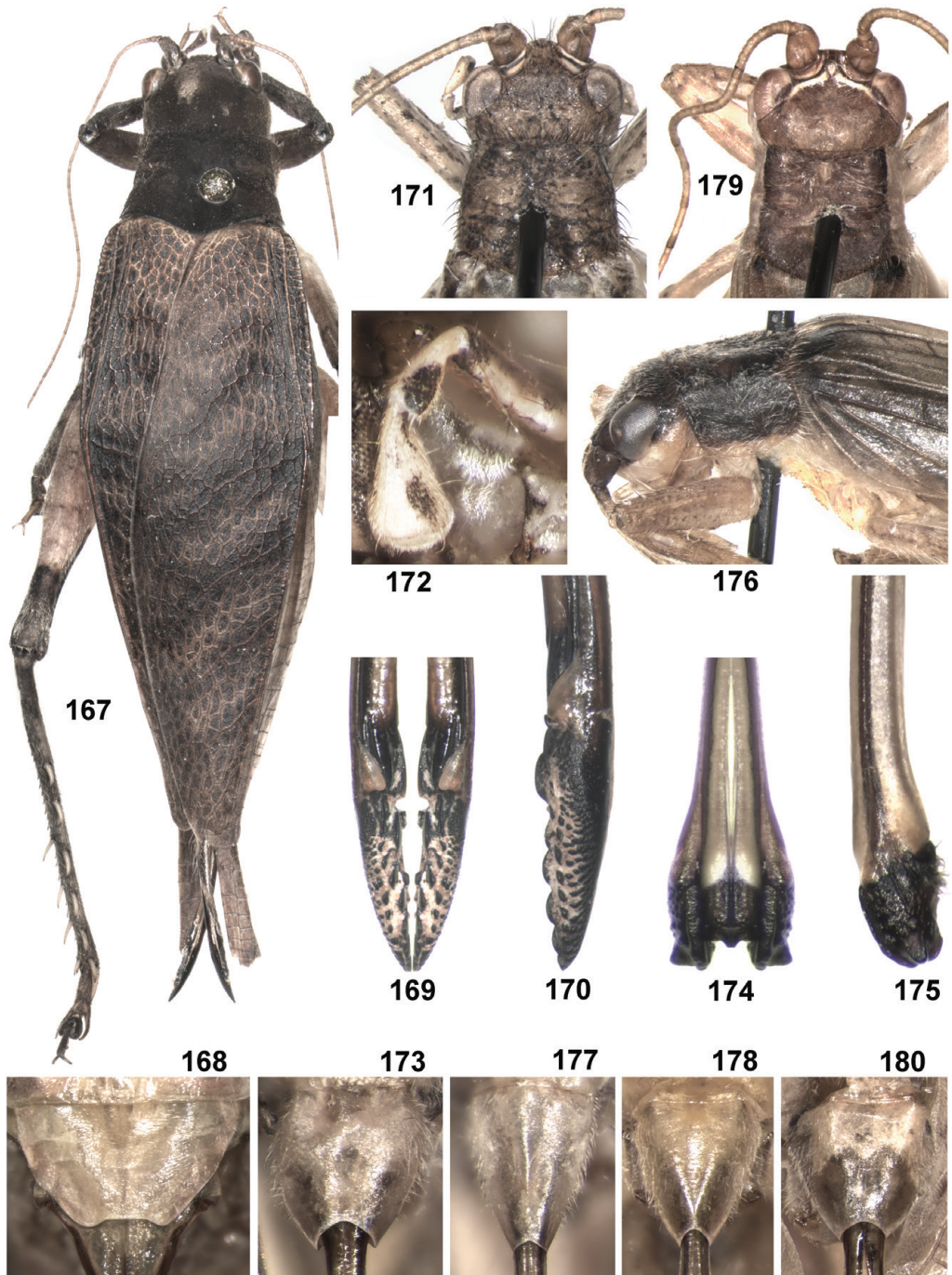
(Figs 162, 163)

Material studied. **Peru:** 1 male (holotype), Junin Department, Satipo Prov., ~25 km SE of Satipo Town near Rio Venado Vill., ~1200 m, primary/secondary forest, 20–23.X.2008, A. Gorochov, M. Berezin, L. Anisyutkin, E. Tkatsheva, V. Izersky (ZIN); 2 males, same province, 12 km N of Satipo Town, protected area “Concesion de Conservacion de la Universitaria”, 11.2031563°S, 74.61914062°W, ~600 m, secondary/primary forest, at light, 25–27.XI.2017, A. Gorochov, G. Irisov (ZIN).

Note. This subspecies is described from the one male mentioned above. It is here recorded from another locality (near Satipo



Figs 156–166. Hapithini, male: 156, 157, *Spiraphonus asymmetricus longiapex* subsp. nov.; 158–160, *S. a. asymmetricus* Gor.; 161, *S. a. napo* Gor.; 162, 163, *S. spiralis junin* Gor.; 164, 165, *S. s. spiralis* Gor.; 166, *S. deceptor* (Chop.). Dorsal epiphallus, anterodorsal view (156, 158); distal part of rachis from below and slightly laterally (157, 159, 161); genitalia from above and slightly laterally (160, 165); distal part of rachis from above (162, 163, 164); genitalia from above (166).



Figs 167–180. Hapithini (167–170) and Aphonoidini (171–180), female: 167–170, *Phyllogryllus crassus* sp. nov.; 171–175, *Diatrypa* (?) *intersecta* sp. nov.; 176, 177, *D. (Diatrypa) decora decora* Gor.; 178, *D. (D.) signata* sp. nov.; 179, 180, *D. (Latispeculum) venado* Gor. Body from above (167); genital plate from below (168, 173, 177, 178, 180); head with pronotum from above (171, 179) and from side (176); distal half of maxillary palpus from side (172); distal part of ovipositor from below (reconstructed view) (169, 174) and from side (170, 175).

Town). Males from the new and type localities have insignificant differences in the shape of rachial apex (see Figs 162 and 163).

****Spiraphonus spiralis spiralis***

Gorochov, 2010
(Figs 164, 165)

Material studied. Peru: 1 male (holotype), Ucayali Department, Atalaya Prov., ~35 km NWW of Atalaya Town on Rio Ucayali, environs of Sapani Vill., ~300 m, primary forest, 26–31.X.2008, A. Gorochov, M. Berezin, L. Anisyutkin, E. Tkatsheva, V. Izersky (ZIN).

Note. This subspecies is known from its type locality only. It differs from *S. s. junin* mainly in the sclerotized plate of rachial apex narrower (see Figs 162, 163 and 164).

Spiraphonus deceptor (Chopard, 1956)
(Figs 166)

Note. It is known from one place in Peru (Chopard, 1956: “Pucallpa, Rio Ucayali”). Probably it is related to *S. spiralis* but clearly distinguished from the latter species by different shape of some male genital structures: epiphallus, left ectoparamere, rachis, endoparameral apodemes and formula (see Figs 165 and 166).

Aenigmaphonus specialisatus
Gorochov, 2010

Material studied. Peru: 1 male (holotype), Loreto Department, bank of Rio Morona near its mouth and not far from Puerto America Town, ~200 m, primary/secondary forest, 20–23.I.2010, A. Gorochov (ZIN).

Note. This species is known from its type locality only.

Subtribe **HAPITHINA** Gorochov, 1986

****Somnambula ucayali*** Gorochov, 2017

Material studied. Peru: 1 female (holotype), Ucayali Department, Atalaya Prov., Atalaya Town on Ucayali River, ~200 m, on branch of bush near river at night, when preparing for oviposition, 25–26.X.2008, A. Gorochov (ZIN).

Note. The species is described from the one female mentioned above.

Gryllophyllus magnispeculum
Gorochov, 2017

Material studied. Ecuador: 1 female (paratype), Morona Santiago Prov., bank of Morona River near border with Peru, environs of Puerto Morona Vill., ~300 m, primary forest, at light, 5–15.I.2010, A. Gorochov (ZIN).

Note. This species was described from two Ecuadorian specimens (male and female). One of them (female) was collected almost on the border with Peru.

****Phyllogryllus crassus* sp. nov.**
(Figs 136–138, 167–170)

Holotype. Female, **Peru**, Junin Department, Satipo Prov., 12 km N of Satipo Town, protected area “Concesion de Conservacion de la Universitaria”, 11.2031563°S, 74.61914062°W, ~600 m, secondary/primary forest, on bark of tree trunk at night, 25–27.XI.2017, A. Gorochov, G. Irisov (ZIN).

Paratype. One female, same province, Rio Tambo Distr., 6 km N of Pichiguia Vill., protected area “Reserva Comunal Ashaninka”, 11.358244°S, 74.0320473°W, ~500 m, primary forest, on bark of tree trunk at night, 14–23.XI.2017, A. Gorochov, G. Irisov (ZIN).

Description. Female (holotype). General appearance similar to that of *Ph. robustus* Gor. and *Ph. velutinius* (Walk.). Colouration rather dark: head (Fig. 136) greyish brown with dorsum behind eyes uniformly blackish, eyes spotted, ocelli and small spaces between them as well as between lateral ocelli and eyes whitish, small areas on epicranium along clypeal suture and on lower half of each gena light greyish brown, mouthparts also light greyish brown but having darkish areas on upper half of clypeus and wore or less darkened three distal segments of maxillary palpus (Fig. 137), and antenna light brown with greyish brown scape (basal part of scape somewhat lighter); pronotum with almost uniformly blackish disc and greyish brown lateral lobes (lower halves of these lobes almost light greyish brown); tegmina

with dorsal field having blackish membranes and brown to almost light greyish brown venation (darker parts of this venation forming six oblique bands; Fig. 167), and with lateral field having greyish brown area between *Sc* and *R* as well as slightly lighter areas between *Sc* branches (latter areas with almost whitish sparse dots, and venation of this field from greyish brown to almost light greyish brown; Fig. 138); hind wings with distal parts darkened; legs with yellowish coxae and trochanters, light greyish brown proximal part of fore femur and proximal half of middle femur as well as most part of hind femur, greyish brown rest of fore and middle femora, blackish distal part of hind femur (this femur also with blackish stripe along outer ventral keel and two distinct dots in median part of outer surface), and almost blackish all tibiae and tarsi (but spines and spots on dorsal surface of hind tibia light, and some areas on tarsi greyish brown to light greyish brown); venter of body yellowish; cerci light greyish brown; ovipositor yellowish with blackish longitudinal line on each lateral side and partly blackish distal part (Figs 169, 170). Body rather high and thick; head high and almost without rostrum; space between antennal cavities approximately 1.5 times as wide as scape; ocelli forming almost straight transverse stripe (lateral ocelli transversally oval; median one almost in shape of narrow transverse ribbon; spaces between ocelli and between each lateral ocellus and eye very small); eyes in relation to head size not large (Fig. 136), maxillary palpus rather short, with apical segment as in Fig. 137; pronotum as in *Ph. robustus* in shape, i. e. lateral lobes high (Fig. 138), and disc as in Fig. 167; tegmina long, with dorsal field having dense irregular (cellular) venation (only some longitudinal veins of this field visible; Fig. 167) as well as with lateral field having moderately wide *Sc-R* area (its crossvenation dense and cellular; Fig. 138) and 14–15 branches of *Sc* (crossveins between them very dense but more or less regular; Fig. 138); hind wings distinctly protruding beyond tegminal api-

ces; legs rather short and thick, with outer tympanum moderately large and oval, with inner tympanum almost slit-like and somewhat longer but poorly visible (partly hidden by hairs), with hind femur moderately thickened in proximal two thirds, with hind tibia having six inner dorsal spines and four outer ones as well as numerous denticles mainly on outer dorsal keel, and with hind basitarsus having two dorsolateral and one dorsomedial denticles (these denticle rather large but much smaller than very long apical spurs of this tarsal segment; Fig. 167); genital plate as in Fig. 168; ovipositor with distal part as in Figs 169, 170.

Variations. Second female lighter: dorsum of both head and pronotum uniformly greyish brown, almost as middle parts of epicranium and pronotal lateral lobe in colour (lower half of this lobe not lighter than upper one); fore and middle femora with lighter proximal half and proximal two thirds, respectively; middle tibia also with distal half light greyish brown; tegmina with membranes from greyish brown to light brown (all membranes of lateral field light brown) and with venation light brown to almost greyish/yellowish (oblique stripes of dorsal field less distinct).

Male unknown.

Length in mm. Body 18.5–20; body with wings 32–34; pronotum 3.8–4; tegmina 21.5–23; hind femora 12.8–13.2; hind tibiae 13–13.4; ovipositor 13.5–14.5.

Comparison. The new species is clearly distinguished from *Ph. robustus* by the head dorsum more uniformly coloured (without stripes and anteromedian spot), oblique stripes of dorsal tegminal field more numerous, traces of longitudinal veins in the proximal half of this field more transverse, absence of darkened median stripe on the outer surface of hind femur, darker tibiae, and less transverse female genital plate. From *Ph. velutinus*, the new species differs in the ovipositor somewhat shorter, and from *Ph. pipilans* Sauss., in the ocelli much smaller and not fused with each other, as well as in the tegminal *Sc-R* area having dense cellular

crossvenation (*Ph. pipilans* has this area narrower and with the crossveins sparser and almost regular, and may belong to another genus of this subtribe).

Etymology. Name of the new species is the Latin word “crassus” (thick).

Subtribe **CEARACESAINA**

Koçak et Kemal, 2010

Cearacesa morona Gorochov, 2017

Material studied. **Ecuador:** 1 male (holotype), Morona Santiago Prov., bank of Morona River near border with Peru, environs of Puerto Morona Vill., ~300 m, primary forest, at light, 5–15.I.2010, A. Gorochov (ZIN).

Note. This species must be distributed in Peru also, because its type locality is situated almost on the border between Ecuador and Peru.

****Cearacesa satipo*** Gorochov, 2017

Material studied. **Peru:** 1 female (holotype), Junin Department, Satipo Prov., ~25 km SE of Satipo Town, environs of Rio Venado Vill., ~1200 m, primary/secondary forest, at light, 20–23.X.2008, A. Gorochov, M. Berezin, L. Anisyutkin, E. Tkatsheva, V. Izerskyy (ZIN).

Note. Only one specimen (holotype) of this species is known (Gorochov, 2017).

****Taroba peru*** Gorochov, 2017

Material studied. **Peru:** 2 males (holotype and paratypes) and 3 females (paratypes), Junin Department, Satipo Prov., ~25 km SE of Satipo Town, environs of Rio Venado Vill., ~1200 m, primary/secondary forest, at light, 20–23.X.2008, A. Gorochov, M. Anisyutkin, E. Tkatsheva, V. Izerskyy (ZIN); 2 females, same locality, but 6–9.XII.2017, A. Gorochov, G. Irisov (ZIN); 1 male and 1 female (paratypes), same province, forest-like garden in environs of Satipo Town, ~600 m, light trap, 15.X–6.XI.2008, A. Gorochov, M. Anisyutkin, E. Tkatsheva, V. Izerskyy (ZIN); 2 males and 3 females (paratypes), same province, ~35 km NE of Satipo Town, environs of Mariposa Vill., ~1200 m, primary/secondary forest, at light, 17–18.X.2008, A. Gorochov, M. Anisyutkin, E. Tkatsheva, V. Izerskyy (ZIN); male and female (paratypes), same country, Ucayali Department, Atalaya Prov., ~35 km NWW of

Atalaya Town on Ucayali River, environs of Sapani Vill., ~300 m, primary/secondary forest, at light, 26–31.X.2008, A. Gorochov, M. Anisyutkin, E. Tkatsheva, V. Izerskyy (ZIN).

Note. All these specimens originate from the same localities which were indicated in the original description of this species (Gorochov, 2017).

****Taroba dea dea*** Gorochov, 2017

Material studied. **Peru:** 1 male (holotype), Ucayali Department, Atalaya Prov., ~35 km NWW of Atalaya Town on Ucayali River, environs of Sapani Vill., ~300 m, primary/secondary forest, at light, 26–31.X.2008, A. Gorochov, M. Anisyutkin, E. Tkatsheva, V. Izerskyy (ZIN).

Note. Only one specimen of this subspecies is known.

Taroba dea ecuador Gorochov, 2017

Material studied. **Ecuador:** 2 females (paratypes), Morona Santiago Prov., bank of Morona River near border with Peru, environs of Puerto Morona Vill., ~300 m, primary forest, at light, 5–15.I.2010, A. Gorochov (ZIN).

Note. This subspecies is distributed in Ecuador including a locality almost on the border between Ecuador and Peru. Thus, it must be presented in Peru also.

Taroba? variegata abbreviata

Gorochov, 2017

Material studied. **Ecuador:** 1 female (holotype), Morona Santiago Prov., bank of Morona River near border with Peru, environs of Puerto Morona Vill., ~300 m, primary forest, at light, 5–15.I.2010, A. Gorochov (ZIN).

Note. This subspecies was also described from a locality on the border between Ecuador and Peru.

Tribe **APHONOIDINI** Gorochov, 1986

Subtribe **DIATRYPINA** Desutter, 1988

****Diatrypa (Diatrypa) signata***

Gorochov, 2013

(Fig. 178)

Material studied. **Peru:** 6 males (holotype and paratypes), Junin Department, Satipo Prov.,

~25 km SE of Satipo Town, environs of Rio Venado Vill., ~1200 m, primary/secondary forest, at light, 20–23.X.2008, A. Gorochov, M. Berezin, L. Anisyutkin, E. Tkatsheva, V. Izersky (ZIN); 2 males and 1 female, same data, but 6–9.XII.2017, A. Gorochov, G. Irisov (ZIN); 1 male, same province, environs of Satipo Town, ~800 m, forest near waterfall, at light, 4–6.XI.2008, A. Gorochov, M. Berezin, L. Anisyutkin, E. Tkatsheva, V. Izersky (ZIN); 12 males and 2 females, same province, Rio Tambo Distr., 6 km N of Pichiguia Vill., protected area “Reserva Comunal Ashaninka”, 11.358244°S, 74.0320473°W, ~500 m, primary forest, at light, 14–23.XI.2017, A. Gorochov, G. Irisov (ZIN).

Description. Female (nov.). General appearance typical of this subgenus. Colouration light brown with antennae and lower half of head lighter (more or less yellowish but with barely distinct sparse and small darkish spots on flagellum), with eyes from greyish to almost greyish brown, with pronotum barely darker than epicranial dorsum (uniformly light greyish brown), with tegmina also light greyish brown but slightly lighter than pronotum and having distinct or poorly distinct darkened (from dark brown to almost brown) spot at base of each dorsal field, with yellowish to light brown legs having barely darker proximal part of hind tibia, and with body venter and cerci yellowish. Head almost not depressed dorsoventrally, with almost angular rostrum in profile, with scape barely wider than space between antennal cavities, and without ocelli; wings long; hind wings distinctly protruding beyond tegminal apices; dorsal tegminal field with 8–10 longitudinal veins and rather sparse crossveins; lateral tegminal field with 7–9 branches of *Sc* (these branches obliquely longitudinal), almost without crossveins between them and with sparse crossveins in *Sc-R* area; genital plate as in Fig. 178; ovipositor with distal part similar to that from Figs 174, 175.

Male. For its description (including illustrations and data on genitalia) see Gorochov (2013).

Length in mm. Body: male 8.5–10, female 7.8–8.2; body with wings: male 13.5–

15, female 13.2–14.8; pronotum: male 1.5–1.8, female 1.6–1.8; tegmina: male 9–11, female 8.5–10; hind femora: male 6–7, female 5.8–6.7; hind tibiae: male 5.2–6, female 5–5.8; ovipositor 6–6.9.

****Diatrypa (Diatrypa) decora decora***

Gorochov, 2013

(Figs 176, 177)

Material studied. **Peru:** 4 males (holotype and paratypes), Junin Department, Satipo Prov., ~25 km SE of Satipo Town, environs of Rio Venado Vill., ~1200 m, primary/secondary forest, at light, 20–23.X.2008, A. Gorochov, M. Berezin, L. Anisyutkin, E. Tkatsheva, V. Izersky (ZIN); 1 female, same province, 18 km N of Satipo Town, forest in environs of waterfall “Cinco Cascadas” near Paratushali Vill., 11.283812°S, 74.713915°W, ~800 m, on leaf of bush at night, 28–30.XI.2017, A. Gorochov, G. Irisov (ZIN); 1 female, same province, 12 km N of Satipo Town, protected area “Concesion de Conservacion de la Universitaria”, 11.2031563°S, 74.61914062°W, ~600 m, secondary/primary forest, at light, 25–27.XI.2017, A. Gorochov, G. Irisov (ZIN); 1 female, same province, Rio Tambo Distr., 6 km N of Pichiguia Vill., protected area “Reserva Comunal Ashaninka”, 11.358244°S, 74.0320473°W, ~500 m, primary forest, at light, 14–23.XI.2017, A. Gorochov, G. Irisov (ZIN).

Description. Female (nov.). General appearance similar to that of male: head more or less contrastingly coloured, i.e. yellowish in lower half and darkened in upper half (but latter part varied from uniformly dark brown to brown with large light brown dorsal area); pronotum with disc from dark brown to almost light brown and with lateral lobes dark brown or brown but having light stripe or band along ventral edges (Fig. 176); tegmina long, uniformly greyish brown or almost light greyish brown but with small dark spot at base of dorsal field; tegminal field with 7–8 longitudinal veins and sparse regular crossveins; lateral field with 6–8 oblique *Sc* branches (areas between them almost transparent and without crossveins) and sparse crossveins in *Sc-R* area; legs and venter of body yellowish to light brown, almost uniform; genital

plate as in Fig. 177; ovipositor long, with distal part typical of this genus (almost as in Figs 174, 175).

Male. For its characters see Gorochov (2013).

Length in mm. Body: male 9–9.5, female 7–8.5; body with wings: male 14.3–14.8, female 13.5–14.8; pronotum: male 1.6–1.9, female 1.7–1.9; tegmina: male 9–10, female 9–9.5; hind femora: male 6–6.5, female 6.2–6.6; hind tibiae: male 5.4–5.7, female 5.3–5.5; ovipositor 5.7–6.

Diatrypa (Diatrypa) decora morona

Gorochov, 2013

Material studied. **Peru:** 1 female (paratype), bank of Rio Morona approximately at middle of distance between mouth of this river and its Ecuadorian part, 200–300 m, primary forest, at light, 24–27.I.2010, A. Gorochov (ZIN). **Ecuador:** 1 male (holotype) and 3 females (paratypes), Morona Santiago Prov., bank of Rio Morona near border with Peru, environs of Puerto Morona Vill., ~300 m, primary forest, at light, 5–15.I.2010, A. Gorochov (ZIN).

Note. This subspecies differs from the previous subspecies in the structure of male abdominal gland. Its range is located to the north of the range of nominotypical subspecies.

****Diatrypa (Diatrypa) diluta***

Gorochov, 2013

Material studied. **Peru:** 3 males (holotype and paratypes), Junin Department, Satipo Prov., ~25 km SE of Satipo Town, environs of Rio Venado Vill., ~1200 m, primary/secondary forest, at light, 20–23.X.2008, A. Gorochov, M. Berezin, L. Anisyutkin, E. Tkatsheva, V. Izersky (ZIN); 2 males, Ucayali Department, Atalaya Prov., Atalaya Town on Rio Ucayali, ~200 m, at light in hotel, 25–26.XI.2008, A. Gorochov (ZIN).

Note. The species is known only from its type series listed above, but it might be indicated for Peru (Chopard, 1956: “Pucallpa” and “Tingo Maria”) as *D. pallidilabris* Chop. originally described from French Guiana.

****Diatrypa (Latispeculum) satipo***

Gorochov, 2013

Material studied. **Peru:** 1 male (holotype), Junin Department, Satipo Prov., environs of Satipo Town, ~800 m, forest near waterfall, at light, 4–6.XI.2008, A. Gorochov, M. Berezin, L. Anisyutkin, E. Tkatsheva, V. Izersky (ZIN).

Note. Only a single specimen of this species is known.

****Diatrypa (Latispeculum) venado***

Gorochov, 2013

(Figs 179, 180)

Material studied. **Peru:** 1 male (holotype), Junin Department, Satipo Prov., ~25 km SE of Satipo Town, environs of Rio Venado Vill., ~1200 m, primary/secondary forest, on leaf of bush, at night, 20–23.X.2008, A. Gorochov, M. Berezin, L. Anisyutkin, E. Tkatsheva, V. Izersky (ZIN); 1 female, same province, Rio Tambo Distr., 6 km N of Pichiguia Vill., protected area “Reserva Comunal Ashaninka”, 11.358244°S, 74.0320473°W, ~500 m, primary forest, at light, 14–23.XI.2017, A. Gorochov, G. Irisov (ZIN).

Description. Female (nov.). Body dorsoventrally depressed as in male. Colouration characteristic: head dorsum light brown with blackish V-shaped line located near antennal cavities and posteriorly bordered by whitish narrow stripes (Figs 179); rest of head yellowish to whitish but with light brown eyes and antennae (ocelli indistinct, but traces of median ocellus visible as small whitish spot between above-mentioned whitish stripes); pronotum with brown disc and light brown to yellowish lateral lobes; tegmina light brown with barely darker longitudinal veins in dorsal field and almost transparent membranes of lateral field; dorsal tegminal field with 11–12 somewhat oblique longitudinal veins and rather numerous and regular crossveins; venation of lateral tegminal field similar to that of female of *D. d. decora* but with 12–14 *Sc* branches; legs and venter of body yellowish with a few brown dots and small spots on middle and hind femora and tibiae; genital plate as in Fig. 180; ovipositor more or less similar to that of *D. d. decora*.

Male. General appearance similar to that of female, but light stripes on epicranial dorsum (which whitish in female) less distinct, almost pinkish; for other characters see Gorochov (2013).

Length in mm. Body: male 9.5, female 9; body with wings: male 17, female 16; pronotum: male 2.3, female 2.2; tegmina: male 13, female 11.8; hind femora: male 7.5, female 7.2; hind tibiae: male 6.9, female 6.5; ovipositor 7.

Diatrypa (Latispeculum) brevis

Gorochov, 2013

Material studied. **Peru:** 1 male (holotype) and 1 female (paratype), bank of Rio Morona approximately at middle of distance between mouth of this river and its Ecuadorian part, 200–300 m, primary forest, on leaf of small tree at night, 24–27.I.2010, A. Gorochov (ZIN).

Note. The species is known only from its type locality.

****Diatrypa (Latispeculum) dentata***

Gorochov, 2013

Material studied. **Peru:** 1 male (holotype) and 1 female (paratype), Junin Department, Satipo Prov., ~25 km SE of Satipo Town, environs of Rio Venado Vill., ~1200 m, primary/secondary forest, at light, 20–23.X.2008, A. Gorochov, M. Berezin, L. Anisyutkin, E. Tkatsheva, V. Izersky (ZIN).

Note. This species is also known from one locality only.

Diatrypa (Latispeculum) nikitai

Gorochov, 2013

Material studied. **Peru:** 1 male (holotype), 57 km from Iquitos City (between Puente Itaya and San Jaquin), along road near Rio Amazon, 3.II.2006, N. Kluge (ZIN).

Note. Only a single specimen of this species is known.

Diatrypa (Latispeculum) allardi

Chopard, 1956

Note. This species is known from one male (Chopard, 1956: “Tingo Maria, Peru”).

Diatrypa (Latispeculum) latipennis

Chopard, 1956

Note. The species is also known from one male collected in the same locality (“Tingo Maria”).

Diatrypa (Latispeculum) schunkei

Chopard, 1956

Note. Only a single male of this species is known (Chopard, 1956: “Pucallpa, Rio Ucuyali, Peru”).

****Diatrypa* (subgenus?) *intersecta* sp. nov.**

(Figs 139, 171–175)

Holotype. Female, **Peru**, Junin Department, Satipo Prov., ~25 km SE of Satipo Town, environs of Rio Venado Vill., 11.11552°S, 74.46307°W, 1000–1200 m, primary/secondary forest, at light, 6–9.XII.2017, A. Gorochov, G. Irisov (ZIN).

Paratype. One female, same province, Rio Tambo Distr., 6 km N of Pichiguia Vill., protected area “Reserva Comunal Ashaninka”, 11.358244°S, 74.0320473°W, ~500 m, primary forest, at light, 14–23.XI.2017, A. Gorochov, G. Irisov (ZIN).

Description. Female (holotype). Body dorsoventrally depressed (especially head) and variegate in colouration. Head (Figs 139, 171) with light brown dorsum (including rostral apex) having dark brown lines along dorsal edges of antennal cavities as well as brown area between posterodorsal parts of antennal cavities and middle parts of eyes, with lighter (light greyish) lower half of epicranium having a pair of vertical rows of darkish dots between antennal cavities as well as darkened line under each eye and antennal cavity (this line continuing as darkish longitudinal stripe on gena behind eye), with whitish membrane of each antennal cavity having dark transverse stripe on upper part (but not along dorsal edge of this cavity; Fig. 171), with greyish eye having yellowish transverse stripe bordered by two dark lines (upper and lower), with yellowish mouthparts having small darkish marks

on upper part of clypeus and a few darkish spots on maxillary palpi (Fig. 172), and with yellowish antenna having light brown scape and pedicel (but scape with darkish ventral spot). Pronotum light brown with brown and dark brown pattern as in Figs 139, 171. Tegmina light greyish brown with darkened (greyish brown) proximal half of *Sc-R* area (Fig. 139); distal parts of hind wings greyish brown. Legs yellowish with following greyish brown and brownish marks: fore and middle femora with a pair of dark lines along outer and inner ventral keels as well as with sparse small darkish dots on outer side of fore femur and somewhat larger and darker marks on inner side of this femur and on both sides of middle femur; hind femur with numerous dark dots on outer side (these dots forming several oblique rows) and sparser ones on inner side; fore tibia with sparse and small darkish marks; middle tibia with dark rather large subbasal and subapical spots and a few small spots near them; hind tibia light brown with darkish proximal third as well as dark middle part of dorsal surface and dark brown distal part (dorsal surface also with light small basal part, and subdistal tibial part almost yellowish); tarsi yellowish with darkened parts of second segments in fore and middle legs as well as whitish hind basitarsus having apical part and second segment completely darkened (Fig. 139). Body venter and ovipositor yellowish, but latter structure with small black apical part and a pair of longitudinal brownish lines on lateral sides. Structure of body with following peculiarities: head rostrum distinctly angular in profile; ocelli undeveloped; eyes low but elongated (longer than wide); mouthparts very short, having maxillary palpus as in Fig. 172; pronotum with lateral lobes low, and posterior edge of disc angular (Figs 139, 171); tegmina long, protruding distinctly beyond apices of hind femora, with 9–10 longitudinal veins and sparse regular crossveins in dorsal field, and with 10–11 oblique *Sc* branches and very sparse crossveins in lat-

eral field; hind wings protruding distinctly beyond tegminal apices; outer and inner tympana moderately large and oval (but inner tympanum slightly longer than outer one and barely immersed); genital plate as in Fig. 173; ovipositor rather long and with distal part as in Figs 174, 175.

Variations. Paratype with head dorsum barely lighter and without distinct darkenings under eyes and antennal cavities as well as on rostrum and scapes (but membranes of antennal cavities as in holotype), with pronotal disc almost uniformly light brown, with tegmina having *Sc-R* area completely not darkened, and with legs having femora and tibiae less spotted (ventral keels of femora almost not darkened, and hind tibia light with three small darkish spots on dorsal surface and darkened short apical part).

Male unknown.

Length in mm. Body 8–8.5; body with wings 13.5–14.2; pronotum 1.8–1.9; tegmina 9.2–9.5; hind femora 6.2–6.4; hind tibiae 5.5–5.7; ovipositor 6.3–6.5.

Comparison. The new species has the membranes of antennal cavities similar to those of *D. (L.) brevis* in the colouration, but it differs from the latter species in the head lower as well as wings and ovipositor distinctly longer. From the congeners with the similar shape of head, *D. intersecta* is distinguished by the different colouration (including the presence of stripes on the membranes of antennal cavities) or location of these stripes not along the dorsal edges of antennal cavities (from *D. striata* Gor.).

Etymology. Name of this species is the Latin word “intersecta” (crossed), because its antennal cavities have the membranes crossed by dark stripes.

Diatrypa (subgenus?) *striata*

Gorochov, 2013

Material studied. **Peru:** 1 female (holotype), 57 km from Iquitos City (between Puente Itaya and San Juan), along road near Rio Amazon, 3.II.2006, N. Kluge (ZIN). **Ecuador:** 1 female (paratype), Morona Santiago Prov., bank of Rio Morona near border with Peru, environs of

Puerto Morona Vill., ~300 m, primary forest, at light, 5–15.I.2010, A. Gorochov (ZIN).

Note. These females have the body colouration somewhat different, and they may belong to two different subspecies (Gorochov, 2013).

Diatrypa* (subgenus?) *lineata

Gorochov, 2013

Material studied. **Ecuador:** 1 female (holotype), Morona Santiago Prov., bank of Rio Morona near border with Peru, environs of Puerto Morona Vill., ~300 m, primary forest, at light, 5–15.I.2010, A. Gorochov (ZIN).

Note. This species was described from a locality situated almost on the border with Peru.

****Diatrypa* (subgenus?) *variegata***

Gorochov, 2013

Material studied. **Peru:** 1 female (holotype), Junin Department, Satipo Prov., ~25 km SE of Satipo Town, environs of Rio Venado Vill., ~1200 m, primary/secondary forest, at light, 20–23.X.2008, A. Gorochov, M. Berezin, L. Anisyutkin, E. Tkatsheva, V. Izersky (ZIN).

Note. Only a single female of this species is known.

****Diatrypa* (subgenus?) *volodymyri***

Gorochov, 2013

Material studied. **Peru:** 1 female (holotype), forest-garden in Satipo Town, at light, 15.X–6.XI.2008, A. Gorochov, M. Berezin, L. Anisyutkin, E. Tkatsheva, V. Izersky (ZIN).

Note. This species, named in honor of V. Izersky, is known from one place only.

Diatrypa* (subgenus?) *minuta

Chopard, 1956

Note. Only a single female having “elytra dark brown with a whitish band along the edge” is known (Chopard, 1956: “Tingo Maria, Peru”).

PODOSCIRTINAE incertae sedis

****Dicerorostrum dicerus* Gorochov, 2017**

Material studied. **Peru:** 1 male (holotype), Junin Department, Satipo Prov., ~25 km SE

of Satipo Town, environs of Rio Venado Vill., ~1200 m, primary/secondary forest, on branch of tree at night, 20–23.X.2008, A. Gorochov, M. Berezin, L. Anisyutkin, E. Tkatsheva, V. Izersky (ZIN).

Note. This species was described from one male only. It has the very characteristic conical and elongated rostrum with a pair of tubercles at the apex.

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