

**Taxonomy of Podoscirtinae (Orthoptera: Gryllidae).****Part 9: the American tribe Paroecanthini****Таксономия подсемейства Podoscirtinae (Orthoptera: Gryllidae).****Часть 9: американская триба Paroecanthini**

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Systematic position and composition of the endemic American tribe Paroecanthini are discussed. This tribe is divided into two subtribes: Paroecanthina **stat. nov.** (from Paroecanthini Gorochov, 1986) and Tafaliscina **stat. nov.** (from Tafaliscinae Desutter, 1988). Five new genera, 24 new species and 6 new subspecies are described. Systematic position and distribution of true and possible taxa of Paroecanthini are clarified, and some of these taxa are redescribed. *Orocharis eclectos* Otte, 2006, **syn. nov.** is synonymised with *Paroecanthus mexicanus* Saussure, 1859 which is restored as type species of *Paroecanthus* Saussure, 1859 according to original monotypy of this genus. *Orocharis signatus* Walker, 1869 and *Carsidava* Walker, 1869 are excluded from synonymy of *P. mexicanus* and *Paroecanthus*, respectively. *Orocharis signatus* is considered to be a probable synonym of *P. aztecus aztecus* Saussure, 1874. *Carsidava* and *Chremon* Rehn, 1930, **syn. nov.** are considered possible and evident synonyms of *Ectotrypa* Saussure, 1874, respectively. *Angustitrella vicina* (Chopard, 1912), **sp. resurr.** and *A. picipes* (Bruner, 1916), **sp. resurr.** are restored from synonymy of *A. podagrosa* (Saussure, 1897) and *Siccotrella niger* (Saussure, 1874), respectively. Lectotype of *Amblyrhetus brevipes* (Saussure, 1878) and type species of *Metrypa* Brunner-Wattenwyl, 1873 (*Tafalisca lurida* Walker, 1869) are designated. *Pseudogryllus* Chopard, 1912, **gen. resurr.** is restored from synonymy of *Tafalisca* Walker, 1869.

Обсуждены систематическое положение и состав эндемичной американской трибы Paroecanthini. Эта триба подразделяется на две подтрибы: Paroecanthina **stat. nov.** (от Paroecanthini Gorochov, 1986) и Tafaliscina **stat. nov.** (от Tafaliscinae Desutter, 1988). Описаны 5 новых родов, 24 новых вида и 6 новых подвидов. Выяснены систематическое положение и распространение настоящих и возможных таксонов Paroecanthini, и некоторые из этих таксонов переописаны. *Orocharis eclectos* Otte, 2006, **syn. nov.** синонимизирован с *Paroecanthus mexicanus* Saussure, 1859, который восстанавливается как типовой вид *Paroecanthus* Saussure, 1859 в связи с оригинальной монотипией этого рода. *Orocharis signatus* Walker, 1869 и *Carsidava* Walker, 1869 исключаются из синонимии *P. mexicanus* и *Paroecanthus* соответственно. *Orocharis signatus* предлагается считать вероятным синонимом *P. aztecus aztecus* Saussure, 1874. *Carsidava* и *Chremon* Rehn, 1930, **syn. nov.** рассматриваются как возможный и явный синонимы *Ectotrypa* Saussure, 1874 соответственно. *Angustitrella vicina* (Chopard, 1912), **sp. resurr.** и *A. picipes* (Bruner, 1916), **sp. resurr.** исключаются из синонимии *A. podagrosa* (Saussure, 1897) и *Siccotrella niger* (Saussure, 1874) соответственно. Лектотип *Amblyrhetus brevipes* (Saussure, 1878) и типовой вид для *Metrypa* Brunner-Wattenwyl, 1873 (*Tafalisca lurida* Walker, 1869) обозначаются. *Pseudogryllus* Chopard, 1912, **gen. resurr.** восстанавливается из синонимии *Tafalisca* Walker, 1869.

**Key words:** America, taxonomy, Orthoptera, Gryllidae, Podoscirtinae, Paroecanthini, new taxa

**Ключевые слова:** Америка, таксономия, Orthoptera, Gryllidae, Podoscirtinae, Paroecanthini, новые таксоны

## INTRODUCTION

This paper is the ninth communication in the series of publications on taxonomy of Podoscirtinae. In the previous communications, the tribes Podoscirtini and Aphonoidini from Old World (Gorochov, 2002, 2003, 2004, 2005, 2006, 2007, 2008) as well as Podoscirtini from New World (Gorochov, 2010) were discussed.

Most part of the material examined (including the type series of all new species) is deposited at the Zoological Institute, Russian Academy of Sciences, St Petersburg (ZIN). But some specimens are from the following institutions: Museum für Naturkunde der Humboldt-Universität, Berlin (MNH); Museum and Institute of Zoology, Polish Academy of Sciences, Warsaw (MIZ).

Majority of specimens studied were collected in tropical forests at night, on leaves of trees and bushes or at light. However some species were collected in less usual conditions which will be briefly characterised for each such species.

## TAXONOMIC PART

The brief characteristics of Podoscirtinae and differences of this subfamily from Eneopterinae are given in the preceding communication of this series (Gorochov, 2010). Here it is necessary to mention only a problem with the tribe Paroecanthini Gorochov, 1986. This tribe was originally included in Podoscirtinae (Gorochov, 1986), but Desutter (1987, 1988) put Paroecanthini in Eneopterinae (=Eneopteridae sensu Desutter). She considered that Podoscirtinae and Eneopterinae are families, and created the subfamily Tafaliscinae Desutter, 1988 with Paroecanthini as one of her tribes of Tafaliscinae. These her actions are not very understandable, because Podoscirtinae and Eneopterinae are very different groups having only weak convergent similarity connected with the adaptation to life on leaves of plants (Gorochov, 2010), and Paroecanthini does not have any characters allowing

us to transfer this tribe from Podoscirtinae to Eneopterinae.

### Tribe **PAROECANTHINI** Gorochov, 1986

A most characteristic feature of this tribe is the unique structure of ovipositor which is dorsoventrally flattened and with the distal part strongly flattened and having small denticles on the lateral edges of valves (Figs I: 103; II: 3, 7, 10; IX: 4, 9, 17, 18, 21; XV: 7, 8, 10, 11, 13, 14, 17, 18, 21–24; XVIII: 7–9; XIX: 7, 8). It is somewhat other type of drilling ovipositor than in all the other taxa of Podoscirtinae; this type is a result of independent specialisation to the oviposition into plant tissues (general ancestor of Podoscirtinae possibly had the ovipositor weakly specialised to such oviposition, but all the members of Eneopterinae have the ovipositor not drilling, adapted to the oviposition into soil or similar loose substrate). Usually small tubercles and low transverse ridges are additionally present on the ventral and /or dorsal surfaces of the ovipositor distal part. However sometimes all drilling denticles and ridges on the ovipositor are partly reduced or practically absent (Figs XVI: 10, 11); such structure may be a result of a return transition from the oviposition into plants to the oviposition into mouldering wood, soil or cracks of bark.

All other external characters of Paroecanthini are typical of Podoscirtinae: head somewhat dorsoventrally depressed and with more or less flattened dorsal area (from rostrum to hind part of vertex), angular or roundly angular rostrum of head in profile, and not very large eyes usually situated near dorsal surface of head; thorax usually with low or moderately low pronotum and often with male metanotal gland typical of Podoscirtinae in structure; all tarsi with very wide second segment; fore and middle legs with very short basitarsus; apical spines (spurs) of hind basitarsi large; stridulatory apparatus of male tegmina (if it well developed) with rather numerous oblique veins, oval or round mirror, and very long arcuate

cell completely or almost completely bordering hind half of mirror (Figs II: 1, 4, 5; VII: 1–5; X; XIV: 9; XV: 3, 9, 12). But in difference from the other taxa of Podoscirtinae, Paroecanthini with such stridulatory apparatus has the lateral part of stridulatory vein clearly S-shaped and lacking any stridulatory teeth, and oblique veins normal (long, weakly sinuate or almost straight, but not zigzag-shaped; Figs I: 4–7).

Male genitalia in this tribe are with some elements reduced. In one group of genera, several genital sclerites are reduced or absent (Figs I: 8–10; IV; XII); in second group of genera, all these sclerites are well developed, but another sclerite (guiding rod) may be reduced (Figs XV: 4–6; XVIII: 1–8). These two groups are considered here as subtribes.

Subtribe **PAROECANTHINA** Gorochov, 1986, **stat. nov.**

This subtribal name originates from the tribe Paroecanthini described earlier (Gorochov, 1986). The subtribe is characterised by the lateral part of male stridulatory vein (lacking stridulatory teeth) long and strongly S-shaped (Figs I: 4–6), male genitalia with several sclerites reduced and/or absent (ectoparameres are often not separated from the epiphallus or practically absent; endoparameres are absent or possibly very small, lacking distinct apodemes and fused with guiding rod; mold of spermatophore attachment plate completely membranous; but guiding rod is not reduced; Figs I: 8–10; IV–VI; VIII; XI: 1–18; XII), and distal part of ovipositor with the acute or narrowly rounded apex (Figs I: 1–3; II: 3, 7, 10; IX: 4, 9, 17, 18, 21).

Paroecanthina includes the following genera: *Paroecanthus* Saussure, 1859; *Siccotrella* **gen. nov.**; *Angustitrella* **gen. nov.**; *Ectotrypa* Saussure, 1874; *Selvagryllus* Otte, 2006.

Genus ***Paroecanthus*** Saussure, 1859

Type species: *Paroecanthus mexicanus* Saussure, 1859.

**Note.** This genus was originally described as *Paroecanthus* for only a single species – *P. mexicanus* described (judging by its name, because geographical data were omitted) from Mexico (Saussure, 1859). So, type species of this genus is *P. mexicanus* by monotypy (!), but not *P. olmecus* Saussure, 1897 which was incorrectly indicated as type of *Paroecanthus* by Kirby (1906) and subsequent authors (Chopard, 1968; Otte, 1994; Otte, Gelabert, 2009; Eades et al, 2011). In one of his later publications, Saussure (1874) changed the name *Paroecanthus* for *Paroecanthus*, because he produced it from the genus *Oecanthus* Audinet-Serville, 1831. The following words present in the first description of Saussure's genus: "Generibus *Occantho* et *Trigonodio* affinis". However there are only two most similar and older generic names of crickets: *Oecanthus* and *Trigonidium*. This is an indication that Saussure's generic name is based on *Oecanthus*, but he or (more probably) typography made some mistakes in the generic names which were corrected by the same author in 1874. Also the name *Paroecanthus* have been used by all the authors since 1874 as a valid generic name proposed in 1859. So, the above-mentioned correction is in accordance to the Code of Zoological Nomenclature: articles 32.5.1 or 33.2.3.1 (International Commission on Zoological Nomenclature, 1999) (as "the Code" elsewhere below).

The genus *Paroecanthus* is characterised by the following characters (Figs I: 4, 8–10; II; III: 1–13; IV; V; VI: 1–9): head is rather short, with the roundly angular (in profile) rostrum narrower than scape, and with the comparatively large lateral ocelli and smaller median ocellus (three these ocelli situated in shape of triangle); pronotum is not very long (distinctly wider than its length) and distinctly or strongly narrowing to head; male metanotal gland is with the middle process transverse and more or less high (Figs III: 1, 5, 7, 9); fore tibiae are hardly or moderately inflated in the tympanal region, with the inner tympanum long, deeply immersed and slit-like, and with the

outer tympanum distinctly shorter (almost round or slightly longitudinal), opened, and weakly immersed; tegmina are long or with the weakly shortened apical area; hind wings are with the rather long or short (but distinct) part exposed behind tegmina; anal and genital plates of both sexes are simple (anal plate is rather small and with the rounded apex; male genital plate is much longer, and its apex similar to previous one; female genital plate is not longer than anal plate, transverse, with the roundly truncate apex); male genitalia are with the epiphallus partly membranous and with the ectoparameres developed or strongly reduced (Figs I: 8–10; IV–VI); distal part of ovipositor is almost triangular and with the numerous denticles on the lateral edges, numerous small transverse ridges on the hind half of its ventral surface and on the lateral parts of basal half of this surface, and a few larger transverse ridges at the middle of this ventral surface and at base of this surface (Figs II: 3, 7, 10), but dorsal surface of ovipositor distal part more smooth (only rather long and weak transverse ridges at base distinct).

*Paroecanthus* contains the following species (named in original binomen): *P. mexicanus* (type species); *P. aztecus* Saussure, 1874 from Mexico; *Orocharis aeschyntelos* Otte, 2006 and *O. habros* Otte, 2006 from Costa Rica; *P. oaxaca* **sp. nov.**; *P. simplex* **sp. nov.**; *P. varius* **sp. nov.**; *P. minor* **sp. nov.**; *P. jalisco* **sp. nov.**; *P. selva* **sp. nov.**; possibly also *O. signatus* Walker, 1869 from Mexico (see Notes after the redescrptions of *P. mexicanus* and *P. aztecus*).

All the other species, included in *Paroecanthus* in the electronic catalogue (Eades et al., 2011), evidently or possibly (1) belong to the genera *Siccotrella* **gen. nov.** (*P. guatemalae* Saussure, 1874; *P. niger* Saussure, 1874; *P. toltecus* Saussure, 1878; *P. sulcatus* Saussure, 1897), *Angustitrella* **gen. nov.** (*P. podagrosus* Saussure, 1897; *P. vicinus* Chopard, 1912; *P. picipes* Bruner, 1916; *P. roosevelti* Rehn, 1917; *P. hesperus* Hebard, 1924; *P. versutus* Otte, 2006), *Ectotrypa* (*Carsidava cinerascens* Walker,

1869; *P. fallax* Saussure, 1874; *P. hwinanus* Otte et Perez-Gelabert, 2009; *P. otaros* Otte et Perez-Gelabert, 2009; *P. scinax* Otte et Perez-Gelabert, 2009; *P. sporadicus* Otte et Perez-Gelabert, 2009; *P. strongylops* Otte et Perez-Gelabert, 2009; *P. valens* Otte et Perez-Gelabert, 2009) and *Selvagryllus* (*P. foraminatus* Saussure, 1878; *P. olmecus* Saussure, 1897; *P. tibialis* Saussure, 1897), (2) must be included in the tribe Diatrypini (*P. desumptus* Otte, 2006; *P. eudoxos* Otte, 2006; *P. exaetos* Otte, 2006; *P. optivus* Otte, 2006; *P. pipizon* Otte, 2006), and (3) are with unknown tribal and generic positions (*O. affinis* Walker, 1869 from Brazil; *P. lituratus* Walker, 1871 from Nicaragua).

***Paroecanthus mexicanus* Saussure, 1859**  
(Figs I: 4, 8–10; II: 1–3; III: 1, 2; V: 1–3)

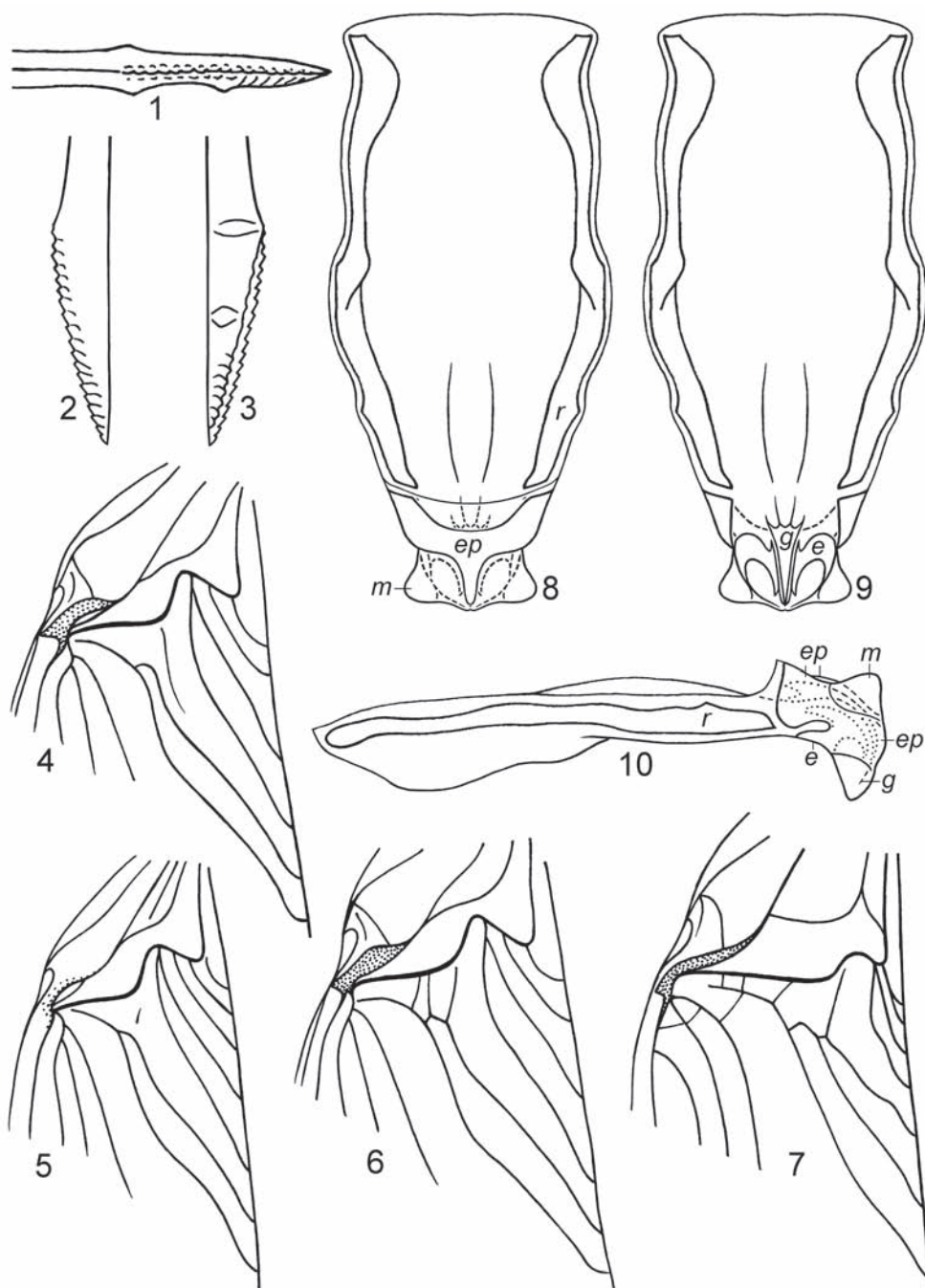
*Orocharis scitulus* Walker, 1869 (synonymised by Saussure, 1874).

*Orocharis eclectos* Otte, 2006, **syn. nov.**

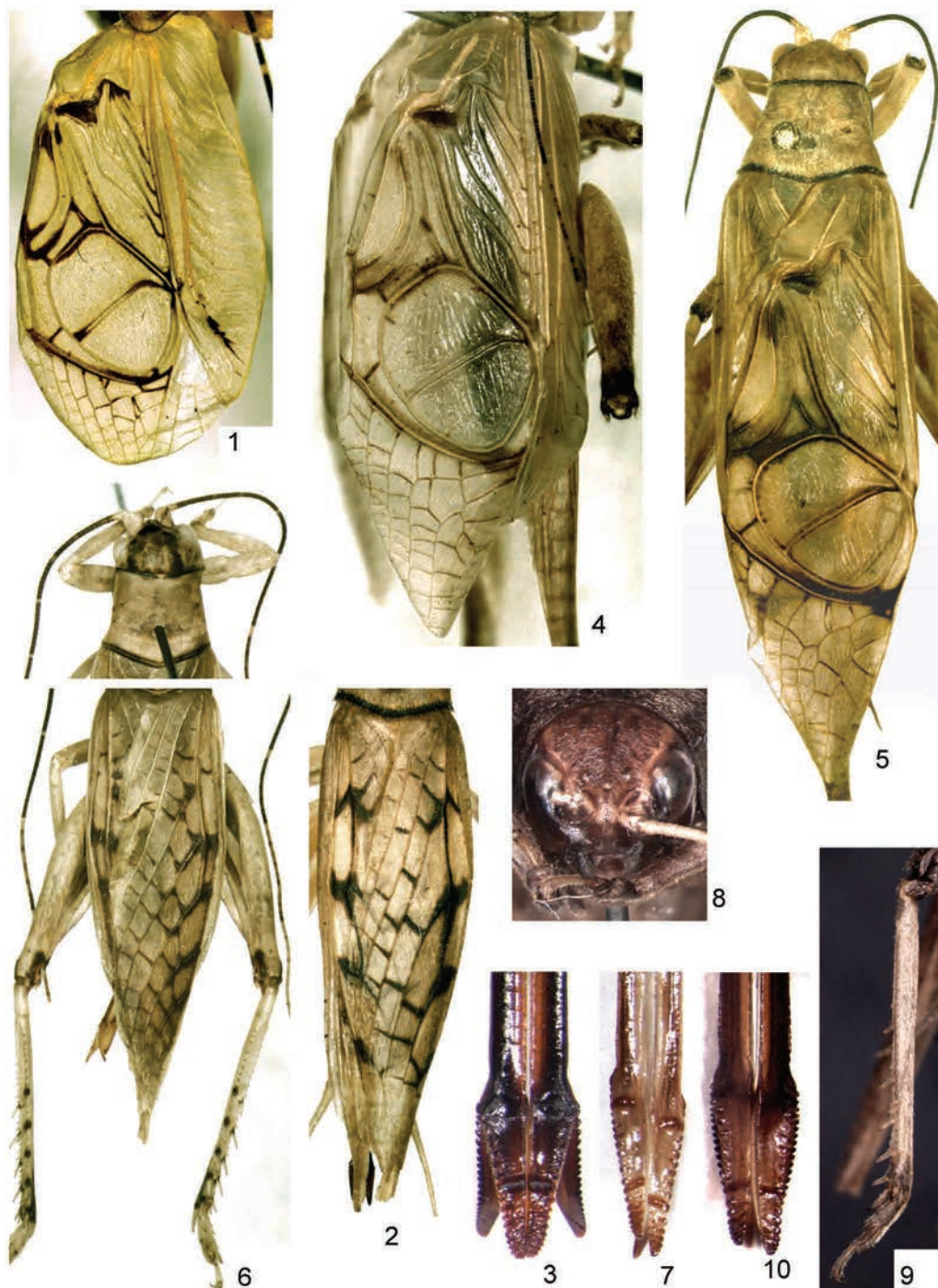
**Material examined.** Two males, 1 female; **Mexico**, Chiapas, environs of Palenque Town near Maya Archaeological Centre, ~ 200 m, secondary forest, on leaves, 18–20 Nov. 2006 (1 male collected as nymph of middle age, imago Feb. 2007); coll. A. Gorochov & A. Ovtshinnikov; ZIN. One male, 3 females; **Mexico**, Veracruz, 15–20 km NE of Catemaco Town, Los Tuxtlas (biostation of Mexico University) in 2 km from coast of Mexican Gulf, partly primary and partly secondary forest on hills, on leaves, 6–17 Nov. 2006 (1 female collected as nymph of middle age, imago Jan. 2007); coll. A. Gorochov & A. Ovtshinnikov; ZIN.

**Redescription.** Male. Colouration light (yellowish), but with following marks: head with brownish transverse stripe along clypeal suture, small brown spots under eyes, and blackish or dark brown both most part of antennae (scape and sparse spots on flagellum light) and three distal segments of maxillary palpi; pronotum with very distinct black or dark brown border along all edges (in one male from Chiapas, fore half of ventral edge of lateral lobes with yellowish border, and in both males from Chiapas, pronotum with additional large light





**Figs I (1–10).** Different structures of body; schematic. 1–3, *Siccotrella modesta modesta* **subsp. nov.**; 4, *Paroecanthus mexicanus*; 5, *Angustitrella trivialis* **sp. nov.**; 6, *S. mutabilis* **sp. nov.**; 7, *Perutrella originalis* **sp. nov.**; 8–10, *Paroecanthus mexicanus*. Distal part of ovipositor from side (1), and its left half from above (2) and from below (3); regions of stridulatory vein and of oblique veins in stridulatory apparatus of male tegmen (4–7); male genitalia from above (8), from below (9) and from side (10). Abbreviations: *e*, ectoparamere; *ep*, epiphallus; *g*, giding rod; *m*, membranous processes on both sides of epiphallus or near its apex; *r*, ramus.



**Figs II (1–10).** *Paroecanthus*. 1–3, *P. mexicanus*; 4, *P. aztecus aztecus*; 5, *P. aztecus tuxtla* **subsp. nov.**; 6, 7, *P. minor* **sp. nov.**; 8–10, *P. selva* **sp. nov.** Male upper tegmen (1); dorsal field of female tegmina (2) and of male upper tegmen (4, 5); dorsal part of ovipositor from below (3, 7, 10); head with pronotum (upper photo) and tegmina with hind legs (lower photo) from above (6); head in front (8); hind tibia and tarsus from side (9).





**Figs III (1–17).** *Paroecanthus* and *Siccotrella*. 1, 2, *P. mexicanus*; 3, *P. aztecus tuxtla* subsp. nov.; 4, *P. aztecus verapaz* subsp. nov.; 5, 6, *P. oaxaca* sp. nov.; 7, 8, *P. simplex simplex* subsp. nov.; 9, *P. simplex chamela* subsp. nov.; 10, *S. varius* sp. nov.; 11, *P. minor* sp. nov.; 12, *P. jalisco* sp. nov.; 13, *P. selva* sp. nov.; 14, *S. mutabilis* sp. nov.; 15, *S. sympatrica* sp. nov.; 16, *S. modesta modesta* subsp. nov.; 17, *S. managua* sp. nov. Male metanotal gland (1, 5, 7, 9, 14–17); outer side of fore tibia (2–4, 6, 8, 10–13).

brown or reddish brown spot on dorsal two-thirds of lateral lobes and light brown median area on disc); legs with rather wide reddish brown subapical (transverse and incomplete) band on fore and middle femora (fore femora of male from Veracruz practically without such band), brown or reddish brown distal third of hind femora, a few small marks of same colour on more proximal part of outer surface of hind femora, small brown or light brown dorsal spot on proximal and distal parts of both fore and middle tibiae (but in male from Veracruz, distal spot absent, and in one male from Chiapas, proximal and distal spots of middle tibiae connected with each other by brownish longitudinal line), several blackish or dark brown spots on dorsal surface of hind tibiae (long spot near their base, and small spot between each pair of tibial spines), two blackish or grayish brown (sometimes partly brownish / partly yellowish) proximal segments of fore and middle tarsi, and brown second segment and sometimes also ventral part of basitarsus in hind tarsi; tegmina with rather large blackish or grayish brown spots on dorsal field of upper tegmen (Fig. II: 1) and somewhat smaller and lighter similar spots on lower tegmen (latter spots in male from Veracruz and in one male from Chiapas almost absent); abdomen with brown or light brown tergites and proximal half of anal plate. Head rostrum almost twice as wide as scape, with very small (much smaller than lateral ocelli) and weakly distinct median ocellus. Pronotum clearly wider than its length, distinctly narrowing to head, with weakly angular (almost weakly arcuate) hind edge of disc; metanotal gland with middle transverse process almost truncate at apex (Fig. III: 1). Fore tibiae with tympanal region hardly inflated (Fig. III: 2), outer tympanum slightly longitudinal (almost round), and inner tympanum moderately long (its distal edge situated at middle of tibia) and not very strongly slit-like (its membrane visible). Tegmina with apical area weakly shortened, stridulatory apparatus as in

photograph (Fig. II: 1), and venation of lateral field with 16–19 branches of *Sc* (some of them more or less oblique and other ones somewhat S-shaped) and without crossveins; hind wings shortly exposed behind tegmina. Genitalia with rather short epiphallus (*ep*), a pair of rather short lateral membranous processes (*m*) near epiphallic apex, and ectoparameres (*e*) looking as weakly sclerotised ventral plates narrowing to apex of genitalia and laterally fused with epiphallus (Figs I: 8–10; V: 1–3).

Female. General appearance as in male including variability in colouration, but dorsal tegminal field with darkened pattern as in Fig. II: 2 (female from Chiapas lighter, with darkened parts of antennae brown, three proximal segments of maxillary palpi light brown, all basitarsi light, second segment of fore and middle tarsi brownish, ventral edge of pronotal lateral lobes completely light, and other edges of pronotum with brown border), pronotum less distinctly narrowing to head (its hind part only slightly wider than pronotal length), dorsal tegminal field narrower and with 7 or 8 partly oblique longitudinal veins and sparse crossveins, venation of lateral tegminal field with 12–14 oblique branches of *Sc* (no S-shaped branches), and genital plate with widely truncate apex. Ovipositor almost completely dark brown (Fig. II: 3).

Length in mm. Body: male 14–16, female 13.5–17; body with wings: male 18–19.5, female 20–23; pronotum: male 2.9–3.1, female 3.1–3.6; tegmina: male 14–15, female 14.2–16.5; hind femora: male 9–9.5, female 9.4–9.8; ovipositor 5.8–6.2.

*Notes.* This cricket is characterised by its remarkably contrasting colouration (somewhat variable, but always with the rather large dark spots on the upper tegmen in male and both tegmina in female) as well as by the wings very slightly shortened, branches of longitudinal veins in the female dorsal tegminal field not numerous, and male genitalia as in Figs V: 1–3. This species is rather widely distributed in Central America. It is synonymised with *O. sci-*



*tulus* from Honduras and indicated from “le Mexique et l’Amérique centrale” by Saussure (1874), recorded from a few southern states of Mexico by Saussure (1897), and synonymised with *O. eclectos* from Costa Rica here. Synonymy of *O. scitulus* and *P. mexicanus* is probably correct as their original descriptions do not contradict the material examined; however the larger *O. signatus* Walker, 1869 from “Orizaba” (Veracruz State of Mexico), also synonymised by Saussure (1874) with *P. mexicanus*, must be excluded from this synonymy as it has a few large dark spots on the epicranium not characteristic of *P. mexicanus*, but presented in dark specimens of some larger species of *Paroecanthus* (see below). *Orocharis eclectos*, judging by its photographs (Otte, 2006), has the general appearance and male genitalia identical to those of the specimens studied, but all tibiae of its holotype are with the long dark longitudinal line on the dorsal surface (it may be a most dark variant of colouration in this species; in the specimens described here, this surface of tibiae is usually with the shorter dark spots, but one male from Chiapas has the long darkish line on the dorsal surface of middle tibiae).

***Paroecanthus aztecus aztecus* Saussure, 1874, stat. nov.**  
(Figs II: 4; IV: 1, 2; V: 4–6)

*Material examined.* One male; **Mexico**, Veracruz, “Atoyac, Veracruz, Schumann”; ZIN.

*Redescription.* Male. Colouration and structure of body similar to those of *P. mexicanus*, but distinguished by following characters: head without darkened stripe along clypeal suture, with completely light maxillary palpi and one brown dot under each eye; pronotum with all edges having dark brown border (however this border in hind and posteroventral parts partly grayish), and with disc and lateral lobes lacking any large spots; legs yellowish with brown apical and light brown subapical parts of hind femora, dark brown line along distal third

of ventrolateral keel of these femora, and brown both spot around each spine of hind tibiae (excepting spurs = apical spines) and small basal part of this spine; upper tegmen with less spotted dorsal field (Fig. II: 4) and without darkened marks on lateral field; lower tegmen practically without spots; abdominal sternites, genital plate and cerci light brown; head rostrum approximately 1.5 times as wide as scape; median ocellus slightly larger, but distinctly smaller than lateral ones; fore tibiae with tympanal region moderately inflated (as in Figs III: 3, 4) and with inner tympanum longer (its distal edge situated in distal half of tibia) and strongly slit-like (its membrane almost invisible); fore and middle basitarsi slightly longer (for comparison see Figs III: 2 and 3); tegmina with distinctly longer apical area (Fig. II: 4); hind wings also longer and with distinctly longer hind part exposed behind tegmina; genitalia with somewhat longer epiphallus (*ep*), distinctly larger and rather narrow membranous processes (*m*) on both sides of epiphallus, and ectoparameres (ectoparameral sclerites) isolated from epiphallus (Figs IV: 1, 2; V: 4–6).

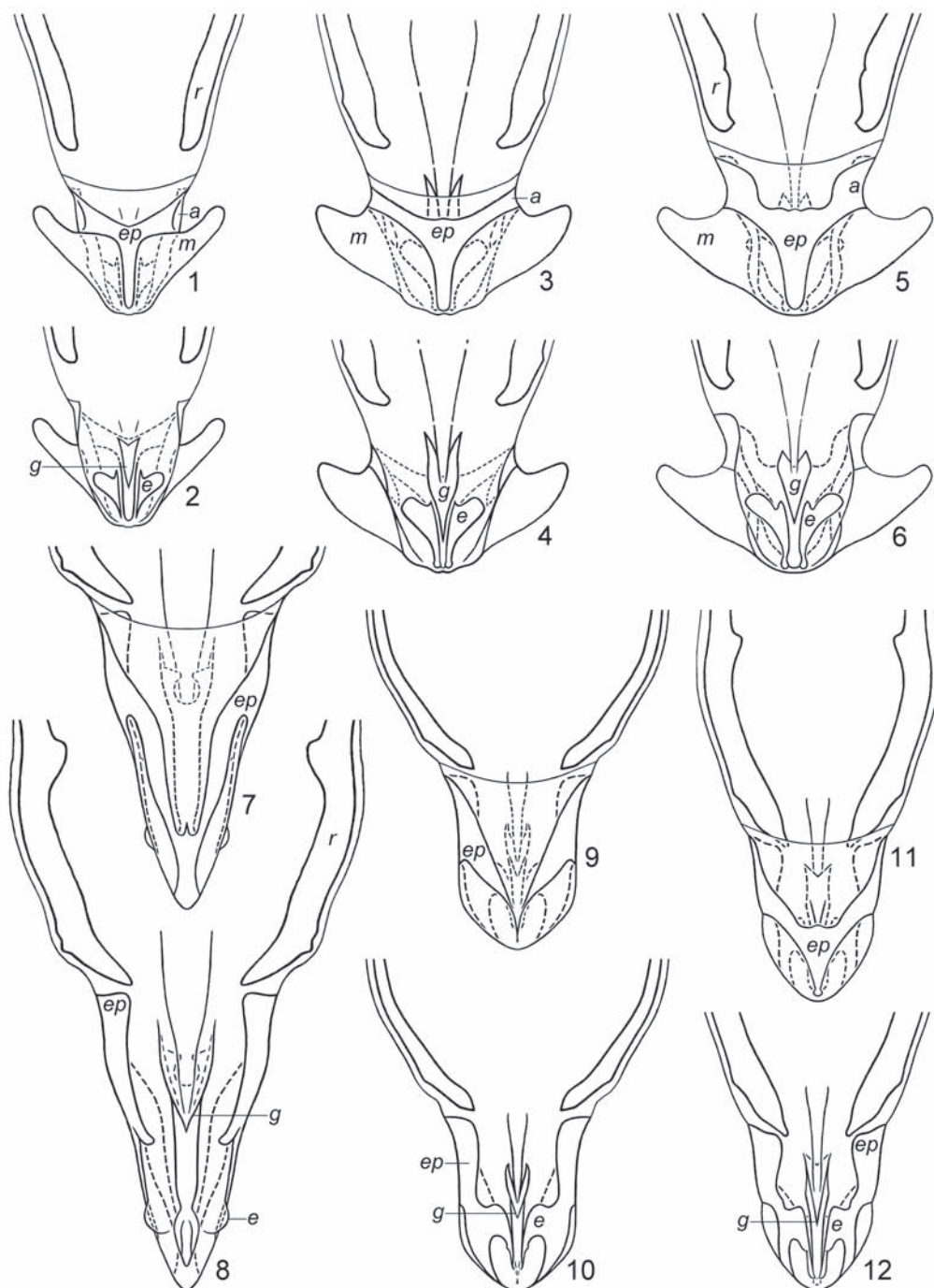
Length in mm. Body 21; body with wings 29; pronotum 3.5; tegmina 20; hind femora 10.7.

*Notes.* The male studied here is with the label inscription by Saussure’s hand – “*Paroec. aztecus*”; it is one of specimens mentioned in the first redescription of this species as a typical variant of *P. aztecus* (Saussure, 1897). It is impossible to exclude that insufficiently described *P.? signatus* (also from Veracruz State) is a synonym of this subspecies.

***Paroecanthus aztecus tuxtla* subsp. nov.**  
(Figs II: 5; III: 3; IV: 3, 4; V: 7–9)

*Holotype.* Male; **Mexico**, Chiapas, environs of Tuxtla Gutierrez City, near reserve El Ocote, 600–1000 m, primary forest, on leave, 19–24 May 2006; coll. A. Gorochov & M. Berezin; ZIN.

*Paratype.* Female; same data as for holotype; ZIN.



**Figs IV (1–12).** *Paroecanthus*; schematic. 1, 2, *P. aztecus aztecus*; 3, 4, *P. aztecus tuxtla* subsp. nov.; 5, 6, *P. aztecus ocosingo* subsp. nov.; 7, 8, *P. oaxaca* sp. nov.; 9, 10, *P. simplex simplex* subsp. nov.; 11, 12, *P. simplex chamela* subsp. nov. Distal half (1, 3, 5, 8–11) and distal part (2, 4, 6, 7, 12) of male genitalia from above (1, 3, 5, 7, 9, 11) and from below (2, 4, 6, 8, 10, 12). Abbreviations: *a*, anterolateral area of epiphallus; others, as in Figs I: 8–10.

**Description.** Male (holotype). Colouration and structure of body very similar to those of *P. aztecus aztecus*, but distinguished by following features: head without dark dots under eyes as well as with brown both stripe along clypeal suture and one dot on each gena near hind corner of subgena; all borders of pronotum very dark brown (almost blackish); legs with small dark spots at apex of fore and middle femora and at base of fore and middle tibiae, one brown dot on dorsal surface of fore tibiae, dark brown two proximal segments of fore and middle tarsi, darkish apical part of distal segment of these tarsi, dark brown both apex of hind basitarsus and second segment of hind tarsus, and somewhat darker (than in *P. aztecus aztecus*) marks on apical part of hind femora and on hind tibiae; dorsal field of upper tegmen with more distinct spots than in *P. aztecus aztecus* (Fig. II: 5); tegminal mirror slightly shorter than in *P. aztecus aztecus* (Fig. II: 5); genitalia with epiphallic anterolateral areas (*a*) distinctly shorter than in *P. aztecus aztecus* and with membranous processes (*m*) on both sides of epiphallus (*ep*) rather wide (Figs IV: 3, 4; V: 7–9).

Female. General appearance as in male, however with slightly darkened spots on head behind eyes, lighter fore and middle legs (their tarsi with dorsal half of basitarsus light), large darkish median spot on disc, colouration and structure of tegmina similar to those of *P. mexicanus* (but dark marks smaller and less distinct, tegmina clearly longer, their dorsal field with 11 or 12 longitudinal veins and less sparse cross-veins, and their lateral field with 16 branches of Sc), and genital plate and ovipositor almost identical to those of this species.

Length in mm. Body: male 22, female 17; body with wings: male 31, female 31; pronotum: male 4, female 3.8; tegmina: male 23, female 22; hind femora: male 11.8, female 11; ovipositor 7.

**Comparison.** Differences between the new subspecies and *P. aztecus aztecus* are listed above.

***Paroecanthus aztecus ocosingo***  
**subsp. nov.**

(Figs IV: 5, 6; V: 10–12)

**Holotype.** Male; **Mexico**, Chiapas, Ocosingo Distr., Selva Lacandona near border with Guatemala (between Biosphere reserve Montes Azules and Bonampak Natural Monument), environs of Lacanja-Chansayab Vill., primary forest, at light, 20–27 May 2007; coll. M. Berezin & E. Tkatsheva; ZIN.

**Paratype.** Female; same data as for holotype; ZIN.

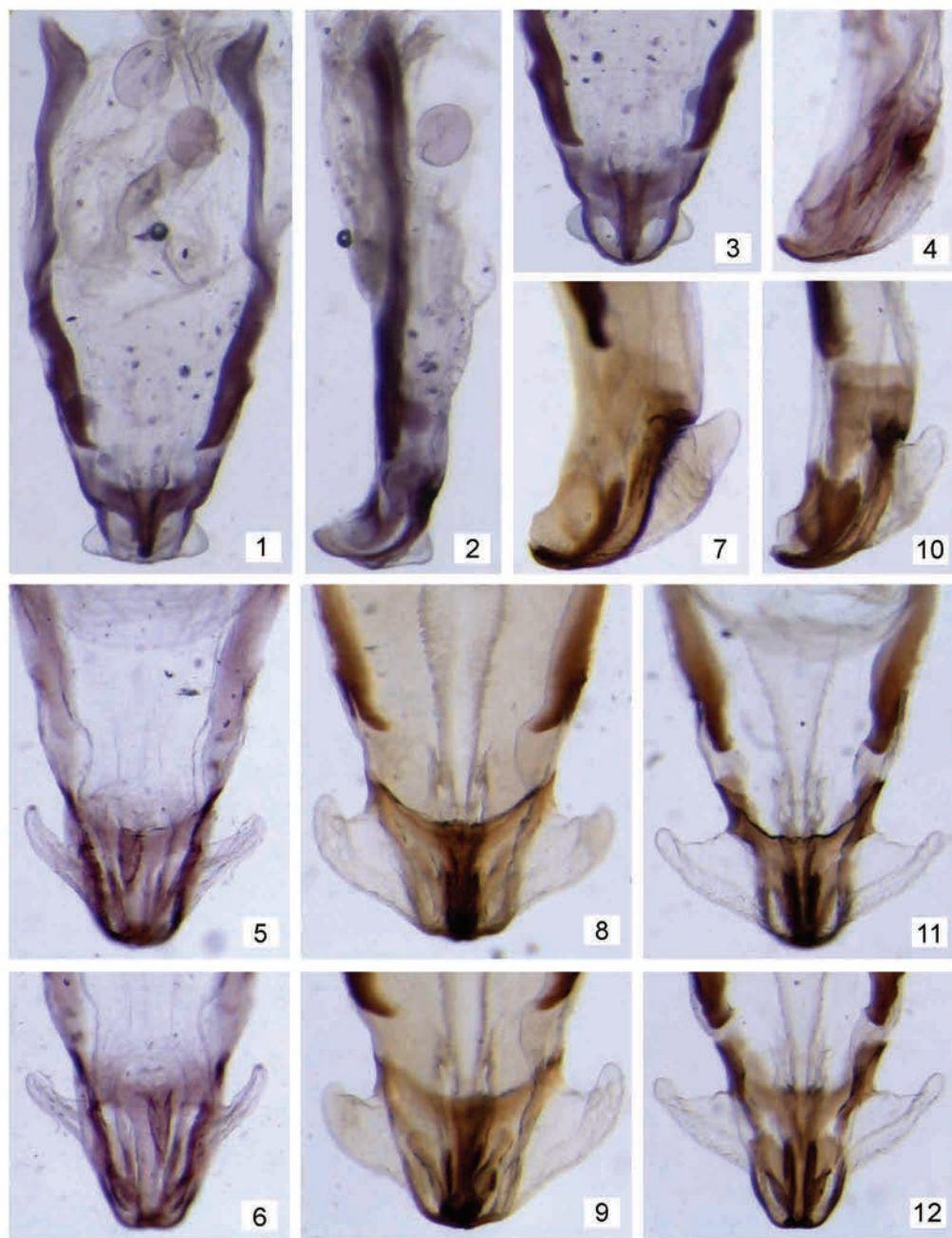
**Description.** Male (holotype). Colouration and structure of body very similar to those of *P. aztecus tuxtla*, but stripe along clypeal suture lighter (light brown), dark dots on genae absent, borders of pronotum lighter (brown), two proximal segments of fore and middle tarsi only weakly darkened and with yellowish areas, colouration of hind legs almost as in *P. aztecus aztecus* (however hind basitarsus with weakly darkened apical part), colouration of tegmina intermediate between those of *P. aztecus aztecus* and *P. aztecus tuxtla*, shape of tegminal mirror almost as in *P. aztecus tuxtla*, and genitalia with epiphallic anterolateral areas (*a*) much longer than in *P. aztecus tuxtla* (Figs IV: 5, 6; V: 10–12).

Female. General appearance as in male, however stripe along clypeal suture, dots on genae, and borders of pronotum as in *P. aztecus tuxtla*, colouration and structure of tegmina as well as shape of genital plate and of ovipositor very similar to those of female of *P. aztecus tuxtla* [but colouration of ovipositor light brown with brown ridges on apical (drilling) part of lower valves and brown lateral parts of rest of these valves (see from below)].

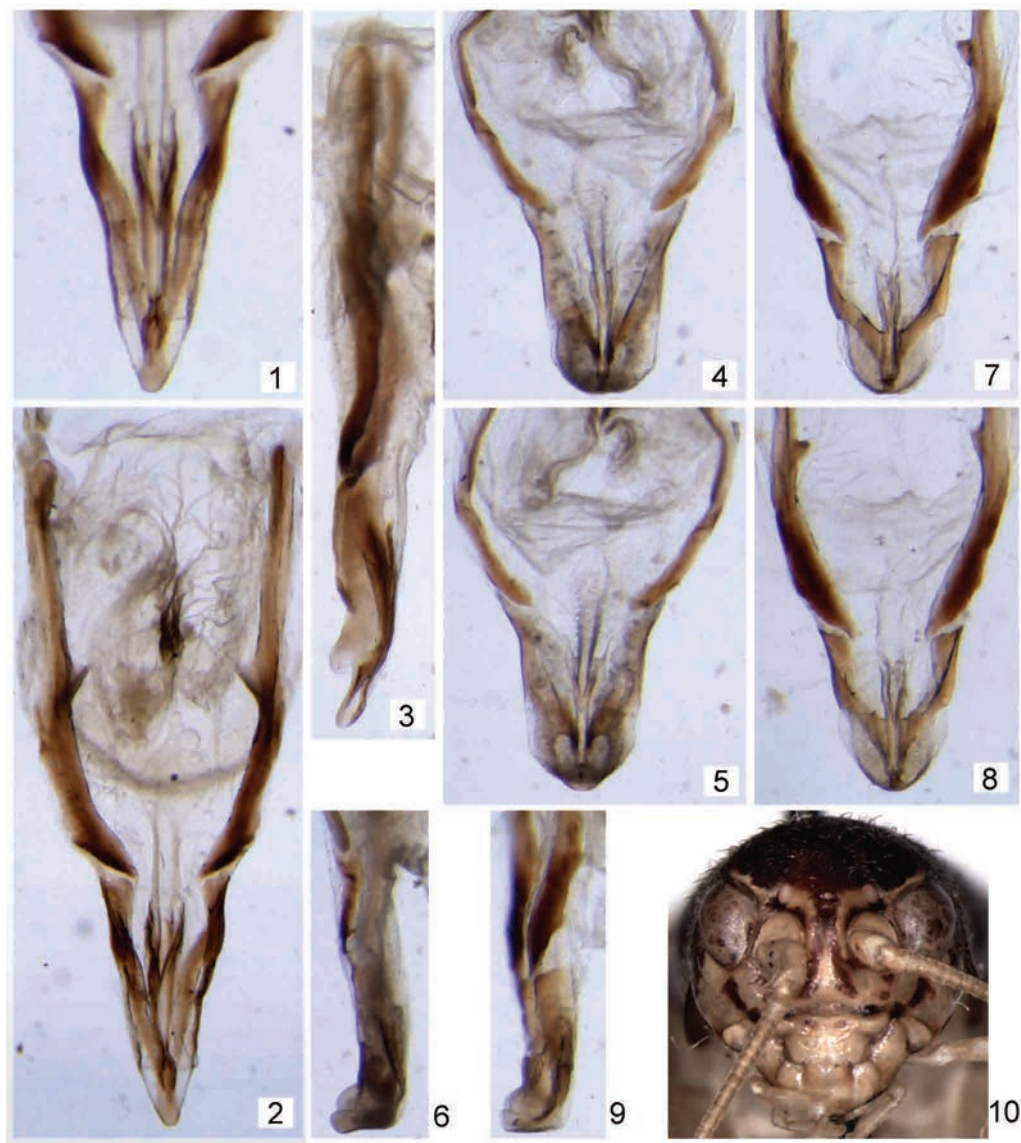
Length in mm. Body: male 18, female 16; body with wings: male 27, female 31.5; pronotum: male 3.7, female 4; tegmina: male 21, female 23; hind femora: male 10.8, female 12.3; ovipositor 7.5.

**Comparison.** The new subspecies differs from *P. aztecus aztecus* mainly in the distinctly wider membranous processes (*m*) on both sides of epiphallus (*ep*), and from *P.*





**Figs V (1–12).** *Paroecanthus*. 1–3, *P. mexicanus*; 4–6, *P. aztecus aztecus*; 7–9, *P. aztecus tuxtla* **subsp. nov.**; 10–12, *P. aztecus ocosingo* **subsp. nov.** Male genitalia (1, 2), their distal half (3, 5, 8, 11) and their distal part (4, 6, 7, 9, 10, 12) from above (1, 5, 8, 11), from below (3, 6, 9, 12) and from side (2, 4, 7, 10).



**Figs VI (1–10).** *Paroecanthus* and *Siccotrella*. 1–3, *P. oaxaca* **sp. nov.**; 4–6, *P. simplex simplex* **subsp. nov.**; 7–9, *P. simplex chamela* **subsp. nov.**; 10, *S. xadani* **sp. nov.** Male genitalia (2, 3), their distal part (1, 6, 9) and their distal half (4, 5, 7, 8) from above (1, 4, 7), from below (2, 5, 8) and from side (3, 6, 9); head in front (10).

*aztecus tuxtla*, in the much longer epiphallallic anterolateral areas (*a*) (for comparison see Figs IV: 3 and 5).

***Paroecanthus aztecus verapaz***

**subsp. nov.**

(Fig. III: 4)

**Holotype.** Female; **Guatemala**, Vera Paz, "S. Geronimo, Guatemala, Champion"; ZIN.

**Description.** Female (holotype). Colouration and structure of body similar to those of all previous subspecies of this species, but with following peculiarities: dorsal part of head and of pronotum with rather large brown areas [largest one (from median ocellus to hind edge of vertex) almost reaching eyes and with light narrow stripes and dots in middle part; two much narrower longitudinal stripes behind each eye; median band on pronotal disc fused with somewhat wider spot near anterior edge of disc and with transverse band along hind edge of disc (this median band with a few small light spots along median line)]; epicranium under rostrum, under eyes and under antennae as well as upper part of clypeus with a few small brown spots and brownish dots; antennae more or less yellowish with light brown proximal part (excepting three most basal segments which also yellowish) having a few moderately sparse brown rings; each pronotal lateral lobe with brown both rather large anterodorsal longitudinal spot and a few small marks on rest of this lobe; femora with rather numerous brown dots and small spots as well as with dark brown apical part; fore and middle tibiae with brown areas on proximal half, dark brown distal part, and a few dark dots between these darkenings (Fig. III: 4); hind tibiae with rather numerous darkish dots on dorsal surface and dark distal part of all other surfaces; tarsi more or less light with small darkened area at base of fore basitarsus (middle tarsi missing) and darkish ventral half of second segment of hind tarsus; tegmina with almost uniformly yellowish dorsal field (only a few small light brown spots

at base of oblique branches developed); fore basitarsi weakly (but distinctly) narrower than in all previous subspecies (for comparison see Figs III: 3 and 4).

Male unknown.

Length in mm. Body 16.5; body with wings 25; pronotum 3.5; tegmina 19; hind femora 12; ovipositor 7.3.

**Comparison.** The new subspecies differs from all the other subspecies of *P. aztecus* in the more spotted fore and middle tibiae as well as narrower fore basitarsi.

**Notes.** This specimen is with the label inscription by Saussure's hand – "*Paroec. aztecus* var. a"; it was mentioned in the first redescription of this species as "Var. a" (Saussure, 1897).

***Paroecanthus oaxaca* sp. nov.**

(Figs III: 5, 6; IV: 7, 8; VI: 1–3)

**Holotype.** Male; **Mexico**, Oaxaca, 35 km NNE of Santa Cruz Huatulco Town (10 km N of Xadani Vill.), 900–1000 m, partly primary and partly secondary forest, on leave, 7–11 May 2006; coll. A. Gorochov & M. Berezin; ZIN.

**Paratypes.** One male, 2 females; same data as for holotype; ZIN.

**Description.** Male (holotype). Colouration and structure of body similar to those of *P. aztecus*. Body yellowish with brown spots on head dorsum between eyes, a few dots on epicranium under antennae and under eyes as well as on upper part of clypeus, proximal part of antennae (excepting three most proximal segments), and numerous marks on pronotum including wide stripe on disc along its hind edge, a few light brown spots on tegmina (almost as in *P. a. aztecus*), numerous darkish dots on legs (excepting tarsi and hind tibiae), dark brown spots at base and at apex of fore and middle tibiae, dark apical part of hind femora, large darkened areas on pterothoracic and abdominal dorsum as well as on pterothoracic pleurites, and very numerous small darkened spots and dots on lateral parts of abdominal tergites. Structure of head, thorax, legs and wings very similar to that of *P. aztecus*, but metanotal gland with middle transverse



process distinctly trilobate (Fig. III: 5), fore and middle basitarsi slightly shorter (for comparison see Figs III: 3, 4 and 6), and shape of tegminal mirror more similar to that of *P. a. aztecus*. Abdominal apex as in *P. mexicanus* and *P. aztecus*, but genitalia without distinct ectoparameres and membranous processes on both sides of epiphallus (*ep*) as well as with distinctly longer and rather narrow epiphallus (ventral surface of genitalia with only a pair of not large membranous convexities – possible traces of ectoparameres) (Figs IV: 7, 8; VI: 1–3).

Variations. Paratype slightly lighter, i. e. with smaller darkened marks including brown stripe on pronotal disc along its hind edge (this stripe narrow).

Female. General appearance as in males, but colouration and structure of tegmina as well as shape of both genital plate and ovipositor very similar to those of *P. aztecus* (however colouration of ovipositor almost as in *P. a. ocosingo*).

Length in mm. Body: male 20–22, female 17–18; body with wings: male 29–31, female 30–31; pronotum: male 3.9–4, female 3.8–4; tegmina: male 21–22, female 22–22.5; hind femora: male 11.8–12.2, female 12–12.4; ovipositor 7–7.2.

*Comparison.* The new species differs from *P. aztecus* in the male genitalia lacking sclerotised ectoparameres and membranous processes on both sides of epiphallus; from *P. mexicanus*, in the same characters as well as larger size, longer wings, and somewhat different colouration; from *P. aeschyntelos*, in the much narrower apex of male genitalia; and from *P. habros*, in the larger size of body and darkened apical part of hind femora.

***Paroecanthus simplex* sp. nov.**

(Figs III: 7, 8; IV: 9, 10; VI: 4–6)

*Holotype.* Male; **Mexico**, Oaxaca, 35 km NNE of Santa Cruz Huatulco Town (10 km N of Xadani Vill.), 900–1000 m, partly primary and partly secondary forest, on leave, 7–11 May 2006; coll. A. Gorochov & M. Berezin; ZIN.

*Paratypes.* Five males, 3 females; same data as for holotype; ZIN.

*Description.* Male (holotype). Colouration and structure of body very similar to those of *P. oaxaca*, but head dorsum with a pair of light brown additional longitudinal stripes near eyes and large dark brown area along hind edge of epicranium, face with brown stripe along clypeal suture and without any darkened dots around this stripe, borders of antennal cavities blackish, pronotum with darkened interrupted stripe along edges of disc and a pair of brown dots on disc, darkish dots on legs almost absent or (on hind femora) weakly distinct, hind tibiae with dark brown area at base and rather small (but distinct) spots around base of each spine and of both dorsal spurs, metanotal gland with middle transverse process weakly trilobate (almost rounded) at apex (Fig. III: 7), fore and middle basitarsi hardly shorter (for comparison see Figs III: 6 and 8), genitalia with epiphallus shorter and with sclerotised ectoparameres developed and widely fused with lateral epiphallic parts (Figs IV: 9, 10; VI: 4–6).

Variations. Sometimes dorsum of head lighter or almost uniformly yellowish, epicranium with darkish spots behind eyes, and pronotum with larger or smaller darkened marks.

Female. General appearance as in male, but head dorsum in all specimens with distinct dark marks (as in holotype or with additional longitudinal stripes larger and dark brown, or with narrow dark brown area along hind edge of epicranium), stripe along clypeal suture sometimes weakly distinct, pronotum sometimes with dark brown disc having a pair of large light brown areas, colouration and structure of tegmina as well as of genital plate and of ovipositor very similar to those of *P. oaxaca*.

Length in mm. Body: male 17–21, female 15–18; body with wings: male 28–31, female 29–31; pronotum: male 3.6–3.9, female 3.5–3.9; tegmina: male 19–21, female 20–22; hind femora: male 10.8–12.2, female 11.3–12; ovipositor 6.5–7.

*Comparison.* The new species differs from *P. aztecus* and *P. mexicanus* in the male

genitalia lacking membranous processes on both sides of epiphallus; from *P. oaxaca*, in the presence of rather large dark area at base of hind tibiae, shorter epiphallus, and sclerotised ectoparameres developed; from *P. aeshyntelos*, in the distinctly shorter epiphallus; and from *P. habros*, in the darkened apical part of hind femora.

***Paroecanthus simplex chamela*  
subsp. nov.**

(Figs III: 9; IV: 11, 12; VI: 7–9)

**Holotype.** Male; **Mexico**, Jalisco, 19°33'N, 105°5'W, biostation of Mexico University near Chamela Vill. (3–4 km from Pacific Ocean), dry forest on hills, on leave, 23–28 Nov. 2006; coll. A. Gorochov & A. Ovtshinnikov; ZIN.

**Paratypes.** Three males, 2 females; same data as for holotype; ZIN.

**Description.** Male (holotype). Colouration and structure of body very similar to those of *P. simplex simplex* **stat. nov.**, but epicranium almost as in most light paratypes of *P. simplex simplex* [yellowish with small brown spots (one near median ocellus, two on dorsum near hind edge of epicranium, and two under eyes) and light brown stripe along lateral parts of clypeal suture], pronotum with only three light brown spots on its fore part and a pair of lateral brown dots on middle part of disc, darkened areas on middle legs and at base of hind tibiae very small and lighter, metanotal gland with middle transverse process clearly trilobate (almost as in *P. oaxaca*; Fig. III: 9), genitalia with epiphallus less membranous in median part and with rami distinctly wider (Figs IV: 11, 12; VI: 7–9).

**Variations.** Sometimes dorsum of head with rather wide brown stripe along its hind edge, and colouration of legs almost indistinguishable from that of *P. simplex simplex*.

**Female.** General appearance as in males, however colouration of tegmina and their structure as well as shape of both genital plate and ovipositor very similar to those of *P. oaxaca* and *P. simplex simplex*, and colouration of ovipositor almost uniformly brown (darker than in *P. simplex simplex*).

Length in mm. Body: male 18–20, female 14–19; body with wings: male 27–29, female 27–28; pronotum: male 3.6–3.8, female 3.7–3.8; tegmina: male 19–20.5, female 19–20; hind femora: male 11–11.5, female 11–11.3; ovipositor 6.3–6.6.

**Comparison.** The new subspecies is distinguished from *P. simplex simplex* mainly by the clearly trilobate middle transverse process in male metanotal gland, less membranous epiphallus, distinctly wider rami in male genitalia, and darker ovipositor.

***Paroecanthus varius* sp. nov.**

(Fig. III: 10)

**Holotype.** Female; **Mexico**, Chiapas, 130 km WN of Tapachula City, environs of Ejido Las Golondrinus Vill. near reserve El Triunfo, 800–1000 m, partly primary and partly secondary forest, at light, 13–17 May 2006; coll. A. Gorochov & M. Berezin; ZIN.

**Paratypes.** Four females; same data as for holotype; ZIN.

**Description.** Female (holotype). General appearance similar to that of *P. aztecus*, *P. oaxaca* and *P. simplex*. Head yellowish with dark brown triangular spot between ocelli, 7 brownish wide longitudinal bands on dorsal half of epicranium behind previous spot and behind eyes (these bands with a few oblique and transverse light lines and narrow stripes), several small brown spots on face (under eyes, under antennae and under rostrum) and on upper part of clypeus, dark brown proximal part of antennae (excepting three most proximal segments), and light brown other parts of antennae; pronotum yellowish with hardly darker disc, brown median marks on disc along its anterior edge and along anterior half of its median line, and brownish stripe on each lateral lobe along its dorsal edge; legs yellowish with several darkish dots on middle femora and on hind femora, a few small brown and brownish spots at apex of all femora and at base and near base of fore and middle tibiae, with one such spot only near base of hind tibiae, and with grayish brown spots around base of majority of spines in

hind tibiae (these spots partly fused with each other dorsally); tegmina yellowish with semitransparent membranes of lateral field and with small brown or brownish spots at base of each oblique branch along lateral edge of dorsal field; all other parts of body yellowish (excepting more or less uniformly brown ovipositor). Scape almost 1.5 times as wide as rostrum between antennal cavities; median ocellus much smaller than lateral ocelli. Fore tibiae with tympanal part hardly inflated (Fig. III: 10) and tympana more or less intermediate between those of *P. mexicanus* and *P. aztecus*; fore and middle basitarsi almost as in *P. simplex* (see Figs III: 8 and 10); spines of hind tibiae comparatively long (as in all previous species). Tegmina with 11–12 longitudinal veins in dorsal field, 16–17 branches of *Sc* in lateral field, and crossveins as in female of *P. aztecus*, *P. oaxaca* and *P. simplex*; hind wings distinctly (but not strongly) exposed behind tegmina. Shape of genital plate and structure of ovipositor similar to those of all previous species.

Variations. Colouration rather variable: two females with additional darkened marks (wide brown stripe on disc along its hind edge; darkish dots on fore femora; more numerous such dots on other femora; almost all veins of tegminal dorsal field brownish), almost completely brown or blackish apical part of hind femora, and dark brown ovipositor (but one of these females almost without dark spots on face and clypeus, excepting brownish stripe along clypeal suture); another female almost without brownish bands on head dorsum (excepting bands behind eyes) and with practically uniformly yellowish dorsal field of tegmina.

Male unknown.

Length in mm. Body 14–16; body with wings 23–25; pronotum 3.4–3.7; tegmina 17–18.5; hind femora 10.3–10.8; ovipositor 6.2–6.4.

**Comparison.** The new species differs from *P. mexicanus* in the wider rostrum of head and distinctly shorter darkened part of hind femora, and from all the other previous

species in the clearly less inflated tympanal part of fore tibiae (for comparison see Figs III: 3, 4, 6, 8 and 10). From *P. aeschynelos* and *P. habros*, it differs in the distinctly more spotted legs.

***Paroecanthus minor* sp. nov.**

(Figs II: 6, 7; III: 11)

**Holotype.** Female; **Mexico**, Chiapas, environs of Palenque Town near Maya Archaeological Centre, ~200m, primary forest, on leave, 18–20 Nov. 2006; coll. A. Gorochov & A. Ovtshinnikov; ZIN.

**Description.** Female (holotype). General appearance more or less similar to that of *P. mexicanus*, however colouration with dark brown spot between ocelli, a pair of brown longitudinal bands from medial edges of eyes to hind edge of vertex, light brown median spot near hind edge of vertex, dark brown proximal part of antennae (excepting three yellowish most proximal segments) interrupted by sparse light spots, brown short part of antennae near their dark part, light brown rest of antennae interrupted by very sparse darkish spots, pattern of pronotum only slightly lighter than in *P. mexicanus* (Fig. II: 6), almost uniformly yellowish legs (but hind femora with brown narrow subapical marks and line along distal part of ventrolateral keel, and hind tibiae with darkened apical part and small spot at base of spines and of dorsal spurs), brown pattern of tegmina as in Fig. II: 6, and uniformly light brown ovipositor (Fig. II: 7). Structure of bodyparts (including shape of head rostrum and of fore tibiae, structure of tympana, length of all wings, venation of tegmina, and shape of genital plate and of ovipositor) very similar to that of female of *P. mexicanus*, but fore and middle basitarsi extremely short, and dorsal field of tegmina with more numerous crossveins (for comparison see Figs II: 2 and 6; III: 2 and 11).

Male unknown.

Length in mm. Body 11.5; body with wings 18; pronotum 3.1; tegmina 14; hind femora 8.5; ovipositor 4.7.



**Comparison.** The new species differs from *P. mexicanus* mainly in the less spotted colouration of legs (especially in the yellowish distal half of hind femora including most part of their apical area) and shorter fore and middle basitarsi. From *P. habros* and *P. aeschyntelos*, the new species differs in the pronotum with the darkened borders, and from all the other congeners, in the same characters as from *P. mexicanus* as well as smaller size of body and (from majority of them) less inflated fore tibiae.

***Paroecanthus jalisco* sp. nov.**  
(Fig. III: 12)

**Holotype.** Female; **Mexico**, Jalisco, 19°33'N, 105°5'W, biostation of Mexico University near Chamela Vill. (in 3–4 km from Pacific Ocean), dry forest on hills, on leave, 23–28 Nov. 2006; coll. A. Gorochov & A. Ovtshinnikov; ZIN.

**Paratype.** Female; same data as for holotype; ZIN.

**Description.** Female (holotype). General appearance as in *P. oaxaca* and *P. simplex*. Head yellowish with a few small brown spots on epicranium under eyes and under antennae, light brown dot near hind corner of each subgena and stripe along clypeal suture, two brownish longitudinal bands behind each eye, small darkish spots on dorsum along its hind edge, and colouration of antennae as in *P. oaxaca* and *P. simplex*; colouration of pronotum similar to that of *P. simplex chamela*; legs yellowish with several darkish dots on all femora, small brown spots at apex of fore and middle femora as well as at base of all tibiae (including somewhat larger sub-basal spot on dorsal surface of fore tibiae), dark brown apical part of hind femora, light brown wide transverse band behind middle of these femora, brownish apical part of all tibiae, and grayish brown tarsi (but with light both proximal half of third segment of all tarsi and area on dorsal and lateral surfaces of hind basitarsus); tegmina yellowish with dorsal field having light brown venation and brown short proximal parts of a few branches situated along lateral edge of this field; hind wings transparent with gray-

ish exposed part; other bodyparts (excepting brown ovipositor) uniformly yellowish. Rostrum of head narrow (scape almost twice wider than rostrum between antennal cavities); median ocellus much smaller than lateral ocelli. Fore legs shorter than in all previous species (pronotum 1.1 times as long as fore tibia, but in all previous species, this ratio 0.8–0.9), with slightly inflated tympanal part (Fig. III: 12) and with tympana similar to those of *P. aztecus*, *P. oaxaca*, *P. simplex* and *P. varius* (right fore leg damaged in nymphal stage – it shorter than left one and with partly reduced tympana); fore and middle basitarsi almost as short as in *P. minor* (see Figs III: 11 and 12); hind tibiae with rather short spines (length of longest spine 0.7–0.8 mm, but in previous congeners, excepting only smallest *P. minor* having similar length of this spine, this length 1–1.2 mm). Tegmina with 13 longitudinal veins in dorsal field and 17–18 branches of *Sc* in lateral field; hind wings strongly exposed behind tegmina. Shape of genital plate and structure of ovipositor similar to those of all previous species.

**Variations.** Paratype with dorsal part of head hardly darkened (intermediate between yellowish and light brown) and that of pronotum almost light brown as well as with distinct brown longitudinal band on upper half of pronotal lateral lobes (this band almost reaching hind edge of these lobes).

Male unknown.

Length in mm. Body 14–15; body with wings 25–27; pronotum 3.6–3.8; tegmina 17.5–19; hind femora 10.2–11.3; ovipositor 5.3–5.7.

**Comparison.** The new species differs from all the other congeners in the relatively shorter fore legs and spines of hind tibiae, presence of wide light brown band behind the middle of hind femora, and (from majority of them) narrow rostrum of head.

***Paroecanthus selva* sp. nov.**  
(Figs II: 8–10; III: 13)

**Holotype.** Male; **Mexico**, Chiapas, Ocosingo Distr., Selva Lacandona near border with Guate-

mala (between Biosphere reserve Montes Azules and Bonampak Natural Monument), environs of Lacanja-Chansayab Vill., primary forest, at light, 20–27 May 2007; coll. M. Berezin & E. Tkatsheva; ZIN.

**Description.** Male (holotype). Structure of body similar to that of *P. jalisco*, but colouration very different, reddish brown (rather dark) with following marks: head (Fig. II: 8) with dark brown genae and area behind each eye (latter area with narrow longitudinal light brown mark), yellowish antennae (scapes with a few brown spots) and a pair of narrow longitudinal stripes running along medial edge of eyes from upper corner of antennal cavities to hind edge of vertex, blackish maxillary palpi, and dark brown labial palpi; pronotum with dark brown lateral lobes; legs with light brown third segment of all tarsi, yellowish hind tibiae having darkish apical part, and darkish two proximal segments of hind tarsi; tegmina uniformly reddish brown with only slightly lighter distal area; exposed part of hind wings with colouration similar to that of distal tegminal area; ovipositor brown with two slightly darker transverse ridges on ventral surface of ventral valves. Structure of head rostrum and of ocelli similar to that of *P. jalisco*. Pronotum 1.1 times as long as fore tibia (as in *P. jalisco*). Fore tibiae moderately inflated (Fig. III: 13) and with tympana as in *P. aztecus*, *P. oaxaca*, *P. simplex*, *P. varius* and *P. jalisco*; fore and middle basitarsi similar to those of *P. minor* and *P. jalisco* (see Figs III: 11, 12 and 13); hind tibiae with spines somewhat shorter than in *P. jalisco* (length of longest one 0.6 mm) (Fig. II: 9). Tegmina with dorsal field having 11–12 longitudinal veins and rather dense crossveins (distinctly more numerous than in all previous congeners), and with lateral field having 15–16 branches of *Sc* and numerous weak crossveins between many of them; hind wings strongly exposed behind tegmina. Shape of genital plate and of ovipositor (Fig. II: 10) similar to that of female of all previous congeners.

Male unknown.

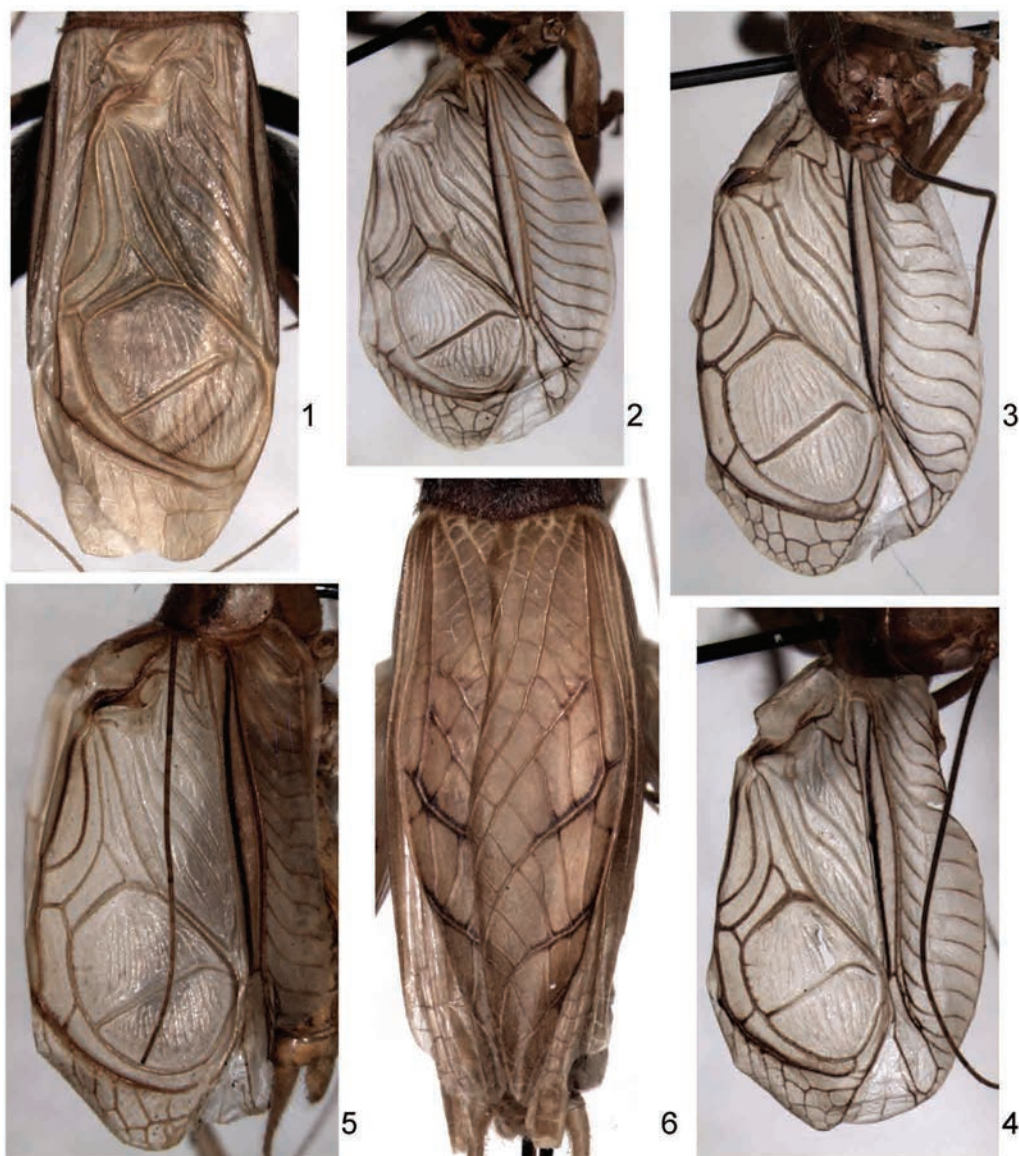
Length in mm. Body 17; body with wings 26.5; pronotum 4.2; tegmina 18.5; hind femora 10; ovipositor 6.

**Comparison.** The new species is most similar to *P. jalisco*, but distinctly differs from it and from all the other congeners in the rather dark (reddish brown) colouration of body, much more dense crossveins in the dorsal field of tegmina, and presence of numerous crossveins in their lateral field.

#### Genus *Siccotrella* gen. nov.

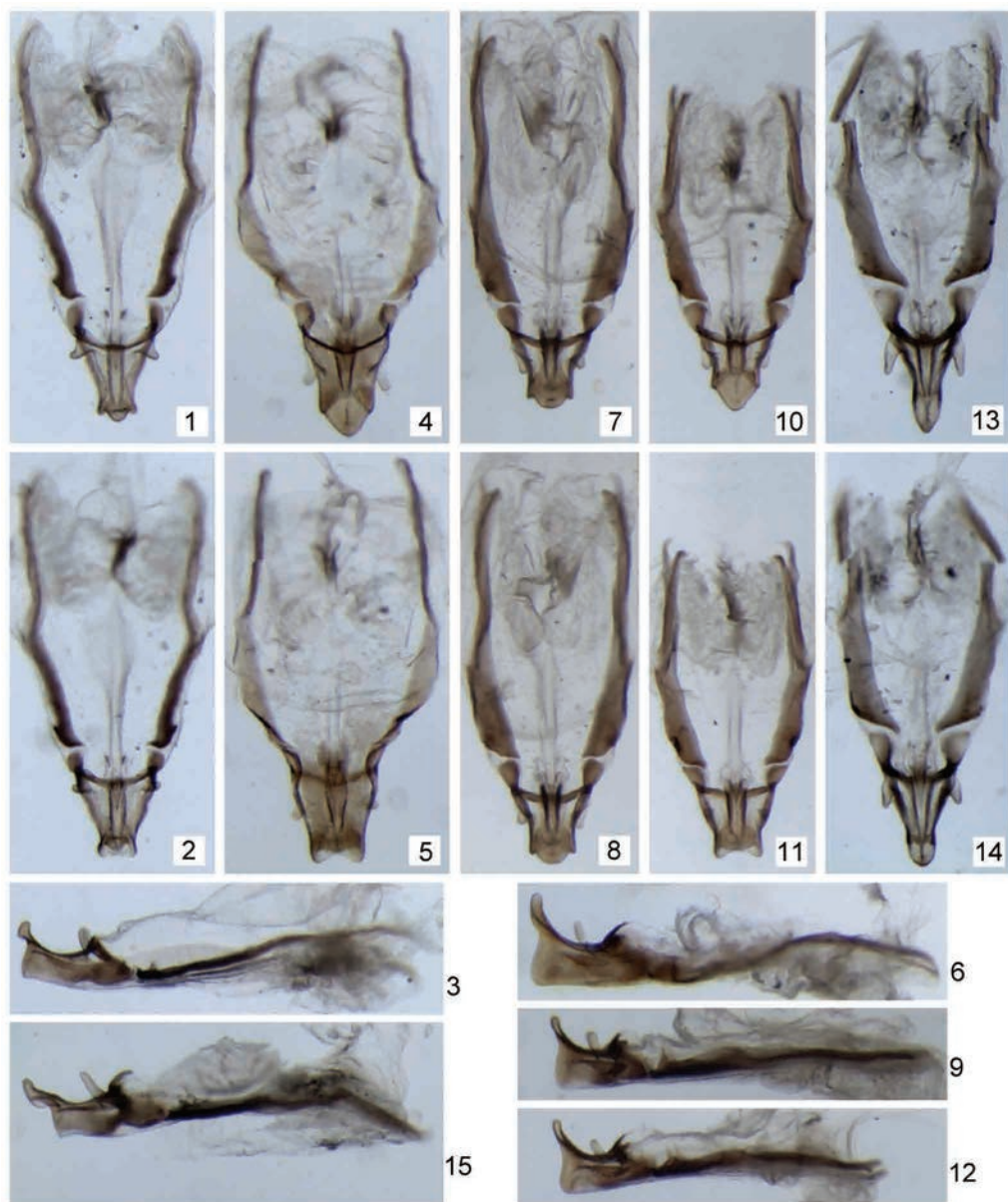
Type species: *Siccotrella mutabilis* sp. nov.

**Diagnosis.** Crickets with general appearance more or less similar to that of *Paroecanthus*, but more stocky. Head rather short, with roundly angular (in profile) rostrum approximately 1.5 times as wide as scape; ocelli situated in shape of triangle; median ocellus extremely small; lateral ocelli not large, but distinctly larger than median one. Pronotum not very long (clearly wider than its length) and distinctly (but not strongly) narrowing to head; male metanotal gland more or less similar to that of *Paroecanthus*, however with somewhat lower middle process (Figs III: 14–17). Fore tibiae not inflated; outer tympanum not large, oval (opened) and not immersed or hardly immersed; inner tympanum absent (only short longitudinal concavity on inner surface of fore tibia presented) or strongly reduced (i. e. very small, narrow, opened, and hardly or not immersed); hind legs somewhat shorter than in *Paroecanthus*. Tegmina with moderately shortened apical area (this area shorter than in all known species of *Paroecanthus*; Figs VII: 1–6); hind wings also shortened – with apical part not exposed or very weakly exposed behind tegmina. Abdominal apex similar to that of *Paroecanthus* (in both sexes, including ovipositor; Figs I: 1–3), but male genitalia lacking ectoparameres and with epiphallus more or less completely sclerotised and having a pair of dorsal finger-like processes (Figs VIII: 1–15), and distal part of ovipositor sometimes almost without large transverse ridges (*S. xadani* sp. nov.).



**Figs VII (1–6).** *Siccotrella*. 1, *S. mutabilis* sp. nov.; 2, *S. sympatrica* sp. nov.; 3, *S. modesta modesta* subsp. nov.; 4, *S. modesta palenque* subsp. nov.; 5, *S. managua* sp. nov.; 6, *S. xadani* sp. nov. Male upper tegmen (2–5) and its dorsal field (1); female tegmina from above (6).





**Figs VIII (1–15).** *Siccotrella*. 1–3, *S. mutabilis* **sp. nov.**; 4–6, *S. sympatrica* **sp. nov.**; 7–9, *S. modesta modesta* **subsp. nov.**; 10–12, *S. modesta palenque* **subsp. nov.**; 13–15, *S. managua* **sp. nov.** Male genitalia from above (1, 4, 7, 10, 13), from below (2, 5, 8, 11, 14) and from side (3, 6, 9, 12, 15).



*Included species* (named in original binomen). *S. mutabilis* **sp. nov.** (type species); *Paroecanthus guatemalae* Saussure, 1874 from Guatemala; *P. niger* Saussure, 1874 from Guatemala; *P. toltecus* Saussure, 1878 from Mexico; *P. sulcatus* Saussure, 1897 from Guatemala; *S. sympatrica* **sp. nov.**; *S. modesta* **sp. nov.**; *S. managua* **sp. nov.**; *S. xadani* **sp. nov.**

*Comparison.* The new genus is most related to the genus *Paroecanthus*, but well distinguished from it by the inner tympanum absent or strongly reduced, hind legs somewhat shorter, wings more shortened, and male genitalia lacking ectoparameres and with the epiphallus more or less completely sclerotised and having a pair of dorsal processes.

*Etymology.* The generic name is originated from siccus (Lat.) – stocky and the genus *Sonotrella*.

### *Siccotrella mutabilis* **sp. nov.**

(Figs I: 6; III: 14; VII: 1; VIII: 1–3)

*Holotype.* Male; **Mexico**, Chiapas, 130 km WN of Tapachula City, environs of Ejido Las Golondrinas Vill. near reserve El Triunfo, 800–1000 m, partly primary and partly secondary forest, on leave, 13–17 May 2006; coll. A. Gorochov & M. Berezin; ZIN.

*Paratypes.* Six males, 1 female; same data as for holotype; ZIN.

*Description.* Male (holotype). Head dark brown with light brown antennae (their middle and distal parts almost yellowish) and mouthparts (upper part of clypeus and small area at base of mandibles brown); pronotum dark brown with brown disc; all coxae and femora dark brown with almost light brown both apical part of hind femora and very small marks at apex of fore and middle femora; all tibiae and tarsi uniformly light brown; tegmina uniformly yellowish, but with brown *R*, *M* and most part of *Sc* (excepting its branches); hind wings almost whitish; dorsum of pterothorax and of abdomen light brown with numerous brown and dark brown spots on abdomen; rest of abdominal tergites, all sternites and ante-

rior half of genital plate dark brown; cerci, paraprocts and distal half of genital plate light brown. Median ocellus situated on hind edge of short and narrow median concavity of rostral dorsum. Hind edge of pronotal disc weakly convex; metanotal gland with comparatively wide middle process truncate at anteromedian edge and having a pair of rather distinct anterolateral projections (Fig. III: 14). Fore tibiae with very small and narrow inner tympanum which opened and hardly immersed; hind tibiae with rather long spines (length of longest one ~1 mm). Tegmina with dorsal field as in photograph (Fig. VII: 1) and with lateral field having 20–21 branches of *Sc* more or less similar to those of *Paroecanthus* in shape; crossveins between these branches absent; hind wings almost reaching apex of tegmina. Genitalia as in Figs VIII: 1–3.

*Variations.* Paratypes with rather variable colouration: dark parts in most dark specimens almost black; but in most light specimens, epicranium brown with almost light brown its lower parts, pronotum uniformly brown, legs almost completely light brown, and thoracic sternites brown.

*Female.* General appearance as in most light males of this species, however wings with only one tegminal vein (*R*) brown, area between tegminal *Sc* and *R* somewhat wider, dorsal tegminal field having 10 longitudinal veins and moderately sparse crossveins, lateral tegminal field having 12–13 branches of *Sc* (more oblique and not S-shaped), and hind wings hardly exposed behind tegmina. Genital plate and ovipositor almost yellowish with brownish drilling ridges on distal part of ovipositor as well as with brownish apex and lateral border of distal part of ovipositor dorsal valves; structure of distal part of ovipositor almost as in Fig. I: 1–3.

Length in mm. Body: male 14–15, female 13; body with wings: male 17–18, female 18; pronotum: male 3.1–3.4, female 3.5; tegmina: male 12.5–13, female 12.8; hind femora: male 10.5–11.2, female 11.3; ovipositor 5.8.

*Comparison.* The new species is distinguished from *S. guatemalae* **comb. nov.** by

the more uniform colouration of head, pronotum and tegmina as well as by the longer hind wings; from *S. niger* **comb. nov.**, by the uniformly light antennae and not dark tibiae as well as longer hind wings; from *S. tolteca* **comb. nov.**, by the distinctly narrower areas between proximal parts of oblique branches in the middle part of dorsal tegminal field in female and uniform colouration of this field; and from *S. sulcata* **comb. nov.**, by the more uniform colouration of male tegmina and less transverse vein in mirror of these tegmina.

***Siccotrella sympatrica* sp. nov.**

(Figs III: 15; VII: 2; VIII: 4–6)

**Holotype.** Male; **Mexico**, Chiapas, 130 km WN of Tapachula City, environs of Ejido Las Golondrinas Vill. near reserve El Triunfo, 800–1000 m, partly primary and partly secondary forest, on leave, 13–17 May 2006; coll. A. Gorochov & M. Berezin; ZIN.

**Paratype.** Female; same data as for holotype; ZIN.

**Description.** Male (holotype). Colouration of body light brown with following marks: dorsum of head hardly darker and with small darkish spot behind each ocellus, a pair of yellowish longitudinal stripes along medial edges of antennal cavities and of eyes (crossing lateral ocelli) as well as a pair of similar stripes behind eyes, brown small marks near eyes around latter stripes, dark brown proximal part of antennae (excepting three most proximal segments), and yellowish distal half of antennae; pronotum with slightly darker anterior border and spots on disc, dark brown upper half of lateral lobes, and brown ventral borders; legs with sparse darkish dots on all femora, dark brown spots on apical part of hind femora, weakly darkened fore and middle tibiae and basal part of hind tibiae, brown second segment of fore and middle tarsi as well as most part of dorsal half of hind tibiae, and dark brown spots around bases of spines and of spurs in hind tibiae (these spots partly fused with each other distally) as well as apical part of hind basitarsi and rest of apical part in hind

tibiae; tegmina yellowish with dark brown *M* and brown other veins excepting light brown both middle part of *Sc* and majority of veins in stridulatory apparatus of lower tegmen; hind wings whitish; other parts of body dark brown with brown thoracic sternites, yellowish both metanotal gland and numerous small spots on abdominal dorsum, more sparse light brown spots on abdominal sternites and genital plate, and yellowish grey anal plate, paraprocts and cerci (distal part of cerci yellowish). Ocelli similar to those of *S. mutabilis* in shape, but median concavity on rostral dorsum longer (reaching rostral apex). Structure of both pronotum and metanotal gland also similar to that of *S. mutabilis*, but middle process of this gland distinctly narrower, clearly rounded at anterior edge and with lateral (not anterolateral) projections (Fig. III: 15). Inner tympanum absent (only short longitudinal concavity presented); spines of hind tibiae somewhat shorter than in *S. mutabilis* (length of longest one ~0.7 mm). Tegmina with dorsal field as in photograph (Fig. VII: 2) and with lateral field having 19–20 branches of *Sc* similar to those of *S. mutabilis* in shape; hind wings distinctly not reaching abdominal and tegminal apices. Abdominal apex also similar to that of this species, but genitalia distinguished by epiphallus having wider distal part (Fig. VIII: 4), more simple (not bulbous) apical part (Fig. VIII: 6) and less proximal position of dorsal (finger-like) processes (Figs VIII: 4, 6), and by distinctly shorter sclerotised longitudinal ribbons on both sides of guiding rod (Fig. VIII: 5).

Female unknown.

Length in mm. Body 11.5; body with wings 13.8; pronotum 2.6; tegmina 9.8; hind femora 8.2.

**Comparison.** The new species is most similar in general appearance to *S. guatemalae* and *S. sulcata*, but it differs from them in the absence of dark spots on the tegminal membranes. From all the other congeners, *S. sympatrica* differs in the more variegate colouration and clearly smaller body.

***Siccotrella modesta* sp. nov.**

(Figs I: 1–3; III: 16; VII: 3; VIII: 7–9)

**Holotype.** Male; **Mexico**, Chiapas, Ocosingo Distr., Selva Lacandona near border with Guatemala (between Biosphere reserve Montes Azules and Bonampak Natural Monument), environs of Lacanja-Chansayab Vill., primary forest, 20–27 May 2007; coll. M. Berezin & E. Tkatsheva; ZIN.

**Paratype.** Female; same data as for holotype; ZIN.

**Description.** Male (holotype). Colouration of body almost uniformly light brown, however proximal part of antennae brown (excepting two most proximal segments which light brown), ventral edges of pronotum also brown, hind tibiae with grayish brown spots around bases of spines and spurs (these spots in distal part of tibia partly fused with each other dorsally), tegmina almost yellowish with dark brown narrow stripe along *R* and brown other veins (but in lower tegmen, majority of veins of stridulatory apparatus light brown), hind wings whitish, and abdomen with small brown marks on tergites and weakly darkened spots on sternites, on basal part of anal plate and on apical part of genital plate. Structure of ocelli, of head rostrum and of middle process of metanotal gland almost as in *S. sympatrica* (however this process somewhat wider and with less distinct lateral projections; Fig. III: 16). Legs as in *S. sympatrica*, but spines of hind tibiae hardly longer (length of longest one ~0.8 mm). Tegmina similar to those of both previous species, but their lateral field with 17–19 branches of *Sc* which clearly more S-shaped (especially in distal half of tegmen; Fig. VII: 3); hind wings intermediate between those of *S. mutabilis* and *S. sympatrica* in length. Abdominal apex (including genitalia) very similar to that of *S. sympatrica*, however genitalia with: longitudinal sclerotised ribbons on both sides of guiding rod somewhat longer, proximal part of rami distinctly wider (if to see from above), and distal part of rami clearly bifurcated (Figs VIII: 7–9).

Female. General appearance as in male, however ventral edges of pronotum almost

not darker than other pronotal parts, tegmina with all veins brown and with dorsal field having 9–10 longitudinal veins and moderately sparse crossveins, tegminal *Sc* with 11–12 oblique branches, width of area between tegminal *Sc* and *R* as well as shape of genital plate and of ovipositor as in female of *S. mutabilis* (Figs I: 1–3), but colouration of ovipositor darker (dark brown with brown ventral median band between base of ovipositor and base of its drilling part).

Length in mm. Body: male 14.5, female 14.5; body with wings: male 16, female 15; pronotum: male 2.9, female 3.1; tegmina: male 12, female 10.8; hind femora: male 8.9, female 10; ovipositor 6.

**Comparison.** The new species is most similar to *S. sympatrica* in the shape of male genitalia, but distinguished by the more uniform colouration and characters of male genitalia listed in the description. From *S. mutabilis*, the new species differs in the different shape of epiphallic apex (not bulbous in profile); from *S. niger*, in the distinctly lighter legs; and from *S. tolteca*, *S. sulcata* and *S. guatemalae*, in the absence of darkened marks on tegminal membranes.

***Siccotrella modesta palenque* subsp. nov.**

(Figs VII: 4; VIII: 10–12)

**Holotype.** Male; **Mexico**, Chiapas, environs of Palenque Town near Maya Archaeological Centre, ~200 m, primary forest, on leave, 18–20 Nov. 2006; coll. A. Gorochov & A. Ovtshinnikov; ZIN.

**Description.** Male (holotype). Colouration and structure of body very similar to those of *S. modesta modesta* **stat. nov.**, but with following differences: in new subspecies, abdomen almost uniformly light brown, middle process of metanotal gland less rounded (roundly truncate) at anterior edge, distal branches of tegminal *Sc* somewhat less S-shaped (Fig. VII: 4), and genitalia with anterior (narrow) part of rami distinctly shorter (this part slightly longer than widened hind part of rami, but in *S. modesta modesta*, narrow anterior part of rami significantly longer than their



widened hind part; for comparison see Figs VIII: 7–9, 10–12).

Female unknown.

Length in mm. Body 13.5; body with wings 15.5; pronotum 2.7; tegmina 11.3; hind femora 8.8.

*Comparison.* Differences of the new subspecies from nominotypical one are listed in the description.

***Siccotrella managua* sp. nov.**

(Figs III: 17; VII: 5; VIII: 13–15)

*Holotype.* Male; **Nicaragua**, environs of Managua City, 27–28 Jan. 1985; coll. L. Medvedev; ZIN.

*Description.* Male (holotype). Colouration of body very light brown with following pattern: dorsum of head with darkish V-shaped spot between ocelli, a pair of yellowish stripes along medial parts of antennal cavities (separated from these cavities by brown lines) and of eyes (these stripes running from rostral apex to hind edge of vertex), and a pair of shorter longitudinal yellowish stripes behind eyes; rest of head yellowish with brown proximal part of antennae (excepting three most proximal segments which light brown); pronotum yellowish with light brown both median band on anterior half of disc and wide median area on hind half of disc, brown stripe on lateral lobes along their dorsal edge, and small darkish spot on anterior part of these lobes under above-mentioned brown stripe; legs with small brown marks on apical part of hind femora, two rather small darkish areas on dorsoproximal part of hind tibiae, brown spots around spines and spurs of these tibiae (distal spots partly fused with each other dorsally), and darkish ventral part of hind basitarsi; tegmina yellowish with brown *R*, narrow stripe along *M*, two chords in dorsal field and some veins in basal area of this field, and light brown rest of veins; hind wings whitish; abdomen yellowish with numerous darkish dots on abdominal tergites and brown median stripe on eighth sternite. Median ocellus slightly larger than in all

previous congeners, but distinctly smaller than lateral ocelli; median concavity on rostral dorsum moderately long, running from median ocellus to almost rostral apex. Thorax similar to that of *S. mutabilis*, however middle process of metanotal gland approximately as in *S. modesta* in width and with anterolateral projections and almost angular anteromedian concavity (if to see from above) (Fig. III: 17). Legs similar to those of *S. sympatrica* and *S. modesta*, but length of longest spine of hind tibiae ~0.9 mm. Dorsal tegminal field as in Fig. VII: 5; lateral tegminal field with 19–20 branches of *Sc* curved as in *S. mutabilis* and *S. sympatrica*; length of hind wings approximately as in *S. modesta*. Abdominal apex also similar to that of previous congeners, however genitalia with longer and almost S-shaped (in profile) apical part of epiphallus, dorsal finger-like epiphallallic processes situated as in *S. mutabilis* (but slightly longer), and proximal part of rami widened approximately as in *S. modesta* (Figs VIII: 13–15).

Female unknown.

Length in mm. Body 16; body with wings 17; pronotum 3; tegmina 12.5; hind femora 10.3.

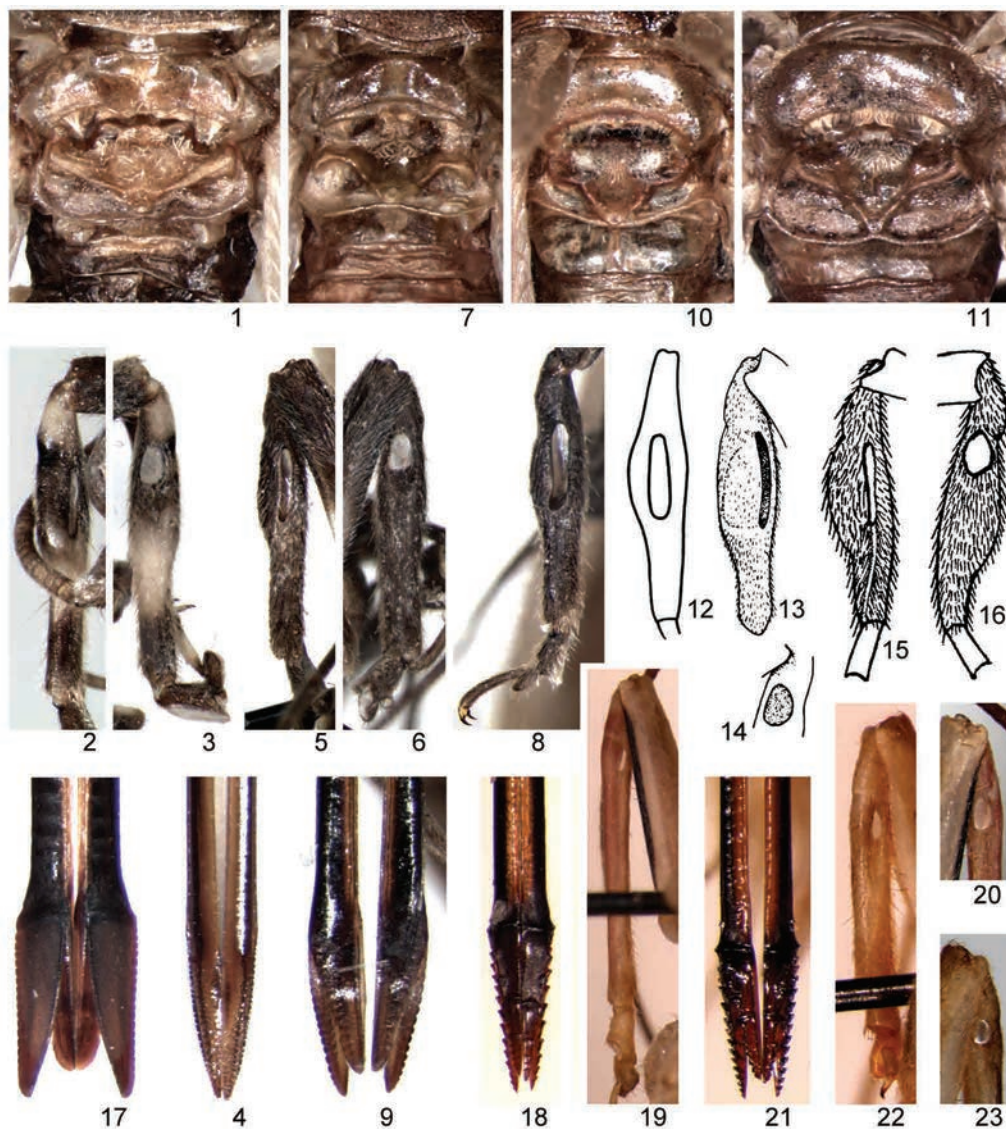
*Comparison.* The new species differs from *S. mutabilis*, *S. sympatrica* and *S. modesta* in the longer and almost S-shaped (in profile) apical part of epiphallus; from *S. niger*, in the light legs; and from *S. sulcata*, *S. guatemalae* and *S. tolteca*, in the absence of darkened marks on tegminal membranes.

***Siccotrella xadani* sp. nov.**

(Figs VI: 10; VII: 6; IX: 17)

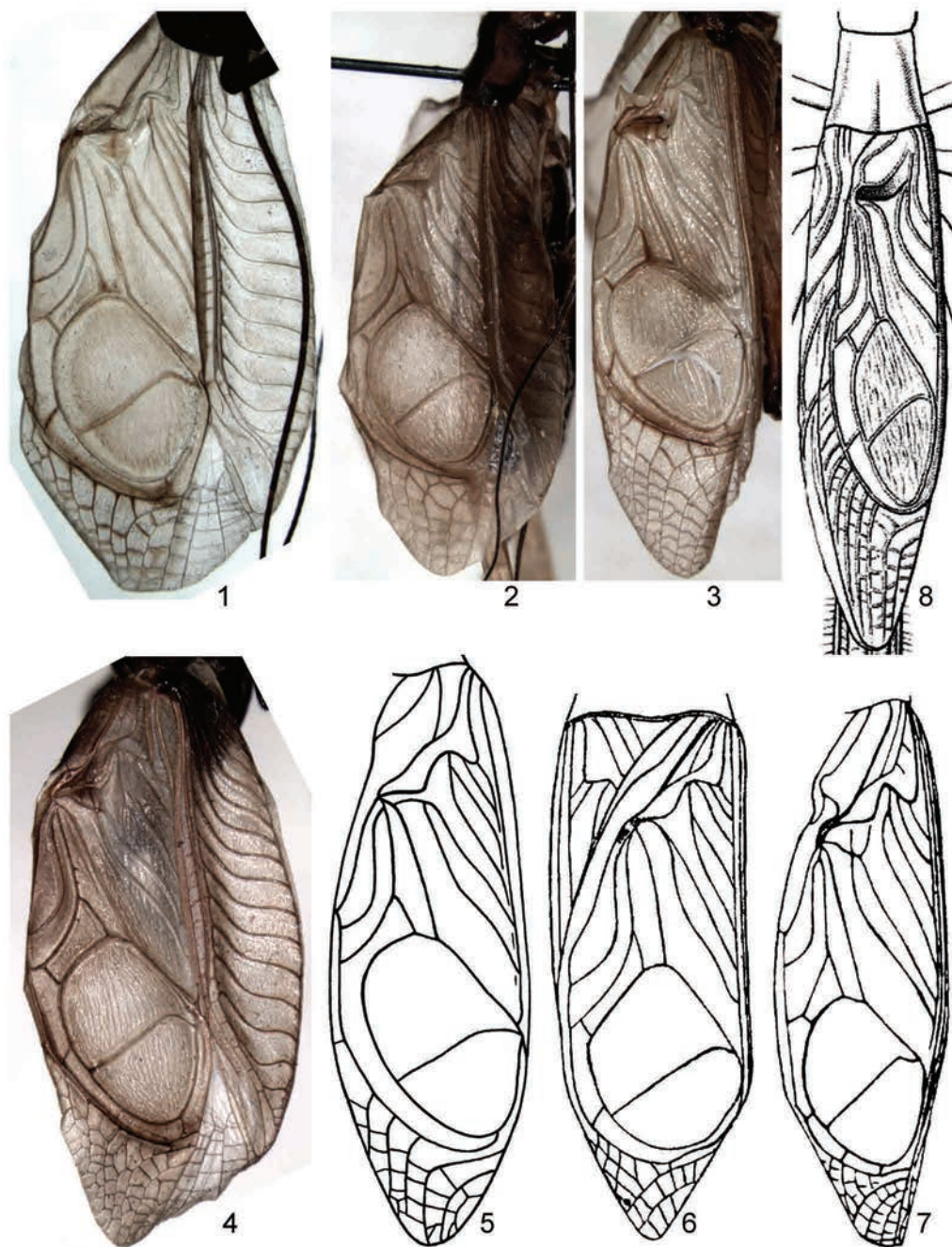
*Holotype.* Female; **Mexico**, Oaxaca, 35 km NNE of Santa Cruz Huatulco Town (10 km N of Xadani Vill.), 900–1000 m, partly primary and partly secondary forest, on leave, 7–11 May 2006; coll. A. Gorochov & M. Berezin; ZIN.

*Description.* Female (holotype). Epicranium dark brown with yellowish face, a pair of stripes from rostral apex to lateral ocelli (separated from antennal cavities only by brown lines), short stripes along medial edges of eyes, and lower parts of ge-



**Figs IX (1–23).** Different structures of body. 1–4, *Angustitrella maculata* sp. nov.; 5, 6, *A. andensis* sp. nov.; 7–9, *A. trivialis* sp. nov.; 10, *A. columbia* sp. nov.; 11, *A. ? borealis* sp. nov.; 12, *A. podagrosa*; 13, 14, *A. roosevelti*; 15, 16, *A. vicina*; 17, *Siccotrella xadani* sp. nov.; 18–20, *Ectotrypa veracruz* sp. nov.; 21–23, *Selvagryllus eltrunfo* sp. nov. Male metanotal gland (1, 7, 10, 11); partly dorsal and partly inner view of fore tibia (2, 13); outer (3, 6, 16) and inner (5, 8, 12, 15, 19, 22) sides of fore tibia; outer tympanum (14, 20, 23); distal part of ovipositor from below (4, 9, 18, 21) and from above (17). [12, after Saussure (1897); 13, 14, after Rehn (1917); 15, 16, after Chopard (1912).]





**Figs X (1–8).** *Angustitrella* and *Ectotrypa*; male. 1, *A. maculata* **sp. nov.**; 2, *A. trivialis* **sp. nov.**; 3, *A. columbia* **sp. nov.**; 4, *A.?* *borealis* **sp. nov.**; 5, *A. podagrosa*; 6, *A. vicina*; 7, *A. roosevelti*; 8, *E.?* *fallax* (Sauss.). Tegmen (1, 2, 4) and its dorsal field (3, 5–8). [5, after Saussure (1897); 6, after Chopard (1912); 7, after Rehn (1917); 8, after Saussure (1874).]



nae, two light brown longitudinal stripes behind each eyes, and reddish brown area between ocelli, reversed V-shaped spot under rostral apex (reaching median ocellus and fused with previous area near this ocellus) and small marks under eyes and under antennal cavities; antennae and mouthparts almost completely yellowish; pronotum almost uniformly dark brown; legs light brown with slightly darkened small areas at apex of hind femora, small darkish sub-basal spot on dorsal surface of hind tibiae, and hardly darkened rings around spines of these tibiae; tegmina light brown with slightly lighter (yellowish) venation and narrow brown stripes along both sides of some longitudinal veins in dorsal field (Fig. VII: 6); hind wings whitish with very light brown apical part; rest of body more or less yellowish with dark brown ovipositor. Median ocellus extremely small, much smaller than lateral ocelli; rostral dorsum with very short median concavity near median ocellus. Pronotum with more convex hind edge of disc than in all previous congeners (Fig. VII: 6). Legs similar to those of *S. sympatricus*, *S. modesta* and *S. managua*, but length of longest spine of hind tibiae as in *S. mutabilis*. Tegmina with 9–10 longitudinal veins in dorsal field (these veins in distal half of tegmen with more transverse proximal parts, elongate cells between them, and rather dense crossveins; Fig. VII: 6), 14–15 oblique branches of *Sc* in lateral field, and area between *Sc* and *R* as in females of other previous congeners; hind wings very weakly exposed behind tegmina. Structure of abdominal apex also similar to that of these species, but genital plate with more rounded apex, and ovipositor distinguished from all congeners described above by somewhat less distinct transverse ridges on ventral surface of distal part and smaller denticles on lateral edge of distal part of dorsal valves (Fig. IX: 17).

Male unknown.

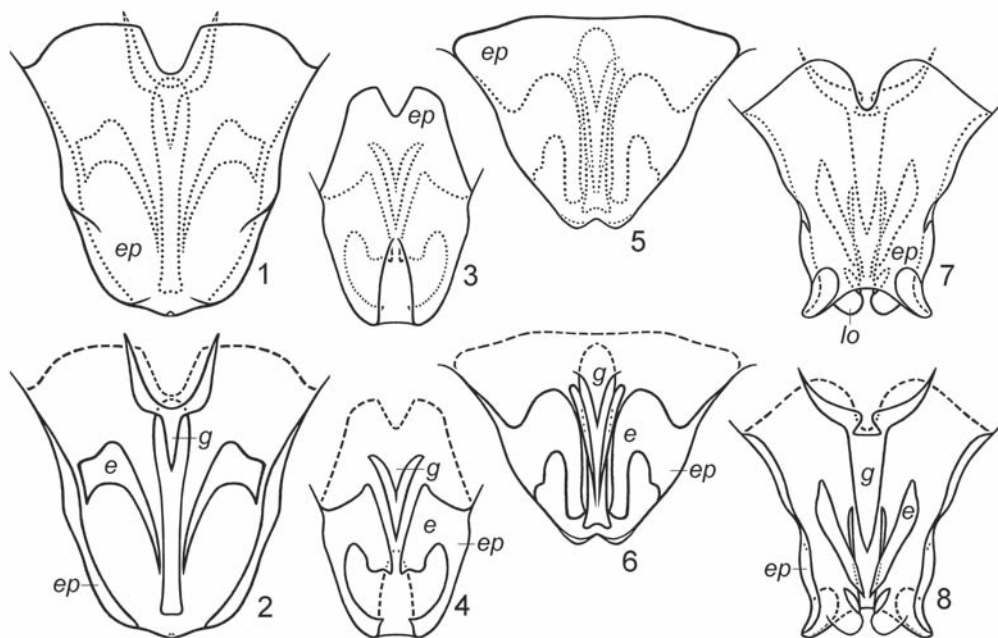
Length in mm. Body 20; body with wings 21; pronotum 3.8; tegmina 15; hind femora 11; ovipositor 6.

**Comparison.** The new species is most similar to *S. tolteca*, but distinguished from it by the dark brown pronotum and most part of epicranium, and yellowish rest of head (in *S. tolteca*, head and pronotum almost uniformly reddish brown, not dark, but with darkish marks on lateral lobes of pronotum near its disc). It is impossible to exclude that *S. xadani* is only a subspecies of *S. tolteca*.

### Genus *Angustitrella* gen. nov.

Type species: *Angustitrella maculata* sp. nov.

**Diagnosis.** Crickets with rather narrow body (including head). Head slightly elongate and with roundly angular (in profile) rostrum approximately 1.5 times as wide as scape; median ocellus indistinct; lateral ocelli moderately large and weakly convex. Pronotum elongate (in male, it slightly wider than its length; in female, it approximately as wide as long), clearly narrowing to head in male, and with almost parallel lateral sides in female; metanotal gland with rather diverse middle process, but this gland distinguished from that of *Paroecanthus* and *Siccotrella* by distinctly longer (wider) areas between two most hind fold of metanotum (Figs IX: 1, 7, 10, 11). Fore tibiae moderately or strongly inflated; outer tympanum not large, oval (opened) and hardly immersed; inner tympanum long, slit-like or almost slit-like (Figs IX: 2, 3, 5, 6, 8, 12–16); hind legs almost as in *Paroecanthus*. Tegmina with rather long apical area and with mirror similar to that of some representatives of *Paroecanthus* and *Siccotrella* (longitudinal, but not narrow; Figs X: 1–7); hind wings not shortened, with hind part distinctly exposed behind tegmina. Abdominal apex also similar to that of *Paroecanthus* and *Siccotrella*, however male genital plate shorter (moderately longer than anal plate), female genital plate with almost rounded or widely truncate apex, and male genitalia with more or less completely sclerotised epiphallus lacking processes on dorsal part and with



**Figs XII (1–8).** *Angustitrella*; schematic. 1, 2, *A. maculata* **sp. nov.**; 3, 4, *A. trivialis* **sp. nov.**; 5, 6, *A. columbia* **sp. nov.**; 7, 8, *A.?* *borealis* **sp. nov.** Epiphallus with ectoparameres and guiding rod from above (1, 3, 5, 7) and from below (2, 4, 6, 8). Abbreviations: *lo*, posteromedial semimembranous lobule; others, as in Figs I: 8–10.

ectoparameres developed (Figs XI: 1–18).

*Included species* (named in original binomen). *Angustitrella maculata* **sp. nov.** (type species); *Paroecanthus podagrosus* Saussure, 1897 from Guatemala and Panama; *P. vicinus* Chopard, 1912 from Guyana; *P. picipes* Bruner, 1916 from Bolivia; *P. roosevelti* Rehn, 1917 from Guyana; *P. hesperus* Hebard, 1924 from Ecuador; *A. andensis* **sp. nov.**; *A. trivialis* **sp. nov.**; *A. columbia* **sp. nov.**; possibly *P. versutus* Otte, 2006 from Costa Rica, "*Bofana*" *mirifica* Otte et Perez-Gelabert, 2009 and "*B.*" *rufa* Otte et Perez-Gelabert, 2009 from Trinidad I., and *A.?* *borealis* **sp. nov.**

*Angustitrella vicina* **comb. nov.** and *A. picipes* **comb. nov.** were synonymised by Chopard (1968) with *A. podagrosa* **comb. nov.** and *Siccotrella niger*, respectively. However *A. vicina* and *A. podagrosa*, judging by Saussure (1897) and Chopard (1912), have some differences in shape of tegminal mirror (for comparison see Figs

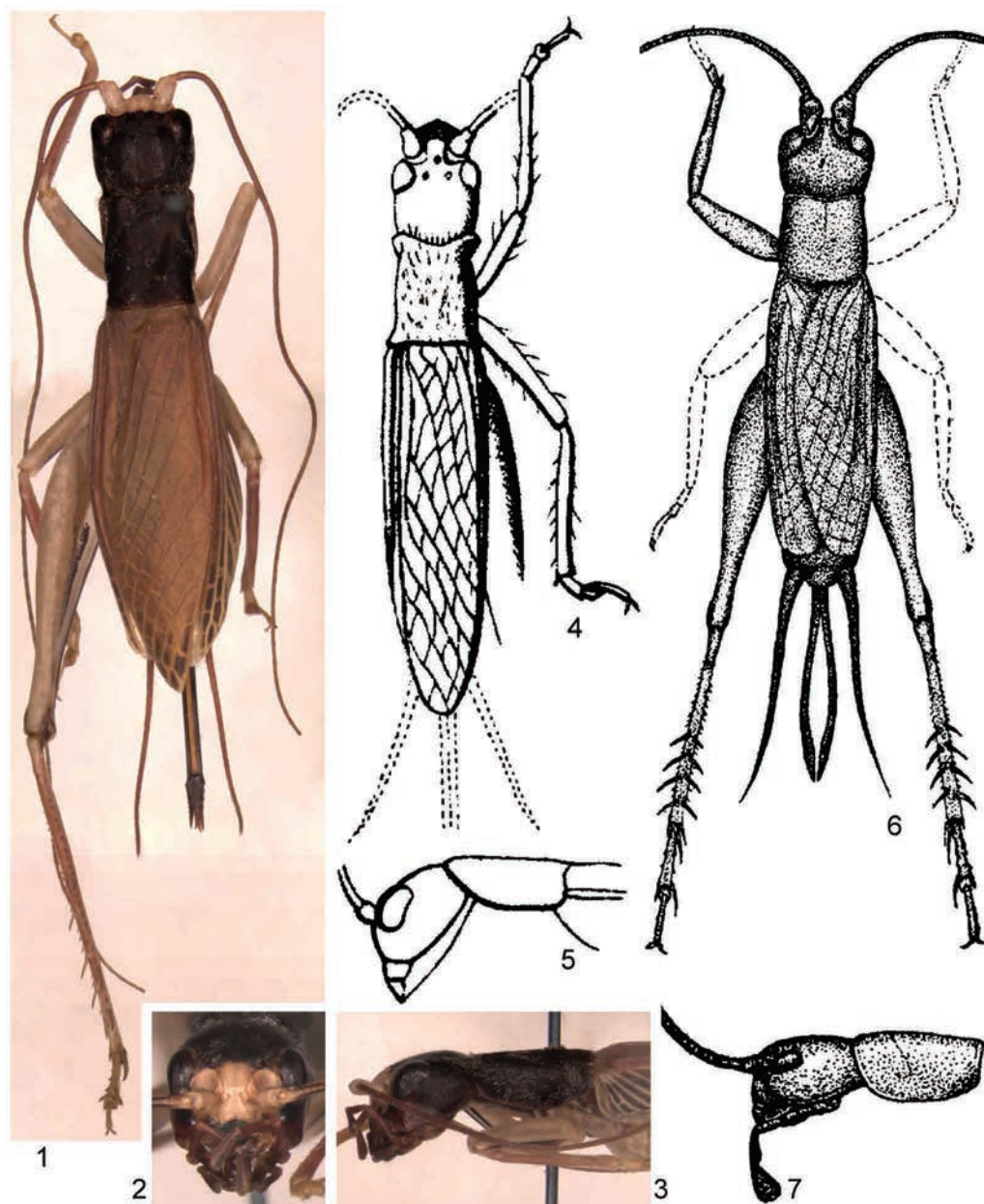
X: 5 and 6) and are described from the different regions, and their male genitalia are not studied. So, synonymy of two these species is in need of examination. *Angustitrella picipes*, judging by Bruner (1916), has the fore tibiae similar to those of *A. vicinus*, but *S. niger*, judging by the original description (Saussure, 1874), lacks inner tympanum. This difference is of a generic level.

Two species from Trinidad mentioned above were very briefly described in combination with the new generic name "*Bofana*" (Otte & Perez-Gelabert, 2009), but this name is unavailable because its authors did not fulfil the following articles of the Code: **13.1** – this article requests the presence of description, diagnosis or reference to one of them for every new scientific name of taxon after 1930, if it is not a new replacement name (however the authors did not give any description, diagnosis or reference for their "new genus", and they did not indicated its name as replacement one);



**Figs XI (1–18).** *Angustitrella*. 1–5, *A. maculata* sp. nov.; 6–10, *A. trivialis* sp. nov.; 11–15, *A. columbia* sp. nov.; 16–18, *A. ? borealis* sp. nov. Male genitalia (1, 2, 5–7, 10–12, 15–18) and their distal part (3, 4, 8, 9, 13, 14) from above (1, 6, 11, 16), from below (2, 7, 12, 17), from side (5, 10, 15, 18), from above and slightly behind (3) and from opposite side (4), from behind (8) and from opposite side (9), and from below and slightly behind (13) and from opposite side (14).





**Figs XIII** (1–7). *Ectotrypa*; female. 1–3, *E. veracruz* sp. nov.; 4, 5, *E. olmeca*; 6, 7, *E. brevis*. Body from above (1, 4, 6); head in front (2); head with pronotum from side (3, 5, 7). [4, 5, after Saussure (1878); 6, 7, after Rehn (1905).]

**13.4** – this article consider that united description of genus and species is possible, if this genus is monotypical, and if a concrete indication about such kind of description is given (however the authors included in their “new genus” three species simultaneously, and they did not give any indication about such kind of description). Also these authors indicated *Paroecanthus olmecus* as the type species of “*Bofana*” as well as of the genus *Paroecanthus*. Later Otte (2009) corrected the latter mistake and indicated “*B.*” *mirifica* as a type species of “*Bofana*”, but he gave neither generic description nor diagnosis again. However this action does not make the latter name available because the above-mentioned articles of the Code are not fulfilled as in Otte & Perez-Gelabert (2009). So, at present “*Bofana*” is still an unavailable name.

**Comparison.** The new genus is related to the genera *Paroecanthus* and *Siccotrella*, but clearly distinguished from them by narrower both head and pronotum (latter one especially narrow in female), fore tibiae strongly inflated, inner tympanum large and slit-like or almost slit-like (from only *Siccotrella*), wings not shortened (also from *Siccotrella*), male genitalia with the epiphallus more or less completely sclerotised (from *Paroecanthus*) and with the ectoparameres developed (from *Siccotrella*).

**Etymology.** The generic name is originated from *angustus* (Lat.) – narrow and the genus *Sonotrella*.

***Angustitrella maculata* sp. nov.**

(Figs IX: 1–4; X: 1; XI: 1–5; XII: 1, 2)

**Holotype.** Male; **Ecuador**, western slopes of Andes Mts, 10 km E of Agua Blanca Vill. (village in environs of Puerto Lopez Town), San Sebastian Forest, 700 m, cloud primary forest, on leave, 26–29 Oct. 2005; coll. A. Gorochov & A. Ovtshinnikov; ZIN.

**Paratypes.** Three females; same data as for holotype; ZIN.

**Description.** Male (holotype). Head brown with dark brown genae, face of episcranium, clypeus and mandibles, and with

light brown rest of mouthparts (excepting brown labium and maxillary palpi, but these palpi with almost light brown spots) and sparse rings on antennal flagellum; pronotum brown with a pair of reddish brown spots on disc and dark brown lateral lobes; pterothorax with light brown dorsum, brown lateral sides and intermediate (between brown and light brown) colouration of sternites; legs yellowish with dark brown distal third of femora, brown long subbasal spot on dorsal part of tibiae (in fore tibiae, this spot occupying areas around tympana also; Figs IX: 2, 3), darkish apical part of fore and middle tibiae as well as two proximal segments of fore and middle tarsi, brown spots around spines and spurs of hind tibiae as well as apical part of hind basitarsi and most part of second segment of hind tarsi, and darkish distal part of third segment of all tarsi; tegmina almost transparent, but with partly whitish and partly grayish venation as well as with very light brown membranes in dorsal field of upper tegmen; hind wings whitish; abdomen brown with light brown majority of sternites and base of cerci as well as with dark brown genital plate and paraprocts. Head and pronotum weakly pubescent (not shining) and not rugous; rostral dorsum with slight narrow and rather short median concavity; pronotal disc without distinct concavities; lateral lobes of pronotum slightly crumpled (not flat); metanotal gland as in Fig. IX: 1. Fore tibiae moderately inflated (Figs IX: 2, 3); inner tympanum almost slit-like (with well visible membrane), and distal edge of this tympanum situated near middle of tibia; spines of hind tibiae moderately short (length of longest one ~0.6 mm). Tegmina as in Fig. X: 1; hind wings reaching base of distal third of hind tibiae. Genitalia with rather short epiphallus having widened anterior part, rounded hind part and distinct median notch at anterior edge; ectoparameres in shape of rather narrow arcuate plate almost fused with epiphallus laterally and having long medial part (Figs XI: 1–5; XII: 1, 2).

Female. General appearance as in male, but tegmina completely very light brown with partly whitish and partly grayish longitudinal venation as well as with brown crossveins (part of these crossveins almost light brown, but sometimes some of them dark brown in dorsal field), abdominal tergites somewhat lighter, genital plate completely yellowish, ovipositor brown with dark brown lateral parts, dorsal tegminal field with 10–11 longitudinal veins and rather numerous crossveins, and lateral tegminal field with somewhat wider *Sc-R* area and 13–15 oblique branches of *Sc* as well as with crossveins slightly less numerous than in previous field. Genital plate short and with apex widely truncate as well as with posterolateral corners rounded; ovipositor with distal part not wider than rest of ovipositor and with only small denticles on lateral edges of this part (transverse ridges on dorsal and ventral surfaces of this part absent; Fig. IX: 4).

Length in mm. Body: male 15, female 14–17; body with wings: male 21, female 22–23.5; pronotum: male 2.9, female 3.1–3.3; tegmina: male 15.5, female 16–16.5; hind femora: male 9, female 9.4–9.8; ovipositor 7.4–7.6.

**Comparison.** The new species differs from *A. podagrosa*, *A. vicina*, *A. picipes*, *A.? versuta* **comb. nov.**, *A.? mirifica* **comb. nov.** and *A.? rufa* **comb. nov.** in the legs contrastingly spotted, and additionally from two the latter species, in the apical part of epiphallus lacking distinct bifurcation. From *A. roosevelti* **comb. nov.** and *A. hespera* **comb. nov.** having the legs more or less spotted, the new species differs in the inflation of fore tibiae shorter and less strong, inner tympanum shorter (situated almost only in proximal half of tibia) [in *A. roosevelti*, distal edge of this tympanum situated distinctly distad than the middle of tibia (for comparison see Figs IX: 2 and 13), and in *A. hespera*, inflation of fore tibiae and inner tympanum longer than even in *A. roosevelti*], and outer spur of hind basitarsi long (the latter character separates *A. maculata*

only from *A. hespera* having the distance between base of hind basitarsus and base of this spur ~2 times as long as this spur; in the new species, this ratio is ~1.5).

***Angustitrella andensis* sp. nov.**  
(Figs IX: 5, 6)

**Holotype.** Female; **Ecuador**, western slopes of Andes Mts, 10 km E of Agua Blanca Vill. (village in environs of Puerto Lopez Town), San Sebastian Forest, 700 m, cloud primary forest, on leave, 26–29 Oct. 2005; coll. A. Gorochov & A. Ovtshinnikov; ZIN.

**Description.** Female (holotype). General appearance similar to that of female of *A. maculata*, but head uniformly brown with only proximal part of antennae dark brown excepting three brown most proximal antennal segments (middle and distal parts of antennae missing), pronotal disc uniformly brown, fore and middle femora with yellowish proximal half and dark brown distal half, hind femora dark brown with yellowish proximal third, all tibiae with dark brown proximal part and gradual transition to brown other parts (Figs IX: 5, 6), all tarsi brown, dorsal field of tegmina practically uniformly light brown, lateral field of tegmina more or less uniformly brown, ventral part of abdomen (including genital plate and cerci) also brown, ovipositor light brown, and distal edge of inner (slit-like) tympanum situated slightly distad than middle of fore tibia (Fig. IX: 5).

Male unknown.

Length in mm. Body 13.5; body with wings 23; pronotum 2.9; tegmina 16.5; hind femora 8.8; ovipositor 6.3.

**Comparison.** The new species is similar to *A. maculata*, but distinguished by the above-listed characters of colouration and slightly more distal position of distal edge of inner tympanum. From *A. roosevelti* and *A. hespera* also having spotted legs, the new species differs in the same characters as *A. maculata* (see Comparison after the description of *A. maculata*), and from all the other congeners, in the femora contrastingly bicolourous.



***Angustitrella trivialis* sp. nov.**

(Figs I: 5; IX: 7–9; X: 2; XI: 6–10; XII: 3, 4)

**Holotype.** Male; **Peru**, Loreto Department, bank of Morona River near its mouth (not far from Puerto Morona Town), ~200 m, primary forest, at light, 20–23 Jan. 2010; coll. A. Gorochov; ZIN.

**Paratypes.** One female; **Peru**, Ucayali Department, ~35 km NWW of Atalaya Town on Ucayali River, environs of Sapani Vill., ~300 m, primary forest, at light, 26–31 Oct. 2008; coll. A. Gorochov, M. Berezin, L. Anisutkin, E. Tkatsheva & V. Izersky; ZIN. One male; **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 Nov. 2005; coll. A. Gorochov & A. Ovtshinnikov; ZIN. One female; **Southern Ecuador**, bank of Morona River near border with Peru, environs of Puerto Morona Vill., ~300 m, primary forest, at light, 5–15 Jan. 2010; coll. A. Gorochov; ZIN.

**Description.** Male (holotype). Head and pronotum reddish brown with dark brown antennae (excepting three most proximal segments: scape almost light brown, two other segments brown) and lower and hind parts of pronotal lateral lobes, grayish brown palpi, and light brown rest of mouthparts (but upper part of clypeus reddish brown); legs dark brown with light brown coxae, most part of hind femora (however their distal part dark) and spines and spurs of hind tibiae; tegmina light brown with somewhat lighter dorsal field of upper tegmen and almost transparent dorsal field of lower tegmen; hind wings whitish; pterothorax and abdomen brown (their dorsal part and pterothoracic sternites lighter, almost light brown). Structure of body similar to that of *A. maculata*, but pronotum and dorsum of head hardly pubescent (almost shining) and weakly (but distinctly) rugous, pronotal disc with a few weakly distinct concavities, metanotal gland with somewhat deeper concavity behind middle process and median fusion of two distal folds of metanotum (in *A. maculata*, median parts of these folds well separated from each other; for comparison see Figs IX: 1 and 7), fore tibiae strongly inflated (Fig. IX: 8), distal edge of inner

(slit-like) tympanum situated distinctly distad than middle of tibia (approximately as in *A. podagrosa*, *A. roosevelti* and *A. vicina*; see Figs IX: 8, 12, 13, 15), spines of hind tibiae slightly shorter (length of longest one ~0.4 mm), venation of tegmina as in photograph (Fig. X: 2), hind wings longer (reaching apical part of hind tibiae), and genitalia with distinctly narrower anterior part of epiphallus and clearly shorter ectoparameres fused with epiphallus laterally (Figs XI: 6–10; XII: 3, 4).

**Variations.** Apical segment of all palpi almost light brown; hind femora with more (than in holotype) gradual transition from light brown proximal part to dark brown distal part; upper tegmen with darkened spot near plectrum.

**Female.** General appearance as in male, but genae of head and pronotal lateral lobes in one female completely dark brown, tegmina completely light brown or with dorsal field light brown and lateral field brown, light part of hind femora varied from light brown to brown, hind tibiae and all tarsi sometimes partly brown, most part of ovipositor dark brown (as in *A. maculata*) or light brown (almost as in *A. andensis*), venation of tegmina similar to that of *A. maculata* and *A. andensis* (however crossveins between branches of *Sc* somewhat more sparse), structure of genital plate also similar to that of these species, and shape of ovipositor distinguished from that of *A. maculata* only by somewhat wider base of distal part (Fig. IX: 9).

**Length in mm.** Body: male 12–13, female 11–14; body with wings: male 19–20, female 19.5–22; pronotum: male 2.5–2.6, female 2.5–2.8; tegmina: male 12.5–13, female 13.5–15; hind femora: male 7.5, female 7.5–8; ovipositor 4.9–5.3.

**Comparison.** The new species is similar to *A. podagrosa*, *A. vicina*, *A. roosevelti* and *A. hespera* in the strongly inflated fore tibiae, but distinguished from the first species by the shorter mirror in male tegmina and somewhat more proximal position of inner tympanum (for comparison see Figs

IX: 8 and 12; X: 2 and 5); from *A. vicina*, in the more oblique both mirror and diagonal vein in male tegmina as well as less oblique (more longitudinal) branches in apical area of these tegmina (see Figs X: 2 and 6); and from *A. roosevelti* and *A. hespera*, in the uniform colouration of fore and middle legs. The latter character and more inflated fore tibiae of *A. trivialis* distinctly separate this species from *A. andensis* and *A. maculata* (from the latter species, *A. trivialis* differs also in the ectoparameres clearly fused with the epiphallus). From *A. picipes*, the new species differs in the smaller size of body; from *A.? mirifica* and *A.? rufa*, in the shape of epiphallus lacking characteristic elongate posterolateral lobes; and from *A.? versuta*, in the rounded (not angular) lateral edges of base of ovipositor distal part.

**Notes.** The above-mentioned females (paratypes) collected in different localities and having some differences in colouration (including colouration of ovipositor) may belong to different subspecies.

***Angustitrella columbia* sp. nov.**

(Figs IX: 10; X: 3; XI: 11–15; XII: 5, 6)

**Holotype.** Male; **Colombia**, “Mosquitero, Rio Magdalena, Woronov”, 9 May 1926; ZIN.

**Description.** Male (holotype). General appearance similar to that of holotype of *A. trivialis*, but genae and face of epicranium as well as pronotal lateral lobes completely dark brown, antennae almost uniformly brown, palpi and femora light brown (however hind femora with brown apical part), tibiae and tarsi brown (with light brown apical tarsal segment and spurs of hind basitarsus), pterothorax and abdomen more or less uniformly light brown, metanotal gland with clearly smaller and distinctly less deep concavity behind middle process (this concavity also clearly smaller and less deep than in *A. maculata*) as well as with somewhat narrower areas between lateral parts of two distal folds of metanotum (Fig. IX: 10), length of longest spine of hind tibiae ~0.5 mm, dorsal field of tegmina as in photo-

graph (Fig. X: 3), and genitalia with much wider anterior part of epiphallus and small (but distinct) median notch at epiphallic apex as well as with distinctly longer ectoparameres (Figs XI: 11–15; XII: 5, 6).

Female unknown.

Length in mm. Body 14; body with wings 21; pronotum 2.4; tegmina 14.5; hind femora 8.

**Comparison.** The new species is most similar to *A. trivialis*, but distinguished by the lighter fore and middle legs and above-mentioned characters of male metanotal gland and of male genitalia. From all the other congeners, the new species differs in the same characters as *A. trivialis* (see Comparison of *A. trivialis* with all the other species) in combination with the not dark fore and middle femora which are lighter than head and pronotum.

***Angustitrella? borealis* sp. nov.**

(Figs IX: 11; X: 4; XI: 16–18; XII: 7, 8)

**Holotype.** Male; **Mexico**, Chiapas, environs of Tuxtla Gutierrez City, near reserve El Ocote, 600–1000 m, primary forest, at light, 19–24 May 2006; coll. A. Gorochov & M. Berezin; ZIN.

**Paratypes.** Two females; **Mexico**, Chiapas, Ocosingo Distr., Selva Lacandona near border with Guatemala (between Biosphere reserve Montes Azules and Bonampak Natural Monument), environs of Lacanja-Chansayab Vill., primary forest, at light, 20–27 May 2007; coll. M. Berezin & E. Tkatsheva; ZIN.

**Description.** Male (holotype). General appearance more or less similar to that of all previous species of *Angustitrella*, but characterised by following characters: head and pronotum reddish brown with dark brown proximal part of antennae (excepting three most proximal segments which brown), pronotal lateral lobes and a pair of spots on pronotal disc, and brown mouthparts (excepting reddish brown middle part of maxillary palpi and almost light brown labrum) and middle part of antennae (their distal part missing); fore and middle legs dark brown with almost blackish apical part of femora and base of tibiae, brown trochanters and most part of third tarsal segments,

and light brown claws; hind legs with brown basal part, reddish most part of femora and small dorsal subbasal spot on tibiae, dark brown apical part of femora and most part of tibiae and tarsi, reddish brown lower part of proximal half of tibiae, and light brown distal part of third tarsal segments; tegmina almost uniformly light brown with slightly darker majority of veins (excepting light brown oblique veins in stridulatory apparatus) and semitransparent stridulatory areas of lower tegmen; hind wings whitish with light brown venation and membranes of distal part; pterothorax and abdomen brown with hardly lighter areas on metanotum and two proximal sternites of abdomen, and slightly darker apical part of anal and genital plates; external structure of body similar to that of *A. trivialis*, but pronotum and dorsum of head practically without pubescence (clearly shining) and more distinctly rugous, pronotum also with more noticeable concavities on disc and somewhat more crumpled lateral lobes, metanotal gland with concavity behind middle process approximately as in *A. mutabilis* and with two distal folds of metanotum almost as in *A. trivialis*, however areas between lateral parts of these folds wider and median parts of these folds (fused with each other) narrower (Fig. IX: 11), spines of hind tibiae hardly longer (length of longest one ~0.5 mm), tegmina with slightly longer mirror (Fig. X: 4), and hind wings hardly longer (reaching basal part of hind tarsi). Genitalia (Figs XI: 16–18; XII: 7, 8) distinguished from those of all previous species of *Angustitrella* by presence of elongate posterolateral epiphallic lobes directed aside and backwards and of a pair of posteromedial semi-membranous lobules (*lo*), straight ectoparameres clearly separated from epiphallus, larger guiding rod, and absence of curvature of distal part of genitalia in profile (this curvature characteristic of all previous species of *Angustitrella* with known genitalia; for comparison see Figs XI: 5, 10, 15, 18).

Female. Colouration and structure of body as in male, however tegmina with

brown lateral field and uniformly light brown dorsal field, tegminal venation similar to that of female of *A. maculata*, and abdominal apex almost as in female of *A. trivialis*.

Length in mm. Body: male 15, female 13–15; body with wings: male 23.5, female 21–23; pronotum: male 2.7, female 2.7–2.9; tegmina: male 16, female 14–15.5; hind femora: male 7.8, female 7–7.7; ovipositor 5–5.3.

*Comparison.* The new species is most similar to *A. ? mirifica* and *A. ? rufa*, but it differs from them in the slightly narrower mirror of male tegmina, somewhat shorter posterolateral lobes of epiphallus, and distinctly wider notch between these lobes. From *A. podagrosa*, *A. vicina*, *A. picipes*, *A. roosevelti*, *A. hespera*, *A. maculata*, *A. andensis* and *A. ? versuta*, the new species differs in the shining and very rugous dorsum of both head and pronotum as well as more crumpled pronotal lateral lobes, and from all the other congeners with known male genitalia, in the genital characters listed in Description. Differences in male genitalia between the new species (+ two the above-mentioned most similar species) and all the other congeners here studied are rather significant; these differences indicates that this genus may be divided into two subgenera or even two related genera.

Genus *Ectotrypa* Saussure, 1874

*Chremon* Rehn, 1930, **syn. nov.**

Type species: *Ectotrypa olmeca* Saussure, 1874.

*Note.* This genus is characterised by the elongate and rather narrow body (Figs XIII: 1, 4, 6), head with the elongate hind part (behind eyes), and long and narrow pronotum (Figs XIII: 1, 3–7) which is distinctly longer than its width. The latter character is presented in female, but in previously unknown male, pronotum might be of somewhat different shape. In all the previous genera of the subtribe Paroecanthina, pronotum is shorter than its width or (only



in some females) as long as wide. The other characteristic features of *Ectotrypa* are following: legs long and thin (especially fore and middle ones; Figs IX: 19; XIII: 1, 4, 6), with the tibiae distinctly longer than femora; fore tibiae hardly inflated in the tympanal region and with the outer tympanum oval (opened) and not immersed, and inner tympanum almost slit-like, rather short (not longer than outer one) and weakly immersed (Fig. IX: 19, 20); distal part of ovipositor rather narrow (somewhat narrower than in the previous genera of Paroecanthina) and having several distinct oblique denticles on the lateral edges (these denticles are somewhat larger and more oblique than in the previous genera; Fig. IX: 18).

No one male included in *Ectotrypa* by previous authors, but there are two similar genera (with known males) having the pronotum longer than its width. One of these genera is *Carsidava* Walker, 1869, an enigmatic genus synonymised with *Paroecanthus* by Saussure (1874). However, judging by its pronotal shape, *Carsidava* may be a synonym of *Ectotrypa* or a distinct genus (*Carsidava* differs from *Ectotrypa* by the legs "rather short and stout"; Walker, 1869). Another genus is *Chremon* Rehn, 1930 including a few species with the long pronotum (in their males, pronotum may be from hardly longer than its width to slightly wider than its length). Legs of *Chremon* are similar to those of *Ectotrypa* in shape (its fore tibiae may be from hardly to almost moderately inflated), and its ovipositor is also more or less similar to that of *Ectotrypa*. *Chremon* is a more probable synonym of *Ectotrypa*. Its males are with the tegminal stridulatory vein curved as in the other representatives of Paroecanthina and with the tegminal mirror possibly varying from slightly elongate (oval) to possibly very long (narrow; Fig. X: 8), but their genitalia are insufficiently studied.

So, *Ectotrypa* may include the following species (named in original binomen): *E. olmeca* (type species) from Mexico; *E. brevis* Rehn, 1905 from Costa Rica; *Chre-*

*mon repentinus* Rehn, 1930 (type species of *Chremon*), *Ch. apithanon* Otte et Perez-Gelabert, 2009, *Ch. anembatos* Otte et Perez-Gelabert, 2009, *Ch. jaiqui* Otte et Perez-Gelabert, 2009, *Ch. eribombos* Otte et Perez-Gelabert, 2009, *Ch. procax* Otte et Perez-Gelabert, 2009 from Hispaniola I.; *E. veracruz* sp. nov.; possibly *Carsidava cinerascens* Walker, 1869 (type species of *Carsidava*) from Brazil, *Paroecanthus fallax* Saussure, 1874 from Cuba, *P. sporadicus* Otte et Perez-Gelabert, 2009, *P. scinax* Otte et Perez-Gelabert, 2009, *P. valens* Otte et Perez-Gelabert, 2009 from Hispaniola I., and *P. strongylops* Otte et Perez-Gelabert, 2009, *P. otaros* Otte et Perez-Gelabert, 2009, *P. hwinanus* Otte et Perez-Gelabert, 2009 from Jamaica.

### *Ectotrypa veracruz* sp. nov.

(Figs IX: 18–20; XIII: 1–3)

*Holotype*. Female; **Mexico**, Veracruz, 15–20 km NE of Catemaco Town, Los Tuxtlas (biostation of Mexico University) in 2 km from coast of Mexican Gulf, partly primary and partly secondary forest on hills, on leaves, 6–17 Nov. 2006; coll. A. Gorochov & A. Ovtshinnikov; ZIN.

*Paratype*. Female; same data as for holotype; ZIN.

*Description*. Female (holotype). Head black with dark brown most part of clypeus as well as genae under hind half of eyes, reddish brown maxillary palpi and genae under anterior half of eyes (but with black spot near each eye), brown other mouthparts (excepting light brown lateral parts of clypeus), yellowish rostral area (Figs XIII: 1–3) and scapes, and light brown rest of antennae; pronotum black with a pair of dark brown spots on disc and brown borders; legs yellowish with blackish stripes along each ventral keels of femora (in hind femora, these stripes from dark brown to brown), rose tibiae (excepting yellowish small basal part, subbasal spot, distal part, and spines and spurs), brownish small marks on apical part of hind femora and on outer side of their distal third, and brown two longitudinal parallel stripes on inner side of distal half

of hind femora; tegmina with light brown dorsal field having hardly lighter venation, reddish lateral part of this field and *Sc-R* area, yellowish *Sc* (including its branches), greyish brown (rather dark) membranes between *Sc* branches, and greyish (lighter) stripe along ventral edge of lateral field (Figs XIII: 1, 3); venter of body yellowish with brown anterior part and small darkish marks on abdominal pleurites; rest of abdomen yellowish with reddish brown areas on hind tergites as well as rose anal plate, paraprocts and cerci, and dark brown ovipositor having light (almost yellowish) median part from base of ovipositor to base of its distal part (Fig. IX: 18). Shape of head typical of this genus (Figs XIII: 1–3); rostrum between antennal cavities slightly narrower than scape; lateral ocelli very small; median ocellus indistinct. Pronotum approximately 1.2 times as long as wide; its lateral lobes low (Figs XIII: 1, 3). Fore tibiae hardly inflated in tympanal region (Fig. IX: 19). Tegmina insignificantly not reaching apex of hind femora; dorsal field with 9–10 somewhat oblique longitudinal veins and numerous crossveins; lateral field with 15–16 oblique branches of *Sc* and a few crossveins between some of these branches; hind wings reaching tegminal apex (not exposed behind tegmina) (Fig. XIII: 1). Genital plate moderately short, with roundly truncate apex; ovipositor as in Fig. IX: 18.

Variations. Paratype slightly smaller, with black spot near anteroventral edge of each eye larger (reaching subgena), and without any rose areas (fore and middle tibiae as well as epiproct, paraprocts and cerci yellowish).

Male unknown.

Length in mm. Body 16–17; body with wings 18–19.5; pronotum 3.8–4; tegmina 12–13; hind femora 11.5.

**Comparison.** The new species is similar to *E. olmeca* in the black pronotum, but distinguished by the darker head (in *E. olmeca*, head light with only the face darkened). *E. veracruz* is also similar to *E. repentinus* **comb. nov.**, *E. apithanon* **comb. nov.**, *E.*

*anembatos* **comb. nov.** and *E. jaiqui* **comb. nov.** in the presence of characteristic dark stripes along the ventral keels of femora, but it differs from them by the most part of head dark and pronotum almost uniformly dark. From all the other true and possible congeners, the new species differs in the more contrast colouration (with the dark head and pronotum as well as two dark stripes along the ventral keels of femora).

#### Genus *Selvagryllus* Otte, 2006

Type species: *Selvagryllus spizon* Otte, 2006.

**Note.** This genus is practically not described, but its author (Otte, 2006) indicated that for the recognition of *Selvagryllus*, it is necessary to see the recognition of type species, and he included in this genus only one species. Such “description” may be considered an united description of a new genus and a new species (Commission on Zoological Nomenclature, 1999: article 13.4). In the species description, Otte mentioned only a single character suitable for the generic recognition: “large inner and large outer tympana”. Possibly he wished to write that the both tympana (inner and outer) are opened (not slite-like). His photographs (Otte, 2006: Figure 116) show that the stridulatory vein in male tegmen of *S. spizon* is strongly S-shaped (as in all the other genera of Paroecanthina), its male genitalia are weakly similar to those of *Angustitrella? borealis*, and its general appearance is somewhat similar to a female described below as *S.? eltriunfo* **sp. nov.**

So, this genus includes *S. spizon* (type species) from Costa Rica and possibly a few other species with the both tympana opened (they are given in original binomen): *Paroecanthus foraminatus* Saussure, 1878 from Cuba; *P. olmecus* Saussure, 1897 from Mexico; *P. tibialis* Saussure, 1897 from Panama; *S.? eltriunfo* **sp. nov.** *Eneoptera annulata* Scudder, 1869, described from Central America without any data on its tympana, may also belong to this genus because head

colouration of *S.? eltriunfo* sp. nov. is rather similar to that of a specimen determined by Nickle (1992: Fig. 11.42) as Scudder's species; however this determination is problematic because Nickle's picture is not in accordance to Scudder's original description.

***Selvagryllus? eltriunfo* sp. nov.**

(Figs IX: 21–23; XIV: 1–4)

**Holotype.** Female; **Mexico**, Chiapas, 130 km WN of Tapachula City, environs of Ejido Las Golondrinus Vill. near reserve El Triunfo, 800–1000 m, partly primary and partly secondary forest, at light, 13–17 May 2006; coll. A. Gorochov & M. Berezin; ZIN.

**Description.** Female (holotype). Colouration of body yellowish with following marks: head with characteristic brown pattern on dorsum of head and behind eyes (Figs XIV: 1–3) as well as with a few brownish dots under eyes and small light brown spot near medial corner of each subgena; pronotum with four dark brown longitudinal stripes interrupted in middle part (a pair near median line of disc and a pair along lateral edges of disc) and with a few brown and light brown spots between these stripes (Figs XIV: 2, 3); legs with two brown longitudinal lines in middle part of outer surface of hind femora, with a few small brownish marks on ventral and dorsal surfaces of hind femora as well as on inner and outer surfaces of distal part of these femora, with dark brown spot near base of each spine and of each spur in hind tibiae, and with brown spot between spurs of hind basitarsi (Fig. XIV: 4); ovipositor dark brown with almost light brown median stripe (from basal part of ovipositor to base of distal part of ovipositor). Head not elongate; rostrum between antennal cavities approximately twice narrower than scape; median ocellus absent; lateral ocelli distinct, medium-sized. Pronotum clearly wider than its length, with roundly convex hind edge. Legs rather short; tibiae slightly longer than femora in fore and middle legs, and slightly shorter, in hind legs; fore tibiae not inflated; outer tympanum almost round, hardly immersed

(Fig. IX: 23); inner tympanum oval (not long), slightly immersed (Fig. IX: 22); hind tibiae and tarsi as in Fig. XIV: 4. Tegmina reaching proximal part of hind femora, with 9–10 weakly oblique longitudinal veins and numerous crossveins in dorsal field, and with 12–13 distinctly oblique branches of Sc and only a few crossveins between them; hind wings weakly (but distinct) exposed behind tegmina. Genital plate and ovipositor similar to those of *Ectotrypa veracruz* (for comparison see Figs IX: 18 and 21).

Male unknown.

Length in mm. Body 14; body with wings 18; pronotum 2.7; tegmina 12; hind femora 8.5; ovipositor 5.8.

**Comparison.** From *S. spizon*, the new species differs in the almost completely light lateral lobes of pronotum; from *S.? foraminatus* comb. nov., in the absence of dark marks on tegmina, on legs and on abdomen; from *S.? olmecus* comb. nov., in the distinctly shorter inner tympanum; from *S.? tibialis* comb. nov., in the not spotted antennae; and from *S.? annulatus* comb. nov., in the absence of dark marks on face, on rostrum of head, and on tegmina.

Subtribe **Tafaliscina** Desutter, 1988, stat. nov.

This subtribal name originates from Tafaliscinae Desutter, 1988. At the first time Tafaliscinae was mentioned by Desutter (1987) as a new subfamily of her family Eneopteridae, but without any description or diagnosis (unavailable name). The diagnosis of Tafaliscinae was published in another paper (Desutter, 1988), and thus the name Tafaliscinae becomes available since 1988.

This subtribe is distinguished from the subtribe Paroecanthina by the lateral part of male stridulatory vein (lacking stridulatory teeth) short and less strongly S-shaped (if tegminal stridulatory apparatus is preserved; Figs I: 7; XV: 3, 9, 12), sclerites of male genitalia are not reduced (ectoparameres are well sclerotised and clearly separated from the epiphallus; endoparameres are



well developed, rather large and with distinct apodemes; mold of spermatophore attachment plate is also developed) excepting guiding rod which is reduced and/or fused with the above-mentioned mold (Figs XIV: 10–12; XV: 4–6; XVI: 3–5, 7–9, 15–17; XVII: 5–7; XVIII: 3–5), and distal part of ovipositor usually with the more obtuse or truncate apex (Figs XV: 8, 10, 11, 13, 14, 17, 18, 21–24; XVI: 10, 11; XIX: 7, 8).

Tafaliscina includes the following genera: *Tafalisca* Walker, 1869; *Amblyrhethus* Kirby, 1906; *Pseudogryllus* Chopard, 1912, **gen. resurr.**; *Perutrella* **gen. nov.**; *Mexitrypa* **gen. nov.**; *Brazitrypa* **gen. nov.**

### Genus *Perutrella* **gen. nov.**

Type species: *Perutrella originalis* **sp. nov.**

**Diagnosis.** Crickets with general appearance partly similar to that of *Angustitrella* and partly, to that of *Amblyrhethus*. Head not elongate, with small lateral ocelli and indistinct median ocellus; rostrum slightly wider than scape and roundly angular in profile. Pronotum transverse, with weakly convex hind edge, and in male, distinctly narrowing to head (Fig. XIV: 5); male metanotal gland reduced, with only a group of short hairs on central convexity of metanotum (Fig. XIV: 6). Legs short and stout; femora of fore and middle legs hardly shorter than their tibiae; fore tibiae (Fig. XIV: 7) somewhat widened, but compressed (flattened) laterally; both tympana oval, opened (outer tympanum almost not immersed, but inner one hardly immersed); middle tibiae less widened, but similarly flattened; hind femora much longer than hind tibiae; hind basitarsi also long (Fig. XIV: 8). Male tegmina completely developed, with stridulatory apparatus having all structures similar to those of Paroecanthina excepting stridulatory vein which typical of Tafaliscina (see Figs I: 7; XIV: 9). Male genital plate rather short, approximately 1.5 times as long as anal plate (Fig. XIV: 8); male genitalia with short epiphallus having a pair of long and rather narrow posterolateral processes

(these processes with membranous medial part) and a pair of short medial projections on hind edge (Figs XIV: 10–12).

**Included species.** Only type species. However it is impossible to exclude that some species (with the both tympana developed and male genitalia unstudied) included in the genus *Amblyrhethus* (*A. manni* Rehn, 1917 from Brazil; *A. natalensis* Rehn, 1917 from Brazil; *A. ponderosus* Hebard, 1928 from Panama; *Amblyopus capitatus* Saussure, 1878 from unknown locality) may belong to this genus.

**Comparison.** The new genus is similar to *Amblyrhethus* in the presence of stridulatory apparatus in male tegmina, but distinguished by the inner and outer tympana well developed and epiphallus with the long and narrow posterolateral processes. From all the other genera of Tafaliscina, the new genus differs in the presence of tympana and of stridulatory apparatus as well as in the same character of male genitalia.

**Etymology.** The generic name is originated from Peru and the genus *Sonotrella*.

### *Perutrella originalis* **sp. nov.**

(Figs I: 7; XIV: 5–12)

**Holotype.** Male; **Peru**, 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. Izersky; ZIN.

**Description.** Male (holotype). Colouration grayish, rather light, however with following marks: head with a few hardly darkened longitudinal bands on hind two thirds of vertex and rather small dark brown spots on genae (near eyes) and on antennal flagellum; pronotum with a few dark brown marks on disc (Fig. XIV: 5) and brown stripe on lateral lobes along their dorsal edge; legs with numerous dark dots on femora and tibiae, but fore tibiae having a pair of additional somewhat larger dark spots on dorsal half near tympana, middle and hind tibiae having additional subbasal dark band, hind femora having dark dots partly fused with

each other (in form of short oblique stripes) and apical part distinctly darkened, and tarsi having distal part of third segment darkened; tegmina almost semitransparent, but upper tegmen with majority of veins brown, rest of veins light brown and many membranes having different spots or short stripes from dark to weakly darkened (Fig. XIV: 9), and lower tegmen with more uniformly light (almost completely semitransparent) basal and stridulatory areas. Metanotal gland as in Fig. XIV: 6. Both tympana rather large (outer tympanum almost equal to inner one in size); hind tibiae almost twice shorter than hind femora and approximately twice longer than hind basitarsi, with short and thick spines and spurs, and with only a few small denticles; hind basitarsi with large denticles and long spurs (these spurs distinctly longer than spurs of hind tibiae) (Figs XIV: 7, 8). Tegmina long, with rather narrow mirror and other characters as in Fig. XIV: 9; hind wings also long, extending to apex of hind legs. Anal plate with rounded apex and a pair of S-shaped dorsal keels separating median concavity from rather narrow lateral parts; genitalia as in Figs XIV: 10–12.

Female unknown.

Length in mm. Body 16.5; body with wings 24.5; pronotum 2.8; tegmina 18; hind femora 9.3.

**Comparison.** The new species differs from all the other similar or related species in the clearly longer and narrower mirror in male tegmina (from *Amblyrhethus? manni* and *A.? natalensis*; compare Figs XIV: 9; XV: 9, 12) as well as distinctly longer hind basitarsi (from *A.? ponderosus* and *A.? capitatus*; Figs XIV: 8; XV: 19, 20). Its male genitalia are similar to those pictured by Desutter (1987: Figs 12–14) as belonging to *Tafalisca lurida* Walker, 1869 (this determination is erroneous, and these genitalia may belong to an unknown species of *Perutrella*), but distinguished by the epiphallus distinctly more curved in profile and hind edge of ectoparameres (if to see from below) not rounded, but with the short and almost angular projection.

Genus *Amblyrhethus* Kirby, 1906

*Amblyopus* Saussure, 1878; nec *Amblyopus* Dejean, 1835 (Coleoptera).

Type species: *Amblyopus brevipes* Saussure, 1878.

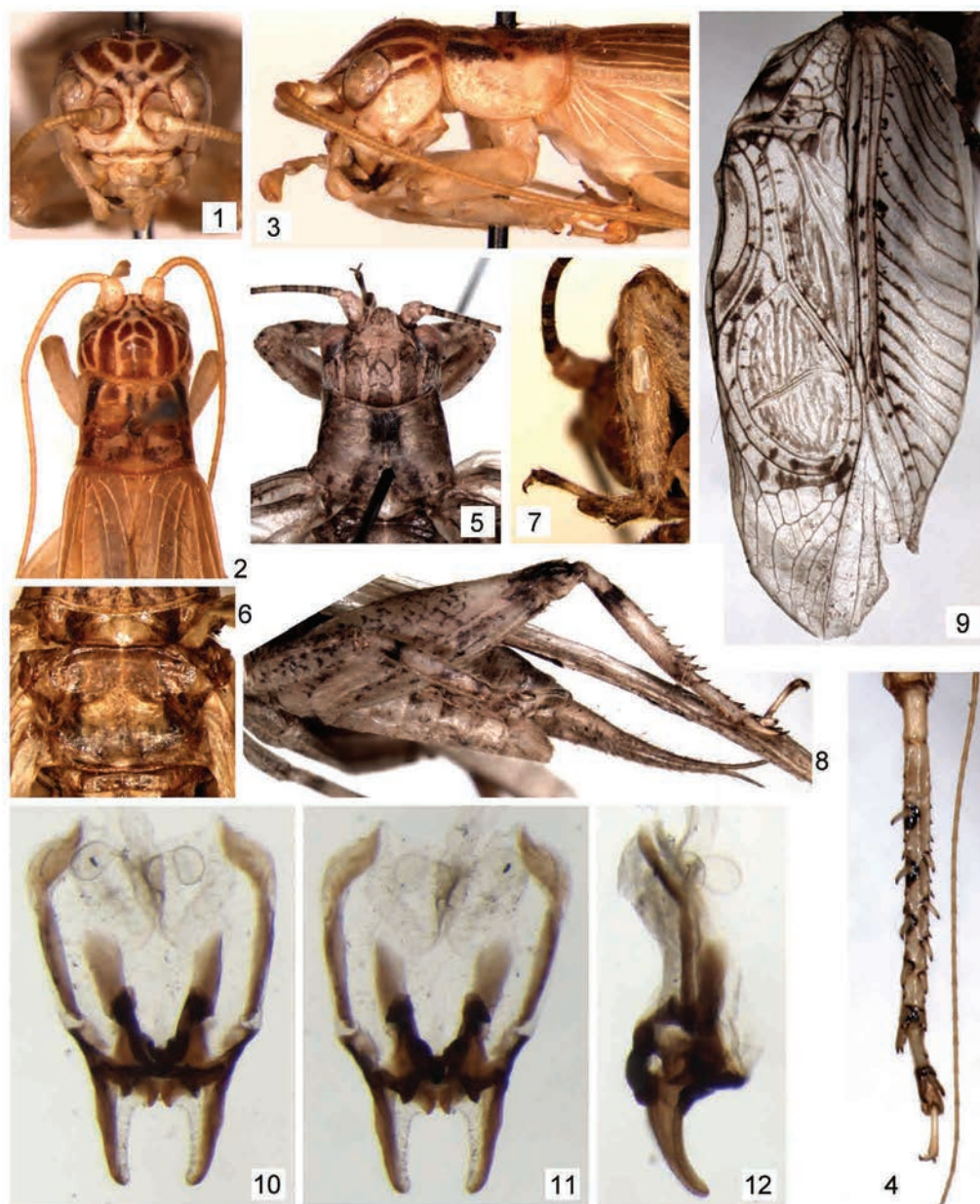
**Note.** The genus, judging by its type species, differs from *Perutrella* in the absence of inner tympanum (outer tympanum present), S-shaped part of male stridulatory vein shorter and less curved (Fig. XV: 3), and male genitalia without posterolateral processes and with the distinctly larger medial projections of its hind edge (Figs XV: 4–6). It includes type species and probably *Amblyopus depressus* Saussure, 1878 (both from Colombia). Some other species were included in this genus by their authors (*Amblyopus capitatus* Saussure, 1878; *Amblyrhethus manni* Rehn, 1917; *A. natalensis* Rehn, 1917; *A. ponderosus* Hebard, 1928), however systematic position of these species is not clear; they may belong to *Amblyrhethus* as well as to another genus (see the paragraph about composition of *Perutrella*) or even to different genera. *Amblyrhethus nodifer* Chopard, 1956 from Peru is also included in *Amblyrhethus* by its author; it has the tympana as in *Perutrella* and male genitalia more or less similar to those of *A. brevipes* (Figs XV: 15, 16), and thus its systematic position is not very clear also.

*Amblyrhethus brevipes* (Saussure, 1878)  
(Figs XV: 1–8)

**Lectotype.** Male; **Colombia**, “Columb., Moritz”, “*Amblyopus brevipes* Sss., male”, “997”, “*Amblyopus* Sauss.”, “male, co-typus”, “*Amblyopus brevipes* Sauss.\*, male / Mem. Soc. Phys. Nat. Hist. Genève 25, 1878, p. 599”; MNH.

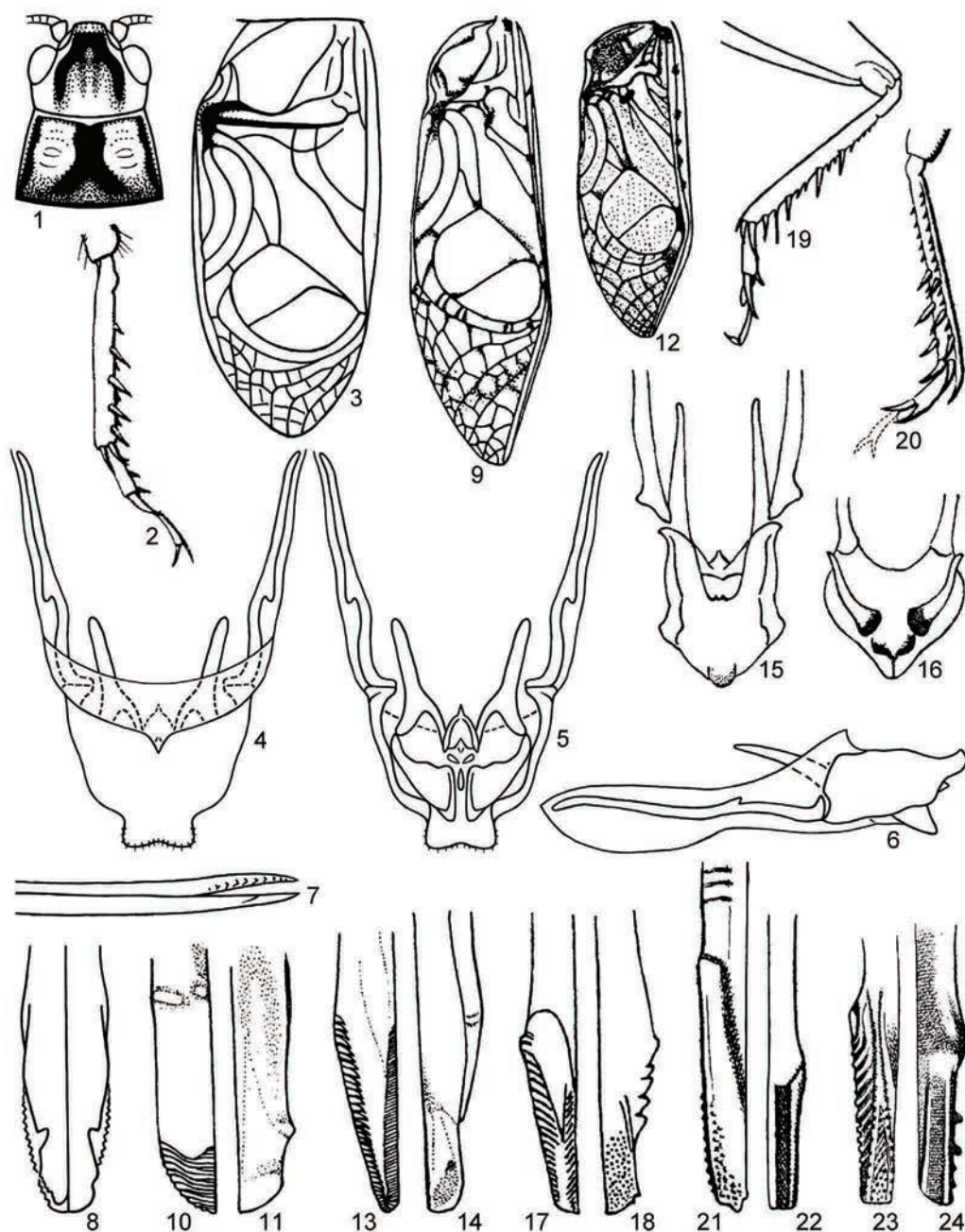
**Other material examined.** Three females; **Colombia**, “Columbien, Moritz”, “Cat. № 997”, determined by unknown person as “*Amblyopus brevipes* Sauss.”; MNH.

**Note.** The species was described after syntypes from Colombia (male from MNH and female from “Musée de Leipzig”; Saussure, 1878). This male is here designated as lectotype of this species.



**Figs XIV (1–12).** Different structures of body. 1–4, *Selvagryllus? eltriufo* sp. nov., female; 5–12, *Perutrella originalis* sp. nov., male. Head in front (1); anterior part of body from above (2, 5) and from side (3); hind tibia, dorsal view (4); metanotum from above (6); fore tibia, outer view (7); middle and hind legs together with abdominal apex from side (8); tegmen (9); genitalia from above (10), from below (11) and from side (12).





**Figs XV (1–24).** *Amblyrhethus* and *Tafalisca*. 1–8, *A. brevipes*; 9–11, *A.? manni*; 12–14, *A.? natalensis*; 15–18, *A.? nodifer*; 19, *A.? ponderosus*; 20–22, *A.? capitatus*; 23, 24, *T.? crypsiphonus*. Head with pronotum from above (1); hind tibia, inner view (2, 19) and inner-dorsal view (20); dorsal field of male tegmen (3, 9, 12); male genitalia from above (4, 15), from below (5) and from side (6); same without both anterior part and endoparameres from below (16); distal part of ovipositor from side (7) and from below (8), and its left half from above (10, 13, 17, 21, 23) and from below (11, 14, 18, 22, 24). [2, 20–24, after Saussure (1878); 9–14, after Rehn (1917); 15–18, after Chopard (1956); 19, after Hebard (1928).]

**Redescription.** Male (lectotype). Colouration yellowish grey with following marks: numerous darkish dots on majority of bodyparts; brown pattern on dorsum of head and of pronotum (as in Fig. XV: 1); yellowish antennae having sparse segments of flagellum darkened; brownish dorsal part of fore and middle tibiae; a few small dark spots on hind tibiae; light brown tegmina having small brown spots on dorsal field; yellowish cerci; almost brown abdomen. Structure of body more or less similar to that of *Perutrella originalis*, but outer tympanum somewhat shorter, inner tympanum absent, hind tibiae clearly longer (but shorter than hind femora) and with more numerous denticles, hind basitarsi distinctly shorter (Fig. XV: 2), tegmina shorter (reaching only abdominal apex) and with somewhat different venation of dorsal field (Fig. XV: 3), hind wings not exposed behind tegmina, anal plate without any keels and without concavity between them, and genitalia as in Figs XV: 4–6.

Female. General appearance similar to male, but tegminal dorsal field with 9–10 oblique longitudinal veins and numerous and somewhat irregular crossveins (forming slightly cellular venation). Ovipositor with distal part as in Figs XV: 7, 8.

Length in mm. Body: male 15, female 16–17; pronotum: male 2.6, female 2.8–3.2; tegmina: male 11; female 11–12; hind femora: male 8, female 9–10; ovipositor 5.5–5.9.

#### Genus *Tafalisca* Walker, 1869

Type species: *Tafalisca lurida* Walker, 1869.

*Metrypa* Brunner-Wattenwyl, 1873 (synonymised by Saussure, 1874).

*Metrypous* Saussure, 1878 (unjustified emendation).

**Note.** The genus originally was described after a single female from Hispaniola I. (Walker, 1869: “St. Domingo”). Recently this species was very briefly redescribed by Otte & Perez-Gelabert (2009) on base of holotype, studied by them, and of a male

from the same island; this work shows that *Tafalisca* is characterised by the male genitalia more or less similar to those of *Amblyrhethus*, but with the posteromedial projections of epiphallus very large (lobe-like), strongly inflated and semimembranous (Figs XVI: 3–5, 7–9, 15–17). All the other species with different or unknown male genitalia, included in this genus by different authors (Eades et al., 2011) and similar to *Tafalisca* in the absence of stridulatory apparatus in male tegmina and of tympana, belong to other genera or are in need of a restudy. The preservation of traces of male stridulatory apparatus in *T. lurida* and *T. rico* (see Otte & Perez-Gelabert, 2009: Figures 413, B and 419, B) supposes that these apparatus and tympana might be reduced independently in *Tafalisca* and in some other genera probably related to *Tafalisca* in connection with the similar structure of hind tibiae (their denticles are rather long and more or less similar to their spines in shape; Figs XVI: 1).

The genus *Metrypa* was described by Brunner-Wattenwyl (1873) without inclusion of any species. Saussure (1874) synonymised *Metrypa* and *Tafalisca*, however with usage of the junior name as a valid one; he also included three species in this genus. One of these species is *T. lurida*, and two other species are with unclear generic position as some their important characters (for example, characters of male genitalia) are unstudied up to now. Since this publication, *Metrypa* is always considered a synonym of *Tafalisca*, but its type species is not designated. For exact fixation of this synonymy, I designate here *T. lurida* as a type species of *Metrypa*. So, this species is now the type species of both *Tafalisca* and *Metrypa*.

*Tafalisca* includes the following species: *T. lurida* (type species); *T. gnophos* Otte et Perez-Gelabert, 2009 from Cayman Islands; *T. periplanes* Otte et Perez-Gelabert, 2009 and *T. rico* Otte et Perez-Gelabert, 2009 from Puerto Rico; *T. eleuthera* Otte et Perez-Gelabert, 2009 from Bagamas; *T. ecuador* sp. nov.; *T. mexico* sp. nov.; *T. proxima* sp. nov.

***Tafalisca ecuador* sp. nov.**

(Figs XVI: 1–5)

**Holotype.** Male; **Western Ecuador**, environs of Puerto Lopes Town, low hills near Agua Blanca Vill. (not far from Pacific coast), dry forest, at night, in cavity inside of dry bush branch, 24–26 Oct. 2005; coll. A. Gorochov & A. Ovtshinnikov; ZIN.

**Description.** Male (holotype). Colouration light brown with following marks: head with brown large spot on dorsum, somewhat smaller transverse spot on hind part of vertex, a few small spots between antennal cavities and along clypeal suture, and yellowish genae, palpi, labrum and antennae (but scape with small brownish medial spots); pronotum with yellowish lateral lobes and lateral parts of disc, brown stripe along dorsal edge of lateral lobes, and grayish brown transverse spot along hind edge of disc; legs with numerous almost indistinct darkish dots, brownish grey small subbasal spot on dorsal surface of fore and middle tibiae as well as a few areas on apical part of hind femora, and grayish brown most part of dorsal surface of hind tibiae; tegmina with yellowish stripe on dorsal field along its lateral edge, brownish stripe on lateral field along its dorsal edge, and light (almost transparent) rest of lateral field; hind wings whitish; sternites of metathorax and of first abdominal segment brown; most part of abdominal tergites and of anal plate dark brown. Rostrum of head roundly angular in profile, slightly narrower than scape; ocelli indistinct. Pronotum transverse, with almost straight hind edge (Fig. XVI: 1); metanotal gland with very large and rather deep concavity having smaller median convexity in its hind two thirds (almost as in Fig. XVI: 13). Legs rather thick and stout; tibiae hardly longer than femora in fore and middle legs, but somewhat shorter, in hind legs; tympana absent; hind tibiae much longer than hind basitarsi and with longest spines almost twice longer than longest denticles (Fig. XVI: 1). Tegmina shortened, reaching middle of 5th abdominal tergite; their dorsal field with 8–9 longitudinal and

slightly oblique veins as well as numerous and irregular crossveins; tegminal lateral field with very narrow distal part and 5–6 almost parallel veins as well as without distinct crossveins; hind wings reaching only middle of 4th abdominal tergite. Anal plate simple (short and with rounded apex); genital plate almost twice longer than anal plate and with roundly angular apex; genitalia as in Figs XVI: 3–5.

Female unknown.

Length in mm. Body 17; pronotum 2.7; tegmina 7.2; hind femora 8.8.

**Comparison.** The new species differs from all the above-mentioned congeners (excepting two new species) in the distinctly shorter distal part of ectoparameres, and from the other species included in *Tafalisca* (Eades et al., 2011), in the wings shortened and/or male genitalia different.

***Tafalisca mexicana* sp. nov.**

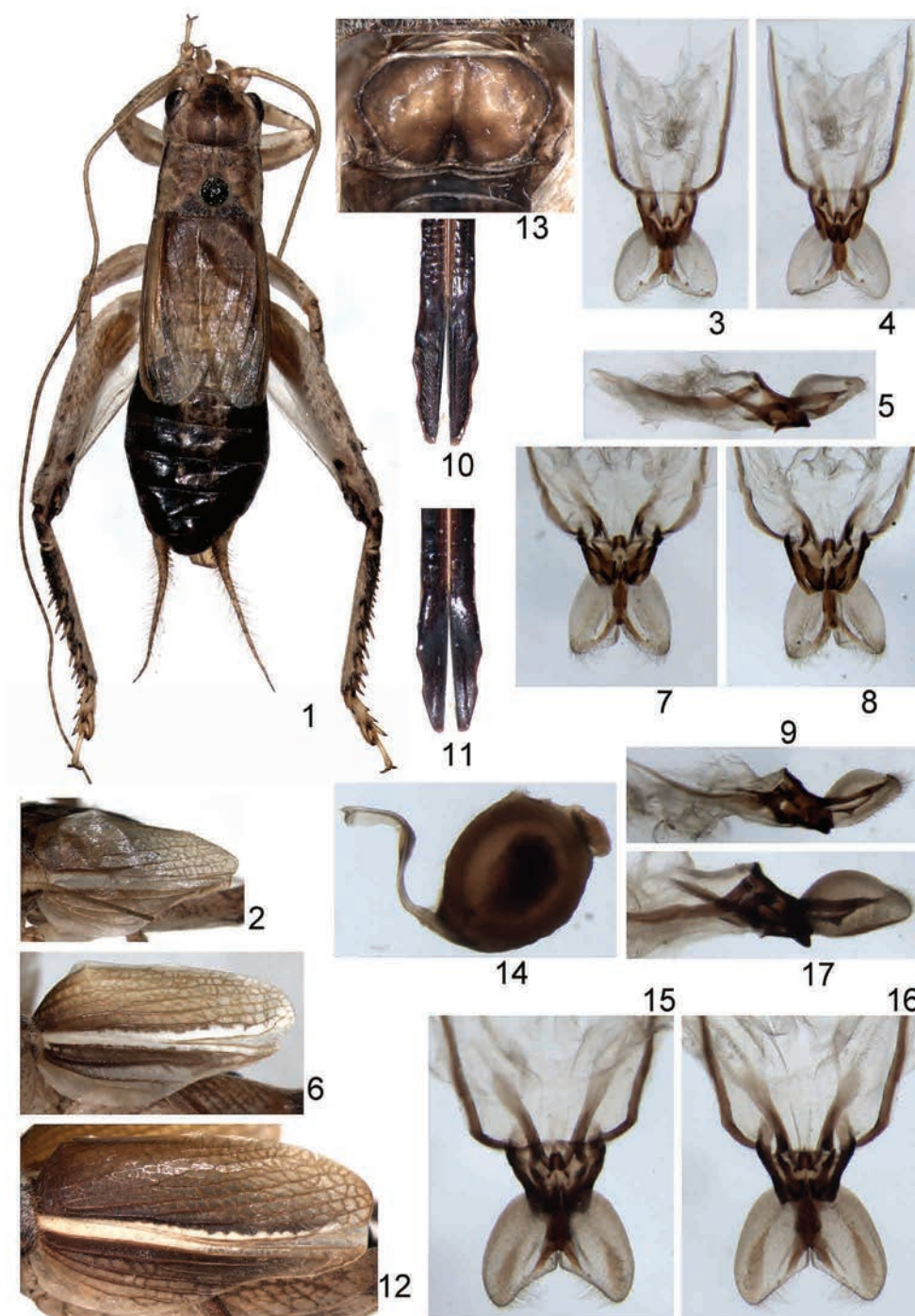
(Figs XVI: 6–11)

**Holotype.** Male; **Mexico**, Jalisco, 19°33'N, 105°5'W, biostation of Mexico University near Chamela Vill. (3–4 km from Pacific Ocean), dry forest on hills, on dry bush branch, at night, 23–28 Nov. 2006; coll. A. Gorochov & A. Ovtshinnikov; ZIN.

**Paratypes.** Three females; same data as for holotype; ZIN.

**Description.** Male (holotype). General appearance similar to that of *T. ecuador*, but distinguished by following features: dorsum of head more uniformly brown; genae with a few brown marks; dark median spot along clypeal suture distinctly larger; antennal flagellum light brown; pronotal disc brown with light brown lateral parts; pronotal lateral lobes with brown line along anterior, ventral and posterior edges; dorsal tegminal field brown with distinct whitish stripe along its lateral and apical edges; lateral tegminal field with brown majority of veins and band along dorsal edge; middle tibiae slightly darkened; apical part of hind femora dark brown; hind tibiae and tarsi almost uniformly greyish brown (however spines and some denticles slightly lighter);





**Figs XVI (1–17).** *Tafalisca*. 1–5, *T. ecuador* sp. nov.; 6–11, *T. mexico* sp. nov.; 12–17, *T. proxima* sp. nov. Male body from above (1); male tegmen (2, 6, 12); male genitalia (3–5) and their distal half (7–9, 15–17) from above (3, 7, 15), from below (4, 8, 16) and from side (5, 9, 17); distal part of ovipositor from above (10) and from below (11); male metanotal gland from above (13); spermatophore from side (14).



**Figs XVII (1–7).** *Mexitrypa ovtshinnikovi* **sp. nov.**; male. 1, left tegmen; 2, metanotal gland from above; 3, hind tibia, outer view; 4, abdominal apex from above; 5–7, genitalia from above (5), from below (6) and from side (7).

anal plate yellowish with darkish apex; sternites of hind half of abdomen with dark brown hind part; genital plate dark brown; cerci yellowish grey; tegmina and hind wings longer, reaching hind part of 7th and 6th abdominal tergites respectively; genitalia with sclerotised part of epiphallus somewhat shorter, a pair of sclerotised ribbons at apex of genitalia somewhat longer, ventromedian sclerotization near this apex slightly narrower and (in profile) with angular (not widely rounded) ventral projection, ectoparameres without spine-like projection at proximal corner (see in profile), and endoparameres with distinctly shorter apodemes (for comparison see Figs XVI: 3–5, 7–9).

Female. Colouration and structure of body (excepting genital structures) as in male, but tegmina with somewhat longer widened part of lateral field having more numerous parallel veins (7–8). Genital plate rather short, with widely rounded (almost truncate) apex, light lateral parts and dark median area; ovipositor almost uniformly brown or dark brown, with distal part as in Fig. XVI: 10, 11.

Length in mm. Body: male 18, female 18–22; pronotum: male 3, female 3.5–4; tegmina: male 10, female 10.5–12; hind femora: male 9.8, female 12–13.5; ovipositor 8.7–9.3.

*Comparison.* The new species differs from *T. ecuador* in the above-mentioned features (including light male anal plate and dark male genital plate; in *T. ecuador*, male anal plate dark, and male genital plate light). From all the other true and possible congeners, the new species differs in the same characters as *T. ecuador*.

***Tafalisca proxima* sp. nov.**

(Figs XVI: 12–17)

*Holotype.* Male; **Mexico**, Oaxaca, 35 km NNE of Santa Cruz Huatulco Town (10 km N of Xadani Vill.), 900–1000 m, partly primary and partly secondary forest, in cavity inside of dry liana, at night, 7–11 May 2006; coll. A. Gorochov & M. Berezin; ZIN.

*Description.* Male (holotype). Head yellowish with dark brown dorsum (having a pair of light stripes along medial edges of antennal cavities and of eyes) and rostrum, a few small dark marks on genae and on frons (under rostrum, eyes and antennal cavities) as well as on subgenae and on upper part of clypeus, and distinct brown stripe along clypeal suture; pronotum dark brown with yellowish lower half of lateral lobes (having narrow dark stripe along anterior, ventral and posterior edges); legs light brown with a few brownish dots on fore and middle femora, small brown marks on fore coxae and on subbasal part of dorsal surface of fore tibiae, greyish brown middle and hind tibiae as well as most part of hind tarsi and reticular ornament on outer surface of hind femora, almost dark brown distal part of these femora, and dark all second tarsal segments; tegmina brown with yellowish white longitudinal stripe and light grey membranes in lower half of lateral field (Fig. XVI: 12); hind wings very light brown; pterothorax brown with slightly lighter metanotal gland (Fig. XVI: 13) and light sternites (but metathoracic sternite with large brown median spot); abdomen with dark brown tergites, sternites, and anal and genital plates, light pleural area and cercal base (but rest of cerci greyish brown). External structure of body similar to that of *T. ecuador* and *T. mexico*, however tegmina reaching base of 8th abdominal tergite, tegminal dorsal field with 9–10 longitudinal veins, lateral tegminal field with 7–8 longitudinal veins and several distinct crossveins, and hind wings reaching apex of 6th abdominal tergite. Genitalia with sclerotised part of epiphallus as in *T. mexico*, ectoparameres and endoparameres as well as sclerotised ribbons at apex of genitalia as in *T. ecuador*, ventromedian sclerotization near genital apex angular in profile (almost as in *T. mexico*) and rather wide (almost as in *T. ecuador*) (Figs XVI: 15–17); spermatophore as in Fig. XVI: 14.

Female unknown.

Length in mm. Body 21.5; pronotum 3.7; tegmina 12.5; hind femora 11.8.



**Comparison.** The new species differs from *T. ecuador* and *T. mexico* in the peculiarities of colouration [anal plate dark (not as in *T. mexico*), and genital plate also dark (not as in *T. ecuador*)] and above-mentioned characters of male genitalia. From all the other true and possible congeners, the new species differs in the same features as *T. ecuador* and *T. mexico*.

Genus ***Mexitrypa* gen. nov.**

Type species: *Mexitrypa ovtshinnikovi* sp. nov.

**Diagnosis.** Structure of body similar to that of *Tafalisca*: head not elongate; pronotum wider than its length and with almost straight hind edge; male metanotal gland developed (Fig. XVII: 2); legs short and stout, without any tympana, with tibiae hardly longer than femora in fore and middle legs, and with hind tibiae having denticles rather long and spine-like (Fig. XVII: 3); male tegmina without stridulatory apparatus; male genitalia similar to those of *Amblyrhethus*, but with apex of epiphallus distinctly bifurcate (i. e. with a pair of lobe-like projections). However this genus distinguished from *Tafalisca* by following characters: pronotum distinctly narrowing to head; hind tibiae shorter (hind femora approximately 1.5 times as long as these tibiae); hind basitarsi longer (their length intermediate between those of *Tafalisca* and *Perutrella* in relation to length of hind tibiae; for comparison see Figs XIV: 8; XVI: 1; XVII: 3); dorsal tegminal field with wider areas between longitudinal veins and dense cellular venations between them (Fig. XVII: 1); male genitalia with lobe-like hind projections not very large and not inflated (Fig. XVII: 5–7).

**Included species.** Only type species. But it is impossible to exclude that *Tafalisca lineatipes* Bruner, 1916 from Jamaica, *T. evimon* Otte et Perez-Gelabert, 2009 from Trinidad I., and some of the other species, included now in *Tafalisca* (Eades et al., 2011) without study of their male genitalia, may belong to this genus.

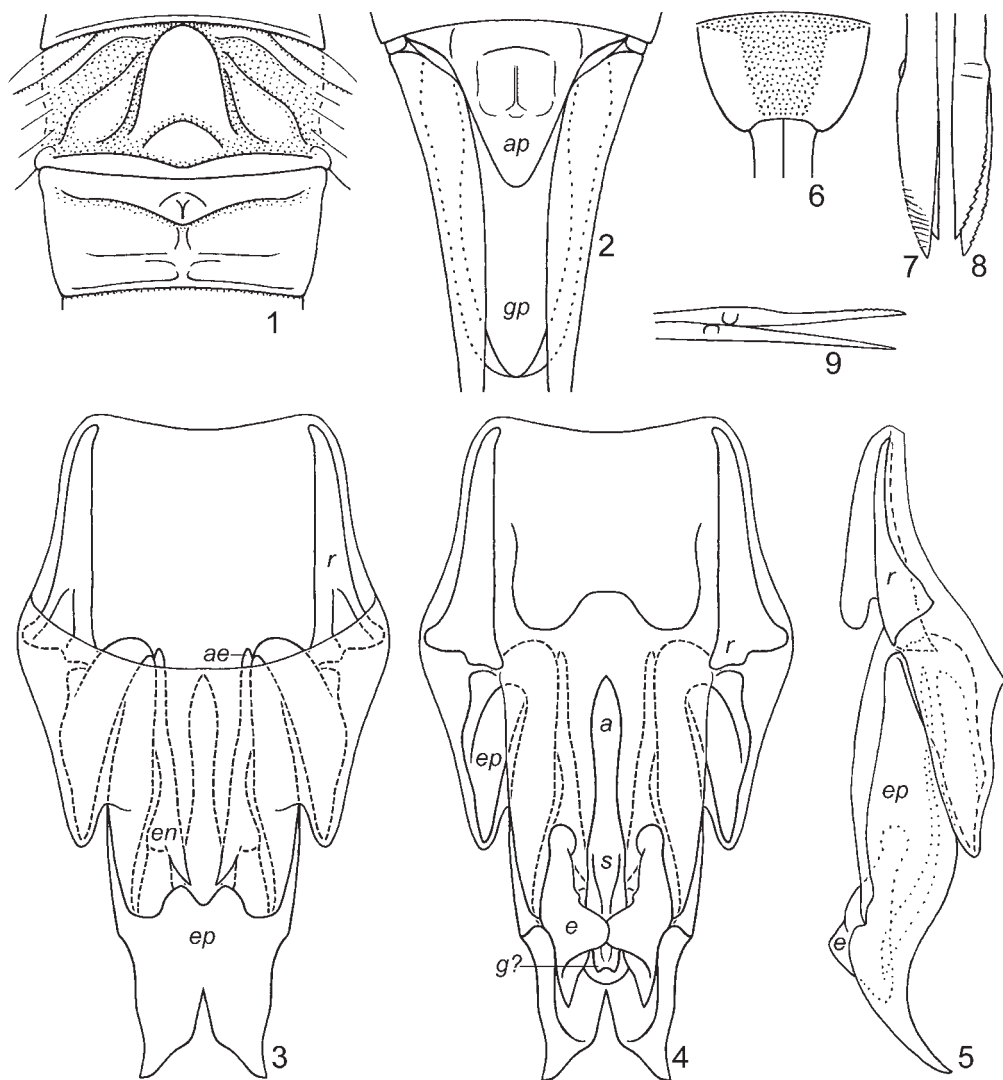
**Comparison.** The new genus is related to *Tafalisca*, but distinguished by the features listed above. Separation of these genera from each other is connected with the possibility of independent loss of tegminal stridulatory apparatus and tympana in *Tafalisca* (see Note on this genus above) and in the new genus. If this preliminary hypothesis is erroneous, the new genus may be considered a subgenus of *Tafalisca*.

**Etymology.** The generic name is originated from Mexico and the genus *Metrypa*.

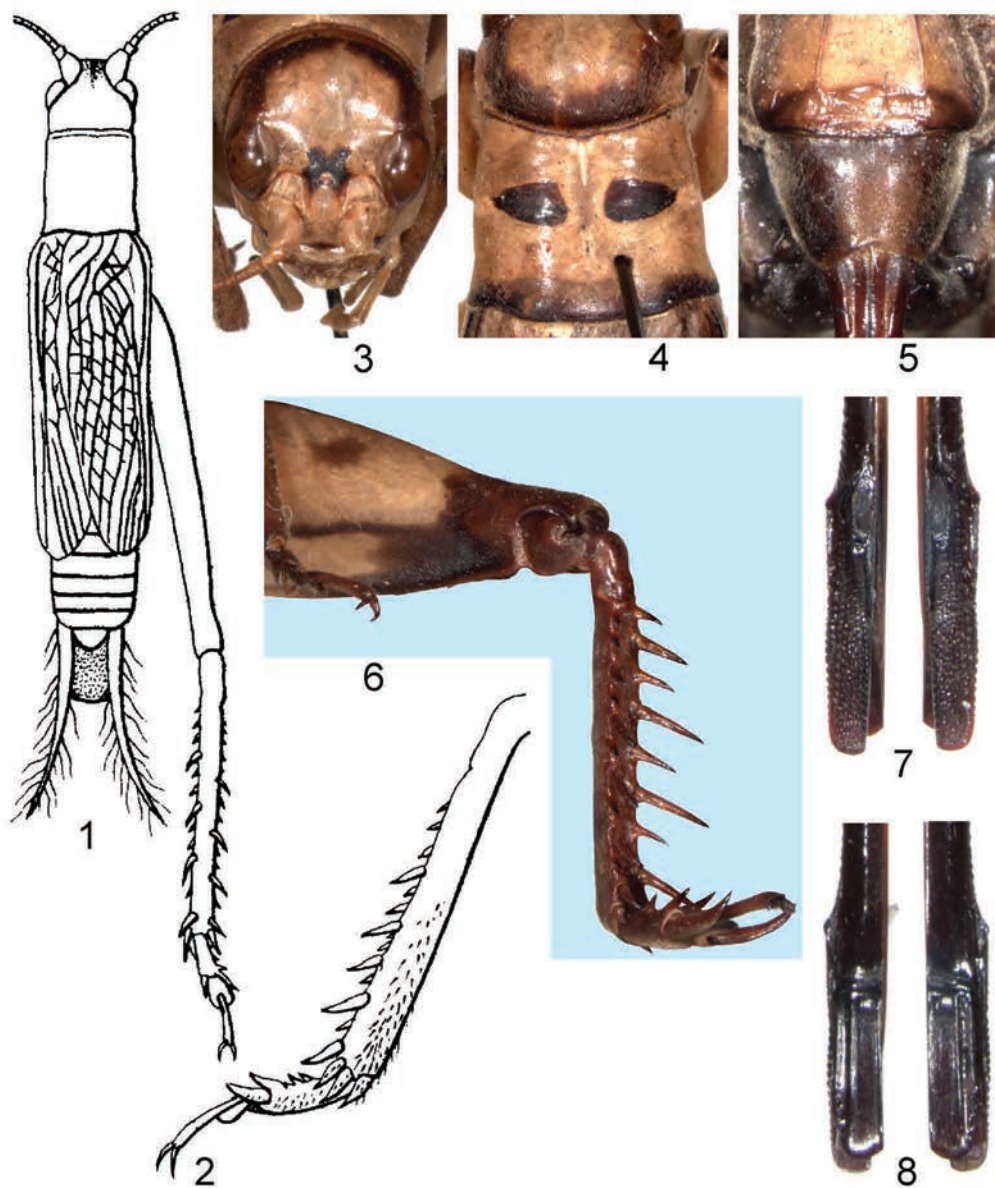
***Mexitrypa ovtshinnikovi* sp. nov.**  
(Figs XVII: 1–7)

**Holotype.** Male; **Mexico**, Veracruz, 15–20 km NE of Catemaco Town, Los Tuxtlas (biostation of Mexico University) in 2 km from coast of Mexican Gulf, partly primary and partly secondary forest on hills, on bark of dry tree branch, at night, 6–17 Nov. 2006; coll. A. Gorochov & A. Ovtshinnikov; ZIN.

**Description.** Male (holotype). Colouration dark brown with following marks: head with small lightish stripes behind eyes and near lateral ocelli, yellowish areas on membranes of antennal cavities, small spot on genae under eyes, areas on distal half of labrum and on apical segment of maxillary palpi, grayish brown frons under rostral apex, antennal flagellum and most part of maxillary palpi, and light brown rest of mouthparts; legs with light brown coxae, yellowish dorsal half of fore and middle tibiae (covered by dark dots and diverse somewhat larger marks), grayish brown hind femora (having darker apical part, small light subapical dorsal spot, and larger dark dorsal spot situated near it, but slightly proximad), and whitish very small subbasal mark on hind tibiae; tegmina grayish brown with grayish and whitish marks as in Fig. XVII: 1; hind wings light grey; rest of thorax grayish brown; abdomen black with light brown anal plate (having several small dark marks) and small lightish spots on cerci. Scape almost 1.5 times as wide as rostrum between antennal cavities; lateral ocelli small; median ocellus indistinct. Metanotal gland with central



**Figs XVIII (1–9).** *Brazitrypa longiapex* sp. nov. 1, male metanotum from above; 2, male abdominal apex from above; 3–5, male genitalia from above (3), from below (4) and from side (5); 6, female genital plate from below; 7–9, distal part of ovipositor from side (9), and its left half from above (7) and from below (8). Abbreviations: *a*, possible apodeme of mold of spermatophore attachment plate; *ae*, apodeme of endoparamere; *en*, endoparamere; *gp*, genital plate; *s*, mold of spermatophore attachment plate; others, as in Figs I: 8–10.



**Figs XIX (1–8).** Different structures of body. 1, 2, *Brazitrypa? haani*, male; 3–8, *Pseudogryllus elongatus gigas* **subsp. nov.**, female. Body from above (1); hind tibia, outer view (2); head in front (3); pronotum from above (4); genital plate from below (5); most part of hind leg, outer view (6); distal part of ovipositor from above (7) and from below (8). [1, 2, after Saussure (1878).]



concavity distinctly smaller than in all species of *Tafalisca* described here, and completely crossed by low median keel (Fig. XVII: 2). Hind tibiae as in Fig. XVII: 3. All wings almost equal in length, extending behind abdominal apex and reaching proximal part of hind tibiae; tegminal venation as in Fig. XVII: 1. Abdominal apex with anal plate as in photograph (Fig. XVII: 4), genital plate approximately twice longer than previous plate and narrowing to roundly angular apex, and genitalia having lateral and ventral parts of hind half of epiphallus membranous as well as ectoparameres more or less similar to those of *T. mexico* in shape (Figs XVII: 5–7).

Female unknown.

Length in mm. Body 19; body with wings 23; pronotum 3.7; tegmina 16; hind femora 12.2.

**Comparison.** The new species differs from *T. lineatipes* and *T. evimon* (having the more or less similar male genitalia) in the lateral parts of epiphallus membranous (from *T. lineatipes*) and apical part of epiphallus less deeply bifurcate (from *T. evimon*) [it is interesting to note that male genitalia of *T. evimon* is somewhat similar to those pictured by Desutter (1988: Fig. 52–54) as belonging to *Amblyrhethus manni*]. From all the other similar species, the new species differs in the characteristic (spotted) colouration of tegmina.

**Etymology.** The species is named in honor of A.B. Ovtshinnikov, photographer of insects and one of collectors of this specimen.

### Genus *Brazitrypa* gen. nov.

Type species: *Brazitrypa longiapex* sp. nov.

**Diagnosis.** External body structure similar to that of *Tafalisca* and *Mexitrypa* (including the absence of stridulatory apparatus in male and of tympana, and characteristic armament of hind tibiae), but male metanotal gland, male genitalia and apex of ovipositor different: gland with the characteristic median convexity instead concavity

(Fig. XVIII: 1); genitalia with epiphallic anterolateral parts very long and very strongly curved (Figs XVIII: 3, 5), with epiphallic posterolateral projections moderately long, flat and almost acute (Figs XVIII: 3–5), and with mold of spermatophore attachment plate long or having a long apodeme (Figs XVIII: 3, 4); ovipositor apex narrowly rounded or acute (Fig. XVIII: 7–9) (truncate or obtusely rounded in *Tafalisca*).

**Included species** (named in original binomen). *B. longiapex* sp. nov. (type species); *Tafalisca paulista* Rehn, 1918 and *T. paranaensis* Dias et Mello, 2010 from Brazil (Dias & Mello, 2010; Figure 5); possibly *Metrypa haani* Saussure, 1874 also from Brazil and some of the other species with unknown male genitalia from the list of *Tafalisca* species presented now in the electronic catalogue of Orthoptera (Eades et al., 2011).

**Note.** If *B. haani* comb. nov. belongs to this genus, the hypothesis about independent loss of tegminal stridulatory apparatus in some related genera of Tafaliscina will be supported by two evidences: presence of traces of such apparatus in some species of *Tafalisca* and in one species of *Brazitrypa*.

**Etymology.** The generic name is originated from Brazil and the genus *Metrypa*.

### *Brazitrypa longiapex* sp. nov. (Figs XVIII: 1–9)

**Holotype.** Male; **Brazil**, “Espírito-Santo Brasil, ex coll. Fruhstorfer”, “*haani* Sauss.”; MIZ.

**Paratype.** Female; same data as for holotype, but without species determination; MIZ.

**Description.** Male (holotype). Size of body approximately as in *Acheta domesticus* L. Colouration light brown with head dorsum and pronotum brown (but each pronotal lateral lobe having light brown longitudinal spot along ventral edge), longitudinal median line on outer surface of hind femora dark, area in apical part of these femora darkened, all veins and area between *Sc* and *R* in tegmina intensively brown, hind wings whitish, abdomen from brown to dark brown (excepting light brown cerci).

Head rather high (general shape of body more or less cylindrical); rostral apex weakly roundly angular (very obtuse) in profile. Pronotum rather long (approximately as long as wide) and with almost parallel lateral sides; metanotal gland lacking specialised hairs (its structure as in Fig. XVIII: 1). Legs stout (but not very short); hind tibiae somewhat shorter than hind femora; armament of these tibiae approximately as in *Tafalisca* and *Mexitrypa*; hind basitarsi much shorter than hind tibiae and with large denticles (three outer and two inner) and very large spurs (however these spurs distinctly not reaching apex of third segment of hind tarsi, approximately as in Figs XIX: 1, 2). Tegmina reaching abdominal apex and without traces of stridulatory apparatus (dorsal tegminal field with longitudinal veins almost parallel to its median line and with crossveins moderately dense); hind wings hardly exposed behind tegmina. Abdomen with anal plate simple and almost triangular, and with genital plate long (Fig. XVIII: 2); genitalia as in Figs XVIII: 3–5.

Female. General appearance as in male, but abdomen light brown with dorsum of hind tergites, anal plate, part of genital plate (Fig. XVIII: 6), and paraprocts darkened. Genital plate as in Fig. XVIII: 6; ovipositor slightly shorter than hind femora, with acute apex and partly smooth dorsal and ventral surfaces of distal part (Figs XVIII: 7–9); colouration of ovipositor brown (rather dark), but with yellowish median stripe running from base of ovipositor to base of its distal part.

*Comparison.* The male described was determined by an unknown person as *B.?* *haani*, but it differs from this species in the longer wings and absence of traces of stridulatory apparatus in male tegmina (in *B.?* *haani*, wings are significantly not reaching the abdominal apex, and male tegmina are with the traces of stridulatory apparatus; Fig. XIX: 1). From *B. paulista* **comb. nov.** and *B. paranaensis* **comb. nov.**, *B. longiapex* is distinguished by the distinctly longer male genital plate and epiphallus.

Genus *Pseudogryllus* Chopard, 1912, **gen. resurr.**

Type species: *Pseudogryllus elongatus* Chopard, 1912.

*Note.* This genus was described for a single female from French Guyana (Chopard, 1912). Later it was synonymised with *Tafalisca* by the same author (Chopard, 1968). But necessity of this synonymy is problematic. *Pseudogryllus* is similar to *Tafalisca*, *Mexitrypa* and *Brazitrypa* in the characteristic spine-like denticles on the hind tibiae and in the absence of stridulatory apparatus in male tegmina and of tympana; however it differs from them in the clearly larger body as well as significantly longer denticles of hind tibiae (which are almost indistinguishable from the true spines) and spurs of hind basitarsi (these spurs almost reach the apex of third segment of hind tarsi) (for comparison see Figs XVI: 1; XVII: 3; XIX: 1, 2 and 6). Male genitalia of *Pseudogryllus* are unstudied, and thus its relationship to the above-mentioned genera is unclear. So, at present it is most reasonable to consider *Pseudogryllus* a separate genus including only type species.

*Pseudogryllus elongatus gigas* subsp. nov. (Figs XIX: 3–8)

*Holotype.* Female; **Colombia**, “Rio Coquetá, A.S. Woronov”, VII.1926; ZIN.

*Description.* Female (holotype). General appearance very similar to that of *P. e. elongatus* **stat. nov.** Colouration yellowish with following marks: arcuate stripe on vertex (Fig. XIX: 3), apical part of all femora, middle and hind tibiae, all tarsi, longitudinal veins of tegmina, and median part of genital plate brown; antennal flagellum, fore tibia, dorsolateral spot near middle of hind femur (Fig. XIX: 6), and sternites of hind half of body light brown; spot on rostrum (Fig. XIX: 3), a pair of spots on pronotal disc (Fig. XIX: 4), all borders of pronotum, rather large subapical spot on ventrolateral part of hind femur (fused with brown apical part and three narrow longitudinal stripes:

near median line of outer surface and along distal half of each ventral keel; Fig. XIX: 6), narrow stripes along tegminal *R* and *M*, lateral parts of genital plate, and most part of ovipositor (excepting slightly lighter narrow median stripe running from ovipositor base to its middle part) dark brown; rest of tegmina very light, yellowish grey (almost whitish); exposed part of hind wings grey. Shape of head and pronotum as in Fig. XIX: 3, 4; all ocelli developed, medium-sized (almost equal to each other in size), situated in shape of triangle. Tibiae of fore and middle legs slightly longer than their femora; hind femur approximately 1.6 times as long as hind tibia; this tibia with very long spines and denticles (especially on inner keel); hind basitarsus much shorter than hind tibia, with three outer and one inner denticles (Fig. XIX: 6). Tegmina somewhat extending behind apex of hind femora, with 7 parallel longitudinal veins in dorsal field and dense cellular venation between all longitudinal veins; hind wings distinctly exposed behind tegmina. Genital plate and ovipositor as in Figs XIX: 5, 7, 8.

Male unknown.

Length in mm. Body 32; body with wings 41; pronotum 6; tegmina 29; hind femora 19; ovipositor 19.

*Comparison.* The new subspecies differs from *P. e. elongatus* in the longer spines and especially denticles on the inner keel of hind tibia (in the new subspecies, they longer than those on the outer keel of this tibia, but in the nominotypical subspecies, armaments on the both keels of hind tibia are almost equal in size; see Chopard, 1912: Figs in p. 413) and presence of three (but not two) outer denticles on the hind basitarsus.

## ACKNOWLEDGEMENTS

I thank all my colleagues and friends helping me during my work in America and collecting many specimens used for this study. Also I am grateful to K.K. Günther and I. Dorandt (MNH) as well as A. Liana (MIZ) for supplying the additional material. This work is supported by the Russian Foundation for Basic Research

(project No 10-04-00682), Presidium of the Russian Academy of Sciences (Program "Biosphere origin and evolution of geo-biological systems"), and the Ministry of Education and Science of the Russian Federation.

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Received September 29, 2011 / Accepted November 10, 2011