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A NEW GENUS OF THE TRIBE PETALOPTILINI (ORTHOPTERA: GRYLLIDAE: GRYLLOMORPHINAE) AND THE PARTIAL REVISION OF SPECIES INCLUDED

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A new genus *Ovaliptila* Gorochov, **gen. n.** is proposed for 8 species distributed in Eastern part of Mediterranean region: *O. buresi* (Mařan, 1958), **comb. n.** (type species), *O. krueperi* (Pantel, 1890), **comb. n.**, *O. wettsteini* (Werner, 1934), **comb. n.**, *O. lindbergi* (Chopard, 1957), **comb. n.**, *O. newmanae* (Harz, 1969), **comb. n.**, *O. kinzelbachi* (Harz, 1971), **comb. n.**, *O. beroni* (Popov, 1975), **comb. n.**, and *O. willemsei* (Karaman, 1975), **comb. n.** These species excluding *O. wettsteini* were included by previous authors in the genus *Discoptila* Pant. described from Spain and probably absent in the above-mentioned region. Brief redescriptions of majority these species and discussion about other species previously included in *Discoptila* are given.

KEY WORDS: Orthoptera, Gryllidae, taxonomy.

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Установлен новый род *Ovaliptila* Gorochov, **gen. n.** для 8 видов, распространенных в Восточном Средиземноморье: *O. buresi* (Mařan, 1958), **comb. n.** (типовой вид), *O. krueperi* (Pantel, 1890), **comb. n.**, *O. wettsteini* (Werner, 1934), **comb. n.**, *O. lindbergi* (Chopard, 1957), **comb. n.**, *O. newmanae* (Harz, 1969), **comb. n.**, *O. kinzelbachi* (Harz, 1971), **comb. n.**, *O. beroni* (Popov, 1975), **comb. n.**

и *O. willemsei* (Karaman, 1975), **comb. n.** Эти виды, за исключением *O. wettsteini*, включались предыдущими авторами в род *Discoptila* Pant., описанный из Испании и, вероятно, отсутствующий в вышеупомянутом регионе. Даны краткие переписания большинства этих видов, а также обсуждаются другие виды, включенные ранее в род *Discoptila*.

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INTRODUCTION

The subgenus *Discoptila* was described by Pantel (1890) for 2 species: *Gryllo-morphus fragosoi* Bolivar, 1885 from Spain and *Gryllo-morpha krüperi* Pantel, 1890 from Greece. The first species was additionally indicated for Greece by Bolivar (1887) and Pantel (1890), for Crimea and Morocco by Retowski (1888: 414, 415). Later this species was designated as a type species of the genus *Discoptila* by Kirby (1906), and numerous new species from the different parts of Mediterranean region were included in this genus (see: Chopard, 1967; Otte, 1994).

The areas of all these species excepting *fragosoi* (sensu Bolivar, 1887 et alii) are narrow. However during my visits to the different European museums (including “Museo Nacional de Ciencias Naturales” in Madrid), I cannot find any specimens conspecific with Ukrainian Petaloptilini excepting Bulgarian ones, and any Iberian specimens of this tribe not belonging to the genus *Petaloptila* Pant.; the type of *fragosoi* is destroyed (Paris, 1994). Moreover I found only 8 species really congeneric with Ukrainian-Bulgarian one; they are distributed only in Eastern part of Mediterranean region. All known representatives of Italian Petaloptilini belong to the other genera, or their generic position is unclear.

These reasons allow me to propose the following hypothesis. Bolivar’s *fragosoi* is probably a nymph of one of *Petaloptila* species, and *Discoptila* is a synonym of this generic name. Petaloptilini from Eastern part of Mediterranean region belong to a new genus described below, and all its species have narrow areas and possibly don’t reach Italy. All large subregions of Mediterranean region with not very dry climate are more or less characterized by the endemic genera or subgenera of Petaloptilini: *Petaloptila* s. str. and *Zapetaloptila* Gor. et Llor. in Iberian Peninsula; *Italoptila* Gor. et Llor. in central part of Apennine Peninsula; *Acroneuroptila* Baccetti in Sardinia; *Hymenoptila* Chop. in Morocco and possibly Canary Islands; *Glandulosa* Harz in Asia Minor; *Ovaliptila* gen. n. in Balkan Peninsula, nearest islands, Northern coast of Black Sea, and Western part of Asia Minor (*Ovaliptila* possibly penetrates Asia Minor from Balkans comparatively late). The most part of Italy and some other Mediterranean subregions are practically “white spots” in relation to Petaloptilini.

Genus *Ovaliptila* Gorochov, gen. n.

Type species – *Discoptila bureši* Mařan, 1958 (Bulgaria).

DESCRIPTION. Size medium of Petaloptilini; coloration more or less uniform. Head typical of this tribe: rounded, with not large eyes and distinctly inflated clypeus;

its rostrum narrower than scape (Figs 1, 2). Pronotum not short and with almost parallel lateral edges. Male mesonotum with weakly developed (Fig. 3) or reduced gland; male tegmina small, oval or disc-like, contacting with each other, with sclerotized dorsal surface usually lacking traces of venation and with membranous or semimembranous ventral surface possibly producing attractive secretion also (Figs 13, 18, 23, 28, 33, 37, 41). Female mesonotum unspecialized; female tegmina very small (scale-like), completely or partly covered with pronotum. Metanotum in both sexes unspecialized; hind wings absent (Fig. 3). Male anal plate with 2 hind lobes (Fig. 4) somewhat varied in size; male genital plate without deep notch dividing its apex into 2 lobes (Fig. 5); male genitalia with epiphallus divided into unpaired distal lobe (more or less rounded) and transverse sclerite (usually fused with rami) by large membranous area provided with acute median process (membranous or semimembranous) at distal part (Figs 9, 11, 14, 16, 19, 21, 24, 26, 29, 31, 34, 38, 40). Anal and genital plates of female simple: first with narrowly rounded apex, second with rounded and not deep apical notch; ovipositor well developed, with apex as in Figs 6-8.

SPECIES INCLUDED. *Discoptila bureši* Mařan, 1958; *Gryllomorpha (Discoptila) krüperi* Pantel, 1890 (Greece: Parnassos); *Mogistoplistus wettsteini* Werner, 1934 (Greece: Ikaria); *D. lindbergi* Chopard, 1957 (Greece: Crete); *D. newmanae* Harz, 1969 (Greece: Epiros); *D. kinzelbachi* Harz, 1971 (Greece: Karpathos); *D. beroni* Popov, 1975 (Turkey: South Anatolia); *D. willemsei* Karaman, 1975 (Yugoslavia: Montenegro). The latter species is not studied by me; its original description (Karaman, 1975) shows that *O. willemsei* **comb. n.** undoubtedly belongs to *Ovaliptila*, and this species is similar to its congener from Epiros, but their differences are not very clear.

COMPARISON. *Ovaliptila* differs from all other genera of Petaloptilini in the small, sclerotized, oval or disc-like tegmina of male and the characteristic structure of male genitalia having epiphallus divided into 2 parts by the large membranous area and provided with the unpaired distal lobe.

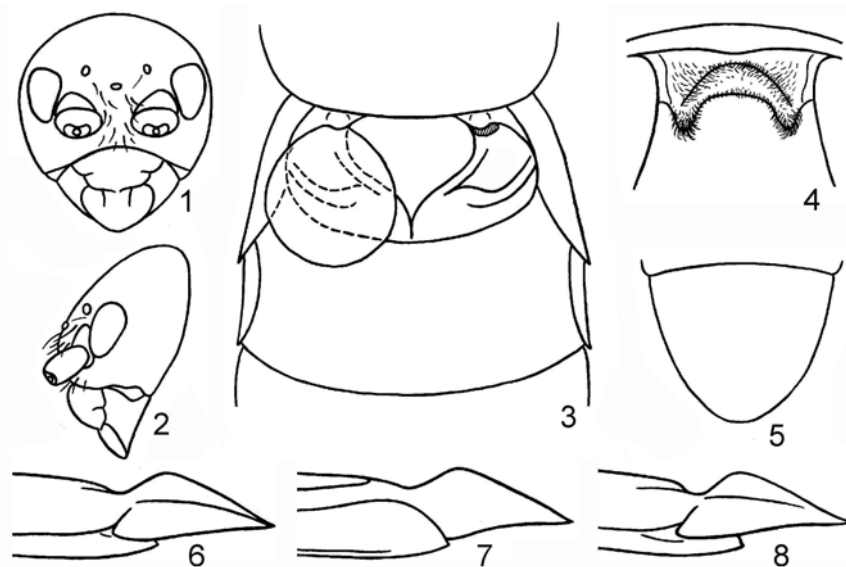
NOTES. Several other species were included by some authors in *Discoptila*, but they don't belong or possibly don't belong to *Ovaliptila*. *Gryllomorpha zernyi* Werner, 1934 (Morocco) included in *Discoptila* by Chopard (1943) possibly belongs to *Hymenoptila*; this species has distinctly spotted coloration not characteristic of *Ovaliptila*. *D. eitschbergeri* Harz, 1976 (Spain) was recently synonymized with *Petaloptila aliena* (Br.-W.) (Goročov, Llorente, 2001). The generic position of Italian *D. sbordonii* Baccetti, 1979 and *D. clauseri* Schmidt, 1991 is unclear: first species was described for only nymphs (Baccetti, 1979), second one, for a single female (Schmidt, 1991).

***Ovaliptila bureši* (Mařan, 1958), comb. n.**

Figs 1-7, 9-13

=*Discoptila brevis* Bey-Bienko, 1964, **syn. n.**

MATERIAL. Holotype – ♂, Bulgaria, “Aladja monastir u Varny, 19.6.59, T.Y. Bureš leg.” (National Museum, Prague). Ukraina: 2 ♂, 2 ♀, 2 nymphs, city Odessa,



Figs 1-8. *Ovaliptila* gen. n.: 1-7) *O. buresi* (Mar.); 8) *O. krueperi* (Pant.). Head in front (1) and from side (2); male pterothorax without right tegmen from above (3); male anal plate from above (4); male genital plate from below (5); apex of ovipositor from side (6, 8) and its inner view (7).

in cellar, 27.X.1929, Barovskij's collection (Zoological Institute, St-Petersburg); 2 ♀, shore of "Kujalnitskij liman" near city Odessa, 30.VI.1919 (Zoological Institute, St-Petersburg); 14♂, 18♀, 43 nymphs (including holotype of *D. brevis*), Crimea, numerous localities to South from cities Eupatoria, Simpheropol and Theodosia, V-XII(?).1899-1988, numerous collectors (Zoological Institute, St-Petersburg).

DESCRIPTION. MALE. Coloration light brown with slight reddish tinge and a pair of more or less distinct dark brown spots on genital plate, but sometimes hind abdominal tergites slightly darkish and tegmina distinctly darkened or with darkened lateral and distal parts. Tegmina disc-like (their width and length almost equal), with smooth dorsal surface and somewhat crumpled ventral one; tegminal medial lobe tucked under tegmen, heavily sclerotized, distinctly widened in middle part, and provided with slight round concavity (Fig. 13); mesonotal gland weakly developed, but distinct (Fig. 3). Anal and genital plates as in Figs 4, 5; genitalia with long distal lobe of epiphallus, rather large median sclerotized part of this lobe, moderately narrow transverse proximal epiphallic sclerite having almost straight hind edge (Figs 9, 11), long and S-shaped guiding rod, long its apical spine, long ectoparameral processes of endoparameres directed forwards and lacking additional lateral projections, small sclerites near these processes, long endoparameral apodemes, and rather wide mold of spermatophore attachment plate provided with long and wide unpaired apodeme (Figs 10-12).

FEMALE. Coloration as in male, but mesonotum with somewhat darker (brown) stripe along hind edge. Tegmina partly or completely covered with pronotum. Ovipositor slightly shorter than hind femora.

LENGTH (mm). Body: ♂ 11-15, ♀ 11.5-15.5; pronotum: ♂ 1.8-2.4, ♀ 2.3-2.7; tegmina: ♂ 1.4-1.7, ♀ 0.5-0.6; hind femora: ♂ 7.8-10, ♀ 8.6-9.7; ovipositor 7-8.8.

NOTES. All indications of *D. fragosoi* for Ukraina apply to *O. buresi*, and synonymy of *D. fragosoi* and *D. brevis* (Gorochov, 1984) must be rejected. The indication of *D. brevis* for Turkey (Gümüşuyu, 1980) is in need of checking.

***Ovaliptila wettsteini* (Werner, 1934), comb. n.**

Figs 14-18

MATERIAL. Holotype – ♀, Greece, “Graecia, Ikaria, 21.IV.34” (Naturhistorisches Museum, Wien). 1 ♂, 1 ♀, Greece, “Südl. Sporaden, Nikaria, v. Oertzen” (Museum für Naturkunde der Humboldt-Universität, Berlin).

DESCRIPTION. MALE. Coloration and body structure very similar to those of *O. buresi*, but distinguished by following characters: head with darkish area between ocelli, dark ring around each lateral ocellus, and darkenings along upper edges of eyes; abdomen almost dark brown; tegmina slightly narrower, with narrower medial lobe (tucked under tegmen) having 2 widenings and lacking round concavity (Fig. 18); anal plate with slightly shorter hind lateral lobes and notch between them; genitalia with slightly shorter distal lobe of epiphallus, wider transverse proximal epiphallic sclerite (Fig. 14), distinctly shorter apical spine of guiding rod, ectoparameral processes of endoparameres having additional lateral projections, narrow mold of spermatophore attachment plate, and much narrower its apodeme (Figs 15-17).

FEMALE. General appearance similar to that of female of *O. buresi*, but distinguished by coloration (as in male of *O. wettsteini*, but abdominal tergites with light proximal and dark distal parts) and length of ovipositor (it distinctly shorter than hind femora).

LENGTH (mm). Body: ♂ 11, ♀ 10; pronotum: ♂ 2, ♀ 2.1; tegmina: ♂ 1.3, ♀ 0.4; hind femora: ♂ 8, ♀ 8.2; ovipositor 6.2.

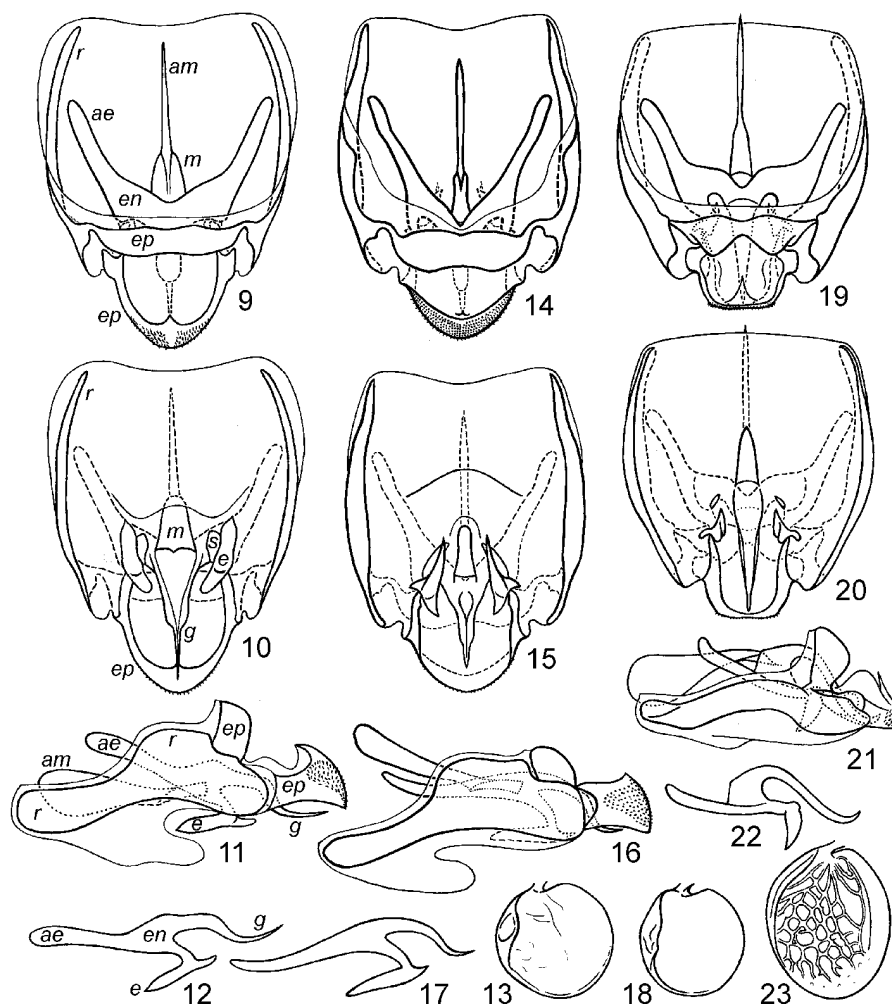
NOTE. During long time, this species indicated also for Rhodes I. (Chopard, 1967) was included in the genus *Gryllomorpha* Fieb. from the tribe Gryllomorphini (Otte, 1994).

***Ovaliptila beroni* (Popov, 1975), comb. n.**

Figs 19-23

=*Discoptila uvarovi* Us, 1975 (Popov, 1984)

MATERIAL. 44 ♂, 21 ♀, 1 nymph, Turkey, Southern part of Asia Minor, 30 km WNW of town Alanya, environs of vill. Okurcalar, bank of r. Alara (flowing into Antalya bay) not far from its mouth, on rock and stones near water, at night, 1-10.X 1994, Gorochov (Zoological Institute, St-Petersburg).



Figs 9-23. *Ovaliptila* gen. n., ♂: 9-13) *O. buresi* (Mar.); 14-18) *O. wettsteini* (Wern.); 19-23) *O. beroni* (Popov). Genitalia from above (9, 14, 19), from below (10, 15, 20), and from side (11, 16, 21); endoparameres with guiding rod and ectoparameral process from side (12, 17, 22); left tegmen from below (13, 18, 23). Abbreviations: *ae* – apodeme of endoparamere, *am* – apodeme of mold of spermatophore attachment plate, *e* – ectoparameral process of endoparamere, *en* – endoparamere, *ep* – epiphallus, *g* – guiding rod, *m* – mold of spermatophore attachment plate, *r* – ramus, *s* – sclerite near ectoparameral process.

DESCRIPTION. MALE. Coloration similar to that of *O. buresi*, but with rather diverse coloration of male tegmina (usually almost dark brown or with dark brown lateral part, sometimes completely light brown) and without dark spots on genital plate. Tegmina oval (their length distinctly bigger than width), with slightly uneven

dorsal surface and distinctly cellulate ventral one; tegminal medial lobe (tucked under tegmen) sclerotized and rather narrow (Fig. 23); mesonotal gland slightly reduced in relation to that of both previous species. Anal and genital plates as in *O. buresi*, but with hind lateral lobes of anal plate directed somewhat aside and weak convexity at median part of notch between these lobes; genitalia with short distal lobe of epiphallus, small (narrow) median sclerotized part of this lobe, wide (almost as in *O. wettsteini*) transverse proximal epiphallic sclerite having deep notch at median part of hind edge (Fig. 19, 21), long and almost straight guiding rod provided with hooked apex, moderately long ectoparameral processes of endoparameres directed downwards and having additional lateral projections, very small sclerites near these processes, moderately long endoparameral apodemes, narrow mold of spermatophore attachment plate provided with long and wide apodeme (Figs 20-22).

FEMALE. General appearance as in female of *O. buresi*, but tegmina always completely covered with pronotum and ovipositor distinctly shorter than hind femora.

LENGTH (mm). Body: ♂ 10-13, ♀ 9-12; pronotum: ♂ 1.7-2.1, ♀ 2-2.3; tegmina: ♂ 1.9-2.3, ♀ 0.3; hind femora: ♂ 7-8.3, ♀ 7.8-9; ovipositor 5.6-6.4.

NOTE. The both above-mentioned synonyms were described from South Anatolia; they are synonymized by Popov (1984) who considers also that their types probably originate from the same localities.

***Ovaliptila newmana* (Harz, 1969) comb. n.**

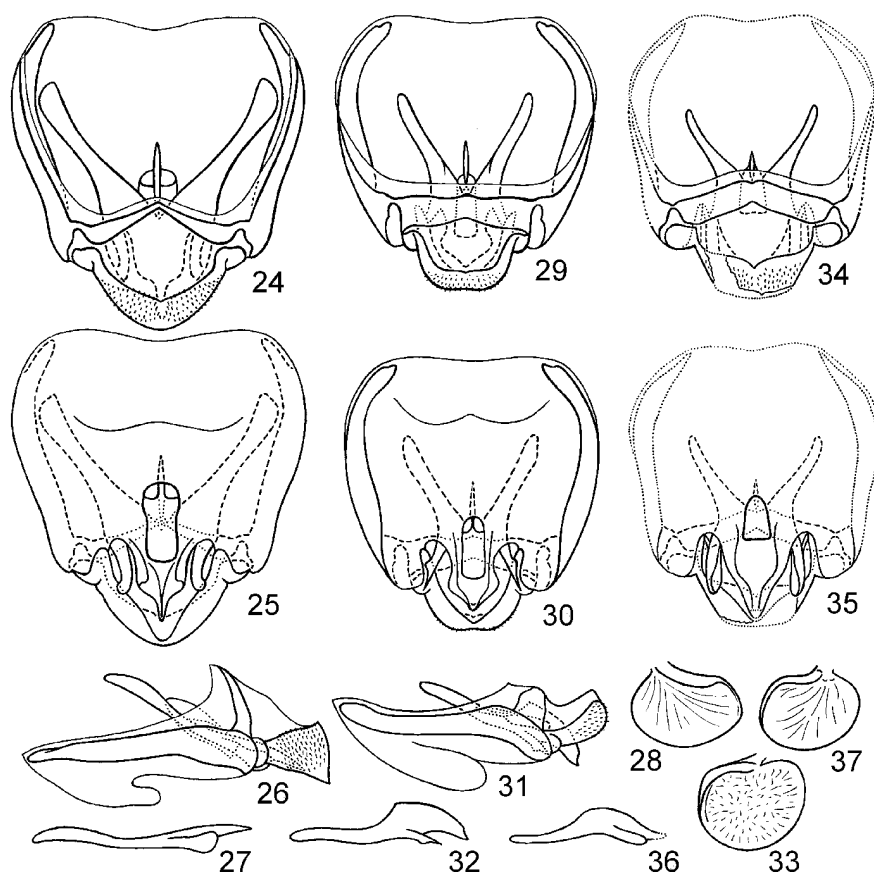
Figs 24-28

MATERIAL. Holotype – ♂, Greece, “Paraskevi, Cumerka, Epir, 1300-1400 m, 14-16.VI.33, Beier” (Naturhistorisches Museum, Wien). Paratype – ♀, same data as in holotype.

DESCRIPTION. MALE. Coloration rather dark, brown, uniform, but with slightly lighter legs. Tegmina transverse (their width distinctly bigger than length), with smooth dorsal surface and somewhat crumpled ventral one; tegminal medial lobe (tucked under tegmen) sclerotized and rather narrow (Fig. 28); mesonotal gland strongly reduced. Anal plate with hind lateral lobes distinctly shorter and wider than in *O. buresi* (notch between these lobes much smaller); genital plate as in *O. buresi*, but with truncated (or very weakly concave) apical part of genital plate; genitalia with moderately short distal lobe of epiphallus, rather large median sclerotized part of this lobe, very narrow and ^-shaped transverse proximal epiphallic sclerite (Fig. 24, 26), short and straight guiding rod having acute apex (but without apical spine), comparatively short and lobe-like ectoparameral processes of endoparameres directed backwards and lacking additional lateral projections (small sclerites near these processes also absent), long endoparameral apodemes, and rather wide mold of spermatophore attachment plate provided with short unpaired apodeme (Figs 25-27).

FEMALE. General appearance as in female of *O. buresi*, but coloration darker (as in male), tegmina completely covered with pronotum, and ovipositor distinctly shorter than hind femora.

LENGTH (mm). Body: ♂ 12.5, ♀ 15; pronotum: ♂ 2.7, ♀ 2.8; tegmina: ♂ 1.2, ♀ 0.2; hind femora: ♂ 9.5, ♀ 10; ovipositor 7.6.



Figs 24-37. *Ovaliptila* gen. n., ♂: 24-28) *O. newmanae* (Harz); 29-33) *O. lindbergi* (Chop.); 34-37) *O. krueperi* (Pant.). Genitalia from above (24, 29, 34), from below (25, 30, 35), and from side (26, 31); endoparamere with guiding rod and ectoparameral process from side (27, 32, 36); left tegmen from below (28, 33, 37).

***Ovaliptila lindbergi* (Chopard, 1957), comb. n.**

Figs 29-33

MATERIAL. Holotype – ♂, Greece, “Crete, 11.V.55, Lindberg”, “grotte Peristera Pyrgos” (Muséum National d’Histoire Naturelle, Paris). Paratype – ♀, same data as in holotype.

DESCRIPTION. MALE. Coloration as in male of *O. buresi*, but genital plate without dark or darkish spots and tegmina intensively brown with light spot at central part and narrow stripe along lateral and distal edges. Structure of tegmina and mesonotum as in *O. newmanae*, but tegmina slightly narrower and with insignificantly different shape of their medial lobe (tucked under tegmen) (Fig. 33). Anal

and genital plates similar to those of *O. newmanae*; genitalia with short distal lobe of epiphallus, small (narrow) median sclerotized part of this lobe, moderately narrow (as in *O. buresi*) and slightly ^-shaped transverse proximal epiphallic sclerite (Figs 29, 31), short and arched guiding rod provided with angular apex, ectoparameral processes of endoparameres similar to those of *O. newmanae* excepting their apical part which almost spine-like, comparatively short endoparameral apodemes, and narrow mold of spermatophore attachment plate having short unpaired apodeme (Figs 30-32).

FEMALE. General appearance as in female of *O. buresi*, but tegmina completely covered with pronotum and ovipositor distinctly shorter than hind femora.

LENGTH (mm). Body: ♂ 9.5, ♀ 10.5; pronotum: ♂ 2, ♀ 2.2; tegmina: ♂ 1.2, ♀ 0.2; hind femora: ♂ 7.8, ♀ 8.3; ovipositor 6.5.

***Ovaliptila krueperi* (Pantel, 1890), comb. n.**

Figs 34-37

MATERIAL. Holotype – ♂, Greece, “Parnass, Krüper, sp. n. aff. *Fragosoi*” (Muséum National d’Histoire Naturelle, Paris). 1 ♀, Greece, “Parnass” (Zoological Institute, St-Petersburg).

DESCRIPTION. MALE. Coloration and body structure very similar to those of male of *O. newmanae*, but distinguished by following characters: structure of tegmina almost intermediate between those of *O. newmanae* and *O. lindbergi* (Fig. 37); anal plate with slightly narrower hind lateral lobes and somewhat larger notch between them; genital plate with rounded apex; genitalia with somewhat smaller membranous area between distal and proximal sclerites of epiphallus, wider (as in *O. lindbergi*) transverse proximal epiphallic sclerite (Fig. 34), slightly arched (or slightly S-shaped) guiding rod, narrower in profile lobe-like ectoparameral processes of endoparameres, shorter (as in *O. lindbergi*) endoparameral apodemes, and shorter mold of spermatophore attachment plate (Figs 35, 36).

FEMALE (nov.). Female almost identical to that of *O. newmanae* and distinguished by only somewhat longer ovipositor which slightly shorter than hind femora.

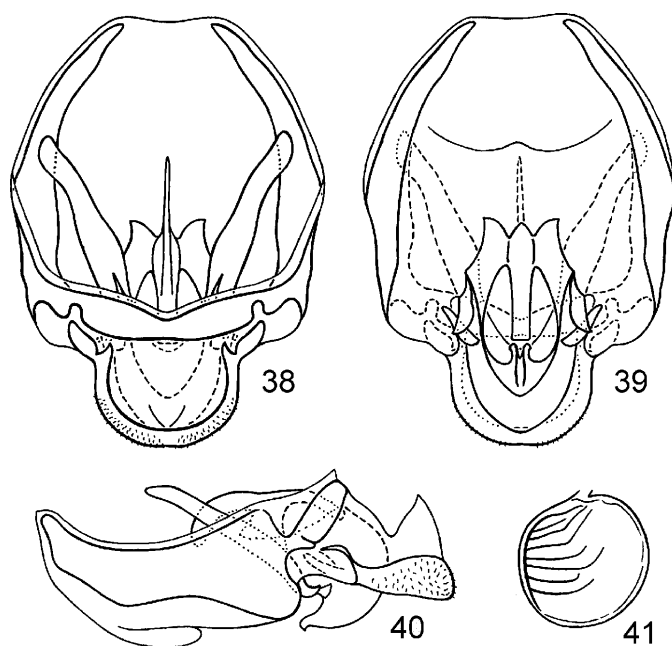
LENGTH (mm). Body: ♂ 13, ♀ 11; pronotum: ♂ 2.2, ♀ 2.4; tegmina: ♂ 1.1, ♀ 0.2; hind femora: ♂ 8.5, ♀ 9; ovipositor 7.8.

NOTE. The genitalia of holotype are partly destroyed. The missing parts are reconstructed in Figs 34, 35 by lines consisting of dots.

***Ovaliptila kinzelbachi* (Harz, 1971), comb. n.**

Figs 38-41

MATERIAL. Holotype – ♂, Greece, “Graecia, Karpathos, 31.III.1963, Grillenhöhle, R. Kinzelbach” (Museum d’Histoire Naturelle, Genève). Paratypes: 1 ♂, 1 nymph (♀), same data as in holotype.



Figs 38-41. *Ovaliptila kinzelbachi* (Harz), ♂: 38) genitalia from above; 39) same from below; 40) same from side; 41) left tegmen from below.

DESCRIPTION. MALE. Coloration as in male of *O. buresi*, but clypeus with slightly darker line along clypeal suture, tegmina with brownish grey transverse lines (darker near medial tegminal edge) and darkenings along lateral and distal tegminal edges, and genital plate without dark or darkish spots. Eyes somewhat smaller than in all previous species. Tegmina almost disc-like, with smooth dorsal surface and transverse striation on ventral surface; sclerotized tegminal medial lobe (tucked under tegmen) very narrow (Fig. 41); mesonotal gland strongly reduced. Anal and genital plates almost as in *O. buresi*; genitalia with epiphallus more or less similar to that of *O. buresi* (but median sclerotized part of distal epiphallic lobe small as in *O. beroni* and *O. lindbergi*) (Figs 38, 40), short and strongly arched guiding rod having bifurcated apex directed downwards and almost forwards, very short ectoparameral processes of endoparameres directed backwards and lacking additional lateral projections, hooked apex of these processes, small sclerites near them, long endoparameral apodemes, and very specialized mold of spermatophore attachment plate having medium-sized and curved apodeme as well as characteristic lateral lobes fused with widened base of guiding rod (such structure of this mold and guiding rod unknown in other congeners) (Figs 39, 40).

FEMALE. Adult female unknown.

LENGTH (mm). Body ♂ 12-12.5; pronotum ♂ 2-2.1; tegmina ♂ 1.6-1.7; hind femora ♂ 8.7-8.9.

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