

New taxa and new data on distribution of the subfamily Orgeriinae in the Mediterranean (Homoptera: Dictyopharidae)

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Emeljanov, A.F. 2003. New taxa and new data on distribution of the subfamily Orgeriinae in the Mediterranean (Homoptera: Dictyopharidae). *Zoosystematica Rossica*, **11**(2), 2002: 311-319.

New data on distribution of the subfamily Orgeriinae in the Mediterranean region are given. The following taxa are described: *Sphenarchus* gen. n. with *S. abdounouri* sp. n., *Antherus* subgen. n. of the genus *Ranissus* Fieber, *Ranissus kartali* sp. n., *Tachorga adiaplasta* sp. n., *Coppa libanotica* sp. n., and three subspecies of *Tilimontia canariensis* Lindberg (*T. canariensis gomerensis* ssp. n., *T. c. tenerifensis* ssp. n., *T. c. hierroensis* ssp. n.).

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The paper contains new data on the distribution of the Mediterranean Orgeriinae and the descriptions of one new genus, four new species and three new subspecies. The publication is based on the material received for investigation from Dr. H. Duffels (Universiteit van Amsterdam Instituut voor Systematiek en Populatiebiologie (Zoologisch Museum), the Netherlands), Dr. H. Abdul-Nour (Lebanon, Jdeidet al-Matn), Dr. P. Lauterer (Moravian Museum, Brno, Czech Republic), Dr. A. Drosopoulos (Agricultural University, Athens, Greece), Prof. V.G. Golemansky (Institute of Zoology, Bulgarian Academy of Sciences, Sofia, Bulgaria), Dr. T. Stern (National Museum of Natural History of Tel-Aviv University, Israel), Prof. A. Guglielmino (Università della Tuscia, Viterbo, Italy), Prof. V. D'Urso (Università di Catania, Italy), Dr. H. Zettel (Naturhistorisches Museum Wien, Austria), Dr. V. Kartal (Ondokuz Mayıs Üniversitesi, Samsun, Turkey), and also on materials collected by the author in Bulgaria with his colleagues I. Gjonov (Sofia University, Bulgaria) and V. Gnezdilov (Zoological Institute, St.Petersburg, Russia). The author is grateful to all mentioned persons.

In the text, the following abbreviations are used: ITZ – Universiteit van Amsterdam Instituut voor Systematiek en Populatiebiologie (Zoologisch Museum), Amsterdam, the Netherlands; MM – Moravian Museum, Brno, Czech Republic; NMW – Naturhistorisches Museum, Wien, Austria; IZBAN – Institute of Zoology, Bulgarian Academy of Sciences, Sofia, Bulgaria; ZIN – Zoological Institute of the Russian Academy of Sciences, St.Petersburg, Russia.

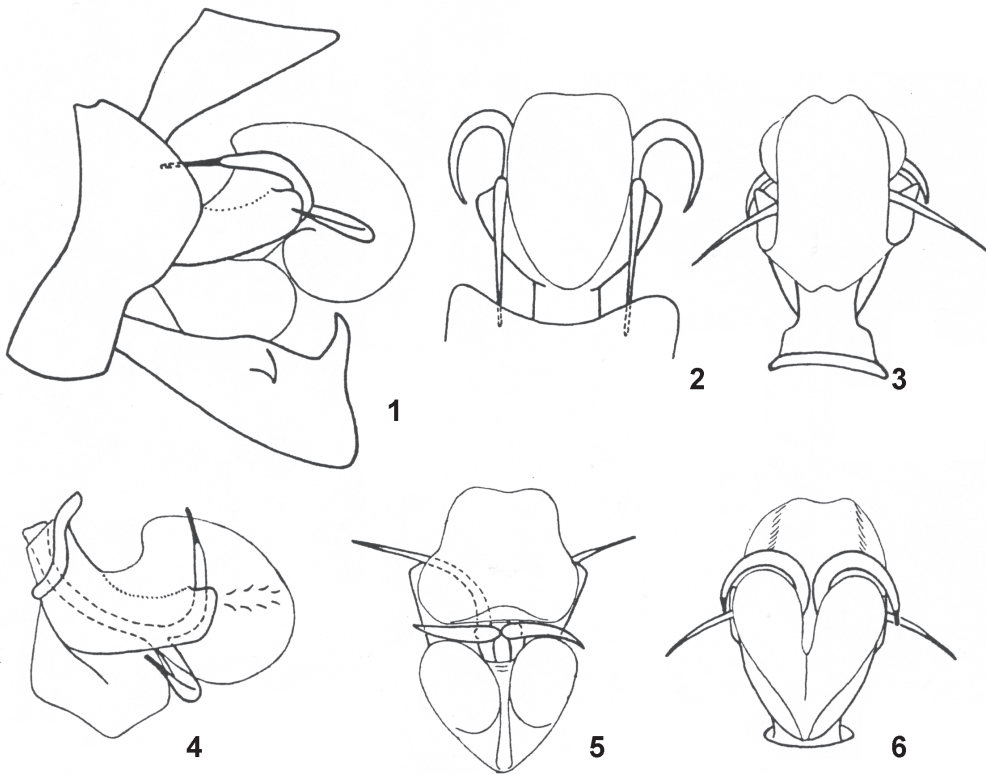
Tribe **Ranissini**

Ranissus Fieber

This genus is divided into three subgenera, one of which is new.

- 1(2). Cornua of penis uniaipicate. Membranous surface of upper and lower bladders of theca connected latero-apically. Lateral sides of tergites roundly swollen and polished; sublateral carinae absent **Schizorgerius** V. Kusnezov
- 2(1). Cornua of penis biapicate. Membranous surface of upper and lower bladders of theca completely separated by lateral sclerotised wall of theca; lower bladder not always developed.
- 3(4). Basal plate of 1st valvulae of ovipositor with digitiform process directed antieriad. Upper bladder of theca developed or not developed, always without paired basal diverticula **Ranissus** s. str.
- 4(3). Basal plate of 1st valvulae simple, without any additional process. Upper bladder of theca always well developed, with paired basal diverticula **Antherus** subgen. n.

The subgenus *Schizorgerius* comprises only one species, *Ranissus scytha* Oshanin. The subgenus *Ranissus* s. str. includes *R. leptopus* Fieber (type species), *R. capnisus* Emeljanov, *R. edirneus* Dlabola, *R. montandoni* Horváth, *R. productus* Fieber, and *R. kartali* sp. n. The new subgenus *Antherus* subgen. n. with type species *Ranissus discrepans* Fieber comprises the following species: *R. acucephalus* Fieber, *R. albiceps* Emeljanov, *R. candidatus* Emeljanov, *R. collaris* Emeljanov, *R. discrepans* Fieber, *R. drosopoulosi* Emeljanov, and *R. punctiger* Horváth.



Figs 1-6. *Ranissus kartali* sp. n., male genitalia. All drawings (1-6) were made from the genitalia placed in water after boiling in KOH. 1, genital block, strongly inflated state (from left side); 2, penis, strongly inflated state (in dorsal view); 3, penis, normally inflated state (in dorsal view); 4, penis, normally inflated state (from left side); 5, penis, normally inflated state (in apical view); 6, penis, normally inflated state (in ventral view).

***Ranissus kartali* sp. n.**
(Figs 1-6)

Ranissus punctiger: Kartal, 1987 (non Horvóth).

Holotype. ♂, **Turkey**, Yozgat Çamlık, 1400 m, 21.VIII. 1982, V. Kartal (ZIN).

Paratypes. 7 ♂, 8 ♀, same data as in holotype (ZIN).

Description. Body oval, with rather short head. Coryphe approximately as long as wide or slightly shorter than wide; its anterior half projecting before eyes, anterior and anterolateral margins forming a joint lancet-arch or parabolic curve, marginal and median carinae sharp, median carina simple (not double). Metope straight along the middle line or slightly concave at apex of cephalic process; transverse section of metope straight near clypeus, but moderately convex in apical part; lateral margins of metope straight, parallel; intermedial carinae from clypeus to level of eyes parallel, joining each other at apex of head in form of high lancet-shaped arch; distance

between intermedial and medial carinae 1.5 times the distance between intermedial and lateral carinae. Median length of metope approximately twice its width. Postclypeus somewhat convex with trapezoidal-rounded projection into metope up to level of hind margins of antennae. Disc of pronotum 3 times as broad as long, its sides weakly diverging posteriorly; lateral discal carinae not developed in posterior third, their apical parts bent laterally; hind margin of pronotum weakly concave, with a pair of distinct impressed points. Scutellum of mesonotum transverse, with three carinae, lateral ones weaker than median. Elytra with fine net of veins; sublateral carinae sharp, subsutural carinae absent. Upper side of abdomen with distinct median carina and indistinct sublateral ones, situated on lateral callosity of tergites and similar to that in *Ranissus scythia* Oshanin. Imprinted spots on IV-VII abdominal tergites medial to sublateral carinae arranged as 1+2+2, on VIII tergite, 3 spots arranged in one

group. Legs simple, strong and rather long, hind tibiae with 5-6 lateral spines.

Female genitalia. Basal plates of 1st valvae of ovipositor each with a small capitate process covered with setae.

Male genitalia. Pygofer with dorsolateral lobes moderately produced. Anal tube oval. Styles moderately long, upper teeth situated in its apical part, posterodorsal margin shallowly convex, lateral teeth with apex slightly bent down, dorsal margin before base of lateral teeth with smoothed step. Phallosome rather short, bent dorsally. Lateral sclerotised lobes of theca with rounded apices. Upper bubble (membranous inflatable portion) of theca large, reniform; its anterior surface simple, not bifide, posterior surface with a broad and shallow mediad furrow. Lower bubble smaller than upper one, with bifide apex. Hooks of penis bifurcate, upper branches (primary branches) bent anterodorsally, lower branches (secondary branches) bent laterally.

Coloration of male. Head yellowish white; genae, lorae, anteclypeus, and lateral portions of postclypeus along lateral carinae black. Pronotum dark brown to black, its fore margin and lateral carinae diffusely lightened up to brown. Paranotal lobes ventral of collateral carinae blackened in anterior part and lightened in posterior part in shape of band, almost to white; sometimes, posteroventral angle of humeral area lightened also, as a part of above-mentioned band. Base of elytra with light triangular spots at both sides; these spots connected with paranotal band or divided by a dark humeral area. Scutellum of mesonotum dark brown to black; median carina and lateral portions of disc lighter than other parts. Elytra dark brown to black, except for above-mentioned humeral light spot. Abdomen and genital block dark brown to black; tergites lateral to median carina with diffuse brown spots, each impressed dark spot lighter laterally; lateral margins of tergites with a nearly white narrow stripe. Upper side of body dark brown, partly black. Fore and middle femora and tibiae with light brown longitudinal carinae and darkened interspaces; hind femora dark brown, lightened apically, carinae becoming lighter in more proximal parts as compared with interspaces; hind tibiae brown with lighter carinae and blackened spines. First and 2nd tarsomeres brown with blackened spines, 3rd tarsomere dark brown.

Coloration of female. Brown, with more or less distinct dark brown pattern. Carinae and net of veins on elytra lighter than background. Genae and adjoining parts of paranota always darkened. More intensely pigmented specimens with darkened anterior parts of paranota, humeral and paradiscal areas and lateral angles of meso-scutellum; elytra of such specimens dark brown

with diffuse brown net of veins and indistinct light line medial to sublateral carina. Upper side of abdomen brown with black impressed spots (vestiges of larval sensory pits), indistinct dark stripes lateral to median carina, lateral parts of tergites darkened, sublateral carinae usually lighter, lateral margin of tergites as light as in male. Lower side of body and legs coloured as in male.

Length (mm). Body: ♂ 4.4-4.7, ♀ 5.0-5.6.

Comparison. The new species differs from the other species of the genus in the simple (not double) median carina of coryphe, and from species of the *R. discrepans* group, in the absence of furrow on anterior side of upper theca bubble.

Ranissus punctiger Horváth

Ranissus anatolicus Kartal, **syn. n.**

Material. Turkey, Ankara Prov.: 3 ♂, 2 ♀, Cubuk Baraji-1, 900 m (see Kartal, 1987), from type series of *R. anatolicus*.

Remarks. All the specimens examined undoubtedly belong to *R. punctiger* according to all diagnostic characters. All records of this species from Bulgaria (Bairyamova, 1976, 1992) are erroneous and refer to *R. edirneus* (see note under *R. edirneus*).

Ranissus discrepans Fieber

Material. Greece, Peloponnesos: 3 ♂, 3 ♀, Messinia, Proastio SE of Kardamili, 100 m, 18-27.V.1993, J.P. Duffels (ITZ).

Ranissus acucephalus Fieber

Material. Greece, Peloponnesos: 2 ♀, Arkadia, Tripolis-Davia, 3-8 km NW of Tripolis, 800 m, 13.VII.1975, J.P. Duffels; 1 ♂, 1 ♀, 10 km S of Tripolis, 6.VIII.1977, M.J. & J.P. Duffels; 1 ♀, Vourvoura, 25 km S of Tripolis, 9.VII.1977, M.J. & J.P. Duffels; 1 ♀, Kosmas, 1000-1200 m, 10-12.?.1994, J.P. Duffels (all specimens deposited at ITZ).

Ranissus edirneus Dlabola

Palaeorgerius punctiger: Bairyamova, 1976a, 1976b, 1992, non Horváth.

Material. Bulgaria: many specimens, Boboshevo, 600-700 m, 25-29.VII.2000, Emeljanov, Gjonov, Gnezdilov; 1 M, Zaparevo, 10 km W of Mirevo, 400 m, 30.VII.-20.VIII.2002, Lazarov, Ljubomirov; 2 M, 5 km N of Kresna, 22.VII.2000, Emeljanov; 1 M, 3 F, Stremtsi, 4.VIII.2000, Emeljanov, Gnezdilov; Kirdzhali, city park, 23.VII.1969 (Bairyamova, 1976; as *P. punctiger* Horv.); Avren, 21.VI.1969 (Bairyamova, 1976; as *P. punctiger* Horv.); Ljubimets, 13.VII.1983, Bairyamova; Mezek, 14.VI.1983, Bairyamova; Popsko, 20.VI.1969 (Bairyamova, 1976; as *P. punctiger* Horv.); 1 F, Kamilski Dol, 5.VIII.2000, Gjonov; 2 M, 10 F, Ivailovgrad, 12.VI.1983, Bairyamova (Bairyamova, 1976; as *P. punctiger* Horv.);

Mandritsa, 19.VI.1969 (Bairyamova, 1976; as *P. punctiger* Horv.); Camping "Perla" near Sozopol, 27.V.1973 (Bairyamova, 1976; as *Palaeorgerius* sp.); 1 M, 3 F, Harmanli, 20.VII.1971, 80-120 m, steppe, Lauterer (MM); 1 M, 3 F, Sandanski (Liljanovo), 11-14.VII.1971, Lauterer (MM); 2 M, 2 F, Sandanski, 23.VI.1956, R. Bielawski & A. Goljan (IZPAN, ZIN); Nesebar-S. Brjag, 16-19. And 24.VI.1966, K. Pospišil (MM); 2 F, 10 km S of Goze Deltschew, 15.VIII.1980, M. Josifov (MM); 2 M, 2 F, Dabovez near Haskowo, 16.VII.1992, M. Josifov (MM).

Remarks. V. Bairyamova recorded this species from Bulgaria as *Palaeorgerius punctiger* (Bairyamova, 1976a, 1992) and *P. sp.* (Bairyamova, 1976b). In one of these papers (Bairyamova, 1992), she indicated both *P. punctiger* Horv. and *P. edirneus* Dlab. from the Rhodopes without concrete localities. Thanks to courtesy of Mr. I. Gjonov (Sofia University) and Prof. V.G. Golemansky (Institute of Zoology, Bulgarian Academy of Sciences, Sofia), I examined the same orgeriine materials. All specimens identified by Bairyamova as *Palaeorgerius punctiger* and *P. sp.* (Camping "Perla") actually belong to *Ranissus edirneus* Dlab. The author did not see any specimens identified by Bairyamova as *R. edirneus*. Thus, the records of *R. punctiger* from Bulgaria seem to be referred to *R. edirneus*. In the materials studied, *Parorgerius platypus* Fieber (from Kresna) identified by Bairyamova as *Palaeorgerius scythia* Oshanin is also found.

Ranissus scythia Oshanin

Material. **Bulgaria:** 1 ♂, 2 ♀, Tornare Plev., 25.VI.1983, Bairyamova (IZBAN); 1 imago (damaged), Drian Plev., 24.VI.1983, Bairyamova (IZBAN). **Macedonia:** 1 ♂, 4 ♀, Kumanovska Banja, 5 km SE of vill. Kumanovo, 20-21.VII.1965 (ITZ).

Parorgerius platypus Fieber

Material. **Bulgaria:** 1 ♂, 2 ♀, Boboshevo, 12 km WNW of Rila, 15-25.VII.1998, students of Sofia University leg. (IZBAN). **Macedonia:** 2 ♂, 2 ♀, Teovo, 22 km SW of vill. Titov Veles, 26.VII.1965 (ITZ); 1 ♂, 1 ♀, Suvodol, 18 km ENE of vill. Bitola, 750-1000 m, 30.VII.1965 (ITZ); 2 ♀, Kumanovska Banja, 5 km SE of Kumanovo, 20-21.VII.1965 (ITZ). **Greece:** 15 ♂, 8 ♀, *Makedonia*, 18 km SE of Kozani, 3.VII.1975, J.P. Duffels (ITZ); 2 ♂, *Stereia*, Ipati-Neochorion, 10 km S of Ipati, 800 m, 7.VII.1975, J.P. Duffels (ITZ); 4 ♂, 1 ♀, *Stereia*, 15 km W of Karpenission, 1100 m, 8.VII.1975, J.P. Duffels (ITZ); 1 ♂, *Thessalia*, 5-10 km S of Servia, 600 m, 4.VII.1975, J.P. Duffels (ITZ); 2 ♂, Nomos Grevenon, Paraskevi (Deskati), 600 m, 8.VII.1976, F. & L. Willemse & J. Tilmans (ITZ).

Tribe **Colobocini**

Colobocus conspersus Puton

Material. **Tunisia:** 3 ♂, 5 km N of Hammamet, 9-17.VI.1980, J.P. Duffels; 3 ♂, 1 ♀, Hammamet, 21.V.1984, J.P. Duffels; 2 ♂, 3 ♀, 10 km N of Jendouba, 8.V.1984, J.P.

Duffels; 1 ♀, 5 km W of Sbeitla, 300 m, 17.V.1984, J.P. Duffels; 1 ♀, 10 km NW of Nabeul (near Hammamet), 300 m, 19.V.1984, J.P. Duffels; 1 ♀, Hammamet beach, 3-17.VI.1973, M.C. & G. Kruseman. **Algeria:** 3 ♂, 2 ♀, Ouled Zoai, 45 km N of Batna, 10.V.1984, J.P. Duffels (all specimens deposited at ITZ).

Tribe **Almanini**

Bursinia genei Dufour

Material. **Spain, Castile-Leon:** 1 ♂, Soria, Medinaceli, 1250 m, 17.VII.1972, M.J. & J.P. Duffels; *Zaragoza:* 3 ♂, 1 ♀, 10 km NE of vill. Calatayud, 700 m, 41-16.VII.1972, M.J. & J.P. Duffels; 1 ♂, Munebrega, 15 km S of vill. Calatayud, 16.VII.1972, M.J. & J.P. Duffels; *Tarragona:* 2 ♀, Catllar, 6.VIII.1966, M.C. & G. Kruseman; *Madrid Prov.:* 1 ♂, 1 ♀, Collado Mediano, 1100-1200 m, 17 km NE of vill. El Escorial, 24.VII.1972, M.J. & J.P. Duffels; *Valencia:* 1 ♂, 1 ♀, Castellon, La Puebla de la Alcolea (Lu Pobleta), 1000 m, 13.VIII.1966, M.C. & G. Kruseman; *Teruel Prov.:* 2 ♂, 4 ♀, Albarracin, 18.IX.1963, C.A.W. Jeekel; 1 ♀, 25-30 km SW of vill. Alcaniz, 350 m, 10.VII.1972, M.J. & J.P. Duffels; 2 ♂, 3 ♀, 19 km S of vill. Alcaniz, 350 m, 11.VII.1972, M.J. & J.P. Duffels; 1 ♂, 25 km E of vill. Alcaniz, 300 m, 7.VII.1978, M.J. & J.P. Duffels (all specimens deposited at ITZ). **France, Hérault:** 3 ♂, Causse du Larzac, 2.VIII.1988, on *Juniperus*, M.J. Gijswijt; *Alpes Basses:* 1 ♂, 2 ♀, Marcoux, 19.VII.1970, P. Poot; *Haute-Provence:* 1 ♂, 1 ♀, Forcalquier, 500-600 m, 29.VII.1979, J.P. Duffels; *Corsica:* 1 ♂, 2 ♀, "monding v. d." [near] Fiume Secco, 4 km E of vill. Calvi, 25-29.VIII.1971, A.C. & W.N. Ellis; 19 ♂, 14 ♀, Ponte Leccia, 200 m, 22.VIII.1971, A.C. & W.N. Ellis; 2 ♀, Tavera, 5 km SW of vill. Bocognano, 400-500 m, 20.VIII.1971, A.C. & W.N. Ellis; 3 ♂, 3 ♀, 1 larva of instar V, Vivario, 600-650 m, 14.VIII.1971, A.C. & W.N. Ellis (all specimens deposited at ITZ). **Italy:** 1 ♀, 3 km E of vill. Corte, 550 m, 9.VIII.1956, R. Blote (ITZ); *Abruzzo:* 1 ♂, 2 ♀, Monte Viglio, 1200m, edge of mixed forest, 10.VIII.1998, Guglielmino & Bückle; 2 ♂, 1 ♀, Tra Secinaro and Molino Atemo, 500 m, on *Quercus* and *Acer*, Guglielmino & Bückle; 1 ♂, Pendio, S of Sella di Corno, 1300 m, "parti secchi" [forest litter], 25.VIII.1999, Guglielmino & Bückle; 1 ♀, Pendio, S of Sella di Corno (L'Aquila), 1100 m, on *Ostrya*, *Quercus*, *Acer*, 26.VIII.1999, Guglielmino & Bückle; *Lazio:* 2 ♂, 1 ♀, M. te Terminillo, 3 km N of Lisciano (Rieti), 900 m, herbaceous vegetation under *Quercus*, 24.VIII.1999, Guglielmino & Bückle; 1 ♀, Piani di Carmelia (Aspromonte), 8.VIII.1963, La Greca (V. D'Urso collection); *Lazio e Molise:* 1 ♂, 2 ♀, National Park d'Abruzzo, 5 km S of vill. Bisegna, 30.IX.2001, I. Gjonov (ZIN). **Croatia:** 1 ♂, 1 ♀, *Hvar*, Starigrad, 5.VIII.1971, A. van de Pol (ITZ); 1 ♂, Murter, Slanica, 15.VIII.1983, J. Vavrino (MM).

Bursinia latipes Horváth

Material. **Spain, Alicante Prov.:** 3 ♀, Guadalest, 26.IX.1984, J.H. Woudstra (ITZ).

Bursinia pythiua Emeljanov

Material. **Spain, Balearic Is.:** 1 ♂, 1 ♀, Ibiza, "Pl.D'en Bossa", 30.IX.1960, V.H. Gravstein (ITZ).

Bursinia sicula Emeljanov

Material. Italy, Sicilia: 1 ♂, Capaci – Tarretta, 28.VIII.1965, S. Novicky (MM); 1 ♀, *Palermo Prov.*, Collesano, 26.VI.1965, S. Novicky (MM); 3 ♂, Serra del Monti (Etna), 1600 m, 29.VIII.1987, Guglielmino & Bückle (V. D’Urso collection).

Bursinia seminitens Horváth

Material. Tunisia: 5 ♂, 10 ♀, 10 larvae, 5 km N of Hammamet, 9-17.VI.1980, J.P. Duffels; 1 larva, Hammamet, 21.V.1984, J.P. Duffels. *Algeria:* 1 ♂, Tlemcen Oran, 6.[18]95, Schmiedeknecht (all specimens deposited at ITZ).

Bursinia breviceps Horváth

Material. Spain, Zaragoza: 3 ♂, 1 ♀, 10 km NW of vill. Calatayud, 16.VII.1972 (ITZ).

Almana longipes Dufour

Material. Portugal: 2 ♂, 1 ♀, 1 larva, Algarve, Porto de Lagos, 11.VI.1970, C. & A. Jeekel (ITZ); 1 ♀, Algarve, Tavira, 30.VIII.1976, V.H. Gravestain (ITZ); 1 ♂, Algarve, 15 km NW of Loule, 24.VII.2001, A. Drosopoulos (ZIN). *Spain, Madrid Prov.:* 2 ♂, 2 ♀, 1 larva, Collado Mediano, 1100-1200 m, 17 km NE of vill. El Escorial, 24.VII.1972, M.J. & J.P. Duffels (ITZ); 1 ♀, Valdemoro, 17.X.1963, C.A.W. Jeekel (ITZ); *Granada:* 1 ♀, Fiume Ferdes, 1200 m, 19.VII.1965, La Greca (V. D’Urso collection).

Almanetta sarda Emeljanov

Material. Italy, Sardinia: 1 ♂ (holotype), *Sassari Prov.*, Palau, 11-23.IX.1971, W.H. Gravestain (ITZ); 1 ♀, *Nuoro Prov.*, M. te Tonneri, 1050 m, 22.VIII.1997; 1 ♂, 1 ♀, *Cagliari Prov.*, Fiume Nieddu, 100 m, 8.VIII.1997; 3 ♂, 4 ♀, *Cagliari Prov.*, Tempio di Antas, 400 m, 10.VIII.1999 (all specimens Guglielmino & Bückle leg.) (V. D’Urso collection).

Tilimontia canariensis Lindberg

Tilimontia canariensis canariensis Lindberg (Figs 7, 8)

Material. Spain, Canary Is.: 11 ♂, 7 ♀, La Palma I., La Cumbrecita, 6 km NNE of El Paso, 1150-1250 m, 22.VII.1985; 1 larva, La Palma I., Roque de los Muchachos, 2000-2200 m, 16.VII.1985, all specimens A.C. & W.N. Ellis leg. (all specimens deposited at ITZ).

Tilimontia canariensis gomerensis ssp. n. (Figs 9, 10)

Holotype. ♂, Spain, Canary Is., La Gomera I., 2 km SW of San Sebastian, 10.IV.1988, A.C. & W.N. Ellis (ITZ).

Paratypes. Spain, Canary Is.: 1 ♂, 1 ♀, same data as in holotype; 1 ♀, La Gomera I., Ayamosma, 3 km W of San Sebastian, 300-700 m, 12.IV.1988, A.C. & W.N. Ellis (all specimens deposited at ITZ).

Tilimontia canariensis hierroensis ssp. n. (Figs 11, 12)

Holotype. ♀, Spain, Canary Is., Hierro I., “Canar. Ins. / Polatzek” (NMW).

Tilimontia canariensis tenerifiensis ssp. n. (Figs 13, 14)

Holotype. ♂, Spain, Canary Is., Tenerife I., Santa Cruz, 5.IV.1984, A.C. & W.N. Ellis (ITZ).

Paratypes. Spain, Canary Is.: 5 ♂, 4 ♀, same data as in holotype; 2 ♂, 1 ♀, Tenerife I., Santiago de Teide, 975 m, 4.X.1974, Kruseman & Lempke (all specimens deposited at ITZ).

Key to subspecies of *Tilimontia canariensis*

- 1 (2). Head long, cephalic process before eyes (in lateral view) nearly twice as long as eye. Junction of lateral carinae of coryphe and metope situated at about 1.5 diameter of eye before the latter. Apical part of cephalic process before bend of coryphe (in lateral view) nearly 1.5 times as long as wide, corresponding part of coryphe along median carina concave – La Palma I. **T. c. canariensis** Lindberg
- 2 (1). Head shorter, cephalic process at most 1.5 times as long as eye. Junction of lateral carinae of coryphe and metope situated at most at one diameter of eye before the latter. Apical part of cephalic process before bend of coryphe (in lateral view) approximately as long as wide.
- 3 (4). Lateral carinae of coryphe and metope (in lateral view) joined at an angle of about 30°, head somewhat longer. Lateral carinae of elytra not reaching their hind margin – La Gomera I. **T. c. gomerensis** ssp. n.
- 4 (3). Lateral carinae of coryphe and metope (in lateral view) joined at angle of about 45°, head somewhat shorter. Lateral carinae of elytra reaching their hind margin.
- 5 (6). Middle parts of lateral carinae of coryphe (basal to transverse carina) in female distinctly converging towards apical cell – Tenerife I. **T. c. tenerifiensis** ssp. n.
- 6 (5). Middle parts of lateral carinae of coryphe (basal to transverse carina) in female subparallel – Hierro I. **T. c. hierroensis** ssp. n.

Tilimontia insularis Melichar

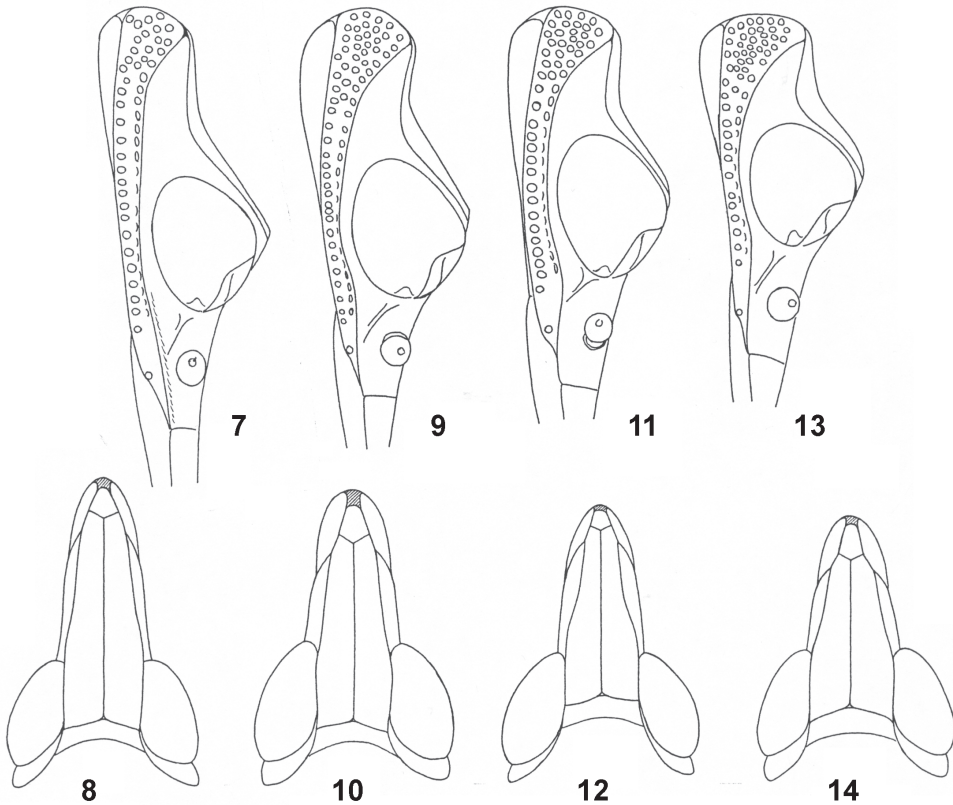
Material. Spain, Canary Is.: 4 larvae, Gran Canaria I., El Sao, 8 km NNE of Arguineguin, 3.IV.1987, A.C. & W.N. Ellis, A.M. & R.T. Simon Thomas (ITZ).

Parorgerioides albocinctus Melichar

Material. Spain, Malaga Prov.: 1 ♂, Coin, 1.VI.1962, Jeekel & Wierling; 1 larva of instar V, 15 km E of vill. Marbella, 20-22.V.1970, W.H. Gravestain, M.J. & J.P. Duffels (all specimens deposited at ITZ).

Parorgerioides immundus Horváth

Material. Marokko: 1 ♀, South Morocco, Agadir, mouth of Ouad Souss River, right bank, 12.XI.1984, M.C. & G. Kruseman (ITZ). *Tunisia:* 1 ♂, 5 km N of Ham-



Figs 7-14. *Tilimontia canariensis* Lindberg, head, from left side (7, 9, 11, 13) and in dorsal view (8, 10, 12, 14). **7, 8.** *T. canariensis canariensis* Lindb., from La Palma I.; **9, 10.** *T. canariensis gomerensis* ssp. n.; **11, 12.** *T. canariensis hierroensis* ssp. n.; **13, 14.** *T. canariensis tenerifiensis* ssp. n.

mamet, 0-150 m, 9-17.VI.1980, J.P. Duffels (ITZ); 1 ♀, El Kef (dint), 500 m, 6.X.1991, Osella (V. D'Urso collection).

Parorgerioides perezii Bolívar & Chicote

Material. **Portugal:** 1 ♂, 1 larva, Algarve, 15 km NW of Loule, 24.VII.2001, A. Drosopoulos (ZIN).

Tachorga adiaplasta sp. n. (Fig. 16)

Holotype. ♀, **Egypt**, Sinai, St.Katherina Mt., with labels: "j. Katerina /14 IX 76/ L. Kinarty" [handwritten]; "Coll. "Zukei David" "F.S.C. /Named after David Tamir/ Sinai, Santa Katherina", "In 527" (deposited at University of Tel-Aviv).

Description. Female. General appearance and head size similar to those of *Parorgerioides immundus* Horváth. Head comparatively small, as in *Tachorga recurviceps* Linnavuori (Fig. 15), but with coryphe of typical geniculate shape as

in *T. recurviceps*. Basal part of coryphe as broad as long; middle ascending part of coryphe slightly shorter than basal part, rather strongly narrowed anteriorly (dorsoapically), its sides somewhat concave; anterior descending part forming a shallow arch with callus apicalis and right angle with middle part. Anterior part nearly twice as long as broad, parallel-sided. Callus apicalis distinctly broadened towards metope up to ends of intermediate carinae of metope. Elytrae nearly smooth, with impressed points, veins not raised, sublateral carinae distinct, subsutural carinae very weak. Hind tibiae with six lateral spines.

Coloration brownish grey, with dark spots almost on all parts of the body. Head light brown; coryphe with small dark spots; metope and adjacent lateral part of head light brown up to apex of clypeus and level of antennae, medial areas of metope with small dark spots; posterior calli and genal carinae yellowish white, without spots.

Upper two-thirds of postclypeus with fused black spots; uppermost part entirely black; lower third almost without spots, but with black hind margin. Anteclypeus between carinae irregularly black, carinae light. Genae lateral to and ventral of antennae blackened; lorae light, except for their lower margin. Upper part of pronotum brown, sensory pits darkened. Humeral areas with fused black spots; upper part of paranota up to level of hind margin of genae entirely black, hind margin indistinct, irregular (falling to spots); lower part of paranota light, with sparse dark spots at lower margin. Scutellum of mesonotum brown, with dark spots. Elytra brownish grey, with dark impressed spots. Upper side of abdomen with dense dark spots; these spots smaller than those of elytra; 9th tergite and anal tube more or less light, without spots; carinae of abdomen light, without spots. Episterna of mesopleura light with very sparse dark spots; metathorax without spots, darkened, along flexions diffusely lightened. Anterior side of fore and middle coxae with two irregular black bands separated by a large light spot; posterior side of fore coxae with brown spots; posterior side of middle coxae entirely darkened. Femora with dark spots, but fore and middle femora, and tarsi nearly uniformly brown; hind femora with light longitudinal carinae and interspaces with confluent brown spots; hind tarsi light brown, apices of tarsomeres darkened. Abdomen ventrally light brown, with indistinct brown pattern. Ovipositor with lower lobes of 3rd valves darkened along margins.

Male unknown.

Length (mm). Body: 4.7.

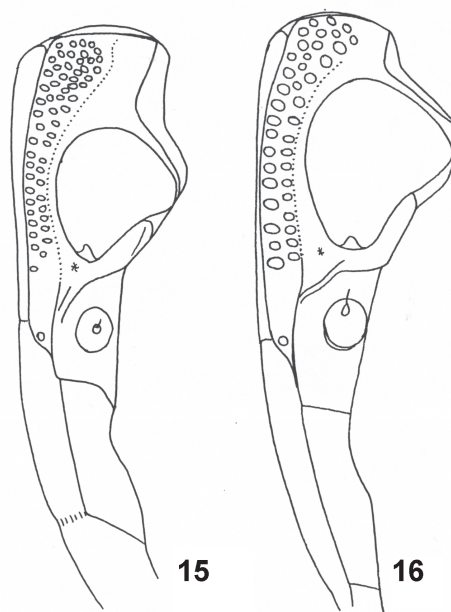
Comparison. The new species differs from *Tachorga recurviceps* Linnavuori in the shorter head, fore and middle parts of coryphe joining at right angle (in *T. recurviceps*, at acute angle), smooth elytra with sublateral carinae only (in *T. recurviceps*, all main longitudinal veins raised).

Coppa libanotica sp. n.

Holotype. ♂, Lebanon, Balaa, 1600 m, 20.VIII.1995, on *Echinops viscosus* (ZIN).

Paratypes. Lebanon: 2 ♀, same data as in holotype; 1 larva, Zebdine, 8.VIII.1987, low vegetation; 1 ♂, 3 ♀, Zebdine, IX.2000, X.2000 and 15.XI.2000; 1 ♂, Ghazir, 16.VI.1981, "pots pieges" [pitfall trap]; 1 ♂, Aintora, 14.VII.1981, *Salvia* sp.; 1 ♂, Dahr es-Souwwane, 30.VI.1989, dry landscape; 4 ♂, 3 ♀, Wadi Afqa (= Bhairet Toula), 1400 m, 29.VIII.1993, on *Cistus salviaeifolius* and *Eryngium* sp.; 2 ♀, Ehden foret, 1500 m, 26.VIII.2000, low vegetation (all leg. H. Abdul-Nour) (ZIN); some paratypes in the collection of H. Abdul-Nour).

Description. The new species very similar to *Coppa volkovitshi* Emeljanov, but distinctly differs in whitish submarginal transverse band of elytra and nearly black hind margin of elytra. Pattern of new species somewhat lighter than that



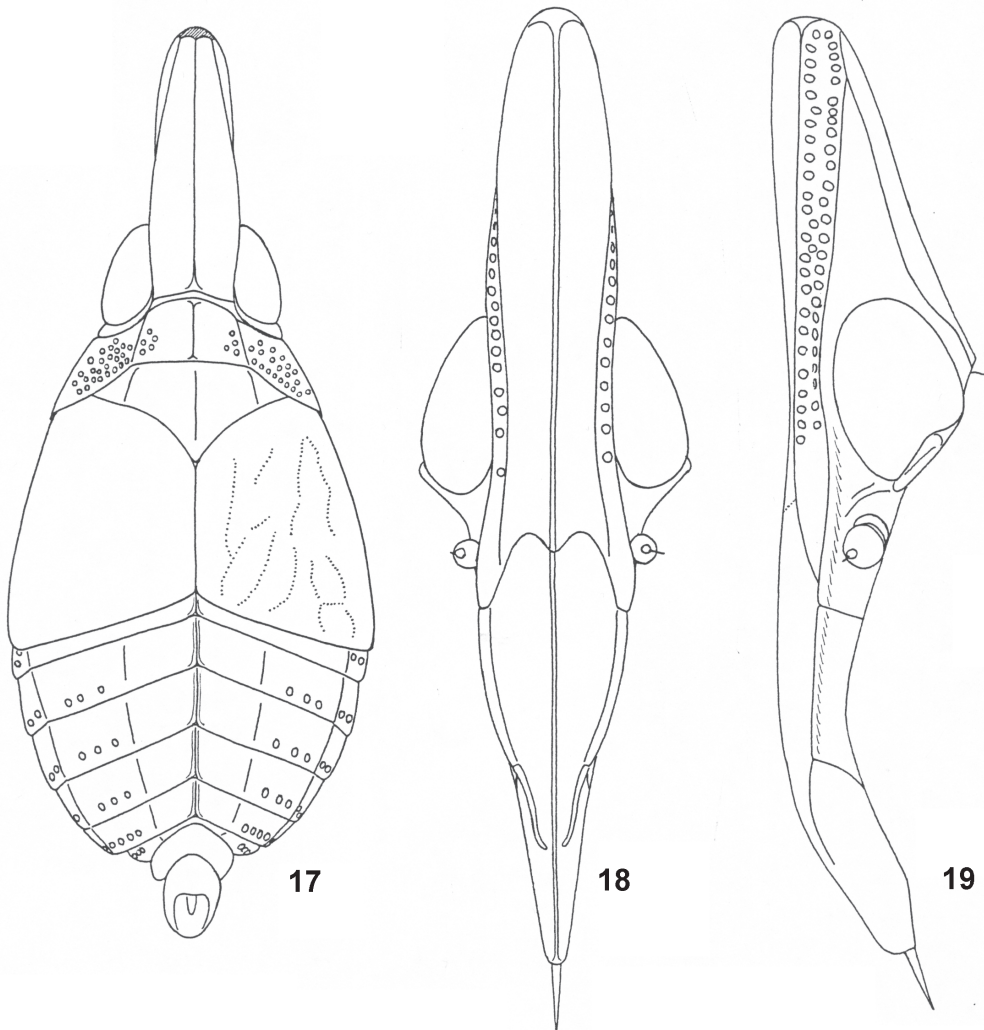
Figs 15, 16. *Tachorga*, head (from left side). **15,** *T. recurviceps* Linnavuori; **16,** *T. adiastola* sp. n.

in *C. volkovitshi*. In addition, postclypeus of new species slightly narrower and shorter as compared with metope.

Sphenarchus gen. n.

Type species: *Sphenarchus abdulnouri* sp. n.

Description. Body shape oblong oval with strongly produced head. Coryphe approximately four times as long as wide; lateral margins of coryphe somewhat diverging anteriorly between eyes, somewhat converging before eyes; apex of coryphe rounded, parabolic. Transverse section of coryphe shallowly tectiform (convexely obtuse-angled); median carina of coryphe sharp, straight in lateral view; lateral carinae in lateral view before eyes parallel to median carina, above eyes converging to hind flat margin of coryphe. Callus apicalis rather large, pentagonal, more or less isodiametric, with unpaired angle directed to metope (downwards). Metope and postclypeus jointly forming almost straight line, but slightly depressed (concave) at level of eyes; this part of metope flattened, shallowly tectiform distally (stronger at apex), so that median and lateral carinae distinctly diverging in profile. Lateral areas of metope from clypeus to apex of the head shifted from lateroventral position to nearly lateral, and apical third of metope not visible in



Figs 17-19. *Sphenarchus abdunnouri* gen. et sp. n. **17**, body (in dorsal view); **18**, head (in anteroventral view); **19**, head (in lateral view from left side).

front. Lateral carinae of metope distinct along its entire length, but weakened near junction with lateral carinae of coryphe. Intermedial carinae of metope distinct and sharp, somewhat converging from clypeus, then diverging again (between eyes width minimum), and joining each other at apex in shape of parabola. Postclypeus projecting into metope up to the level just above antennae. Lateral areas of metope with two rows of sensory pits and without any additional pits; epiclypeal pits absent. Rows of sensory pits continued to hind (lower) one-third of eyes. Postcly-

peus convex, rather broad, not narrower than metope above eyes, and with sharp median carina. Postocular calli distinctly thinner dorsally and ventrally as compared to middle part, clearly separated from subocular carina. About one-half of subapical joint of rostrum exceeding apex of hind coxae; apex of rostrum reaching middle part of genital styles (in male). Pronotum from above crescent-shaped; its hind margin immediately adjacent to scutellum, trapezoidal, rounded or shallowly concave; disc about twice as wide as long, weakly produced anteriorly, its lateral cari-

nae shallowly arcuate, somewhat converging anteriorly. Disc with 3+1 or 3+2 sensory pits along each lateral carina. Scutellum with three distinct carinae, lateral ones somewhat converging anteriorly; sensory pits of scutellum absent. Elytra with not sharp sublateral carinae and similar irregular net medial to them; sutural carina indistinct. Dorsal side of abdomen with strong median and sublateral carinae; intermediate carinae not strong, interrupted near anterior and posterior margins of each segment. All lateral areas of abdomen, including 3rd segment, with one or two sensory pits on each side; 4-6th tergites with 3 (2+1) pits medial to sublateral carinae; 7th, with 4 pits (one pit added laterally), 8th, with 3 pits in medial row and 3-4 lateral pits desorderly. Paranotal lobes of pronotum flat. Legs rather elongate, narrow, linear. Hind tibiae with four lateral spines; apical row of spines on 1st and 2nd metatarsomeres with 15 spines.

Comparison. The new genus is related to *Coppa* Emeljanov, differing from the latter in the shape of cephalic process, which is long, narrower and subtruncate at apex, in absence of short transverse carinae on epiclypeal lobes of the metope, in distinct separation of subocular carinae from postocular callus, in absence of mammoids on paranotal lobes, and that of sensorial pits on scutellum and on epiclypeal lobes of metope, in presence of intermedial carinae on the abdomen and four lateral spines on hind femora, instead of 6-7 in *Coppa*.

The new genus somewhat resembles long-headed species of the genus *Nymphorgerius* Oshanin, such as *N. longiceps* Oshanin, and some species of the genus *Bursinia* A. Costa, such as *B. socialis* Horváth, but differs from *Nymphorgerius* in the same characters as *Coppa*, for example, in presence of sensory pits on sublateral area of abdominal tergites, and from *Bursinia*, in simple straight cephalic process and others characters.

Sphenarchus abdulnouri sp. n. (Figs 17-19)

Holotype. ♂, **Lebanon**, Jbab el-Homr (Hermel), 2000 m, 10.VII.1998, on Poaceae, H. Abdul-Nour (ZIN).

Description. Male. Coloration light brown, with somewhat darker pattern. Lateral parts of head before eyes and adjacent part of lateral areas of metope and lateral part of coryphe brown. Genae irregularly brown, darkened. Medial areas of metope from middle level of eyes to apex

of head whitish yellow. Mesoscutellum with a pair of longitudinal brown stripes medial to lateral carinae and brown lateral angles; these darkened parts with scattered dark brown speckles. Paranotal margin adjoining head and hind margin diffusely darkened. General colour of elytra light brown; base of sublateral carina lightened, nearly white; these lightening surrounded by dark brown spots with diffuse margins; remainder of elytra with irregular net of lighter veins, and with diffuse indistinct spots in some cells. Dorsal surface of abdomen with dark speckles, which absent near median carina and along medial side of sublateral carinae. Fore and middle legs with light or whitish carinae and dark brown to black interspaces. Hind femora with a combination of dark longitudinal stripes and speckles: dorsally with two dark stripes, dorsoapical part with elongate triangular spot between the stripes, lateral sides with speckles, ventral side uniformly brown. Dorsal and posterior sides of hind femora with speckles between carinae, anterior and ventral sides almost uniformly brown. Ventral side of abdomen light brown, in places with not numerous speckles.

Length (mm). Body: 5.9.

Nymphorgerius gemmatus Horváth

Material. Lebanon: 1 ♂, Ehden, 1600 m, 14.VII.1995, on *Echinops viscosus*; 1 ♂, 1 ♀, Ooyoun el-Simane, 2000 m, VIII.2000, "piège gluant" [glue trap], all leg. H. Abdul-Nour (ZIN and collection of H. Abdul-Nour).

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Received 3 February 2003