

The Central European Hallodapini (Insecta: Heteroptera: Miridae: Phylinae)

Hallodapini Центральной Европы (Insecta: Heteroptera: Miridae: Phylinae)

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КЛЮЧЕВЫЕ СЛОВА. Центральная Европа, Heteroptera, Miridae, Phylinae, Hallodapini, *Cremnocephalus*, *Hallodapus*, *Mimocoris*, *Omphalonotus*, *Systellonotus*, таксономия, фаунистика.

ABSTRACT. Diagnoses, illustrations of the male genitalia and an identification key are provided for the ten species of Central European Hallodapini.

РЕЗЮМЕ. Приведены диагнозы, рисунки гениталий самцов и определительные таблицы для 10 видов Hallodapini из Центральной Европы.

Introduction

The Hallodapini (Phylinae) contains 49 genera worldwide. The tribe is most species-rich in the Old World tropics, with the single New World taxon, *Cyrtopeltocoris* Reuter, 1875 being restricted to North America. Members of the tribe are usually elongate and range from relatively small to moderately large. In most species the females, and in some species also the males, are brachypterous. In many species, especially the females are ant-like. The male genitalia have an elongate, slightly sclerotized and distinctly sinuous vesica (Figs 1–39); female genitalia have a characteristic ventral sack (sensu Ehanho) [Magnien, 2000].

A work dealing with all Central European Hallodapini species has never been prepared. According to Günther & Schuster [2000] ten species of five genera are recorded from Central Europe. Two of them, viz. *Mimocoris rugicollis* (A. Costa, 1853) and *Systellonotus alpinus* Frey-Gessner, 1871, are recorded from Central Europe only from Switzerland [Frey-Gessner, 1871, 1872; Göllner-Scheiding & Rezbanayi-Reser, 1992]. A detailed work on the female genitalia of the Central European Hallodapini species, as the one on *Cremnocephalus* Fieber, 1860 [Magnien, 2000], as well as a cladistic analysis is beyond the present study and will be the subject of another study.

KEY TO CENTRAL EUROPEAN HALLODAPINI SPECIES

- 1 Clavus brown with light narrow bands, those bands parallel to claval margins and ending in pointed tip, with light longitudinal band along midline interiorly, sometimes slightly diffuse but still recognizable 2
 - Clavus brown without light narrow bands parallel to claval margins, but outer claval margin adjoining to corium with distinct longitudinal light band or clavus with transverse light band 3
- 2 Clavus with light narrow angle formed by longitudinal bands reaching almost to apex of clavus, base of cuneus with distinct broad white transverse band
 - *Cremnocephalus albolineatus* Reuter, 1875
 - Clavus with light narrow angle formed by longitudinal bands extending over slightly more than ¼ of claval commissure, with light band interiorly; white transverse band at cuneus base narrow and usually not reaching inner margin of cuneus *C. alpestris* Wagner, 1941
- 3 Clavus brown with distinct longitudinal light band along outer claval margin adjoining to corium and sometimes longitudinal light band with transverse light band medially 4
 - Clavus with transverse light band 6
- 4 Corium, including outer margin, bright yellow with matt brown spot medioapically; cuneus red-brown
 - *Hallodapus suturalis* (Herrich-Schaeffer, 1837)
 - Corium light brown with light parts apically and basally 5
- 5 Borders of basal light parts of corium ambiguous; general aspect matt *H. montandoni* Reuter, 1895
 - Borders of basal light parts clear and distinct; general aspect shiny *H. rufescens* (Burmeister, 1835)
- 6 Transverse light claval band at level of scutellum apex forming, in conjunction with light basal spots of hemelytra a collar-like band; hemelytra brown with narrow light band at base of cuneus; lateral margin of hemelytra slightly concave; females distinctly ant-like
 - *Mimocoris rugicollis* (A. Costa, 1853)
 - Transverse light claval band more medially, not reaching claval commissure or sometimes lunate 7

- 7 Pronotum campanulate with distinctly swollen calli; claval band nearly behind apex of scutellum, distinct, not reaching claval commissure, not infrequently triangular and never lunate; corium dark brown to black with apical and basal ivory spots *Omphalonotus quadriguttatus* (Kirschbaum, 1856)
- Pronotum not campanulate, calli not swollen; claval band located far from apex of scutellum, nearly lunate; corium not distinctly ivory and black, always with distinct glassy transverse band 8
- 8 Hemelytra basally brown with indistinct transverse orange band apically; in females hemelytra brown with glassy transverse band and indistinct orange spot apically; clavus brown with transverse light lunate band, basally with indistinct orange spot; cuneus red-brown *Systemonotus alpinus* Frey-Gessner, 1871
- Hemelytra basally brown or orange with distinct transverse orange band apically 9
- 9 In male orange part of hemelytra broadly bordered by brown bands, base of hemelytra brown; clavus brown with narrow transverse light band; female distinctly ant-like; almost entirely black and hemelytra with triangular light spot *S. discoidalis* Horváth, 1894
- In male orange part of hemelytra narrowly bordered by brown bands, base of hemelytra with transverse orange band; clavus brown with distinct lunate light band; female distinctly ant-like; orange brown and hemelytra with triangular light spot narrowly bordered by brown bands *S. triguttatus* (Linnaeus, 1767)

The genus *Cremnocephalus* Fieber, 1860 was revised by Magnien [2000]. He recognized five species, two of which are recorded from Central Europe.

Cremnocephalus albolineatus Reuter, 1875

Figs 1–4.

MATERIAL. GERMANY: Umgebung Eichstätt, 1.vii.1956, 1 ♂, leg. Seidenstücker (ZSMC). Gunzenhausen Mfr., 19.vi.1953, 1 ♂, 1 ♀, leg. Seidenstücker (ZSMC). Hahnenkamm, Fr. Jura, 24.vi.1957, 1 ♂, 30.vi.1958, 1 ♂, 1 ♀, leg. Seidenstücker (ZSMC). Furth, Jura, Hersbruck, 10.vii.1902, 1 ♂, leg. R. Schmidt, det. R. Wagner (ZSMC). Lochhausen, 01.vii.1940, 1 ♂, Sammlung O. Bühlmann (ZSMC). Gröbenzell, 23.vi.1942, 2 ♂, 27.vi.1942, 1 ♀, Sammlung O. Bühlmann (ZSMC). Starnberger Seegebiet, 08.vii.1944, 1 ♂, 3 ♀, leg. F. Stöcklein (ZSMC). Umgeb. Nürnb. Fischbach, 10.viii.1943, 1 ♀, leg. Stöcklein (ZSMC). Strahlwalde, 12.vii.1936, 1 ♀, (ZSMC). Fürth i.B. Hainberg, 05.vii.1936, 1 ♀, leg. K. Schmid, det. R. Wagner (ZSMC). Dachauer Moor, Schwarzhölzl, viii.1939, 1 ♀, Sammlung O. Bühlmann (ZSMC). Schleissheim, 12.vii.1942, 1 ♀, Sammlung O. Bühlmann (ZSMC). MORAVIA: Mohelno (hadcová step) (záp. cip), 300–400m, 20.vi.1975, 1 ♂, leg. L. Pospíšilová (MMBC). Žerutky, 30.vii.1965, 1 ♀, leg. L. Pospíšilová (MMBC). Jedovnice Budkovan, 10–12.vii.1969, 1 ♀, leg. J. L. Stehlík (MMBC). Lomnice (Tišnov) step, 02.vii.1970, 1 ♀, leg. L. Pospíšilová (MMBC). Zblovce, 02.vii.1969, 1 ♀, L. Pospíšilová (MMBC). Jamolice (Mor. Krumlov), "Kališky", 379m, 05.vii.1971, 1 ♂, leg. J. Stehlík (MMBC). SLOVAKIA: Vys. Tatry, 4km záp. Štrb. Plesa, 1000m, 08.viii.1967, 1 ♂, leg. J. L. Stehlík (MMBC). Rakúsy, 700m, 07.viii.1967, 1 ♂, 5 ♀, leg. P. Lauterer (MMBC). Bor u Hlboké, 27.v.1950, 1 ♀, leg. J. Stehlík (MMBC). SWITZERLAND: Schwyz, Gersau Oberholz, 550 m, light trap, 28.vi.1979, 3 ♂, 14.vii.1980, 1 ♂, 24.vii.1980, 7 ♂, leg. L. Rezbanyai, (NML, Naturmuseum Luzern, Switzerland). Zürich-Zug, Maschwanden, Rüss-Spitz Wald, 388 m, light trap, 13.vi.1989, Rezbanyai, 1 ♂ (NML). Wallis, Conthey, Vuisse, 560 m, 590,2/120,4, light trap, 1–10. vii. 1991, Rezbanyai & Hächler, 2 ♂ (NML). Wallis, Conthey, Vuisse, 560 m, 590,2/120,4, light trap, 11.–20. vii. 1988, Rezbanyai & Hächler, 1 ♂

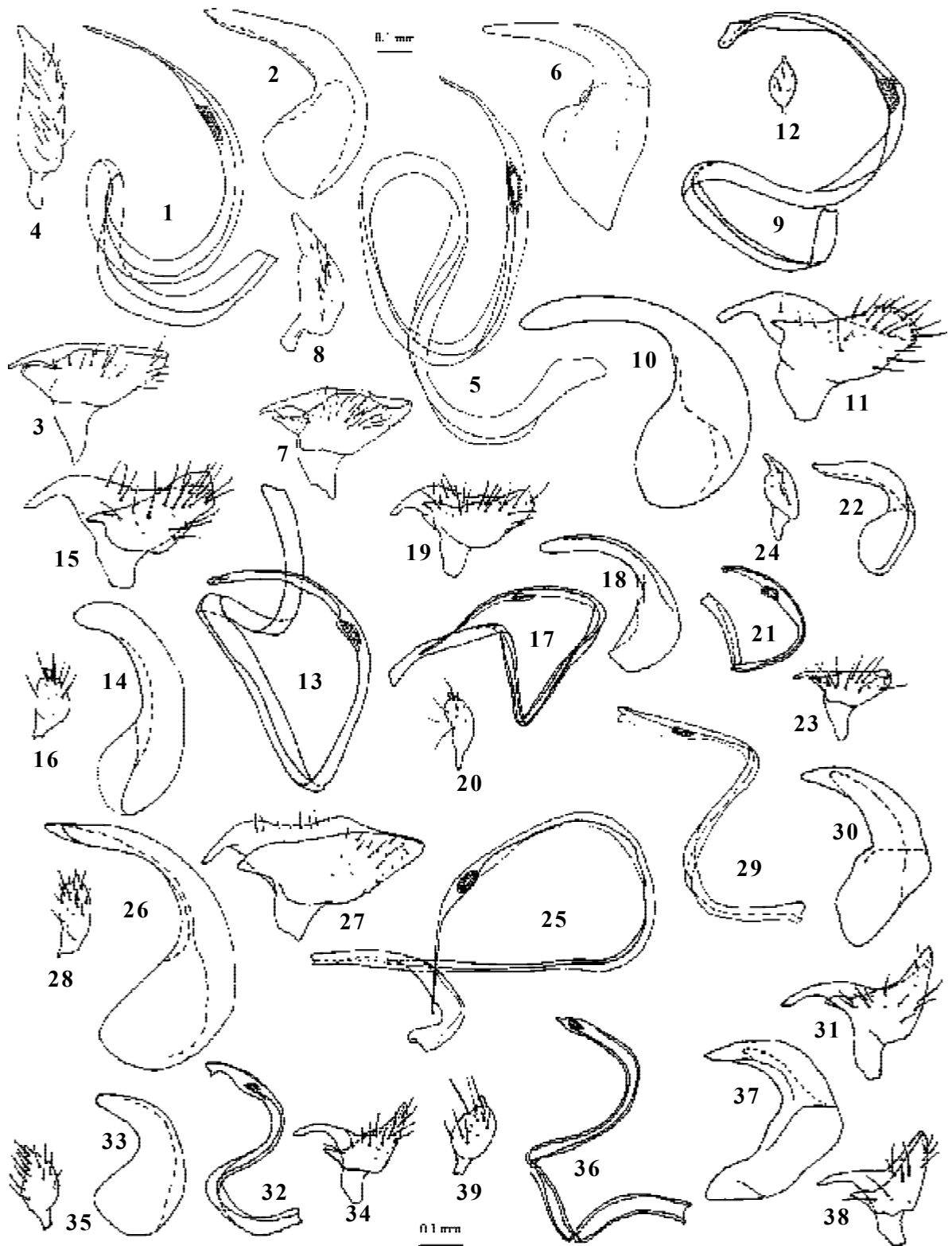
(NML). Wallis, Conthey, Vuisse, 560 m, 590,2/120,4, light trap, 11.–20. vii. 1991, Rezbanyai & Hächler, 2 ♂ (NML). Wallis, Vuisse, ca. 560 m, , light trap, 1.–10. vii. 1989, Hächler & Rezbanyai, 1 ♂ (NML). Zürich-Zug, Maschwanden, Rüss-Spitz Wald, 388 m, 21. vi. 1989, Rezbanyai-Reser, 2 ♀ (NML). Hörbranz, 04. vii. 1916, 2 ♂, 2 ♀, Paravicini-Sammlung (NHMB). Champex, 30. vii. 1944, 2 ♀♀, coll. J. Sominet (MHNG). Oberdorf Bg., Solothurner Jura, 25.vii.1950, 1 ♂ 3 ♀, leg. J. P. Wolf (ETHZ). Metzleren, Solothurner Jura, 03.vii.1949, 2 ♀, 15.viii.1948, 1 ♀, leg. J. P. Wolf (ETHZ). Domleschg, Rothenburg, 13.vii.1938, 1 ♂, 14.vii.1938, 2 ♀, leg. J. P. Wolf (ETHZ). Klotener Ried, on *Pinus silvestris*, 05.vii.1967, 2 ♀, coll. H. R. Maurer (ETHZ). Zeihen, BL, 05.vi.1965, light trap, 3 ♂, coll. H. Bachmann (ETHZ). Raimeux, Berner Jura, 28.vi.1950, 1 ♀, leg. J. P. Wolf (ETHZ).

DIAGNOSIS. In coloration, size and shape similar to *C. alpestris* but distinguished by the pale band parallel to claval commissure almost reaching to the apex of clavus. The part of vesica beyond secondary gonopore longer than in *C. alpestris* (Figs 1, 5).

Cremnocephalus alpestris Wagner, 1941

Figs 5–8.

MATERIAL. AUSTRIA: Tirol, Biol. Sat. Kraspes (oberes Sellrain), 1600m, 06.viii.1944, 1 ♂, 15.viii.1944, 1 ♀, v. Spow (ZSMC). Tirol, Reith b. Brixlegg, 14.vii.1941, 1 ♀, leg. Stöcklein (ZSMC). Kärnten, Dobratsch, 29.vii.1966, 1 ♂, leg. H. Freude, det. Seidenstücker 1967, (ZSMC). Erzgeb. Saxon, Sammlung M. Hütter (ZSMC). Schneeberg zw. Hochschneeberg u. Baumgartnerhütte, 1796–1350m, 47°45.5'/15°50–51', 27.vii.1999, 1 ♀, leg. W. Rabitsch (SWRW). BULGARIA: Kresnensko defile, vi.1935, 2 ♂, 1 ♀, lgt. Táborský (KUPC). GERMANY: Kaiserstuhl, 6.vii.1934, 1 ♂, 20.vi.1938, 2 ♂, 1 ♀, 18.vi.1938, 1 ♂, leg. J. P. Wolf (ETH). Meran, 07.vii.–07.vii.1974, 3 ♂, leg. Seidenstücker (ZSMC). Südbayern, Eisenburg b. Memmingen, 10.vi.1946, 1 ♂, leg. W. Forster (ZSMC). Steinebach, 27.vi.1947, 1 ♂, leg. F. Daniel (ZSMC). München, Forstenrieder Park, 29.vi.1936, 1 ♀, 16.vii.1936, 1 ♀, 14.vii.1938, 1 ♀, 08.vii.1949, 1 ♀, 13.vi.1950, 1 ♀, 28.vi.1952, 1 ♂, 1 ♀, 12.vii.1954, 1 ♀, leg. M. Hütter (ZSMC). Bayr. Alpen, Benediktbeuern, vii.1944, 2 ♂, 26.vii.1944, 1 ♂, leg. M. Hütter (ZSMC). Wesling 03.vi.1947, 1 ♀, leg. Daniel (ZSMC). Oberbayern, Mürnauer Moor, 11.vii.1947, 1 ♂, leg. F. Stöcklein (ZSMC). SLOVAKIA: Javorníky Bumbálka, 15.vii.1964, 1 ♂, 5 ♀, leg. L. Pospíšilová (MMBC). Belan. Tatry Bujačie hoeben k Skal. Vratum, 26.vii.1962, 1 ♂, leg. P. Lauterer (MMBC). Javorníky Makov, 16.vii.1964, 4 ♀, leg. L. Pospíšilová (MMBC). Javorníky Kolárovice-Škorbu, 17.vii.1964, 1 ♀, leg. J. Stehlík (MMBC). Javorníky Dlhá n. Kysuccu, 16.vii.1964, 1 ♀, leg. L. Pospíšilová (MMBC). Povážský Inovec, 750–850m, 27.vi.1968, 1 ♂, 8 ♀, leg. Lauterer (MMBC). Vys. Tatry, Podbanaké, 08.viii.1967, 1 ♀, leg. J. Stehlík (MMBC). Belanské Tatry Kobylí vrch, 1100m, 06.viii.1967, 1 ♀, leg. P. Lauterer (MMBC). Belanské Tatry Holubyho dolina, 1400m, 3 ♀, 08.ix.1967, leg. P. Lauterer (MMBC). Vys. Tatry Kyetnica, 1821–1870m, 10.viii.1967, 1 ♂, leg. J. L. Stehlík (MMBC). Belanské Tatry Faix. Louka-Skal. Vrata, 1500–1600m, 06.viii.1967, leg. J. L. Stehlík (MMBC). Vys. Tatry Podbanské, 08.viii.1967, 1 ♂, leg. J. Stehlík (MMBC). Belanské Tatry úd. Hlbokého potoka, 06.viii.1967, 1 ♂, leg. J. Stehlík (MMBC). MORAVIA: Javorníky Velký Javorník, 18.vii.1963, 2 ♂, 4 ♀, leg. Stehlík, 2 ♂, leg. L. Pospíšilová (MMBC). Javorníky Stolečný vrch, 19.vii.1963, 2 ♀, 12 ♀, leg. J. Stehlík (MMBC). Závist (Blansko), 04.vii.1963, leg. P. Lauterer (MMBC). Vsetínské vrchy Vsetín, Janová, 12.vii.1964, 1 ♂, leg. L. Pospíšilová (MMBC). Lomnice (Tišnov) step, 02.vii.1970, 8 ♂, leg. L. Pospíšilová (MMBC). Kozárov (Tišnov), 03.vii.1970, 1 ♂, 4 ♀, leg. L. Pospíšilová (MMBC). Brumov (Tišnov), 04.vii.1970, 1 ♂, leg. L. Pospíšilová (MMBC). SWITZERLAND: Weissbad, Sonhalb, 26.vii.1918, 1 ♂, 10 ♀, Sammlung Paravicini (NHMB). Raimeux, Berner Jura, 28.vi.1950, 14 ♂, 7 ♀, leg. J. P. Wolf (ETHZ). Davoser Tal, Patzg., 26.vii.1935, 2 ♀, leg. J. P. Wolf (ETHZ). Davoser Tal, Rüti, 10.viii.1935, 1 ♂, 16.viii.1935, 1 ♂, 1 ♀, leg. J. P. Wolf (ETHZ).



Figs 1-39. Male genitalia of Hallodapini: 1-4 — *Cremnocephalus albolineatus*; 5-8 — *C. alpestris*; 9-12 — *Hallodapus montandoni*; 13-16 — *H. rufescens*; 17-20 — *H. suturalis*; 21-24 — *Mimocoris rugicollis*; 25-28 — *Omphalonotus quadriguttatus*; 29-31 — *Systellonotus alpinus*; 32-35 — *S. discoidalis*; 36-39 — *S. triguttatus*; 1, 5, 9, 13, 17, 21, 25, 29, 32, 36 — vesica; 2, 6, 10, 14, 18, 22, 26, 30, 33, 37 — phallosoma; 3, 7, 11, 15, 19, 23, 27, 31, 34, 38 — left paramere; 4, 8, 12, 16, 20, 24, 28, 35, 39 — right paramere.

Рис. 1-39. Гениталии самцов Hallodapini: 1-4 — *Cremnocephalus albolineatus*; 5-8 — *C. alpestris*; 9-12 — *Hallodapus montandoni*; 13-16 — *H. rufescens*; 17-20 — *H. suturalis*; 21-24 — *Mimocoris rugicollis*; 25-28 — *Omphalonotus quadriguttatus*; 29-31 — *Systellonotus alpinus*; 32-35 — *S. discoidalis*; 36-39 — *S. triguttatus*; 1, 5, 9, 13, 17, 21, 25, 29, 32, 36 — везика; 2, 6, 10, 14, 18, 22, 26, 30, 33, 37 — фаллотека; 3, 7, 11, 15, 19, 23, 27, 31, 34, 38 — левый парамер; 4, 8, 12, 16, 20, 24, 28, 35, 39 — правый парамер

Davoser Tal, Laret, 27.vii.1938, 1 ♂, leg. J. P. Wolf (ETHZ). Davoser Tal, Erbalp, 19.vii.1935, 1 ♂, leg. J. P. Wolf (ETHZ). Davoser Tal, Dorf, 14.ix.1935, 1 ♂, leg. J. P. Wolf (ETHZ). Davoser Tal, 26.vii.1935, 2 ♀, 8.ix.1935, 1 ♀, leg. J. P. Wolf (ETHZ). Davoser Tal, Seeh., 25.vii.1935, 1 ♀, leg. J. P. Wolf (ETHZ). Davoser Tal, Höhwald, 17.viii.1935, 1 ♀, leg. J. P. Wolf (ETHZ). Davoser Berge, Strela, 19.viii.1934, 3 ♂, leg. J. P. Wolf (ETHZ). Solothurner Jura, Stallberg, 17.viii.1949, 1 ♂, 2 ♀, leg. J. P. Wolf (ETHZ). Solothurner Jura, Hasenmatt, 17.viii.1949, 1 ♀, leg. J. P. Wolf (ETHZ). Davos, Wiesen Steig, 21.vii.1935, 2 ♂, 2 ♀, leg. J. P. Wolf (ETHZ). Uri, Altdorf, Kapuzinerkloster, 520m, light trap, vii.1983, 1 ♂, leg. L. Rezbanyai (NML). Wallis, Vuise, 560 m, light trap, 1.10.vii.1989, 4 ♂, 11.-20.vii.1992, 1 ♂, 21.-31.vii.1992, 1 ♂, leg. Hächler & Rezb. Reser (NML). Luzern, Hasle, Balmoos, 970m, 29.vii.1976, 1 ♂, 2.viii.1978, 1 ♀, leg. L. Rezbanyai (NML). Wallis, Vuise, Conthey, 560m, light trap, 590,2/120,4, 11.-20.viii.1989, 1 ♂, leg. Rezbanyai-Reser & M. Hächler (NML). Wallis, Visperterminen, 1480m, 19.vii.1993, 1 ♂, 23.vii.1992, 1 ♂, 24.vii.1990, 1 ♂, 25.vii.1991, 1 ♂, leg. W. Sauter (ETHZ). Wallis, Fiesch, 1068m, 17.vii.1955, 1 ♂, leg. Eckerlein (MHNG). Sedrun, on *Pinus picea*, 29.vi, 1 ♂, 29.vii, 1 ♀, coll. Frey-Gessner (MHNG). Genthod, Genève, 25.vi, 1 ♂, coll. Frey-Gessner (MHNG). Jura Soleurz, 21.viii, 1 ♀, coll. Frey-Gessner (MHNG). Weissenstein, Nesselb., 25.viii, 1 ♀, coll. Frey-Gessner (MHNG). Anzeindaz, 1 ♀, leg. M. A. Forel (MHNG). Châtelaine, 22.vi.1930, 1 ♀, coll. Simonet (MHNG). Klotener Rief, on *Picea abies*, 20.vii.1966, 1 ♀, coll. H. R. Maurer (ETHZ). Tessin, Ludiano, 870m, 08.vii.1994, 2 ♀, leg. A. Otto (ETHZ). Graubünden, Valbella, 1500m, 28.vii.1999, 1 ♀, 29.vii.1999, 1 ♀, leg. Merz & Müller (ETHZ). Graubünden, Valbella/Casoja, 1540m, 15.vii.1998, 2 ♀, leg. B. Merz (ETHZ). Büren, 25.vi.1898, 1 ♂ (NMB).

DIAGNOSIS. *C. alpestris* similar in coloration, size and shape to *C. albolineatus* but differs in the pale band parallel to the claval commissure reaching slightly past midpoint of the claval commissure. The part of vesica beyond secondary gonopore shorter than in *C. albolineatus* (Figs 1, 5).

The genus *Hallodapus* is widespread in the Old World with a main distribution in the tropics [Schuh, 1974]. Its distribution in the Indo-Pacific region was documented by Schuh [1984] as from southern Palaearctic to southern Africa east to Japan, south to New Guinea and northern Australia. A detailed work on the *Hallodapus* species from West and Central Africa is given by Linnavuori [1996]. *Hallodapus* contains 47 species; three of them are recorded from Central Europe.

Hallodapus montandoni Reuter, 1895 Figs 9–12.

MATERIAL. AUSTRIA: Umgebung Weissensee Kärnten, 850m, 8./30.vii.1958, 1 ♀, leg. Weber (ZSMC). W-IX. Bez. Kellerberg in Erberg, 19.viii.2000, 1 ♂, 1 ♀, leg. W. Rabitsch (SWRW). FRANCE: Umgebung Paris, Bouray Lardy, 5./7.vi.1954, 1 ♀, leg. Weber (ZSMC). GERMANY: Breitenb., vii.1889, 3 ♂ (KUPC). Regensburg, Fränk. Jura, vi.1941, 5 ♂, 4 ♀, leg. Seidenstücker (ZSMC). Aschaffenburg, 24.vi.1934, 1 ♂, leg. K. Singer (ZSMC). Umgebung Mainz, Budenheim, 19.vi.1953, 1 ♂, 2 ♀, leg. Weber (ZSMC). Krainberg b. Karlstadt a. M., 15.viii.1934, 1 ♀, 08.ix.1934, 1 ♀, leg. K. Singer (ZSMC). Kahl a. M., 21.vii.1946, 1 ♀, leg. K. Singer (ZSMC). Bamberg, Bürsting b. Hallstadt, 04.vii.1956, 1 ♂, leg. Eckerlein, det. L. Hoberlandt 1965 (KUPC). MORAVIA: Oblekovice, 250-270m, 11.viii.1976, 4 ♂, 10 ♀, leg. J. L. Stehlik (MMBC). Dyje, 220-240m, 05.vii.1976, 1 ♂, leg. J. L. Stehlik (MMBC). Sedlec (u Nesytu), 06.vii.1959, 2 ♀, leg. J. L. Stehlik (MMBC). Zarotice, stráž západne obce, 230m, 24.ix.1974, 1 ♂, leg. P. Lauterer (MMBC). Zarotice, step, 06.vi.1974, 1 ♂, leg. J. L. Stehlik (MMBC). ROMANIA: St. Georghe-Ciotic, 1.vi.1994, 1

♀, leg. J. Bašta (KUPC). SLOVAKIA: Kamenin, 06.vi.1960, 1 ♂, 1 ♀, 19.vi.1991, 1 ♀, leg. Stehlik (MMBC). Dmica / Certova diera, 350-450m, 06.vii.1076, 1 ♂, leg. P. Lauterer (MMBC). Modrý Kamen, "Drienovka", 480-500m, 9.viii.1989, 1 ♀, leg. J. L. Stehlik (MMBC). Horné Pribelce, 300-350m, okolí hobitova, 24.viii.1988, 1 ♀, leg. P. Lauterer (MMBC). Modrý Kamen, "Drienovka", 480-500m, 29.viii.1989, 1 ♂, leg. J. Stehlik (MMBC).

DIAGNOSIS. Similar to *H. rufescens* in size and coloration, but distinguished by the basal light parts of hemelytra not as distinct as in *H. rufescens* and general aspect matt; further distinguished by the shape of phallotheca and the wider anterior process of the left paramere wider (Figs 10–11). According to Günther & Schuster [2000] this species shows a more eastern distribution.

Hallodapus rufescens (Burmeister, 1835) Figs 13–16.

MATERIAL. GERMANY: Umgb. Mainz, Budenheim, 19.vi.1953, 1 ♂, leg. Weber (ZSMC). Fürth i. B. Stadtwald 03.vii.1929, 1 ♂, leg. K. Schmidt (ZSMC). Breitenb., VII.1889, 1 ♀ (KUPC). MORAVIA: Jedovnice, "Kombut", 500m, 25.vii.1983, 1 ♀, leg. J. L. Stehlik (MMBC). Pavlov-Buková, 04.vii.1963, 3 ♂, 1 ♀, leg. J. L. Stehlik (MMBC). SLOVAKIA: Solvenský kras zadie, 21.vi.1951, 1 ♀, leg. J. L. Stehlik (MMBC). Jeseníky, Karl. Studánka (údolí Opavice), leg. 19.vii.1956, 1 ♂, leg. J. L. Stehlik (MMBC). Záhorie Studienka, úd. Rudavy, 05.vi.1968, 1 ♂, leg. P. Lauterer (MMBC). Záhorie Jakubov, Feld, 12.vi.1969, 1 ♂, leg. P. Lauterer (MMBC). Záhorie Vel. Leváre, M. Lúky, 01.vii.1968, 1 ♀, leg. J. L. Stehlik (MMBC). SWITZERLAND: Haggen, 07.vii.1918, 1 ♂, Sammlung Paravicini (NHMB). Graubünden, Valbella/Casoja, 1530m, 16.vii.1998, 1 ♂, leg. B. Merz (ETHZ).

DIAGNOSIS. Most similar to *H. montandoni* in size and coloration but distinguished by distinct light parts of hemelytra and by generally shining aspect. Phallotheca not as elongate and slender as in *H. montandoni* (Figs 10, 14).

Hallodapus suturalis (Herrich-Schaeffer, 1837) Figs 17–20.

MATERIAL. AUSTRIA: Südtirol, Meran, 18.vi.-07.vii.1960, 3 ♂, 6 ♀, leg. Seidenstücker (ZSMC). Hundsheimer Bge., 220-480m, 48°07.2-08°N/16°55'-56.5'E, 12.vi.2003, 1 ♂, leg. W. Rabitsch (SWRW). MORAVIA: Kobylí step, 04.vi.1983, 1 ♂, leg. J. Meduna (MMBC). Vacenovice-pisky, 215m, 21.viii.1974, 1 ♂, leg. L. Pospšilová (MMBC). Ratiškovice, 04.vii.1962, 3 ♂, leg. P. Lauterer (MMBC). Rohatec-kolonie, myslivna "Soboňky", 183.5m, 13.viii.1975, 1 ♀, leg. J. L. Stehlik (MMBC). SLOVAKIA: ěnkov, 07.vi.1960, 19 ♂, 17 ♀, det. L. Hoberlandt 1960 (MNP). ěnkov, 30.vi.1960, 2 ♂, 2 ♀, leg. J. L. Stehlik, 2 ♀, leg. Irina Tešová (MMBC). ěnkov (Štúrovc), 28.viii.1958, 1 ♂, leg. Irina Tešová, 08.vii.1958, 1 ♂, 1 ♀, 15.vii.1958, 1 ♂, 30.vii.1958, 1 ♀, 12.viii.1958, 1 ♂, 13.viii.1958, 1 ♀, 28.viii.1958, 2 ♀, leg. O. Štěpanovičová, 17.vi.1958, 3 ♂, 15.vii.1958, 3 ♀, 16.vii.1958, 1 ♀, leg. J. Stehlik (MMBC). Plavecký Štvrtok, 15.vii.1951, 2 ♂, 2 ♀, leg. J. Stehlik (MMBC). Záhoří Kúty, 24.viii.1960, 1 ♂, leg. J. Stehlik (MMBC). Záhoří Rohozník, Obora, 04.vi.1969, 4 ♂, 11 ♀, leg. P. Lauterer (MMBC). Chotín, u JRD, 123-pisky, 29/91, 130m, 17.vi.1991, 1 ♂, 1 ♀, leg. J. Stehlik (MMBC). Chotín, 13.viii.1964, 1 ♀, leg. Irina Tešová (MMBC). SWITZERLAND: Wallis, Stalden, 21.vii.1954, 1 ♂, leg. J. P. Wolf, det. E. Wagner (ETHZ).

DIAGNOSIS. Recognized by its bright yellow hemelytra coloration with the distinct brown spots. Vesica very slender and weakly sclerotized (Fig. 17).

The genus *Mimocoris* contains two species, one of which is recorded from Central Europe, and there only from Switzerland [Günther & Schuster, 2000; Göllner-Scheiding & Rezbanyai-Reser, 1992].

Mimocoris rugicollis (A. Costa, 1853)

Figs 21–24.

MATERIAL. BULGARIA: Petriè-Belastica, 08.vii.1959, 3 ♂, 4 ♀, leg. and det. L. Hoberlandt (KUPC). Blaiasiza bei Petritsch, 400m, 22.vi.1960, leg. M. Josifov, det. L. Hoberlandt 1965 (KUPC). CROATIA: Split, vi.1960, 1 ♂, det. H. H. Weber 1961 (ZSMC). SWITZERLAND: Tessin, Somazzo Torretta, 590m, light trap, 21.-31.vii.1985, 1 ♂, 1.-10.viii.1986, 1 ♂, leg. L. Rezbanyai-Reser (NML).

DIAGNOSIS. Collar-like band formed by the basal light spot of hemelytra and the transverse claval band; lateral margin of hemelytra slightly concave; females distinctly ant-like. Vesica very tiny, hook-like apically (Fig. 21).

Omphalonotus quadriguttatus (Kirschbaum, 1856)

Figs 25–28.

MATERIAL. AUSTRIA: Wien, Lobau, 158m, 48°10'/16°31.5', 18.vi.2000, 1 ♂, 1 ♀, leg. W. Rabitsch (SWRW). GERMANY: Umgeb. Mainz, Budenheim, 19.vi.1953, 1 ♂, leg. Weber (ZSMC). Stockstadter Wald, 21.vii.1940, 1 ♂, leg. Karl Singer (ZSMC). Greitschen bei Bürgel (Thür.), 01.vii.1934, 1 ♀, 25.vii.1944, 1 ♀, (ZSMC). Eichstätt Umgeb., 25.vii.1979, 1 ♀, leg. Seidenstücker (ZSMC). Frankfurt, Offenbach, 27.vii.1917, 1 ♀, leg. Gulde (ZSMC). Thüringen, Graitschen, 25.vii.1944, 1 ♀ (ETHZ). Würzburg, 14.vii.1944, 1 ♀, leg. J. S. (ZSMC). MORAVIA: Nová Ves Oslavan, 22.vi.1976, 1 ♀, leg. P. Lauterer (MMBC). Šakvice step, 180m, 27.viii.1973, 1 ♀, leg. Pospíšilová (MMBC). Mušov, sev. Obce, 170m, 03.ix.1973, 1 ♂, 1 ♀, leg. J. Stehlik (MMBC). Šakvice step, 180m, 04.vii.1973, 1 ♂, 1 ♀, leg. J. Stehlik (MMBC). Vevčice, 17.vii.1963, 1 ♂, leg. J. Stehlik (MMBC). Letonice "Větrník", 02.vii.1975, 1 ♂, leg. J. L. Stehlik (MMBC). SLOVAKIA: Horné Příbelce, okoli hřbitova, 300-350m, 24.viii.1988, 4 ♀, leg. P. Lauterer (MMBC). Marcelová, Bošov. kopec 120m, 05.ix.1989, 1 ♀, leg. J. Stehlik (MMBC). Nitra, Kalvaria, 22.viii.1966, 1 ♂, leg. J. Stehlik (MMBC). Čenkov (Štúrovo), 17.vi.1958, 1 ♂, leg. J. Stehlik (MMBC). Malé Karpaty Plav. Mikuláš Horlatka, 11.vi.1969, 1 ♂, leg. Pospíšilová (MMBC). SWITZERLAND: Graubünden, Calanda, 1 ♀, on *Juniperus*, coll. Frey-Gessner (MNHG). Wallis, Sierre, 03.x.1948, 2 ♂, 1 ♀, leg. J. P. Wolf (ETHZ).

DIAGNOSIS. Recognized by its campanulate black pronotum with distinctly swollen calli. Left paramere robust, phallosome slender and elongate (Fig. 26). Pronotum black, campanulate with distinctly swollen calli; clavus light transverse band medially not reaching claval commissure; hemelytra black with apical and basal ivory spots.

The genus *Systellonotus* contains 20 species, of which three are recorded from Central Europe, one of which, viz. *S. alpinus* Frey-Gessner, only from Switzerland [Frey-Gessner, 1871, 1872].

Systellonotus alpinus Frey-Gessner, 1871

Figs 29–31.

MATERIAL. SWITZERLAND: Tracuit, 29.vii., 1 ♀, *Systellonotus alpinus* Frey (MNHG; syntypus label). Berisal, Alpes, 1 ♂, coll. Frey (with date), right paramere is missing (MNHG).

DIAGNOSIS. Similar to *S. triguttatus* in coloration, but distinguished by the vesica being bifurcate apically (Fig. 29) and the phallosome not as curved as in *S. discoidale* and *S. triguttatus* (Figs 30, 33, 37).

Frey-Gessner [1871] described *S. alpinus* from a single specimen of the Meyer-Dür collection identified as *S. triguttatus* (Linnaeus, 1767). There is, as usually with the Meyer-Dür material, no locality label on the specimen. A proper description was published later [Frey-Gessner, 1872]. Frey-Gessner found in 1871 a larva and an adult in July in the

alpine region above Zinal (Switzerland, Kanton Wallis, Traucitpawand) on grass [Frey-Gessner, 1871 1872]. He mentioned that *S. alpinus* looks almost the same as *S. triguttatus* in shape and coloration, but that it is at least twice as large as *S. triguttatus*. Hollier [2004] mentioned that the specimens found in the collection of the Natural History Museum of Geneva could be syntypes or specimens captured later. The only female found in the MHNG collection shows the label "Tracuit, 29.vii" and an additional determination label "*Systellonotus alpinus* Frey", therefore Hollier treated it as a syntype [Hollier, 2004].

Systellonotus discoidalis Horváth, 1894

Figs 32–35.

MATERIAL. MACEDONIA: Skoplje, 06.v.1939, 1 ♂, det. Hoberlandt 1962 as *S. kiritschenkoi* = *scopliensis* (ZSMC). Nezezi, 07.v.1939, 1 ♀, det. Hoberlandt 1962 as *S. kiritschenkoi* = *scopliensis* (ZSMC). TURKEY: Kayseri-Talas, Ali-Dagh, 11.-17.vi.1960, 3 ♂, 15./22.vi.1962, 1 ♂, leg. Seidenstücker (ZSMC). Ankara, Gölbaschi, 12.vi.1962, 1 ♂, leg. Seidenstücker (ZSMC). Kayseri-Hisarçik, 17.vi.1962, 3 ♀, leg. Seidenstücker (ZSMC).

DIAGNOSIS. Similar to *S. triguttatus* but distinguished by its bifurcate and apically curved vesica (Figs 32, 35). The phallosome more curved and round apically than in *S. alpinus* and *S. triguttatus* (Figs 29, 32, 36).

Systellonotus triguttatus (Linnaeus, 1767)

Figs 36–39.

MATERIAL. AUSTRIA: Hundsheimer Berge, 22.viii.1960, 2 ♂, leg. Weber (ZSMC). NSG Oberweiden, 161m, 16°50'E/48°17'N, 28.vii.2001, 1 ♂, 1 ♀, leg. W. Rabitsch (SWRW). Donautal, Umgeb. Marching, 01.viii.1982, 1 ♂, 1 ♀, leg. M. Döberl (SWRW). BULGARIA: Čenkov, 07.vi.1960, 1 ♂, 2 ♀, det. L. Hoberlandt (KUPC). Vitoša, 8.-9.vii.1956, 2 ♂, leg. and det. L. Hoberlandt (KUPC). GERMANY Aschaffenburg, Wendelberg, 29.vi.1935, 1 ♀, 07.vii.1935, 1 ♂, 1 ♀, leg. K. Singer (ZSMC). Sandgrube bei Mainaschaff. 28.vii.1950, 1 ♀, leg. K. Singer (ZSMC). Laabertal, 28.v.1928, 1 ♂, leg. K. Schmidt (ZSMC). München, Gröbelzell Sandberg, 04.vi.1947, 1 ä, (ZSMC). Umgeb. Mainz, Mombach. Sand, 17.vi.1953, 1 ♀, leg. Weber (ZSMC). Leipzig, Colmberg bei Holzhausen, 16.vi.1934, 1 ♀ (ETHZ). Boberg, 07.vi.1917, 1 ♀, 19.vii.1919, 1 ♀ (ZSMC). Umgeb. Eichstätt 19.vi.1954, 1 ♂, leg. Seidenstücker (ZSMC). MORAVIA: Strážnice, 07.vi.1942, 6 ♂, leg. Hoffer (KUPC). Brno-Hády, step na Vyvěřelíně, 340-380m, 06.viii.1975, 4 ♂, 9 ♀, leg. P. Lauterer (MMBC). Vevčice, 11.vi.1964, 1 ♀, leg. P. Lauterer (MMBC). SLOVAKIA: Kováčovské kopce, 09.vi.1960, 2 ♂, 1 ♀, det. L. Hoberlandt (KUPC). Záhorie, Plav. Štvrtok, Kamenný mlýn, 02.vi.1969, 1 ♂, leg. Pospíšilová (MMBC). SWITZERLAND: Aargau, Biberstein, 450m, 19.v.1992, 1 ♂, 3.-12.viii.1992, 2 ♂, 06.viii.1992, 1 ♂, leg. A. Otto (ETHZ). Peney, 13.vi.1886, 2 ♂ (MNHG). Jura, Argori, 1 ♂, coll. Frey-Gessner (MNHG). Basel-Land, Reinach, 15.v.1945, 4 ♂, leg. J. P. Wolf (MNHG). Tessin, Prugiasco, 830m, 24.vii.1994, 1 ♂, leg. A. Otto (ETHZ). Wallis, Vuisse, 560m, 1.-10.viii.1990, light trap, 1 ♂, leg. Hächler & Rezb. Reser (NML). Wallis, Vuisse, Conthey, 560m, 590,2/120,4 11.-20.viii.1992, 1 ♂, leg. Rezbanyai-Reser & M. Hächler (NML). TURKEY: Kayseri, 21.-31.v.1963, 1 ♂, leg. Seidenstücker (ZSMC).

DIAGNOSIS. Distinguished from *S. discoidalis* by distinctly curved vesica with apical secondary gonopore, phallosome pointed and curved (Figs 36–37).

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