

Trichoptera endemic in the Carpathian Basin and the adjacent areas

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Abstract – Original text of taxonomic diagnosis and data of type specimens are collected and cited for each Trichoptera species endemic or subendemic in and around the Carpathian Basin, together with taxonomic history of relevant changes in nomenclature. The total number of the described caddisfly species endemic in or around the Carpathian Basin is 263. By describing 78 new incipient phylogenetic sibling species a surprisingly high ratio of unknown caddisfly diversity were detected during only a few years and with only moderate collecting effort. This clearly indicates the highly depressed state of the western contemporary taxonomy. The recently diverged taxa are products of Pleistocene speciation process during isolated integration in crenon/epicrenon habitats on sky islands of high mountain ranges. *Rhyacophila* (32 species) and *Drusus* (62 species) genera and the Chaetopterygini (56 species) and Stenophylacini (42 species) tribes are the groups richest in endemic species diverged in spring and spring stream habitats of high elevations.

Key words – Balkan Peninsula, caddisflies, Carpathian Basin, taxonomic history

INTRODUCTION

During the last few years we have conducted studies on speciation processes acquiring intuitive insight into the contemporary entity divergences simply by empirical detecting and describing over 120 young incipient new caddisfly species in the European Trichoptera fauna (OLÁH *et al.* 2012, 2013a, b, c, 2014, 2015a, b, 2017). This amount of new taxa, discovered easily with moderate effort in the so-called “intensively studied and well known” faunal region, clearly indicates that our knowledge is still far from complete.

Our method is based on the adaptive speciation traits, integrated in sexual processes, and enabled us to delimit and delineate recently diverged or even contemporary diverging phylogenetic species in sibling species complexes (OLÁH *et al.* 2015a, 2017). Most of these young species are the product of the Pleistocene speciation. This integrative process has been realised in isolated crenon/hypocrenon habitats of sky islands of high elevations and highly influenced by the complexity of European high mountain systems (SCHMITT 2009). Just in and around the

Carpathian Basin *sensu lato* we have collected and described 78 new endemic incipient phylogenetic species from the total of 263 endemic or subendemic Carpathian species. They populate the spring habitats in sky islands of high mountain ranges.

In order to distinguish these young sibling species applying the discovered sensitive speciation traits we had to examine old historical specimens of several unsettled taxa deposited and curated in various European and North American museums. The study on the taxonomic history of these old taxa has been resulted in this revision of the endemic caddisflies of the Carpathian Basin. The territory under revision is the Carpathian Basin *sensu lato*. Endemic species under the present taxonomic revision are not restricted to the Carpathian caddisflies *sensu stricto*, i.e. to species inhabiting surroundings of the Carpathian Mountains. The taxonomy of endemic or subendemic Trichoptera species having distribution centre in Carpathian Basin or described from the Carpathian Basin and the adjoining Balkan and Alps territories are revised. In geographic terms the area of the Carpathian Basin *sensu lato* covers the Danube drainage basin from River Morva nearby the Dévény Gate where Danube River enters the Carpathian Basin to River Morava nearby the Iron Gate where Danube River leaves the Carpathian Basin. In ecological terms, taking into account the dispersion habitats and distribution capacities of the most active caddisfly species, the environmental territory of the Carpathian Basin under revision covers the entire drainage basin and extended to running waters flowing to adjoining drainage basins possibly hundreds of kilometers over the watershed.

In this revision of the endemic Trichoptera of the Carpathian Basin *sensu lato* I have collected data of the taxonomic history of listed species.

Diagnosis (if available) together with the locality data of type specimens are given by citing the relevant information from the original publications in the original language of the descriptions. Species diagnoses, frequently hardly accessible, give a brief summary of specific character states or character combinations for both specialist and non-specialist readers, together with the close relatives or siblings of the species groups or species complexes. This essence of delineation or delimitation of the endemic species in the Carpathian Basin, accumulated in a single paper, may help scientists and conservationists directly by giving practical guidance in nature conservation practices.

The taxonomic position of some Trichoptera subspecies is not studied yet. Reviewing the present taxonomic status of the Carpathian Trichoptera species we have accepted the subspecies status of the biological species concept. However, we believe that similarly to all of our previous systematic investigations on the fine structures of speciation traits, the search of initial split criteria in these subspecies reveals in most cases the natural status of incipient sibling species elaborated in the phylogenetic species concept.

MATERIAL

Thinking of population concept in the new taxonomy requires more elaborated field collecting strategies. To collect many specimens from many populations is the prime target of any research project aimed to find the first signs of reproductive isolation, to search species boundaries, to delimit closely related incipient taxa, and to recognise the young phylogenetic species. Biodiversity research and conservation are badly limited by the lack of population field sampling, which is expensive. Staggering in the deprived discipline of taxonomy and suffering the lack of adequate collecting we have been forced to outline the principles and practice of cooperation to put together what we have (OLÁH *et al.* 2013c). There are historical materials scattered in museums, universities and private collections. We have laboured an idea of cooperation how to realise comprehensive studies when funding is removed from taxonomy to more modern regarded disciplines of genetics, ecology and conservation and no resource remained available even for adequate population sampling (OLÁH *et al.* 2015b).

The examined freshly collected materials and the old historical type and non-type specimens are deposited and curated in the following natural history collections:

BDOL = Biologiezentrum des Oberösterreichischen Landesmuseums, Linz, Austria;

CCPC = Ciubuc Private Collection, Sinaia, Romania;

CMZL = Cantonal Museum of Zoology Laussane, Switzerland;

CNHM = Croatian Natural History Museum, Zagreb, Croatia;

DBFMNSUP = Department of Biology, Faculty of Mathematics and Natural Sciences, University of Prishtina, Prishtina, Kosovo;

DEI = Senckenberg Deutsches Entomologisches Institut, Müncheberg, Germany;

HNHM = Hungarian Natural History Museum, Budapest;

MCSNBG = Museo Civico di Scienze Naturali "E. Caffi", Bergamo, Italy;

MPC = Malicky Private Collection Lunz-am-See, Austria;

MFN = Museum für Naturkunde der Humboldt Universität zu Berlin, Germany;

MM = Mátra Museum of Hungarian Natural History Museum, Gyöngyös, Hungary;

MP ISEZ = NHM-ISEA;

NMPC = The National Museum (Natural History Department) in Prague, Czech Republic;

NHMB = HNHM;

NHM-ISEA = Natural History Museum of the Institute of Systematics and Evolution of Animals, Polish Academy of Sciences, Kraków, Poland;

NMNBAS – National Museum of Natural History, Bulgarian Academy of Sciences, Sofia;

NMP = The National Museum (Natural History Department) in Prague, Czech Republic;

NMPC = NMP;

NMW = Naturhistorisches Museum Wien, Austria;

OPC = Oláh Private Collection, under national protection by the Hungarian Natural History Museum, Debrecen, Hungary;

PMS = Slovenian Museum of Natural History, Ljubljana, Slovenia;

SMNHL = National Academy of Sciences of Ukraine, State Museum of Natural History, Lviv, Ukraine;

WM = NMW

The original texts are cited verbatim, but the original character formatting is not followed.

TAXONOMY

PHILOPOTAMIDAE

Wormaldia McLahlan, 1865

Wormaldia albanica Oláh, 2010

Wormaldia albanica OLÁH, 2010: 68–69: “Holotype, male, HNHM. Albania: Tepelenë county, Tepelenë, Uji i Ftohtë (Cold Water Spring), 165 m, N40°15.011’ E20°03.548’, 13.III.2008, leg. Sz. Czigány & D. Murányi.”

Diagnosis – OLÁH (2010: 68–69): “This new species belongs to the species complex described from the Balkan Mountains with enlarged endothecal microspine cluster and tapering harpagones: *W. kimminsi* Botoșăneanu, 1960; *W. khourmai* Schmid, 1959; *W. balcanica* Kumanski, 1979; *W. bulgarica* Novák, 1971. Most close to *W. bulgarica* described from Bulgaria but differs by having (1) conspicuous basolateral flange of sclerites present on Xth segment and well visible both in lateral and dorsal view; (2) in lateral view Xth segment has no dorsal excision and no any dorsal subapical hook, dent or elevation, both present and very conspicuous on *W. bulgarica*; (3) cerci slightly S-forming tapering in dorsal view, not straight and clavate; (4) harpagones longer than coxopodites, not shorter; (5) harpagones slender, tapering and downcurving apically; (6) endotheca with a large spine and a group of four smaller spines besides the long microspine cluster, not only with a single large spine.”

Etymology – “It is named for the country in which the type was collected.”

Wormaldia balcanica Kumanski, 1979

Wormaldia khourmai balcanica KUMANSKI, 1979a: 63–65: “Bulgaria, Strandza Mts., hygropetric biotop near Katun-dere stream, not far from the bridge on the road Malko Tarnovo-Zvezdetz (about 100 m a.s.l.), 11.VII.1976, 16♂♂ and 12♀♀ (leg. Kumanski); Greece, Isl. Rhodos, 4♂♂, Isl. Lesbos, 8♂♂, and Isl. Chios,

12 ♂♂ (all. leg. Malicky); Turkey, Prov. Samsun, 10 km NW Havza (500 m.a.s.l.), 41°30'N/35°33', 15.V.1975, 1♂ (leg. H. & U. Aspöck, H. & U. Rausch and P. Ressler). Holotype ♂ (among the Bulgarian specimens), 22♂♂ and 8♀♀. Paratypes (19 from Bulgaria, 2 from Rhodos, 4 from Lesbos and 5 from Chios) in the author's collection, 18♂♂ and 4♀♀ Paratypes (4♂♂ and 4♀♀ from Bulgaria, 1♂ from Turkey and others from Greece) in coll. Malicky, Lunz am See, Austria."

Wormaldia balcanica Kumanski, 1979: KUMANSKI (1985a: 167): raised to species status.

Wormaldia bosniaca Botoșăneanu, 1960

Wormaldia occipitalis bosniaca BOTOȘĂNEANU, 1960a: 262, 263, 274: "Trebevic, près de Sarajevo, 15. VII. 1955, entre 1100 et 1300 m. Petits ruisseaux assez agités, coulant sous des sapins bas. *Wormaldia (W.) occipitalis bosniaca* n. ssp. très commun." "Trescavica, pas loin de Sarajevo, 18–20. VII. 1955. Rivière de taille moyenne, en-dessous de Kosia Luka, vers 1200 m, dans la forêt; chassé en-dessous de la source. *Wormaldia (W.) occipitalis bosniaca* n. ssp. 4♂." Trnovo, localité située au pied de Trescavica, vers 1000 m environ, 23. VII. 1955. Rivière de 8–10 m de large, assez agitée. *Wormaldia (W.) occipitalis bosniaca* n. ssp. assez commun." "Je pense qu'il s'agit d'une nouvelle sous-espèce, que je vais dénommer *bosniaca* n. ssp. 1♂ et 1♀ de Trebevic ont été désignés comme holotype et allotype (FS)[Fernand Schmid]; 1♂ parat.: DEI [Deutsches Entomologisches Institut, Berlin]; 1♂ parat.: LB [Lazar Botoșăneanu]."

Wormaldia bosniaca Botosaneanu, 1960: MALICKY (2005b: 549): unclear taxonomic position.

Wormaldia bosniaca Botosaneanu, 1960: NEU (2015: 107): raised to species status.

Wormaldia bulgarica Novák, 1971

Wormaldia khourmai bulgarica NOVÁK, 1971: 105–106: "Holotypus: Fundorte: Bach bei Rilski Monastir, 14.VII.1962, 1♂, in der Sammlung des Autors. Paratypen: Fundorte: Rila-Gebirge; Zufluss des Malovice Flusses, Rilski Monastir, 14.VII.1962, 5♂, 3♀; Bach bei Rilski Monastir, 14.VII.1962, 1♂; Fluss Malovice, Rilski Monastir, 11♂, 2♀. (in der Sammlung von L. Botosaneanu)."

Wormaldia bulgarica Novák, 1971: KUMANSKI (1979a: 61–62): raised to species status.

Wormaldia daga Oláh, 2015

Wormaldia khourmai KUMANSKI, 1979a: 62–63 (ssp.): misidentification.

Wormaldia daga Oláh, 2015 in OLÁH & KOVÁCS (2015: 99–100): “Holotype: Bulgaria: Bosna Mts. Dudenovo, Dudenska Reka, between Vizitza and Novo Panicharevo, 249m, N42°10'25" E27°34'07", 26.VII.2012 at light leg. S. Beshkov & M. Beshkova (1♂, NMNHBAS).”

Diagnosis – OLÁH & KOVÁCS (2015: 99–100): “We have collected *W. khourmai* Schmid 1959 on the Thales slopes near to the locus typicus: Irán, Thales Mts. Masula River, 12.VIII.1990, leg. J. Oláh (3 males, OPC). The most important genital structures involved in sexual selection, the endothecal spine pattern and the the head of segment X are clearly different. This species with charactersitic endothecal spine clusters and narrowing harpagones belongs to the *Wormaldia khourmai*, *W. bulgarica*, *W. balcanica*, *W. mahiri* and *W. erzincanica* group of species and most close to *W. khourmai*, but differs by having more swollen apex of segment X, rounded, not truncate apex of cerci and only a single endothecal spine, not three spines.”

Etymology – “*Daga*, from “dagadt”, swollen in Hungarian, refers to the apical shape of the segment X in lateral view.”

Wormaldia hellenica Jacquemart, 1962

Wormaldia hellenica JACQUEMART, 1962: 3–4: “Récoltés par la mission E. Janssens-R Tollet, Mont Pélion W. Drakia (Khani Zisi) (1.200 m), 28/30-VII-1953, 5 préparations microscopiques, Mont Olympe E Stavros a Prioni, 1.000 m, 21/23-VII-1953, 1 préparation microscopique.”

Wormaldia hellenica Jacquemart, 1962: MALICKY (2005: 549): unclear taxonomic position.

Wormaldia hellenica Jacquemart, 1962: NEU (2015: 107): raised to species status.

Wormaldia homora Oláh, 2015

Wormaldia triangulifera asterusia KUMANSKI, 1975: 59: misidentification.

Wormaldia triangulifera asterusia Kumanski, 1975: KUMANSKI & MALICKY (1976: 103): misidentification.

Wormaldia triangulifera McLachlan, 1878: KUMANSKI (1985: 165–166): misidentification.

Wormaldia homora Oláh, 2015 in OLÁH & KOVÁCS (2015: 102–103): “Holotype. Bulgaria, Eastern Rodopi, near Strazhetz, above the crossroad Gugutka-Krumovgrad, 575m, N41°21'11" E25°50'35", 24.VII.2012, at light, leg. S. Beshkov & M. Beshkova (1♂, NMNHBAS).”

Diagnosis – OLÁH & KOVÁCS (2015: 102–103): “The species under the name of *Wormaldia triangulifera asterusia* Malicky were collected from several regions in

Bulgaria: Stara Planina, Pirin Mts., Strandscha Mts. (Kumanski & Malicky, 1976). Specimens from various regions exhibit rather stable genital structures: especially the head of segment X and the endothecal spine pattern are conservative. We have a single specimen from the Eastern Rodopi Mts. and compared its fine structure with specimens of *W. asterusia* collected from Greece (Crete) *W. homora* sp. n. is most close to *W. asterusia*, but differs by having apex of segment X high, not low, apical portion of cerci truncate, not rounded in lateral view and the subapical mesal projection triangular, not rounded lobe in dorsal view; apices of harpago narrowing and downward curving, not broad; endothecal spine structure different.”

Etymology – “*Homora*, from “homorú”, concave in Hungarian, refers to the apical shape of the segment X in lateral view. The apical portion beyond the subapical dorsal point is concave in lateral view.”

Wormaldia juliani Kumanski, 1979

Wormaldia juliani KUMANSKI, 1979a: 58–60: “Bulgaria, Maleshevska Mt., streamlet falling into Struma River, nearly 2 km over railway station Kresna (about 400 m a.s.l.), 9.VI.1975, Holotype ♂ and 4 Paratypes (3♂♂ and 1♀). Strandzha Mts., spring Aidere near the bridge on the road Malko Tarnovo-Zvezdetz, 11.VII.1975, 1♂ Paratype. Holotype and 4 Paratypes deposited in the author’s collection in the National Natural History Museum, Sofia; 1♂ Paratype in coll. H. Malicky, Lunz am See, Austria. I am very obliged to Dr. Malicky for reexamining and confirming the new species.”

Wormaldia occipitalis vaillantorum BOTOSANEANU, 1980a: 168–169: “Holotype ♂ de l’île grecque de Kérkira (= Corfou): Or. (= Mt.) Pantokrator, 900 m. alt., Mai (“16/30”) 1971, coll. B. van Aartsen. J’ai trouvé cet exemplaire dans les collections entomologiques de notre Musée; il y est conservé à sec, abdomen dans un petit tube à glycérine.”

Wormaldia juliani vaillantorum Botosaneanu, 1980: BOTOSANEANU (2004: 162): the subspecies *Wormaldia occipitalis vaillantorum* Botosaneanu, 1980 transferred to *W. juliani* Kumanski, 1979.

Wormaldia juliani Kumanski, 1979, *Wormaldia vaillantorum* Botosaneanu, 1980: MALICKY (2005: 549): unclear taxonomic position.

Wormaldia juliani Kumanski, 1979: NEU (2015: 107): *Wormaldia occipitalis vaillantorum* Botosaneanu, 1980, and *Wormaldia juliani vaillantorum* Botosaneanu, 1980 synonymised with *Wormaldia juliani* Kumanski, 1979.

Wormaldia kimminsi Botoșăneanu, 1960

Wormaldia triangulifera kimminsi BOTOȘĂNEANU, 1960a: 270–271: “4♂ et 5♀ de Perister 12–16.VIII.1955, que j’ai désigné comme holotype ♂, allotype ♀ et

paratypes ♂ et ♀; holot. ♂ + allot. ♀: F. Schmid; 1 ♂ parat.+ 1 ♀ parat.: Deutsches Entomologisches Institut, Berlin; 2♂+2♀ parat.: L. Botoșăneanu.”

Wormaldia kimminsi Botosaneanu, 1960: MALICKY (1977: 68): raised to species status.

Wormaldia subterranea Radovanović, 1932

Wormaldia subterranea RADOVANOVIĆ, 1932: 103–107: “Die Höhle Pompeska jama liegt 40 km südöstlich von Ljubljana (26 km Luftlinie), ungefähr 2 km von der Station Dobro-polje an der Lokalbahn Ljubljana-Kocevje, und steht mit dem gleich danebenliegenden Pokrito brezno (etwa: “zugedeckter Abgrund”) in unterirdischer Verbindung. Dieser letztere ist nur eine unterirdische Schlucht ohne direkte Verbindung mit der Aussenwelt und wurde erst im Jahre 1914 durch Sprengarbeiten zufälligerweise aufgeschlossen; der Eingang wurde aber sofort wieder zugedeckt. Seitdem wurde diese Höhle nur zweimal noch besucht (am 12. Juni 1927 und am 19. Juni dieses Jahres) und gleichzeitig zoologisch gründlich erforscht. Am Grunde dieses unterirdischen Ganges, der sich bei seinem engen Eingang gleich vertical 6 m in die Tiefe senkt und zirka 30 m lang ist, befindet sich ein Bach, der jedenfalls aus weiter Ferne herkommt (man weiss nicht woher); er verschwindet bald in einer engen Höhlung, erscheint dann wieder 45 m weiter abwärts als Bach “k” (Kenk und Seliskar) in der Podpeska jama (84 m von dem Eingang der Höhle entfernt und 9,5 m tiefer als dieser gelegen), um dann sofort wieder unterirdisch zu verschwinden.

Die Larven und Nymphen der neuen *Wormaldia*-Form wurden in grosser Zahl in dem eben erwähnten Bäche angetroffen, und die Imagines waren gleich daneben an den feuchten Wänden haftend oder langsam kriechend zu finden. Es sind seit Oktober 1928 bis 1. Juni dieses Jahres in der gleichzeitig als Höhlenlaboratorium (Kenk-Seliskar) dienenden Podpeska jama insgesamt 85 Stück Imagines beobachtet worden. Sie sind zwar in allen Monaten des Jahres an dieser Stelle aufgefunden worden, jedoch konnte eine auffällige Periodizität in ihrem Vorkommen festgestellt werden (darüber später). Die Tiere leben aber im unvergleichlich grösser Menge in Pokrito brezno, und dieses muss als eigentliche Heimat der neuen *Wormaldia*-Form angesehen werden. Sie machen hier gleichzeitig bei weitem die überwiegende Mehrzahl der gesamten Tierbevölkerung aus.”

Wormaldia occipitalis subterranea Radovanović, 1932: KIMMINS (1953: 51): treated as a subspecies.

Wormaldia occipitalis occipitalis Pictet, 1934: BOTOSANEANU (1989: 166): *W. subterranea* and *W. occipitalis subterranea* are synonyms of *W. occipitalis occipitalis*.

Wormaldia subterranea Radovanović, 1932: NEU (2015: 107): species rank resurrected.

PSYCHOMYIIDAE

Psychomyia Latreille, 1829*Psychomyia klapaleki* Malicky, 1995

Psychomyia klapaleki MALICKY, 1995: 443–444: “Holotypus ♂ und Paratypen: Slowenien, Fluss Kolpa bei Gsparci, 23.VII.1994 (25♂, 1♀); Paratypen, Kocevje, 25.VI.1994, leg. Wimmer (9♂, 18♀); in meiner Sammlung. Weitere Paratypen: Bosnien, Rogatica, 2.VIII.1897 (7♂) und Gorazda, 9.VIII.1897 (1♂) leg. Klapálek (diese sind ein Teil der bei Klapálek (1898) erwähnten Ausbeute); Slowenien, Sanntaler Alpen, Leutsch, 3–10.VII.1942 (14♂) und 21–27.VII.1942 (3♂), leg. Zerny; alle im Naturhistorischen Museum Wien.”

Tinodes Curtis, 1834*Tinodes andrasi* Oláh, 2010

Tinodes andrasi OLÁH, 2010: 74–76: “Holotype, male, HNHM Croatia: Konavli Mts, Ljuta (near Gruda), Ljuta stream at the Konaviski dvori watermill, 60 m, N4° 32.076 E18° 22.610', 7.X.2008, leg. L. Dányi, Z. Fehér, J. Kontschán & D. Murányi.”

Diagnosis – OLÁH (2010: 74–76): “This new species is close to the widely distributed *Tinodes rostocki* MacLachlan, 1878, but differs by having (1) IXth sternite short and tall, not long and low; (2) phallicata with S-forming thin apical end, not C-forming; (3) paraproctal processes armed with 4–5 megasetae on the middle, besides the apical set; (4) apical margin of coxopodite has altogether only 3 spinelike processes, not 5 processes; apicomesal short and blunt processes lacking; (5) dorsal pair of processes on basal plate low arching, not hook-forming; (6) anterior apodeme of basal plate very enlarged and clavate.”

Etymology – “The name of this tiny *Tinodes* species was dedicated to András, the newly-born son of the collector, Dávid Murányi.”

Tinodes polifurculatus Botoșăneanu, 1956

Tinodes polifurculatus BOTOȘĂNEANU, 1956: 382–386: “La prise No 30 contenait un riche matériel (46 ♂♂ et ♀♀): Bulgarie: Région de la ville Varna, Ceaika, dans la region des ruisseaux, près du rivage de la mer. IX.1955, leg. A. Valkanov & B. Rusev.”

Tinodes popovi Kumanski, 1975

Tinodes popovi Kumanski, 1975 in KUMANSKI & MALICKY (1975: 25–27): “Das gesamte Material stammt aus Bulgarien und umfasst acht Exemplare: Holotypus ♂ und 4♀ Paratypen: Ost-Stara Planina-Gebirge, Fluss Kotlenska ober-

halb Kotel (ca. 800 m), 6.VII.1970. 1 ♂ Paratypus vom selben Fundort, 7.VI.1968, leg. Kumanski. 1 ♂ Paratypus: Sliwen (dasselbe Gebiet), 1913 leg. Tschhorbadjief. 1 ♂ Paratypus West-Stara Planina Planina-Gebirge, Zufluss des Flusses Zaselja, Bov, 1.VII.1962, leg. Novak. Ein paratypus (vom Fluss Kotlenska) in coll. Malicky, der ♂-Paratypus aus der Westlichen Stara Planina in coll. Novak, Praha, die übrigen Typen in coll. Kumanski im Zoologischen Institute und Museum, Sofia.”

Tinodes raina Botoșăneanu, 1960

Tinodes raina BOTOȘĂNEANU, 1960b: 113–114: “Holotype ♂: ruisseau Trestenic, affluent droit de la Cerna, un peu en aval du ruisseau Presacina, Banat, Roumanie, 4.X.1956. Conservé dans les collections du British Museum (Nat. Hist.), Department of Entomology.”

Tinodes unidentatus Klapálek, 1894

Tinodes unidentatus Klapálek, 1894: 491–492: “Frequents the rapid streams on the slopes of the Vitosa Mountain near Sophia, Bojana, 20th July, 1893”

Tinodes pseudorostocki BOTOȘĂNEANU, 1960a: 276–278: “J’ai eu à ma disposition 6♂ et 4♀ de Perister, 12–16. VIII. 1955, dont j’ai désigné le holotype ♂, l’allotype ♀ ainsi que des paratypes ♂ et ♀. Holot. ♂ + allot. ♀: FS.; 1♂ parat.: DEI; 3♂ + 2♀ parat.: LB.”

Tinodes pseudorostocki Botoșăneanu, 1960: BOTOȘĂNEANU & SYKORA (1963: 122): synonymised with *T. unidentatus*. “Espèce décrite par Klapálek (1894, 1894) de ruisseaux rapides du massif Vitocha, et retrouvée à Kostenetz (Mts. Ryla), le 16.VI.1959. Elle est connue aussi de Roumanie (Mts. Bihar).”

Tinodes urdhva Oláh, 2010

Tinodes urdhva OLÁH, 2010: 77–78: “Holotype male, HNHM. Albania: Dibër district, Korab Mts, Radomirë, torrent E of the village, 1460m, N41°49.131’, E20°30.160’, 26.VI.2007, leg. D. Murányi.”

Diagnosis – OLÁH (2010: 77–78): “This new species belongs to the *Tinodes kimminsi* Sykora, 1962; *T. maculicornis* (Pictet, 1934); *T. sarisa* Malicky, 1975, *T. unicolor* (Pictet, 1934) species complex having simple monolobed harpagones and tall paraproct. Most close to *T. sarissa* Malicky described from Greece, but differs by having (1) number and pattern of megasetae on paraproctal processes different; (2) phallicata is simple rod without any structures; (3) harpagones upward directed, not downward; (4) basal plate of gonopods with different structural units both in lateral and ventral view.”

Etymology – “Name was given with reference to the upward directed harpagones, upward “urdhva” in Sanscrit.”

POLYCENTROPODIDAE

Plectrocnemia Stephens, 1836*Plectrocnemia kisbelai* Botosaneanu, 1967

Plectrocnemia kisbelai BOTOSANEANU, 1967a: 171–172: “Holotype ♂ (conservé en alcool, dans ma collection): 20.VI.1964, Mts. Apușeni (ou de Bihor), Scărișoara-Belioara, leg. Kis Béla. J’ai le plaisir de dédier cette espèce à son découvreur, entomologue distingué de Cluj, auquel je suis redevable pour bien des captures intéressantes de Trichoptères.”

Plectrocnemia kisbelai Botosaneanu, 1967: BOTOSANEANU (1995: 67): “Only the holotype of this rare, endemic species was known. I was very pleased to find more specimens in the recently studied collections. Some of them are, like the holotype, from the Bihor mountains: 3 ♂♂, 1 ♀ taken on 13, 15, and 17. VII. 1971 along small tributaries of Valea Disghitului between Garda and the hamlet Iarba Rea (catchment of Arieșul Mare), L. Botosaneanu leg. But 1 ♂ was caught on 9 VI. 1966 in Valea Ciului, tributary of Valea Nadașului (catchment of the Mureș), not far from Cabana Debela Gora, Zarand mountains, L. Botosaneanu leg. This last record means a slight extension of the known range.”

Plectrocnemia minima Klapálek, 1899

Plectrocnemia minima Klapálek, 1899a: 436–437: “Ein ♂ von Korniareva im Krassó-Szörényer Comitat.”

Plectrocnemia minima Klapálek, 1899: BOTOSANEANU (1967a: 171): “*Plectrocnemia minima* Klap. est un endémite carpatique, et son aréal comprend uniquement les Mts. du Banat. Capturée d’abord à Cornereva (type ♂ de Klapálek); j’ai capturé entre 1954 et 1961 à peu près 25 ♂♂ (la ♀ reste inconnue, ce qui est assez curieux!) dans plusieurs sources, ruisselets de source et petits ruisseaux des environs des localités Băile Herculane (Herkulesbad), Mehadia et Cornereva (bassins donc de la Cerna et de la Belareca). Or. Les Mts. du Banat étant bien explorées au point de vue trichoptérologique, nous serions tentés de conclure à l’existence d’un aréal extrêmement restreint dans le cadre de ces montagnes; cependant, 1 ♂ a été pris dans la “source” de la Beușnița (bassin de la Nera). Les zones des réseaux lotiques que *P. minima* habite, sont: eukrenal, hypokrenal, epirhithral et, beaucoup moins fréquemment, metarhithral. Les dates des captures sont comprises entre le 1.V. et le 11.VII.”

Plectrocnemia mojkovacensis Malicky, 1982

Plectrocnemia mojkovacensis MALICKY, 1982: 161: “Holotypus ♂ und Paratypus ♂: Crna Gora, Bistrica, Mojkovac, 19. VII. 1981, leg Sivec, coll. Malicky. Paratypus ♂ mit gleichen Daten in coll Prirodoslovni Muzej Slovenije, Ljubljana.”

Plectrocnemia smiljae Marinković-Gospodnetić, 1966

Plectrocnemia smiljae MARINKOVIĆ-GOSPODNETIĆ, 1966a: 112: "Holotype ♂, the source of the stream Zunovnica, Hadzici near Sarajevo, 28. V. 1964. Leg. M. Dokić."

Polycentropus Curtis, 1835*Polycentropus devetaki* Krušnik et Malicky, 1992

Polycentropus devetaki KRUŠNIK & MALICKY, 1992: 56: "Holotype ♂: Crna Gora, Mojkovac, 10.VII.1985, leg D. Devetak, coll. Krušnik."

Polycentropus ierapetra septentrionalis Kumanski, 1986

Polycentropus ierapetra septentrionalis KUMANSKI, 1986: 185–186: "Material and localities: Struma valley, railway station Stara Kresna, 10.VI.1975, 1♂, and 24.VI.1981, 1♂ (leg. A. Slivov); Sestrino village, the foothills of Ograzhden Mt., 19.IX.1984, 2♂♂ (leg. J. Ganey); Rhodopes Mts., Lukovitza River, above Asenovgrad, 8.VIII.1983, 2♂♂, and 15.VIII.1983, 2♂♂ (leg. J. Ganey); Strandzha Mt., Ropotamo River, 2 km above Krushevetz village, 4.VIII.1981, 2♂♂; Eastern part of Stara Planina MT., streamlet, left tributary of the Kamtschia River, ca. 2 km from the "Kamtschia" barrage, 15.VI.1984, 2♂♂. All localities are below 350 m a.s.l. All samples were made at artificial light. Holotype chosen among the specimens from the Rhodopes."

Polycentropus ierapetra slovenica Malicky, 1998

Polycentropus ierapetra slovenica MALICKY, 1998: 326–328: "Holotypus: Slowenien, Mini, Socerga, 29.VI.1990, leg. C. Krušnik, in meiner Sammlung."

Polycentropus schmidi Novák et Botoşăneanu, 1965

Polycentropus schmidi NOVÁK et BOTOŞĂNEANU, 1965: 139–140: "1 holotype ♂ provenant des collections du musée de Budapest, et mis a notre disposition par le Dr. F. Schmid. L'étiquette porte l'inscription suivante: "Vratna, Dr. Pasziczky". Vratna est une localité située dans la montagne Malá Fatra en Slovaquie. Insecte conservé à sec, ailes déployées, abdomen en preparation microscopique, coll. F. SCHMID. 1 paratype ♂ (leg. K. NOVÁK): ruisseau près de Lopusna, Slovaquie du NO, 450 m. alt., 18.VI.1963. Conservé en alcool, coll. K. Novák."

HYDROPSYCHIDAE

Hydropsyche Pictet, 1834*Hydropsyche botosaneanui* Marinković-Gospodnetić, 1966a

Hydropsyche botosaneanui MARINKOVIĆ-GOSPODNETIĆ, 1966a: 112. "Holotype ♂, Bosnia, river Miljacka (Mokro), 2.VI.1964."

Hydropsyche dinarica Marinković-Gospodnetić, 1979

Hydropsyche dinarica MARINKOVIĆ-GOSPODNETIĆ, 1979: 165. "Holotype: Sutjeska (river system of Drina), Tjentiste, 24.V.1965. Allotype ♀: Sutjeska, Tjentiste, 24.V.1965. Paratypes: Sutjeska, Tjentiste, 6♂♂ 8♀♀, 24.V.1965; 1♂ 1♀, 16.V.1967. Tributaries of the river Sutjeska at Tjentiste 2♂♂, 19.VI.1968; 1♂, 29.VI.1968. Josanica, a tributary of Drina at Coca, 1♂, 19.VI.1968. The source of the river Pliva (river system of Vrbas), 1♂, 22.VI.1976. The source of the river Zeta, 4♂♂ 1♀, 27.V.1973. Bregava (Stolac), 1♂, 28.IV.1975. Holotype in autor's collection."

Hydropsyche emarginata Navas, 1923

Hydropsyche emarginata NAVAS, 1923: 90, 159–160: "Museum Paris Rég. D'Iven et ravins de la côte 1422 (SE de Monastir) D. Vergné 1917"; "Mai"; "*Hydropsyche emarginata* Nav./P. Navás S.J. det"; "Type" (BOTOSANEANU 1980b: 191).

Hydropsyche tjederi BOTOSANEANU et MARINKOVIĆ-GOSPODNETIĆ, 1966: 514–516: "1 ♂ (holotype). 31.VIII.1956, riviere Belareca a Mehadia. Banat. Roumanie (leg. I. Capuse). L'holotype, en alcool, est conservé dans la coll. L. Botosaneanu." Synonymised by BOTOSANEANU (1980b: 191).

Hydropsyche mostarensis Klapálek, 1898

Hydropsyche mostarensis Klapálek, 1898b: 127–128: "Mostar 18./VIII., sklepána s dubu při cestě ku pramenu Jasenice."

Hydropsyche peristerica Botosaneanu et Marinković-Gospodnetić, 1966

Hydropsyche peristerica BOTOSANEANU et MARINKOVIĆ-GOSPODNETIĆ, 1966: 516: "2 ♂; torrent de largeur, au fond d'une vallée principale descendant sur Bitolia, captures entre 1 800 et 2 500 m. (Mt. Persister, Macédonie Yougoslave), 12–16.VIII. 1955, leg F. Schmid. L1holotype ♂ (à sec, ailes déployées, abdomen dans un petit tube d'alcool glyceriné) et l'allotype ♀ (à sec, ailes déployées) dans la coll. F. Schmid; paratype ♂ dans la coll. L. Botosaneanu (à sec, abdomen en alcool glyceriné)"

Hydropsyche sarnas Oláh, 2015

Hydropsyche sarnas Oláh, 2015 in OLÁH & KOVÁCS (2015: 106–107): "Holotype. Albania, Gjirokastër District, N of Humelicë, shore vegetation of

river Drino, 170m, N40.17854° E20.07981°, 10.05.2014, leg. Z. Barina, D. Pifkó & G. Puskás (1♂, OPC)."

Diagnosis – OLÁH & KOVÁCS (2015: 106–107): "Belongs to the *Hydropsyche angustipennis* species group and to the *Hydropsyche pellucidula* species cluster of OLÁH & JOHANSON (2008). Close to *Hydropsyche dinarica* Marinković-Gospodnetić but differs by the lateral profile of the median keel of segment X, by the clearly twopartite apical profile of segment X and by the extremely enlarged subapical lateral projection on the head of the phallic organ."

Etymology – "*Sarnas*, from "szárnyas", winged in Hungarian, refers to the very much produced, wing-like angular, subapical, lateral projections before the cleft apex of the phallosome."

Hydropsyche sinuata Botosaneanu et Marinković-Gospodnetić, 1966

Hydropsyche sinuata BOTOSANEANU et MARINKOVIĆ-GOSPODNETIĆ, 1966: 513–514: "1 ♂ et 3 ♀, 23.VI.1960, ruisseau Silistea, petit affluent gauche du Lapusnic, a 2 km environ en amont du village Lapusnica Mare (Mts de Banat, Roumanie) Le matériel est conservé en alcool. Holotype ♂, allotype ♀ et 2 paratypes ♀ dans la coll. L. Botosaneanu."

Hydropsyche smiljae Marinković-Gospodnetić, 1979

Hydropsyche smiljae MARINKOVIĆ-GOSPODNETIĆ, 1979: 167–169: "Holotype ♂ and allotype ♀: Buna, the left tributary of the river Neretva, 27.V.1975. Paratypes: 8♂♂ 1♀, 28.VI.1967; 4♂♂ 4♀♀, 27.V.1975; 2♂♂ 1♀, 8.VII.1975. Trebizat, the right tributary of the river Neretva: 1♂, 28.IV.1974. (Vitina) 2♂♂ 2♀♀, 28.IV.1974. Trebisnjica, 4♂♂ 1♀, 30.VI.1967. Holotype in the author's collection."

Hydropsyche fischeri BOTOSANEANU, 1980a: 169: Synonymised by BOTOSANEANU (2004: 166).

Hydropsyche tabacarui Botoşăneanu, 1960

Hydropsyche tabacarui BOTOŞĂNEANU, 1960b: 114–115: "29.X.1959, Vallée de Iezerul, affluent de l'Ampoi, peu en aval du lac Ighiel, pas loin de Alba Iulia, Transsylvanie, Roumanie. Leg. I. Tabacaru. Holotype ♂, allotype ♀, 1 paratype ♂ et 6 paratypes ♀, dans les collections de l'auteur; 1 paratype ♂, 1 allotype ♀ dans les collections du British Museum (Nat. Hist.), Department of Entomology."

RHYACOPHILIDAE

Rhyacophila Pictet, 1834

Rhyacophila akutila Oláh, 2010

Rhyacophila akutila OLÁH, 2010: 82–83: “Holotype male, HNHM. Bulgaria: Sofia province, Rila Mts, Borovec, Prava Marica Stream at Zavračica mountain hut, 2190 m, N42°10.075', E23°38.504', 8.IX.2005, leg. M. Földvári & D. Murányi. Paratype, female, HNHM. Bulgaria: Sofia province, Rila Mts, Borovec, Prava Marica Stream at Zavračica mountain hut, 2190 m, N42°10.075', E23°38.504', 8.IX.2005, leg. M. Földvári & D. Murányi.”

Diagnosis – OLÁH (2010: 82–83): “This new species belongs to the *R. tristis* species group. Most close to *R. pseudotristis* Kumanski, 1987, but differs by having (1) abdominal tergites and sternites with very pronounced light coloured alveolar haloes, *R. pseudotristis* has no light ring around alveoli at all; (2) in dorsal view the apical excision on Xth segment almost pentangular, not triangular; (3) in dorsoapical view the pair of apicoventral flaps on the dorsal branch of the Xth segment laterad directed, not parallel or mesad oriented; (4) the vertically oriented ventral branch of the Xth segment short and straight, not long and arching; (5) apices of the vertical branche of the Xth segment deeply bifid, not shallow; (6) mesal lobe of the apices pointed, not blunt; (7) membranous, almost indiscernible blunt parameres much shorter than the paired less sclerotized dorsal processes of the phallobase.”

Etymology – “This species is named with reference to the peculiar straight ventral branch of the Xth segment; “*akutila*” is “straight” in Sanscrit.”

Rhyacophila balcanica Radovanović, 1953

Rhyacophila balcanica RADOVANOVIĆ, 1953: 20–22, 32, 38–39: “Fundort: ein Männchen auf dem Bjelassitza-Gebirge in Montenegro (am 12. VIII. 1948).”

Rhyacophila biegelmeieri Malicky, 1984

Rhyacophila biegelmeieri MALICKY, 1984: 297: “Holotypus ♂: Griechenland, Grammos-Gebirge bei Eptachorion, 1000 m, 10. VII. 1976, leg. H. Biegelmeier, in meiner Sammlung.”

Rhyacophila biegelmeieri Malicky, 1984: MALICKY (2005a: 48): recorded from six localities in Greece.

Rhyacophila biegelmeieri Malicky, 1984: OLÁH (2010: 84): recorded from Albania (Tropojë district).

Rhyacophila biegelmeieri Malicky, 1984: OLÁH & KOVÁCS (2013: 110): recorded from Albania (Librazhd district).

Diagnosis – OLÁH & BESHKOV (2016: 95): “Apicodorsal process long horizontal, broad based with triangular apex. Cerci enlarged and elongated quadratic with parallell lateral margins. Dorsoapical process of segment X shorter than cerci. Epiproct (anal sclerite) short. Apicodorsal excision on harpagones low. Easily

distinguished from its sibling species (*R. diakoftensis* Malicky, 1983, *R. neretva* sp. n., *R. nyurga* sp. n., *R. pascoei* McLachlan, 1879) by the enlarged parameres and by the paramere dorsum densely packed with strong setae. *R. neretva*, *R. nyurga* and *R. pascoei* have only a small cluster of setae on parameres subapically ventromesad. *R. diakoftensis* has no any additional setae on parameres; only the single terminal seta is present. The tripartite aedeagus has the paired dorsal arm very short, long at all the other sibling species; Ventral arm of the aedeagus long and spatulate in ventral view.”

Rhyacophila bosnica Schmid, 1970

Rhyacophila bosnica SCHMID, 1970: 161. “Holotype ♂: Yougoslavie, Bosnie, Vucjaluka.”

Rhyacophila braaschi Malicky et Kumanski, 1976

Rhyacophila braaschi Malicky et Kumanski, 1976 in KUMANSKI & MALICKY (1976: 98–99): “Holotypus ♂ und 8 paratypen ♂: Bulgarien, Stara Planina, Nebenbach der Strjama oberhalb Sopot, 1700 m, 11.IX.1971 (=BStpl 2). Weitere Paratypen ♂♂: BStpl 8 (2♂), BPir 4 (1♂), BRo 3 (4♂). Holotypus und Paratypen von allen Platzen in coll. Malicky, Paratypen (ausser vom Pirin) ebenso in coll. Kumanski.”

Rhyacophila brevifurcata Kumanski, 1986

Rhyacophila brevifurcata KUMANSKI, 1986b: 55–57: “Bulgaria, Western Stara Planina, the river Barzija near the Petrohan-pass (ca. 1400 m a.s.l.), 10.VI. 1979, 1 ♂, and the stream Sini Vir at the tourist home Probojnica (ca. 1000 m a.s.l.), 18–22.VIII.1980, 3♂. Holotype chosen among the males from the second locality. One paratype in coll. L. Botosaneanu (Amsterdam); the other types in the author’s collection at the National Natural History Museum (Sofia).”

Rhyacophila cibinensis Botosaneanu et Marinković, 1967

Rhyacophila cibinensis BOTOSANEANU et MARINKOVIĆ, 1967: 1145–1149: “Le 19 mai 1963, 5♂ et 3♀ (leg. B. Kis) furent capturés à Paltini, près de deux affluent du Riul Mare; cette localité est située dans les Monts de Cibin, Carpates méridionales, 1400 m alt. environ, pas loin de Sibiu (Hermannstadt). 2♂ et 1♀ furent capturés, le même jour et par le même collègue, près d’un ruisseau affluent du Sadu, dans les mêmes Monts de Cibin, près du sommet Batrîna (1500–1600 m alt.). Holotype ♂ et allotype ♀ dans la collection L. Botosaneanu; les paratypes ♂ et ♀ sont gardés dans les collections L. Botosaneanu, M. Marinković et F. Schmid.

Le 23 mai 1966, un de nous (L.B.) a réussi à retrouver *R. cibinensis* près du ruisseau Izvorul Danesii (Monts de Cibin, bassin de Cibin, à quelques centaines de mètres de Paltinis). 13♂ et 8♀ furent capturés dans la végétation des bords du ruisseau.”

Rhyacophila confinium Botoșăneanu, 1957

Rhyacophila confinium BOTOȘĂNEANU, 1957a: 62–63: “Bach Comanul, Nebenfluss des Baches Wasser, 3 km von der Quelle abwärts (Marmarosh) 19. VII. 1956. 1♂ in Alkohol (Holotypus SMF N3).”

Rhyacophila confinium Botoșăneanu, 1957: SZCZĘSNY & CHVOJKA (2008: 160): “Ukraine, Czarnohora Massif, Arendarski stream, 16.VII.1995, leg. B. Szczęsny, 4♂♂, 1♀.”

Rhyacophila denticulifera Kumanski, 1986

Rhyacophila denticulifera KUMANSKI, 1986b: 51–55: “Material and localities. Rila Mountain: Resorts “G. Dimitrov” and Dolna Banja, 13–14.IX.1967, 2♂ and 1♀; brooklets with hygropetric niches in the vicinity of Kartalska poljana (1400–1600 m a.s.l.), 15–17.VIII.1972, 15♂ and 2♀; The Rhodopes: the river Sirikolaska, upper flow (1200–1500 m a.s.l.) 31.VIII.1968, 3♂, and 6.X.1976, 1♂; brooklet in Caira-locality, 20.VII.1972, 1♂; brooklet, right tributary of the Cerna River above Smoljan, 17.VII.1971, 4♂. Strandza Mountain: the Ropotamo River near Krusevec village (ca. 300 m a.s.l.), 25.IV.1970, 1♂ (leg. D. Braasch). Holotype chosen among the males of the long series from Rila. One paratype ♂ in coll. H. Malicky (Lunz) and another ♂ (indicated earlier as *Rh. furcifera*) in coll. A. Dyakonoff (Leiden) (both specimens from the Cerna river). Holotype and other paratypes in the author’s collection at the National Natural History Museum (Sofia).”

Rhyacophila dohleri Botoșăneanu, 1957

Rhyacophila dohleri BOTOȘĂNEANU, 1957b: 180–182: “19.VII.1956, Torrent du Comanul, affluent de la rivière Wasser, à environ 3 km en aval de la source (Maramouresch, Nord des Carpathes orientales, environ 1300 m alt.). 1 ♂ en alcool (Holotype, dans les collections du Rijksmuseum van Natuurlijke Historie de Leyde).”

Rhyacophila fagarashiensis Botosaneanu, 1964

Rhyacophila fagarashiensis BOTOSANEANU, 1964: 177–179: “Holotype ♂: 7.VIII.1962, cours supérieur (zone alpine) du torrent alpin Podragul, massif de

Fagarash – Alpes de Transylvanie, Carpates Meridionales, ca. 2.100 m. alt. (dans la collection de l'auteur). 2 paratypes ♂: 8.VIII.1962, le torrent alpin Podragul dans la zone superieure de la forêt d'épicea, massif de Fagarash-Alpes de Transylvanie, Carpates Meridionales, 1700-1800 m. alt. (un exemplaire dans la collection F. Schmid, l'autre dans la collection de l'auteur)."

Rhyacophila fischeri Botoșăneanu, 1957

Rhyacophila fischeri BOTOȘĂNEANU, 1957b: 186–188: "11.VI.1956. Le ruisseau de forêt Scocina, affluent droit de la rivière de Cerna à environ 1 km en amont du point denommé "7 izvoare reci" (Banat, pas loin de Băile Herculane-Herkulesbad). Holotype ♂ (avec aedeagus en extension totale), dans les collections du Rijksmuseum van Natuurlijke Historie de Leyde). Paratype ♂ dans la collection de l'auteur. Material en alcool."

Rhyacophila flava Klapálek, 1898

Rhyacophila flava Klapálek, 1898a: 489–490: "Hungary: Aus Marmaros. 1♂"; Klapálek (1899a: 437–438).

Rhyacophila furcifera Klapálek, 1904

Rhyacophila meyeri var. *furcifera* Klapálek, 1904: 729: "Goetzenberg 3/8. 2♂."

Rhyacophila furcifera Klapálek, 1904: BOTOȘĂNEANU (1952a: 547–550): raised to species rank. "In pădure de conifere pe valea Galeșului, masivul Retezat, 9.VI.1951."

Rhyacophila joosti Mey, 1979

Rhyacophila joosti MEY, 1979: 124–125: "Holotyp ♂ und Paratyp ♂: 2.X.1976, rechter Nebenbach der Strjama oberhalb Sopot, Balkangebirge, Bulgarien. Die Typen werden im Museum der Natur, Gotha aufbewahrt."

Rhyacophila kimminsiana Botosaneanu, 1958

Rhyacophila kimminsi BOTOȘĂNEANU, 1957: 179–180: "20.VIII.1956, Torrent de Cocora, affluent de la rivière Ialomitza, près de la cabane de Pestera, massif de Bucegi (Carpathes méridionales, environ 1600 m alt). 1 ♂ en alcool (Holotype, dans les collections du Rijksmuseum van Natuurlijke Historie de Leyde)". Homonym: preoccupied by Ross (1956: 122).

Rhyacophila kimminsiana BOTOSANEANU, 1958: 139: replacement name.

Rhyacophila kownackiana Szczęsny, 1970

Rhyacophila kownackiana SZCZĘSNY, 1970: 773–772: “Holotype ♂: le torrent Stakatsu? Dans Botev, 18.VIII.1969. Le spécimen dans la collection du Musée de Zoologie à Sofia.”

Rhyacophila liutika Oláh, 2010

Rhyacophila liutika OLÁH, 2010: 85–87: “Holotype male, HNHM. Macedonia: Southeastern region, Belasica Mts. Kolesino, waterfall of the Kolesino stream in platan-beech forest above the village, 500 m, N41° 23', E22° 48', 18.X.2006, leg. L. Dányi & D. Murányi.”

Diagnosis – OLÁH (2010: 85–87): “This new species belongs to the species group of *R. stigmatica* and close to species complex described from the Carpathians: *R. furcifera* and from various parts of the Balkan: *R. kownackiana* Szczęsny, *R. morettina* Botosaneanu, *R. brevifurcata* Kumanski, *R. denticulifera* Kumanski. Most close to *R. denticulifera* described from Bulgaria but differs by having (1) dorsomedial process of IXth tergite lost; (2) apical part of segment X rounded balloon-shaped in lateral view, not rectangular; (3) two vertical setal lines both located inside a single circular area in the caudal concavity of the Xth segment, not in two separate vertically oval area; (4) the dorsal processes of the phallobase differently shaped and their apical lobes smooth, not serrated.”

Etymology – “This species is named to remember Liütika (today Levente). He was the first son of the Hungarian Prince Árpád and led the Turkic Kabar tribes to balance the Turkic Bolgars on the Balkan during the great Hungarian return to the Carpathians.”

Rhyacophila margaritae Kumanski, 1998

Rhyacophila margaritae Kumanski, 1998 60–61: “All the localities are streams in the forest zone of the Central Stara Planina Mts. Stara Ribaritsa riv., 1000–1200 m .s.l., 19 males (25.09.1997); same river, 950–1000 m, 1 male (23.10.1996); Bolovandzhishka riv., 1050 m, 7 males and 1 female (26.09.1997); Krayovitsa riv., above “Yavorova luka”-hut, 740–1000 m, 3 males and 1 female (22–24.09.1997); Beli Osum riv., above “Haidushka pesen”-hut, 1000–1100 m, 15 males; left tributary to the Kositsa riv. above “Antshova batshyia”-hut, 100–1200 m, 41 males (26.10.1997); Svinska (left tributary to Tsherni Vit river) ca. 600 m a.s.l. 1 male (03.11.1996), and 3 males (27.10.1997). Holotype male chosen among the insects of the second locality; all other specimens designated as paratypes. The whole type series collected by the author and deposited in alcohol in the National Museum of Natural History, Bulgarian Academy of Sciences, Sofia.”

Rhyacophila mocsaryi Klapálek, 1898

Rhyacophila mocsaryi Klapálek, 1898: 489: "Görgény im Com. Maros-Torda. 1♂, 14♀." Klapálek (1899a: 437).

Rhyacophila morettina Botosaneanu, 1980

Rhyacophila morettina BOTOSANEANU, 1980a: 165–166: "Holotype ♂ de Yougoslavie, Bosnie: Jajce, 6.VI.1963, coll. F.C.J. Fischer. Conservé à sec, abdomen dans un petit tube à glycérine. Cet exemplaire était dans une collection de trichoptères de Yougoslavie que m'avait léguée F.C.J. Fischer."

Rhyacophila motasi Botoșăneanu, 1957

Rhyacophila motasi BOTOȘĂNEANU, 1957a: 61–62: "Kleiner Nebenfluss des Dragan-Tales bei Zerna (Bihar-Gebirge); 26.VI.1953. 1♂ in Alkohol (Holotypus SMF N2)."

Rhyacophila neretva Oláh, 2016

Rhyacophila neretva Oláh, 2016 in OLÁH & BESHKOV (2016: 97): "Holotype: Bosnia & Herzegovina, Neretva River before Mostar, 13.IX.1989, light, leg. J. Oláh (male, OPC). Paratypes: same as holotype (44 males OPC)."

Diagnosis – OLÁH & BESHKOV (2016: 97): "This new species forms a species complex with the closely related sibling species of *R. biegelmeieri* Malicky, 1984, *R. diakoftensis* Malicky, 1983, *R. nurga* sp. n. and *R. pascoei* McLachlan, 1879. Distinguished from all the other siblings by the strongly downward curving clavate dorsal process of segment IX, by the length ratio of cerci and dorsal process of segment X, by the configuration of the tripartite aedeagus."

Etymology – "Named after the Neretva River where the specimens were collected."

Rhyacophila nurga Oláh, 2016

Rhyacophila nurga Oláh, 2016 in OLÁH & BESHKOV (2016: 98): "Holotype: Montenegro, Pivska Planina, Crkvicko Polje, near Rudine Village, 1117 m, N43°19'48"; E018°53'41", 7.VIII.2015, leg. S. Beshkov & A. Nahirnic (male, OPC)."

Diagnosis – OLÁH & BESHKOV (2016: 98): "A member of the *Rhyacophila pascoei* new species complex. Differs from *R. diakoftensis* Malicky, 1983 by having longer dorsal apical lobe on segment X; apical lobe narrow tapering, not broad middle; cerci very long, not the shortest in the species complex, like at *R.*

diakoftensis; epiproct long, not short; configuration of the tripartite aedeagus different.”

Etymology – “*Nurga*, from “nyurga”, slender or elongate in Hungarian with reference to the elongate apicodorsal process of segment IX, cerci, paraproct and epiproct.”

Rhyacophila obtusa Klapálek, 1894

Rhyacophila obtusa Klapálek, 1894: 492–493: “Three ♂ at a brook in Dragalevci flowing from the Vitosa Mountains near Sophia, 22nd July (1893).”

Rhyacophila olahorum Oláh, 2016

Rhyacophila orghidani Botoșăneanu, 1952: Schmid (1970: 66): the new drawing was prepared not from the holotype of *R. orghidani*, but from the here distinguished and described closely related sibling, *R. olahorum* sp. n. as detectable from the lateral view of the harpago. Misidentification.

Rhyacophila orghidani Botosaneanu, 1952: Malicky (1983: 6, 2004: 7): reproducing the erroneous drawing of Schmid. Misidentification.

Rhyacophila olahorum Oláh, 2016 in Oláh & Beshkov (2016: 91): “Holotype: Romania, Munții Apuseni, Munții Gilăului, Stațiunea Muntele Băișorii, spring stream of Vadului, N46°31.954', E23°16.852', 1552 m, 26.V.2013, singled, leg. J. Oláh, E. Bajka, Cs. Balogh & G. Borics (male, OPC). Allotype: same as holotype (female, OPC). Paratypes: Romania, Munții Apuseni, Someșul Cald Gorge, 1143 m, 5–15.VI.1999, leg. L. Újvárosi (8 males, 8 females, OPC); Munții Apuseni, Cetatea Radusei, 14.VI.1999, leg. L. Újvárosi (1 male, OPC); Munții Apuseni, Someșul Cald Gorge, 1143 m, 10.VI.2007, leg. M. Bálint (1 male, OPC). Munții Apuseni, Munții Gilăului, Stațiunea Muntele Băișorii, three-branched stream, N46°30.701', E23°16.279', 1620 m, 19.VI.2013, singled, leg. J. Oláh, Cs. Balogh & S. Fekete (1 male, OPC); Munții Apuseni, Munții Gilăului, Muntele Mare, spring stream area of Valea Mare, 1826 m, 19.VI.2013, singled, leg. J. Oláh, Cs. Balogh & S. Fekete (1 male, OPC). Munții Apuseni, Masivul Vlădeasa, Stâna de Vale, Pastravariei stream, N46°41.676', E22°38.027', 1277 m, 6.VI.2015, leg. M. Kiss, J. Oláh & L. Szél (12 males, 4 females, OPC); Munții Apuseni, Masivul Vlădeasa, Stâna de Vale, small stream, crossing road to Culmea Baia Popii, N46°40.452', E22°38.045', 1335 m, 6.VI.2015, leg. M. Kiss, J. Oláh & L. Szél (3 males, OPC); Munții Apuseni, Masivul Vlădeasa, Stâna de Vale, upper section of Jád stream, N46°41.5', E22°36.725', 1135 m, 5.VI.2015, leg. M. Kiss, J. Oláh & L. Szél (3 males, OPC); Munții Apuseni, Masivul Vlădeasa, Stâna de Vale, upper section of Jád stream, N46°41.867', E22°36.666', 1075 m, 5.VI.2015, leg. M. Kiss, J. Oláh & L. Szél (5 males, OPC); Munții Apuseni, Masivul Vlădeasa, Stâna de Vale,

Galbenele stream, N46°40.809', E22°37.147', 1180 m, 7.VI.2015, leg. M. Kiss, J. Oláh & L. Szél (12 males, 8 females, OPC); Munții Apuseni, Masivul Vlădeasa, Stâna de Vale, upper section of Ciripa stream, N46°40.546', E22°38.515', 1360 m, 6.VI.2015, leg. M. Kiss, J. Oláh & L. Szél (36 males, 13 females, OPC); Munții Apuseni, Cheile Someșului Cald, spring area, N46°37'59.77", E 22°42'39.64", 1247 m, 20.V.2015, leg. Cs. Balogh (26 males, 1 female, OPC); Munții Apuseni, V. Cuciulata, spring stream near Piatra Grăitoare, N46°38'38.41", E 22°41'40.62", 1521 m, 20.V.2015, leg. Cs. Balogh (9 males, OPC); Munții Apuseni, Munții Gilăului, Stațiunea Muntele Băișorii, Muntele Mare (Öreghavas), Iara (Jára) spring area, N46°28.914', E23°13.294', 1750 m, 19.VI.2015, singled, leg. J. Oláh, Cs. Balogh & P. Juhász (1 male, 2 females, OPC); Munții Apuseni, Munții Gilăului, Stațiunea Muntele Băișorii, Muntele Mare (Öreghavas), Crețoaia spring area (Posaga tributary), N46°28.862', E23°13.921', 1750 m, 19.VI.2015, singled, leg. J. Oláh, Cs. Balogh & P. Juhász (1 male, OPC)."

Diagnosis – OLÁH & BESHKOV (2016: 91): "In dorsal profile of segment X the apical excision is deep and wide, not shallow and narrow. Ventral lobe of harpago parallel-sided with obliquely truncate apex, not gradually tapering. Apex of the dorsal process of the phallosome quadrifid, not trifid. Apical margin of the posterior process of the vaginal sclerite complex truncate, not bifid."

Etymology – "This beautiful species is named for all Vlach peoples of Illyrian-Thracian-Dacian origin scattered today as Aromans in Albania, Bulgaria, Bosnia-Herzegovina, Croatia, Greece, Republic of Macedonia, Serbia and as well as Romanians in Romania. In Hungarian language Vlach is pronounced as Oláh to lessen consonant dominance. Consequently named also for all Hungarian nominate Oláh families populated the Carpathian Basin, especially the Munții Apuseni, the habitats of *Rhyacophila olahorum* sp. n. and its surroundings from the Middle Ages, including the ancestors of the first author."

Rhyacophila orghidani Botoșăneanu, 1952

Rhyacophila orghidani BOTOȘĂNEANU, 1952b: 721–723: " *Rhyacophila orghidani* n. sp. a fost descoperită de noi în cursul verii anului 1951; 6 ♂ și 2 ♀ au fost capturate în imediata apropiere a unei cascade cu apă puternic incrustantă (afluent al Arieșului mic) în limitele satului Vidra de Jos, Munții Apuseni."

Notes – OLÁH & BESHKOV (2016: 94): "Dorsal profile of apical margin of segment X with small mesal excision delimited by small lateral triangular lobes. Ventral lobe of harpago gradually tapering. Dorsoventral profile of heavily sclerotized head of dorsal process of phallosome trifid; mesal arm long and pointed. Apical margin of posterior process of vaginal sclerite complex bifid, not truncate."

Rhyacophila pirinica Kumanski, 1980

Rhyacophila pirinica KUMANSKI, 1980: 197–198, 203: “Holotype ♂: Pirin Mts., hostel “Pirin” (1600 m a.s.l.), 27.VI.1979 (leg. A. Popov), in the National Natural History Museum, Sofia.”

Rhyacophila pseudotristsis Kumanski, 1987

Rhyacophila pseudotristsis KUMANSKI, 1987a: 17–21: “Pirin Mts.: Circus Banderiski, the outlet of the Greater Banderiski-lake (ca. 2250 m a.s.l.), 22.IX.1967, Holotype ♂ and 3♂ and 2♀ paratypes (2 pairs in copula), leg. K. Kumanski; brooklet below the Muratovi-lakes (ca. 2300 m a.s.l.); 22.IX.1967, 6♂ and 3♀ paratypes (of them 2♂ and 2♀ in collection of Dr. O. Nybom, Imatra, Finland, labelled as *Rh. tristis* by me); river Banderiska above the tourist home “Vihren” (2063 m a.s.l.), 21.IX.1967, 7♂ and 5♀ paratypes, leg. K. Kumanski, at light; brooklet below the peak Vihren, 27.VIII.1979, 6♂ and 2♀ paratypes (of them 2♂ in collection of Dr. S. Smith, Washington, USA, labelled as *Rh. tristis* by me), leg. P. Beron; Circus Demianiski, river Demianiska (2000–2200 m a.s.l.), 8.X.1976, 6♂ and 2♀ paratypes, leg. K. Kumanski; small lake below the Popovo-lake (2200 m a.s.l.), 28.VII.1978, 2♂ paratypes, leg. K. Kumanski. Rila Mts.: “The Seven Lakes”, Circus the outlet of the 4th lake (ca. 2250 m. a.s.l.), 9.VIII.1969, 1♂ paratype, leg. A. Ianev; Elenski-lake (2470 m. a.s.l.), 21.VIII.1972, 5♂ paratypes, leg. P. Beron; small brooklet with hygropetric niches, right tributary of Cena-river above Smoljan (ca. 1100 m a.s.l.), 17.VII.1971, 1♂ paratype, leg. K. Kumanski. Stara Planina Mts.: right tributary of Lesnica-river, ca. 10 km above Iasenova-village (ca. 950 m a.s.l.), 20.VI.1984, 2♂ paratypes, leg. K. Kumanski (together with a large series of the proper *Rh. tristis*). If not otherwise stated, all the types are preserved in the collection of the National Natural History Museum, Sofia.”

Rhyacophila schmidinarica Urbanič, Krušnik et Malicky, 2000

Rhyacophila schmidinarica URBANIČ, KRUŠNIK et MALICKY, 2000: 17–18: “Holotype ♂: Slovenia, Podplana, 19.V.1983, leg. I. Kos, coll. Krušnik. Paratypes: Podplana, 22.V.1983, 1♀; Zlebica, 11.V.1983, 1♂; 29.V.1983, 1♀; 5.VI.1983, 1♂; all leg. I. Kos, coll. Krušnik. Paratype: Crna Gora, Durmitor, Tara, 13.VII.1981, 1♂, leg. I. Sivec, coll. Malicky.”

Rhyacophila trescavicensis Botoșăneanu, 1960

Rhyacophila trescavicensis BOTOȘĂNEANU, 1960a: 265–266: “8♂ et 3♀ de Trescavica 18–20.VII.1955, que j’ai désigné comme holotype ♂, allotype ♀ et paratypes ♂ et ♀; holot. ♂ + allot. ♀: F. Schmid; 1 ♂ parat.: Deutsches Entomologisches Institut, Berlin; 5♂+2♀ parat.: L. Botoșăneanu.”

Rhyacophila vranitzensis Botosaneanu et Marinković-Gospodnetić, 1967

Rhyacophila vranitzensis BOTOSANEANU et MARINKOVIĆ-GOSPODNETIĆ, 1967: 1149–1151: “Nous avons eu a notre disposition 6 ♂ et 4 ♀ en provenance des localités suivantes de Bosnie: Mont Vranitza, ruisseau, 12 août 1956; Mont Bjelachnitza, Chavnitzi, ruisseau, 23 juin 1957; rivière Miljacka a Mokro, 24 juillet 1964; le holotype ♂ et allotype ♀ ont été choisis parmi les exemplaires de cette dernière localité, ils sont conservés dans la collection M. Marinković; un paratype ♂ de Miljacka dans la coll. F. Schmid et un autre dans la coll. L. Botosaneanu.”

GLOSSOSOMATIDAE

Glossosoma Curtis, 1834

Glossosoma bunae Marinković-Gospodnetić, 1988

Glossosoma bunae MARINKOVIĆ-GOSPODNETIĆ, 1988: 42–45: “Za sada jedino poznato nalazište *Glossosoma bunae* je izvorište reke Bune u blizini Mostara. Svi primerici *Glossosoma discophorum*, koji su nalaženi u Buni, u radu Marinković-Gospodnetić (1978) pripadaju vrsti *Glossosoma bunae* n. sp. Ova vrsta je i kasnije tu nalažena, kako u prolećnim mesecima (naročito u maju i junu), tako i u jesen (u septembru, oktobru i novembru). Holotip mužjaka, alotip ženke i paratipovi mužjaka i ženke nalaze se u autorovoj kolekciji.”

Glossosoma discophorum Klapálek, 1902

Glossosoma discophorum Klapálek, 1902: 165–166: “Stolac (Winneguth) 2♂ und 2♀.”

Glossosoma discophorum Klapálek, 1902: BOTOSANEANU (1995: 62): “The only Romanian records for this species being from the Apușeni Mountains and from the Eastern Carpathians, it is not uninteresting to mention its presence also in the Southern Carpathians (20.VIII.1973, Retezat mountains: Gura Zlata, 1♂, leg. Eleonora Erhan-Dinca) as well as – with a slight doubt – in Oltenia (30–31. VII.1971, Runc-Gorj, various springs, 2♀♀, leg. L. Botosaneanu).”

Glossosoma neretvae Marinković-Gospodnetić, 1988

Glossosoma neretvae MARINKOVIĆ-GOSPODNETIĆ, 1988: 45–47: “*Glossosoma neretvae* n. sp. je nalažena samo u reci Neretvi i to na deonici od Vrapčića ispred Mostara do Doljana (kod Metkovic). Odrasli oblici nalaženi su dva puta godišnje, u proleće (april, maj, juni i početak jula) i u jesen (septembar, oktobar i novembar). U radu Marinković-Gospodnetić (1978) oznacena je imenom

Glossosoma neretvanus sp. n. (ali nije opisana ni ilustrovana). Holotip mužjaka, alotip ženke i paratipovi mužjaka i ženke nalaze se u autorovoj kolekciji.”

Agapetus Curtis, 1834

Agapetus belareca Botoșăneanu, 1957

Agapetus belareca BOTOȘĂNEANU, 1957*b*: 188–189: “Première moitié de juin 1956. Material pris à la lumière d’une lampe Petromax, à Mehadia (Banat); il provient probablement de la rivière de Belareca. Holotype ♂ dans les collections du Rijksmuseum van Natuurlijke Historie de Leyde. Paratype ♂ dans la collection de l’auteur. Material en alcool.”

Agapetus kampos Oláh, 2013

Agapetus kampos Oláh, 2013 in OLÁH & KOVÁCS (2013: 111–112): “Holotype. Montenegro, Bar municipality, Rumija Mts, Sutorman, Basa spring, N42° 09’25.6”, E19°06’06.3”, 770 m, 26.05.2013, leg. P. Juhász, T. Kovács, G. Magos, G. Puskás (1 ♂, OPC). Allotype. Same as holotype (1 ♀, OPC). Paratype. Same as holotype (1 ♂, OPC).”

Diagnosis – OLÁH & KOVÁCS (2013: 111–112): “Its characteristic bifid hook-headed structure of the phyllic organ differentiates this species from all the known European species.”

Etymology – “*Kampos* from “kampós” (= hooked) in Hungarian, refers to the hopoked head of the phallic organ.”

Agapetus montanus Kumanski, 1985

Synagapetus montanus KUMANSKI, 1985*b*: 76–79: “Pirin Mt., Kamenischki Circus, small torrent following in the Great (3rd) Kamenischko-Lake (ca. 2200 m a.s.l.), 21.VII.1968, 6 mature pupae (3♂♂), one immature pupa, 2 praepupae and 3 larvae; Rila Mt., tributary of Malyovishka River, 11.VII.1962, 1♂ and 1♀ (leg. Novak). Holotype male chosen among the mature pupae from Pirin. The other mature pupae and the adults from Rila designated as paratypes. All specimens kept in the collection of the National Natural History Museum, Sofia.”

Agapetus montanus Kumanski, 1985: the genus *Synagapetus* was lowered to subgeneric rank by Ross (1956: 144–149, 158–163).

Agapetus rectigonopoda Botoșăneanu, 1957

Agapetus rectigonopoda BOTOȘĂNEANU, 1957*a*: 63–64: “Dragan-Tal (Bihar-Gebirge); 23.VI.1953. Iada-Tal (Bihar-Gebirge); 29.VII.1953. Holotypus ♂ (SMF N4), Paratypoide: ♀ (SMF N5) und ♂♀ (Sammlung des Verfassers), in Alkohol.”

Agapetus slavorum Botoșăneanu, 1960

Agapetus slavorum BOTOȘĂNEANU, 1960a: 268–269: “J’ai eu à ma disposition 2♂ et 2♀ de Trnovo, 23.VII.1955, qui ont été désignés comme holotype ♂, allotype ♀, paratype ♂ et paratype ♀. Holot. ♂ allot. ♀; F. Schmid, 1♂+1♀ parat.; L. Botoșăneanu”.

HYDROPTILIDAE

Allotrichia McLahlan, 1880

Allotrichia marinkovicae Malicky, 1977

Allotrichia marinkovicae MALICKY, 1977: 66–67: “Holotypus ♂ und zwei Paratypen ♂♂: Hercegovina, Mostar, 26.VII.1916. Ferner (nicht als typen festgelegt, aber vermutlich dazugehörig) von ebendort: 1♀ vom 12.VII.1916 und 2♀♀ vom 27.VII.1916. Alle in coll. Naturhistorisches Museum Wien.”

Ithytrichia Eaton, 1873

Ithytrichia bosniaca Murgoci, Botnariuc et Botoșăneanu, 1948

Ithytrichia bosniaca MURGOCI, BOTNARIUC et BOTOȘĂNEANU, 1948: 2–22: “La nouvelle espèce d’*Ithytrichia* a été trouvée en grand nombre dans les eaux courantes presque partout où l’on a récolté ce matériel: dans la Bosna (30/VII et 17/VIII 1947) à quelques kilomètres en aval de la gare de Kakany en face du village du même nom, sur le gravier qui couvre le lit du fleuve et, surtout sur le *Potamogeton fluitans* qui se développe en abondance dans certains endroits tranquilles du fleuve: 2) dans le ruisseau Rybnica (3/VIII.1947; T° de l’eau 17°) affluent de la Bosna près du village Kakany; 3) dans la Lashva (12/VIII.1947; T° de l’eau 18°) affluent gauche de la Bosna et 4) dans la Kusica (21/VIII.1947; T° de l’eau 18°) affluent droit de la Lashva.”

Hydroptila Dalman, 1819

Hydroptila angulifera Kumanski, 1974

Hydroptila angulifera KUMANSKI, 1974: 71–74: “Rhodope, la rivière Trigradska, juste avant sa confluence avec la rivière Tchairska (environ 800 mètres d’altitude), 2.VIII.1970, 5 paratypes (4♂ et 1♀, nymphes) et 16 fourreaux vides; 20.VII.1971, 1♂ (Holotype) et 33 paratypes (17♂, 1♀ et 15 nymphes mures dont 8♂ et 7♀). Holotype, 2♂ (1 adulte et 1 nymphe in sec) et 1♀ paratypes (in sec) fixés sur trois préparations microscopiques et les autres exemplaires – en alcool, sont gardés dans la collection de l’Institut Zoologique et Musée près l’Académie Bulgare des Sciences, à l’exception d’un ♂ paratype envoyé à la collection du D. H. Malicky, Station biologique près l’Académie des Sciences de l’Autriche, Lunz am See.”

Hydroptila atalante Malicky, 1997

Hydroptila atalante MALICKY, 1997: 147: "Holotypus ♂ und 5 Paratypen ♂♂: Bulgarien, Strandscha-Gebirge, 1 km S Kruschewez, 100 m, 18.VI.1980, leg. Kumansky & Malicky, Sammlung Malicky, Lunz am See & Nationales Naturwissenschaftliches Museum, Sofia."

Hydroptila kalonichtis Malicky, 1972

Hydroptila kalonichtis MALICKY, 1972: 30–31: "Holotypus ♂: Kreta, Kalonichtis, 24.IV.1971, leg. Malicky, Allotypoid ♀ und Paratypoide ♂♂, ♀♀ mit den selben Daten. Zahlreiche weitere Paratypoide von drei weiteren Fundorten in Kreta. Alle in meiner Sammlung."

Hydroptila bureschi KUMANSKI, 1972: 1261–1263: "Balkangebirge, kleiner Bach, Nebenfluss des Iskar beim Dorf Bov, 1.VII.1962, Holotypus ♂ (leg. Dr. K. Novak); Rhodopen-Gebirge, Fluss Trigradska, 3 km unterhalb des Dorfes Trigrad, 2.VIII.1970, 1 ♂ Paratypes. Holotypus- und Paratypusmikroskoppräparate in der vom Autor zusammengetragenen Sammlung des Zoologischen Instituts und Museums der Bulgarischen Akademie der Wissenschaften." Synonymised by BOTOSANEANU & MALICKY (1978b).

PHRYGANEIDAE

Phryganea Linnaeus, 1758

Phryganea ochrida Malicky, 1975

Phryganea ochrida MALICKY, 1975: 85: "Holotypus ♂ und drei Paratypen ♂♂: Makedonien, Ochrid, 8.VII.1973, leg. R. Willmann, in meiner Sammlung. Paratypus ♂: Ochrid, "V 1.1835" (vermuthlich richtig: 1.V.1935), leg. Wolfschlaeger, coll. Oberösterreichisches Landesmuseum Linz; Paratypus ♂: Ochrid, 24.VI.1954, leg. Thurner, coll. Hoelzel, Graz."

BRACHYCENTRIDAE

Micrasema McLachlan, 1876

Micrasema sericeum Klapálek, 1902

Micrasema sericeum Klapálek, 1902: 164–165: "Pazaric, Krupthal 3 ♂ (Winneguth), Stolac (Winneguth) 2♀."

LEPIDOSTOMATIDAE

Crunoecia McLachlan, 1876

Crunoecia bosniaca Marinković-Gospodnetić, 1971

Crunoecia bosniaca MARINKOVIĆ-GOSPODNETIĆ, 1971a: 84: "Southeast Bosnia, the small forest springs of tributaries of the Sutjeska, between Tjentiste and Curevo". MARINKOVIĆ-GOSPODNETIĆ (1971: 144): "Southeast Bosnia, ♂♂ ♀♀ in small forest springs on the mountain Maglic."

Crunoecia monospina Botoșăneanu, 1960

Crunoecia monospina BOTOȘĂNEANU, 1960a: 286–287: "J'ai eu à ma disposition 3♂ de Perister 12–16.VIII.1955, que j'ai désigné comme holotype ♂ et paratypes ♂; holot. ♂: F. Schmid; parat. ♂: Deutsches Entomologisches Institut, Berlin; parat.: L. Botoșăneanu."

UENOIDAE

Thremma McLachlan, 1876

Thremma anomalum McLachlan, 1876

Thremma anomalum MCLACHLAN, 1876: 266: "Greece (Parnassus, Krüper, 12th June); one pair in the Vienna Museum."

APATANIIDAE

Apatania Kolenati, 1848

Apatania carpathica Schmid, 1954

Apatania carpathica SCHMID, 1954: 11–12: "Cette espèce a été signalé des Carpathes par Dziędzielewicz, sous le nom de *meridiana*. Elle est très voisine de cette dernière forme et s'en distingue principalement par la forme du corps du Xme segment. J'en ai vu 1♂ et 2♀, que je désigne comme holotype (♂), allotype (♀) et paratype. Ils ont été capturés à Czarnohora et sont actuellement dans ma collection."

Apatania szczesnyorum Oláh, 2006

Apatania szczesnyorum OLÁH, 2006: 11–12: "Holotype male: Poland, Polish Tatras, Chocholowska Valley, 22. VIII. 1986, net leg. J. Oláh. Habitat. The adult animal was resting on *Carex* canopy in a small stream-fed bog at the entrance of a side valley in the middle section of Dolina Chocholowska. This small bog was maintained by the tributary of the side valley. The stream water was spreading and ending in this bog. This rare animal was accompanied with *Apatania fimbriata* Pictet, which is an abundant species living in larger streams and small tributaries of the whole Tatras. In this valley it was also just some minutes of sweeping effort to collect 27 males."

LIMNEPHILIDAE

Drusinae

Drusus Stephens, 1837*Drusus arbanios* Oláh, 2010

Drusus arbanios OLÁH, 2010: 98–100: “Holotype, male, HNHM. Albania: Skrapar district, Ostrovicë Mts, Backë, stream beneath the pass between Mt. Frengu and Mt. Faqekuq, 1913 m, N40°31.614', E20°25.021', 4.VII.2005, leg. Z. Barina, D. Pifkó & D. Schmidt.”

Diagnosis – OLÁH (2010: 98–100): “This dark species with almost ebony black sclerites belongs to the species complex with large upward arching triangular gonopods and triangular or bilobed cerci inhabiting the Balkan Mountains. Most close to *Drusus illyricus* sp. n., but differs by having (1) small animal with forewing length of 8 mm, not large animal of 14 mm; (2) posterodorsal spinate area on VIIIth tergite four-lobed in dorsal view, not trilobed; (3) the longitudinal groove of IXth segment linear, not with ventral arm; (4) cerci with dorsal lobe quadratic, not tapering in lateral view; (5) inner branch of paraproct forming an almost regular quadratic plate in lateral view, not supplied with a dorsal pronounced subapical wart-shaped process.”

Etymology – “The name was given to remind the old ancient city of Arbon and his people the Arbanios, nearby the type locality.”

Drusus balcanicus Kumanski, 1973

Drusus discophorus Radovanović, 1942: KUMANSKI (1971: 102): “Stara Planina, below “Tdza” (1500 m), 17. V. 1968, leg. P. Beron (3♂, 1♀).” Misidentification.

Drusus discophorus balcanicus KUMANSKI, 1973a: 113–114: “Die Fundorte der neuen subspecies befinden in dem Zentral-Balkangebirge: Berghütte “Taza” (1500 m Höhe), 17.V.1968, 3♂ und 1♀; Bach bei der Berghütte “Raj”, 1♀ und subalpiner Bach (1900–2000 m Höhe), rechter Zufluss des Baches Taza, 10.VI.1971, massenhaft anzutreffen (insgesamt 43♂ und 10♀ gesammelt.”

Drusus discophorus balcanicus Kumanski, 1973: KUMANSKI & MALICKY (1976: 104): “Stara Planina, Teteven, Beli Vit, Ribariza und Nebenbache, 600 m, 15–18.V.1969, 1 male. Stara Planina, Trojan Pass, Einzugsgebiet des Tscherni Osam, 1400–1600 m, 20.V.1969, 2 females.”

Drusus balcanicus Kumanski, 1973: KUMANSKI (1981: 142): raised to species status.

Diagnosis – KUMANSKI (1973a: 113–114): “In allgemeinen Linien nach dem Bau von *D. discophorus discophorus* konstruiert.”

Drusus bosnicus Klapálek, 1899

Drusus bosnicus Klapálek, 1899b: 327–329: “Ilidže i Vrelo Bosne (Apfelb.), Pazarič, Dolina Krupe, 3. novembra 1898. (Apfelb.)”

Drusus bosnicus Klapálek, 1899: Klapálek (1900: 674–675): “Ilidže und Vrelo Bosna (Apfelb.), Pazarič, Krupathal, 3. November 1898 (Apfelb.).

Drusus bosnicus Klapálek, 1899: Schmid (1956: 31–32): “Cette espèce a été décrite de Bosnie; M. Radovanović l’a signalée de Sarajevo. J’ai étudié un assez grand nombre d’exemplaires que j’ai capturés à mi-juillet en Bosnie au massif de Treskavitz.”

Drusus bosnicus Klapálek, 1899: Oláh *et al.* (2017: 95): “Bosnia & Herzegovina: Federation of Bosnia and Herzegovina, Sarajevo, Ilidža, Bosna springs, 43°49’08.4”, 18°16’09.4”, 645 m, 2.X.2015, leg. P. Juhász & T. Kovács (26 males, 14 females, OPC)”

Diagnosis – Klapálek (1900: 675): “Die Analanhänge dieser Art zeigen eine grosse Aehnlichkeit mit den homologen Theilen des *Dr. monticola*, und ich würde es nicht wagen sie als eine distincte Art zu beschreiben, wäre nicht der Unterschied in der Färbung und in der Form der Discoidalzelle so auffallend; auch die Form der oberen Anhänge ist etwa verschieden.”

Schmid (1956: 32): “*Dr. bosnicus* est sans doute l’espèce la plus évoluée du groupe; ceci est visible à ses appendices de forme très spécialisée: IX^e segment concave latéralement, appendices inférieurs très divergent, appendices intermédiaires formant une assez grande surface propoageant la zone spinulifera.”

Kučinić *et al.* (2015): larval head shape relates *D. bosnicus* to *D. ramae*, although the present efforts in larval research focus rather on morphological separations than on phylogenetic relations. Surprisingly recent molecular study suggested two different species from the *Drusus bosnicus* species group coexisting in the spring area of Bosna River, but so far, there was no any records of adult of last instar larvae of this possible new species. The fine structure analysis carried out on the paraproct, paramere and vaginal sclerite complex of 26 males and 14 females, collected in the autumn of 2015 in the spring area of Bosna River, has demonstrated the presence of only a single species: *Drusus bosnicus*.

Drusus botosaneanui Kumanski, 1968

Drusus botosaneanui Kumanski, 1968a: 214–216: “Fundort: Vitosa-Gebirge, Bojanski-Bach bei der Berghütte “Bor” (1600 m Höhe), 3.IX.1967. Holotypus (mit getrenntem Abdomen) und 2 Paratypen (alles in alcohol) in der Sammlung des Autors.”

Diagnosis – Kumanski (1968a: 214–216): “*Drusus botosaneanui* gehört zur Gruppe von *annulatus* (nach Schmid, 1956) und steht *tenellus* am nächsten.”

Drusus brunneus Klapálek, 1898

Drusus brunneus Klapálek, 1898a: 489: "Mehádia, Corniareva, Marmaros, Boroszno. 6♂, 4♀."

Drusus brunneus Klapálek, 1898: Klapálek (1899a): 434–435, 489: *Drusus brunneus* Klapálek, 1898: Schmid (1956: 48–49): "Cette espèce est localisée dans les montagnes de l'Europe orientale: j'ai vu une dizaine d'individus, provenant de Hongrie et de Roumanie."

Diagnosis – Klapálek (1898: 489): "Habituell dem *D. Muelleri* sehr ähnlich." Klapálek (1899: 434–435): "Obwohl diese Art durch ihr Aeusseres stark an den *Drusus Muelleri* erinnert, so lässt sie sich durch die Genitalanhänge sogleich von demselben unterscheiden."

Schmid (1956: 49): "*Dr. brunneus* est caractérisé par ses deux paires d'ailes brun-jaune foncé, par ses appendices intermédiaires armés de deux pointes très petites, par le corps du X^e segment proéminent et par ses appendices inférieurs assez petits et peu velus."

Drusus bureschi Kumanski, 1973

Drusus bureschi Kumanski, 1973a: 114–117: "Östliche Balkangebirge, a) Eleno-Twardischki-Pass (1000 m Höhe), 25.V. 1969, 1♂ (leg. Al. Popov); b) Längs eines kleinen Berbaches, 4 km östlich vom Pass und c) Bei einem ungestümen Bergbach, am Beginn des Twardischka-Baches (eines Zuflusses der Tundza), ungefähr 10 km östlich von Pass, 12.VI.1971, insgesamt 3♂ und 4♀; d) Balkangebirge bei der Stadt Sliwen, Örtlichkeit Karandilja, 21.V.1969, 1♂ (leg. Al. Popov). Als Typusexemplar bezeichnete ich ein ♂ von Fundort c). Dasselbe sowie auch die übrigen Exemplare sind in Alkohol in der Sammlung des Zoologischen Instituts mit Museum bei der Bulgarischen Akademie der Wissenschaften aufbewahrt."

Drusus bureschi Kumanski, 1973: Kumanski (1975: 63): Bulgaria, Stara Planina, Sliven, 4. VII. 1911, 1 male. Bulgaria, Below Raj, Basmandra, 1800 m, 22. VIII. 1970, 32 female.

Drusus bureschi Kumanski, 1973: Kumanski & Malicky (1976: 105): Bulgaria, Stara Planina, Sliven, Oberlauf der Stara Reka, 500–800 m, 22. V. 1969, 1 male. Bulgaria, Stara Planina, Sliven, Tundscha-Einzugsgebiet mit Nebenbächen, 300–600 m, 23. V. 1969, 1 male.

Diagnosis – Kumanski (1973a: 114–117): "Nach vielen ihrer Merkmale steht die neue Art *D. discophorus* ziemlich nahe; letztere galt als eine in dem Rahmen der Gattung isolierte Art (Schmid, 1956). Die Affindung ihrer Unterart *balcanicus* in der Balkangebirgen sowie auch das Antreffen von *D. bureschi* erlaubt die Vereinigung der drei Taxa in eine neue Gruppe – die Gruppe von *discophorus*. Die Zusammengehörigkeit dieser Gruppe beruht bei den ♂ auf

dem Vertiefung der dorsalen Oberfläche des VIII. Tergiten, dem Gleichen Aussehen der App. Inferiores und dem gemeinsamen Schema des X. Segments mit App. Intermediales und bei den ♀ auf der allgemeinen Ähnlichkeit der Genitalstrukturen. Die Eigenheiten, die *D. bureschi* individualisieren, sind folgende: eine breite zona spinulata am VIII. Tergit; die eigenartige Form und die weit entfernten Spitzen der App. Intermediales bei den ♂ und die zugespitzten seitlichen Teile des X. Segments bei den ♀.

Drusus buscatensis Botoșăneanu, 1960

Drusus buscatensis BOTOȘĂNEANU, 1960: 369–370: “Holotypus ♂: Băișoara – Muntele Buscat (Rumanische Westliche Karpaten – Munții Apuseni); Neben einer Quelle, 21.V.1956 (leg. Kiss Béla, Sammlung L. Botoșăneanu). Paratypus ♂: selber Ort, 16.V.1956 (leg. L. Botoșăneanu, Sammlung F. Schmid).”

Drusus buscatensis Botosaneanu, 1960: BOTOSANEANU (1975: 97–98): “*Drusus buscatensis* Bots. ist einerseits vom Apuseni-Gebirge, andererseits vom Cibin- oder Cindrel-Gebirge (Südkarpaten) bekannt. Frühlingsart (Mai); lebt in Quellen und Bächlein in der Fichtenwaldzone (etwa 1400–1600 m).

Drusus buscatensis Botoșăneanu, 1960: L. Újvárosi (pers comm.) has collected 1♂ near the locus typicus (RO, Cluj county, Apuseni, Muntele Băișorii, Buscat, springs 46.537505°N, 23.291260°E, 1529 m, 12.V.2012) and 1♂ near Paltinis, Munții Cindrel (RO, Sibiu county, Southern Carpathians, Complex Paltinis, Cibin, Batrana springs 45.620050°N, 23.893600°E, 1720 m, 2.VI.2010).

Diagnosis – BOTOSANEANU (1975: 97–98): “Sicherlich nahe mit *D. doehleri* verwandt, die ihre Schwesterart ist. Es wäre interessant zu wissen, wann und unter welchen Umständen die Art aufsplitterung stattgefunden hat.”

Drusus carpathicus Dziędzielewicz, 1911

Drusus carpathicus DZIĘDZIELEWICZ, 1911a: 206–209: “In Karpathibus Orientalibus in regione alpina (Pini Mughii) apud fontes. Mons Chomiak 27.V. – 11.VI.1909 (supra 1300 m. s. m.). Czarnohora in montibus Dancerz et Howerla 30.V.1909. – 10.VI.1910.”

Drusus carpathicus Dziędzielewicz, 1911: SZCZĘŚNY (1980): specimen in NHM-ISEA: 1♂; this specimen is labelled with the following notes: “Czarnohora, Dancerz 31.V.1911” and “*Drusus carpathicus* Dz. ♂ ver. C. Tomaszewski”, and is registered in the inventory under number 8/25. DZIĘDZIELEWICZ (1911) described the species on the basis of specimens collected “near the summit of Chomiak by springs of the stream Roskowski during the period 27.V.-11.VI.1909 and at Czarnohora near Howerla and Dancerz on the days 30.V.1909 and 10.VI.1910”. Dziędzielewicz also noted that all the specimens collected in this

period were deposited in the museum at Lvov. Therefore the male deposited at Cracow does not belong to this series of specimens which enabled Dziędzielewicz to describe a new species, nevertheless it does come from the “locus typicus”.

Drusus carpathicus Dziędzielewicz, 1911: SZCZĘSNY & GODUNKO (2007): “3♂♂, 3♀♀; East Carpathians, Czarnohora Massif, Gorgany Massif (Chomiak); 1♂ and 1♀ collected on slopes of Chomiak Mt, 3.VI.1909 and 11.VI.1909, respectively (No E24.12.06.04/02 and 03), and 1♀ caught 9.VI.1910 in the Czarnohora massif (No E24.12.06.04/01) belong to the series of specimens on the basis of which Dziędzielewicz described the species; the male from Chomiak is designated as a lectotype herein. To that series belong also several specimens stored in NMP (P. Chvojka, pers. comm.).”

Drusus carpathicus Dziędzielewicz, 1911: SZCZĘSNY & CHVOJKA (2008): altogether 2♂♂ and 4♀♀ paralectotype specimens were collected during 27.V.-11.VI.1909 in the East Carpathians (Chomiak) and deposited in NMP.

Diagnosis – DZIĘDZIELEWICZ (1911a: 206–209): “Habitu coloreque *Druso bosnico* Klap. similis. Capite nigro, in fronte et occipite nigro piloso; protorace rufo, nigro piloso; meso et metathorace nigris; abdomine griseo. Appendices praeanales maris oblongae, lappaceae, pilosae; ungues praeanales perlongi, recti, apice hamato; pedeg genitales bipartiti, in aspectu supero excavati, apice arcuato exciso, in aspectu laterali conici, paullulum curvat.”

Drusus crenophylax Graf et Vitecek, 2015

Drusus crenophylax Graf et Vitecek, 2015 in VITECEK *et al.* (2015c: 88): “Holotype. 1 male: Bosnia and Herzegovina, Cvrka river; 44°32.932'N 17°23.562'E; 393 m a.s.l.; 1. X. 2014; leg. Dejan Dmitrovic, Goran Sukalo, specimen identifier: fDsp4501M. Paratypes: 2 females: Bosnia and Herzegovina, Spring of Cvcka river, Vilenjska vrela; 44°33.003'N 17°23.580'E; 456 m a.s.l.; 12. IX. 20124; leg. Dejan Dmitrovic, specimen identifier: fDsp3401F. 4 males, 3 females, 19 larvae: Bosnia and Herzegovina, Cvrka river; 44°33.003'N 17°23.580'E; 456 m a.s.l.; 12. IX. 2012; leg. Dejan Dmitrovic, Goran Sukalo, Goran Sukalo; specimen identifier for 3 larvae: fDsp4502L, fDsp4503L, fDsp4504L. Holotype and paratypes currently in coll. W. Graf, will deposited in the Biologiezentrum des Oberösterreichischen Landesmuseums, Linz, Austria.”

Drusus crenophylax Graf et Vitecek, 2015: OLÁH *et al.* (2017: 96): “Bosnia & Herzegovina: Republika Srpska, Večići, Cvrcka river, 44°32'55.4”, 17°23'33.7”, 1.X.2015, leg. P. Juhász & T. Kovács (1 male, OPC).”

Diagnosis – VITECEK *et al.* (2015c: 88): “Males of the new species are most similar to *Drusus discophorus* Radovanović and *D. vernonensis* Malicky, but exhibit (1) subtriangular superior appendages I n lateral view, (2) subtriangular,

low tip of the intermediate appendages in lateral view, and (3) simple, rounded tips of intermediate appendages in caudal view. *Drusus discophorus* males have suboval superior appendages and a high round tip of the intermediate appendage in lateral view; *D. vernonensis* males have round superior appendages in lateral view and trilobate tips of intermediate appendages in caudal view. Females of the new species show the reduced median lobe of the vaginal sclerite and high base of the lateral lobe of segment IX as typical for Balkan *Drusinae* and most similar to *Drusus vernonensis*. Larvae of the new species are most similar to *Drusus klapeleki* Marinković-Gospodnetić and *D. serbicus* Marinković-Gospodnetić.”

Drusus croaticus Marinković-Gospodnetić, 1971

Drusus croaticus MARINKOVIĆ-GOSPODNETIĆ, 1971c: 105–107: “Sources of the river Crna Reka, Plitvice, 30m, 1f, 13. V. 1971.”

Diagnosis – MARINKOVIĆ-GOSPODNETIĆ (1971c: 105–107): “*Drusus croaticus* is, probably, a member of the group *discolor* according to the form of intermediate appendages, which are the most similar to those of *D. macedonicus* and *D. transylvanicus*.”

Drusus dacothracus Oláh, 2010

Drusus dacothracus OLÁH, 2010: 100–102: “Holotype, male, HNHM. Albania: Dibër district, Dejë Mts, Varoshit Stream and its karst cave sidespring at Shkanderbeu Cliff, W of Murrë Pass, 975 m, N41°38.792', E20°11.390', 11.X.2005, leg. T. Deli & D. Murányi. Paratypes, HNHM. Albania: Dibër district, Dejë Mts, Varoshit Stream and its karst cave sidespring at Shkanderbeu Cliff, W of Murrë Pass, 975 m, N41°38.792', E20°11.390', 13.IV.2006, leg. Z. Eröss, Z. Fehér, A. Hunyadi & D. Murányi (1 male). Dibër district, Dejë Mts, Varoshit Stream and its karst cave sidespring at Shkanderbeu Cliff, W of Murrë Pass, 975 m, N41°38.792', E20°11.390', 11.X.2005, leg. T. Deli & D. Murányi (1 male, 3 associated females). Dibër district, Lurë area, Cidhnë, aqueduct above Setë Stream in its gorge, W of the village, 780 m, N41°45.149', E20°14.732', 10.X.2005, leg. Z. Eröss & D. Murányi (1 male). Skrapar district, Ostrovicë Mts, Çeremica, brook W of the village, 1820 m, N40°32.649', E20°26.573', 5.VII.2005, leg. Z. Barina, D. Pifkó & D. Schmidt (1 male).”

Diagnosis – OLÁH (2010: 100–102): “This dark species belongs to the species complex with large upward arching triangular gonopods and triangular or bilobed cerci inhabiting the Balkan Mountains. Most close to *Drusus illyricus* sp. n., but differs by having (1) smaller size; (2) upper lobe of the trilobed spinate area on tergite VIII narrow and clearly monolobed, not broad bilobed with some mesal depressen; (3) sternal lateral suture of the fused IXth segment with-

out middle fork, not with well-developed middle ventral brach; (4) segment IX not very long ventrally; (4) cerci with dorsal lobe short triangular, not long and downward curving; (5) the ventral lobe of the cerci long triangular, not long digitiform; (6) inner branch of paraproct differently shaped both in lateral, dorsal and caudal view.”

Etymology – “The name was given to remind Dacian-Thracian origin of the Albanian people inhabiting the type locality. Three theories exist: the Illyrian, Dacian-Thracian and Pelasgian origin of the Albanians.”

Drusus dardanicus Ibrahim, Kučinić et Vitecek, 2015

Drusus dardanicus Ibrahim, Kučinić et Vitecek, 2015 in IBRAHIMI *et al.* (2015: 558–561): “Type material. Holotype (1 male) and paratypes (2 males): Kosovo: Podujeve Municipality, Shatorice Mountains, stream above Bollosice Village, 1330 m a.s.l., 43.118169°N, 20.99330°E, 11.V.2014, leg Halil Ibrahim. Holotype deposited in the department of Biology, faculty of Mathematics and Natural Sciences, University of Prishtina “Hasan Prishtina”, Prishtine, Republic of Kosovo. Paratype (3 males): Same collection and locality data, deposited in the Croatian Natural History Museum, Zagreb (coll. Kučinić -Trichoptera), Croatia. Paratypes (3 males): Same collection and locality data, deposited in the Biologiezentrum des Oberösterreichischen Landesmuseum, Linz, Austria; specimen identifiers for 2 males: fDsp4301M, fDsp4302M.”

Diagnosis – IBRAHIMI *et al.* (2015: 558–561): “Males of the new species are most similar to *Drusus discophorus*, *D. bureschi*, and *D. balcanicus*.”

Drusus discophoroides Kumanski, 1979

Drusus discophoroides KUMANSKI, 1979: 67–70: “Belassitza Mt. (South-Western Bulgaria), brooklet 1.5 km western from the mountain hostel “Belassitza” (750 m a.s.l.), 10.VI.1975, 2♂♂ (leg. Kumanski). Holotype ♂ and 1♂ Paratype in the author’s collection in the National Natural History Museum Sofia.”

Diagnosis – KUMANSKI (1979: 67–70): “*D. discophoroides* n. sp. is near to *D. discophorus* Rad. Both species have common plan of ♂ genitalia. This notwithstanding they can easily be distinguished both after the darker general colour of the new species and several details of the male genitalia: the upper appendages of *D. discophoroides* n. sp. are so small that the intermediate appendages remain wholly visible from the side; in *D. discophorus* the latter almost invisible; the upper margin of the intermediate appendages rounded in the new species and formed as an undulate horizontal line in *discophorus*; the perianal region oval rounded (*discophoroides* n. sp.) or with nearly straight side borders (*discophorus*).”

Drusus discophorus Radovanović, 1942

Drusus discophorus RADOVANOVIĆ, 1942: 184–190: “An den Quellen und Bachen am 1. und 3. Gebirgssee auf dem Jablanitza-Gebirge.” “Dieses Gebirge liegt etwa 16 km nordwestlich von Struga am Ochridsee und bildete damals das Grenzgebiet zwischen Albanien und Jugoslawien. In einer Höhe von etwa 1960 m befinden sich vier Gebirgsseen von verschiedener Grösse. Diese liegen im Bereiche der am Fusse des Gebirges gelegenen Dörfer Labuniste, Podgoratz und Vevcane und werden auch nach diesen Dörfern als Labunisko (1. Und 2. See), Podgoracko (3. See) und Vevcansko Jezero (4. See; jezero = See) genannt. Die drei erstgenannten Seen konnte ich gelegentlich meines Besuches (13.–16. VII. 1939) ziemlich eingehend trichopterologisch erforschen.” “Der 1. Gebirgssee auf der Jablanitza (“1. Labunisko Jezero”) hat eine etwa trapezförmige Gestalt und geht mit seinem nördlichen Winkel in einen gegen Labuniste abfließenden Bach über der bald danach unterirdisch verschwindet. Westlich von See, unter dem Gebirgsrücken, befinden sich einige kräftige Quellen, deren Wasser dem See zufließt. Der 3. See (Podgoracko Jezero) liegt etwa 1300 m südlich von 1. See und ist bedeutend grösser als die zwei vorher geschilderten.” “In dem Trichopteren-Material, das mir nachträglich von Herrn Winneguth aus Sarajevo zum Bestimmen nachgesandt wurde, befanden sich etliche Exemplare, die ebenfalls zu dieser Art gehören. Von diesen waren zwei Stück am Limflusse bei Andrijewitza erbeutet, und die zwei anderen (sämtlich ♂) an der Wrujaquelle bei Gusinje.”

Diagnosis – RADOVANOVIĆ (1942: 184–190): Compared to *Drusus bosnicus* and *D. graecus* among the known species in the Balkan Peninsula. “Von dieser Art [*Drusus graecus*] sowie von *Drusus bosnicus* Klap. Unterscheiden sich die Exemplare von der Jablanitza (*Drusus discophorus*) und von Labuniste (*Drusus plicatus*) nach einigen augenscheinlichen charakteristischen Merkmalen, vorwiegend nach der Form der Genitalanhänge und nach der Gestalt des 8. Tergits.”

Drusus ekes Oláh, 2017

Drusus ekes Oláh, 2017 in OLÁH *et al.* (2017: 150–151): “Holotype: Romania, Apuseni Mts., Vlădeasa Mt., Stâna de Vale, upper section of Ciripa stream, N46°40.546' E22°38.515', 1360 m, 6.VI.2015, leg. M. Kiss, J. Oláh & L. Szél (1 male, OPC). Allotype: same as holotype (1 female, OPC). Paratypes: same as holotype (12 males, OPC). Apuseni Mts., Vlădeasa Mt., Stâna de Vale, Galbenele stream, N46°40.809' E22°37.147', 1180 m, 7.VI.2015, leg. M. Kiss, J. Oláh & L. Szél (2 males, OPC). Apuseni Mts., Mt. Bihor, Gârda de Sus, tributary of Arieșul Mare, N46°270.493' E22°47.895', 788m, 29.V.2013, singled leg. J. Oláh, E. Bajka, Cs. Balogh, & G. Borics (1 male, OPC). Apuseni Mts. Munții Gilăului, Stațiunea

Muntele Băişorii, Lupinus stream, 18.VI.2013, singled leg. J. Oláh, Cs. Balogh, & S. Fekete (1 male, OPC). Apuseni Mts. Munții Gilăului, Stațiunea Muntele Băişorii, La Mocirle, spring streams, N46°30.241' E23°15.550', 1552m, 19–20. VI.2015, singled leg. J. Oláh, Cs. Balogh, & P. Juhász (1 male, OPC). Apuseni Mts., Vlădeasa Mt., Stâna de Vale, upper section of Ciripa stream, N46°40.546' E22°38.515', 1360 m, 6.VII.2016, leg. J. Kecskés (3 females, OPC). Stana de Vale, 3. VI. 1956, leg V. Cirligat (1 male, registration number TRH136/013, CCPC)."

Diagnosis – OLÁH *et al.* (2017: 150–151): "The hump on the apical margin of the paraproct, that is the only recognised paraproct divergence between *D. chrysotus* and *D. romaicus* complexes, is very decisive and pronounced at *D. ekes* sp. n. The lateral profile of the fused dorsal branches of paraproct has the flat top sloping anterad and produced posterad, similar to *D. ferdes*, differing from the lateral configuration of the other three species. The top configuration of the speciation trait of paraproct is rather stable in the sampled populations of the three main mountain ranges of the Apuseni Mts.: Vlădeasa Mt., Bihor Mt., and Gilăului Mt. The subapical spines, that is the true terminal of the paramere shaft long and armed basad with a few small tertiary spine like structures; the apparent terminalia of modified setal origin is very long and thin. This paramere pattern differs from the paramere patterns of the other three species."

Etymology – "*Ekes*", from „ékes”, supplied with wedge in Hungarian, refers to the flat top of the paraproct sloping anterad and produced posterad into a wedge shape. But "*ékes*", has the peculiar meaning of glory, an outstanding beauty, more than beautiful, thanks to the fractal nature of the Hungarian language. The given name refers to both characters, this animal is really elegant and beautiful."

Drusus fortos Ibrahimimi et Oláh, 2017

Drusus fortos Ibrahimimi et Oláh, 2017 in OLÁH *et al.* (2017: 155–157): "Holotype: Kosovo: Çakor, streamlet along the border line between Kosovo and Montenegro. 42.685542°N, 20.053636°E, 1289 m, 25.VIII.2015 leg. E. Dimitrou & V. Dragobia (1 male, DBFMNSUP). Allotype: Lloqan, Krojet e Gucise, 42.55143°N, 20.1335°E, 2110 m, 3.VIII.2016, leg. H. Ibrahimimi (1 female, DBFMNSUP). Paratypes: same as holotype (1 male hybrid, OPC). Haxhaj, spring area of a tributary of Lumbardhi i Pejës River, 42°42'30N 20°2'32E, 1278 m, 25.VIII.2015 leg. E. Dimitrou & V. Dragobia (1 male, OPC). Lloqan, Gurrat e Hasan Agës springs, Bjeshkët e Nemuna. 42.557155°N, 20.152696°E, 1991 m, 18.VIII.2015 leg. H. Ibrahimimi (1 male, DBFMNSUP). Lloqan, Gurrat e Hasan Agës springs, Bjeshkët e Nemuna. 42.557155°N, 20.152696°E, 1991 m, 3.VIII.2016, leg. H. Ibrahimimi (3 males DBFMNSUP). Lloqan, Krojet e Gucise, 42.55143°N, 20.1335°E, 2110 m, 3.VIII.2016, leg. H. Ibrahimimi (2 males OPC)."

Diagnosis – OLÁH *et al.* (2017: 155–157): “The lateral profile of the fused dorsal branches of paraproct has short dorsoapical digitiform process with medium thickness, most similar to name bearing species *D. siveci*, but differs by having variously produced hump on the apical margin of the paraproct, completely lacking at *D. siveci*; by the slightly anterad turning and tapering apex of the fused digitiform dorsoapical process, vertical and not tapering at *D. siveci*; and the very tip of the fused dorsal branches of the paraproct is entirely fused into a narrow and straight pencil-like black process without any mesal suture, that is the vestigium of the fusion surface completely disappeared as visible in caudal view, the tip is bilobed and the mesal suture is discernible both at *D. siveci* and at *D. vekon* sp. nov. The subapical spine of the paramere is robust bearing small dorsal spine or corrugations. In the sampled habitats *D. fortos* sp. nov. lives together with *D. vekon* sp. nov. with hybrid forms.”

Etymology – “*Fortos*”, from „összeforrt”, fused in Hungarian, refers to the completely fused state of the dorsoapical digitiform process of the paraproct.”

Drusus gombos Oláh, 2013

Drusus gombos Oláh, 2013 in OLÁH & KOVÁCS (2013: 112–114): “Holotype: Montenegro, Žabljak municipality, Sinjajevina Mts, Dobrilovina, forest stream at the monastery, N43°01.652', E19°24.086', 765 m, 25. V. 2013, leg. P. JUHÁSZ, T. KOVÁCS, G. MAGOS, G. PUSKÁS (1♂, OPC). Allotype. Same as holotype (1♀, OPC). Paratypes. Same as holotype (2 ♀, OPC).”

Diagnosis – OLÁH & KOVÁCS (2013: 112–114): “This castanean brown species belongs to the species complex with large upward arching triangular gonopods inhabiting the Balkan Mountains. Most close to *Drusus klapaleki* MARINKOVIC, but differs by having cerci less slender with more bulky ventroapical corner; lateral profile of the paraproct different and female has trilobed apical margin on the anal tube in dorsal view, not bilobed; the median lobe on the vulvar scale present, not absent; the dorsal profile of the vaginal sclerite complex different.”

Etymology – “*Gombos*, from “gombos” buttom-like in Hungarian, refers to the rounded knob-shaped dorsoapical lateral processes of the paraproct.”

Drusus illyricus Oláh, 2010

Drusus illyricus OLÁH, 2010: 102–104: “Holotype, male, HNHM. Albania: Mat district, Kreshtës Mts, Vajkal, Fusha e Kaliut, brook N of the village, 1730 m, N41°32.508', E20°12.390', 30.V.2008, leg. Z. Barina, D. Pifkó & B. Pintér.”

Diagnosis – OLÁH (2010: 102–104): “This dark species belongs to the species complex with large upward arching triangular gonopods and triangular or

bilobed cerci inhabiting the Balkan Mountains. Most close to *Drusus pelasgus* sp. n., but differs by having (1) larger size; (2) sternal lateral suture of the fused IXth segment with middle fork, not without; (3) segment IX very long ventrally, not medium long; (4) cerci with dorsal lobe slender, downward curving, not blunt rounded; (5) inner branch of paraproct with short and narrow dorsal apex as visible both in lateral, dorsal and caudal view, not long and broad.”

Etymology – “The name was given to remind one possible origin of the Albanian people inhabiting the type locality. Three theories exist: the Illyrian, Dacian-Thracian and Pelasgian origin of the Albanians.”

Drusus juliae Oláh, 2011

Drusus juliae OLÁH, 2011a: 113–1174: “Holotype male. Albania: Mirdite district, Oroshi area, Nanshene, open stream in the village, N41°51.848', E20°07.088', 1175 m, 21.05.2010, leg. D. Murányi (1 male, HNHM). Paratypes: same as holotype (4 males, 2 females, HNHM)”.

Diagnosis – OLÁH (2011a: 113–1174): “This castanean brown species belongs to the species complex with large upward arching triangular gonopods inhabiting the Balkan Mountains. Most close to *Drusus radovanovici* Marinković-Gospodnetić, but differs by having sternal lateral suture of the fused IXth segment curving, not straight; cerci subquadratic, not subtriangular in lateral view; inner branch of paraproct with rounded lateral lobes, not with triangular in dorsal view.”

Etymology – “Patronym in honor of my wife Erzsébet Julia Tóth, who accompanies and supports my various activities on science.”

Drusus kerek Oláh, 2011

Drusus kerek OLÁH, 2011a: 114–116: “Holotype male. Albania: Prokletije Mts, creek above village, Sylbice, N42°31.326', E20°05.919' 2010 m, 8.07.2011, leg. Z. Barina, A. Kovács, G. Puskás, B. Sárospataki (1 male, HNHM). Paratypes: same as holotype (2 females, HNHM). Prokletije Mts, S slope of Mt maja e Shpatit above village Doberdol, rocky creek covered with tall herbs, N42°33.040', E20°05.919' 1940 m, 9.07.2011, leg. Z. Barina, A. Kovács, G. Puskás, B. Sárospataki (1 male, 1 female, HNHM). Prokletije Mts, valley of stream Topoje, small side creek in village Sylbice, N42°30.557', E20°08.054', 1580 m, 8.07.2011, leg. Z. Barina, A. Kovács, G. Puskás, B. Sárospataki (1 female, HNHM). Prokletije Mts, valley of stream Topoje below village Sylbice, tall herb community of the creek, N42°30.283', E20°08.917', 1460 m, 8.07.2011, leg. Z. Barina, A. Kovács, G. Puskás, B. Sárospataki (3 males, 2 females, HNHM).”

Diagnosis – OLÁH (2011a: 114–116): “This dark brow species belongs to the species complex with large upward arching triangular gonopods inhabiting the Balkan Mountains. Most close to *Drusus juliae* sp. n. but differs by having sternal lateral suture of the fused IXth segment curving, not so deep; cerci rounded, not subquadratic in lateral view; inner branch of paraproct more robust; apical third of gonopods more tapering. Female: segment IX triangular in lateral view, not subquadrangular, lateral setose lobe double long than high, not similar; supra-genital plate not regular quadrangular in lateral view; median lobe of the vulvar scale (lower vaginal lip) enterily lacking; lateral lobes of the vulvar scale differently shaped.”

Etymology – “Kerek, from “kerek” round in Hungarian, refers to the rounded cerci.”

Drusus klapaleki Marinković-Gospodnetić, 1971

Drusus klapaleki MARINKOVIĆ-GOSPODNETIĆ, 1971a: 80: “Southeast Bosnia, mm and ff in small springs of tributary of the river Sutjeska, between Tjeniste and Curevo.”

Drusus klapaleki Marinković-Gospodnetić, 1971: MARINKOVIĆ-GOSPODNETIĆ (1971b: 144): “Southeast Bosnia, ♂♂ ♀♀ in small springs of tributary of the river Sutjeska.”

Drusus klapaleki Marinković-Gospodnetić, 1971 in OLÁH & KOVÁCS (2013: 115–116): “Bosnia-Herzegovina: Jablanica, spring stream, 04.09.1988, singled, J. OLÁH (1♂, 1♀, OPC).” “The female of this species is unknown. We have collected a single female from a spring area together with three males. Here we describe the female and redraw the male in order to compare it with its close relative, with *Drusus gombos* sp. n. Compared to male of *D. gombos*, *D. klapaleki* has more slender cerci, differently shaped paraproct having apicolateral lobes hook-shaped, and slightly different spine pattern of the paramere.”

Diagnosis – MARINKOVIĆ-GOSPODNETIĆ (1971a: 80): “This species is closely related to *D. bosnicus* Klap. The greatest difference between these two species is in the shape of the superior appendages and of the intermediate appendages.”

Drusus komanus Oláh, 2017

Drusus krusniki Malicky, 1981: OLÁH & KOVÁCS (2015: 109): misidentification.

Drusus komanus Oláh, 2017 in OLÁH *et al.* (2017: 110): “Holotype: Albania, Shkodër district, Prokletije Mts, Mollë, Maljag Stream on the right bank of Koman Lake, N42°11.673', E19°49.063', 185 m, 18.06.2012, leg. Z. Fehér, T. Kovács, D. Murányi (1 male, OPC).

Diagnosis – OLÁH *et al.* (2017: 110): “The *D. komanus* is closest to *D. krusniki* and *D. kerek*, but differs from both by having the dorsal branches of the paraproct, that is the speciation trait, differently shaped. In lateral view both *D. krusniki* and *D. kerek* characterized by having a hump subdorsad on the apical margin of the paraproct. At *D. komanus* this hump structure is modified into a triangular process well visible both in lateral and dorsal view. In caudal view the dorsal margin of paraproct clearly V-shaped at the new species, not straight as at *D. krusniki* or shallow V-shaped as at *D. kerek*. The transversally plate forming measally touching pair of the dorsal branches of the paramere, that is the transversal plate characteristic for the species complex is differently formed at all the three species. This plate configuration of the speciation trait visible in caudal view is very stable. Stability is the result of selective, non-random, non-neutral processes.”

Etymology – “Named after the locus typicus.”

Drusus kovacsi Oláh, 2017

Drusus dacothracus OLÁH, 2010: 100: “Albania, Skrapar district, Ostrovicë Mts, Ceremica, brook W of the village, 1820 m, N40°32.649', E20°26.573', 5.VII.2005, leg. Z. Barina, D. Pifkó & D. Schmidt (1 male).” Misidentification.

Drusus arbanios Oláh, 1910: OLÁH & KOVÁCS (2012: 90–91): female description and drawings. “Allotype female. Albania: Skrapar district, Ostrovicë Mts, Backë, Krojmbret Spring and its outlet brook NE of the village, N40°31.753' E20°25.152', 1965 m, 12.10.2012, leg. P. Juhász, T. Kovács, D. Murányi, G. Puskás (1♀, OPC). Same as allotype (3♂, 6♀, OPC). Skrapar district, Ostrovicë Mts, Backë, brook and spring NE of the village, N40°31.346' E20°25.096', 1650 m, 12.10.2012, leg. P. Juhász, T. Kovács, D. Murányi, G. Puskás (1♂, 4♀, OPC).” Misidentification.

Drusus arbanios Oláh, 1910: OLÁH & KOVÁCS (2013: 112): “Albania, Korçë district, Ostrovicë Mts, Çemerricë, open brook W (above) the village, N40°32'38.9", E20°26'33.5", 1820 m, 28.V.2013, leg. P. Juhász, T. Kovács, G. Magos, G. Puskás, (2♂, 7♀, OPC). Albania, Skrapar district, Ostrovicë Mts, Backë, Krojmbret Spring and its outlet brook NE of the village, N40°31.753', E20°25.152', 1965 m, 28.V.2013, leg. P. Juhász, T. Kovács, G. Magos, G. Puskás, (19♂, 7♀, OPC). Albania, Skrapar district, Ostrovicë Mts, Backë, brook and spring NE of the village, N40°31.346', E20°25.096', 1650 m, 29.V.2013, leg. P. Juhász, T. Kovács, G. Magos, G. Puskás, (10♂, 13♀, OPC). Albania, Skrapar district, Ostrovicë Mts, open stream 3 km S of village Faqekuq, N40°32'19.3, E20°24'22.0", 1730 m, 29.V.2013, leg. P. Juhász, T. Kovács, G. Magos, G. Puskás (3♂, 9♀, OPC).” Misidentification.

Drusus kovacsi Oláh, 2017 in OLÁH *et al.* (2017: 98–100): “Holotype: male. Albania: Skrapar district, Ostrovicë Mts, Backë, Krojmbret Spring and its outlet brook NE of the village, N40°31.753' E20°25.152', 1965 m, 12.10.2012, leg. P. Juhász, T. Kovács, D. Murányi, G. Puskás (3 males, 6 females; OPC). Allotype: same as holotype (1 female, OPC). Paratypes: same as holotype (2 males, 6 females; OPC). Albania, Skrapar district, Ostrovice Mts, Ceremica, brook W of the village, 1820m, N40°32.649' E20°26.573', 5. VII. 2005, leg. Z. Barina, D. Pifkó & D. Schmidt (1 male, HNHM). Skrapar district, Ostrovicë Mts, Backë, brook and spring NE of the village, N40°31.346' E20°25.096', 1650 m, 12.10.2012, leg. P. Juhász, T. Kovács, D. Murányi, G. Puskás (1 male, 4 females, OPC). Albania, Korçë district, Ostrovicë Mts, Çemerricë, open brook W (above) the village, N40°32'38.9", E20°26'33.5", 1820 m, 28.V.2013, leg. P. Juhász, T. Kovács, G. Magos, G. Puskás, (2 males, 7 females; OPC). Albania, Skrapar district, Ostrovicë Mts, Backë, Krojmbret Spring and its outlet brook NE of the village, N40°31.753', E20°25.152', 1965 m, 28.V.2013, leg. P. Juhász, T. Kovács, G. Magos, G. Puskás, (19 males, 7 females; OPC). Albania, Skrapar district, Ostrovicë Mts, Backë, brook and spring NE of the village, N40°31.346', E20°25.096', 1650 m, 29.V.2013, leg. P. Juhász, T. Kovács, G. Magos, G. Puskás, (10 males, 13 females; OPC). Albania, Skrapar district, Ostrovicë Mts, open stream 3 km S of village Faqekuq, N40°32'19.3, E20°24'22.0", 1730 m, 29.V.2013, leg. P. Juhász, T. Kovács, G. Magos, G. Puskás, (3 males, 9 females; OPC)”

Diagnosis – OLÁH *et al.* (2017: 98–100): “*Drusus kovacsi* is most close to *D. arbanios*, but differs by having cerci with rounded dorsal lobe, not flat; lateral profile of paraproct with convex vertical dorsoapical margin, not straight vertical as well as dorsoapical tips, the diverging tips is rounded lobed, not truncate. The erected primary spine differently shaped, however it is not known how stable is this divergion having only the single holotype of *D. arbanios* available.”

Etymology – “We named this species after the collector Tibor Kovács, who has performed a systematic and specialised collecting program to sample target populations of Drusinae subfamily in the sky islands of high altitude crenon and hypocrenon habitats in the Balkan mountain ranges during the years of 2010 and 2017.”

Drusus krpachi Kučinić, Graf et Vitecek, 2015

Drusus krpachi Kučinić, Graf et Vitecek, 2015 in VITECEK *et al.* (2015b: 81–83): “Holotype. 1 male. Macedonia, Mavrovo National Park, Korab Mountains, cesma Elem; N41.857, E20.625; leg. Kucinic, Krpac, Mihoci; 15. VIII. 2011. Currently deposited in coll. WG, will be deposited in the Croatian Natural History Museum, Zagreb, Croatia. Paratypes. 3 males: Macedonia, Mavrovo

National Park, Korab Mountains, Rec; leg. Krpac, Mihoci, Kucinic; 1. VIII. 2011. Currently deposited in coll. MK, two paratypes will be deposited in the Macedonian Museum of Natural History, Skopje, Republic of Macedonia, one paratype will be deposited in coll. WG.”

Diagnosis – VITECEK *et al.* (2015b: 81–83): “Males of the new species are most similar to *D. macedonicus*.”

Drusus krusniki Malicky, 1981

Drusus krusniki MALICKY, 1981a: 342–343: “Holotypus ♂: Crna Gora, Snjili Potok, Andrijevisa, 25. V. 1979, leg. Sivec, coll. Malicky.”

Drusus kerek Oláh, 2011: 116: “Albania: Prokletije Mts, creek above village, Sylbice, N42°31.326', E20°05.919' 2010 m, 8.07.2011, leg. Z. Barina, A. Kovács, G. Puskás B. Sárospataki (2 females, HNHM). Prokletije Mts, valley of stream Topoje below village Sylbice, tall herb community of the creek, N42°30.283', E20°08.917' 1460 m, 8.07.2011, leg. Z. Barina, A. Kovács, G. Puskás, B. Sárospataki (3 males, 2 females, HNHM). Prokletije Mts, valley of stream Topoje, small side creek in village Sylbice N42°30.557', E20°08.054' 1580 m, 8.07.2011, leg. Z. Barina, A. Kovács, G. Puskás, B. Sárospataki (1 female, HNHM).” Misidentification.

Diagnosis – MALICKY (1981a: 342–343): “Diese Art gehört in die Gruppe der miteinander nahverwandten und durchwegs allopatrischen Arten um *Drusus bosnicus* Klapálek, 1899, über die MARINKOVIĆ-GOSPODNETIĆ (1976) ausführlich berichtet hat. Die Unterschiede zwischen diesen Arten sind relativ gering und liegen hauptsächlich in der Form der mittleren Anhänge.” Described as an allopatric species of the *Drusus bosnicus* species group, and closest to *Drusus klapaleki* Marinković-Gospodnetić, 1971.”

Notes – OLÁH *et al.* (2017: 111): “On Callumit Mountain we have detected a contact zone where *D. krusniki* lives together with *D. kerek*. The two *D. krusniki* males are smaller with significant modifications in the paramere spine pattern. The subterminal perpendicular enlarged spine less perpendicular, almost horizontal in one male.”

Drusus lakmos Oláh, 2017

Drusus graecus McLachlan, 1876: MALICKY (2005a: 107): all specimens collected by Sivec in Pindos and Lakmos Mts are misidentifications.

Drusus graecus McLachlan, 1876: OLÁH & KOVÁCS (2015: 109): misidentification.

Drusus lakmos Oláh, 2017 in OLÁH *et al.* (2017: 114–116): “Holotype: Greece, Thessaly, Trikala peripheral unit, Lakmos Mts, Chaliki, springs on Verliga Plateau, N39°40.825', E21°07.551', 2020 m, 09.05.2014, T. Kovács, D. Murányi (1

male, OPC). Allotype: same as holotype (1 female, OPC). Paratypes: same as holotype (2 males, 1 female, OPC). Greece, Thessaly, Trikala peripheral unit, Lakmos Mts, Chaliki, open brook W of the village, N39°40.895', E21°08.261', 1840 m, 09.05.2014, T. Kovács, D. Murányi (1 male, 1 female, OPC). Thessaly, Trikala peripheral unit, Lakmos Mts, Chaliki, open stream SW of the village, N39°40.267', E21°09.176', 1430 m, 09.05.2014, T. Kovács, D. Murányi (1 male, 2 females; OPC)."

Diagnosis – OLÁH *et al.* (2017: 114–116): "The dorsal branch-es of the paraproct fused forming simple, rounded hump-like, blunt apical arm in lateral view at all the examined five specimens; not hump, more pointed at *D. graecus*. The paraproct caudal profile is low, high at *D. graecus*; the apex of the fused dorsal branches rounded with small pointed mesal structure, apex is straight or rather concave without any mesal structure at *D. graecus*. Cerci are rounded at all the five specimens; elongated at *D. graecus*. The primary erect spine on the paramere is highly reduced, almost vestigial at all the five males; this erect spine an ancestral character of the *Drusus bosnicus* species group is retained, almost fully developed at *D. graecus*."

Etymology – "Named after the locus typicus."

Drusus lapos Oláh, 2017

Drusus lapos Oláh, 2017 in OLÁH *et al.* (2017: 136–138): "Holotype: Italy, Trento, Telve, torr. Maso T.L. c/o Malga Cagnon di Sotto, 1670 m, 8. VIII. 2001, leg. B. Lodovici (1 male, MCSNBG). Allotype: Italy, Bolzano, Moso in Passiria, Ponte segheria, 1600 m, 19.VI.1993, leg M. Valle (1 female, MCSNBG). Paratypes: Italy, Friuli Venazia Giulia, Tarvisio (UD), 870 m, Rio del Lago, light trap, 21.VII.1996, leg Pantini & Valle (1 male, OPC). Austria, Weinebene, 46° 50.52 15° 00.33, 28.VII.2007. leg. W. Graf (1 male, OPC). Pinned specimen: 1st label: Admont. 19.VIII.02; 2nd label: *chrysotus* Klapálek; 3rd label: *chrysotus* det Kempny; 4th label: *Drusus chrysotus* ♂ det. Malicky 1983 (1 male, WM). Pinned specimen: 1st label: Carinthia, Glockner, 7.VIII.20; 2nd label: *Drusus chrysotus* ♂ det. Dr. Döhler 1931; 3rd label: *Drusus chrysotus* ♂ det. Malicky 1983 (1 male, WM). Pinned specimen: 1st label: Admont, 19.VIII.02; 2nd label: *chrysotus* det. Kempny; 3rd label: *Drusus chrysotus* ♂ det. Malicky 1983 (1 male, WM). Pinned specimen: 1st label: Stelzing, Jul.01; 2nd label: Coll Brauer, 3rd label: *discolor* ♀ det. Brauer; 4th label: *H. flavipennis*; 5th label: *Drusus chrysotus* ♂ det. Malicky 1983 (1 male, WM). Pinned specimen: 1st label: Gesaues, subalpin H. Franz; 2nd label: Coll. H. Franz; 3rd label: *Drusus chrysotus* Ramb. ♂ det. Dr. Döhler 1948; *Drusus chrysotus* ♂ det. Malicky 1983 (1 male, WM). Pinned specimen: 1st label: Strechengraben, Nied. Tauern, leg. H. Franz; 2nd label: coll. Franz; 3rd label: *Drusus chrysotus* Ramb. ♂ det. Dr. Döhler 1952; 4th label: *Drusus chrysotus* ♂

det. Malicky 1983 (1 male, WM). Pinned specimen: 1st label: Manu[?] Glockn. Carin, M 856; 2nd label: *flavipennis* det Brauer; 3rd label: *Drusus chrysotus* ♂ det. Malicky 1983 (1 male, WM). Pinned specimen: 1st label: Twong 12–1400 m; 2nd label: Salzburg, Radstadter Tauern, 3–10.VIII.40, Zerny; 3rd label: *Drusus chrysotus* Ramb. ♀ det. Dr. Döhler 1941; 4th label: *Drusus chrysotus* det. Malicky 1983 (1 female, WM). Pinned specimen: 1st label: Austria Alp; 2nd label: Ullr.; 3rd label: *flavipennis* det Brauer; 4th label: *Drusus chrysotus* ♂ det. Malicky 1984 (1 male, WM). Pinned specimen: 1st label: Manu, Glockner, carin 856; 2nd label: *flavipennis* det Brauer; 3rd label: *Drusus chrysotus* ♂ det. Malicky 1984 (1 male, WM). Pinned specimen: 1st label: Austria Alp. 2nd label: *flavipennis* det Brauer; 3rd label: *Drusus chrysotus* ♂ det. Malicky 1984 (1 male, WM). Pinned specimen: 1st label: Gug 57. 2nd label: *Drusus chrysotus* Rbr. (1); 3rd label: *Drusus chrysotus* ♂ det. Malicky 1986 (1 male, WM). Pinned specimen: 1st label: Austria Alp; 2nd label: *flavipennis* det Brauer; 3rd label: *Drusus chrysotus* ♂ det. Malicky 1984 (1 male, WM). Pinned specimen: 1st label: Manu, Glocker 1861; 2nd label: *flavipennis* det Brauer; 3rd label: *Drusus chrysotus* ♂ det. Malicky 1984 (1 male, WM). Pinned specimen: 1st label: Triafoi, Handlirsch; 2nd label: *Drusus chrysotus* Ramb. ♂ det. Dr. Döhler 1931; 3rd label: *Drusus chrysotus* ♂ det. Malicky 1983 (1 male, WM). Pinned specimen: 1st label: Giglachseegeb. Schlaum Tauern, leg. H. C. Franz; 2nd label: *Drusus chrysotus* Ramb. ♂ det. Dr. Döhler 1958; 3rd label: *Drusus chrysotus* ♂ det. Malicky 1983 (1 male, WM). Czech Republic, S. Bohemia, Sumava Mts. tributary of Cerne jezero lake, 15.V.2007 leg. P. Chvojka (1 male, 2 females, NMPC). Switzerland, Valais Canton, Gd St Bernard, 2472 m, 7.VIII.1981, leg. C. Siegenthaler (1 male, CMZL). Switzerland, Valais Canton, Gd St Bernard, Maringo, 1950 m, 14.VII.2004, leg. P. Stucki (1 male, CMZL)."

Diagnosis – OLÁH *et al.* (2017: 136–138): "The fused dorsal branches of paraproct robust with almost straight and vertical apical margin in lateral view. Similar to *D. chrysotus*, but the dorsum of the fused dorsal branches are flat horizontal in lateral view, not sloping anterad. Periphallic organs of cerci and gonopods are short. Subapical spine on the paramere short and intact, not subdivided like at *D. chrysotus*."

Etymology – "*Lapos*", from „lapos", flat in Hungarian, refers to flat and horizontal dorsum of the fused dorsal branches of the paraproct in lateral view."

Drusus lepcos Oláh, 2011

Drusus lepcos OLÁH, 2011: 116–118: "Holotype male. Albania: Mirdite district, Shent Mts, Kurbnesh, Urake River and its sidespring NE of the city, N41°47.711', E20°06.703', 800 m, 20.05.2010, leg. Z. Fehér, D. Murányi, Zs. Ujvári (1 male, HNHM). Paratypes: same as holotype (1 male, 2 females, HNHM)."

Diagnosis – OLÁH (2011: 116–118): “This dark brown brow species belongs to the species complex with large upward arching triangular gonopods inhabiting the Balkan Mountains. Most close to *Drusus dacothracus* Oláh and *D. illyricus* Oláh, but differs from both by having dorsum of paraproct stepwise formed in lateral view. However these species are very close, moreover the lateral shape of their cerci varying. Most easy to distinguish between the 3 species is to stretch out the paraproct of the cleared genitalia out under the dark spinose tergite VIII and compare the paraproctal dorsum in lateral view: flat sloping at *D. dacothracus*, towering at *D. illyricus* and stepwise in *D. lepcos* sp. n.”

Etymology – “*Lepcos*, from “lépcsős”, stepwise in Hungarian, refers to the shape of the dorsum of the paraproct in lateral view.”

Drusus macedonicus Schmid, 1956

Drusus macedonicus SCHMID, 1956: 90–91: “Holotype ♂, allotype ♀ et paratypes ♂♂♀♀: Massif du Périster (Macédoine yougoslave), 10–12.VIII.1955. L'espèce était assez commune le long des petits torrents d'alpage entre 1.500 et 2.000 m d'altitude.”

Diagnosis – SCHMID (1956: 90–91): “Le *Drusus* de Macédoine est très voisin de *discolor* comme en témoignent la coloration et les génitalia. Il s'en distingue par sa coloration moins grise, par les appendices supérieurs du ♂ plus grand, plus proéminents et rappelant ceux de *transylvanicus* et par les appendices inférieurs pus élancés. Il est toujours bien distinct de *discolor* avec qui il cohabite.”

Drusus malickyorum Oláh, 2017

Drusus malickyi Oláh et Vitecek, 2015 in VITECEK *et al.* (2015b: 83–85): “Material examined. Holotype. 1 male: Albania, Shkoder County, Shkoder District, Prokletije Mts, beech forest with brook above Okol; N42.42258, E19.76127; leg. Puskás 05. IX. 2013. Currently deposited in coll. WG, will be deposited in János Oláh Private Collection under national protection of the Hungarian Natural History Museum, Budapest, Hungary (JO).” Junior homonym of *Drusus malickyi* (Sipahiler, 1992).

Drusus malickyorum Oláh, 2017 in OLÁH *et al.* (2017: 145): new name for *Drusus malickyi* Oláh et Vitecek, 2015.

Diagnosis – VITECEK *et al.* (2015b: 83): “The holotype of the new species is most similar to *D. macedonicus*, but exhibits (1) a sharp mediocaudal protrusion of segment IX; (2) a dorsally straight and rough tip of the intermediate appendage distinctly separated by a proximal indentation; (3) a distinctly slender and constricted distal half of the inferior appendage in lateral view. *Drusus macedonicus* males have a mediocaudal and a ventrocaudal protrusion of segment IX, interme-

diate appendages with two rough rounded dorsal protrusions but lacking a distinct proximal indentation, and to a lesser degree constricted inferior appendages.”

Etymology – “We dedicate the new name to H. Malicky, to his wife and their son.”

Drusus medianus Marinković-Gospodnetić, 1976

Drusus medianus MARINKOVIĆ-GOSPODNETIĆ, 1976: 80: “Localities in the springs of the left tributaries of the river Bosna are: – Lasva (Plave vode), 30♂ 12♀, 5.VI.1965; 8♂ 4♀, 4.V.1973; Holotype ♂, allotype ♀, paratypes ♂♂♀♀ in author’s collection. – Lasva (Komar), 12♂ 4♀, 13.V.1971; 6♂, 4.V.1972; 4♂ 3♀, 15.V.1973. – Zujevina, 5♂ 2♀, 10.V.1970. – Zujevina (Ljubovcica potok), 26♂ 2♀, 14.V.1957; 5♂ 1♀, 15.V.1958; 2♂ 23.IV.1958; 12♂ 3♀, 15.V.1960. – Zujevina (Krupa) 2♂ 28.VI.1957. – Fojnica (Pozarna) 22♂ 10♀, 31.V.1967. Localities in the springs of the right tributaries of the river Vrbas are: – Bistra (near Gornji Vakuf), 1♂, 15.VI.1973. Krusnica (tributary of the river Bistrica), 1♂, 18.VI.1972.”

Diagnosis – MARINKOVIĆ-GOSPODNETIĆ (1976: 80): “Appendices intermediales differ from those of other Bosnian species of *Drusus* gr. *bosnicus* in being small. They bear two narrow tips on the dorsal part. In dorsal view, appendices intermediales are narrow and with a deep recess laterally. Appendices superiores are concave and similar to those of *D. radovanovici septentrionis*. The surface beset with tubercles is also similar to that of *D. radovanovici septentrionis*, but its darker semicircular zones are more separated by the light zone beset with few tubercles.”

Drusus meridionalis Kumanski, 1973

Drusus romanicus Murgoci et Botoșăneanu, 1954: SZCZĘŚNY (1970: 775): Rila Mts, Malovitsa stream, 9.VIII.1969, 2 males; 12.VIII.1969, 4 females. Noted numerous differences in genital structure between the Rila and the Romanian specimens. Misidentification.

Drusus romanicus meridionalis KUMANSKI, 1973a: 108–110: “Die Material der neuen Unterart is aus Pirin-Gebirge, Banderischki-Zirkus, Bergbach unterhalb der Muratowi-Seen (2200 m Höhe), 21.IX.1967, 1♂ und 3♀ und aus der Umgebung der Berghütte “Demjanitzja” (1900 m Höhe), 1.VIII.1970, 1♂, wie auch aus dem Rila-Gebirge, Bergbach in dem Malöwitsa-Zirkus, 9–12.VIII.1969, 2♂ (leg. M. Kownacka) und oberhalb der Hütte “Sawratschitzja” (etwa 2200 m Höhe), 10.VIII.1968, 2♂ (leg. Dr. I. Buresh).” Misidentification in part. Specimens from the the Pirin Mts see *Drusus pirinensis* Oláh et Chvojka, 2017.

Drusus romanicus meridionalis Kumanski, 1973: KUMANSKI & MALICKY (1976: 105): Rila Mts, Nebenbach des Beli Iskar ob Borowez, 2300 m, 23–24. VIII.1971, 1 male, 2 females. Rila Mts. Nebenbach des Beli Iskar ob Borowez,

1200–1800 m, 24.VIII.1971, 1 female. Rila Mts. Nebenbach des Beli Iskar ob Borowez, 2200–2300 m, 18–21.VII.1968, 3 males.

Drusus romanicus meridionalis Kumanski, 1973: KUMANSKI (1988: 42–44): Rila Mts and Pirin Mts are given for distribution. No exact collecting data are given, however the lateral profile of the paraproct as well as the paramere pattern on the drawings are identical with specimens from the Rila Mts.

Drusus meridionalis Kumanski, 1973: VITECEK *et al.* (2015a: 258): raised to species level by performance of morphological data in phylogenetic reconstruction of Drusinae.

Drusus meridionalis Kumanski, 1973: VITECEK *et al.* (2015c: 90–93): redrawn and redescribed from specimens collected in Pirin Mts. Misidentification.

Diagnosis – KUMANSKI (1973a: 108–110): “App. superiores bei den ♂ bemerkenswert kürzer als bei der Nominatform (*Drusus romanicus romanicus*). App. intermediales im Profil mit schwacher individualisiertem oberen (freien) Teil; derselbe erhebt sich bei *romanicus romanicus* in seinem Vorderende unter einem geraden Winkel.”

Drusus muranyorum Oláh, 2010

Drusus muranyorum OLÁH, 2010: 104–106: “Holotype, male, HNHM. Greece: Rodopi prefecture, Sapka Mts, Nea Sanda, torrent in an oak forest, E of the village, 651 m, N41°07.672' E25°53.223', 4.IV.2007, leg. L. Dányi, Z. Eröss, Z. Fehér, J. Kontschán & D. Murányi. Paratypes. Greece: Rodopi prefecture, Sapka Mts, Nea Sanda, torrent in an oak forest, E of the village, 651 m, N41°07.672' E25°53.223', 4.IV.2007, leg. L. Dányi, Z. Eröss, Z. Fehér, J. Kontschán & D. Murányi (5 females).”

Diagnosis – OLÁH (2010: 104–106): “This autumn collected dark fuscous species belongs to the species complex of *D. discophorus* described from the Balkan. Most close to *Drusus bureschi* Kumanski, 1973, but differs by having (1) almost black body color, not light brownish yellow; (2) IXth segment long, not short in lateral view; (3) lateral lobe on paraproctal complex in dorsal and caudal view narrow, not broad; (4) cerci subrectangular, not rounded; (5) gonopods S-shaped, not upward arching triangular; (6) parameres single filament, not bifid.”

Etymology – “The name was given for the collectors Dávid Murányi and his wife Szilvia Czigány, who have made together extensive collection activity along alpine springs and streams on the Balkan.”

Drusus noricus Malicky, 1981

Drusus noricus MALICKY, 1981b: 44: “Holotype male: Austria, Carinthia, Saualpe 1900 m, Ladinger Alm, 12.VIII.1980, leg. et coll. Malicky.”

Diagnosis – MALICKY (1981b: 44): “General appearance similar to *Drusus chrysotus* Rambur, but smaller and paler coloration.” “The intermediate appendages are fused on their base only, but in *chrysotus* over their whole inner surface. The upper edge of the intermediate appendages decreases caudally in *D. noricus*, but increases in *D. chrysotus*.”

Drusus osogovicus Kumanski, 1980

Drusus osogovicus KUMANSKI, 1980: 204–205: “Holotype ♂ and 4 Paratypes (2♂♂ and 2♀♀): Osogovska Mt. (SW Bulgaria), hostel “Osogovo”, 1640 m a.s.l., 18–19.VI.1979 (leg J. Ganev, at light), in the National Natural History Museum, Sofia.”

Diagnosis – KUMANSKI (1980: 204–205): “*Dr. osogovicus* n. sp. belongs to the group of *discophorus*, being in general one of the dark coloured species there. The contrast between the yellow thoracic sclerites scutum and scutellum on one hand and the darker rest of the insect on the other is one of its characteristics; thus, the darkest species in the group, *Dr. discophoroides* Kum., as well as the dark coloured population of *Dr. discophorus* Rad. found in the Rhodopes are monotonous. The extremely narrow spinulate zone of 8th tergite and the turned inwards position of the superior appendages are the main diagnostic features of the male. As to the female, its genitalia are very similar to those of *Dr. balcanicus* Kum. and the coloration remains its most distinctive feature.”

Drusus ostot Oláh, 2017

Drusus ostot Oláh, 2017 in OLÁH *et al.* (2017: 101–102): “Holotype female. Albania: Prokletije Mts. Creek above village, Sylbice, 2010 m, N42°31.326' E20°05.919' 8. VII. 2011, leg. Z. Barina, A. Kovács, G. Puskás & B. Sárospataki (1 female HNHM). Paratype. Same as holotype (1 female, OPC).”

Diagnosis – OLÁH *et al.* (2017: 101–102): “The very specialised tergite IX makes it possible to distinguish this species from all the other known species. Tergite of segment IX clearly bipartite well visible from both dorsal and lateral view; on the middle of the tergite there is a traversal rim separating the basal and distal parts of the segment; the lateral setose lobe of sternite IX rounded. [...] The dorsal profile of the bipartite segment IX has some resemblance both to *D. klapaleki* and *D. medianus*, but the the mesal excision on the apical margin of segment IX is deeper than at *D. klapaleki* and wider than at *D. medianus*. Moreover, the lateral profile of the segment IX differs very much from the other two species.”

Etymology – “*Ostot*, from „osztott”, divided in Hungarian, refers to the shape of segment IX divided by pronounced rim into basal and distal parts.”

Drusus pallidus Kumanski, 1988

Drusus rectus McLachlan, 1868: Klapálek (1913: 16): “Jezero pod Musallou, 31. VII. 2♂, neobyčejné malé kusy, mající v rozpětí 16 mm.” P. Chvojka’s translation: “Lake below Musala Mt., remarkably small specimens, wing-span 16 mm).” Musala is in the alpine zone of the Rila Mts.” Misidentification.

Drusus rectus rectus McLachlan, 1868: SCHMID (1956: 61): established subspecies *D. rectus rectus* and *D. rectus nigrorectus* and considered Klapálek’s record from Bulgaria as probably a mistake.

Drusus discophorus Radovanović, 1942: BOTOȘĂNEANU & SYKORA (1963: 22–24): revised and drawn Klapálek’s specimen from Rila Mts and compared with Schmid’s drawings of *Drusus discophorus*. Misidentification.

Drusus discophorus KUMANSKI, 1979b: 68: misidentification.

Drusus discophorus pallidus KUMANSKI, 1989: 19–20: “Holotype chosen among males of a large sample (20♂ and 5♀) from the Rila Mountains, the Lower Elensko Lake (ca. 2300 m alt.), 31.VII.1965, leg. A. Popov. The holotype and a large series of paratypes (altogether 50♂ and 25♀) from 20 localities in the three above mentioned mountains (Pirin, Rila, Vitosha) is kept in the collection of the National Museum of Natural History, Sofia.” Misidentification in part. Specimens from the Pirin Mts belong to *Drusus tovises* Oláh et Chvojka, 2017.

Drusus pallidus Kumanski, 1989: OLÁH *et al.* (2017: 165): elevated to species rank.

Diagnosis – KUMANSKI (1989: 19–20): “Rather small insects, very variable in size; length of forewing (♂, ♀) 5.5–9.0 mm. Coloration pale-yellow to yellow-brownish, in general much lighter than in the other subspecies (*D. discophorus rhodopaeus*).”

Drusus paros Oláh, 2017

Drusus paros Oláh, 2017 in OLÁH *et al.* (2017: 102): “Holotype female. Albania: North Albanian Alps (Prokletije Mts.), Cerem, 42°29’48”N 19°56’55”E, 1225 m, 29. VII. 2016, light leg. Z. Varga (1 female, OPC).”

Diagnosis – OLÁH *et al.* (2017: 102): “The very specialised tergite IX makes it possible to distinguish this species from all the other known species. Tergite of segment IX clearly bipartite well visible from both dorsal and lateral view; lateral broadening of the basal part separating the basal and distal parts of the segment; apical margin of the segment IX is very specific, quadrifid; the lateral setose lobe of sternite IX rounded continuing ventrad by setaless slightly pigmented ventrum.”

Etymology – “*Paros*, from „páros”, paired in Hungarian, refers to the bifid “paired” shape of the mesal lobe on the apical margin of segment IX.”

Drusus pelasgus Oláh, 2010

Drusus pelasgus OLÁH, 2010: 106–108: “Holotype male. Albania: Dibër district, Korab Mts, torrent and wet meadow NE of the Mt. Korab, 2300 m, N41°48.143', E20°33.285', 27.VI.2007, leg. L. Dányi, Z. Eröss, Z. Fehér, A. Hunyadi & D. Murányi. Paratype, male, HNHM. ALBANIA: Dibër district, Korab Mts, torrent and wet meadow NE of the Mt Korab, 2300 m, N41°48.143', E20°33.285', 27.VI.2007, leg. L. Dányi, Z. Eröss, Z. Fehér, A. Hunyadi & D. Murányi.”

Diagnosis – OLÁH (2010: 106–108): “This dark species with almost ebony black sclerites belongs to the species complex with large upward arching triangular gonopods and triangular or bilobed cerci inhabiting the Balkan Mountains. Most close to *Drusus plicatus* Radovanović, 1942, but differs by having (1) posterodorsal spinate area on VIIIth tergite quadrangular in dorsal view, not triangular; (2) rounded mesal lobe of the spinate area in lateral view, not rectangular; (3) cerci not deeply bilobed; (4) cerci with dorsal lobe broad and short, not slender and long; (5) inner branch of paraproct stepped in lateral view, not rounded triangular; (6) inner branch with quadrangular lateral lobe in dorsal view, not with triangular; (7) outer branch robust and straight vertical, not thin and arching; (8) outer branch met mesad forming a closed structure around anus, not open.”

Etymology – “The name was given to remind the origin of the Albanian people inhabiting the type locality. *Pelasgus* was the ancestor of the Pelasgians, the son of Zeus, the Ancient Greeks even used to believe that he was the first man. In a wider sense Albanians are Illyrians and Illyrians are Pelasgians, as a result the Albanian language explains the names of the ancient Greek gods, the Greek mythology originates from the Illyrian-Pelasgian.”

Drusus pirinensis Oláh et Chvojka, 2017

Drusus romanicus Murgoci et Botoșăneanu, 1954: KUMANSKI (1969a: 177): “Bulgaria, Pirin Mts., Banderiski Circus. Ottoka na Muratovi Ozera. 21.IX.1967.” Misidentification.

Drusus romanicus meridionalis KUMANSKI, 1973a: 108–110: “Die Material der neuen Unterart is aus Pirin-Gebirge, Banderischki-Zirkus, Bergbach unterhalb der Muratowi-Seen (2200 m Höhe), 21.IX.1967, 1 ♂ und 3 ♀ und aus der Umgebung der Berghütte “Demjanitza” (1900 m Höhe), 1.VIII.1970, 1 ♂, wie auch aus dem Rila-Gebirge, Bergbach in dem Malöwitza-Zirkus, 9–12.VIII.1969, 2 ♂ (leg. M. Kownacka) und oberhalb der Hütte “Sawratschitza” (etwa 2200 m Höhe), 10.VIII.1968, 2 ♂ (leg. Dr. I. Buresh).” Misidentification in part. Only specimens from the the Rila Mts are *Drusus meridionalis* Kumanski, 1973.

Drusus romanicus meridionalis Kumanski, 1973: KUMANSKI & MALICKY (1976: 105): “Pirin Mts. Banderiza-Einzugsgebiet mit Nebenbachen, 1000–2000

m, 24.VII.1968, 1 male. Pirin Mts. Banderiza-Einzugsgebiet mit Nebenbach, 2000–2300 m, 26.VII.1971, 1 male, 3 females.” Misidentification.

Drusus meridionalis Kumanski, 1973: VITECEK *et al.* (2015c: 91–93): “Bulgaria, Vihren, Pirin Mountains, Okotovo-Banserishka, marshy spring; N41.7389, E23.4462; 23.VIII.2013 leg. Keresztes, Török, Kolcsár; 10 males: in coll WG.” Misidentification.

Drusus pirinensis Oláh et Chvojka, 2017 in OLÁH *et al.* (2017: 152–153): “Holotype: Bulgaria, Pirin Mts. 2100 m, above Vichren challet, 27.VIII.1979, leg. Beron (1 male, NMPC). Allotype. Same as holotype (1 female, NMPC). Paratypes: Bulgaria, Blagojevgrad province, Pirin Mts, between Ribno Ezero and Gorno Ezero, left side brook of Vasilashki Potok, 41°44'26.3", 23°26'51.7", 2191 m, 12. IX. 2016, leg. P. Juhász, T. Kovács, G. Szilágyi (2 females, OPC)."

Diagnosis – OLÁH *et al.* (2017: 152–153): “The hump on the apical margin of the paraproct, that is the only recognised paraproct divergence between *D. chrysotus* and *D. romaicus* complexes, is less pronounced. The lateral profile of the fused dorsal branches of paraproct has the rounded flat top low, sloping anterad, differing from the lateral configuration of the other three species.”

Etymology – “Named after the locus typicus.”

Drusus plicatus Radovanović, 1942

Drusus plicatus RADOVANOVIĆ, 1942: 186–190: “Fundort: Labuniste, nord-westlich von Struga, am Fussa, des Jablanitza-Gebirges. 13–16.VII.1939.”

Diagnosis – RADOVANOVIĆ (1942: 186–190): Compared to *Drusus bosnicus* and *D. graecus* among the known species in the Balkan Peninsula. “Von dieser Art [*Drusus graecus*] sowie von *Drusus bosnicus* Klap. Unterscheiden sich die Exemplare von der Jablanitza (*Drusus discophorus*) und von Labuniste (*Drusus plicatus*) nach einigen augenscheinlichen charakteristischen Merkmalen, vorwiegend nach der Form der Genitalanhänge und nach der Gestalt des 8. Tergits.”

Drusus popovi Kumanski, 1980

Drusus popovi KUMANSKI, 1980: 203–204: “Holotype ♂ and 2♀♀ Paratypes: Western Stara Planina Mts., Petrohan pass, stream Burzija (ca. 1000 m a.s.l.), 25. V. 1979, (leg. POPOV), in the National Natural History Museum, Sofia.”

Diagnosis – KUMANSKI (1980: 203–204): “This is another member of the *discophorus*-group, related closely to *Dr. bureschi* Kum. It can be recognised from the latter by the different shape of the intermediate appendages and by the long, bearing a series of thorns parameres of the male, as well as by the dorsal shape of female genitalia and the longer central piece of the subgenital plate. These features also complete the differential diagnosis of *Dr. popovi* n. sp.”

Drusus puskasi Oláh et Ibrahimi, 2017

Drusus puskasi Oláh et Ibrahimi, 2017 in OLÁH *et al.* (2017: 157): “Holotype: Bosnia & Herzegovina: Republika Srpska, Foča, Sutjeska NP, Zelengora Mts, S of village Govza, brooks and outlets of Bijelo jezero, 1420 m, N43.380° E18.584°, netting, leg. G. Puskás & G.Szövényi 8.VIII.2014 (1 male, OPC). Paratypes: same as holotype (1 male, DBFMNSUP; 3 males, OPC).”

Diagnosis – OLÁH *et al.* (2017: 157): “The lateral profile of the fused dorsal branches of paraproct has short, stout and slightly anterad turning dorso-apical digitiform process, most similar to the name bearing species *D. siveci*, but differs by having small hump on the apical margin of the paraproct; by the anterad turning and tapering apex of the fused digitiform dorsoapical process; by the very tip that is hardly bilobed just the mesal suture is discernible. The subapical spine of the paramere is short robust, not long and bearing additional variously shaped small spine-like formation on middle dorsum. The periphallic organ of gonopod is elongated compared to *D. siveci*.”

Etymology – “We have dedicated this species to the collector Gellért Puskás, who collects adult and juvenile Orthoptera on dry highlands, but devoted to visit crenon area to collect caddisflies.”

Drusus radovanovici Marinković-Gospodnetić, 1971

Drusus radovanovici MARINKOVIĆ-GOSPODNETIĆ, 1971a: 80: “Many males and females in small springs of the tributaries of the river Sutjeska, on the mountain Zelengora, up to 1400 m.”

Drusus radovanovici Marinković-Gospodnetić, 1971: MARINKOVIĆ-GOSPODNETIĆ, (1971b: 144): “Southeast Bosnia, ♂♂ ♀♀ in small springs on the mountain Zelengora.”

Drusus radovanovici radovanovici Marinković-Gospodnetić, 1971: MARINKOVIĆ-GOSPODNETIĆ (1976: 78): Subspecies status created by the description of *Drusus radovanovici septentrionis* Marinković-Gospodnetić, 1976.

Drusus radovanovici Marinković-Gospodnetić, 1971: KUČINIĆ *et al.* (2011: 150): taxonomic status raised to species level based on larval and adult morphology as well as by mtCOI gene sequences.

Diagnosis – MARINKOVIĆ-GOSPODNETIĆ (1971a: 80): “This species belongs to the group *bosnicus* too, but it is mostly similar to *D. plicatus* Rad. The differences between *D. radovanovici* and *D. plicatus* is in the structure of the eighth tergite, in the shape of its front margin as well as in the shape of its zones with tubercula. These characters of *D. radovanovici* correspond to these of *bosnicus* and *D. klapaleki*.”

Drusus ramae Marinković-Gospodnetić, 1971

Drusus ramae MARINKOVIĆ-GOSPODNETIĆ, 1971a: 80: "This species (mm and ff) is found only in the large karst springs of the river Rama."

Drusus ramae Marinković-Gospodnetić, 1971: MARINKOVIĆ-GOSPODNETIĆ (1971b: 144): "Southeast Bosnia, ♂♂ ♀♀ in karst spring of the river Rama."

Diagnosis – MARINKOVIĆ-GOSPODNETIĆ (1971a: 80): "*D. ramae* is closely related to *D. radovanovici*. It differs from it in the form of intermediate appendages. They are concave on the back side (lateral view). In dorsal view, they are narrower, more pointed than by *D. radovanovici*. The differences appear in the shape of superior appendages and inferior appendages, too."

Drusus rhaeticus (Schmid, 1956)

Metanoea rhaetica SCHMID, 1956: 69–70: "Elle habite les Alpes de la Suisse orientale ou son aire de distribution prolonge sans discontinuité celle de *flavipennis*. J'en ai étudié un grand nombre d'exemplaires de Suisse orientale."

Drusus rhaeticus (Schmid, 1956): OLÁH *et al.* (2017: 179): *Metanoea* synonymised with *Drusus*.

Diagnosis – SCHMID (1956: 69–70): "Cette espèce, très voisine de *flavipennis*, a une aire repartition plus orientale que cette dernier. Cette espèce ne se différencie guère de *flavipennis* que par l'armature genitale; la coloration, la nervulation et les proportions des différents articles des membres sont identiques chez les deux espèces."

Drusus rhodopeus Kumanski, 1989

Drusus discophorus Rad. ssp.?: KUMANSKI & MALICKY (1976: 104): "Die Tiere aus dem Rhodopen unterscheiden sich insofern leicht von der namenstypischen Form, als sie deutlich dunkler gefärbt sind. Da aber in den Kopulationsarmaturen keine Unterschiede zu finden sind und auch die geographische Isolation von den anderen Populationen nicht sehr ausgeprägt ist, verzichten wir darauf, dieser Form einen eigenen Namen zu geben. Es sei aber immerhin auf den Sachverhalt hingewiesen."

Drusus discophorus rhodopeus KUMANSKI, 1989: 20: "Holotype ♂ and a couple (♂ and ♀) of paratypes (streamlets in the vicinity of the mountain hut "Erkyupriya", 1300–1700 m, 26. V. 1969, leg. D. Braasch) in the collection of the National Museum of Natural History, Sofia; 1♂ paratype (same region, 1–2. IX. 1971, leg. D. Braasch) and 1♀ paratype (River Shirokolashka, upper stream, 1200–1600 m, 21.–31. VIII. 1971, leg D. Braasch) in coll. Malicky, Lunz am See, Austria".

Drusus rhodopeus Kumanski, 1989: OLÁH *et al.* (2017: 166): elevated to species rank.

Diagnosis – KUMANSKI (1989: 20): “Also small insects, but less variable than *D. d. pallidus* ssp. n.; forewing length (♂,♀) 7.5–9.5 mm. General coloration rather fuscous. Except for the smaller size, the new subspecies is morphologically less different from the nominate form than *D. d. pallidus*. Its main distinctive feature remains the geographic isolation of the population.”

Drusus romanicus Murgoci et Botoșăneanu, 1954

Drusus romanicus MURGOCI et BOTOȘĂNEANU, 1954: 967–972: “Masivul Retezat: circa 30 de exemplare (♂♂ et ♀♀) în regiunea izvoarelor lacurilor Bucura, Galeșul, Stînișoara, Pietrele (Peste 2000 m altitudine) (leg. Botoșăneanu, 1950–1952. Masivul Bucegi: 1 exemplar ♂ și 1 exemplar ♀ în Valea Cășăriei, în iunie 1951, la circa 900 m altitudine.”

Drusus transylvanicus SCHMID, 1956: 27–28: “Holotype ♂: Retezat (Transylvanie), déposé au musée de Budapest. *Dr. transylvanicus* est très voisin de *romanicus* et surtout de *chapmani*; il s’en distingue principalement par la forme de ses appendices intermédiaires et supérieurs.” *Drusus transylvanicus* has been synonymized with *Drusus romanicus* by BOTOSĂNEANU (1967c: 300).

Diagnosis – MURGOCI & BOTOȘĂNEANU (1954: 967–972): “În concluzie, cele mai importante caractere permițând diferențierea speciei *D. romanicus* n. sp., de toate celelalte descrise, sînt următoarele: ♂ – forma trapezoidală a ariei spinigere pe tergitul abdominal VIII (observate dorsal); – aspectul apendicelor preanale (privite lateral), – structura picioarelor genitale și mai ales a regiunii lor mediane și ventrale; – forma titilatorilor. ♀ – tubul anal egal în lungime cu apendicele preanale; – forma pieselor laterale ale sternitului IX și ale solzului vulvar.”

Drusus sarkos Oláh, 2017

Drusus sarkos Oláh, 2017 in OLÁH *et al.* (2017: 138–139): “Holotype: Italy, Friuli Venezia Giulia, Uccia (UD), 550 m, Uccia Rio Uccia, light trap, 24.V.1996, leg. Pantini & C. Valle (1 male, MCSNBG)”.

Diagnosis – OLÁH *et al.* (2017: 138–139): “Similar to *D. slovenicus*, but the dorsum of the fused dorsal branches has different profile in lateral view; the dorso-apical corner or angle is more produced upward. The divergences in the shape of the fused dorsal branches is more pronounced in the two species in the dorsal and caudal profile. Periphallallic organs of cerci and gonopods are short. The paramere has short subapical spine accompanied by two small secondary spines anterad. The most pronounced divergence between *D. sarkos* sp. nov. and *D. sloveni-*

cus is well visible in the shape of the spinulose area on the VIII tergite. The shape is rounded oviform at *D. slovenicus* and regular quadrangular at *D. sarkos* sp. nov.”

Etymology – “*Sarkos*”, from „sarkos”, corner in Hungarian, refers to the more produced dorsoapical corner of the dorsal branches of the para-proct as well as the to the quadrangular shape of the spinulose area on tergite VIII.

Drusus schmidi Botoşăneanu, 1960

Drusus schmidi BOTOŞĂNEANU, 1960a: 288–290: “6♂ et 1♀ de Trescavica et 3♂ et 1♀ de Trnovo; le holotype ♂ et l’allotype ♀ ont été choisis parmi les exemplaires de Trescavica (F. Schmid); 2 paratypes ♂: Deutsches Entomologisches Institut, Berlin; 4♂ et 1♀ parat.: L. Botoşăneanu.”

Diagnosis – BOTOŞĂNEANU (1960a: 288–290): “En comparant minutieusement les ♂ de *D. tenellus* qu’il avait capturé en Macédoine (Perister) et en Bosnie (Trescavica et Trnovo), le Dr. Schmid constata qu’en réalité seulement les premiers peuvent être considérés comme appartenant réellement à l’espèce de Klapalek, en ce qui concerne les exemplaires bosniaques “...la zone de spinules du VIIIe tergite est assez petite, indivise et située sur le ligne médiane. En comparant les exemplaires bosniaques à celui de Macédoine et aux exemplaires de *D. tenellus* provenant de Roumanie (Retezat et Banat) je suis moi-même arrivé à la conclusion qu’il s’agit d’une nouvelle espèce, très proche de *tenellus*.”

Drusus septentrionis Marinković-Gospodnetić, 1976

Drusus radovanovici septentrionis MARINKOVIĆ-GOSPODNETIĆ, 1976: 78–80: “Inhabits the north-western part of Bosnia. The localities are: – the source of the river Pliva, 13♂ 2♀, 8.VI.1972; 10♂ 4♀, 4.V.1973. (Holotype ♂, allotype ♀, paratypes ♂♂♀♀ are in the author’s collection, the Faculty of Natural Science and Mathematics, Sarajevo.). – the source of the rivers in Livanjsko polje: river Bistrica, 7♂ 2♀, 8.VI.1966; 9♂ 1♀, 19.X.1970; 1♂ 1♀, 16.VII.1971; Sturba, 2♂ 2♀, 8.VI.1966; 29♂ 19♀, 17.X.1970; 4♂ 5♀, 15.VII.1971. – the source on the left bank of the river Vrbas near Bocac, 10♂ 2.VI.1966; 4♂ 4♀, 8.VI.1972.”

Drusus septentrionis Marinković-Gospodnetić, 1976: KUCINIC *et al.* (2011: 150): based on larval and adult morphology as well as by mtCOI gene sequences taxonomic status raised to species level.

Drusus septentrionis Marinković-Gospodnetić, 1976: KUCINIC *et al.* (2011: 150): taxonomic status raised to species level based on larval and adult morphology as well as by mtCOI gene sequences.

Diagnosis – MARINKOVIĆ-GOSPODNETIĆ (1976: 78–80): “The difference between *D. radovanovici radovanovici* and *D. radovanovici septentrionis* appears

in the form of appendices intermediales and appendices superior as well as in the shape of tubercules zone of the 8th tergite.”

Drusus serbicus Marinković-Gospodnetić, 1971

Drusus serbicus MARINKOVIĆ-GOSPODNETIĆ, 1971c: 107–108: “Stream which is an affluent of the river Glonsica (near Nova Varos, west Serbia), 13m, 1f, 30. V. 1970.”

Drusus sharrensis Ibrahimi, Vitecek et Previšić, 2016

Drusus sharrensis Ibrahimi, Vitecek et Previšić, 2016 in IBRAHIMI *et al.* (2016: 111–119): “Holotype. 1 male: Republic of Kosovo, Shterpce Municipality, Sharr Mountains, tributary of the Lepenc River, 2 km above the main road Prizren-Shterpce, 1558 m, 42.17228°N, 20.98823°E, 21.v.2014, leg. Halil Ibrahimi (DBFMNSUP). Paratypes: same collection and locality data as holotype, 6 males, 3 females (DBFMNSUP), 2 males, 1 female (CNHM), 2 males, 1 female (BDOL); same except 8.v.2014, 2 males, 1 female (CNHM); same except 15.vi.2013, leg. Halil Ibrahimi and Joachim Milbradt, 3 males (DBFMNSUP); Shterpce Municipality, Sharr Mountains, small spring, a branch of the Lepenc River 50 meters above the main road Prizren – Shterpce, 1410 m, 42.17506°N, 20.97593°E, 08.vi.2010, leg. Halil Ibrahimi, 2 males (DBFMNSUP); Shterpce Municipality, Sharr Mountains, Lepenc River on the main road Prizren – Shterpce, 1465 m, 42.1813°N, 20.9781°E, 18.v.2010, leg. Halil Ibrahimi, 2 males (DBFMNSUP); Prizren Municipality, Sharr Mountains, Lumbardhi i Prizrenit River, Prevallë village 1664 m, 42.161°N, 20.99533°E, 08.vi.2009, leg. Halil Ibrahimi, 1 male (DBFMNSUP); Prizren Municipality, Sharr Mountains, first small lake above Prevallë village, 2142 m, 42.152402°N, 20.995024°E, 18.ix.2010, leg. Halil Ibrahimi, 3 males, 1 female (DBFMNSUP).”

Diagnosis – IBRAHIMI *et al.* (2016: 111–119): “Males of the new species are most similar to *Drusus krusniki*, *D. kerek* and *D. juliae*. Females of the new species are most similar to *D. krusniki*, *D. kerek*, *D. juliae*, and *D. plicatus*.”

Drusus siveci Malicky, 1981

Drusus siveci MALICKY, 1981a: 343–344: “Holotypus ♂: Crna Gora, Snjili Potok, Andrijevic, 25. V. 1979, leg. Sivec, coll. Malicky.”

Diagnosis – MALICKY (1981a: 343–344): “Diese Art gehört in die Verwandtschaft von *Drusus croaticus* Marinkovic, 1971, *Drusus macedonicus* Schmid, 1956, *Drusus imrovisus* McLachlan, 1884, *Drusus biguttatus* Pictet, 1834, und anderen.”

Drusus slovenicus Urbanič, Krušnik et Malicky, 2002

Drusus slovenicus URBANIČ, KRUSNIK et MALICKY, 2002: 35: "Holotype ♂: Slovenia, Triglav National Park, Bohinj, Studorski preval, 1740 m, 46°18'N, 13°54'E, 19.VII.1983, leg Sivec, in the collection of the first author."

Diagnosis – URBANIČ *et al.* (2002: 35): "It may be related with some endemic species of the Balkan peninsula such as *D. croaticus* Marinkovic 1971 or *D. siveci* Malicky 1981. It is also somewhat similar to *Drusus noricus* Malicky 1981."

Drusus tenellus (Klapálek, 1898)

Catadice tenella Klapálek, 1898a: 488–489: "Hungary, Vom Hochgebirge Retyezát. 2♂, 1♀".

Catadice tenella Klapálek, 1898: Klapálek, 1899a: 432–434: "Retyezát. 2♂, 1♀".

Drusus tenellus (Klapálek, 1898): Mosely 1933: 499: *Catadice* synonymised with *Drusus*.

Drusus tenellus (Klapálek, 1898): Botoșăneanu (1959: 71): "Retezat, 800 m altitudine 12 VIII. Valea Cernei: 1–2 VIII. Belareca spre vărsarea în Cerna (de la Mehadia până la confluență): 31. VII. "Dintre toate speciile de *Drusus* din materiale noastre, este cea care coboară cel mai jos (până la altitudini în jur de 150 m) și care populează gama cea mai euritermă de ape (rîurile Belareca, Cerna, probabil rîurile rezultate din unirea torenților Retezatului)."

Diagnosis – Klapálek (1898a: 488–489): "Körper rötlich gelbbraun, mit gelbbraunen Harchen, denen aber auf dem Scheitel und neben den Augen schwarze Härchen beigemischt sind. Die obere Anhänge schmal, länglich, schwach gekrümmt, in der Ansicht von oben stumpf dreieckig und ausgehöhlt; die mittleren Anhänge verwachsen; untere Anhänge stark, aber kurz, kegelförmig, daher in der Seiten- und Rückenansicht dreieckig, stumpf."

Drusus tovises Oláh et Chvojka, 2017

Drusus tovises Oláh et Chvojka, 2017 in Oláh *et al.* (2017: 167): "Holotype: Bulgaria, Blagojevgrad province, Pirin Mt, left side brook of Vasilashki Potok, 41°44'32.08", 23°26'24.45", 3.VII.2016, leg. K. Harnos, T. Kovács & G. Magos (1 male, OPC). Allotype: same as holotype (1 female, OPC). Paratypes: same as holotype (10 males, 1 female; OPC). Bulgaria, Blagojevgrad province, Pirin Mt, Bansko – Demianitsa hut, left side stream of Demianitsa Reka, 2.VII.2016, leg. K. Harnos, T. Kovács & G. Magos (4 males, OPC). Bulgaria, Blagojevgrad province, Pirin Mt, Bansko – Demianitsa hut, left side brook of Demianitsa Reka, 41°46'15.3", 23°27'44.3", 3.VII.2016, leg. K. Harnos, T. Kovács & G. Magos (3

males, OPC). Bulgaria, Pirin Mts., Bela Reka stream (1800+1900 m), 19. IX. 1990, leg. P. Chvojka (4 males, 4 females, NMPC; 2 males, 2 females; OPC)."

Diagnosis – OLÁH *et al.* (2017: 167): "This new species is widely distributed in the crenon and hypocrenon habitats of high elevations in the Pirin Mts. A sibling species of *D. pallidus* and *D. rhodopeus*, but differs from both species by the shape of paraproct; the apical arms of the dorsal branches of the paraproct is slightly anterad angled, not rounded blunt of *D. rhodopeus* or simple hump of *D. pallidus* in lateral view; in caudal view the apical arms are very low with concave dorsum not very high of *D. pallidus* or high with straight dorsum of *D. rhodopeus*."

Etymology – "Tovises", from „tövises", spiny in Hungarian, refers to the paramere with subapical spine bunch of many spines as well as to the paramere shaft anterad of the subapical spine bunch covered with numerous tertiary spines."

Drusus vargai Oláh, 2017

Drusus vargai Oláh, 2017 in OLÁH *et al.* (2017: 187): "Holotype: Jugoslavia, Durmitor, Zablják, 21-25. VII. 1965, leg. Z. Varga (1 male, OPC)."

Diagnosis – OLÁH *et al.* (2017: 187): "This new species is close to *Drusus schmidi*, but differs by having the paraproct diverged, differently formed. In lateral view the paraproct is slender, not robust; in dorsal view the slender apical arms of the dorsal branches of the paraproct form a deep V-shaped apical excision that is lacking in *D. schmidi*; the lateral margins are smooth concave, not supplied with lateral humps. In caudal view the ventral branch of paraproct is high and narrow, not low and wide as well as the laterad directed arms are robust, not tapering."

Etymology – "We describe this new species and dedicate it to the collector, Prof. Z. Varga."

Drusus vekon Ibrahimi et Oláh, 2017

Drusus vekon Ibrahimi et Oláh, 2017 in OLÁH *et al.* (2017: 158–159): "Holotype: Kosovo: Çakor, streamlet along the border line between Kosovo and Montenegro. 42.685542°N, 20.053636°E, 1289 m, 25.VIII.2015 leg. E. Dimitrou & V. Dragobia (1 male, DBFMNSUP). Allotype: Lloqan, Gurrat e Hasan Agës springs, Bjeshkët e Nemuna. 42.557155°N, 20.152696°E, 1991 m, 3.VIII.2016, leg. H. Ibrahimi (1 female, DBFMNSUP). Paratypes: same as holotype (1 male, 1 female; DBFMNSUP; 1 male hybrid, OPC). Haxhaj, spring area of a tributary of Lumbardhi i Pejës River, 42°42'30N 20°2'32E, 1278 m, 25.VIII.2015 leg. E. Dimitrou & V. Dragobia (1 male, OPC). Lloqan, Gurrat e Hasan Agës springs, Bjeshkët e Nemuna. 42.557155°N, 20.152696°E, 1991 m, 18.VIII.2015 leg. H. Ibrahimi (2 males, DBFMNSUP, 1 male, OPC). Lloqan, Gurrat e Hasan Agës

springs, Bjeshkët e Nemuna. 42.557155°N, 20.152696°E, 1991 m, 3.VIII.2016, leg. H. Ibrahim (62 males, OPC, DBFMNSUP). Lloqan, Krojet e Gucise, 42.55143°N, 20.1335°E, 2110 m, 3.VIII.2016, leg. H. Ibrahim (12 males, OPC, DBFMNSUP). Lloqan, Gurrat e Hasan Agës springs, Bjeshkët e Nemuna. 42.557155°N, 20.152696°E, 1991 m, 3.VIII.2016, leg. H. Ibrahim (1 female, OPC). Lloqan, Krojet e Gucise, 42.55143°N, 20.1335°E, 2110 m, 3.VIII.2016, leg. H. Ibrahim (1 female, DBFMNSUP)."

Diagnosis – OLÁH *et al.* (2017: 158–159): "The lateral profile of the fused dorsal branches of paraproct has long and slender dorsoapical digitiform process, most similar to *D. fortos* sp. nov., but differs by the anterad turning slender, long and tapering apex of the fused digitiform dorsoapical process, and the very tip of the fused dorsal branches of the paraproct is not completely fused, the tip is bilobed and the mesal suture is discernible that is the vestigium of the fusion surface present and visible in caudal view, The subapical spine of the paramere long and robust and frequently more complex, than the subapical spine of *D. fortos*. In the sampled habitats *D. vekon* sp. nov. lives together with *D. fortos* sp. nov. with hybrid forms."

Etymology – "*Vekon*", from „vékony", thin in Hungarian, refers to the slender dorsoapical digitiform process of the paraproct."

Drusus vernonensis Malicky, 1989

Drusus veronensis MALICKY, 1989: 303–304: "Holotypus ♂ und paratypen (1♂, 1♀): Griechenland, Vernon-Gebirge bei Bitsi, ca. 1700 m, 11.VI.1989, in meiner Sammlung."

Diagnosis – MALICKY (1989: 303–304): "Kopulationsarmaturen ♂ ähnlich wie bei *Drusus Krušniki* Malicky. *Drusus Krušniki* aus Crna Gora ist etwas grösser, im Habitus und in der Färbung gleich, das hyaline Dorsalfeld des 8. Tergits ist breiter, der Endteil der unteren Anhänge in Ventralansicht viel plumper, und die Form der freien Dorsalteile der mittleren Anhänge ist anders."

Drusus vespertinus Marinković-Gospodnetić, 1976

Drusus vespertinus MARINKOVIĆ-GOSPODNETIĆ, 1976: 80: "Has been found only in a large karstic spring of the river Ribnik, a tributary of the river Sana: 68♂ 5♀, 26.III.1968 (Holotype ♂, allotype ♀, paratypes ♂♂♀♀ are in the author's collection); 20♂ 11♀, 25.V.1968; 12♂ 1♀, 28.III.1975"

Diagnosis – MARINKOVIĆ-GOSPODNETIĆ (1976: 80): "The structure of appendices intermediale is complex. The shape of the dark part of appendices intermediales is very similar to appendices intermediales of *D. radovanovici septentri-*

onis. Appendices superiores are concave and similar to those of *D. radovanovici septentrionis* and *D. medianus*.”

Drusus zivici Kučinić, Previšić, Stojanović et Vitecek, 2017

Drusus zivici Kučinić, Previšić, Stojanović et Vitecek, 2017 in VITECEK *et al.* (2017: 8–12): “Holotype. 1 male: Serbia, Stara Planina Mountains, spring of the river Tovarnička Reka; N43.3362367 E22.583983; 1493 m a.s.l.; 19.vi.2013–21.vi.2013; leg. M. Kučinić, K. Stojanović, M. Živić; specimen identifier fDpo0202M. Paratypes: 1 male, 1 female, 5 larvae: same data; specimen identifiers: 1 female: fDpo0201F, 1 male: fDpo0203M, 5 larvae: fDpo0204L–fDpo0208L. 2 males: Serbia, Stara Planina Mountains, spring of the river Rekička Reka; N43.372150 E22.625333; 1540 m a.s.l.; 19.vi.2013; leg. M. Kučinić, K. Stojanović, M. Živić; specimen identifiers: fDpo0301M, fDpo0302M. 1 female, 3 larvae: Serbia, Stara Planina Mountains, spring of Kaluđerske vode; N43.388690 E22.677934; 1930 m a.s.l.; 20.vi.2013; leg. M. Kučinić, K. Stojanović, M. Živić; specimen identifiers: 1 female: fDpo0401F, 3 larvae: fDpo0402L–fDpo0404L. 1 female: Serbia, Stara Planina Mountains, spring of the river Javorska Reka; N43.386150 E22.689817; 1890 m a.s.l.; 20.vi.2013; leg. M. Kučinić, K. Stojanović, M. Živić; specimen identifier: fDpo0501F.”

Diagnosis – VITECEK *et al.* (2017: 8–12): “Males of the new species are most similar to *Drusus popovi* but exhibit (1) subcircular, elongate superior appendages in lateral view; (2) high tips of the intermediate appendages in lateral view, high and wide tips of intermediate appendages in caudal view; (3) suboval, elongate, approximately straight inferior appendages in lateral view; and (4) a high segment IX with a distinct, rounded, caudad medial protrusion in lateral view. *Drusus popovi* males have subcircular, short superior appendages; short and narrow tips of the intermediate appendages in lateral and caudal view; suboval, dorsally curved inferior appendages; a wide segment IX lacking a distinct medial indentation in lateral view. Females of the new species are most similar to females of *D. popovi* but exhibit (1) in dorsal view distinct, rounded lateral shoulders of segment X, (2) in dorsal view a ragged outline of the lateral lobes of segment X. *Drusus popovi* females have an evenly rounded lateral outline of segment X in dorsal view and evenly rounded lateral lobes of segment X. Larvae of the new species are most similar to *D. serbicus* Marinković-Gospodnetić as larvae of both species have an intermittent lateral line ([98, 99]), but exhibit a pronotum with a distinct, rounded pronotal ridge (type B sensu [98]). Larvae of *D. serbicus* have an annular pronotal ridge (type E sensu [98]).”

Etymology – “Named for Miroslav Živić, biophysicist, for his continuous support of faunistic surveys.”

Ecclisopteryx Kolenati, 1848
Ecclisopteryx asterix Malicky, 1979

Ecclisopteryx asterix MALICKY, 1979: 4–5: “Holotype ♂ and two paratypes ♂: Austria, Carinthia, northern slope of Loiblpass, 800 m, 18. VI. 1977, leg. & coll. Malicky.”

Diagnosis – MALICKY (1979: 5): “This species resembles *Metanoea rhaetica* in colour and general appearance. In the genus *Ecclisopteryx* (Schmid, 1956) it is somewhat isolated because segment 9 is closed ventrally, whereas in the other three species interrupted.”

Ecclisopteryx alkon Oláh et Oláh, 2017

Ecclisopteryx alkon Oláh et Oláh, 2017 in OLÁH *et al.* (2017: 199–202): “Holotype: Romania, Lotru Mts, Obirsia Lotrului, dawn swarm along Lotru River, 30.VI.2016, leg. J. Oláh & J. Oláh jr. (1 male, OPC). Allotype: same as holotype (1 female, OPC). Paratypes: Bulgaria Western Rhodopi, Sumena Reka near crossroad to Zmeitza, 1245m, N41°39'20" E24°13'44", 16.VI.2012, at lamps, light traps leg. S. Beshkov M. Beshkova & V. Gashtarov (1 male, 1 female, NMNHBAS). Central Stara Planina Mts. Elenova Gora Reserve near Skobeleva Village, Mazalat Forestry, 872 m, N42°44'34" E025°08'50", 1.VIII.2014, leg. S. Beshkov (1 male, 1 female; OPC). Montenegro: Mojkovac municipality, Sinjajevina Mts, Gornja Polja, Zoljski Ljevak Stream above the village, N42°57.808', E19°31.597', 880 m, 14.VI.2012, leg. Z. Fehér, T. Kovács, D. Murányi (1 male, OPC). Romania, same as holotype (4 males, 3 females, OPC). Rodna Mts. Borșa, Stațiunea Borșa, garden, 878m N47°36'48.0" E24°46'55.8", 28–29.VI.2005, light trap J. Kontschán, D. Murányi, K. Orci (2 males, NHMB). Maramaros Mts. tributaries at Visó spring area, 15.VI.1993 leg. J. Oláh (6 females, OPC). Apuseni Mts, Direction to Scărișoara, 30.V.2006, leg. M. Bálint (14 males, OPC). Apuseni Mts. Munții Gilăului, Muntele Bâisorii, stream Valea Gera, N46°33.001' E23°20.014', 1055m, 18.VI.2013, light leg. J. Oláh, Cs. Balogh, & S. Fekete (1 male, 1 female; OPC). Apușeni Mts, Bihor Mts, Crișul Pietros, Boga, Valea Bulz and Valea Galbena, N: 46°35' 23,25" E: 22°37' 54,74", 450m, 4.VII.2013, light leg. Cs. Balogh (1 male, OPC). Apușeni Mts, Bihor Mts, Bubești-Cobleș, tributary P. Cobleș, N: 46°29' 56.08" E: 22°43' 48.64" 902 m, 14.V.2014, leg. Cs. Balogh & B. V. Béres (1 male, OPC). Cupaș Mts, Cupaș Valley, Lacu Roșu, 14.VII.1981 leg. Peregovits & Ronkay (4 males, 2 females, HNHM). Bucegi Mts, Cocora stream, 25.443993, 45.394969, 1564 m, 15.VII.2015, light trap, leg. Z. Baczó & J. Kecskés (14 males, 182 females, OPC). Bucegi Mts, Cocora stream, 25.443147, 45.3402125, 1680 m, 16.VII.2015, leg. Z. Baczó & J. Kecskés (1 male, 1 female; OPC). Vâlcea county, Parâng Mts, Obrâșia Lotrului, open spring area, 500 m along Transalpina (67C) road, downstream from 45°22'27.7", 23°39'4.0", 1915 m, 30.VI.2016, leg. J. Oláh & J. Oláh

jr. (1 female, OPC). Lotru Mts, Obirsia Lotrului, 1578 m, 45.463 23.620, 29.VI.2016, singled leg. J. Oláh & J. Oláh jr. (1 female, OPC). Lotru Mts, Obirsia Lotrului, 1578 m, 45.463 23.620, 29.VI.2016, light trap leg. J. Oláh & J. Oláh jr. (5 females, OPC). Lotru Mts, Obirsia Lotrului, 1578 m, 45.463 23.620, 30.VI.2016, light trap leg. J. Oláh & J. Oláh jr. (3 females, OPC). Lotru Mts, Obirsia Lotrului, side stream of River Lotru, 29.VI.2016, dawn swarm, leg. J. Oláh & J. Oláh jr. (5 males, 105 females; OPC). Lotru Mts, Obirsia Lotrului, side stream of River Lotru, 30.VI.2016, light trap, leg. J. Oláh & J. Oláh jr. (19 females; OPC). Retezat Mts., Cheile Butii, 936m, N: 45°18' 07,30" E: 22°58' 27,92" 9.VII.2013, leg. E. Bajka, Cs. Balogh, G. Borics, P. Borics (3 males, 2 females, OPC). Retezat Mts., Cheile Butii, 910m, N: 45°18' 06,96" E: 22°58' 31,48" 9.VII.2013, light leg. E. Bajka, Cs. Balogh, G. Borics, P. Borics (28 males, 41 females; OPC). Munții Sibiului, Rau Sadu, 700 m N45.64 E24.06, 3.VII.2007, leg. M. Bálint (1 male, OPC). Caras-Severin county, Tarcu Mts. Poiana Marului, upper section of Sucu Stream, S of the village, 955m, N45°20.907' E22°31.073', 8.VI.2011, leg. T. Kovács, D. Murányi & G. Puskás (16 females, HNHM)."

Diagnosis – OLÁH *et al.* (2017: 199–202): "This new species is a close incipient sibling species of *E. dalecarlica*, but differs by having different lateral profile of the gonopods; gonopod apex is monolobed, not bilobed; produced mono-lobe on the ventral corner of the gonopod apex is a decisive character state of *E. alkon* sp. nov.; *E. dalecarlica* has bilobed gonopod apex, *i.e.* there is an additional, smaller lobe on the dorsal corner of the gonopods; this different pattern of the lateral profile of the gonopods is the result of the modified position of the heavily pegged vertical ridge of the stimulatory organ; actually the small lobe of the dorsal corner is present also on *E. alkon* sp. nov. but the vertical ridge moved or shifted higher masking or decreasing the apparent lobeness of the dorsal corner of the gonopods." "The difference in the spine patterns between the two siblings is less pronounced, but *E. alkon* sp. nov. has smaller subapical spine cluster and more heavily developed subbasal scattered spine pattern, compared to *E. dalecarlica*."

Etymology – "Alkon", from „alkony", nightfall in Hungarian, refers to the mass swarming habit of this new species in the dusk of the nightfall. We have experienced clouds of heavy swarmings at nightfall in Apuseni, Bucegi, Lotru and Retezat mountains."

Ecclisopteryx ivkai Previšić, Graf et Vitecek, 2014

Ecclisopteryx ivkai Previšić, Graf et Vitecek, 2014 in PREVIŠIĆ *et al.* (2014: 317–319): "Holotype ♂: Cetina River, Glavaš spring, N 43.976697 E 16.430150, 386 m asl, 02.vi.2011, leg. Previšić A.; deposited in the Biology Centre, Oberösterreichisches Landesmuseum, Linz, Austria. Paratypes: 4 ♂ and 2 ♀, same data; 1 ♂ and 1 ♀ 31.V.2005, leg Previšić A.; 1 ♀ 07.vi. 2007, leg Graf W.; 2 ♀

02.vi.2012, leg. Previšić A.; deposited in the first author's collection at the Faculty of Science in Zagreb. 8 5th instar larvae, same location, 04.x. 2013 (N=4, leg. Kučinić M.) and 07.xi.2013 (N=4, leg. Previšić A.)."

Diagnosis – PREVIŠIĆ *et al.* (2014: 317–319): "Posterior edge of tip of inferior appendages more or less straight in lateral view, lacking a clear ventral elongation, tips in dorsal view with distinct shoulder."

Ecclisopteryx keroveci Previšić, Graf et Vitecek, 2014

Ecclisopteryx keroveci Previšić, Graf et Vitecek, 2014 in PREVIŠIĆ *et al.* (2014: 317–319): "Holotype ♂: Bosnia and Herzegovina, mouth of Jabučica River, N 43.29022 E 18.61733, 765 m asl, 04.vii.2012, leg. Previšić A., Ivković M., Mihaljević Z., Miliša M.; deposited in the Biology Centre, Oberösterreichisches Landesmuseum, Linz, Austria. Paratypes: 30 ♂ and 49 ♀, same data; deposited in the first author's collection at the Faculty of Science in Zagreb. 10 5th instar larvae, same location, 14.v.2008 and 02.vi.2009, leg. Previšić A., Graf W."

Diagnosis – PREVIŠIĆ *et al.* (2014: 317–319): "Posterior edge of tip of inferior appendages ventrally elongated and arched dorsally, tips in dorsal view lacking distinct shoulder."

Ecclisopteryx loudai Oláh, 2017

Ecclisopteryx loudai Oláh, 2017 in OLÁH *et al.* (2017: 204): "Holotype: Greece, Metsovo, 1100 m, 39.77°N 21.18°E, 13. VII. 2012 leg. J. Louda (1 male, MCSNBG). Allotype: same as holotype (1 female, MCSNBG). Paratypes: same as holotype (3 females, MCSNBG; 1 male, 1 female, OPC)."

Diagnosis – OLÁH *et al.* (2017: 204): "This new species is a close incipient sibling species of *E. alkon* sp. nov. and *E. dalecarlica* but differs by having different lateral profile of the gonopods; the smaller lobe on the dorsal corner of the gonopods has completely reduced, that is disappeared at both the holotype and at the single male paratype."

Etymology – "The species was named after Josef Louda, Czech entomologist, who has collected this new species."

Limnephilinae

Limnephilini

Limnephilus Leach, 1815

Limnephilus petri Marinković-Gospodnetić, 1966

Limnephilus petri MARINKOVIĆ-GOSPODNETIĆ, 1966a: 112: "Holotype ♂, allotype ♀, paratypes ♂♂ ♀♀: Sar-Planina, August 1954."

Chaetopterygini

Annitella Klapálek, 1907*Annitella apfelbecki* (Klapálek, 1899)

Chaetopterygopsis apfelbecki Klapálek, 1899: 329–330: “Ledici kod Sarajeva (Apfelb.)” Klapálek (1900: 676–677): “Ledici bei Sarajevo (Apfelb.)”

Annitella apfelbecki (Klapálek, 1899): Klapálek (1907: 29–30): *Annitella* gen. n. erected with type species *Annitella kosciuszkii*. *Chaetopterygopsis apfelbecki* Klapálek transferred to the new genus.

Annitella ostrovicensis Oláh et Kovács, 2012

Annitella ostrovicensis Oláh et Kovács, 2012: 92–93. “Holotype: Albania: Skrapar district, Ostrovicë Mts, Backë, Krojmbret Spring and its outlet brook NE of the village, N40°31.753', E20°25.152', 1965 m, 12.10.2012, leg. P. Juhász, T. Kovács, D. Murányi, G. Puskás (1♂, OPC). Allotype: same as holotype (1♀, OPC). Paratypes: same as holotype (24♂, 10♀; OPC; 4♂, 1♀, MM).”

Diagnosis – Oláh & Kovács (2012: 92–93): “This spring brook dwelling new species collected on high elevation is a sister species of *Annitella triloba* Marinković-Gospodnetić, 1955 but differs in male by having tergite VIII without median spinate lobe, paraproct without median process, cerci reduced to an almost indiscernible pair of warts, bifid distal sclerite of aedeagus very narrow. Also differs in female by having sternite IX (setosa lateral lobes) with very short ventrum, dorsal black region of segment X simple rounded, not with ventral pair of oblique rounded ridges. *A. ostrovicensis* sp. n., probably a parapatric or peripatric species occurs not far from the southernmost populations of its sister species *A. triloba*.”

Etymology – “The new species is named after the Ostrovicë Mts, where the type locality is found. These mountains are rich in valuable autumnal Trichoptera sapecies (even our one-day collecting demonstrates it).”

Annitella jablanicensis Oláh, 2014

Annitella jablanicensis Oláh, 2014 in Oláh & Kovács (2014: 110–112): “Holotype. Macedonia: Southwestern region, Jablanica Mts, 6.5 km W of Labuništa, open brook at Labuniško Lake, N41°16.069', E20°31.242', 1905 m, 10.10.2014, leg. P. Juhász, T. Kovács, G. Puskás (1♂, OPC). Allotype. Same as holotype (1♀, OPC).”

Diagnosis – Oláh & Kovács (2014: 110–112): “This new species collected on high elevation of the Jablanica Mts. in Macedonia is a sister species of *Annitella triloba* Marinkovic, 1955 and *A. ostrovicensis* Oláh & Kovács, 2012. It

differs in male by having tergite VIII with reduced, mintituarized median spinate lobe, not without any such lobe like *A. ostrovicensis* and not with large spinate lobe dominating over the dorsum of tergite VIII like *A. triloba*; needle-pointed paraproct without median process, with well developed median process in all the 29 population in Albania Bulgaria, Montenegro; cerci present, vestigial at *A. ostrovicensis*. Also differs in female by having sternite IX (setosa lateral lobes) and dorsal black region of segment X differently formed. Probably an “island” allopatric species occurs not far from the southernmost populations of its sister species *A. triloba*. However a detailed fine structure analysis of several populations of all the three sibling species will give us more details about the early stages of their speciation. A comparative analysis of the phallic and periphallic organs of cerci, paraproct as well as the vaginal sclerite complex, the female sternite IX and the black region of segment X is recommended. We have examined and recorded very high stability of the paraproct fine structure of *A. triloba* in the 8 Bulagtian, 12 Montenegro and 9 Albanian populations.”

Note – OLÁH & KOVÁCS (2014: 110–112): “This isolated mountain range of Jablanica Mts. is an endemic hot-spot. All the representatives of caddisfly groups exhibiting pleistocen divergence evolved an incipient species in spring or lake inflow and outflow habitats of high elevation of Jablanica mountain: *Allogamus zugor* sp. n., *Annitella jablanicensis* sp. n., *Drusus discophorus* Radovanović 1942, *Potamophylax alsos* sp. n. Other insect groups have also evolved endemic species in this mountain range: a short-winged herbivorous bushcricket *Poecilimon jablanicensis* Chobanov & Heller, 2010; a stonefly, *Isoperla vevcianensis* Ikononov, 1980; a high-altitude ground beetle *Trechus (Trechus) nezlobinskyi* Hristovski, 2014.”

Etymology – “The new species is named after the Jablanica Mts., where the type locality is found.”

Annitella singularis (Klapálek, 1902)

Chaetopteryx singularis KLAPÁLEK, 1902: 162–164: “Vares, 8/10 1900 1♂”.

Vareshiana singularis (Klapálek, 1902): MARINKOVIĆ-GOSPODNETIĆ (1966b: 206): new genus erected for *Chaetopteryx singularis*.

Anitella singularis (Klapálek, 1902): MALICKY (2005: 572): *Vareshiana* synonymised with *Annitella*.

Annitella triloba Marinković-Gospodnetić, 1955

Annitella triloba MARINKOVIĆ-GOSPODNETIĆ, 1955: 128–129: “Na izvoru Miljacke nađeni su primerci jedne vrste *Annitella* koja po svokim karakterima izgleda još primitivna.” (“At the spring of River Miljacka *Annitella* specimens were found which appear to be primitive.”)

Annitella kosciuszkii species complex

Examination of newly collected materials as well as the historical materials deposited in the Klapálek's Collection in NMP and in the Dziędzielewicz's collection in SMNHL initiated to establish the *A. kosciuszkii* new species complex with four species: *A. chomiacensis*, *A. kosciuszkii*, *A. lateroproducta*, and *A. wolo-satka* (OLÁH *et al.* 2015b: 67).

Annitella chomiacensis (Dziędzielewicz, 1908)

Heliconis chomiacensis Dziędzielewicz, 1908 in DZIĘDZIELEWICZ & KŁAPÁLEK (1908a: 22–23, 1908b: 250–255): “Jawi się w dostatecznej ilości przy brzegach rzek: Prutec i Gnilec i przy dolnym biegu potoku: Barani na południowych stokach góry Chomiak za Tatarowem we wschodnich Karpatach od początku po koniec października (X). Samica o wiele rzadsza od samca”.

Annitella chomiacensis (Dziędzielewicz, 1908): RACIECKA (1934: 240–241): *Heliconis* synonymised with *Annitella*. *A. chomiacensis* redescribed and redrawn.

Annitella chomiacensis chomiacensis (Dziędzielewicz, 1908): SZCZĘSNY (1979: 260): reduced to subspecies status based on supposed crossing between *A. chomiacensis* and *A. lateroproducta*. Synonymised with *A. kosciuszkii* KŁAPÁLEK, 1907: 30–31, with *A. Dziędzielewiczi* SCHMID, 1952: 157–158. “Holotype ♂ et un paratype ♂: Worochta, Okolice, 12.X.1908 (Carpathes). Ils sont déposés dans la collection de Ris. Ces specimens ont été envoyés à Ris par Dziędzielewicz, qui les a confondus avec d'autres spécimens de *kosciuszkii*”. With *Annitella transylvanica* Murgoci in MURGOCI & BOTOȘĂNEANU (1957: 139–142). “Un exemplar ♂ (Holotip, in col. A. Murgoci), in Munții Rodnei, pe Valea pîrîului Fîntina, in apropierea cabanei Borșa, leg. Eleonora Erhan.”

Annitella chomiacensis (Dziędzielewicz, 1908): SZCZĘSNY (1980: 473–474): lectotype and paralectotype designation. In NHM-ISEA: “9♂♂, 2♀♀; East Carpathians (Gorgany to the North of Worochta); 7 specimens were labelled with “*Heliconis Klapaleki Dziedz.*”. Dziędzielewicz (DZIĘDZIELEWICZ & KŁAPÁLEK 1908a) described this species from a series of specimens collected “by the stream Gnilec, by the lower reaches of Barani stream on the southern slopes of the summit of Chomiak and also by the rivers Prutec and Blotek” in the autumn of 1907, beginning from the end of September. 7♂♂ and 2♀♀ from the collections in Cracow come from this time and place given by Dziędzielewicz, thus the status of these specimens as syntypes is certain. They have the following inventory numbers: 82/23 – (6♂♂, 1♀), 69/24 (1♂, 1♀. From them is designated the lectotype of male – 82/23 – with the label “Chomiak, Blotek 20.X.1907”.

Annitella chomiacensis (Dziędzielewicz, 1908): BOTOSĂNEANU (1995: 82): reinstated the species status.

Annitella chomiacensis (Dziędziewicz, 1908): SZCZĘSNY & GODUNKO (2007: 35): in SMNHL: “8♂♂, 1♀; East Carpathians, Gorgany Massif (mainly on slope of Chomiak Mt), Czarnohora Massif, (only 1♂ on slope of Polonina Kozmieska); 6♂♂ and 1♀ collected by Dziędziewicz during 4–23.X.1907 on slope of Chomiak Mt belong to the series of specimens on basis of which Dziędziewicz described this species, and match the criteria for paralectotypes according to the ICZN Article 74.1, Recommendation 74.6 (No E24.12.010) 01–07). Several paralectotypes are stored in NMP (P. Chvojka, pers. comm.). The lectotype designated by SZCZĘSNY (1980) is stored in MP ISEZ.”

Annitella chomiacensis (Dziędziewicz, 1908): SZCZĘSNY & CHVOJKA (2008: 156): in NMP: “Paralectotypes of 2♂♂ and 1♀ specimens were collected in 14–16.X.1907 in the East Carpathians, Chomiak, Blotek from the type locality and deposited in NMP.”

Annitella chomiacensis (Dziędziewicz, 1908): SZCZĘSNY & GODUNKO (2008: 65): “Streams on southern slope of the Khomiak Mts. in Gorgany are locus typicus for the taxon.”

Annitella chomiacensis (Dziędziewicz, 1908): OLÁH *et al.* (2015b: 67–68): “Ukraine: original label: “Chomiak, Blotek, 14.X.1907, leg. J. Dziędziewicz” (1 male, Klapalek’s Collection in NMPC: K383). Ukraine: original label: “Chomiak, Blotek, 15.X.1907, leg. J. Dziędziewicz” (1 male, Klapalek’s Collection in NMPC: No. 48). Ukraine: original label: “Chomiak, Blotek, 16.X.1907, leg. J. Dziędziewicz” (1 female, Klapalek’s Collection in NMPC: No. 41). Ukraine: original label: “Chomiak, Blotek, X.1907” (1 male, Dziędziewicz’s collection in SMNHL: BS.024, E24.12.14.01/09). Ukraine: original label: “Czarnohora, Kozmieska, 16.X.1908” (1 male, Dziędziewicz’s collection in SMNHL: BS.012). Ukraine: original label: “Chomiak, Blotek, 15.X.1907” (1 female, Dziędziewicz’s collection in SMNHL: BS.029, E24.12.14.01/04). Ukraine: original label: “Tatarow, (Prutec), 7.X.1905” (1 male, Dziędziewicz’s collection in SMNHL: BS.004). Ukraine: original label: “Chomiak, Potok Barani, 16.X.1907” (1 male, Dziędziewicz’s collection in SMNHL: BS.028, E24.12.14.01/06). Ukraine: original label: “Chomiak, Potok Barani, 16.X.1907” (1 male, Dziędziewicz’s collection in SMNHL: BS.022, E24.12.14.01/05). Ukraine: original label: “Chomiak, Blotek, 6.X.1907” (1 male, Dziędziewicz’s collection in SMNHL: BS.025, E24.12.14.01/01). Ukraine: original label: “Chomiak, Blotek, 4.X.1907” (1 male, Dziędziewicz’s collection in SMNHL: BS.023, E24.12.14.01/03).”

Diagnosis – OLÁH *et al.* (2015b: 67–68): “The lateral lobe of the paraproct is shorter than the mesal lobe, and the mesal lobe is very robust as visible both in lateral and ventral view. The sclerotized tip of the aedeagus is most developed and diverted laterad. Female anal tube with wide mesal excision in dorsal view, lateral apodemes of the vaginal sclerite complex slender and laterad directed.

The locus typicus of this species is on the southern slope of the Khomiak Mts in Gorgany, Ukraine.”

Annitella kosciuszkii Klapálek, 1907

Annitella kosciuszkii Klapálek, 1907: 30–31: “Naleziště: Tatarów, Błotek (vých. Karpaty) v říjnu 1906 1♂. Leg. Józ. Dziędzielewicz”.

Annitella kosciuszkii Klapálek, 1907: DZIĘDZIELEWICZ (1911: 46–47): female description.

Annitella kosciuszkii Klapálek, 1907: RACIECKA (1934: 241–243): redescribed and redrawn.

Annitella kosciuszkii Klapálek, 1907: SZCZĘSNY (1979: 260): reduced to a hybrid status formed in hybridisation zone by *Annitella lateroproducta* × *Annitella chomiacensis*.

Annitella kosciuszkii Klapálek, 1907: MALICKY (2005b: 572): a hybrid status formed in hybridisation zone by *Annitella lateroproducta* × *Annitella chomiacensis* reconfirmed.

Annitella dziedzielewiczi SCHMID, 1952b: 157–158: Schmid distinguished *A. Dziędzielewiczi* from *A. kosciuszki* mostly or even exclusively by the shape of the posterior process of tergite VIII.

Annitella dziedzielewiczi Schmid, 1952: SZCZĘSNY (1979: 260): reduced to a hybrid status formed in hybridisation zone by *Annitella lateroproducta* × *Annitella chomiacensis*.

Annitella dziedzielewiczi Schmid, 1952: MALICKY (2005b: 572): hybrid status formed in hybridisation zone by *Annitella lateroproducta* × *Annitella chomiacensis* reconfirmed.

Annitella transylvanica Murgoci, 1957 in MURGOCI & BOTOȘĂNEANU (1957: 139–142): “Un exemplar ♂ (Holotip, in col. A. Murgoci), in Munții Rodnei, pe Valea pârului Fîntina, in apropierea cabanei Borșa, leg. Eleonora Erhan.”

Annitella transylvanica Murgoci, 1957: BOTOSANEANU (1973: 132–134): female described, species status reconfirmed.

Annitella transylvanica Murgoci, 1957: SZCZĘSNY (1979: 260): reduced to a hybrid status formed in hybridisation zone by *Annitella lateroproducta* × *Annitella chomiacensis*.

Annitella transylvanica Murgoci, 1957: BOTOSANEANU (1995: 82): species status resurrected.

Annitella transylvanica Murgoci, 1957: MALICKY (2005b: 572): hybrid status formed in hybride zone by *Annitella lateroproducta* × *Annitella chomiacensis* reconfirmed.

Annitella dziedzielewiczi Schmid, 1952: OLÁH *et al.* (2015b: 69): a synonym of *A. kosciuszkii*.

Annitella transylvanica Murgoci 1957: Oláh *et al.* (2015b: 69): a synonym of *A. kosciuszkii*.

Annitella kosciuszkii Klapálek, 1907: OLÁH *et al.* (2015b: 69): species status restituted. "Romania: Maramures county, Rodna Mts. Borsa-Stațiunea Borsa, stream along the road towards Prislop Pass, 1014 m, N47° 37' 34.0" E24° 49' 13.0", 26.ix.2006 leg. Dányi, J. Kontschan D. Murányi, (1♂ HNHM). Romania, Rodna Mts. small spring streamlets on the Bistrita Aurie spring area, N47°34'23.8" E24°48'43.9", 1654m, 28. IX. 2014, leg. J. Oláh & Cs. Balogh (1 male, OPC). Rodna Mts. Complex Borsa, small side spring stream of Fantana Stream, 29. IX. 2014, leg. J. Oláh & Cs. Balogh (1 male, 1 female; OPC). Ukraine: original label: "Chomiak, Blotek, 13.X.1907, leg. Lesmitz" (1 male, Klapalek's Collection in NMPC: No. 14). Ukraine: original label: "Worochta, Okolice, 9.X.1908, leg. J. Dziędzielewicz (1 male, Klapalek's Collection in NMPC: No. 13). Ukraine: original label: "Worochta, Okolice, 23.X.1908, leg. J. Dziędzielewicz" (1 female, Klapalek's Collection in NMPC: No. 16). Ukraine: original label: "Worochta, Okolice, 24.X.1908, leg. J. Dziędzielewicz" (1 male, Klapalek's Collection in NMPC: K 384). Ukraine: original label: "Worochta, Okolice, 26.X.1908, leg. J. Dziędzielewicz" (1 male, Klapalek's Collection in NMPC: No. 15). Ukraine: original label: "Worochta, Okolice, 12.X.1908" (1 male, Dziędzielewicz's collection in SMNHL: No. 1240). Ukraine: original label: "Worochta, Okolice, 14.X.1908" (1 male, Dziędzielewicz's collection in SMNHL: No. 1238). Ukraine: original label: "Czarnohora, Kozmieska, 12.X.1908" (1 male, Dziędzielewicz's collection in SMNHL: No. 1250). Ukraine: original label: "Czarnohora, Foreszczynka, 8.X.1910" (1 male, Dziędzielewicz's collection in SMNHL: No. 1248). Ukraine: original label: "Worochta, 5.X.1909" (1 male, Dziędzielewicz's collection in SMNHL: No. 1246). Ukraine: original label: "Worochta, 9.X.1910" (1 male, Dziędzielewicz's collection in SMNHL: No. 1247). Ukraine: original label: "Worochta, Okolice, 5–11.X.1908" (1 male, Dziędzielewicz's collection in SMNHL: No. 1246). Ukraine: original label: "Worochta, 22.X.1909" (1 female, Dziędzielewicz's collection in SMNHL: No. 1242). Ukraine: original label: "Czarnohora, Zawojela, 2.X.1908" (1 female, Dziędzielewicz's collection in SMNHL: No. 1252). Ukraine: original label: "Worochta, 17.X.1909" (1 male, Dziędzielewicz's collection in SMNHL: No. 1253). Ukraine: original label: "Worochta, 22.X.1909" (1 male, Dziędzielewicz's collection in SMNHL: No. 1244). Ukraine: original label: "Tatarow, Blotek, X.1906" (1 male, Dziędzielewicz's collection in SMNHL: No. 1243). Ukraine: original label: "Czarnohora, Kozmieska, 17.X.1908" (1 male, Dziędzielewicz's collection in SMNHL: No. 1249). Ukraine: original label: "Czarnohora, Kozmieska,

13.X.1909" (1 male, Dziędzielewicz's collection in SMNHL: No. 1241). Ukraine: original label: "Worochta, Okolice, 8.X.1908" (1 male, Dziędzielewicz's collection in SMNHL: No. 1245). Ukraine: original label: "Worochta, 9.X.1910" (1 male, Dziędzielewicz's collection in SMNHL: No. 1255).

Diagnosis – OLÁH *et al.* (2015b: 69): "The lateral lobe of the paraproct has almost equal length with the mesal lobe, and the mesal lobe is slender as visible both in lateral and ventral view. The sclerotized tip of the aedeagus has some flat apical surface. Female anal tube without wide mesal excision in dorsal view, lateral apodemes of the vaginal sclerite complex rounded. The locus typicus of this species is in the Czarnohora Mts. Ukraine."

Annitella lateroproducta (Botoșăneanu, 1952)

Carpathopsyche lateroproducta BOTOȘĂNEANU, 1952c: 1–15: "Les matériaux dont nous disposons jusqu' à présent proviennent exclusivement du massif du Retezat, région importante de la chaîne des Carpathes Méridionales de la R. P. R. Les localités qui ont fourni le matériel prélevé par nous des collections de l'expédition hydrobiologique de 1946, sont les suivantes: 1. Lac de Bucura (Viorica). Littoral, au niveau de la cascade. 2. Lac de Stanisoara. Littoral Nord. 3. Torrent droit de la source du lac de Galesul. 4. Embouchure de la source d'évacuation du lac de Bucura (lac principal)"

Annitella lateroproducta (Botoșăneanu, 1952): MURGOCI & BOTOȘĂNEANU (1957: 142): *Carpathopsyche* is synonymised with *Annitella*.

Annitella lateroproducta lateroproducta (Botoșăneanu, 1952): SZCZĘSNY (1979: 260): reduced to subspecies status based on supposed crossing between *A. lateroproducta* and *A. chomiicensis*.

Annitella lateroproducta (Botoșăneanu, 1952): BOTOSĂNEANU (1995: 82): reinstated the species status.

Annitella lateroproducta (Botoșăneanu, 1952): OLÁH *et al.* (2015b: 71): "Romania: Apuseni Mts. Vadul Crisului, Crisul Rapide, 29. X. 1997, leg. L. Újvárosi (1♂, OPC). Apuseni Mts. Ic Ponor, spring area of Somesul Cald, 6. XI. 1998, leg. L. Újvárosi (5♂, 4♀, OPC). Apuseni Mts. Arieseni, Alboc, 6. X. 1999, leg. L. Theodor (1♂, 1♀, OPC). Gilau Mts. Jerii Valley, 8. X. 2000, leg. L. Újvárosi (1♂, OPC). Apuseni Mts. Doda Pili, 3. XII. 2006, leg. L. Újvárosi (6♂, 4♀, OPC). Apuseni Mts, Valea lui Dragan, 650m, N46.83119 E22.77093, 20.xi.2008 leg. M. Bálint & Tasnádi (1♂, OPC). Apuseni Mts. Sebes Körös valley, Suncuius, near Izbandis spring, 26. X. 2009 singled leg. J. OLÁH & M. BÁLINT (7♂, OPC). Apuseni Mts, Padis, open stream near pine forested sphagnum bog, N46° 35' 20.632 E22° 45' 54.857, 5.XI.2011, leg. Gy. Monori, J. Oláh & L. Szél (8♂, 6♀, OPC). Hargitha Mts. Sincraieni, Valea Mare, 6–14. IX. 1993, light trap, (23♂, OPC). Ciucaș Mts. 3 km

S of Dălghiu, Dălghiu stream, N45°33'00.2", E25°54'43.5", 970 m, 13.10.2011, leg. Á. Ecsedi, T. Kovács, G. Puskás, (1♂, 1♀, OPC). Caraș-Severin county, Țarcu Mts., open stream with Salix bushes 6 km S of Poiana Mărului, 1000 m, N45°20'47.5", E22°31'04.6", 14.10.2011, leg. Á. Ecsedi, T. Kovács, G. Puskás, (1♀, OPC). Caraș-Severin county, Țarcu Mts., left side brook of open stream on the N slope of Mt. Țarcu, 1500 m, N45°17'40.7", E22°31'44.5", 14.10.2011, leg. Á. Ecsedi, T. Kovács, G. Puskás, (1♂, 1♀, OPC). Caraș-Severin county, Țarcu Mts., open stream on the N slope of Mt. Țarcu, N45°17'46.2", E22°31'41.5", 1500 m, 14.10.2011, leg. Á. Ecsedi, T. Kovács, G. Puskás, (5♂, 2♀, OPC). Caraș-Severin county, Semenice Mts., open brook E of Mt. Piatra Goznei, N45°10'55.4", E22°04'01.4", 1340 m, 15.10.2011, leg. Á. Ecsedi, T. Kovács, G. Puskás, (1♀, OPC). Gurghiu Mts. near Bucin Pass, Târnava Mica springs and stream, N: 46°39' 16.63"E: 25°16' 42.46", 1290, 30.X.2014, leg. Z. Baczó, Cs. Balogh, J. Kecskés & J. Oláh. (1 male; OPC). Harghita Mts. Filio stream, N: 46°27' 03.90" E: 25°30' 20.10", 940m, 31.X.2014 leg. Z. Baczó, Cs. Balogh, J. Kecskés & J. Oláh. (1 male, 1 female; OPC). Dâmbovia county, Bucegi Mts, Hotel Peștera, Ialomița, 45°23'54.5", 25°26'25.1", 1610 m, 07.11.2014, leg. T. Kovács & G. Magos (1 male, OPC). Sibiu county, Făgăraș Mts, Cârțișoara, Bâlea Stream below the Bâlea Lake, 45°36'30.4", 24°37'14.6", 1940 m, 08.11.2014, leg. T. Kovács & G. Magos (1 male, OPC)."

Diagnosis – OLÁH *et al.* (2015b: 71): "The lateral lobe of the paraproct is longer than the mesal lobe, and the mesal lobe is reduced digitiform as visible both in lateral and ventral view. The sclerotized tip of the aedeagus is blunt. Female anal tube tapering in dorsal view, lateral apodemes of the vaginal sclerite complex rounded laterad directed. The locus typicus of this species is in the Retezat Mts. Romania."

Annitella wolosatka Oláh et Szczęsny, 2015

Annitella chomiaceensis (Dziędzielewicz, 1908): SZCZĘSNY (1966: 344–346): misidentification.

Annitella wolosatka Oláh et Szczęsny, 2015 in OLÁH *et al.* (2015b: 72–73): "Holotype: Poland, East Carpathians, Bieszczady Mts. at Wolosatka brook, 900m, 28.X.2010, leg B. Szczęsny (1 male, OPC). Allotype: same as holotype (1 female, OPC). Paratypes: same as holotype (2 males, OPC). Poland, East Carpathians, Bieszczady Mts. at Wolosatka brook, 850–1000m, 22.X.2014, leg B. Szczęsny (3 males, OPC)."

Diagnosis – OLÁH *et al.* (2015b: 72–73): "The lateral lobe of the paraproct is very short and directed laterad; the mesal lobe is very robust with rounded lateral margin as visible in lateral view. The sclerotized tip of the aedeagus is less developed, very blunt. Female anal tube with wide mesal excision and produced

an addition small mesal lobe on the mesal tip of the lateral lobes in dorsal view; lateral apodemes of the vaginal sclerite complex straight. Reduced male tibial spur formula differs from the other member of the species complex.”

Etymology – “This new species was named after the Wolosatka Stream valley in the Beszczady Mts. where the type material was collected.”

Chaetopteroides Kumanski, 1987

Chaetopteroides bulgaricus (Kumanski, 1969)

Chaetopteryx bulgaricus KUMANSKI, 1969b: 21–27: “Material und Fundort: 10.X.1967, Pirin-Gebirge, Banderitza-Tal, Bach über der Berghütte “Wichren”, 2♂♂, 1♀ und im Abfluss der Muratowi-Seen (gleicher Bezirk), 1♂, 2♀♀. Höhe über dem Meeresspiegel entsprechend 2100 und 2200 m.” Holotypus und die Paratypen (2♂♂, 3♀♀) in Sammlung (in Alcohol) des Zoologischen Museums der Bulgarischen Akademie der Wissenschaften”.

Chaetopteroides bulgaricus (Kumanski, 1969): KUMANSKI (1987b: 15): *Chaetopteroides* gen. n. erected.

Chaetopteroides bulgaricus (Kumanski, 1969): OLÁH *et al.* (2013b: 99–100): “Additional female was collected in Pirin Mts below Bezbog on 2240 m in 18.IX.1968 (Kumanski 1971). Later a single female in Rila Mts. at tributary of Beli Iskar ob Borowez, 2300 m, 23–24.VIII.1971 and a single male at the tributary of Beli Iskar ob Borowez 1200–1800 m, 24.VIII.1971 have been collected (Kumanski & Malicky 1976).”

Chaetopteroides bulgaricus (Kumanski, 1969): OLÁH & KOVÁCS (2012): Rila Mts. Beli Iskar, 1900 m, 23.VIII.1971 leg Braasch, (1♂, 1♀, OPC present from MPC). Oláh & Kovács (2012): Rila Mts. Borovets, Zavrachitsa hut, Prava Maritsa, N42°10'04.9", E23°38'28.1", 2200 m, 05.10.2011, leg. Á. Ecsedi, T. Kovács, G. Puskás (1♀, OPC). Pirin Mts, 950 m S of Demianitsa hut, left side brook of Valyavitsa stream, N41°44'02.6" E23°28'03.1", 2020 m, 07.10.2011, leg. Á. Ecsedi, T. Kovács, G. Puskás (1♂, 6♀, OPC). Pirin Mts. 1.5 km E of Begovitsa hut, Begovitsa stream, N41°40'32.6" E23°26'38.8", 1930 m, 08.10.2011, leg. Á. Ecsedi, T. Kovács, G. Puskás (1♂, OPC). "Bulgaria, Blagoevgrad province, Pirin Mts, Bansko, stream in pine shrub above the Vihren hut, N41°45.293' E23°24.933', 1995 m, 24.X.2013, leg. J. Kontschán, D. Murányi, T. Szederjesi (1♂, HNHM).”

Diagnosis – OLÁH *et al.* (2013b: 99–100): “Cerci simple without additional setose process of subdivision. Paamere apex multidenticulate. Anal tube with short dorsolateral setose lobe and ventrolateral lobe-like setose surface. Sternite IX high. Vulvar scale simple rounded in lateral view, median lobe short rounded.”

Chaetopteroides kosovarorum Ibrahim et Oláh, 2013

Chaetopteroides kosovarorum Ibrahim et Oláh, 2013 in OLÁH *et al.* (2013b: 101): “Holotype. Kosovo, Mitrovicë Municipality, Bajgorë area, entrance into the Kaçandoll village from Mitrovicë side, sidespring of the Kaçandoll River by the main road, N42.979° E21.0509°, 1262 m, 29.10.2013, H. Ibrahim, F. Asllani Ibrahim, Irsa Ibrahim & Ildir Ibrahim (1♂, DBFMNSUP). Paratypes. Same as holotype (2♂, DBFMNSUP). Same place as holotype, 18.09.2012, light trap, H. Ibrahim (2♂, DBFMNSUP); 25.10.2013, H. Ibrahim (1♂, OPC).DBFMNSUP”

Diagnosis – OLÁH *et al.* (2013b: 101): “This large sized species with few light spots on male forewing and with subdivided cerci is more similar to *C. veges* sp. n., but differs by the modified parameres. Parameres became elongated thin-slim with bulbous basement, apical teeth reduced in size, almost minituarized and their number multiplied up to 8–10.”

Etymology – “*Kosovarorum* from “kosovar”, the inhabitants of Kosovo.”

Chaetopteroides maximus (Kumanski, 1968)

Chaetopteryx maximus KUMANSKI, 1968b: 59–61: “Fundort: Vitosa-Gebirge, beim Bergbach, nicht weit von der Berghütte “Bor”, 1620 m Höhe, 1.X.1958, 7♂♂ (leg. N. VIHODCEVSKI). Holotypus und 1 paratypus ♂ in der Kollektion von F. Schmid (Ottawa); 5♂♂ Paratypen in der Insektensammlung des Zoologischen Museums der Bulgarischen Akademie der Wissenschaften.”

Chaetopteroides maximus (Kumanski, 1968): *Chaetopteroides* gen. n. erected by KUMANSKI (1987b: 15).

Chaetopteroides maximus (Kumanski, 1968): OLÁH *et al.* (2013: 102–103): “In Vitosha Mts Kumanski (1971) has collected 3 males in Zlatnite bridge and 1 male below Rodina in 19.10.1968. A single female was collected on Vitosha Mts on 19.10.1974, near the type locality (Kumanski 1987). Oláh & Kovács (2012): Vitosha Mts, spring and brook 200 m E of Rodina hut, N42°37'09.6", E23°15'32.3", 1600 m, 03.10.2011, Á. Ecsedi, T. Kovács, G. Puskás (4♀, OPC). Vitosha Mts, Lavchemo, Boyanska Reka, N42°34'34.6" E23°16'57.7", 2050 m, 04.10.2011, Á.Ecsedi, T. Kovács, G. Puskás (1♂, 3♀, OPC; 1♂, 1♀, MM). Marinković-Gospodnetić (1980) has reported the species from Serbia: spring area of Lisinska River, Kopaonik Mts, 1♂, 2♀, 08.10.1978. Marinković'-Gospodnetić's specimens have been lost: the entire collection was destroyed during the Bosnian war between 1992 and 1995 (personal communication by H. Malicky). New collection is required to confirm its real taxonomic position. It is probably not *C. maximus*. *C. maximus* is known as endemic to Vitosha Mts. Bulgaria.

Diagnosis – OLÁH *et al.* (2013: 102–103): “Cerci with additional setose process of subdivision. Paramere apex linear denticulate laterad. Anal tube with

long dorsolateral setose lobe, ventral setose surface divided. Sternite IX rounded low. Vulvar scale humped rounded in lateral view; median lobe less developed triangular.”

Chaetopteroides tunik Oláh, 2013

Chaetopteroides tunik Oláh, 2013 in OLÁH *et al.* (2013b: 103–104): “Holotype. Macedonia, Vardar region, Kožuf Mts, open brook in alpine grassland towards Ski Kožuf, N41°12.560', E22°13.170', 1670 m, 04.10.2013, T. Kovács, D. Murányi (1♂, OPC).”

Diagnosis – OLÁH *et al.* (2013b: 103–104): “This medium sized species with narrow and long forewing without any pattern and having subdivided cerci is more similar to *C. kosovarorum*, but differs by having cerci, elongated not stalked; gonopod without vertical ridge; paramere less slender, straight in dorsal view, not arching mesad and the minute teeth limited to terminal position and their number are reduced to 4. This description is based on a single holotype male; female is required to confirm its position.”

Etymology – “*Tunik* from “tűnik” appear and disappear in Hungarian, refers to just appearing, almost disappearing setae on the parameres.”

Chaetopteroides veges Oláh, 2013

Chaetopteroides veges OLÁH, 2013 in OLÁH *et al.* (2013b: 104–106): “Holotype. Bulgaria, Kyustendil province, Osogovska planina, spruce forest, forest brook below Trite buki hut, N42°10.463', E22°38.066', 1520m, 23.10.2013, J. Kontschán, D. Murányi, T. Szederjesi (1♂, HNHM). Allotype. Same as holotype (1♀, HNHM). Paratypes. Same as holotype (1♀, HNHM). Kyustendil province, Osogovska planina, beech forest and forest brook at Iglika hut, N42°13.783', E22°38.842', 1325m, 23.10.2013, J. Kontschán, D. Murányi, T. Szederjesi (1 female, HNHM).

Diagnosis – OLÁH *et al.* (2013b: 104–106): “This large sized species with narrow and long light-spotted male forewing and brachypterous fused-spotted female forewing having subdivided cerci is more similar to *C. maximus*, but differs by having male with paramere setae limited to terminal position and their number are reduced to 2–3. Differs by female by having apical lateral lobes much longer than dorsolateral lobes; ventral setose surface on the anal tube fused, not divided; sternite IX higher; vulvar scale hooked in lateral view, not humped; median lobe of the vulvar scale more developed.”

Etymology – “*Veges* from “véges” meaning terminal/apical in Hungarian, referring to the few setae on the parameres present and limited to the terminal/apical area.”

Chaetopterygopsis Stein, 1874*Chaetopterygopsis sisestii* Botosaneanu, 1961

Chaetopterygopsis sisestii BOTOSANEANU, 1961b: 61–64: “Vallée du Delghiu, torrent a 800 m. alt. environ, bassin superieur du Buzea, au pied du Massif Ciucas, Carpates Orientales, 24.X.1960, 11 ♂, 1 ♀ (holotype ♂, allotype ♀, 10 paratypes ♂); Rivière Motru à Closani, Monts de l'Olténie du Nord, 17.X.1960 (1 ♂. Leg. I. Tabacaru). Holotype ♂ et allotype ♀ dans les collections du Musée Zoologique de Lausanne; le rest du materiel se trouve dans ma collection.”

Chaetopteryx Stephens, 1829*Chaetopteryx aproka* Oláh, 2011

Chaetopteryx aproka OLÁH, 2011b: 9–10: “An unusually small-sized *Chaetopteryx* species with reduced tibial spur number and open anal tube was collected first by David Murányi.” “Holotype. Romania: Maramureş county, Munţii Ignis, Deseşti-Stăniunea Izvoare, open brook with spring bog on the Valhani Plateau, 1020m, N47°43'01.0" E23°44'32.1", 24.09.2005, leg. J. Kontschán, D. Murányi, J. Nédli (1 male NHMB). Paratypes. Romania: Maramureş county, Munţii Ignis, Deseşti-Stăniunea Izvoare, open brook with spring bog on the Valhani Plateau, 1020m, N47°43'01.0" E23°44'32.1", 24.09.2005, leg. J. Kontschán, D. Murányi, J. Nédli (2 males, NHMB). Maramureş county, Munţii Ignis, Deseşti-Stăniunea Izvoare, open brook with spring bog on the Valhani Plateau, 1020m, N47°43.015' E23°44.547', 07.10.2010, leg. P. Barcánfalvi, D. Murányi & J. Oláh (15 males, 2 females, OPC). Maramureş county, Munţii Ignis, Deseşti-Stăniunea Izvoare, forest spring at settlement, 920m, N47°45.167' E23°43.013', 08.10.2010 leg. P. Barcánfalvi, D. Murányi & J. Oláh, (28 males, 10 females, OPC). Maramureş county, Munţii Ignis, Deseşti-Stăniunea Izvoare, forest spring and spring brook at settlement, 920m, N47°45.167' E23°43.013', 20.X.2010 leg. Á. Ecsedi, J. Oláh & I. Szivák (12 males, 10 females, OPC). Maramureş county, Munţii Ignis, Deseşti-Stăniunea Izvoare, forest spring and spring brook at settlement, 920m, N47°45.167' E23°43.013', 21.X.2010 leg. Á. Ecsedi, J. Oláh & I. Szivák (21 males, 14 females, OPC). Maramureş county, Munţii Ignis, Deseşti-Stăniunea Izvoare, forest spring and spring brook at settlement, 920m, N47°45.167' E23°43.013', 22.X.2010 leg. Á. Ecsedi, J. Oláh & I. Szivák (14 males, 6 females, OPC). Maramureş county, Munţii Ignis, Deseşti-Stăniunea Izvoare, small spring brook on the Valhani Plateau, 1020m, N47°43.015' E23°44.547', 21.X.2010, leg. Á. Ecsedi, J. Oláh & I. Szivák (25 males, 8 females, OPC).” “The paratypes are deposited in the following collections: Oláh Private Collection (Debrecen, Hungary), Malicky Private Collection (Lunz-am-See, Austria), Museo Civico di Scienze Naturali (Bergamo), Naturhistoriska Riksmuseet (Stockholm), National Museum of Natural History, Smithsonian Institution (Washington, DC).”

Diagnosis – OLÁH (2011b: 9–10): “Despite its reduced spur number this species is a true *Chaetopteryx* and despite its modified female anal tube it belongs to the *Chaetopteryx rugulosa* species group.”

Etymology – “The name refers to the unusually small size of this species, tiny “aproka” in Hungarian.”

Chaetopteryx biloba Botoșăneanu, 1960

Chaetopteryx biloba BOTOȘĂNEANU, 1960b: 116–118: “Ogasul Ulmului, source affluente du ruisseau Frasincea, à Cornereva bassin de Belareca, Banat, Roumanie), 10.X.1956. Holotype ♂, allotype ♀, dans les collections du British Museum (Nat. Hist.), Department of Entomology. Un paratype ♂ dans la collection de l’auteur.”

Chaetopteryx bosniaca Marinković-Gospodnetić, 1955

Chaetopteryx bosniaca MARINKOVIĆ-GOSPODNETIĆ, 1955: 125–128: “Primerici uhvaćeni na vrelu Bosne, Večerici (prvoj desnoj pritoci Bosne) i na Treskavici (i to uz potok koji spaja Platno sa Velikim jezerom) razlikuju se od dosad opisanih vrsta.” “U zbirci Biološkog instituta pri Zemaljskom muzeju u Sarajevu nađeni su primerici *Ch. bosniaca* sa sledećih lokaliteta: Vojkovići, Ledići, Pazarić i Vrelo Bosne. Svi ti primerici su bili određeni kao *Chaetopteryx vilosa* [sic!] Fabr.” (“The specimens collected at Vrelo Bosne, Večerića (the first right tributary of the River Bosna) and at Treskavica (and along the creek connecting Platno and Big lakes) differ from the species described earlier.” “In the collection of the Biological Institute of the National Museum in Sarajevo there are specimens from Vojkovići, Ledići, Pazarić and Vrelo Bosne. These specimens were identified as *Chaetopteryx villosa* Fabr.”)

Chaetopteryx cissylvanica BOTOȘĂNEANU, 1960b: 118–120: “Ogasul lui Roșet, affluent gauche de la Cerna, en amont de Băile Herculane, Banat, Roumanie, 13.X.1957. Holotype ♂ et allotype ♀, dans la collection F. Schmid (Lausanne). 2 ♂ paratypes, dans les collections de l’auteur.”

Chaetopteryx cissylvanica BOTOȘĂNEANU, 1960: MALICKY (2005: 573): synonymised with *Chaetopteryx bosniaca* Marinković-Gospodnetić, 1955.

Chaetopteryx fontisdraconis BOTOSĂNEANU, 1993: 399–402: “1♂ (holotype), and 3♀ (allotype and paratypes), in alcohol; 22.X.1971, Romania, Oltenia, district Gorj: Village Runc (Runcu), Izvoarele (= the springs) La Balaure”. Deposited in the Zoological Museum of the University of Amsterdam.”

Chaetopteryx fontisdraconis BOTOSĂNEANU, 1993: MALICKY (2005: 573): synonymised with *Chaetopteryx bosniaca* Marinković-Gospodnetić, 1955.

Chaetopteryx gonospina Marinković-Gospodnetić, 1966

Chaetopteryx gonospina MARINKOVIĆ-GOSPODNETIĆ, 1966a: 110–112: “Holotype ♂, Bosnia, Olovo, 7.X.1964. in author’s collection; 2 paratypes ♂, Bosnia, Sarajevo, Crepoljsko, one in collection of Zemaljski muzej, Sarajevo, the other in Schmid’s collection, Ottawa.”

Chaetopteryx polonica Dziędziewicz, 1889

Chaetopteryx polonica DZIĘDZIEWICZ, 1889: 112, 117–118: “Znajdowałem 3 i 16 października w Młodiatynie, na podgórzu koło Kołomyi przy potoku w borze po burzanach i podrostach jodłowych w małej ilości (5♂, 1♀).”

Chaetopteryx polonica Dziędziewicz, 1889: SZCZĘSNY (1980: 472): in NHM-ISEA: “4♂♂, 1♀; the specimens undoubtedly come from the typical series from which Dziędziewicz described this species. In the publication, in which the author describes the species (Dziędziewicz, 1889) is the information that the specimens were caught “at Młodiatyn near Kolmyja by a stream 3.X. and 16X.” Two males with inventory number 8/6 have the following labels: “Młodiatyn 1887” and 2.X.Ml.” The other two males with inventory number 75/9 have identical labels “16.X.Ml.” and the female with inventory number 33/8 “Młodiatyn 16.X. (Kolom.). A male from no 75/9 I am designating as lectotype.”

Chaetopteryx polonica Dziędziewicz, 1889: SZCZĘSNY & GODUNKO (2007: 35): in SMNHL: “18♂♂, 9♀♀; West Carpathians, Beskid Wyspowy; East Carpathians, Gorgany Massif (Chomiak); 1♀ from Gorgany Mts was wrongly determined “*Chaetopteryx major*”. Although the species was discovered and described by Dziędziewicz at Młodiatyn village, at border between East Carpathian Foothills and East Carpathians (the Pokucie-Marmarosch Carpathians), none of specimens deposited in SMNHL belongs to the type series which is housed in Cracow.”

Chaetopteryx polonica Dziędziewicz, 1889: SZCZĘSNY & CHVOJKA (2008: 157): in NMP: Specimens of 4♂♂ and 1♀ were collected in 22–25. IX.1906, in 29. IX.1907 and in 5.X.1907 in the East Carpathians, Chomiak as well as in 11.IX.1908 in Pod Dancerz and deposited in NMP. SZCZĘSNY & GODUNKO (2008): a stream (probably Kobyltsia) at Molodiatyn village (border line between the Carpathian foothills and the Carpathians) is locus typicus of the species.

Chaetopteryx stankovici Marinković-Gospodnetić, 1966

Chaetopteryx stankovici MARINKOVIĆ-GOSPODNETIĆ, 1966a: 112: “Holotype ♂ and allotype ♀: Serbia, mountain Kopaonik, 29. X. 1952. Leg. D. Filipovic.”

Chaetopteryx subradiata Klapálek, 1907

Chaetopteryx subradiata KLAPÁLEK, 1907: 27–28: “Jeden párek sbíral Józ. Dziędzielewicz, 22 a 23. IX. na Chomiaku (Błotek). Samička chycena v myslivně na okně.”

Chaetopteryx uherkovichi Oláh, 2011

Chaetopteryx uherkovichi OLÁH, 2011a: 118–119: “Holotype: Croatia, Krndija Mts., 6 km N of Kutjevo, Velika rijeka, springs, N45°28'59", E17°51'33", 580 m, 4.11.2011, leg. Á. Uherkovich & I. Szivák (1 male, OPC).”

Diagnosis – OLÁH (2011a: 118–119): “This new species belongs to the *Chaetopteryx major* species group and is a close relative of the *Chaetopteryx major* McLachlan. They live together in the Papuk Mountains. *C. uherkovichi* new species can be easily distinguished from *C. major* by having spur number 133, not 033; posterodorsal spinate area on segment VIII vestigial, not well-developed; dorsum of segment IX long, not very short; cercus shallowly excised in dorsal view, not deeply; paraproct modified having outer arm shifted laterad; subanal plate extremely broadened; gonopods differently shaped.”

Etymology – “Patronym in honor of the collector Ákos Uherkovich, who has contributed most significantly to the knowledge of the Hungarian caddisfly fauna, today Hungary is one of the most studied area in our biosphere.”

Chaetopteryx rugulosa species group

This species group was established by MALICKY *et al.* (1986) with four known and four new taxa. After a quarter of century, applying the phylogenetic species concept and the sexual selection theory we have revised the species group, established three subgroups, two species clusters and described seven new species (OLÁH *et al.* 2012). MALICKY (2014) synonymised our three species and questioned all the others, while arguing against the application of the phylogenetic species concept and the sexual selection theory, but without arguments. His nomenclatural acts were rather autocratic contradicting also to his earlier statements (MALICKY *et al.* 1986). Malicky's taxonomic actions have been realised without any factual explanations and criticisms regarding the divergence diagnoses of the new clades and species and without giving his own new diagnosis explaining the divergences remained in his new synonymised combined taxa.

Based upon (1) new population sampling, re-examination of the old materials; (2) relying on the theoretical progress in species delineation, taxa delimitation, reproductive isolation, and phylogenetic species; (3) exploring the discovery of speciation traits, as a powerful tool in phenomics we have revised

the species group and described new species (OLÁH *et al.* 2015b). At this stage the *Chaetopteryx rugulosa* species group is comprised of 21 species: *Chaetopteryx balcanica* Oláh, 2015, *C. clara* McLachlan, 1876, *C. euganea* Moretti et Malicky, 1986, *C. giuliensis* Oláh et Kovács, 2012, *C. goricensis* Malicky et Krušnik, 1986, *C. idriensis* Oláh et Urbanič, 2012, *C. irenae* Krušnik et Malicky, 1986, *C. kamnikensis* Oláh et Urbanič, 2012, *C. karima* Oláh, 2015, *C. kozarensis* Oláh, 2015, *C. marinkovicae* Malicky et Krušnik, 1988, *C. mecsekensis* Nógrádi, 1986, *C. noricum* Malicky, 1976, *C. papukensis* Oláh et Szivák, 2012, *C. pohorjensis* Oláh et Urbanič, 2012, *C. prealpensis* Oláh, 2012, *C. psunjensis* Oláh, 2015, *C. rugulosa* Kolenati, 1848, *C. schmidi* Botoșăneanu, 1957, *C. tompa* Oláh, 2015, *C. zalaensis* Oláh, 2012. These species are diverged in clades of three subgroups and two species clusters.

Chaetopteryx schmidi species subgroup
Chaetopteryx balcanica Oláh, 2015

Chaetopteryx schmidi Botoșăneanu, 1957: OLÁH *et al.* (2012: 62): all the specimens from Serbia and Bosnia-Herzegovina were misidentified.

Chaetopteryx balcanica Oláh, 2015 in OLÁH *et al.* (2015b: 78–81): “Holotype: Serbia: Derdap Mts. Donji Milanovac, Grgeci spring and its outlet in a beech forest, 500 m, N44° 28' E22° 02', 13.X.2006, leg. L. Dányi, J. Kontschán & D. Murányi (1 male, in copula with the allotype, HNHM). Allotype: same as holotype (1 female in copula with the holotype; HNHM). Paratypes: same as holotype (1 male, 1 female, OPC). Miroc, D. Milanovac, Stream Supljanka, 8.X.1984, leg. Branceli (1 female, PMS). Pesaca, Donji Milanovac, 9.X.1986, leg. I. Sivec & B. Horvát (1 male, PMS). Popadija, Donji Milanovac, 9.X.1986, leg. I. Sivec & B. Horvát (1 male, PMS). Derdap Mts. Golubinje, stream valley with young forest, N of the village, 88 m, N44° 30'59.6" E22° 12'41.5", 13.X.2006, leg. L. Dányi, J. Kontschán & D. Murányi (6 males, HNHM). Derdap Mts. Dobra, Reka Pesaca, beech forest with stream, 386 m, N44° 34,670 E21° 59,250, 28.X.2010, leg. L. Dányi, J. Kontschán & Zs. Ujvári. Murányi (2 males, 1 female; HNHM). Bosnia-Herzegovina: Kravica, Zvornik, 5.X.1986, leg. I. Sivec & B. Horvát (1♂, PMS). Dobrovci, Gracanica, 430m, 11.X.1990, leg. B. Horvát & I. Sivec (2 males, 4 females; PMS). Blagijevici, Ozren Planina, 390 m, 12.X.1990, leg. B. Horvát & I. Sivec (1 female, PMS). Kamensko, River Krivaja, 15.X.1990, leg. B. Horvát & I. Sivec (2 males, PMS). Cunista, River Krivaja, 450m, 15.X.1990, leg. B. Horvát & I. Sivec (1 male, 1 female; PMS). Skender, vakuf, 820m, 19.X.1990, leg. B. Horvát & I. Sivec (2 males, PMS).”

Diagnosis – OLÁH *et al.* (2015b: 78–81): “This new species having stout spine-like terminal shaft on the paramere as well as having no setose lateral lobes

on female tergite IX belongs to the *C. schmidi* subgroup, but differs from all the known species by having combined character state: (1) Shallow curvature on para-proctal hook, not deep curving more anterad as at *C. schmidi*; (2) Various sized lateral process, but without any sclerotized basal tube; only a sclerotized basal ring is present permitting a longitudinal position of the inflated and protruded membranous process; in many specimens the membranous process is withdrawn inside the cylinder, not visible at all; at *C. schmidi* the sclerotized basal tube is present and producing and supporting a perpendicular position of the protrudable and inflatable membranous posterior part of the lateral process; at *C. papukensis* the sclerotized basal tube is present, but almost longitudinal and the membranous process is not retractable entirely; there is no any specimens without lateral process. (3) Primary spine long and curved like at *C. papukensis*, but paramere shaft is not triangular in dorsal view. (4) Female anal tube quadrangular with less protruded inner sclerite. We presume that *C. balcanica* sp. n. is the ancestral species of the *C. schmidi* subgroup widely distributed from East Serbia through Bosnia-Herzegovina, but we need to examine more specimens from more populations to confirm its relations.”

Etymology – “This new species was named after its wide distribution in the Balkan Peninsula.”

Chaetopteryx karima Oláh, 2015

Chaetopteryx papukensis Oláh et Szivák, 2012 in OLÁH *et al.* (2012: 62) (par-tim): misidentification.

Chaetopteryx karima Oláh, 2015 in OLÁH *et al.* (2015b: 81): “Holotype: Bosnia & Herzegovina: Banja Luka region, Kozara Mts, forest brook below the Vrbaška – Kozarac road, 45°02.480', 16°54.266', 560 m, 07.11.2012, leg. T. Kovács & G. Magos (1♂, OPC).”

Diagnosis – OLÁH *et al.* (2015b: 81): “This single male was collected in a small forest stream where an unknown *Leuctra* species was also collected in previous spring, still waiting to describe. Earlier without experiences on speciation trait and the application of fine structure analysis we have determined this specimen and listed as a paratype of *C. papukensis* (Oláh *et al.* 2012). Although the female is unknown, the strongly developed paramere spine clearly relates this new species into the *C. schmidi* subgroup. The lack of setose lateral lobes on female tergite IX would further confirm the phylogeny of this interesting species. The presence of well elaborated supporting sclerite system of flange and ridge formation on the aedeagus is present only in *C. irenae* subgroup and in *C. noricum* species cluster. The detection of this much specialised trait of deeper/older divergence in *C. schmidi* subgroup seems discordant and explainable by incomplete

lineage sorting. Having this specific supporting sclerite system on the aedeagus present this is a well diverged new species, however female traits of lateral setose lobe and anal tube formation would give more information about its relations.”

Etymology – “*Karima* from “karima” flange in Hungarian, refers to the double pairs of flange ridge formation on the aedeagus.”

Chaetopteryx kozarensis Oláh, 2015

Chaetopteryx papukensis Oláh et Szivák, 2012 in OLÁH *et al.* (2012: 62) (partim): misidentification.

Chaetopteryx kozarensis Oláh, 2015 in OLÁH *et al.* (2015b: 81–83): “Holotype: Bosnia & Herzegovina: Banja Luka region, Kozara Mts, forest edge spring 1 km S of peak Lisina, 44°57.773', 16°58.342', 680 m, 7.XI.2012, leg. T. Kovács & G. Magos (1 female, OPC). Allotype: same as holotype (1 male, OPC). Paratypes: same as holotype (4 males, 5 females; OPC).”

Diagnosis – OLÁH *et al.* (2015b: 81–83): “Most close to *C. papukensis*, but differs by having apical hook formation of the dorsal branch of the paraproct blunt, not pointed and the curvature is very shallow. The most striking divergence from all the known female anal tube in the species group is detected in the dorsal configuration. This is why the female was designated as holotype. The unique dorsal profile of the anal tube is characterized by a deep V-shaped excision; however we do not know how the anchoring pressure may modify the shape of the excision by moving the internal sclerite backward. It is actually not known whether this internal sclerite is movable at all or not. The bilobed posterior end of the internal sclerite is in protruded state in all of the examined hundreds of *C. papukensis*. This may suggest that the internal sclerite, that is the vestigial tergite X fixed withdrawn inside the anal tube is not movable even under the long anchoring pressure of the paraproctal hook.”

Etymology – “This new species was named after the mountain range where the type material was collected.”

Chaetopteryx mecsekensis Nógrádi, 1986

Chaetopteryx schmidi mecsekensis Nógrádi, 1986 in MALICKY *et al.* (1986: 8–10): “Die Adulten findet man an Quellen und entlang der Oberläufe von kleinen Bachen im Mecsek-Gebirge sowohl auf Kalk als auch auf Sandstein. Sie sind flugunfähig, laufen aber entlang der Bäche rasch herum, manchmal noch auf Schnee. Die Aktivitätsperiode dauert von Anfang Oktober bis Anfang Januar. Die Tiere sind auch noch bei Lufttemperaturen von minus 2–3 Grad Celsius aktiv und überleben minus 10–12 Grad.” “Untersuchtes Material (alles vom Mecsek-Gebirge in Südungarn): Holotypus ♂: Tal “Meleg-mány”, 20. 12 1983, leg. A.

Uherkovich, in coll. Janus Pannonius Museum, Pécs, als Flüssigkeitspräparat, Genitalpräparat Nr.282. Paratypen: Mánfa, bei der Höhle "Kölyuk", 26. 11. 1982: 1 ♂; Tal "Meleg-mány", 8. 10. 1983: 31 ♂♂, 12 ♀♀, 22. 10. 1983: 10 ♂♂, 10 ♀♀, 7. 11. 1983: 2 ♂♂, 20. 12. 1983: 1 ♂, 6 ♀♀, 29. 12. 1983: 2 ♂♂ (diese alle im Nordwesten des Mecsek-Gebirges); Kisújbánya, Pásztor-Quelle, 8. 10. 1983: 11 ♂♂, 5 ♀♀, 15. 10. 1983: 8 ♂♂, 5 ♀♀, 16. 10. 1983: 2 ♂♂, 2 ♀♀, 28. 10. 1983: 10 ♂♂, 7 ♀♀, 27. 11. 1983: 23 ♂♂, 3 ♀♀, 7. 12. 1983: 14 ♂♂, 1 ♀, 10. 12. 1983: 8 ♂♂, 17. 12. 1983: 25 ♂♂, 26. 12. 1983: 7 ♂♂, 1 ♀, 1. 1. 1984: 6 ♂♂, 6. 1. 1984: 3♂; Vékény, Tal "Vár-völgy", 8. 10. 1983: 9 ♂♂, 5 ♀♀, 15. 10. 1983: 3 ♂♂, 1 ♀, 28. 10. 1983: 9♂♂, 8 ♀♀, 27. 11. 1983: 12♂♂, 7. 12. 1983: 7 ♂♂, 2 ♀♀, 17. 12. 1983: 4♂♂, 1 ♀, 1. 1. 1984: 1 ♂, 1 ♀; Pécs-Vasas, Hármaskükk-Quelle, 30. 12. 1983: 2 ♂♂ (diese alle im östlichen Mecsek-Gebirge, etwa 20 km von den ersten Orten entfernt). Die Tiere wurden gesammelt von Sára U. Nógrádi, A. Uherkovich und G. Vágner und befinden sich in coll. Janus Pannonius Museum, Pécs, coll. Naturwissenschaftliches Museum Budapest, coll. Ujhelyi, Budapest, und coll. Malicky."

Chaetopteryx rugulosa mecsekensis Nógrádi, 1986: MALICKY (2005b: 573): transferred from *C. schmidi* to *C. rugulosa*.

Chaetopteryx mecsekensis Nógrádi, 1986: OLÁH *et al.* (2012: 59–60): raised to species status. "Hungary: Mecsek Mts. Pécs, Meleg-mány, 22.X.1983, leg. S. Nógrádi (5♂, 5♀, OPC). 1.XI.1985, leg. S. Nógrádi (5♂, 3♀, OPC). 20.XII.1983, leg. Á. Uherkovich (1♂, 3♀, OPC). 28.X.1987, leg. Á. Uherkovich (10♂, 5♀, OPC). Mecsek Mts. Kisújbánya [Hosszúhetény], Pásztor-spring, 436m, N 46°13'04", E 18°21'27", 12.XI.1986, leg. S. Nógrádi (3♂, 1♀, OPC); 10.XII.1983, leg. S. Uherkovich (4♂, OPC); 26.XII.1983, leg. S. Nógrádi (4♂, 1♀, OPC); 1.I.1984, leg. S. Nógrádi (3♂, OPC). 7.XII.1983, leg. Á. Uherkovich (7♂, 1♀, OPC); 6.XI.2009, leg. I. Szivák & Á. Uherkovich (3♂, 1♀, OPC); 5.XI.2010, singled leg. I. Szivák, J. Oláh & Á. Uherkovich (11♂, 11♀, OPC). Mecsek Mts. Hosszúhetény, Takanyó-v, 24.X.1984, leg. Á. Uherkovich (2♂, 2♀, OPC); Mecsek Mts. Hosszúhetény, Hidasi-v. Csurgó, 11.XI.1984, leg. Á. Uherkovich (2♂, 2♀, OPC); Mecsek Mts. Mánfa, Kölyuk, 12.XI.1985, leg. S. Nógrádi (8♂, 1♀, OPC). Vékény, Vár-v. Iharos-spring, 28.X.1983, leg. S. Nógrádi (3♂, 2♀, OPC). 12.XI.1986, leg. S. Nógrádi (4♂, 1♀, OPC). Magyaregregy, Iharos-kút, 327m, N46°13'21.90", E18°20'06.80", 6.XI.2009, leg. I. Szivák & Á. Uherkovich (2♂, OPC). Magyaregregy, Máré-forrás, N46°13'39.98", E18°19'19.39", 6.XI.2009, leg. I. Szivák & Á. Uherkovich (1♂, 1♀ in copula, OPC). Mecsek Mts. Pécs, Nagy-Mély-völgy, Kánya-forrás, 347m, N46°08'05.16", E18°12'43.75", 14.XI.2009, leg. I. Szivák (3♂, 1♀, OPC). Mecsek Mts. Pécs, Nagy-Mély-völgy, Sziklás-forrás, N46°08'26.7", E18°12'39.96", 14.XI.2009, leg. I. Szivák (3♂, OPC). Mecsek Mts. Pécs, Melegmányi-völgy, Anyák-kútja, N46°08'08.55", E18°13'31.46", 14.XI.2009, leg. I. Szivák (2♂, 1♀, OPC). Mecsek Mts. Pécs, Melegmányi-völgy, Mésztufa lépcső, 352m, N46°08'12.89",

E18°13'29.92", 14.XI.2009, leg. I. Szivák (3♂, OPC). Mánfa, Nagy-Mély-völgy, Cserkész-forrás, N46°08'56.73", E18°12'38.08", 14.XI.2009, leg. I. Szivák (4♂, OPC). Magyaregregy, Vár-v. Réka-spring, N 46°13'39", E 18°19'19" 6. XI. 2011, leg. S. Nógrádi & Á. Uherkovich (7♂, 3♀, OPC).

Distinguishing traits – OLÁH *et al.* (2012: 59–60): "Male: cerci higher than at *C. schmidi* and *C. papukensis*; apical flap of gonopod less developed, resulting in gonopod apex rounded in lateral view, not with pointed or projected blunt apex like at *C. schmidi* and *C. papukensis*; dorsal hook of paraproct medium turned, less turned at *C. papukensis*, highly turned at *C. schmidi*; aedeagus with long, almost filiform lateral processes, not gemmiform of *C. schmidi* or short digitiform of *C. papukensis*; paramere shaft short rod-shaped with medium long straight primary spine, not short straight of *C. schmidi* or long curved of *C. papukensis*. Female: anal tube medium long; supragenital plate very sharp triangular in ventral view."

Chaetopteryx papukensis Oláh et Szivák, 2012

Chaetopteryx rugulosa mecsekensis Nógrádi, 1986: OLÁH (2010: 98): misidentification.

Chaetopteryx papukensis Oláh et Szivák, 2012 in OLÁH *et al.* (2012: 60–62): Holotype. Croatia: Papuk Mts, Slatinski Drenovac, Jankovac, Jankovac spring, 45°31'08.1", 17°41'11.9", 510 m, 06.11.2012, T. Kovács, G. Magos (1♂, OPC). Allotype. Same as holotype (1♀ OPC). Paratypes. Same as holotype (14♂, 10♀ OPC, 5♂, 3♀ MM). Krndija Mts, 3 km N of Kutjevo, Velika rijeka, small tributary, 424 m (YL23), N45°27'55", E17°52'37", 04.11.2011, I. Szivák (1♂, OPC). Krndija Mts, 6 km N of Kutjevo, Velika rijeka, springs, 580 m, N45°28'59", E17°51'33", 04.11.2011, I. Szivák, Á. Uherkovich (4♂, 4♀ OPC); 06.11.2012, T. Kovács, G. Magos (9♂, 9♀ OPC). Krndija Mts, Kutjevo, Mala rijeka, 402 m (YL23), N45°27'48", E17°51'53", 04.11.2011, I. Szivák, Á. Uherkovich (4♂, 1♀ OPC). Papuk Mts, forest brook below the Slatinski Drenovac – Velika road, 45°29'32.4", 17°39'10.9", 480 m, 06.11.2012, T. Kovács, G. Magos (7♂, 10♀ OPC). Papuk Mts, Jankovac, 13.10.1986, B. Horvat, I. Sivec (2♂, 2♀ PMS). Papuk Mts, Jankovac spring, cave and the surrounding beech forest, 456 m, N45°31'126", E17°41'198", 01.10.2007, L. Dányi, J. Kontschán, D. Murányi (7♂, HNHM). Papuk Mts, Slatinski Drenovac, 1.5 km S, Jankovac stream, 350 m, N45°32'01", E17°42'08", 19.10.2012, Á. Uherkovich (1♀ OPC). Papuk Mts, Slatinski Drenovac, Jankovac, Jankovački potok, 351 m (YL14), N45°31'31", E17°41'25", 04.11.2011, I. Szivák (3♂, 1♀ OPC). Papuk Mts, Slatinski Drenovac, Kovačica Potok, 541 m, N45°31'08", E17°39'54", 03.11.2012, Á. Uherkovich (1♂, OPC)."

Chaetopteryx papukensis Oláh et Szivák, 2012: MALICKY (2014: 52): synonymised with *C. schmidi*.

Chaetopteryx papukensis Oláh et Szivák 2012: OLÁH *et al.* (2015b: 83–84): “Here we reinstate the specific status of *Chaetopteryx papukensis* Oláh & Szivák 2012 stat. restit.”

Diagnosis – OLÁH *et al.* (2012: 60–62): “This new species belongs to the *C. schmidi* New Species Subgroup of the *C. rugulosa* species group. Most close to *C. mecsekensis* but differs by having cerci lower than at *C. mecsekensis*, apical flap of gonopod present, not lacking; the well developed flap producing gonopod apex with pointed or blunt projection in lateral view, not rounded like at *C. mecsekensis*; dorsal hook of paraproct less turned, medium turned at *C. mecsekensis*, highly turned at *C. schmidi*; aedeagus with medium digitiform lateral processes, not long filiform of *C. mecsekensis* or gemmiform of *C. schmidi*; paramere shaft triangular, not digitate; primary spine long curved, not short straight of *C. schmidi* or long straight of *C. mecsekensis*. Anal tube of female is long.”

Etymology – “The new species is named after the Papuk Mts, where the type locality is found.”

Chaetopteryx psunjensis Oláh, 2015

Chaetopteryx papukensis Oláh et Szivák, 2012 in OLÁH *et al.* (2012: 62): misidentification.

Chaetopteryx psunjensis Oláh, 2015 in OLÁH *et al.* (2015b: 84–86): “Holotype: Croatia: Sumetlica Strmac, Psunj Mts. Creek on sandstone, 663m, 45°22'32"N, 17°21'40"E, 23.X.2012, leg. Á. Uherkovich (1♂, OPC). Allotype: Croatia, Sumetlica Strmac, Psunj Mts. Small creek on crystalline rock, 722m, 45°22'43"N, 17°22'04"E, 23.X.2012, leg. Á. Uherkovich (1 female, OPC). Paratype: same as allotype (1 female, OPC).”

Diagnosis – OLÁH *et al.* (2015b: 84–86): “This new species has elongated dorsal branch of the paraproct with blunt apex. The lateral process of the aedeagus is enforces by a short double S-shaped ridge connected directly to the basal sclerotized tube of the lateral process. Such a sclerotized basal tube has been evolved in *C. kamnikensis* of the *C. rugulosa* subgroup. This unique structural modification of the simple sclerotized cylinder of the aedeagus is an adaptive product of the sexual selection together with the modification of the apical hook formation on the paraproct. The dorsal profile difference in the female anal tube between the allotype and paratype is resulted probably by the long coupling pressure of anchoring paraproctal apical hook on the internal sclerites, as anchor substrate during copulation. During copulation the hook pair is inserted into the membranous anterior margin of the internal sclerite inside the anal tube exerting pressure to move the entire internal sclerite backward. The hook and sclerite interlocking keeps the male and female together for several

days may move the internal sclerite backward exposing the bilobed very sclerotized apical part more free as well as slandering and elongating the entire anal tube accordingly.”

Etymology – “This new species was named after the mountain range where the type material was collected.”

Chaetopteryx schmidi Botoșăneanu, 1957

Chaetopteryx schmidi BOTOȘĂNEANU, 1957b: 191–193: “15.XII.1956, petit ruisseau affluent gauche du torrent Plavisevitza a environ 8 km en amont de sa confluence avec le Danube (Banat, région du Défilé de Cazane) 8 ♂, en alcool. Holotype ♂ dans les collections du Rijksmuseum van Natuurlijke Historie de Leyde). Paratypes ♂ dans les collections F. C. J. Fischer, D. E. Kimmins, F. Schmid, ainsi que dans celle auteur.”

Chaetopteryx rugulosa schmidi Botosaneanu, 1957: MALICKY (2005b: 573): reduced to subspecies status.

Chaetopteryx schmidi Botosaneanu, 1957: OLÁH *et al.* (2012: 62–63): resurrected to species status.

Chaetopteryx schmidi Botosaneanu, 1957: KUČINIĆ *et al.* (2013: 21–22): species status confirmed.

Chaetopteryx schmidi Botosaneanu, 1957: OLÁH *et al.* (2015b: 87–88): “Published material (Oláh *et al.* 2012) is re-examined and diverged fine structure elements redrawn to compare them with *C. papukensis*.”

Chaetopteryx tompa Oláh, 2015

Chaetopteryx schmidi Botoșăneanu, 1957: OLÁH *et al.* (2012: 62) (partim): misidentification.

Chaetopteryx tompa Oláh, 2015 in OLÁH *et al.* (2015b: 88): “Holotype: Bosnia-Herzegovina: Skender, vakuf, 820m, 19.X.1990, leg. B. HORVÁT & I. SIVEC, (1 male, OPC). Allotype: same as holotype (1 female, OPC).”

Diagnosis – OLÁH *et al.* (2015b: 88): “This new species is close to *C. balcanica* sp. n. but differs by having paramere shaft triangular, not digitate; primary spine short, stout and straight, not long and curved; dorsal branch of the paraproct, the apical hook formation is different, longer with blunt apex; female anal tube longer and not quadrangular. A more detailed examination on several specimens from more population is required to establish its relations.”

Etymology – “*Tompa* from “tompá” blunt in Hungarian, refers to the blunt apex of the hook formation on the dorsal branch of the paraproct.”

Chaetopteryx rugulosa species subgroup*Chaetopteryx noricum* species cluster*Chaetopteryx noricum* Malicky, 1976

Chaetopteryx schmidi noricum MALICKY, 1976: 98–99: “Holotypus ♂, Allotypus ♀ und Paratypen: Carinthia, Saualpe oberhalb Wieting, Umgebung der Weisbürgerhütte, 1600–1800 m, 20.–28. 9. 1975, leg. et coll. Malicky. – Ein weiteres ♂ befindet sich im Naturhistorischen Museum Admont, es wurde im Veitlgraben bei Admont (Steiermark) gefunden und von Strobl (1906: 232) unter Namen *Ch. rugulosa* publiziert.”

Chaetopteryx rugulosa noricum Malicky, 1976: MALICKY (2005b: 573): transferred from *C. schmidi* to *C. rugulosa*.

Chaetopteryx noricum Malicky, 1976: OLÁH *et al.* (2012: 63): raised to species status. “Austria: Carinthia, Saualpe ob Wieting, 1600m, 28.IX.1988, leg. H. Malicky (3♀, OPC from MPC). Katschbach, STMKz, 3.XI.2000, leg. W. Graf (1♂, OPC). Saualpe, Kliening, middle reach of stream Klieningbach, 932m, N46°56′49.4″, E14°46′24.2″, 21.XI.2009, leg. A. Déry & I. Szivák (1♂, OPC). Saualpe, Geierkogel Klippitztörl, springs of stream Klippitzbach, 1584m, N46°55′53.8″, E14°40′49.3″, 21.XI.2009, leg. A. Déry & I. Szivák (5♂, OPC). Saualpe, Hinterberg Löllinggraben, a spring in the middle reach of stream Löllingbach, 802m, N46°54′38″, E14°34′03″, 21.XI.2009, leg. A. Déry & I. Szivák (6♂, OPC).”

Chaetopteryx pohorjensis Oláh et Urbanič, 2012

Chaetopteryx pohorjensis Oláh et Urbanič, 2012 in OLÁH *et al.* (2012: 63–65): “Holotype. Slovenia, Pohorje Mts, below Pesek, spring area of river Oplotnica, 1345m, N46°28′24.8″, E15°20′55.9″, 08.11.2012, T. Kovács, G. Magos, I. Sivec (1♂, OPC). Allotype. Same as holotype (1♀, OPC). Paratypes. Same as holotype (2♂, 6♀, OPC; 1♂, 1♀, MM). Same locality as holotype: 20.10.1981, I. Sivec (2♂, 2♀, OPC); 15.10.1984, B. Horvat, I. Sivec (16♂, 9♀, PMS); 27.09.2008, I. Sivec (1♂, 1♀, OPC); 10.11.2008, I. Sivec (3♂, 1♀, OPC); 28.09.2012, I. Sivec (1♂, OPC); 19.10.2012, B. Horvat, I. Sivec (18♂, 7♀, OPC); 08.11.2012, I. Sivec (3♂, 1♀, OPC). Dravograd, Ogleja puša, Vrački stream, 1170 m, N38°08′09″, E15°05′24.30″, 04.10.2012, I. Sivec, G. Urbanič (4♂, 1♀, OPC). Kamnik, Volovljek, N46°18′59.7″, E14°42′03.1″, 14.11.2010, I. Sivec (1♀, OPC). Kozji Vrh nad Dravogradom, sidestream of stream Brelejev potok, 1530 m, N46°38′26.35″, E15°04′52.35″, 04.10.2012, I. Sivec, G. Urbanič (3♂, OPC). Kozji Vrh nad Dravogradom, sidestream of stream Velka, 570 m, N46°37′26.0″, E15°04′16.4″, 04.10.2012, I. Sivec, G. Urbanič (7♂, OPC); 07.11.2012, G. Urbanič (1♀, labo-

ratory reared, OPC). Kozji Vrh nad Dravogradom, stream Brelejev potok, 1170 m, N46°38'39.25", E15°02'52.41", 04.10.2012, I. Sivec, G. Urbanič (5♂, 1♀, OPC). Litija, Konjski graben, 16.10.1985, I. Sivec (1♀, PMS). Mislinja, Mislinjski jarek, 29.10.2010, I. Sivec (2♂, 2♀, OPC). Pohorje Mts, Pesek, 28.10.1989, B. Horvat, I. Sivec (1♂, PMS). Pohorje Mts, Pesek, N46°28'26.3" E15°20'55.9", 09.10.2010, I. Sivec (2♂, OPC)."

Chaetopteryx pohorjensis Oláh et Urbanič, 2012: MALICKY (2014: 52): dubious remarks on species status and synonymy with "*Chaetopteryx rugulosa noricum*" are presented without any factual arguments or nomenclatorial acts.

Chaetopteryx pohorjensis Oláh et Urbanič, 2012: OLÁH *et al.* (2015b: 89–90): "Malicky (2014) has not synonymized *C. pohorjensis* with *C. noricum*, but his position was uncertain and confusing, moreover he maintained without any explanation that *C. noricum* is a subspecies of *C. rugulosa* and *C. pohorjensis* does certainly not merit a specific name. Above we have summarised the older divergences in the *C. rugulosa* species group forming the subgroup and species cluster structures as was detailed earlier (Oláh *et al.* 2012). Subgroups and cluster structures are differentiated by neutral traits of periphallic organs of older divergences, by gross phallic structures and by specific divergences in the speciation trait of the lateral process on the aedeagus. *C. noricum* species cluster is diverged from *C. rugulosa* species cluster by having entirely different aedeagus with large inflated and rigid flexible lateral processes enforced and supported by a pair of heavily sclerotized ventral flanges. At higher magnification this type of aedeagus seems clearly diverged far from the species of the *C. rugulosa* cluster. This magnitude of shape divergence may realize dramatic changes in copulatory processes and mating signals. *C. pohorjensis* compared to *C. noricum*, as detailed in the original species description, has well diverged paramere shaft and paramere spine pattern, very enlarged tube of lateral processes supported by a short, heavily sclerotized pair of ventral flanges. Moreover the ventral lip of the female anal tube of *C. pohorjensis* is short, not long. The female of *C. noricum* has diverged significantly from all members of the entire species group by having elongated ventral lip on female anal tube. It is unique for the entire species group that the ventral lip is longer than the dorsal lip. This old divergence of the ventral lip is stable and well visible under lower magnification. The elongated ventral lip of *C. noricum* is highly sclerotized, as usual in all the females of the *C. rugulosa* species group, its distinct divergence from *C. pohorjensis* is easily recognised at first glance."

Diagnosis – OLÁH *et al.* (2012: 63–65): "Described and drawn, but not named by Malicky *et al.* (1986). Failed to relate it clearly to any of the known taxa. This new species belongs to the *Chaetopteryx rugulosa* species group, *C. rugulosa* subgroup and *C. noricum* species cluster. Close to *C. noricum* sp. n. but differs by

having paraproct wide and angled laterad, not narrow in caudal view; paramere shaft shorter than at *C. noricum*; number of paramere spines usually 3; position of paramere spines nested, not with a tendency to be arranged in horizontal row with laterad located primary spine and gradually mesad shortening secondary spines. There are significant differences in the genital structures of the females: the lower lip of the anal tube is shorter than the upper lip, not equal as at the *C. noricum*; the dorsal apical profile of the anal tube characterized by deep V-shaped excision due to the highly protruded position of the internal scerites.”

Etymology – “The new species is named after the Pohorje Mts, where the type locality is found.”

Chaetopteryx rugulosa species cluster

Chaetopteryx kamnikensis Oláh et Urbanič, 2012

Chaetopteryx kamnikensis Oláh et Urbanič, 2012 in OLÁH *et al.* (2012: 66–68): “Holotype. Slovenia: Tržič, Bistrica, Blajšnica stream, 689 m, N46°21'50.02”, E14°16'55.70”, 03.12.2011, A. Déry, I. Szivák (1♂, OPC). Allotype. Same as holotype (1♀, OPC). Paratypes. Same as holotype (1♂, OPC). Same locality as holotype: 13.10.2011, A. Déry, I. Szivák (1♂, OPC). Dolž, Gorjanci, stream Klampfer, 660 m, 25.10.1990 B. Horvat, I. Sivec (1♀, OPC). Golovec, brooklet near Rakovnik distinct (Ljubljana), 335 m, N46°02'27.49”, E14°31'46.12”, 05.12.2011, A. Déry, I. Szivák (4♂, 1♀, OPC); 08.11.2012, T. Kovács, G. Magos (1♂, 1♀, MM). Ig. Želimlje, potok Želimeljščica, 330 m, N45°53'35”, E14°35'43”, 27.10.1989, B. Horvat, I. Sivec (1♀, PMS). Kamniške alpe, [rna pri Kamniku, Volovljek, 1016 m, N46°24'50”, E14°54'10”, 26.10.2012, B. Horvat, I. Sivec (10♂, 4♀, OPC); 1028 m, N46°16'13.5”, E14°41'20.8”, 26.10.2012, B. Horvat, I. Sivec (11♂, 6♀, OPC). Litija, Janče, stream Gostinca, 350 m, N46°03'39.19”, E14°40'48.46”, 12.10.2012, G. Urbanič (2♂, 1♀, OPC). Rakovnik at Ljubljana, 20.10.1983, C. Krušnik (1♂, 1♀, MPC). Šklendrovec Podkum, stream Šklendrovec, 493 m, N46°04'52.6”, E15°01'10.5”, 25.10.2012, B. Horvat, I. Sivec (2♂, 2♀, OPC). Tržič, Brezje at Tržič, stream Blajšnica, 646 m, N46°21'46.06”, E14°17'00.31”, 16.11.2012, B. Horvat, I. Sivec (4♂, 5♀, OPC). Tržič, Grahovše, potok Lomščica, 860 m, N45°22'00”, E14°22'03”, 01.10.1990, B. Horvat, I. Sivec (1♀, PMS). Tržič, Hudi Graben, stream Hudi Graben, 683 m, N46°21'41.35”, E14°15'46.64”, 16.11.2012, B. Horvat, I. Sivec (1♂, 1♀, OPC).

Chaetopteryx kamnikensis Oláh et Urbanič, 2012: MALICKY (2014: 52): dubious remarks on the species status are presented indirectly without any factual arguments or nomenclatural acts.

Chaetopteryx kamnikensis Oláh et Urbanič, 2012: OLÁH *et al.* (2015b: 90): “Malicky (2014) has not synonymized this species, but his position was vague

or even confused. Here we do not detail our original description and diagnosis, simply we repeat that the divergence of paramere spine pattern and the female anal tube distinguish this species both from *C. prealpensis* and from *C. rugulosa*. Moreover the lateral process is not platform-shaped, the platform process is characteristic for *C. prealpensis*. It is digitiform like the lateral process of *C. rugulosa*, but with the evolution of the very specific sclerotized basal tube lacking at *C. rugulosa*. This is why the oblique direction of the process is fixed at *C. kamnikensis* does not depend on the erection state of the endophallus. Without this supporting sclerotized basal tube on the lateral process of *C. rugulosa*, the position or oblique direction of the lateral process depends on the erection state of the endophallus.”

Diagnosis – OLÁH *et al.* (2012: 66–68): “Described and drawn, but not named by Malicky *et al.* (1986). Due to insufficient material failed to relate it clearly to any of the known taxa. This new species belongs to the *Chaetopteryx rugulosa* species group, *C. rugulosa* subgroup and *C. rugulosa* species cluster. Close to *C. prealpensis* sp. n. but differs by having subapical lateral processes on the aedeagus digitiform, not platform; 5–6 parameter spines present and gradually decreasing in length from apicad to subapicad in sagittal plane, not 2–3 spines nested. The anal tube of the female with rounded apical lobes and rounded mesal excision formed by the tergite IX, not triangular and created by the protruded segment X.”

Etymology – “The new species is named after the town Kamnik, the type locality is not far away.”

Chaetopteryx prealpensis Oláh, 2012

Chaetopteryx prealpensis Oláh, 2012 in OLÁH *et al.* (2012: 68–71): “Holotype. Hungary: Kőszeg Mts, Hörmann-forrás, 18.10.1986, Á. Uherkovich (1♂, OPC). Allotype. Same as holotype (1♀, OPC). Paratypes. Same as holotype (4♂, 2♀, OPC; 1♂, 1♀, MM). Austria: Ausserneuwald, stream, 817 m, N47°34'01.9", E16°01'10.5", 19.11.2009, A. Déry, I. Szivák (1♂, 1♀, ♂♀ in copula, OPC). Gleinalpe, GH Krautwaschl & Gleinalm Sulmhütte, 1100–1300 m, 08.10.2012, D. Stradner (1♂, 2♀, OPC). Hohegg bei Grimmenstein, spring and its outlet, 621 m, N47°36'44", E16°05'52.7", 19.11.2009, A. Déry, I. Szivák (3♀, OPC). Koralpe, Handalm, springs near Gösler Hütte (Weinebene), 1784 m, N46°50'35.89", E15°01'18.53", 21.10.2012, J. Oláh, I. Szivák (13♂, 7♀, OPC). Koralpe, St. Oswald, Wildbach, 30.09.2007, D. Stradner (4♂, 2♀, OPC). Lafnitz Quelle, 16.10.2012, W. Graf (1♂, 1♀, OPC). Mitterneuwald, Hermann spring, 956 m, N47°32'56.3", E15°58'56.1", 19.11.2009, A. Déry, I. Szivák (2♂, OPC). Packalpe, spring near Knödelhütte, 1440 m, N46°59'31.20", E14°56'20.02",

20.10.2012, J. Oláh, I. Szivák (2♂, 3♀, OPC). Sommeralm, upper reach of stream Mixnitz Bach, 1327 m, N47°20'57", E15°32'56.5", 20.11.2009, A. Déry, I. Szivák (1♂, 1♀, ♂♀ in copula, OPC). Styria, 14 km above restaurant Krautwaschl, Gleinalm, N47°12'16", E15°08'47", 1187 m, 25.09.2011, D. Stradner (2♂, OPC). Styria, NW Stainz, near Marhof, N46°54', E15°13', 10.11.2006, W. Graf (1♀, OPC). Croatia: Ivanščica Mts, Potok Slugovina, 15.12.2002, K. Žganec (1♀, OPC). Medvednica Mts, Bliznec, pilana, stream, 09.12.2009, M. Kučinić (1♀, OPC). Medvednica Mts, Izvor Mrzlak, 18.11.2006, A. Popijač (3♂, 2♀, OPC). 18.11.2008, A. Popijač (1♂, 1♀, OPC). Medvednica Mts, Kraljičin Zdenac, 19.11.2009, M. Kučinić, I. Vučkavić (1♀, OPC). Medvednica Mts, Veliki Potok, N45°51'28.52" E15°56'08.19", 18.10.2011, A. Previšić (1♂, OPC). Žumberačka Mts, small stream near River Slapnica, 03.11.2012, M. Kučinić (2♂, 1♀, OPC). Žumberačka Mts, Vlašić Brdo, River Slapnica, N45°42'35.7", E15°29'40.1", 215 m, 07.11.2012, T. Kovács, G. Magos (1♂, 1♀, OPC). Žumberačka Mts, Žumberak, River Slapnica, 28.10.2009, M. Kučinić (1♀, OPC). Hungary: Kőszeg Mts, Hörmann-forrás, 694 m, N47°27'34.2", E16°27'34.2", 18.11.2009, I. Szivák (2♂, 1♀, OPC). Kőszeg Mts, Stájer-házak, 05.10.1991, Á. Uherkovich (2♂, OPC); 18.10.1986, Á. Uherkovich (1♂, 1♀, OPC). Velem, Borha-forrás, 04.11.1984, S. Nógrádi (1♂, 1♀, OPC). Slovenia: Brdo, Kranj, brooklet to the pond IX, 14.10.2003, G. Urbanič (2♂, PMS). Kališe, Črna pri Kamniku, 13.10.1990, I. SIVEC (1♂, 3♀, PMS). Kamniška Bistrica, 27.11.1969, B. Horvat, I. Sivec (1♂, 1♀, PMS). Kamniške alpe, [rna pri Kamniku, Volovljek, 1016 m, N46°24'50", E14°54'10", 04.10.2012, I. Sivec, G. Urbanič (3♂, 3♀, OPC). Kozje, stream Bistri graben, 01.10.1986, B. Horvat, I. Sivec (1♂, PMS). Ljubno, Smrekovec, potok Pod Krumpaško Planino, 1390 m, 10.09.1997, B. Horvat, I. Sivec (1♀, PMS). Ljubno, Smrekovec, potok Robanšek, Pod Komnom, 1200 m, N46°24'41", E14°51'02", 25.09.1997, B. Horvat, I. Sivec (1♂, PMS). Ljubno, Smrekovec, stream below Kugovnik, N46°25'13", E14°52'20", 1450 m, 25.09.1997, B. Horvat, I. Sivec (2♂, PMS). Lukovica, Trnjava, stream Drtiščica, 340 m, 12.11.1996, B. Horvat, I. Sivec (1♂, PMS). Moravče, Vinje, stream Drtiščica, 360 m, 12.11.1996, B. Horvat, I. Sivec (4♂, 1♀, PMS). Pečice, Brejce, stream Močnik, 15.10.1988, B. Horvat, I. Sivec (1♂, 1♀, PMS). Pohorje Mts, brooklet near Rogla, 1350 m, N46.448280°, E15.339671°, 03.12.2011, A. Déry, I. Szivák (1♂, 1♀, OPC). Pohorje Mts, brooklet near Snežinka (Rogla), 1097 m, 46.435143 N, 15.368489 E, 03.12.2011., A. Déry, I. Szivák (3♂, 1♀). Pohorje Mts, Padeški vrh, source of Gradiški graben, 1020 m, N46°25'54.1", E15°22'18.0", 08.11.2012, T. Kovács, G. Magos, I. Sivec (1♂, OPC). Pohorje Mts, Pesek, N46°28'26.3", E15°20'55.9", 10.11.2008, I. Sivec (1♀, OPC); 12.09.2009, I. Sivec (1♀, OPC); 09.10.2010, I. Sivec (1♂, OPC). Pohorje Mts, Vel. Vrh, Osankarica, 1300 m, 04.11.1984, D. Šere (1♂, 1♀, PMS). Pri koritu Ob Litijški cesti, 50 m, pod

hišo Sp. Besnica 1, 25.11.1984, B. Horvat, I. Sivec (2♂, PMS). Smrekovec Mts, below Krumpaška planina, 1390 m, N46°24'50", E14°54'10", 26.09.2012, I. Sivec, G. Urbanič (4♂, OPC); 05.10.2012, B. Horvat, I. Sivec (2♂, 3♀, OPC). Smrekovec Mts, Tračka Planina, source of stream Ĺep, 11.09.1987, B. Horvat, I. Sivec (1♀, PMS). Tepe, Zagorje ob Savi, 16.10.1985, B. Horvat, I. Sivec (1♀, PMS). Zg. Velka, spring of the Ščavnica River, 01.10.1998, G. Urbanič (1♂, 1♀pupae, PMS); 01.12.1998, G. Urbanič (1♂, PMS)."

Chaetopteryx prealpensis Kolenati, 1848: MALICKY (2014: 52): synonymised with *C. rugulosa*.

Chaetopteryx prealpensis Oláh, 2012: OLÁH *et al.* (2015b: 90–91): species state reinstated. "This species with very large distributional area is the putative ancestral species of the *C. rugulosa* species cluster. Malicky (2014) has synonymized *C. prealpensis* with *C. rugulosa*, declaring that the lateral processes are variable in their length, only slightly sclerotized, and may easily be deformed during maceration. In 2014 we have resampled three more populations in the Kőszeg Mts. and one population in the Őrség NP in Hungary and re-examined with care and sophistication our old materials from Croatia, Slovenia and Austria (population details in Oláh *et al.* 2012). We have found, as earlier, the opposite what Malicky wrote. The lateral process is very stable and consistently structured in so many populations from the entire large distributional area. It is sagittally flat, not digitiform like at *C. rugulosa* or gemmiform like at *C. zalaensis*, it is vertically plate-shaped or platform (a *terminus technicus standardization* following the terms of digitiform and gemmiform). It is natural that there are individual variations, no two animals are identical even in the diverged adaptive traits, but the platform shape is in the range of the basic architecture. The process is not much sclerotized, but seems rather rigid. At least if we compare the lateral view of the process drawn in the diverged trait matrix it is well visible that the different specimens have differently erected endophallus, but the shape of the lateral process is similar, stable. The divergence of the lateral process represents the speciation trait evolved in sexual selection processes and manifests itself as a possible reproductive barrier in prezygotic phase realized by cryptic female choice, sperm competition or by other unknown mechanisms. Based on this divergence we reinstate the incipient phylogenetic species state of *Chaetopteryx prealpensis*."

Diagnosis – OLÁH *et al.* (2012: 68–71): "Specimens of this widely distributed species collected from several populations in Austria, Bosnia & Herzegovina, Croatia, Hungary and Slovenia formerly were determined as *C. rugulosa*. However it clearly differs from the holotype of *C. rugulosa* Kolenati, 1948. This new species belongs to the *Chaetopteryx rugulosa* species group, *C. rugulosa* subgroup and *C. rugulosa* species cluster. Close to *C. rugulosa* Kolenati, 1848 but dif-

fers by having subapical lateral processes on the aedeagus platform and directed oblique upward, not digitiform and not horizontal. The anal tube of the female broad, not slender.

Variability – OLÁH *et al.* (2012: 68–71): “Similarly to most species in *Chaetopteryx rugulosa* species group the non-intromittent periphallid structures, the cerci, the paraprocts and the gonopods are highly variable. The number and length of paramere spines are less variable; the spine pattern varies especially in peripheral area with two tendencies: (1) reducing spine number down to the single primary spine that is accompanied by 1–2 very short, almost tertiary spines; (2) shortening the primary spine with increasing number of secondary spines up to 3–4. The intromittent part of the phallic organ that is the aedeagus and especially its head with the spatulate, platform lateral processes is rather stable even in populations of peripheral area: Zumberacka Mts in Croatia and Kőszeg Mts. in Hungary.”

Etymology – “The new species is named after the Prealpine region, where this widely distributed ancestral species lives.”

Chaetopteryx rugulosa Kolenati, 1848

Chaetopteryx rugulosa KOLENATI, 1848: 73: “Habitat in Dalmatia (Stenz!).”

Chaetopteryx rugulosa Kolenati, 1848: MALICKY *et al.* (1986: 3–5): holotype redrawn. Locus typicus uncertain: “Da die Art sonst unseres Wissens nie in Dalmatien gefunden wurde, könnte man an der Richtigkeit der Herkunftsbezeichnung zweifeln. In der erste Hälfte des vorigen Jahrhunderts nahm man es mit der Etikettierung nicht so genau”

Chaetopteryx rugulosa Kolenati, 1848: OLÁH *et al.* (2012: 71): “Austria: Gleinalpe, springs and springbrook 1.4 km above restaurant Krautwaschl, 1172 m, N47°12'15.31", E15°08'22.14", 22.10.2012, J. Oláh, I. Szivák (3♂ 6♀, OPC). Plenzengreith, upper reach of stream Schöcklbach, 954 m, N47°12'37.2", E15°29'00.8", 20.11.2009, A. Déry, I. Szivák (2♂ 1♀, OPC). Stiftingtal, Graz, 19.10.1998, W. Graf (1♂ 1♀, OPC); 25.09.2005, W. Graf (3♂, 1♀, 7 pupae, OPC); 10.2006, W. Graf (6♂, 8♀, OPC; 2♂, 1♀, MM).”

Chaetopteryx rugulosa Kolenati, 1848: MALICKY (2014: 52): contradicting to his earlier statement (Malicky *et al.* 1986), the author now argues “that *Chaetopteryx rugulosa* was described from Dalmatia”.

Chaetopteryx rugulosa Kolenati, 1848: OLÁH *et al.* (2015b: 91–93): “Austria, Graz, Stiftingtal stream tributaries, 25. X. 2014, leg. M. Máté, D. Stradner, J. Oláh & M. Oláh (17 male, 10 females; OPC). Hungary: Őrség National Park, Kétyölgy, N 46°53' 12.41" E 16°13' 42.00", 30. X. 2014, leg. M. Máté (3 males, 3 females, OPC).”

Remarks – OLÁH *et al.* (2012: 71): “Specimens from Austria, Bosnia & Herzegovina, Croatia, Hungary and Slovenia were determined as *C. rugulosa*, however we have found that specimens from only a very small area in Austria has the aedeagal structure identical with the aedeagus of the holotype, other specimens belong to four species: *C. schmidi* from Bosnia & Herzegovina, *C. kamnikensis* sp. n. from Slovenia, *C. zalaensis* sp. n. from Hungary and to the widely distributed *C. prealpensis* sp. n.”

Diagnosis – OLÁH *et al.* (2015b: 91–93): “The holotype of *C. rugulosa* has slender digitiform lateral process (Malicky *et al.* 1986). In 2014 we have examined several populations newly sampled in side valleys of the main Stiftingtal valley near Graz, near the headwater regions of the River Rába. In our new collection trial we have found a small *C. rugulosa* population also in the Őrség NP in Hungary again in a small spring stream belonging to the system of River Rába. In diverged trait matrix we have presented diagrammatic lateral drawings of aedeagus with the lateral process and with the endophallus of 22 specimens representing one Hungarian and 8 Austrian populations. The finger-like lateral process of *C. rugulosa* is consistently different from the vertically flat, plate-shaped, platform lateral process of *C. prealpensis*. Moreover the lateral process of *C. prealpensis* is double or even triple sized. Similarly to *C. prealpensis* the size of the lateral process has no significant relationship to the erection state of the endophallus.

Malicky (2014) emphasized that *C. rugulosa* was described from Dalmatia based on Kolenati description: “Habitat in Dalmatia (STENZ!)”. However in an earlier paper Malicky *et al.* (1986) have questioned the reality of the habitat data of the profit oriented insect dealer Stenz: “In der ersten Hälfte des vorigen Jahrhunderts nahm man es mit der Etikettierung nicht so genau”. We have sampled real Dalmatian costal area in right time and in right habitats several times, but we have not collected any specimens from the *C. rugulosa* species group. We have collected members of this species group in internal mountain ranges in Bosnia-Herzegovia and Serbia, but all belong to the *C. schmidi* subgroup. No *C. rugulosa* or *C. prealpensis* live in Dalmatia or even nearby Dalmatia. The holotype is in good condition, aedeagus perfectly preserved, and all the specimens, with exactly the same lateral process, was collected in a very restricted area near around Graz, except the single Hungarian population just discovered.”

Chaetopteryx zalaensis Oláh, 2012

Chaetopteryx zalaensis Oláh, 2012 in OLÁH *et al.* (2012: 71–73): “Holotype. Hungary: Hegyhátszentjakab, Vadása-tó, források, N46°52'32", E16°33'03", 04.11.2010, singled, J. Oláh, Á. Uherkovich (1♂, OPC). Allotype. Same as hol-

otype (1♀, OPC). Paratypes. Same as holotype (15♂, 11♀, OPC, 3♂, 1♀, MM). Vas Megye, Szőce, 05.11.1985, Á. Uherkovich (12♂, 7♀, OPC); 17.10.1986, Á. Uherkovich (10♀, OPC)."

Chaetopteryx zalaensis Oláh, 2012: MALICKY (2014: 52): synonymised with *C. rugulosa*. This nomenclatural act was based on putative identity of the lateral shape of cerci. It was suggested that the stalked shape of cerci at *C. zalaensis* is plane dependent: in slightly different view it is rectangular and parallel-sided similarly to the lateral shape of cerci at *C. rugulosa*. The cerci are neutral, non-adaptive trait in the contemporary divergences; highly exposed to various stochastic processes; therefore rather variable in most member of *Chaetopteryx rugulosa* species group. Nevertheless on population level and in proper comparable observational view, the cerci are characterized with stalked lateral shape at *C. zalaensis* and with parallel-sided shape at *C. rugulosa*. Moreover the divergence between the two species is evident and realised in non-neutral adaptive trait, that is in the gemmiform (*C. zalaensis*) and digitiform (*C. rugulosa*) diverged state of the lateral process on the aedeagus.

Chaetopteryx zalaensis Oláh, 2012: OLÁH *et al.* (2015b: 93–95): "Hungary, Örség, Szőce stream, Eastern arm, Biczó springs, N 46°54' 16.60" E 16°34' 42.36" 26.X.2014, leg. M. Máté, J. Oláh & M. Oláh (36 males, 11 females; OPC). Örség, Szőce stream, Eastern arm, Biczó springs, N 46°54' 16.60" E 16°34' 42.36" 23.XII.2014, leg. M. Máté, (2 males, 2 females; OPC). Örség, Hegyhátszentjakab, Vadása-tó Spring, 18.X.2014, leg. M. Máté (9 males, 8 females; OPC). Örség, Hegyhátszentjakab, Vadása-tó Spring, N 46°52' 33.37" E 16°33' 06.13" 23.X.2014, leg. M. Máté, J. Oláh & M. Oláh (6 males, 5 females; OPC). Örség, Szőce stream, Dam springs, 26.X.2014, leg. M. Máté, J. Oláh & M. Oláh (7 males, 7 females; OPC). Örség, Szőce stream, spring at bridge, 26.X.2014, leg. M. Máté, J. Oláh & M. Oláh (1 male, OPC)." "Malicky (2014) has synonymized *C. zalaensis* having gemmiform lateral process with *C. rugulosa* having long digitiform lateral process, repeating again without documentation that the lateral process is variable. [...] Here we reinstate the specific status of the incipient phylogenetic species *Chaetopteryx zalaensis* stat. restit."

Diagnosis – OLÁH *et al.* (2012: 71–73): "This new species belongs to the *Chaetopteryx rugulosa* species group, *C. rugulosa* subgroup and *C. rugulosa* species cluster. Close to *C. rugulosa* Kolenati, 1848 but differs by having subapical lateral processes on the aedeagus short and pointed gemmiform, not long digitiform; cerci stalked, not parallel-sided. The anal tube of the female very long and slender, almost tapering apicad."

Etymology – "The new species is named after the Zala region, where the type locality is found."

Chaetopteryx irenae species subgroup*Chaetopteryx clara* McLachlan, 1876

Chaetopteryx clara McLACHLAN, 1876: 197: “Carniola (Schmidt; one ♂ in Hagen’s collection); Görz (one ♂ in the Vienna Museum). Remarkable for its uniformly pale colour, and thoroughly distinct in its anal characters, the penis being nearly obsolete.”

Chaetopteryx clara McLachlan, 1876: OLÁH *et al.* (2012: 73): “Slovenia: Bormes, stream Grabnarica, 21.10.1995, B. Horvat (1♂, PMS). Ljubljana, Mostec, 1989, H. Malicky (2♂, 2♀, OPC from MPC). Ljubljana, Mostec, Pržanec stream, 293 m, N46°03’44.3”, E14°28’49.3”, 06.12.2009, A. Déry, I. Szivák (7♂, OPC). Medvode, Osolnik, 440 m, N46°07’24.5”, E14°20’54.8”, 25.11.2012, I. Sivec (1♂, OPC).”

Notes – OLÁH *et al.* (2012: 73): “Its species group position needs further studies. The supplementary digitiform processes on the superanal complex is vestigial. Paraproct spine pattern rather peculiar; characterized by the presence of primary, secondary and tertiary spines arranged in anteriad shortening row in sagittal plane; primary spine slender and undulate; location and number of peg-like tertiary spines variable.”

Chaetopteryx euganea Moretti et Malicky, 1986

Chaetopteryx euganea Moretti et Malicky, 1986 in MALICKY *et al.* (1986): “Untersuchtes Material: Veneto, Fontanella del Mottolo, 130 m, Vo Euganeo, 21. 12. 1967: 2♂, 1♀ (leg. Satori, coll. Moretti): Holotypus ♂, Allotypus ♀, Paratypus ♂.”

Chaetopteryx euganea Moretti et Malicky, 1986: OLÁH *et al.* (2012: 73): “Italy: Colli Euganei, 19.10.1987, H. Malicky (2♂, 2♀, OPC from MPC).”

Chaetopteryx giuliensis Oláh et Kovács, 2012

Chaetopteryx giuliensis Oláh et Kovács, 2012 in OLÁH *et al.* (2012: 73–75): “Holotype. Italy: Alpi Giulie, Sella Carnizza, spring area of River Ucea, N46°20’11.4”, E13°19’46.8”, 1105 m, 09.11.2012, T. Kovács, G. Magos (1♂, OPC). Allotype. Same as holotype (1♀, OPC). Paratypes. Same as holotype (2♂, OPC; 1♂, MM). Alpi Giulie, between Ucea and Resia, left side brook of River Ucea, N46°18’54.2”, E13°23’37.6”, 725 m, 09.11.2012, T. Kovács, G. Magos (1♂, 1♀, OPC). Sorgente del T. Ucea (1050 m), Parco Naturale delle Prealpi Giulie, Com Resia prov. Udine, crenal, 09.10.1999, S. Paradisi, F. Stoch (1♂, OPC).”

Chaetopteryx giuliensis Oláh et Kovács, 2012: MALICKY (2014: 52): reduced the divergence to the number of spines of the parameres between *C. giuliensis*

and *C. goricensis*. However the basic pattern of paramere spines are the result of older divergences and may be exposed to significant fluctuating asymmetry of matching type indicative of developmental instabilities caused by adverse environmental condition or by genetic challenges (OLÁH *et al.* 2015b). In this species group the real divergences have been evolved in the non-neutral, adaptive speciation trait that is in the structure and shape of the aedeagus head.

Chaetopteryx giuliensis Oláh et Kovács, 2012: OLÁH *et al.* (2015b: 95): “Malicky (2014) has not synonymized these species (*giuliensis* and *idriensis*), but his position was vague. We agree with him that these species are close to *C. goricensis*, but disagree with his other statements: “Except for the usual individual variability of the structures, the only difference is the number of the spines of the parameres, both having a small bunch of them”. “*C. goricensis* normally has only one spine, but some specimens from the type locality Deskle have two”. The number of spine-like modified apical setae nested on the tip of the parameres is stable in the examined 15 specimens of *C. idriensis* from three populations. There was a single specimen of *C. giuliensis* with left paramere having only two well developed modified setae out of the 6 examined specimens from three populations. We have found also a specimen of *C. goricensis* from the type locality having 2 spines on the right paramere, but the second spine was very small vestigial.

As we have explained above in details the pattern of modified paramere setae are not a contemporary speciation trait in *Chaetopteryx rugulosa* species group, not diverging consistently on species level. They exhibit older divergences at subgroup level. Nevertheless *C. goricensis* has specific paramere spine pattern compared to *C. giuliensis* and *C. idriensis*. The three species have diverged significantly in several neutral traits, we do not list them here, and the differences are explained in details in the original species descriptions. In the *C. rugulosa* species group, as explained before, the speciation trait is the lateral process and the associated substructures on the aedeagus. The lateral processes are rather rigid and evolved into completely different shapes in the three species. *C. idriensis* with the smallest lateral process has no any sclerotized ridge or flange evolved to support the function of the lateral process. Simply it is not required; this small process may function perfectly without additional support of sclerotized structures. Here we can realise again that the divergence of the lateral process, the speciation trait in the building process of reproductive barriers is governed by sophisticated complex cooperation of several quantitative trait loci in concerted evolution. *C. goricensis* has larger lateral process and a small sclerotized ventral flange supporting its function. *C. giuliensis* evolved an extremely large lateral process in the form of a vertical subquadrangular plate. Its specific function is supported by a well developed pair of ventral flange.”

Diagnosis – OLÁH *et al.* (2012: 73–75): “This new species belongs to the *Chaetopteryx rugulosa* species group, *C. irenae* new species subgroup. Close to *C. irenae* Krušnik & Malicky, 1986 but differs by having cerci downward directed ventroapicad; paraproct more slender in apical view; supplementary processes free, not fused to the paraproctal triangle; gonopods with apical margin less undulate; lateral subapical processes platform, not digitiform; supporting sclerite broad, almost semicircular, not long and narrow. Female has apical profile of the anal tube angulate, not rounded in dorsal view.”

Etymology – “The new species is named after the Alpi Giulie, where the type locality is found.”

Chaetopteryx goricensis Malicky et Krušnik, 1986

Chaetopteryx goricensis Malicky et Krušnik, 1986 in MALICKY *et al.* (1986: 13): “Untersuchtes Material: Holotypus ♂ und Allotypus ♀: Slowenien, Deskle nördlich von Gorica, an einem kleinen Wiesenbachlein, 25. 10. 1982, leg. Krušnik & Malicky, in coll. Malicky. Paratypen: 1♀ mit den selben Daten sowie 1♂ vom selben Platz vom 29. 10. 1983, leg. Krušnik, in coll. Krušnik.”

Chaetopteryx goricensis Malicky et Krušnik, 1986: OLÁH *et al.* (2012: 75): “Slovenia: Ajdovščina, Predmeja, one spring of Lokavšček stream, 695 m, N45°56'21.8", E13°52'17.8", 06.12.2009, A. Déry, I. Szivák (9♂, OPC; 1♂, MM). Ajdovščina, Predmeja, stream Lokavšček, 15.10.1992, B. Horvat, I. Sivec (1♂, PMS). Čekovnik, Blašk, spring, brooklet, 631 m, N45°59'04.6", E13°58'11.0", 05.12.2009, A. Déry, I. Szivák (4♂, OPC). Čekovnik, Hleviše, spring, brooklet, 640 m, N45°58'48.18", E13°59'9.52", 05.12.2009, A. Déry, I. Szivák (1♂, OPC). Deskle, 1986, H. Malicky (2♂, 2♀, OPC).”

Chaetopteryx idriensis Oláh et Urbanič, 2012

Chaetopteryx idriensis Oláh et Urbanič, 2012 in OLÁH *et al.* (2012: 75–77): “Holotype. Slovenia: Idrijsko hribovje, Čekovnik, Blašk, spring, brooklet, N45°59'04.6", E13°58'11.0", 650 m, 09.11.2012, T. Kovács, G. Magos (1♂, OPC). Allotype. Same as holotype (1♀, OPC). Paratypes. Same as holotype (2♂, OPC; 1♂, MM). Same locality as holotype: 04.12.2011, A. Déry, I. Szivák (10♂, OPC); 05.12.2009, A. Déry, I. Szivák (4♂, OPC). Idrijsko hribovje, Čekovnik, Hleviše, spring, brooklet, 640 m, N45°58'48.18", E13°59'9.52", 05.12.2009, A. Déry, I. Szivák (1♂, OPC). Idrijsko hribovje, Krekovše, spring, brooklet at the Idrijca River, N45°59'01.4", E13°56'57.4", 460 m, 31.10.2003, G. Urbanič (1♀, MPC); 08.10.2002, G. Urbanič (1♂, MPC).”

Chaetopteryx idriensis Oláh et Kovács, 2012: MALICKY (2014: 52): reduced the divergence to the number of spines of the parameres between *C. idriensis* and

C. goricensis. However, the basic pattern of paramere spines are the result of older divergences and may be exposed to significant fluctuating asymmetry of matching type indicative of developmental instabilities caused by adverse environmental condition or by genetic challenges (OLÁH *et al.* 2015a). In this species group the real divergences have been evolved in the non-neutral, adaptive speciation trait that is in the structure and shape of the aedeagus head.

Chaetopteryx idriensis Oláh et Kovács, 2012: OLÁH *et al.* (2015b: 95): see *Chaetopteryx giuliensis* Oláh et Kovács, 2012.

Diagnosis – OLÁH *et al.* (2012: 75–77): “This new species belongs to the *C. irenae* new species subgroup of the *Chaetopteryx rugulosa* species group. Close to *C. goricensis* Malicky & Krušnik, 1986 but differs by having cerci differently shaped; paraproct broader in apical view; gonopods longer; paramere spines tripled, not single; lateral subapical processes slender, not broad both in lateral and dorsal view. Female has ventrolateral setose processes differently shaped; internal sclerite of the anal tube protruding and producing lateral lobes blunt, not acute triangular; supragenital plate blunt, not pointed.”

Etymology – “The new species is named after town Idrija, located nearby the type locality.”

Chaetopteryx irenae Krušnik et Malicky, 1986

Chaetopteryx irenae Krušnik et Malicky, 1986 in MALICKY *et al.* (1986: 14): “Untersuchtes Material: Slowenien, Artvize, Izvir Vrtice, 8. 11. 1983: 1♂ (Holotypus, leg. & coll. Krušnik).”

Chaetopteryx irenae Krušnik et Malicky, 1986: OLÁH *et al.* (2012: 77): “Slovenia: Artviže stream Brusnica, 18.10.2000, G. Urbanič (1♂, reared in the laboratory, PMS). Misliče, upper reach of Sušica stream, 617 m, N45°37'14.8”, E14°02'16.7”, 06.12.2009, A. Déry, I. Szivák (13♂, OPC); 04.12.2011, A. Déry, I. Szivák (6♂, 2♀, OPC; 2♂, 1♀, MM).”

Chaetopteryx marinkovicae Malicky et Krušnik, 1988

Chaetopteryx marinkovicae MALICKY et KRUSNIK, 1988: 180: “Holotype ♂ and paratypes (♂,♀): Yugoslavia, Istria, Kompanj, 20. 10. 1988. Paratypes also from nearby Rockopolje (♂,♀) and Ugrini (1♀); in the collections of the authors.”

Chaetopteryx marinkovicae Malicky et Krušnik, 1986 in OLÁH *et al.* (2012: 77): “Croatia: Istria, Kompanj, 1989, H. Malicky (2♂, 2♀, OPC). Istria, Kompajn, Klobasi, N45.39111°, E14.07111°, 14.11.2009, M. Kučinić (4♂, 9♀, OPC; 1♂, 1♀, MM). Slovenia: Vala Zelenica, Loka, Črni kal, 17.10.1990, leg. G. Urbanič (2♂, 1♀; PMS).”

Psilopteryx Stein, 1874*Psilopteryx bosniaca* Marinković-Gospodnetić, 1970

Psilopteryx bosniaca MARINKOVIĆ-GOSPODNETIĆ, 1971a: 83–84: “Central Bosnia, m, f, the source of the river Stavnja.”

Psilopteryx bosniaca Marinković-Gospodnetić, 1971: MARINKOVIĆ-GOSPODNETIĆ (1971b: 144): “Southeast Bosnia, 1♂ 1♀, the source of the river Stavnja near Vares.”

Psilopteryx curvicolatus Botoșăneanu, 1957

Psilopteryx curvicolatus BOTOȘĂNEANU 1957a: 64–65: “Ariescheni (Ariesch-Tal, Bihar-Gebirge); leg. Mihai Serban, 28. IX. 1954. 1♂ in Alkohol (Holotypus SMF N6).”

Psilopteryx montanus Kumanski, 1968

Psilopteryx montanus KUMANSKI, 1968a: 216–218: “Fundort: 10.X.1967, Vitosa-Gebirge, Bojanski-Bach bei der Berghütte “Rodina” 1♂ und 1♀. Holotypus ♂ und Paratypus ♀ (mit getrenntem Abdomen) in der Sammlung des Verfassers (in Alkohol).”

Psilopteryx schmidi Kumanski, 1970

Psilopteryx schmidi KUMANSKI, 1970: 277–279: “Fundort: 23.IX.1967, Rila-Gebirge, Unterer Jakorudsko-See (2191 m Höhe), 1♀; 22.X.1968, Rila-Gebirge, Zirkus “Die sieben Seen”, Abfluss des 5. Sees (2240 m Höhe), 1♂ und ein Paar in Copula. Holotypus und Paratypen (in Alkohol) in meiner Sammlung im Holotypus ♂ und Paratypus ♀ (mit getrenntem Abdomen) in der Sammlung des Verfassers (in Alkohol) Zoologischen Museums der Bulgarischen Akademie der Wissenschaften.”

Psilopteryx psorosa species group*Psilopteryx bohemosaxonica* species complex*Psilopteryx bohemosaxonica* Mey et Botosăneanu, 1985

Psilopteryx psorosa bohemosaxonica MEY et BOTOSĂNEANU, 1985: 120: “Holotypus ♂ und Allotypus ♀: Erzgebirge, südlich von Cinovec, 12.X.19862 (in coll. MEY); 4♂- und 3♀-paratypen vom selben Ort, (1♂, 1♀ in coll. Botosăneanu). Areal: Erzgebirge, Böhmerwald, (Zwischen Osterzgebirge und Isergebirge existiert offensichtlich eine Verbreitungslücke. In diesem fast 100 km langem Bereich konnte trotz intensiver Suche 1982 keine *Psilopteryx*-Population nachgewiesen werden.”

Psilopteryx bohemosaxonica Mey et Botosaneamu, 1985: OLÁH *et al.* (2015b: 98–99): raised to species status. “Holotype and Allotype. Czech Republic, Erzgebirge, S of Cinovec, 12.X.1982, leg. W. Mey (MFN). Austria, Superior, Schwarzenberg, 28.X.1987, leg. H. Malicky (2 males, 2 females; OPC). Czech Republic, Southern Bohemia, Sumava Mts. inlet of Laka lake N49°06'30" E13°19'34", 1090m, 30. IX. 2010, leg. J. Bojkova (9 males, 4 females, NMPC). Southern Bohemia, Sumava Mts. inlet of Cerné jezero lake, N49°10'44" E13°10'51", 1030m, 11. X. 2007, leg. P. CHVOJKA (5 males, 3 females, OPC). Southern Bohemia, Sumava Mts. left tributary of Teplé Vltava river below source, N48°58'44" E13°33'45", 1160m, 16. X. 1992, leg. P. Chvojka (3 males, 1 female, NMPC). Northern Bohemia, Jizerské hory Mts. Straceny potok brook below Smrk Mt. N50°53'44" E15°14'49", 680m, 11.X.1989, leg. J. Preisler & P. Vonicka (2 males, 3 females; NMPC). Northern Bohemia, Jizerské hory Mts. left tributary of Sous reservoir. N50°47'40" E15°19'22", 800m, 4.XI.1989, leg. J. Chvojka (23 males, 16 females; NMPC). Northern Bohemia, Krkonose (Giant Mts.), left tributary of Labe (Elbe) river below Labský vodopád waterfall, N50°46'03" E15°33'12", 1100m, 11.X.1992, leg. P. Chvojka (6 males, 5 females; NMPC). Eastern Bohemia, Orlické hory Mts., brook, Zidovský kout SW Orlické Záhorí, N50°16'16" E16°27'03", 775–870m, 27.X.1994, leg. P. Chvojka (18 males, 12 females; NMPC). Eastern Bohemia, Orlické hory Mts., brook, NPR Bukacká reserve NW of Serlich Mt., N50°20'06" E16°22'31", 880–970m, 26.X.1994, leg. P. Chvojka (158 males, 4 females; NMPC). Eastern Bohemia, Orlické hory Mts., brook S of Serlich Mt., N50°19'15" E16°22'59", 870–940m, 24.X.1994, leg. P. Chvojka (9 males, 7 females; NMPC). Germany: Bayern, Böhmerwald, inlet of Kleiner Arbersee, N49°07'24" E13°07'14", 925m, 10.X.2007, leg. P. Chvojka (1 male, 1 female; NMPC). Bayern, Böhmerwald, inlet of Rachelsee, N48°58'34" E13°24'03", 925m, 9.X.2007, leg. P. Chvojka (4 males, 2 females; OPC). Poland: Kudłon Mt. Gorce Mts. 11.XI.1996, leg. B. Szczęsny (4 males, OPC). Gorce Mts. IX–X. leg. B. Szczęsny (3 males, 3 females; OPC). Babia Góra, West Beskidy Mts. 1964, leg. B. Szczęsny (6 males, 5 females; OPC). Babia Góra, West Beskidy Mts. 1997, leg. B. Szczęsny (2 males, 2 females; OPC). Dolina Pięciu Stawów Polskich (Lengyel-Öt-tó völgy) Roztoki Spring, the Tatra Mts. 26.X.1985, leg. B. SZCZĘSNY (3 males, 5 females, OPC). Roztoki Valley, the Tatra Mts. 26.X.1985, leg. B. SZCZĘSNY (5 males, 3 females, OPC). Slovakia: Banskobystrický region, Poľana Mts, Hriňová, Bystré, spring brook of Bystrý Stream, N48°37.671' E19°28.655', 1200m 8.X.2013, singled leg. J. Oláh & L. Szél (1 male, OPC). Banskobystrický region, Poľana Mts, Hriňová, Bystré, spring brook of Bystrý Stream, N48°37.569' E19°29.261', 1025m 8.X.2013, singled leg. J. Oláh & L. Szél (1 male, 1 female; OPC).”

Diagnosis – OLÁH *et al.* (2015b: 98–99): “This sibling incipient species is characterized by short dorsal branch of paraproct. The short and high subtrian-

gular paraproct is rather stable. Some populations in Gorce Mts and Babia Gora Mts have some sign of paraproct elongation probably as a result of having contact zone or very complex and irregular moving cline with *P. psorosa*. The curvature of the paramere rod is shallow. The dental pattern on the paramere head is rather elaborated and packed with apical and dorsosubapical teeth. *P. bohemosaxonica* is distributed from the Ore Mts to the Poliana Mts.”

Psilopteryx gutinensis Mey et Botosaneanu, 1985

Psilopteryx psorosa gutinensis MEY et BOTOSANEANU, 1985: 120: “Holotypus ♂ und Allotypus ♀: Gutin-Berge, Sasarului-Tal bei Baia Sprie, 14.XI.1962 (in coll. Botosaneanu); 1♂- und 1 ♀-paratyp vom selben Ort, in coll Royal Ontario Museum. Areal: Gutin-Berge.”

Psilopteryx gutinensis Mey et Botosaneanu, 1985: OLÁH *et al.* (2015b: 99–100): raised to species status. “Romania, Maramureş county, Muntii Ignis, Deseşti-Staţiunea Izvoare, open brook on the Valhani Plateau, 1020m, N47°43.015' E23°44.547', 7.X.2010, leg. P. Barcánfalvi, D. Murányi & J. Oláh, (1 males, OPC). Maramureş county, 2010/4, Muntii Ignis, Deseşti-Staţiunea Izvoare, brook in bushy edge on the Valhani Plateau, 930m, N47°44.374' E23°43.331', 8.X.2010, leg. P. Barcánfalvi, D. Murányi & J. Oláh, (1 female, OPC). Maramureş county, Muntii Ignis, Deseşti-Staţiunea Izvoare, open brook on the Valhani Plateau, 1020m, N47°43.015' E23°44.547', 21.X.2010, leg. Á. Ecsedi, J. Oláh & I. Szivák, (1 male, 1 female, OPC). Maramureş county, Muntii Ignis, Deseşti-Staţiunea Izvoare, open spring brook at settlement, 920m, N47°45.167' E23°43.013', 22.X.2010 leg. Á. Ecsedi, J. Oláh & I. Szivák, (3 males, 1 female, OPC). Maramureş county, Muntii Ignis, Deseşti-Staţiunea Izvoare, side valley spring brook along the road between Firiza and Statiunea Izvoare, 600 m, 22.X.2010 leg. Á. Ecsedi, J. Oláh & I. Szivák, (1male, 1 female, OPC).”

Diagnosis – OLÁH *et al.* (2015b: 99–100): “This sibling incipient species is characterized by short dorsal branch of paraproct. The lateral profile of the short and high subtriangular paraproct is rather variably. The curvature of the paramere rod is deep. The dental pattern on the paramere head is characterized by an enlarged single leading tooth. This species is distributed in the Ignis and Gutin Mts.”

Psilopteryx javorensis Oláh et Chvojka, 2015

Psilopteryx javorensis Oláh et Chvojka, 2015 in OLÁH *et al.* (2015: 100): “Holotype. Slovakia, Javorie Mts, Blyskavica, stream Tisovnik, 657m, 20.X.2005, leg. D. MURÁNYI (1 males, HNHN). Allotype. Same as holotype (1 female, HNHN). Paratypes. Same as holotype (3 males, 1 female HNHN). Slovakia,

Banskobystrický region, Poľana Mts, Hriňová, sidebrook of Slatina Stream, N48°37.210' E19°31.582', 514m 8.X.2013, singled leg. J. Oláh & L. Szél (1 male, OPC). Banskobystrický region, Javorie Mts, Stará Huta, Blýskavica, Tisovník Stream, N48°27.553' E19°18.048', 671m, 7–9.X.2013, singled leg. J. Oláh & L. Szél (1 female, OPC)."

Diagnosis – OLÁH *et al.* (2015: 100): "This new sibling incipient species is characterized by short dorsal branch of the paraproct and belongs to the *P. bohemosaxonica* species cluster. Most close to the nominate species *P. bohemosaxonica*, but differs by having the lateral profile of the short and high paraproct very regular triangular at all the examined 5 specimens, not irregular subtriangular. The dental pattern on the paramere head is reduced to a narrowing bifid tip, not densely packed with teeth apicad and dorsosubapicad. This species is distributed in the Javoros Mts."

Etymology – "This new species was named after the mountain range where the type material was collected, Javoros Mts."

Psilopteryx psorosa species complex

Psilopteryx harmas Oláh et Chvojka, 2015

Psilopteryx harmas Oláh et Chvojka, 2015 in OLÁH *et al.* (2015b: 101): "Holotype. Poland, East Carpathians, Bieszczady Mts. at Wolosatka brook, 900m, 28.X.2010, leg B. Szczęsny (1 male, OPC). Allotype. Same as holotype (1 female, OPC). Paratypes. East Carpathians, Bieszczady Mts. at Wolosatka brook, 850-1000m, 22.X.2014, leg B. Szczęsny (1 male, OPC). East Carpathians, Bieszczady Mts. no more data, leg B. Szczęsny (2 males, 1 female; OPC). Slovakia, NE Slovakia, Bukovské Hills, Stuzica stream, left tributary Kremenny potok stream, N49°04'23" E22°32'33", 7. XI. 1999, leg J. Lukas (1 male, 2 females; OPC,). NE Slovakia, Bukovské Hills, Kremenny potok stream, N49°04'23" E22°32'33", 8. XI. 1999, leg J. Lukas (1 male, OPC; 1 male, NMPC). East Slovakia, Vihorlat Mts. Cerny potok (above Zemplinske Hamre), 640m, 12.X.1990, leg P. Chvojka (4 males, 1 female, NMPC; 1 male, 1 female; OPC). East Slovakia, Vihorlat Mts. Zemplinske Hamre, stream below source, 700m, 15.X.1962, leg. J. Sykora (5 males, 4 females, NMPC; 2 males, 1 females, OPC; 1 male, 1 female; CSNMB). East Slovakia, Vihorlat Mts. Strihovsky potok brook NW Strihovce, 590-600m, 12.X.1990, leg P. Chvojka (1 male, 3 females; NMPC). East Slovakia, Vihorlat Mts. Malá Bystra, 560-700m, 9.X.1990, leg P. Chvojka (2 males, OPC)."

Diagnosis – OLÁH *et al.* (2015b: 101): "This new incipient species is characterized by medium long dorsal branch of the paraproct and therefore belongs to the *P. psorosa* species cluster. Close to the nominate species *P. psorosa*, but differs by having the lateral profile of the paraproct higher, not as low; para-

mere curvature deeper and the dentate apex turned mesad or upward. It is difficult to demonstrate how its incipient specific status is related to the putative *P. bohemosaxonica*/*P. psorosa* hybrid cline effect. However its paraproct and paramere clearly differ from the typical paraproct and paramere structures of pure *P. psorosa* populations. This species might represent a hybrid species of dubious origin and needs further taxonomic and population genetical studies. The formation of new hybrid taxa is possible by introgression of those loci that promote adaptive divergence or reproductive barrier building (Abbott *et al.* 2013). This species is distributed in the Vihorlat Mts. and Beszczady Mts.”

Etymology – “*Harmas* from “*hármas*” triple in Hungarian, refers to the distributional area of the species centred around the triple borders of three countries: Poland, Slovakia and Ukraine.”

Psilopteryx psorosa (Kolenati, 1860)

Chaetopteryx psorosa KOLENATI, 1860: 388–389: “Areal: Bieszczady, Beskiden, Hohe- und Niedere Tatra, Sudeten.”

Psilopreyx psorosa (Kolenati, 1860): STEIN (1874: 250): *Psilopteryx* genus erected and *C. psorosa* transferred as type species.

Psilopteryx psorosa (Kolenati, 1860): MEY & BOTOSANEANU (1985: 120): nominate subspecies of the complex: *Psilopteryx psorosa psorosa*.

Psilopteryx psorosa carpathica Schmid, 1952: SZCZĘSNY (1986: 537): misidentification.

Psilopteryx psorosa (Kolenati, 1860): OLÁH *et al.* (2015b: 102–103): raised to species status. “Czech Republic, Jeseník, Ovcarna, source of Bílá Opava, 110m, 24. IX. 2000, leg. Sivec & B. Horvát near type locality (10♂, 1♀ OPC). Northern Moravia, Králický Sněžník Mt., Morava, Morava River below Králický Sněžník Mt., N50°11'59" E16°50'36", 1100m, 19.X.2000, leg. P. Chvojka (6 males, 3 females; NMPC). Eastern Bohemia, Králický Sněžník Mt., brook, “Strasidla” SW Králický Sněžník Mt., N50°11'35" E16°49'39", 1070m, 19.X.2000, leg. P. Chvojka (14 males, 5 females; NMPC). Poland: Right tributary of the Olczyski Potok, (Olczyski Spring), the Tatra Mts., 12.XI.1986, leg. B. Szczęsny males, 5 females, Koscieliska Valley, the Tatra Mts. 25.X.1985, leg. B. Szczęsny males, 5 females, Tatra Mts., IX-X. leg. B. Szczęsny males, 2 females, The Biała Łądecka River, Masyw Śnieżnika, The East Sudety, N 50° 14' 17" E 17° 0' 5.76", 9.XI.2009, leg. K. Majecka 1 female The Kleśnica River, Masyw Śnieżnika, The East Sudety, N N 50° 15' 35" E 16° 51' 41" , 10.XI.2009, leg. K. Majecka 1 male Białý Spław, beginning of stream the Biała Łądecka River, Masyw Śnieżnika, The East Sudety, N 50° 13' 47" E 17° 1' 4", 9.XI.2009, leg. K. Majecka 1 female). Karkonowski Park Narodowy, Hala Szrenicka, Kamiencyk stream, spring area, 11.X.2014, leg. J.

Majecki (1 male, OPC). Karkonowski Park Narodowy, Równia pod Sniezka, spring area, 12.X.2014 leg. J. Majecki (1 male, 1 female in copula; OPC). Slovakia, Vysoké Tatry, brooks E of Zlomiskovy potok brook, N49°08'14" E20°01'05", 1460m, 7.X.1989, leg. P. Chvojka (3 males, NMPC). Vysoké Tatry, Furkotsky potok brook, N49°08'014" E20°02'015", 1480m, 7.X.1989, leg. P. Chvojka (1 female, NMPC). Vysoké Tatry, Zlomiskovy potok brook, N49°07'18" E20°00'59", 1460m, 7.X.1989, leg. P. Chvojka (1 male, 1 female, NMPC). Podtatranská kotlina basin, Lieskovec, N49°07'13" E20°03'04", 1280m, 7.X.1989, leg. P. Chvojka (1 male, 1 female; NMPC). Podtatranská kotlina basin, Nové Strbské pleso, N49°07'04" E20°03'56", 1315m, 7.X.1989, leg. P. Chvojka (2 males, NMPC). Podtatranská kotlina basin, right tributary of Bela stream, SW Hrdovo (NE Pribylina) N49°07'04" E19°50'45", 830m, 11.X.1989, leg. P. Chvojka (2 males, 3 females; NMPC). Oravské Beskydy Mts. left tributary of Bystrá stream below Babia hora Mt., N49°33'39" E19°30'47", 1300m, 15.X.1991, leg. P. Chvojka (6 males, 4 females; NMPC)."

Diagnosis – OLÁH *et al.* (2015b: 102–103): "This incipient species is characterized by medium long dorsal branch of the paraproct. The lateral profile of the paraproct is subtriangular and very low, the lowest compared to all the other species. The curvature of the paramere rod is shallow. The dental pattern on the paramere head is concentrated on the very apical region. Individual variation and intermediate cline formations might be connected with complex contact zones with *P. bohemosaxonica*. This species is distributed in Jesenic, Králický Sněžník, Sudety, Tatra, Babia Hora Mts. However its distributional and hybrid formation processes needs further studies as was suggested already long before (Mey et Botosaneanu, 1985)."

Psilopteryx carpathica species complex

Psilopteryx carpathica Schmid, 1952

Psilopteryx carpathica SCHMID, 1952: 142–144: "Holotype: 1♂ Czarnohora 17. X. 1908, Carpathes (Dziędzielewicz)."

Psilopteryx psorosa carpathica Schmid, 1952: MEY & BOTOSANEANU (1985: 120): downgraded to subspecies level. "Areal: Rodna-, Maramures- und Tschernogora-Gebirge."

Psilopteryx carpathica Schmid, 1952: OLÁH *et al.* (2015b: 104): species status reinstated. "Romania, Borsa, 26.IX.1992, leg J. Oláh, (1 male, OPC). Maramures county, Rodna Mts. Borsa-Stațiunea Borsa, stream along the road towards Prislop Pass, 1014 m, N47° 37' 34.0" E24° 49' 13.0", 26.IX.2006, leg. L. Dányi-J. Kontschan & D. Murányi (1 male, HNHM). Maramures county, Maramures Mts. Borsa-Baile Borsa, brook over the village 1046 m, N47° 40' 21.5" E24° 50' 16.7", 26.ix.2006

leg. L. Dányi, J. Kontschán & D. Murányi (1 male deformed, HNHM). Radnei Mts. numerous spring streamlets on the spring area of Cailor waterfall, Piatra Rea, N47°35'1.9" E24°47'49.4", 1564m, 28. IX. 2014, leg. J. Oláh & Cs. Balogh (1 male, OPC). Radnei Mts. small spring below Lake Isvoru Bistritei, N47°34'46.4" E24°48'49.34", 1586m, 28. IX. 2014, leg. J. Oláh & Cs. Balogh (1 male, 1 female; OPC). Ukraine: East Carpathians, Gorgany Mts., at Sitny brook, 1111m, 29.X.2005, leg B. Szczęsny (1 male, 1 female; OPC). East Carpathians, Skupova Mts., Hnylec brook, 1470 m, 26.X.2006, leg B. Szczęsny (4 males, 3 females; OPC). Czarnohora Massif, Prut River at Forestenka, 26.X.2005, leg. B. Szczęsny (1 male, 1 female; OPC). Czarnohora Massif, 8.X.1995, leg. B. Szczęsny (4 males, 1 female; OPC)."

Diagnosis – OLÁH *et al.* (2015b: 104): "This incipient nominate species of the complex is characterized by long dorsal branch of the paraproct. The lateral profile of the paraproct is elongated subtriangular and the lowest compared to the two other species. The curvature of the paramere rod is shallow. The deeper curvature found at the single specimen examined from the Gorgany Mts. could be a result of copulatory processes. The simplified dental pattern on the paramere head is restricted to the very apical almost bifid tip. This species populates spring fed streams in the Gorgany, Czarnohora, Maramaros and Rodnai Mts. of the North-East Carpathians."

Psilopteryx retezatica Botosaneanu et Schneider, 1978

Psilopteryx psorosa retezatica BOTOSANEANU et SCHNEIDER, 1978: 321–322: "Retezat-Geb. 100–2100 m, 17.IX.-14.X.1927 Diós".

Psilopteryx psorosa retezatica Botosaneanu et Schneider, 1978: MEY & BOTOSANEANU (1985: 119).

Psilopteryx retezatica Botosaneanu et Schneider, 1978: OLÁH *et al.* (2015b: 104–105): raised to species status. "Romania, Retezat Mts., Gura Apelor, N45.33 E22.88, 1500m, 20.X.2007, leg. M. Bálint, E. Magyari & M. Braun (23 males, 13 females; OPC). Retezat Mts. 24 km from Baile Herculane, spring area of a small tributary to River Cerna, N45° 2'32.14" E22°35'3.36", 13.XI.2010, singled leg. Á. Ecsedi & I. Szivák (2 males, OPC). Caraş-Severin county, Ţarcu Mts. left side brook of open stream on the N slope of Mt. Ţarcu, 1500 m, N45°17'40.7", E22°31'44.5", 14.10.2011, leg. Á. Ecsedi, T. Kovács, G. Puskás (1♂, OPC). Caraş-Severin County, Ţarcu Mts. spring and its outlet at Cuntu Meteorological Station, N45°18'00.2", E22°30'04.3", 1465 m, 14.10.2011, leg. Á. Ecsedi, T. Kovács, G. Puskás, (19♂, 8♀, OPC). Vâlcea county Parâng Mts, Obrâşia Lotrului, open brook, 200 m of Transalpina (67C) road, 45°22'46.1", 23°38'30.6", 1765 m, 9.XI.2014, leg. T. Kovács & G. Magos (3 males, 3 females, OPC). Vâlcea county, Parâng Mts, Obrâşia Lotrului, open brook, 900 m of Transalpina (67C) road, 45°23'9.9",

23°39'24.9", 1780 m, 9.XI.2014, leg. T. Kovács & G. Magos (2 males, 1 female, OPC). Vâlcea county, Parâng Mts, Obrâșia Lotrului, open spring area, 100 m of Transalpina (67C) road, 45°22'27.7", 23°39'4.0", 1915 m, 9.XI.2014, leg. T. Kovács & G. Magos (1 male, OPC)."

Diagnosis – OLÁH *et al.* (2015b: 104–105): "This incipient species of the complex is characterized by long dorsal branch of the paraproct. The lateral profile of the paraproct is irregular subtriangular and the highest in the species group. The curvature of the paramere rod is deeper compared to the other two species of the complex and having constrictions and dilatations more frequently. The dental pattern on the paramere head is most elaborated in the entire species group. Dentate pattern moves more far into the middle direction in lateral view. This species populate spring fed streams in the Tarcu, Retezat, Muntele Mic, Cerna and Parang Mts. In Parang Mts. there are sign of hybrid contact zone with *P. transsylvanica* in the shape or dental pattern of the speciation traits of paraproct and paramere."

Psilopteryx transsylvanica Mey et Botosaneanu, 1985

Psilopteryx (*Psilopteryx*) *carpathica* Schmid, 1952: BOTOȘĂNEANU (1957b: 193–194): misidentification.

Psilopteryx psorosa transsylvanica MEY et BOTOSANEANU, 1985: 120: "Holotypus ♂ and allotypus ♀: Fagaras, Bilea Cascada, 28. 10. 62, (in coll. Botosaneanu): 13♂- und 6♀-Paratypen vom selben Fundort, (2 ♂-Paratypen in coll. Mey)." "Areal: Cibin-Gebirge, Fagaras, Bucegi, Karpathenknien, Harghita-, Ceahlau und Stinisoara-Gebirge."

Psilopteryx transsylvanica Mey et Botosaneanu, 1985: OLÁH *et al.* (2015b: 105–107): raised to species status. "Romania. Parcul Natural Bucegi, Peles, 7.X.1954, leg. P. Iuncu (1 male, OPC). Parcul Natural Bucegi, V.Pelesului, 4.X.1954, leg. P. Iuncu (4 males, OPC). Parcul Natural Bucegi, Peles, 27.X.1954, leg. P. Iuncu (2 males, 1 female; OPC). Parcul Natural Bucegi, Parcul Natural Cascada Urlatoarea, 22.X.1954, leg. P. Iuncu (2 males, 1 female; OPC). Gurghiu Mts. near Bucin Pass, Tárnavá Mica springs and stream, N: 46°39' 16,63"E: 25°16' 42,46", 1290, 30.X.2014, leg. Z. Baczó, Cs. Balogh, J. Kecskés & J. Oláh. (13 males, 9 females; OPC). Gurghiu Mts. near Bucin Pass, Gainasa springs and stream, N: 46°40' 11,35" E: 25°17' 39,06", 1400, 30.X.2014, leg. Z. Baczó, Cs. Balogh, J. Kecskés & J. Oláh (66 males, 7 females; OPC). Gurghiu Mts. near Bucin Pass, Frasileasa stream with side springs, N46°38' 37,45" E: 25°17' 35,08", 1193, 29.X.2014, leg. Z. Baczó, Cs. Balogh, J. Kecskés & J. Oláh (8 males, 3 females, OPC). Harghita Mts. Filio stream side spring, N: 46°27' 03,90" E: 25°33' 29,29", 1350m, 31.X.2014 leg. Z. Baczó, Cs. Balogh, J. Kecskés & J. Oláh. (9 males, 5 females; OPC).

Hargitha Mts. Filio stream side spring, N: 46°27' 14,53" E: 25°33' 53,04", 1415m, 31.X.2014 leg. Z. Baczó, Cs. Balogh, J. Kecskés & J. Oláh. (12 males, 6 females; OPC). Hargitha Mts. Filio stream side spring, N: 46°26' 45,18" E: 25°34' 25,73", 1600m, 31.X.2014 leg. Z. Baczó, Cs. Balogh, J. Kecskés & J. Oláh. (7 males, OPC). Hargitha Mts. Filio stream side spring, N: 46°26' 29,54" E: 25°34' 48,09", 1625m, 31.X.2014 leg. Z. Baczó, Cs. Balogh, J. Kecskés & J. Oláh. (29 males, 9 females, OPC). Dâmbovița county, Bucegi Mts, M. Dichiu, left sidebrook of V. Oboarele, 45°19'32.8", 25°26'05.0", 1420 m, 6.XI.2014, leg. T. Kovács & G. Magos (2 males, 1 female; OPC). Dâmbovița county, Bucegi Mts, Hotel Peștera, Valea Cocora, 45°23'04.1", 25°26'37.6", 1590 m, 6.XI.2014., leg. T. Kovács & G. Magos (1 male, 1 female; OPC). Dâmbovița county, Bucegi Mts, Hotel Peștera, V. Șugărilor, 45°24'42.1", 25°27'23.5", 1850 m, 6.XI.2014, leg. T. Kovács & G. Magos (1 male, OPC). Dâmbovița county, Bucegi Mts, Hotel Peștera, left sidebrook of Ialomița, 45°24'08.8", 25°26'35.1", 1690 m, 6.XI.2014, leg. T. Kovács & G. Magos (9 males, 7 females, OPC). Dâmbovița county, Bucegi Mts, Hotel Peștera, spring area beside the V. Șugărilor, 45°24'25.0", 25°26'47.8", 1760 m, 6.XI.2014, leg. T. Kovács & G. Magos (5 males, 3 females, OPC). Dâmbovița county, Bucegi Mts, Hotel Peștera, Ialomița, 45°23'54.5", 25°26'25.1", 1610 m, 7.XI.2014 leg. T. Kovács & G. Magos (1 male, 1 female, OPC). Dâmbovița county, Bucegi Mts, Hotel Peștera, spring area beside the Cascada Obrisia Ialomiței, 45°25'35.2, 25°26'42.8", 2030 m, 7.XI.2014, leg. T. Kovács & G. Magos (3 males, 1 female, OPC). Dâmbovița, Bucegi Mts, Lacul Bolboci, Blana Stream, 45°22'06.0", 25°26'40.9", 1515 m, 7.XI.2014, leg. T. Kovács & G. Magos (2 males, 3 females, OPC). Sibiu county, Făgăraș Mts, Cârțișoara, spring beside the Bâlea Stream, 45°37'59.4", 24°36'31.3", 1290 m, 8.XI.2014, leg. T. Kovács & G. Magos (13 males, 11 females, OPC). Sibiu county, Făgăraș Mts, Cârțișoara, open sidebrook of Bâlea Stream below the Bâlea Lake, 45°36'30.4", 24°37'14.6", 1940 m, 8.XI.2014, leg. T. Kovács & G. Magos (1 male, 2 females, OPC). Sibiu county, Făgăraș Mts, Cârțișoara, Bâlea Stream below the Bâlea Lake, 45°36'30.4", 24°37'14.6", 1940 m, 08.11.2014, leg. T. Kovács & G. Magos (1 male, 2 females, OPC)."

Diagnosis – OLÁH *et al.* (2015b: 105–107): "This incipient species of the complex has long dorsal branch of the paraproct. The lateral profile of the paraproct is characterized by almost regular straight dorsum and downward directed basal region. The curvature of the paramere rod is shallow and having constrictions and dilatations more frequently in the most western populations in the Fagaras Mts. The dental pattern on the paramere head is restricted to apicad and dorsosubapicad. Dentate pattern does not move more far into the middle direction in lateral view, except again in populations of the Fagaras Mts. The contact zone with *P. retezaticea* could be more complicated extending even into the Fagaras Mts. This species is most distributed in the complex; populating

spring-fed small streams on higher elevations in mountain ranges in the eastern and southern Carpathians. We have collected numerous specimens in Gurghiu, Harghita, Bucegi and Fagaras Mts.”

Stenophylacini

Acrophylax Brauer, 1867

Acrophylax vernalis Dziędziewicz, 1912

Acrophylax vernalis DZIĘDZIELEWICZ, 1912: 134–136: “Spostrzegałem ten gatunek na górnej granicy lasów Czarnohory i w krainie kosodrzewn pod szczytami Dancerza i Breskula w wysokości ad około 1200–1500 m. n. p. m, przy potokach, w czasie od 15 do 20-go maja w malej ilości okazów, zgromadzonych tylko na pewnych przestrzeniach potoków. Jawi się on między zaspami śniegu, zalegającego od zimy. Ukriwa się na brzegach poloków w szczelinach skał i kami-
eni. Tak samce jak i samice wylatują z kryjówek, gdy słońce świeci, i w miejscach oświetlonych przelatują szybko z biegiem potoku i w górę w wysokości około 15 metra nad powierzchnią wody; od czasu do czasu usiadają na gałęziach drzew lub kosodrzewu, zwisających nad wodą, albo na krawędziach zasp śniegowych, na których biegają a od czasu do czasu zatrzymują się i podnosząc główkę i różki, rozglądają się po otoczeniu.”

Acrophylax vernalis Dziędziewicz, 1912: SZCZĘSNY (1980: 464): in NHM-ISEA: “2♀♀; both specimens have the same inventory number 3/25 and identical labels “Czarnohora, Dancerz, 15.V.1911” and “*Acrophylax vernalis* Dz. ♀ ver. C. Tomaszewski”. Dziędziewicz (1912) described this species on the basis of specimens collected from Czarnohora near the summits of Dancerz and Breskul during the period 15–20.V.1911 thus the specimens deposited in Cracow belong to the typical series and are syntypes. I am designating one of the females preserved in a better state as a lectotype”.

Acrophylax vernalis Dziędziewicz, 1912: SZCZĘSNY & GODUNKO (2007: 36): in SMNHL: “12♂♂, 7♀♀; East Carpathians: Czarnohora Massif; 4 ♂♂, 6♀♀ which Dziędziewicz collected during 15–30.V.1911 (on the Czarnohora massif on slopes of Dancerz and Breskul) are paralectotypes according to /01–10, i. e. belong to the series of specimens on basis of which Dziędziewicz described this species. A designated lectotype is stored in MP ISEZ (Szczęsny 1980). Chornohora Massif above forest line is locus typicus for the species (Szczęsny & Godunko, 2008).”

Allogamus Schmid, 1955

Allogamus dacicus (Schmid, 1951)

Halesus dacicus SCHMID, 1951a: 65–66: “Retyezat (Transylvanie), déposé au musée de Budapest.”

Allogamus dacicus (Schmid, 1951): SCHMID (1955: 194–196): transferred to the newly established genus *Allogamus*.

Allogamus dacicus (Schmid, 1951): BOTOȘĂNEANU (1959: 67): “Această specie a fost descrisă de SCHMID (1951) din Retezat; noi nu am reușit să o regăsim în acest masiv și putem raporta tot materialul de *Allogamus* colectat în Retezat la specia foarte îndeaproape înrudită *uncatus* Brau. Pe *A. dacicus* îl cunoaștem din Făgăraș (lacul Podragul).”

Allogamus dacicus (Schmid, 1951): BOTOSANEANU (1961a: 59): “Lac Podragul, Fagaras, VIII. 1950.”

Allogamus dacicus (Schmid, 1951): BOTOSANEANU (1975: 99): “*A. dacicus* Schmid ist bis jetzt durch drei Belegstücke bekannt: ein Stück vom Retezat-Massiv, die zwei anderen vom Fagarasch-Massiv (Südkarpaten). Es ist eine Hochgebirgsart (1900–2100 m), die im August in der Nahe von Seen und deren Ausflüssen fliegt.”

Allogamus dacicus (Schmid, 1951): MEY (1978: 62): collected in Romania: “Fagaras Gebirge: Lacul Avrig: 8. X.1977., 5♂; Serata: 12. X.1977., 3♂; Podragu: 14. X.1977. 2♂.”

Allogamus dacicus (Schmid, 1951): SZCZĘSNY & CHVOJKA (2008: 164): “Ukraine, Czarnohora Massif (Chornohora), Dancerz stream at forest line, 9.X.1995, leg B. Szczęśny, 1 ♂.”

Allogamus dacicus (Schmid, 1951): OLÁH *et al.* (2014: 74): new records: “Romania. Argeș county, Făgăraș Mts, Căpătânenii Ungureni, small springlake by the Capra Stream along road No.7C, N45°34.605' E24°37.060', 1405m, 29.VIII.2012 leg. T. Kovács, D. Murányi, J. Oláh (1 male, 1 female; OPC). Brașov county, Făgăraș Mts, Dejani, right sidebrook of Dejani stream, N45°35.446' E24°56.348', 1755m, 30.VIII.2012 leg. T. Kovács, D. Murányi, J. Oláh (1 male, OPC).”

Allogamus starmachi Szczęśny, 1967

Allogamus starmachi SZCZĘSNY, 1967: 479: “Holotype ♂: Tatra, Vallée Gasi-enicowa, 1680 m, 2.X.1966; paratypes 6♂♂ capturés avec holotype, et 4♂♂ Vallée Panszczyca, 1600 m, 3.X.1966. leg M-me M. Kownacka. Tous les specimens dans la collection de l'auteur.”

Allogamus starmachi Szczęśny, 1967: BOTOSANEANU & MALICKY (1978: 353): synonymised with *A. starmachi* Szczęśny, 1967: *Allogamus lazarei* SZCZĘSNY, 1967: 480–481. *Allogamus tatricus* SZCZĘSNY, 1967: 481–482.

Allogamus tomor Oláh, 2012

Allogamus tomor Oláh, 2012 in OLÁH & KOVÁCS (2012: 95–96): “Holotype. Albania: Skrapar district, Ostrovicë Mts, Backë, Krojmbret Spring and its out-

let brook NE of the village, N40°31.753' E20°25.152', 1965 m, 12.10.2012, leg. P. Juhász, T. Kovács, D. Murányi, G. Puskás (1♂, OPC). Allotype. Same as holotype (1♀, OPC)."

Diagnosis – OLÁH & KOVÁCS (2012: 95–96): "Having mesad angled gonopods together with three-armed aedeagus and fused paramere this new species is close to *Allogamus uncatus* (Brauer, 1857), but differs by having "apparent harpago" with transversally cut trilobed apical margin, not with pointed or narrowing monolobed apicoventral corner; aedeagus abbreviated and dilated, not long and slender; on female the elongated mesal structure of the vaginal sclerite complex short, not as long as at *A. uncatus*. This elongated sheath is connected to the dorsum of the vaginal or spermathecal sclerite was first mentioned by SCHMID (1951 as a *vestibular apparatus* with equilibrating function. Later SCHMID (1955) mentioned as *bursa copulatrix*. We have found this long tube-like structure as functioned to receive the long fused paramere in copulation."

Etymology – "Tomor from "tömör" solid or concise in Hungarian, refers to the abbreviated and dilated aedeagus of the phallic organ."

Allogamus zugor Oláh, 2014

Allogamus zugor Oláh, 2014 in OLÁH & KOVÁCS (2014: 113–114): "Holotype. Macedonia, Southwestern region, Jablanica Mts, 6.5 km W of Labuništa, open brook at Labuniško Lake, N41°16.069', E20°31.242', 1905 m, 10.10.2014, leg. P. Juhász, T. Kovács, G. Puskás (1♂, OPC). Allotype. Same as holotype (1♀, OPC). Paratypes. Same as holotype (1♀, OPC; 1♀, MM)."

Diagnosis – OLÁH & KOVÁCS (2014: 113–114): "Having three-armed aedeagus and fused paramere this new species is a member of uncatus group and having mesad angled gonopods is close to *A. uncatus*, it is a sister species of *A. uncatus*, and *A. tomor*. It differs from both sisters by having "apparent harpago" with monolobed apical margin turned back from transversal to sagittal plane; aedeagus minutarized shrunk, not long slender like at *A. uncatus* or broad dilated like at *A. tomor*; parallel with shrunk aedeagus, the vagina is very small, similarly abbreviated in sexual coevolution processes."

Etymology – "Zugor from "zsugor", shrink in Hungarian, refers to the abbreviated and highly shrunk aedeagus, which coevaluated with the abbreviated vaginal chamber."

Chionophylax Schmid, 1951

Chionophylax czarnohoricus (Dziędzielewicz, 1911)

Acrophylax czarnohoricus DZIĘDZIELEWICZ, 1911b: 45–46: "Czarnohora, mons Tomnatyk, in altitudine 1791 m. s. m., 30. V. 1909. 3♂ zebrał P. Karol

Huppenthal przy jeziorku pod szczytem Tomnatyka na Czarnohorze w wysokości 1791 m. n. p. m.; ukrywały się tu w kosodrzewinie. 30.V.1909.”

Chionophylax czarnohoricus (Dziędziewic, 1911): SCHMID (1951b: 55–58): transferred to the new genus *Chionophylax*.

Chionophylax czarnohoricus (Dziędziewic, 1911): SZCZĘSNY (1980: 464): in NHM-ISEA: “4♂♂, 2♀♀ with the inventory number 4/25 are labelled with the inscription “Czarnohora, Dancerz 29.V.1911” the other two with the inventory number 5/25 are labelled with the inscription “Czarnohora Breskul 1.VI.1911”. DZIĘDZIEWICZ (1911) described the species on the basis of 3♂♂ collected by K. Huppenthal by a small lake near the summit of Tomnatek, Czarnohora 30.V.1909 so none of the specimens deposited in Cracow belong to the typical series. However, they do come from the “terra typica”.

Chionophylax czarnohoricus (Dziędziewic, 1911): SZCZĘSNY & GODUNKO (2007: 36): in SMNHL: “16♂♂, 1♀; East Carpathians: Czarnohora Massif; 3♂♂ collected by Karol Huppenthal 30.V.1909 at the pond on slope of Tomnatyk Mt (“przy jeziorku pod szczytem Tomnatyka”) on Czarnohora massif (1791 m a.s.l.) were the basis for description of the species under generic name *Acrophylax* (Dziędziewic 1911). In SMNHL there are stored 2♂♂ collected in 1909: one male “30.V.1909 Czarnohora, Gadzyna, jeziorko” – now designated as lectotype (according to the ICZN Articles 73.2 and 74.1, No /01), second male “4–5.VI.1909, Czarnohora, zeb. Dr. Antoni Lomnicki”. As to the former specimen, it is highly probable that Dziędziewicz when writing “pond on slope of the Tomnatyk Mt” wanted to point at the pond in Gadzyna valley, and not on the Barbeniescu lake which is situated directly at Tomnatyk Mt. The latter specimen not mentioned in this paper was found by RACIECKA (1934) in Dziędziewicz’s collection. The remaining ones (14♂♂ – 1911 and 1♀ – 1910) were collected by Dziędziewicz in locus typicus. The paralectotype is stored in NMP (P. Chvojka, pers. comm.).

Chionophylax czarnohoricus (Dziędziewic, 1911): SZCZĘSNY & CHVOJKA (2008: 157): in NMP: Paralectotypes of 3♂ specimens were collected in 30.V.1909 in the East Carpathians, Czarnohora from the type locality and deposited in NMP.

Chionophylax mindszentyi Schmid, 1951

Chionophylax mindszentyi SCHMID, 1951b: 59–61: “Holotype ♂: Vurfu Mare, 11. IV. 1910 (Szeben, “Cziki”, correctly: Csíki); il appartient au musée Budapest.”

Chionophylax mindszentyi bulgaricus Kumanski, 1973

Chionophylax mindszentyi bulgaricus KUMANSKI, 1973b: 194–196: “Holotype ♂ et paratype ♀ (les deux a sec), recueillis le 26. IV. 1968 sur la neige

couvrant un torrent au-dessous du mont Botev, Stara planina, environ 2100–2200 m d'altitude (leg. P. Beron)."

Chionophylax monteryla Botoșăneanu, 1957

Chionophylax czarnohoricus monteryla BOTOȘĂNEANU, 1957c: 599–603: "Récemment nous avons eu le plaisir de recevoir Prof. Dr. Al. Valkanov un tube contenant 28 exemplaires (25 ♂♂, 3♀♀) d'un Trichoptère capturé par lui-même le 13 avril 1955 sur les bords du "VIème lac" ("Sedemite ezera") dans le haut massif de Ryla, en Bulgarie."

Chionophylax monteryla Botosaneanu, 1957: KUMANSKI (1973b: 196–203): raised to species status. "Les 28 exemplaires dont BOTOSANEANU a disposé lors de description de ssp. monteryla sont en réalité une petite partie d'une récolte beaucoup plu riche comprenant 394 exemplaires. La récolte est faite le 13. IV.1955."

Isogamus Schmid, 1955

Isogamus aequalis (Klapálek, 1907)

Anisogamus aequalis Klapálek, 1907: 24–27: "Naleziště Chomiak (Blotek) ve Vých. Karpatech 22./IX.1906, leg. Joz. Dziędzielewicz, 3♂ a 2♀".

Isogamus aequalis (Klapálek, 1907): SCHMID (1955: 183–184): transferred to his newly erected genus *Isogamus*.

Isogamus aequalis (Klapálek, 1907): SZCZĘŚNY (1980: 466–471): differential diagnoses of both sexes of *I. aequalis* and *I. czarnohorensis* from the Ukrainian Carpathians were elaborated and detailed drawings prepared.

Isogamus aequalis (Klapálek, 1907): CHVOJKA (1993: 217–220): the first collection and reliably records from Slovakia with excellent drawings were presented.

Isogamus aequalis (Klapálek, 1907): Oláh *et al.* (2015b: 41–42): "Poland, Bieszczady Mts. X. leg. B. Szczęsny (2 males, 2 females; OPC). Slovakia, Vihorlat Mts. Zempl Hamre, 700 m, 15. IX. 1962, leg. P. Chvojka (3 males, 4 females, aedeagus and parameres on slide No. 13,14, NMPC; 3 males, 2 females, OPC). Vihorlat Mts. prameniste pot.-Morska eko, 15.IX.1962, leg. P. Chvojka, (4 males, aedeagus and parameres on slide No. 16, NMPC). Vihorlat, 16.IX.1962, leg. P. Chvojka (2 males, aedeagus and parameres on slide No. 1,2, NMPC). Vihorlat Mts. prm. N. Zempl. Hamre, 740 m, 12.X.1990, leg. P. Chvojka (1 male, aedeagus and parameres on slide No. 18, NMPC). Vihorlat Mts. prm. N. Zempl. Hamre, 740 m, 12.X.1990, leg. P. Chvojka (1 male, aedeagus and parameres on slide No. 18, NMPC). Vihorlat Mts. potucek severne, N Sedlice, 10.X.1990, leg. P. Chvojka (1 male, aedeagus and parameres on slide No. 17, NMPC). Vihorlat Mts. levostr. Pritok Bystre, 5–700 m, 9.X.1990, le. P. Chvojka (4 males, aedeagus and parameres on slide No. 19, NMPC)."

gus and parameres on slide No. 16, NMPC). Ukraine, Klapálek Collection: No. 21, Worochtensky, 7.IX.1908, leg. Dziędzielewicz (1 female, NMPC). Klapálek Collection: No. 5, Chomiak (Blotek), 22.IX.1906, leg. Dziędzielewicz (1 male, aedeagus and parameres on slide No K5, NMPC). No. 6, Chomiak, 5.IX.1908, leg. Dziędzielewicz (1 male, aedeagus and parameres on slide No K6, NMPC). No. 7, Chomiak, 5.IX.1908, leg. Dziędzielewicz (1 male, aedeagus and parameres on slide No K7, NMPC). No. 8, Chomiak, 5.IX.1908, leg. Dziędzielewicz (1 male, aedeagus and parameres on slide No K8, NMPC). No. 9, Chomiak, 5.IX.1908, leg. Dziędzielewicz (1 male, aedeagus and parameres on slide No K9, NMPC). No. 10, Chomiak, 5.IX.1908, leg. Dziędzielewicz (1 male, aedeagus and parameres on slide No K10, NMPC).” No. 20, Chomiak (Blotek), 22.IX.1906, leg. Dziędzielewicz (1 female, NMPC). Bieszczady Mts (Besszádok), Ung National Park, below Lubnya (Kiesvölgy), N: 49°00' 54,81" E: 22°43' 23,82", 478 m, singled, 20. IX. 2013, leg. J. OLÁH, Cs. BALOGH, Cs. DEÁK & I. MESZESÁN (1 female, OPC).”

Isogamus balinti Oláh, 2015

Isogamus aequalis aequalis Klapálek, 1907: BOTOSANEANU (1961a: 60): records from Southern Carpathians. Misidentifications.

Isogamus balinti Oláh, 2015 in OLÁH *et al.* (2015b: 43): “Holotype. Romania, Southern Carpathians, Parang Mts. Calcescu Lake, 45.356 23.614, 1802 m, 3.VIII.2004, leg. L. Ujvárosi (1 male, OPC). Paratypes. Same as holotype (1 male, OPC). Southern Carpathians, Iezer Mts, 45.45 25.02, 1050m, 3.VIII.2006, leg. M. BÁLINT (2 males, OPC).”

Diagnosis – OLÁH *et al.* (2015b: 43): “Sibling species of *I. baloghi* having truncate, concave gonopod apex in lateral view; dorsally convex paraproct; parameres with less developed spine pattern of the modified setae; shaft terminal slender spine-like. Differs from its sibling *I. baloghi* by having high paraproct in lateral view, not slender, paramere dorsum convex, not straight; reduced spine-like setae located ventrad, not laterad. Female unknown.”

Etymology – “We dedicated this species to Miklós Bálint, one of the collector who has accompanied the senior author (J.O.) in his first Romanian Carpathian collecting trip.”

Isogamus baloghi Oláh, 2015

Isogamus aequalis aequalis (Klapálek, 1907): BOTOSANEANU (1961b: 60): records from Rodnei Mts. Misidentifications.

Isogamus baloghi Oláh, 2015 in OLÁH *et al.* (2015b: 44–45): “Holotype. Romania, Rodnei Mts. Iza stream, side spring with sphagnum bog, N47°36'19.3”

E24°31'53.4", 993m 27. IX. 2014, leg. J. Oláh & Cs. Balogh (1 male, OPC). Allotype: same as holotype (1 female). Paratype: same as holotype (14 males, 3 females). Rodnei Mts. Numerous spring streamlets on the spring area of Cailor waterfall, Piatra Rea, N47°35'1.9" E24°47'49.4", 1564m, 28. IX. 2014, leg. J. Oláh & Cs. Balogh (1 male, OPC)."

Diagnosis – OLÁH *et al.* (2015b: 44–45): "Sibling species of *I. balinti* having truncate, quadratic gonopod apex in lateral view; dorsally straight paraproct; parameres with less developed spine pattern of the modified setae; paramere shaft terminal slender spine-like. Differs from its sibling *I. balinti* by having slender paraproct in lateral view, not broad, paramere dorsum straight, not convex; reduced spine-like setae on the paramere located laterad, not ventrad. Female lateral lobes of tergite IX long triangular, not short and not blunt like at *I. aequalis*; basal region of tergite IX shouldered and without subbasal dark crossline, not without lateral shoulder and not with pronounced subbasal transversal line present at female of *I. aequalis*."

Etymology – "We dedicated this species to Csaba Balogh, one of the collector who has accompanied the senior author (J.O.) in several Carpathian collecting trips."

Isogamus czarnohorensis (Dziędziewicz, 1912)

Anisogamus aequalis Klapálek var. *czarnohorensis* DZIĘDZIELEWICZ, 1912: 137–138: "Odmiana ta pojawia się w małych gromadkach na Czarnohorze wysokości od 1300–1700 m n. p. m. przy potokach i źródłach w czasie od połowy sierpnia poza połowę września. Samec latają w świetle słonecznym i okrążają drzewa świerkowe lub krzewy kosodrzewu, na których usiadają, samice zaś ukrywają się w gęstwinach niskiej roślinności lub między głazami na brzegach wody i popszukując źródła, przy których najchętniej składają jaja, wydostają się do znacznej wysokości."

Isogamus aequalis czarnohorensis (Dziędziewicz, 1912): SCHMID (1955: 183–184): transferred to his newly erected genus *Isogamus*.

Isogamus czarnohorensis (Dziędziewicz, 1912): SZCZĘSNY (1980: 466–471): elevated to species rank. Lectotype and paralectotypes designated, labeling: Czarnohora, Breskul 25.IX.1910. In NHM-ISEA: "In the Cracow collection I found 6♂♂ and 4♀♀ collected by Dziędziewicz and 1♀ collected by Fudakowski in the Eastern Carpathians; 4♂♂ with inventory numbers 37/24, 38/24 and 39/24 were wrongly identified as "*Stenophylax millenii* Klap." and 1♀ with inventory number 2/25 as "*Anisogamus aequalis* Klap." Dziędziewicz described this form on the basis of specimens caught by the streams and springs of Czarnohora in the sub-alpine and alpine levels between 1300 and 1700 m asl., during the months

of August and September. It happened probably in the year 1910 as the specimens dated from this time are already identified as "*Anisogamus aequalis* Klap. *czarnohorensis* Dz.". In the Cracow collection are 2 ♂♂ and 2 ♀♀ which come from this period bearing the same inventory number 1/25, I believe that these may be called the typical series. I am choosing from these the ♂ lectotype; the specimen has the labelling "Czarnohora, Breskul 25.IX.1910" and "*Isogamus aequalis czarnohorensis* (Dz.) ver. C. Tomaszewski". The abdomen of the lectotype as well as the paralectotypes are macerated in KOH." Differential diagnoses of both sexes of *I. aequalis* and *I. czarnohorensis* from the Ukrainian Carpathians were elaborated and detailed drawings prepared.

Isogamus czarnohorensis (Dziędzielewicz, 1912): SZCZĘSNY & GODUNKO (2007: 36–37): in SMNHL: "7 ♂♂ and 2 ♀♀; East Carpathians: Czarnohora Massif (1200 m a.s.l.); all the specimens match the criteria for paralectotypes (No 01–09). Several paralectotypes are stored also in NMP (Chvojka, pers. comm.). The taxonomical status of this taxon in original description was *Anisogamus aequalis* Klap. var. *czarnohorensis* which corresponds to the rank of subspecies (Schmid 1955). Dziędzielewicz in the description emphasized the differences in body and wing color and size of wings between parental forms, *aequalis* and *czarnohorensis*. The specific wing color pattern as a main character of *czarnohorensis* is also stressed by Raciecka (1934). Subsequent, more careful studies of genital structure of both taxa allowed the status of latter (Szczęsny 1980)".

Isogamus czarnohorensis (Dziędzielewicz, 1912): SZCZĘSNY & CHVOJKA (2008: 157): in NMP: Altogether 21 ♂♂ and 3 ♀♀ specimens were collected during 9–12.IX.1908 in the East Carpathians from the type locality and deposited in NMP.

Isogamus czarnohorensis (Dziędzielewicz, 1912): OLÁH *et al.* (2015b: 45–46): "Romania. Maramures county, Maramaros Mts. Hututeanca stream, 1020 m, N47° 52' 27" E24° 20' 31", 7.VIII.2012, leg. J. Oláh & L. Szél (1 male, OPC). Maramures Mts. Bistra stream valley, small spring with sphagnum bog, N47°53'1.3" E24°16'47.7", 609m, 27. IX. 2014, leg. J. Oláh & Cs. Balogh (1 male, OPC). Ukraine: Klapálek Collection: K218, Forestanka, 12.IX.1908, leg. Dziędzielewicz (1 male, NMPC). K219, Porzyszevska, 9.IX.1908, leg. Dziędzielewicz (1 male, NMPC). K220, Pod Turkul, 10.IX.1908, leg. Dziędzielewicz (1 male, NMPC). No. 22, Pod Turkul, 10.IX.1908, leg. Dziędzielewicz (1 female, NMPC). No. 23, Pod Breskul, 11.IX.1908, leg. Dziędzielewicz (1 female, NMPC). No. 24, Pod Dancerz, 10.IX.1908, leg. Dziędzielewicz (1 female, NMPC). No. 12, Pod Turkul, 10.IX.1908, leg. Dziędzielewicz (1 male, aedeagus and parameres on slide No K12, NMPC). No. 11, Pod Turkul, 10.IX.1908, leg. Dziędzielewicz (1 male, aedeagus and parameres on slide No K11, NMPC)."

Remarks – OLÁH *et al.* (2015b: 45–46): “According to the original description (Dziędzielewicz 1912) and confirmed by Raciecka (1934) and Szczęsny (1980) this species differs from the closely related sibling species of *I. aequalis* by its darker colour. We have collected specimens in Romania in sunny environment and the shining dark coloration of the freshly collected living specimens was remarkable.”

Isogamus lineatus (Klapálek, 1903)

Anisogamus lineatus Klapálek, 1903a: 1–2: “Ein ♂, Styrie, Scheibleregger Hochalpe, leg. Strobl”.

Anisogamus lineatus Klapálek, 1903b: 1–2: “Mám před sebou jediný kus ♂ ze Scheibleregger Hochalpe (3./6.98, Strobl)”.

Isogamus lineatus (Klapálek, 1901): BOTOSANEANU (1967b: 103): transferred to genus *Isogamus*. “L'exemplaire type (que nous designons ici comme lectotype ♂; conservé à sec; abdomen en préparation au baume du Canada, attachée à l'épingle supportant la reste de l'insecte), provient de Styrie, Scheibleregger Hochalpe, 3. VI. 1898 (Strobl). Nous ne savons rien du milieu où se développent les larves. Notre matériel comprend 38 ♂ des Mts. de Fagarash (Carpathes Méridionales de Roumanie). Ces insectes furent capturés le 7. VI. 1961, le 8. VIII. 1960, entre les 7.–9. VIII. 1962, ainsi que le 16. IX. 1964. Il s'agit donc d'une espèce “on the wing” durant le printemps, l'été et au moins la première moitié de l'automne alpine. Les stations sont des sources, des ruisseaux et des torrents, dans la zone alpine, dans celle subalpine et à la limite supérieure de la forêt de conifères, eaux appartenant aussi bien à des bassins du versant N. que du versant S. du massif (Podu Giurgiului – Buda, Podrag – Arpas, Bilea – Cîrtzisoara, Sîmbata). Les altitudes varient de 1500 à 2300 m.”

Isogamus lineatus (Klapálek, 1901): MALICKY (2005b: 576): “Nach Angabe in der Beschreibung stammt der Holotypus von der Scheibleregger Hochalpe bei Admont (Steiermark). Diese Art ist sonst nie mehr in den Alpen, sondern immer nur in Südkarpaten gefunden worden. Ich habe mehrere Jahre hindurch wiederholt die Scheibleregger Hochalpe besucht und dort zu allen Jahreszeiten gesammelt, auch viele Larven aus einzigen dort fliessenden Bach mitgenommen und im Labor zu Adulten gezüchtet. Dabei ich niemals einen *Isogamus* gefunden. Offenbar ist entweder Klapálek oder dem Sammler Strobl eine Etikettenverwechslung unterlaufen. Beide haben auch in der Karpaten gesammelt. Die Art kommt in Alpen nicht vor.”

Isogamus lineatus (Klapálek, 1901): OLÁH *et al.* (2015b: 46–47): “Romania. Argeş county, Făgăraş Mts, Căpătânenii Ungureni, small springlake by the Capra Stream along road No.7C, N45°34.605' E24°37.060', 1405m, 29.VIII.2012 leg. T. Kovács, D. Murányi, J. Oláh (2 males, 5 females; OPC). Argeş county, Făgăraş Mts, Căpătânenii Ungureni, sidebrook of Capra Stream along road No.7C, N45°35.185'

E24°37.691', 1705m, 29.VIII.2012 leg. T. Kovács, D. Murányi, J. Oláh (8 males, 7 females, 1 copula; OPC). Sibiu county, Făgăraș Mts, Cârțișoara, forest seep along road No.7C, N45°38.742' E24°36.464', 1325m, 29.VIII.2012 leg. T. Kovács, D. Murányi, J. Oláh (3 females, OPC). Brașov county, Făgăraș Mts, Dejani, forest sidebrook of Dejani stream, N45°36.408' E24°56.466', 1310m, 30.VIII.2012 leg. T. Kovács, D. Murányi, J. Oláh (8 males, 5 females, OPC). Brașov county, Făgăraș Mts, Dejani, right sidebrook of Dejani stream, N45°35.446' E24°56.348', 1755m, 30.VIII.2012 leg. T. Kovács, D. Murányi, J. Oláh (1 male, 1 female, OPC). Brașov county, Făgăraș Mts, Dejani, forest sidestream of Dejani stream, N45°36.720' E24°56.533', 1250m, 30.VIII.2012 leg. T. Kovács, D. Murányi, J. Oláh (5 males, 3 females, OPC)."

Remarks – OLÁH *et al.* (2015b: 46–47): "This species was described from Austrian Alp (Styria), but never collected there, despite systematic search, but found very common in the South Carpathians. This confusion was probably resulted by mistakes in the original labelling (Malicky, 2005)."

Melampophylax Schmid, 1955

Melampophylax austriacus Malicky, 1990

Melampophylax austriacus MALICKY, 1990: 8: "Material: Wechsel oberhalb von Mariensee (Niederösterreich), 900 m, 24.X.1985 – 1♂ (Holotypus), 15♀♀ (paratypen). Weitere Paratypen: selber platz, aber 26.X.1977 – 1♀; Mönichner Schwaig, 1100 m, 26.X.1977 – 6♀; Steiermark: Vorauer Schwaig (Wechsel), 1500 m, 26.X.1977 – 5♂, 4♀; do 24.X.1985 – 14♀; Teichalpe, leg Hölzel, 2.X.1965 – 2♂, 3♀; do 20.X.1963 – 3♂; do 2.X.1966 – 4♂; do 20.X.1968 – 2♂; Reinischkogel, leg. Hölzel, 6.X.1968 – 2♂; do 13.X.1968 – 6♂, 1♀; Klugveitl, leg. Hölzel, 2.X.1969 – 2♂, 1♀. Kärnten: Saualpe, Ladinger Alm, 1800 m, 28.IX.1988 – 3♂, 2♀. Slowenien: Pohorje, leg. Sivec, 20.X.1981 3♀. Die Tiere von der Teichalpe, vom Reinischkogel (ausser 1♂) und Klugveitl (ausser 1♀ in coll. Hölzel; je 1 Pärchen vom Vorauer Schwaig in der Zoologischen Staatssammlung München und im Forschungsinstitut Senckenberg Frankfurt; alle anderen in meiner Sammlung."

Melampophylax austriacus Malicky, 1990: OLÁH *et al.* (2015b: 54): "Austria, Schwarze Sulm, 20. X. 2013 leg. W. Graf (1 male, 1 female; OPC)."

Remarks – OLÁH *et al.* (2015b: 54): "Auxilliary mesal elongation of the gonopods blunt broad triangular. Terminal blade on paramere sagittally flattened. Elongated vaginal sclerite complex broad basad and narrowing distad."

Melampophylax banaticus Botosaneanu, 1995

Melampophylax nepos ssp. *banaticus* BOTOSANEANU, 1995: 76.

Melampophylax nepos ssp. *banaticus* Botosaneanu, 1995: MALICKY (2005b: 577).

Melampophylax banaticus Botosaneanu, 1995: OLÁH *et al.* (2015b: 50–51): elevated to species status. “Romania, Caraş-Severin county, Ţarcu Mts., open brook on the W slope of Mt. Ţarcu, N45°17'30.9", E22°30'59.9", 1770 m, 14.10.2011, Á. Ecsedi, T. Kovács & G. Puskás (4 males, 2 females; OPC). Retezat Mts. Gura Apelor, N45.33 E22.88, 1500 m, 20.X. 2007 leg. M. Bálint, E. Magyari & M. Braun (1 male, OPC).”

Remarks – OLÁH *et al.* (2015b: 50–51): “This is an incipient sibling species closely related *M. polonicus* and *M. gutinicus*, but differs from both by having female with differently shaped vaginal sclerite elongation and males with pointed mesal corner on the mesal plate of the gonopods. Also differs by having the speciation trait, the paramere very stout with shallow curvature and with pronounced mace-like terminal blade.”

Melampophylax gutinicus Botosaneanu, 1995

Melampophylax nepos ssp. *gutinicus* BOTOSANEANU, 1995: 75–76.

Melampophylax nepos ssp. *gutinicus* Botosaneanu, 1995: MALICKY (2005b: 577).

Melampophylax banaticus Botosaneanu, 1995: OLÁH *et al.* (2015b: 50–51): elevated to species status. “Romania, Maramureş county, Muntii Ignis, Deseşti-Staţiunea Izvoare, open brook on the Valhani Plateau, 1020m, N47°43.015' E23°44.547', 07.10.2010, leg. P. Barcánfalvi, D. Murányi & J. Oláh, (5 males, 2 females, OPC). Maramureş county, Munţii Ignis, Deseşti-Staţiunea Izvoare, open stream on the Valhani Plateau, 940m, N47°43.945' E23°44.661', 08.10.2010, leg. P. Barcánfalvi, D. Murányi & J. Oláh, (1 male, OPC). Maramureş county, Munţii Ignis, Deseşti-Staţiunea Izvoare, spring brook on the Valhani Plateau, 955m, N47°44.177' E23°43.971', 08.10.2010, leg. P. Barcánfalvi, D. Murányi & J. Oláh, (4 males, OPC). Rodnei Mts. Rodnei Mts. small tributary just below Iza Spring, Albastru al Izei, 1020m, 27. IX. 2014, leg. J. Oláh & Cs. Balogh (1 male, OPC).”

Remarks – OLÁH *et al.* (2015b: 50–51): “Incipient sibling species closely related *M. banaticus* and *M. polonicus*, but differs from both by having female with differently shaped vaginal sclerite elongation, that is short and narrowing distad and the male has the most rounded mesal corner on the mesal plate of the gonopods as well as very slender paramere that has minute terminal blade.”

Melampophylax polonicus Malicky, 1990

Melampophylax polonicus MALICKY, 1990: 8–9: “Material: Polen, Bieszczady-Gebirge, Polaniec, 600–1000 m, 22.X.1976 – 1♂ (Holotypus), 2♀ (Paratypen); do. Wolosarka, 21. X. 1974 – 1♀ (paratype) in coll. Malicky. 3 ♂ mit den gleichen Funddaten in coll. Szczęsny (Paratypen).”

Melampophylax polonicus Malicky, 1990: OLÁH *et al.* (2015b: 54): “Poland, Bieszczady Mts. X. (October, without day and year), leg. det. B. Szczęsny (2 males, 1 female; OPC).”

Remarks – OLÁH *et al.* (2015b: 54): “Incipient sibling species closely related *M. banaticus* and *M. gutinicus*. Differs from both by having female with differently shaped vaginal sclerite elongation with produced subapical constriction; males with straight truncate apical margin on the mesal plate of the gonopods as well as long and strong paramere that has strong terminal blade.”

Melampophylax triangulifera Botoșăneanu, 1957

Melampophylax nepos triangulifera BOTOȘĂNEANU, 1957d: 400–401.

Melampophylax nepos ssp. *triangulifera* Botosaneanu, 1957: MALICKY (1990: 2, 2005b: 576).

Melampophylax nepos ssp. *triangulifera* Botosaneanu, 1957: BOTOSANEANU (1995: 74–75): female described.

Melampophylax triangulifera Botosaneanu, 1957: OLÁH *et al.* (2015b: 57): elevated to species status. “Romania, Eastern Carpathians, Harghita Mts., springs and streamlets between Baile Harghita and Cabana Madaras, 1650–1700 m, 14. X. 1970 leg. L. Botosaneanu (6 males, OPC). Gurghiu Mts. near Bucin Pass, Tárnavá Mica springs and stream, N: 46°39' 16,63" E: 25°16' 42,46", 1290, 30.X.2014, leg. Z. Baczó, Cs. Balogh, J. Kecskés & J. Oláh. (49 males, 6 females; OPC). Gurghiu Mts. near Bucin Pass, Gainasa springs and stream, N: 46°40' 11,35" E: 25°17' 39,06", 1400, 30.X.2014, leg. Z. Baczó, Cs. Balogh, J. Kecskés & J. Oláh (1 male, 1 female; OPC). Harghita Mts. Filio stream side spring, N: 46°27' 03,90" E: 25°33' 29,29", 1350m, 31.X.2014 leg. Z. Baczó, Cs. Balogh, J. Kecskés & J. Oláh. (1 male, 3 females; OPC). Caliman Mts. Fantanele stream, N: 46°59' 04,00" E: 25°05' 52,56", 776m, 1.XI.2014, leg. Z. Baczó, Cs. Balogh, J. Kecskés & J. Oláh. (3 females; OPC).”

Remarks – OLÁH *et al.* (2015b: 57): “This is a sibling species of *M. nepos* and *M. szczesnyorum*. Auxilliary mesal elongation of the gonopods laterad curving. Terminal blade of the paramere robust and rounded. Elongated vaginal sclerite complex rather variable inside populations.”

Melampophylax szczesnyorum Oláh et Chvojka, 2015

Melampophylax nepos triangulifera Botosaneanu, 1957: SZCZĘSNY (1980: 465–466): misidentification.

Melampophylax szczesnyorum Oláh et Chvojka, 2015 in OLÁH *et al.* (2015b: 56–57): “Holotype- Ukraine, original label: “Chomiak, (pot. podziemny), 6.X.1905, leg. Dziędzielewicz (1 male, Klapálek's Collection in NMPC: No. 50).

Allotype: Ukraine: original label: "Chomiak. p. Weredyk, 1–10.–1907, leg Dz." (1 female, Dziędzielewicz's collection in NHM-ISEA). Paratypes. Ukraine, original label: "Tatarow (Prutec), 7.–10.1905 Dz" (1 male, Dziędzielewicz's collection in NHM-ISEA). Ukraine: original label: "Chomiak, p. Weredik, 1.–10.-1907 Dz" (1 male, Dziędzielewicz's collection in NHM-ISEA). Ukraine: original label: "Chomiak (pot. podziemny), 6.–10.-1905 Dz" (1 male, Dziędzielewicz's collection in NHM-ISEA). Ukraine: original label: "Tatarov, (Blotek.) X. 1906" (1 male, Dziędzielewicz's collection in SMNHL: No. 1385). Ukraine: original label: "Czarnohora, Foreszczynka 4.X. 1910" (1 male, Dziędzielewicz's collection in SMNHL: No. 1399). Ukraine: original label: "Czarnohora, Foreszczynka 19.X. 1910" (1 male, Dziędzielewicz's collection in SMNHL: No. 1402). Ukraine: original label: "Czarnohora, Kozmieska 16.X. 1908" (1 male, Dziędzielewicz's collection in SMNHL: No. 1396). Ukraine: original label: "Chomiak, Barani. 9.X. 1907" (1 female, Dziędzielewicz's collection in SMNHL: No. 1389). Ukraine: original label: "Chomiak, Prutec. 2.X. 1912" (1 female, Dziędzielewicz's collection in SMNHL: No. 1403). Ukraine: original label: "Chomiak, Prutec. 2. X. 1912" (1 male, Dziędzielewicz's collection in SMNHL: No. 1401). Ukraine: original label: "Chomiak, P. Weredyk. 7. X. 1907" (1 female, Dziędzielewicz's collection in SMNHL: No. 1386). Ukraine: original label: "Czarnohora, Foreszczynka 4.X. 1910" (1 male, Dziędzielewicz's collection in SMNHL: No. 1397). Ukraine: original label: "Chomiak, Gnilec. 5. X. 1907" (1 male, Dziędzielewicz's collection in SMNHL: No. 1394). Ukraine: original label: "Chomiak, P. Weredyk. 23. IX. 1907" (1 male, Dziędzielewicz's collection in Dziędzielewicz's collection in SMNHL: No. 1388). Ukraine: original label: "Chomiak, (Blotek.) 22. IX. 1906" (1 female, Dziędzielewicz's collection in SMNHL: No. 1392). Ukraine: original label: "Chomiak, Potok Barani. 18. X. 1907" (1 female, Dziędzielewicz's collection in SMNHL: No.1384)."

Diagnosis – OLÁH *et al.* (2015b: 56–57): "This new species differs from its close relatives, from the sibling species of *M. nepos* and *M. triangulifera* by having the auxilliary mesal elongation of the gonopods with straight apex, mesad turning at *M. nepos* and laterad turning at *M. triangulifera*; the terminal blade of the paramere produced into a very flattened shape, a unique and powerful device in copulation; the elongated vaginal sclerite complex broadening distad. Only historical material was available for this study. No newly collected material!"

Etymology – "We dedicated this species to Dr. Bronisław Szczęsny and his wife, who has produced significant contribution to the knowledge of the Trichoptera in the North-East Carpathians covering both Poland and Ukraine."

Potamophylax Wallengren, 1891

Potamophylax borislavi Kumanski, 1975

Potamophylax borislavi KUMANSKI, 1975a: 85–87: “Holotype ♂: (pinned, abdomen in glycerine, attached to the same needle) Bulgaria, the Rhodops near Polkovnik Serafimovo village (about 1100 m), 4. IX. 1970, S. Zagortshinov leg. (by light).”

Further records – Bulgaria, Rhodope Region Rozsen, 13.IX.1979, 1 ♂ (leg. J. Ganey) (KUMANSKI 1983). Rila Mts. River Slavova, above the Tchaira-Dam, ca 1350 m, 22–23.VIII.1997, 1 ♂, 1–2.X.1997, 2 ♂ leg. Kumanski at light (KUMANSKI & MALICKY 1999). Greece, near Dasikon Chorio, in Elatia area 1300m, 24°20'E 41°30'N, 10. X. 1991, 2 ♂, leg H. Malicky (MALICKY 2005a).

Potamophylax carpathicus (Dziędzielewicz, 1912)

Stenophylax carpaticus DZIĘDZIELEWICZ, 1912: 136–137: “In Montibus Carpaticis Orientalibus sub cacuminibus: Chomiak ad Tatarów, Rebrowach in Worochta et in regione alpina Czarnohorae in altitudine 800–1400 m s m. apud fontes 12 VI– 6 VII rarus.”

Potamophylax carpathicus (Dziędzielewicz, 1912): SCHMID (1955: 176): transferred and listed in genus *Potamophylax*.

Potamophylax carpathicus (Dziędzielewicz, 1912): SZCZĘSNY (1980: 463): in NHM-ISEA: “1♂, 3♀♀; 2♀♀ were labelled wrongly as “*Stenophylax millenii* Klap.” (now known as *Potamophylax millenii* (Klap.)), their labels had the following notes: nr. 16/20 – “Chomiak (Blotek) 3.VII.1905 Dz.” Nr. 43/23 – “Chomiak Potok Barani zrodla 27. VI. 1907”. The two remaining specimens had identical inventory numbers 6/25, they were named correctly and bore the following labelling: ♂ – “Worochta 12. VI. 1911”, ♀ (without the last abdominal segments) – “Worochta 24.VI.1911 pod Rechaczem”. The species was described (Dziędzielewicz, 1912) on the basis of the specimens collected “near the summits of Chomiak and Rebrowacz at Worochta during the period 12. VI. – 6. VII. 1911”. I beleive, the last two specimens come from the typical series and so satisfy the conditions for syntypes. I am designating as a lectotypus the male of nr. 6/25 with an adduitional labelling “*Potamophylax carpathicus* (Dz.) ♂ ver. C. Tomaszewski.”

Potamophylax carpathicus (Dziędzielewicz, 1912): SZCZĘSNY & GODUNKO (2007: 37): in SMNHL: “5♂♂, 6♀♀; West Carpathians: Beskid Wyspowy, East Carpathians (5♂♂, 5♀♀): Czarnohora Massif (Worochta), Gorgany Massif (Chomiak) – of those collectedi n East Carpathians, 2♂♂, 3♀♀ are paralectotypes according to the ICZN Article 74.1.4 (No 24.12.23.01/01–05), but 3♂♂, 2♀♀ origin from locus typicus. Dziędzielewicz did not mention the series of specimens being the basis for species description. He informed only in which localities the species was observed, i.e.: Chomiak Mt at Tatarow, Rebrowacz Mt at Worochta and Czarnohora Massif, 12. VI – 6. VII. As a matter of fact, he had not recog-

nised correctly the species because all the earlier (until 1908) collected specimens, both *I. czarnohorensis* and *P. carpathicus*, were labelled as “*Stenophylax millenii* Klap. det Dz.” (those stored in MP ISEZ). The museum specimens stored in Lviv were labelled “*Stenophylax carpathicus* Dz. Det. M.R. (Maria Raciecka)” or “*Potamophylax carpathicus* Dz.” – name changed recently.”

Potamophylax carpathicus (Dziędzielewicz, 1912): SZCZĘSNY & GODUNKO (2008: 74): the Khomiak Mts. is locus typicus for the species.

Potamophylax jungi Mey, 1976

Potamophylax jungi MEY, 1976: 166–167: “Holotypus: 1♂ Rumanien, Schupichbach südlich von Sibiu, 31.VII.1975; in coll Mey. Paratypus 1♂: Rumanien, Nebenbach des Dragan bei Ciucea, 26.VIII.1975; in coll Botosaneanu.”

Potamophylax millenii (Klapálek, 1898)

Stenophylax millenii KLAPÁLEK, 1898a: 488: “Mehádia, Carniareva, Ferenczfalva im Krassó-Szörényer Comitat. 3♂, 1♀.”

Stenophylax millenii Klapálek, 1898: KLAPÁLEK (1899a: 431–432).

Potamophylax millenii (Klapálek, 1898): SCHMID (1955: 177): transferred and listed in genus *Potamophylax*.

Potamophylax seprus Oláh, Lodovici et Valle, 2011

Potamophylax seprus OLÁH, LODOVICI et VALLE, 2011: 13: “Holotype male. Albania: Skrapar county, Tomor Mts, Kulmak Pass, mountain grassland near the bektashi teqe, N40°37.116' E20°11.945', 1485m, 23.VIII.2006, leg. Z. Fehér, A. Hunyadi, T. Huszár & D. Murányi (1 male, HNHM).”

Potamophylax nigricornis species group

Potamophylax elegantulus (Klapálek, 1899)

Stenophylax nigricornis var. *elegantulus* KLAPÁLEK, 1899b: 325: “Lako ga je razlikovati od tipične forme po jako iztaknutim svjetlim prugama na tamnoj osnovnoj boji krila. Čitav niz ekzemplara sa Vrela Bosne 16 maja, i Trebevića (Win-negth.).”

Potamophylax nigricornis elegantulus (Klapálek, 1899): SCHMID (1955: 176): transferred to genus *Potamophylax*.

Potamophylax elegantulus (Klapálek, 1899): OLÁH *et al.* (2013a: 184–185): raised to species status. “The original description in 1899 was based on 6 males and 2 females specimens without any type labels. Here we have designated lectotype and selected allotype. Lectotype. Bosnia-Herzegovina: Vrelo Bosna, 16 May

(1 male, K369, NMPC). Allotype. same as lectotype (1 female: K373, NMPC). Paralectotypes. same as lectotype (1 male: K371, 1 male: K264, 1 male: K265, 1 male: K370, 1 male: K372; NMPC). Trebević leg. Winnegth (1 female, K374, NMPC). New record. Bosnia-Herzegovina: Toplice, N43°35.658 E18°29.697, 995 m 3.VI.2009, leg. W. Graf, (1 female, OPC)."

Diagnosis – OLÁH *et al.* (2013a: 184–185): "This species having dark striped forewing was described as a variant. The original description of *Potamophylax nigricornis* var. *elegantulus* is based upon the characteristic forewing pattern. Klapálek has not cleared the abdomen and thus he was unable to detect the significant modifications in the structure of the phallic organ. The ability of the aedeagal head to extend so much laterad during erection has been never observed at any specimens of *P. nigricornis*. Compared to *P. nigricornis* the parameres has lost the basal quadratic basement of the shaft; sigmoid pattern reduced; the basal tuft of 5 strongly mesad curving setae shortened, straightened, doubled to 10 and spread up to the end of the shaft; apical seta fused to the end of the shaft, alveolus almost indiscernible. Female vaginal sclerite complex rounded, not elongated longitudinally and has short sclerotized opening on the spermathecal process, not long; transversal bursal sclerite long, not short."

Potamophylax fules Oláh et Ibrahimi, 2013

Potamophylax fules Oláh et Ibrahimi, 2013 in OLÁH *et al.* (2013a: 185–186): "Holotype. Romania: South Carpathians, Caras-Severin county, Tarcu Mts. Poina Marului, upper section of Sucu Stream, S of the village, N45°20.907' E22°31.073', 955 m, 08.VI.2011, leg. T. Kovács, D. Murányi & G. Puskás, (1 male, HNHM). Paratypes. Kosovo: Skënderaj Municipality, entrance into the Kuçicë village, Klinë river sidespring, N42°48.36' E20° 46.29', 690 m, 12.V.2011, leg. H. Ibrahimi, Ar. Gashi & B. Deliu (1 male, DBFMNSUP). Prishtinë Municipality, Gollak region, Keqekollë village, streamlet, N42.7237°, E21.3067°, 804 m, 15.06.2009, leg. H. Ibrahimi & F. Asllani Ibrahimi (1 male, DBFMNSUP). Montenegro: Biogradska Gora, N42 54 01.5 E19 35 44.7, 1093 m, 29.V.2009, leg W. Graf (1 male, OPC)."

Diagnosis – OLÁH *et al.* (2013a: 185–186): "This species having dark striped forewing belongs to the *Potamophylax elegantulus* species subgroup. Close to *P. ureges* sp. n. but differs by having the ventral subapical double layered heel with lateral plates abbreviated; the lateral plate is longer at *P. fules*; as a result the mesal plate is long exposed free in lateral view; pectinate patterned setae distributed along to the subapical region, not limited to the basal half of the paramere shaft."

Etymology – "Fules from "füles" auriculate in Hungarian, refers to the ear-shaped small corner produced by the abbreviated lateral plate of the double-layered ventral subapical heel on the aedeagus."

Potamophylax hasas Oláh, 2013

Potamophylax nigricornis (Pictet, 1834): KUMANSKI (1971: 103): Bulgaria (Rodope Mts). Misidentification.

Potamophylax hasas Oláh, 2013 in OLÁH *et al.* (2013a: 186): “Holotype. Bulgaria: Smoljan Province, Perelik Mts. Pamporovo, open brooks and alpine grassland at the settlement, 1560 m, N41°37.540' E24°42.411', 31.V.2012, leg. J. Kontschán, D. Murányi & T. Szederjesi (1 male, OPC). Allotype. Bulgaria, Rodope Mts. above Triglad 25. VII. 1968, leg. A. Slivov (1 female, NMNHBAS) Paratype. Same as allotype (1 male, NMNHBAS).”

Diagnosis – OLÁH *et al.* (2013a: 186): “Close to *P. kethas* sp. n. but differs by having single belly on the aedeagus without a strong constriction midway, apical seta on paramere long, not short; basal setae four, not eight. Kumanski’s original male and female specimens were examined designated as allotype and paratype and compared to the holotype.”

Etymology – “*Hasas* from “hasas” bellied in Hungarian, refers to the subapical lateral bulging on the aedeagus.”

Potamophylax kethas Oláh, 2013

Potamophylax kethas Oláh, 2013 in OLÁH *et al.* (2013a: 186–188): “Holotype. Bosnia-Hercegovina: Vucjaluka, N43.93221 E18.52135, 12.VII.2008, leg. M. Bálint & S. Lelo (1 male, OPC).”

Diagnosis – OLÁH *et al.* (2013a: 186–188): “Close to *P. hasas* sp. n. but differs by having double bellies on the aedeagus with a strong constriction midway, apical seta on paramere short, not long; basal setae eight, not four.”

Etymology – “*Kethas* from “két has” double bellies in Hungarian, refers to the strong constriction midway on the aedeagus resulting double bellies in ventral view.”

Potamophylax lemezes Oláh et Graf, 2013

Potamophylax lemezes Oláh et Graf, 2013 in OLÁH *et al.* (2013a: 188): “Holotype. Macedonia: Mavrovo, Galicnicka spring, N41.35364, E20.39523, 1407m, 2.VII.2010, leg. W. Graf (1 male, OPC). Allotype. Same as holotype (1 female, OPC). Paratypes. Same as holotype (1 males, 2 females; OPC). Vitosa, 27. V. 2010, leg. I. Sivec (1 male, 1 female; OPC).”

Diagnosis – OLÁH *et al.* (2013a: 188): “This species having no double layered heels (*P. ureges*, *P. fules*), no bellies on aedeagus (*P. hasas*, *P. kethas*), no elongated pointed heels (*P. apados*) and no broad paramere shaft (*P. schmidi*) has resemblance in the subgroup to *P. elegantulus*, but differs by having the unique lateral

plate developed on the aedeagus subapicad, and by the differently patterned setal structure on the paramere shaft.”

Etymology – “*Lemezes*” from “*lemezes*” laminate in Hungarian, refers to lateral laminar plates present subapicad on the aedeagus.”

Potamophylax schmidi Marinković-Gospodnetić, 1971

Potamophylax schmidi MARINKOVIĆ-GOSPODNETIĆ, 1971a: 80–83: Southeast Bosnia.

Potamophylax schmidi Marinković-Gospodnetić, 1971: MARINKOVIĆ-GOSPODNETIĆ (1971b: 144): “Southeast Bosnia, ♂♂ ♀♀ in many small brooks on the mountain Zelengora and Maglič.”

Potamophylax schmidi Marinković-Gospodnetić, 1971: OLÁH *et al.* (2013a: 188–189): “Bosnia-Herzegovina: Sutjeska NP, Izvor uz Cestu, N43°15.902 E18°35.56716, 1109 m. 15. V. 2008, leg. W. Graf & H. Ibrahim (7 females, OPC). Same but 2.VI.2009, leg. W. Graf (2 females, OPC). Same, but spring by the road, 2.VI.2009, leg. A. Previsic (1 female, OPC).”

Diagnosis – OLÁH *et al.* (2013a: 188–189): “Type specimens of this species were lost. We have collected only females and effort to borrow males failed. Male drawings are reproduced from the original description and drawings. Compared to other species of this group the reconstructed lateral view of phallic organ and the dorsal view of the paramere with setal formation is rather particular. We have examined the available 9 females. Dorsal profile of the vaginal sclerite complex as well as the spermathecal process and the bursal sclerite are, as usual, very stable indicated by the narrow range of phenotypic variation.”

Potamophylax ureges Oláh, 2013

Potamophylax ureges Oláh, 2013 in OLÁH *et al.* (2013a: 189): “Holotype. Montenegro: Žabljak municipality, Sinjajevina Mts, Dobrilovina, forest stream at the monastery, N43°01.652', E19°24.086', 765 m, 25.05.2013, leg. P. Juhász, T. Kovács, G. Magos, G. Puskás, (1 male, OPC). Allotype same as paratype: (1 female, OPC). Paratypes. Same as holotype (4 males, 3 females; OPC; 1 male, 2 females, NMPC). Same but 14.VI.2012 leg. Z. Fehér, T. Kovács, D. Murányi (6 females, OPC).”

Diagnosis – OLÁH *et al.* (2013a: 189): “This beautiful species having dark striped forewing belongs to the *Potamophylax elegantulus* species subgroup. Close to *P. fules* sp. nov. but differs by having the ventral subapical double layered heel with mesal and lateral plates almost equal enclosing a concavity; the lateral plate is shorter at *P. fules*, pectinate patterned setae distributed only on the basal half of the paramere shaft, not along to subapical region.”

Etymology – “*Ureges* from “üreges” supplied with hollow in Hungarian, refers to the concavity enclosed by the double-layered heels.”

Potamophylax winneguthi species group

Potamophylax alsos Oláh, 2015

Potamophylax alsos Oláh, 2015 in OLÁH & KOVÁCS (2015: 117–120): “Holotype. Macedonia, Southwestern region, Jablanica Mts, 6.5 km W of Labuništa, open brook at Labuniško Lake, N41°16.069', E20°31.242', 1905 m, 10.10.2014, leg. P. Juhász, T. Kovács, G. Puskás (1 ♂, OPC). Allotype. Same as holotype (1 ♀, OPC). Paratypes. Same as holotype (7 ♂, 3 ♀, OPC, 2 ♂, 1 ♀, MM).”

Diagnosis – OLÁH & KOVÁCS (2015: 117–120): “The fourth member of the *Potamophylax tagas* species cluster. A sister or sibling species of *P. hajlos* but differs by having gonopod apical margin with backward produced lower corner, not downward directed outgrow; paramere tip with three spines; apicomeral excision on the aedeagus wide U-shaped, not narrow; lateral margin of the dorsal vaginal sclerite complex short with lateral hump, not long and convex.”

Etymology – “*Alsos*” from “alsó, alsós”, lower in Hungarian, refers to lower apical corner of the gonopods more produced compared to its dorsoapical corner. Here we follow to name this new species of the complex according to the lateral shape of the gonopod.”

Potamophylax haidukorum Malicky, 1999

Potamophylax haidukorum Malicky, 1999 in KUMANSKI & MALICKY, 1999: 28–29: “Surroundings of the Motel Hajdučka voda between Doboj and Banja Luka, 28. X. 1988, holotype and many paratypes. Vares near Sarajevo 2.XI.1988, 1 female.”

Potamophylax haidukorum Malicky, 1999: OLÁH & KOVÁCS (2012: 97–98): female description. “Bosnia & Herzegovina: Banja Luka region, Borja Planina, between Maslovare and Klupe, Hajduk spring, N44°35'29.2", E17°35'50.9", 790 m, 06.11.2012, leg. T. Kovács, G. Magos (1 ♀, OPC; 1 ♂, 1 ♀, MM). Banja Luka region, Kozara Mts, forest brook below the Vrbaška–Kozarac road, N45°02.480', E16°54.266', 560 m, 07.11.2012, leg. T. Kovács, G. Magos (1 ♀, OPC). Bosnien, Hajdučka voda, Zucht 1990, leg. Malicky (1 ♂, 1 ♀, OPC).

Notes – OLÁH & KOVÁCS (2015: 117–120): “There seems to be no clear feature for separating the females of *P. haidukorum* and *P. winneguthi* wrote Malicky (Malicky & Kumanski 1999). After a detailed examination of both the external and internal genital structure we have found significant differences to separate the females of these species. The fused regions of segment IX and X, the closed anal tube is subquadrangular on *P. winneguthi* and triangular on *P. haidukorum*

both in dorsal and ventral view; sternite IX, the setose lateral lobes differently shaped, longer than high on *P. winneguthi* and higher than long on *P. haidukorum*; vulvar scale, the lower vulvar lip very developed on *P. winneguthi* and less developed on *P. haidukorum*; the mesal lobe of the vulvar scale is present on *P. winneguthi* and almost vestigial on *P. haidukorum*; the internal genital structure, the vaginal or spermathecal sclerite complex clearly differently formed in the two species.”

Potamophylax hajlos Oláh, 2012

Potamophylax hajlos Oláh, 2012 in OLÁH & KOVÁCS (2012: 98–100): “Holotype: Albania: Tiranë district, Gropë Mts, Vakumonë, karst spring and brook along the road to Elbasan, N41°15.109', E20°05.805', 1195 m, 11.10.2012, leg. P. Juhász, T. Kovács, D. Murányi, G. Puskás (1♂, OPC). Allotype. Same as holotype (1♀, OPC). Paratypes. Same as holotype (1♂, OPC). Bulqizë district, Çermenikë Mts, open brook beneath Mt. Kaptinë, N41°23.212', E20°17.506', 1610 m, 10.10.2012, leg. P. Juhász, T. Kovács, D. Murányi, G. Puskás (3♂, OPC; 2♂, MM). Mat district, Gropë Mts, brook along the Klos-Elbasan road, N of Shtyllë Pass, N41°22.455', E20°05.073', 1505 m, 11.10.2012, leg. P. Juhász, T. Kovács, D. Murányi, G. Puskás (1♂, OPC).”

Diagnosis – OLÁH & KOVÁCS (2012: 98–100): “A member of the *Potamophylax winneguthi* new species group and of the *Potamophylax tagas* new species cluster. Most close to *P. kesken* sp. n. but differs by having gonopod apical margin with downward directed outgrow and paramere tip with two spines; apicomesal excision on the aedeagus narrow, not wide U-shaped.”

Etymology – “Hajlos from “hajló, hajlós” bending in Hungarian, refers to the downward directed ventroapical corner of the gonopods.”

Potamophylax juliani Kumanski, 1999

Potamophylax juliani Kumanski, 1999 in KUMANSKI & MALICKY (1999: 27): “Material studied: Ossogovo Mts. (W-Bulgaria), upper stream of the Mlacha river, with very small brooklets nearby (mixed coniferous and deciduous forest, 1600–1700 m a.s.l.), 10. 11. 1996, Holotype male (leg. Kumanski). The type specimen deposited (in alcohol, the abdomen separated and treated in KOH) in the collection of the National Museum of Natural History, Sofia.”

Potamophylax juliani KUMANSKI, 1999: OLÁH & KOVÁCS (2013: 118–119): “Here we describe the unknown female of this sexually dimorphic species. We have collected three females associated with two males from the same habitat. Females are brachypterous, smaller sized similarly to other species of the *Potamophylax winneguthi* species group.” “Bulgaria, Kyustendil province, Osogovska planina,

beech forest and open brook at Osogovo hut, 1625m, N42°11.791', E22°37.409', 23.10.2013, J. Kontschán, D. Murányi, T. Szederjesi, (1♂, HNHM). Kyustendil province, Osogovska planina, spruce forest, forest brook below Trite buki hut, 1520m, N42°10.463', E22°38.066', 23.10.2013, J. Kontschán, D. Murányi, T. Szederjesi, (2♂, 3♀, HNHM)."

Potamophylax kesken Oláh, 2012

Potamophylax kesken Oláh, 2012 in OLÁH & KOVÁCS (2012: 100–101): "Holotype: Albania: Dibër district, Korab Mts, open stream above Fushë Korabit, N41°49.215' E20°32.738', 1945 m, 07.10.2012, leg. P. Juhász, T. Kovács, D. Murányi, G. Puskás (1♂, OPC)."

Potamophylax kesken Oláh, 2012: OLÁH & KOVÁCS (2015: 122–124): "Albania, Dibër district, Korab Mts, 3.5 km SE of Radomirë, spring area of right tributary of Elbini Stream, N41°48'10.9", E20°31'27.4", 1830 m, 11.10.2014, P. Juhász, T. Kovács, G. Puskás (4♂, 8♀, OPC). Dibër district, Korab Mts, 4.5 km SE of Radomirë, open brook, N41°47'44.2", E20°31'51.7", 2050 m, 11.10.2014, P. Juhász, T. Kovács, G. Puskás (7♂, 6♀, OPC; 2♂, 2♀, MM)." "This species was described from a single male. In 2014 we have succeeded to collect 13 males and 16 females from a new spring area in the Korab Mts. Here we describe the unknown female. Like each member in the *Potamophylax winneguthi* species group the female has brachyptery."

Diagnosis – OLÁH & KOVÁCS (2012: 100–101): "A member of the *Potamophylax winneguthi* new species group and of the *Potamophylax tagas* new species cluster. Most close to *P. hajlos* sp. n. but differs by having gonopod apical margin without any downward outgrow and paramere tip with a single spines accompanied with three very short basal spines; apicomeral excision on the aedeagus very wide, U-shaped, not narrow."

Etymology – "Kesken from "keskeny" narrow in Hungarian, refers to the narrow gonopods in lateral view compared to the gonopod of *P. tagas*."

Potamophylax tagas Oláh et Kovács, 2012

Potamophylax tagas OLÁH & KOVÁCS, 2012: 101–102: "Holotype. Albania: Dibër district, Korab Mts, spring brooks of the bog beneath Mt. Korab, N41°47.913', E20°33.561', 2165 m, 07.10.2012, leg. P. Juhász, T. Kovács, D. Murányi, G. Puskás (1♂, OPC). Paratypes: same as holotype (2♂, OPC; 1♂, MM)."

Potamophylax tagas Oláh et Kovács, 2012: OLÁH & KOVÁCS (2015: 124–127): "Albania, Dibër district, Korab Mts, 5.5 km SE of Radomirë, spring and open brook, N41°47'20.0", E20°32'23.0", 2330 m, 11.10.2014, P. Juhász, T. Kovács,

G. Puskás (14♂, 22♀, 1 copula, OPC; 2♂, 2♀, MM).” “This species was described without female. In 2014 we have succeeded to collect 17 males and 24 females from new spring area in the Korab Mts. Here we describe the unknown female. Like each member in the *Potamophylax winneguthi* species group the female is brachypterious.”

Diagnosis – OLÁH & KOVÁCS (2012: 101–102): “A member of the *Potamophylax winneguthi* New Species Group. *Potamophylax tagas* sp. n. forms a new species cluster together with *P. kesken* sp. n. and *P. hajlos* sp. n. This cluster is characterized by apical margin of the gonopods without any significant projections; superanal genital complex of cerci and paraproct rather uniform; paramere forms stout, upward arching and slightly narrowing rod. The very tip of the rod armed with a few number of short and stout spines. *P. tagas* sp. n. differs from both by the very long and high gonopods, by the tip of aedeagus and parameres.”

Etymology – “Tagas from “tágas” spacious or wide in Hungarian, refers to the enlarged gonopods.”

Potamophylax winneguthi (Klapálek, 1902)

Stenophylax winneguthi Klapálek, 1902: 161–162: “Sarajevo 12/11 1899 (Winneguth) 2♂, Pale (Winneguth) 2♂”.

Potamophylax winneguthi (Klapálek, 1902): SCHMID (1955: 177): transferred and listed in genus *Potamophylax*.

Potamophylax winneguthi (Klapálek, 1902): OLÁH & KOVÁCS (2012: 102): “Serbia: Zlatibor Mts, Čigota Mts, spring area of Crni Rzav, N43°37'52.6”, E19°46'18.0”, 1150 m, 03.11.2011, leg. T. Kovács & G. Magos (2♂, 2♀, OPC) (Oláh 2011). Zlatibor Mts., Čigota Mts., spring area of Crni Rzav, N43°37'52.6”, E19°46'18.0”, 1150 m, 20.11.2011, leg. T. Kovács & Cs. Oberczán, (15♂, 7♀, OPC) (Oláh 2011).” “There seems to be no clear feature for separating the females of *P. haidukorum* and *P. winneguthi* wrote Malicky (Malicky & Kumanski 1999). Differences in both the external and internal genital structure have been found and compared. See at *P. haidukorum*.”

Rhadicoleptus Wallengren, 1891

Rhadicoleptus macedonicus Botoșăneanu et Riedel, 1965

Rhadicoleptus alpestris macedonicus BOTOȘĂNEANU et RIEDEL, 1965: 550–551: “9. Macédoine, Yougoslave, Sar Planina près de Crno Jezero, 9.VIII.1954, leg. M. Marincovic; 10. Bulgarie, Pirin Planina, 28.VII.1962, leg. B. Russev. Le holotype ♀ de la nouvelle ssp. est choisi parmi les exemplaires du point 9 de notre liste de stations; il est conservé dans la coll. L. Botoșăneanu; le ♂ figuré provient de la station 10, et il est raisonnable de l'attribuer à cette race.”

Rhadicoleptus macedonicus Botosaneanu et Riedel, 1965: OLÁH *et al.* (2015b: 63): Elevated to species rank. “Albania: Erseke county, Grammos Mts, mountaine pasture on the slope of Mt Varibob, 2.1 km NW of Mt Oukapeci, 2249 m, N40.366220° E20.770510° 19.VII.2006, leg. Z. Barina, T. Pifkó & D. Pifkó (4 males, 3 females, HNHM). Librazhd county, Jablanica Mts, Quarishte, brook 6.1km E of the village, 1899 m, N41.24569° E20.51238° 4.VII.2008, leg. Z. Barina, T. Pifkó & D. Pifkó (3 males, HNHM). Bulqizë district, Çermenikë Mts, brooks in open forest beneath Mt. Kaptinë, N41°23.199’ E20°17.338’, 1600 m, 21.06.2012, leg. Z. Fehér, T. Kovács, D. Murányi (3 males, 3 females; OPC). Bulgaria: Rila Mts, Jazovir Belmeken, springbrook, N42°10’22.7”, E23°48’04.4”, 1332m, 23. VI. 2011, P. Juhász, T. Kovács, & L. Urbán, (6 males, 1 female, OPC). Macedonia: Korab Mts., Malá Korab Vrata, 20.VII.1930 leg. Komarek (3 males, NMPC; 2 males, OPC).”

Diagnosis – OLÁH *et al.* (2015b: 63): “The subspecies was established only by female character having supragenital plate very short similar to *R. spinifer*, but paramere and gonopod apical tip is different. The lateral profile of parameres is characterized by low (shallow) curvature, by narrowing gradually apicad without subbasal constriction and subapical dilatation. This profile is very stable in the examined populations of Bulgaria, Macedonia and Albania. Ventral profile of the gonopod apical tip is without highly varying pattern of small lobes, a single blunt but varying lobe is present usually mesad. Female supragenital plate very short triangular, but as rounded as the supragenital plate of *R. spinifer*.”

Rhadicoleptus meridiocarpaticus Botoșăneanu et Riedel, 1965

Rhadicoleptus alpestris meridiocarpaticus BOTOȘĂNEANU et RIEDEL, 1965: 549–550: distinguishable only by female. “Nous avons néanmoins considéré nécessaire de séparer les populations de Bihar et de Banat de celles des Carpates septentrionales, c’est que le gonopode des ♂♂ de Banat et de Bihar n’est jamais type si caractéristique pour *R. a. sylvanocarpaticus* ssp. Locus Typicus: sources réocrene à Stina de Vale, Mts. de Bihar ou Apuseni, Roumanie, juin 1956. Holotype dans la coll. L. Botoșăneanu.”

Rhadicoleptus meridiocarpaticus Botoșăneanu et Riedel, 1965: OLÁH *et al.* (2015b: 63): elevated to species rank. “Romania, Apuseni Mts. Vartop, spring streams, N46°31.045’ E22°39.821’, 1209m, 29.V.2013, singled leg. J. Oláh, E. Bajka, Cs. Balogh, & G. Borics (1 female, OPC). Apuseni Mts. Vartop, spring stream (Flescula), N46° 31’07,23” E22° 39’41,69” 1209 m, 14.V.2014, leg. Cs. Balogh & B.V. Béres (1 male, OPC).”

Diagnosis – OLÁH *et al.* (2015b: 63): “The lateral profile of parameres is characterized by high (deep) curvature, even, uniform shape without narrowing,

constriction and dilatation. Ventral profile of the gonopod apical tip is slightly dilated with subtle tiny irregular pattern. Female supragenital plate is long triangular, but more robust than at *R. alpestris*.”

Rhadicoleptus sylvanocarpaticus Botoșăneanu et Riedel, 1965

Rhadicoleptus alpestris sylvanocarpaticus BOTOȘĂNEANU et RIEDEL, 1965: 547–549: distinguishable by both sexes. “3. Region sous-carpatique d’Ukraine, plusieurs localités: Yanov (Janow), voisinage Lvov, Ivano-Frankovsk (Stanislawow), Mlodiatin (Mlodzyatyn) entre Delatin et Kolomyia, (diverses dates entre 1902–1906), leg. J. Dziędziewicz. 5. Beskides Orientales, affluents de la Wetlinka, bassin du San, 22.V.1962, leg. W. Riedel; 6. Maramouresch (diverses localités dans les Mts. de Gutin, 20.V. et 23.VI.1964, leg. L. Botoșăneanu. La ssp. *sylvanocarpaticus* ssp. n. décrite d’après les spécimens des points 3,5 et 6 de notre liste de stations. Locus Typicus: complexe de sources à Tau la Gutii, Mts. de Gutin, Maramouresch, Roumanie, 23.VI.1964. Holotype dans la coll. L. Botoșăneanu.”

Rhadicoleptus sylvanocarpaticus Botoșăneanu et Riedel, 1965: OLÁH *et al.* (2015b: 65): elevated to species rank. “Romania, Muntii Lapusului (Lápos), Valeni (Mikolapatak), peat bog, its inflow and outflow brooks in a beech forest, N47°42’43.2” E24°01’48.7”, 987m, 23.V.2006 leg. L. Dányi, M. Földvári, J. Kontschán & D. Murányi (1 male NHMB). Ukraine, Zakarpattia province, Mizhhirya raion, Kolochava (Alsókalocsa), right sidebrook of Tereblja River by the village, N48°25.41’ E23°41.56’, 565m, 16.05.2002, leg. D. Murányi (2 males, 4 females, HNHM). Tiachiv raion, Krasna Mts, beech forest edge in the upper valley of Luzanka River, N48°22.564’ E23°45.081’, 1295 m, 19.05.2002, leg. D. Murányi (1 female, HNHM).”

Diagnosis – OLÁH *et al.* (2015b: 65): “Paramere is very robust: The lateral profile of parameres is characterized by very short (very shallow) curvature, by uniform, even shape without narrowing, and constriction, but with some apical dilatation. Ventral profile of the gonopod apical tip is with a single blunt narrowing. Female supragenital plate is very long triangular, the dorsal profile of the vaginal sclerite complex with slight middle constriction.”

BRACHYCENTRIDAE

Micrasema McLachlan, 1876

Micrasema sericeum Klapálek, 1902

Micrasema sericeum Klapálek, 1902: 164–165: “Pazaric, Krupthall 3 ♂ (Winneguth), Stolac (Winneguth) 2♀.”

HELICOPSYCHIDAE

Helicopsyche Siebold, 1856*Helicopsyche bacescui* Orghidan et Botoșăneanu, 1953

Helicopsyche bacescui ORGHIDAN et BOTOȘĂNEANU, 1953: 425–431: “Greaca (Reg. București, Oltenița) în izvoare reocrene ce ies din malul nordic al bălții, în apropiere de punctul pescăresc. Comana (Reg. București, Oltenița) în “izvorul cu nuc”. Comuna Prahova (Reg. București). Nenumărate larve și nimfe, precum și 4 ♂♂ și 1 ♀ (toți adulții au fost găsiți la Greaca de către M. Băcescu)”.

BERAEIDAE

Beraea Stephens, 1833*Beraea gurba* Oláh, 2014

Beraea gurba Oláh, 2014 in OLÁH & KOVÁCS (2014: 127–129): “Holotype. Albania, Pukë District, rocky stream above Blinisht, 1010m, N42.08290 E19.96340, 13.05.2014 leg. Z. Barina, D. Pifkó & G. Puskás (1♂, OPC). Allotype. Same as holotype (1♀, OPC). Paratypes. Same as holotype (6♂, 1♀, OPC).”

Diagnosis – OLÁH & KOVÁCS (2014: 127–129): “Similar to *Beraea zawadil* Malicky described from Greece, but differs by the shorter segment IX, by the differently shaped gonopods and by the highly bent and four tipped phallic organ.”

Etymology – “*Gurba*, from “girbe-gurba”, menadering in Hungarian, refers to the mesomarginal profile of gonopod ventral branch as visible in ventral view.”

Beraeamyia Mosely, 1930*Beraeamyia schmidi* Botoșăneanu, 1960

Beraeamyia schmidi BOTOȘĂNEANU, 1960a: 282–286: “Un ♂ et 1♀ de Trnovo 23.VII.1955, désignés comme holotype and allotype (F. Schmid).”

Ernodes Wallengren, 1891*Ernodes skipetarum* Malicky, 1986

Ernodes skipetarum MALICKY, 1986: 6: “Holotypus ♂ und 2 ♀ Paratypen: Jugoslawien: Kosovo, östlich des Cakor-Passes, 1500 m, 19.VII.1985. – In meiner Sammlung”.

SERICOSTOMATIDAE

Notidobia Stephens, 1829*Notidobia bizensis* Malicky, 1993

Notidobia bizensis MALICKY, 1993: 472–473: “Holotypus ♂: Albanien, Bize bei Shengjergji, 1400–1500 m, 10–15.VII.1961. Paratypus ♂: (chem. Jugoslawisch) Makedonien, Galicica-Vojetina, 4.VIII.1930, leg. Komarek, coll. Národní Muzeum, Prag.”

Notidobia melanoptera Stein, 1863

Notidobia melanoptera STEIN, 1863: 415: “Nur diese eine griechische Sericostomide in der K. Sammlung wurde von Dr Krüper eingesandt. In Dalmatien fand ich an einer für diese Thiere ungünstigen Localität während etwas zu später Jahreszeit 9 Phryganeiden-Arten, darunter das interessante *Sericostoma collare* Burm. in Mehrzahl in beiden Geschlechtern.”

Notidobia nekibe Klapálek, 1903

Notidobia nekibe Klapálek, 1903a: 3–4, 1903b: 4–5: “1 ♂ Janina (Apfelbeck).”

Notidobia nogradorum Oláh, 2010

Notidobia nogradorum OLÁH, 2010: 114–115: “Holotype, male, HNHM. Albania: Korcë district, Zvirine, Trifti spring N of the village, 835 m, N40°47.644', E20°44.128', 24.V.2007, leg. Z. Barina, Cs. Németh, D. Pifkó.”

Diagnosis – OLÁH (2010: 114–115): “This new species belongs to the homogeneous group of species: *Notidobia melanoptera* Stein, 1863 (Greece), *N. nekibe* Klapálek, 1903 (Greece), *N. sagarrai* Navas, 1917 (Sardinia), *N. bizensis* Malicky and Sipahiler, 1993 (Albania) and *N. salihli* Malicky et Sipahiler, 1993 (Turkey). It is closest to *N. bizensis*, but differs by having (1) more robust and curve-shaped groove pattern on the IXth dorsum, not slender and straight; (2) the heavily sclerotized pair of paraproctal processes with extremely enlarged dorsal and down-curving hook-formation, not with small hook; (3) the two spine-shaped processes on the basomesal surface of the gonopod with separated individual bases, not with long joint basal plate.”

Etymology – “This species was dedicated to Sára Nógrádi and her husband Ákos Uherkovich, who have made the Hungarian caddisflies one of the best studied national fauna of the planet.”

ODONTOCERIDAE

Odontocerum Leach, 1815

Odontocerum hellenicum Malicky, 1972

Odontocerum hellenicum MALICKY, 1972: 41: “Holotypus ♂: Griechenland, Pertuli (Trikalon), Pindos 1250 m, 1.6.68, leg. Roesler, in coll. Museum Alexander König, Bonn, Paratypoide: 4 ♂♂ mit den selben Daten, i davon in meiner Sammlung, die anderen im Museum Bonn.”

LEPTOCERIDAE

Adicella McLachlan, 1877

Adicella altandroconia Botosaneanu et Novák, 1965

Adicella altandroconia BOTOSANEANU et NOVÁK, 1965: 475–477: “Jusqu’à present, *A. altandroconia* est connue des stations suivantes: a. Carpates du Banat de Roumanie (source dans le Massif de Domogled, près Herkulesbad, leg. L. Botosaneanu, 1.VII.1956, 1♂ paratype et 13.VII.1964 3♀ paratypes, en alcool); b. Bulgarie (source dans la vallée du Isker près Svoger, leg. K. Novák, 1.VII.1962. Holotype ♂, Allotype ♀ et 16 ♂ paratypes, en alcool).”

Adicella balcanica Botosaneanu et Novák, 1965

Adicella balcanica BOTOSANEANU et NOVÁK, 1965: 472–476: “*Adicella balcanica* sp. n. est actuellement connue de: A. Bosnie (Ilidze, ruisseau Rakitnica, leg F. Klapálek, juillet-aôut 1897), 2♂ 3♀ (collection: Musée National, Section entomologique, Prague). B. Macédoine Yougoslave (Capari, ruisseau moussu, leg. F. Schmid, 11.VIII.1955). Holotype ♂ et allotype ♀ (Coll. F. Schmid, 1 paratype ♂ (Coll. L. Botosaneanu). Les 3 exemplaires conservés à sec, ailes déployées, les génitalia en préparations microscopiques. C. Bulgarie (Rhodopes Centrales, petit ruisseau à Smoljan, leg. K. Novák, 7.VII.1962: 3 paratypes ♂, 1 paratype ♀, tous dans coll. K. Novák, à l’exception d’un ♂ dans coll. L. Botosaneanu; Stara Planina, petit ruisseau près de la rivière Zaselja à Bov, leg. K. Novák, 1.VII.1962, coll. K. Novák, 1 ♀). Le materiel est conservé en alcool.”

Setodes Rambur, 1872

Setodes bulgaricus Kumanski, 1976

Setodes viridis bulgaricus Kumanski, 1976 in KUMANSKI & MALICKY (1976: 120–123): “Holotypus ♂, Allotypus ♀ und Paratypen 3♂, 1♀: Strandscha-Gebirge, Fluss Weleka bei der Ortschaft Kowatch, 20.VII.1973, leg. A. Sliwow. 1♂ und 1♀ in coll. Malicky, die anderen in coll. Kumanski. Weitere paratypen in coll. Kumansky: Fluss Weleka bei der Ortschaft Katschul, 13.VII.1974, 3♂; Sakar-Berge bei Topolowgrad, 11.VII.1974, 1♂, beide leg. S. Zagortschinow.” Elevated to species rank by SCHMID (1987: 48, 135).

*

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