

## New species and records of Balkan Trichoptera

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**ABSTRACT:** From various habitats of the Balkan 38 new species records are presented and 4 new species are described in this paper: *Drusus juliae* sp. n., *Drusus kerek* sp. n., *Drusus lepcos* sp. n., *Chaetopteryx uherkovich* sp. n.

### Introduction

Recent collections carried out by members of the Hungarian Natural History Museum and the Mátra Museum in the course of Balkan Biodiversity Research Project have produced four new Trichoptera species described below and several new records of those species which were not collected at all, or were only very rarely collected after its description.

### Material and methods

This study is based on animals preserved in 70-80% alcohol. In order to observe morphological details in the genitalia, the entire abdomen was removed and placed in a small glass beaker of 25 cm<sup>3</sup> with 10% KOH solution and boiled during 5-15 minutes for digestion. The duration of the treatment is adjusted individually to the effectiveness of clearing process which depends on the species or even on the nutritive state of tissues or on the physiological condition of the specimens. The process of digestion can be easily followed by transparency. The dissolution rate of the soft tissues, the clearing transparency is clearly visible to naked eye. The digested abdomen was subsequently transferred to distilled water and the macerated tissue was removed mechanically by fine tipped forceps and needles. The cleared abdomen was transferred to 80% ethyl alcohol, and to glycerine for examination under microscope. Different sized pins modified to supporting ring bottom was introduced into the abdomen and used to hold and stabilise the genitalia in lateral, dorsal and ventral position for drawing. However, the plane of view is never perfect and we made no special procedures of grid, matrix or reflection to produce absolute mirror symmetry of the drawings. Instead, the genital structures are drawn exactly as seen in the microscope. However setae are represented only by their alveoli and moreover their density is only symbolic. If essential the setal length or setal shape are presented by drawing a single or a few setae only. The genital structure was traced by pencil on white paper using a drawing tube mounted on a WILD M3Z microscope at between 260x and 416x magnification. Final illustrations were prepared by enlarging the original pencil drawings and re-drawn on transparent paper by Black India Ink. The inked illustrations were scanned on an Epson Expression 1680 Pro scanner in grayscale and 800 dpi resolution. The plates were arranged, and brightness and contrast edited in Adobe® Photoshop© 8.0 on a Macintosh G5.

We used our functional appendicular terminology and not the conventional anatomical directional terminology to describe the genital structures in species description (OLÁH & JOHANSON 2008). Species descriptions were standardized to ensure consistently formatted and comparable description in general accord with Evenhus's template principle (2007). We have standardised also the terminology to describe space extensions of variously formed structural elements. The following terms were used to qualify the dimensions and extensions of genital structural elements: (1) *short* or *long* for length dimension on the longitudinal direction of coronal plane along the anteroposterior axis; (2) *low* or *high* (traditionally *shallow* or *deep* especially for excisions) for height dimension on the vertical direction of the sagittal plane along the dorsoventral axis and (3) *narrow* or *wide* (broad) on the lateral direction of the transversal plane along the mediolateral or left-right axis. The three dimensional Cartesian coordinate system provides theoretical possibility to quantify by measurements the three physical dimensions of length, width, and

height of each structural element. However this quantification is used very seldom in species description. Here we quantify only the length of forewing.

Depositories: HNHM = Hungarian Natural History Museum, Budapest, Hungary, OPC = OLÁH Private Collection presently under National Protection of the Hungarian Natural History Museum, Hungary.

## Taxonomic part

### PSYCHOMYIDAE Walker, 1852

*Tinodes rostocki* McLachlan, 1878 – **Albania**: Prokletije Mts, tall herb community of the creek in village Sylbice, N42°30.748', E20°07.551', 1670 m, 8.07.2011, leg. Z. Barina, A. Kovács, G. Puskás, B. Sárospataki (2 males, HNHM).

*Tinodes unidentatus* Klapálek, 1894 – **Bulgaria**: Rila Mts, Sestrimo-Jazovir Belmeken, Kriva Reka, N42°12'08.3", E23°51'20.0", 1233 m, 23.06.2011, P. Juhász, T. Kovács, L. Urbán (1 male, OPC).

*Tinodes urdhva* Oláh, 2010 – **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). Prokletije Mts, tall herb community of the creek in village Sylbice, N42°30.748', E20°07.551', 1670 m, 8.07.2011, leg. Z. Barina, A. Kovács, G. Puskás, B. Sárospataki (1 male, 1 possible associated female, HNHM).

### RHYACOPHILIDAE Stephens, 1836

*Rhyacophila armeniaca* Guerin-Ménéville, 1843 – **Bulgaria**: Rila Mts, Rila Mts, Rilski Manastir, Complex Zodiac, N42°08'32.0", E23°21'27.3", 1213 m, 23.06.2011, UV light, P. Juhász, T. Kovács, L. Urbán (1 male, 1 female, OPC).

*Rhyacophila balcanica* Radovanovic, 1953 – **Montenegro**: Moraca's Mts, Mrtvo Duboko, Canyon of river Mrtvica, Mrtvica, N42°43'47.2", E19°20'22.9", 259 m, 7.05.2003, P. Juhász, T. Kovács, V. Pešić, P. Sevola (1 male, OPC).

*Rhyacophila obtusa* Klapálek, 1894 – **Bulgaria**: Rila Mts, Jazovir Belmeken-Jundola, Chakaritsa, Chakarski Dol, N42°07'41.3", E23°47'33.5", 1880 m, 23.06.2011, P. Juhász, T. Kovács, L. Urbán (1 male, 2 females, OPC).

*Rhyacophila trescavicensis* Botosaneanu, 1960 – **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 (7 males, 8 females, HNHM). **Montenegro**: Sinjajevina Mts, Bogomolje, mouth of Ljutica, N43°08'16.6", E19°18'07.7", 645 m, 5.11.2011, leg. T. Kovács, G. Magos (1 male, OPC).

### HYDROPSYCHIDAE Curtis, 1835

*Hydropsyche botosaneanui* Marinkovic, 1966 – **Greece**: Central Greece, Phthiotis periferal unit, Agios Georgios, Sperchios River W of the village, N38°57.009', E21°56.712', 363 m, 8.05.2011, leg. J. Kontschán, D. Murányi, T. Szederjesi, Zs. Ujvári (1 male, HNHM).

*Hydropsyche instabilis* (Curtis, 1834) – **Bulgaria**: Trigrad, 3.08.2010, light, leg. Z. Varga (3 males, OPC).

*Hydropsyche peristerica* Botosaneanu & Marinkovic, 1966 – **Albania**: Prokletije Mts, creek and flush in village Sylbice, N42°30.828', E20°07.204', 1710 m, 8.07.2011, leg. Z. Barina, A. Kovács, G. Puskás, B. Sárospataki (1 male, HNHM). Prokletije Mts, above village Doberdol, rocky creek below tarn Liqeni i Dashit, N42°32.423', E20°04.378', 1970 m, 9.07.2011, leg. Z. Barina, A. Kovács, G. Puskás, B. Sárospataki (1 male, HNHM).

### PHRYGANEIDAE Leach, 1815

*Oligotricha striata* (Linnaeus, 1758) – **Albania**: Prokletije Mts, above village Doberdol, flush around a smaller tarn below tarn Liqeni i Dashit, N42°32.008', E20°04.653', 2080 m, 9.07.2011, leg. Z. Barina, A. Kovács, G. Puskás, B. Sárospataki (9 males, 2 females, HNHM).

*Silo piceus* (Brauer, 1857) – **Bulgaria:** Trigrad, 3.08.2010, light, leg. Z. Varga (1 male, OPC).

LIMNAPHILIDAE Kolenati, 1848

Drusinae Banks, 1916

*Drusus botosaneanui* Kumanski, 1968 – **Bulgaria:** Vitosha Mts, Kladnitsa, Sv. Nikola, Tanchovitsa, N42°34'02.9", E23°11'41.4", 1100 m, 03.10.2011, UV light, leg. Á. Ecsedi, T. Kovács & G. Puskás (3 males, OPC).

*Drusus discophorus pallidus* Kumanski, 1989 – **Bulgaria:** Vitosha Mts, Kladnitsa, Sv. Nikola, Tanchovitsa, N42°34'02.9", E23°11'41.4", 1100 m, 03.10.2011, UV light, leg. Á. Ecsedi, T. Kovács & G. Puskás (1 male, OPC).

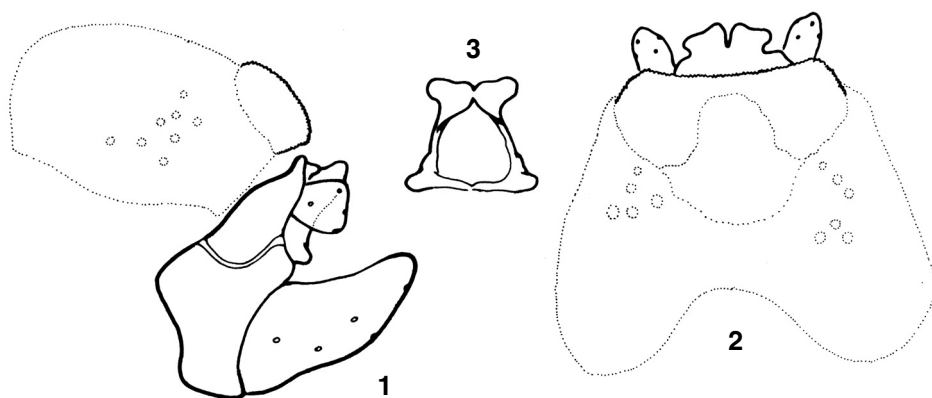
*Drusus krusniki* Malicky, 1981 – **Montenegro:** Prokletije Mts, Gusinje, Alipašini Izvori, N42°33'01.2", E19°49'30.5", 930 m, 8.11.2011, leg. T. Kovács, G. Magos (2 males, 2 females, OPC).

*Drusus juliae* sp. n. (Figs 1–6)

*Diagnosis* – This castanean brown species belongs to the species complex with large upward arching triangular gonopods inhabiting the Balkan Mountains. Most close to *Drusus radovanovici* Marinkovic-Gospodnetic, 1971, but differs by having sternal lateral suture of the fused segment IX curving, not straight; cerci subquadratic, not subtriangular in lateral view; inner branch of paraproct with rounded lateral lobes, not with triangular in dorsal view.

*Description* – Male (in alcohol). Dark castanean; cephalic and thoracic sclerites dark, almost black especially on the dorsum; cephalic and thoracic setose warts brown; appendages including legs except coxa and proximal portion of femur lighter brown, haustellum and intersegmental membranous teguments whitish. Spurs of male 1.3.3. Forewing length 11 mm.

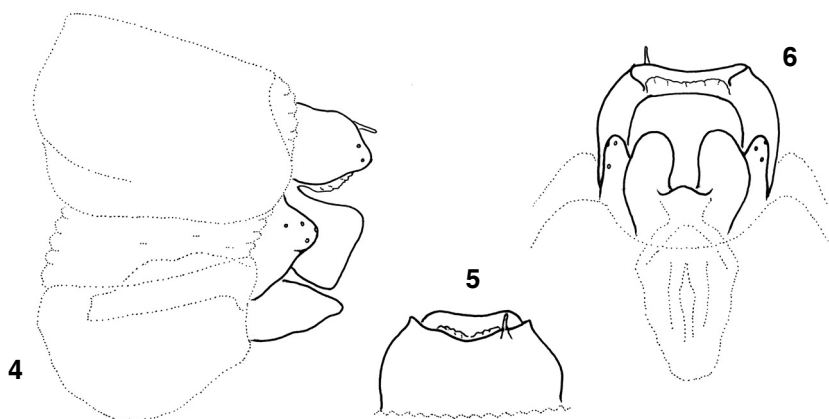
Male genitalia (Figs 1–3). Posterodorsal black spinate area on tergite VIII slightly extended posteriorly, two-patched and armed with specialized peg-like setae; less pigmented oval area discernible between the patches and encircled anteriorly by the darker basic colour of the tergite. Segment IX long ventrally, very short bridle-like dorsally; its lateral length elongated



**Figs 1–3.** *Drusus juliae* sp. n. holotype male: 1 = genitalia without phallic organ and with dotted contour of tergite VIII with spinate lobes in left lateral view; 2 = dotted contour of tergite VIII with spinate lobes, tergite IX, cerci, paraproct in dorsal view; 3 = paraproct in caudal view

by rounded triangular lobe anteriorly; midlateral sclerotized strips of sternite IX not pronounced; vestige of sternal lateral suture of the fused segment IX well developed and deeply downward curving middle. Segment X fused to tergite IX forming together the short dorsal bridle. Cerci are quadrangular in lateral view. Paraproctal complex forming a closed structure around the anal opening by the inner and outer branches; the upward directed obtuse dorsal apices of the inner branches short and diverting laterad into rounded lobes both in dorsal and caudal view; outer branches of the paraproct spread laterad with straight bottom. Gonopods are upward arching broad triangular large lobe like in many other species populating various areas in the Balkan Mountains. Aedeagus and parameres are slender.

Female genitalia (Figs 4–6). Segment IX short tube open ventrally and embedded inside by membranous segment X encircling anus. Lateral setose lobe, the sternite of segment IX triangular. Supragenital plate of segment X well-developed and quadrangular both in lateral and dorsal view. Median lobe of the vulvar scale (lower vaginal lip) vestigial, reduced to a small rounded hump in ventral view. Vaginal chamber medium sized reaching almost to the anterior margin of sternite VIII. Vaginal sclerite pattern clearly visible.



**Figs 4–6.** *Drusus juliae* sp. n. female:

4 = genitalia in left lateral view; 5 = genitalia in dorsal view, 6 = genitalia in ventral view

*Material examined* – 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)

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

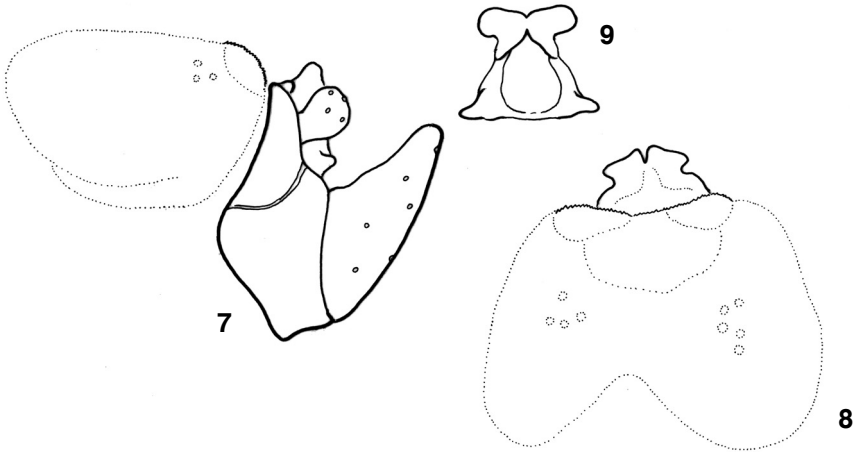
***Drusus kerek* sp. n.** (Figs 7–12)

*Diagnosis* – This dark brown 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 segment IX 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; supragenital plate not regular quadrangular in lateral view; median lobe of the vulvar scale (lower vaginal lip) entirely lacking; lateral lobes of the vulvar scale differently shaped.

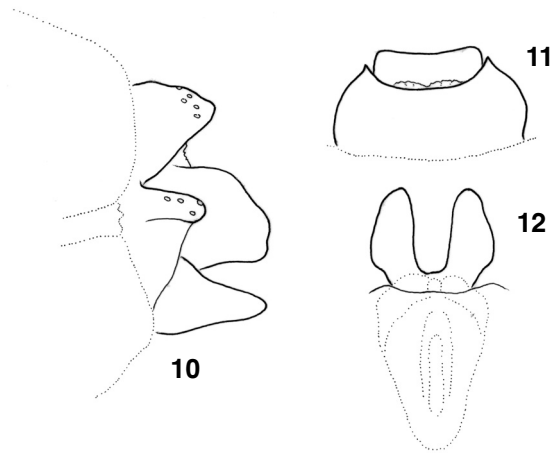
*Description* – Male (in alcohol). Dark castanean; cephalic and thoracic sclerites dark, almost black especially on the dorsum; cephalic and thoracic setose warts brown; appendages including legs except coxa and proximal portion of femur lighter brown, haustellum and inter-segmental membranous teguments whitish. Spurs of male 1.3.3. Forewing length 11 mm.

Male genitalia (Figs 7–9). Posterodorsal black spinate area on tergite VIII short, two-patched and armed with specialized peg-like setae; less pigmented depressed oval area discernible between the patches and encircled anteriorly by the darker basic colour of the tergite. Segment IX long ventrally, very short bridle-like dorsally; its lateral length elongated by rounded triangular lobe anteriorly; midlateral sclerotized strips of sternite IX not pronounced; vestige of sternal lateral suture of the fused segment IX well developed and upward curving. Segment X fused to tergite IX forming together the short dorsal bridle. Cerci are almost regular circular in lateral view. Paraproctal complex forming a closed structure around the anal opening by the inner and outer branches; the upward directed obtuse dorsal apices of the inner branches robust short and diverting laterad into rounded lobes both in dorsal and caudal view; outer branches of the paraproct spread laterad with straight bottom and triangular lateral lobes. Gonopods are upward arching broad triangular large lobe with tapering apex. Aedeagus and parameres are slender.



**Figs 7–9.** *Drusus kerek* sp. n. holotype male: 7 = genitalia without phallic organ and with dotted contour of tergite VIII with spinate lobes in left lateral view; 8 = dotted contour of tergite VIII with spinate lobes, tergite IX, cerci, paraproct in dorsal view; 9 = paraproct in caudal view

Female genitalia (Figs 10–12). Segment IX short tube, triangular in lateral view, open ventrally and embedded inside by membranous segment X encircling anus. Lateral setose lobe, the sternite of segment IX elongated. Supragenital plate of segment X well-developed irregular, not quadrangular in lateral view. Median lobe of the vulvar scale (lower vaginal lip)



**Figs 10–12.** *Drusus kerek* sp. n. female: 10 = genitalia in left lateral view; 11 = genitalia in dorsal view, 12 = vulvar scale in ventral view

entirely lacking in ventral view. Vaginal chamber medium sized reaching almost to the anterior margin of sternite VIII. Vaginal sclerite pattern clearly visible.

*Material examined* – 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°08.0541, 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).

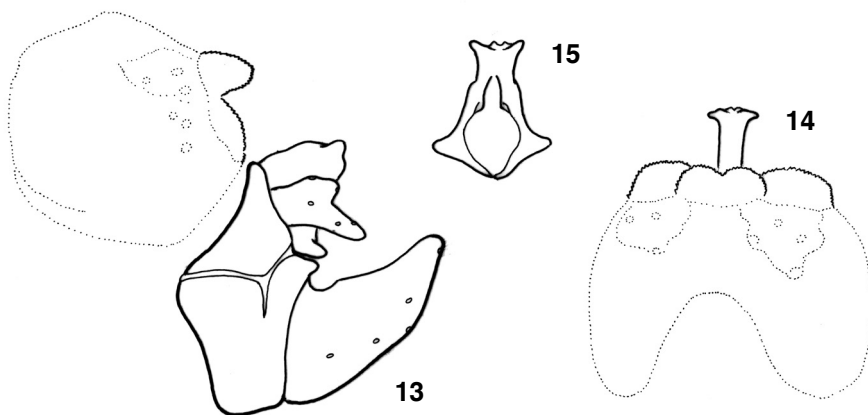
*Etymology* – *kerek*, from “kerek” round in Hungarian, refers to the rounded cerci.

### ***Drusus lepcos* sp. n. (Figs 13–18)**

*Diagnosis* – 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, 2010 and *D. illyricus* Oláh, 2010, 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.

*Description* – Male (in alcohol). Dark brown; cephalic and thoracic sclerites dark, especially on the dorsum; cephalic and thoracic setose warts brown; appendages including legs except coxa and proximal portion of femur lighter, haustellum and intersegmental membranous teguments whitish. Spurs of male 1.3.3. Forewing length 11 mm.

Male genitalia (Figs 13–15). Posterodorsal black spinate area on tergite VIII armed with specialized peg-like setae trilobed in dorsal and stepwise in lateral view; mesal lobe slightly incised; less pigmented oval area discernible behind the lateral lobes. Segment IX long ventrally, very short bridle-like dorsally; its lateral length elongated by rounded triangular lobe anteriorly; midlateral sclerotized strips of sternite IX pronounced; vestige of sternal lateral suture of the fused segment IX Y-shaped. Segment X fused to tergite IX forming together the short dorsal bridle. Cerci bilobed in lateral view. Paraproctal complex forming a closed structure around the anal opening by the inner and outer branches; the upward directed obtuse dorsal apices of the inner branches short and diverting laterad into short lobes in caudal view and stepwise in lateral view; outer branches of the paraproct spread laterad with triangular bottom. Gonopods are upward arching broad triangular large lobe. Aedeagus and parameres are slender.

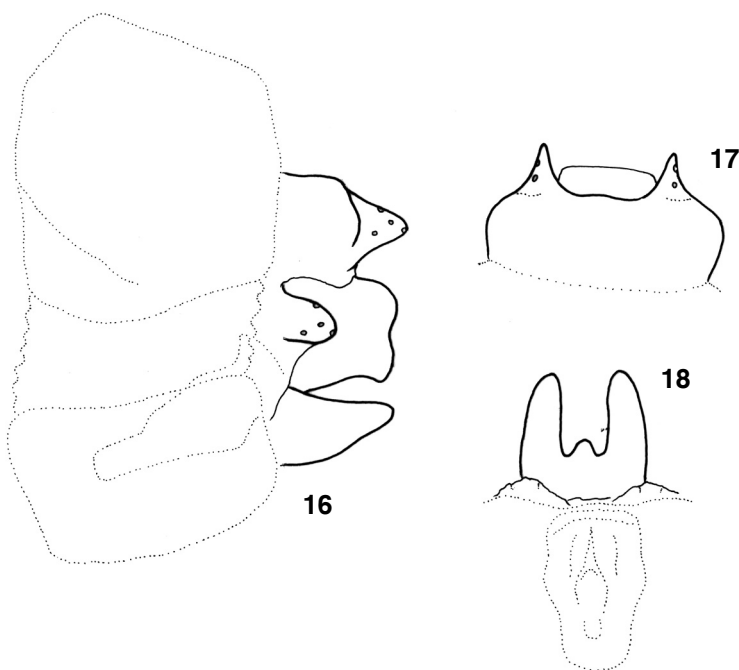


**Figs 13–15.** *Drusus lepcos* sp. n. holotype male: 13 = genitalia without phallic organ and with dotted contour of tergite VIII with spinate lobes in left lateral view; 14 = dotted contour of tergite VIII with spinate lobes, tergite IX, cerci, paraproct in dorsal view; 15 = paraproct in caudal view

Female genitalia (Figs 16–18). Tergite of segment IX forming short tube, open ventrally, roundly excised dorsally; its apical lateral lobes setose, pointed in dorsal view; the lateral setose lobe of sternite IX triangular and continuing into setaless less pigmented downward section. Segment X embedded inside by membranous segment X encircling anus; supragenital plate of segment X well-developed and quadrangular both in lateral and dorsal view; slightly incised middle in lateral view. Median lobe of the vulvar scale (lower vaginal lip) present and small, in ventral view. Vaginal chamber medium sized reaching 2 thirds of sternite VIII. Vaginal sclerite pattern clearly visible.

*Material examined* – 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)

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



**Figs 16–18.** *Drusus lepcos* sp. n. female: 16 = genitalia in left lateral view; 17 = genitalia in dorsal view, 18 = vulvar scale in ventral view

#### **Limnephilinae Kolenati, 1848**

*Allogamus auricollis* (Pictet, 1834) – **Montenegro:** Prokletije Mts, Gusinje, Alipašini Izvori, N42°33'01.2", E19°49'30.5", 930 m, 8.11.2011, leg. T. Kovács, G. Magos (1 male, 7 females, OPC).

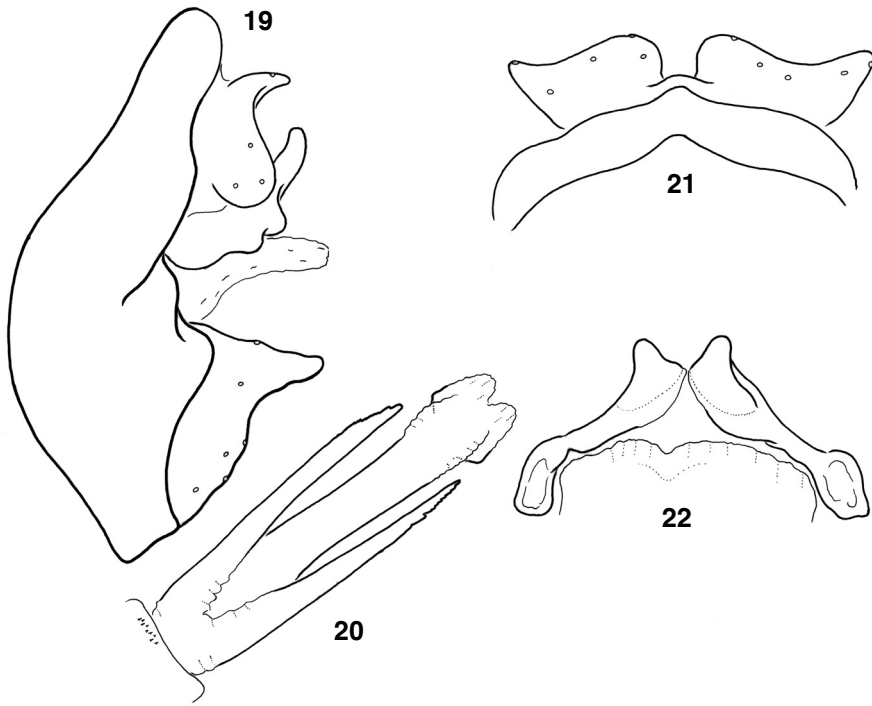
*Allogamus uncatatus* (Brauer, 1857) – **Bulgaria:** Rila Mts, Borovets, Zavrachitsa hut, Prava Maritsa, N42°10'04.9", E23°38'28.1", 2200 m, 05.10.2011, leg. Á. Ecsedi, T. Kovács, G. Puskás (2 males, 14 females, OPC). **Montenegro:** Sinjajevina Mts, Gornji Štitarica, right side sprigs of Štitarička reka, N425514.9, E192959.4, 1040 m, 4.11.2011, T. Kovács, G. Magos (2 males, 2 females, OPC).

#### ***Chaetopteryx uherkovichi* sp. n. (Figs 19–22)**

*Diagnosis* – This new species belongs to the *Chaetopteryx major* species group and is a close relative of the *Chaetopteryx major* McLachlan, 1876. 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.

*Description* – Male (in alcohol). Yellowish medium-sized animal with light body appendages and with yellowish-testaceous wings. Anterior wing with rounded apex and with very long erect spine-like setae present both on the membrane and on the veins; setae on the veins usually stronger. Tibial spur number is 133. Forewing length 14 mm.





**Figs 19–22.** *Chaetopteryx uherkovichi* sp. n. holotype male:  
 19 = genitalia without phallic organ in left lateral view; 20 = phallic organ in dorsal view;  
 21 = cerci in dorsal view; 22 = paraproct in caudal view

Male genitalia (Figs 19–22). Posterodorsal spinate area of vestitural noncellular microtrichiae on segment VIII vestigial. Segment IX with equal length both ventrad and dorsad; its lateral length elongated by rounded convexity anteriad, enforced with well developed antecosta; on the lateral shoulder posterad in the midlateral concavity a heavily sclerotized triangular flank developed; its dorsal margin especially strengthened by vestige of sternal abdominal lateral suture of the fused segment IX. Segment X partly fused to tergite IX forming together the joint dorsum and partly present as less sclerotized membranous vestigium. Cerci (superior or preanal appendages) large slightly excised apicad. Paraproctal complex (intermediate appendages) present with the upward curving blunt apices of the inner branch and the laterad shifted outer branches. Membranous subanal lobe very broad dominating below the paraproct. Gonopods with tapering apex. Phallic organ composed of large, mostly membranous aedeagus and long parameres.

*Material examined* – 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).

*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.

*Halesus digitatus* (Schränk, 1781) – **Bulgaria:** Vitosha Mts, Kladnitsa, Sv. Nikola, Tanchovitsa, N42°34'02.9", E23°11'41.4", 1100 m, 03.10.2011, UV light, leg. Á. Ecsedi, T. Kovács, G. Puskás (8 males, 6 females, OPC).

*Halesus tessellatus* (Rambur, 1742) – **Bulgaria:** Vitosha Mts, Kladnitsa, Sv. Nikola, Tanchovitsa, N42°34'02.9", E23°11'41.4", 1100 m, 03.10.2011, UV light, leg. Á. Ecsedi, T. Kovács, G. Puskás (1 male, OPC).

*Limnephilus bipunctatus* Curtis, 1934 – **Albania:** Bulqize district, Ceremnike Mts, Fushe Studia, artificial pool, SW of the village, N41°18.758', E20°22.497', 1395 m, 17.05.2011, leg. Z. Barina, H. Mező, D. Pifkó (1 male, HNHM).

*Limnephilus sparsus* Curtis, 1834 – **Bulgaria:** Strandzha, 3.5 km N of Primorsko, Ropotamo, N42°18'11.1", E27°43'40.3", 10 m, 09.10.2011, UV light, leg. Á. Ecsedi, T. Kovács, G. Puskás (1 male, 1 female, OPC).

*Melampophylax mucoreus* (Hagen, 1861) – **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, leg. Á. Ecsedi, T. Kovács, G. Puskás (4 males, 2 females, OPC).

*Potamophylax cingulatus* (Stephens, 1837) – **Bulgaria:** Vitosha Mts, Kladnitsa, Sv. Nikola, Tanchovitsa, N42°34'02.9", E23°11'41.4", 1100 m, 03.10.2011, UV light, leg. Á. Ecsedi, T. Kovács, G. Puskás (18 males, 8 females, OPC).

*Potamophylax juliani* Kumanski, 1999 – **Bulgaria:** Rila Mts, Ezero Vira – Tiha Rila, Rilska Reka, 42°08'20.5", 23°27'52.3", 1935 m, 07.10.2011, leg. Á. Ecsedi, T. Kovács, G. Puskás (1 male, OPC).

*Potamophylax luctuosus* (Piller & Mitterpacher, 1783) – **Bulgaria:** Rila Mts, Rila Mts, Rilski Manastir, Complex Zodiac, N42°08'32.0", E23°21'27.3", 1213 m, 23.06.2011, UV light, P. Juhász, T. Kovács, L. Urbán (1 male, OPC). **Montenegro:** Sinjajevina Mts, Donja Polja, Zoljski ljevak, N42°57'49.4", E19°31'39.1", 883 m, 9.05.2003, Juhász, T. Kovács, P. Sevola (1 male, OPC).

*Potamophylax millenii* Klapálek, 1898 – **Romania:** Caraş-Severin county, Ţarcu Mts, spring and its outlet at Cuntu Meteorological Station, N45°18.008', E22°30.059', 1465 m, 9.06.2011, T. Kovács, D. Murányi, G. Puskás (1 male, 1 female, OPC).

*Potamophylax schmidi* Marinkovic, 1970 – **Albania:** Prokletije Mts, tall herb community of the creek in village Sylbice, N42°30.748', E20°07.551', 1670 m, 8.07.2011, leg. Z. Barina, A. Kovács, G. Puskás, B. Sárospataki (1 female, HNHM).

*Potamophylax winnegruthi* (Klapálek, 1902) – **Serbia:** Zlatibor Mts, Čigota Mts, spring area of Crni Rzav, N43°37'52.6", E19°46'18.0", 1150 m, 3.11.2011, leg. T. Kovács, G. Magos (2 males, 2 females, OPC). 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 males, 7 females, OPC). Zlatibor Mts, Čigota Mts, spring area of Crni Rzav, N43°37'52.6", E19°46'18.0", 1150 m, 21.11.2011, leg. T. Kovács (7 males, OPC). Zlatibor Mts, open brook and spring along the road No.21, N43°40'51.1", E19°42'14.7", 1025 m, 20.11.2011, leg. T. Kovács, Cs. Oberczán (3 males, OPC).

*Rhadicoleptus alpestris* (Kolenati, 1848) – **Albania:** Prokletije Mts, above village Doberdol, flush around a small-er tarn below tarn Liqeni i Dashit, N42°32.008', E20°04.653', 2080 m, 9.07.2011, leg. Z. Barina, A. Kovács, G. Puskás, B. Sárospataki (1 male, HNHM). **Bulgaria:** Rila Mts, Jazovir Belmeken, springbrook, N42°10'22.7", E23°48'04.4", 1332 m, 23.06.2011, P. Juhász, T. Kovács, L. Urbán (1 male, 2 females, OPC).

*Senophylax nycterobius* (McLachlan, 1875) – **Montenegro:** Durmitor Mts, Donja Bukovica, Šuškovac, N43°00'39.1", E19°09'36.8", 1330 m, 6.11.2011, leg. T. Kovács, G. Magos (1 male, OPC).

*Senophylax wagneri* Malicky, 1971 – **Albania:** Shkoder district, Prokletije Mts, Kir, rocky torrent S (beneath) of the village, N42°12.854', E19°42.349', 320 m, 23.05.2010, leg. Z. Fehér, D. Murányi, Zs. Ujvári (1 male, HNHM).

#### UENOIDEAE Iwata, 1927

*Thremma anomalum* McLachlan, 1876 – **Montenegro:** Sinjajevina Mts, Bogomolje, mouth of Ljutica, N43°08'16.6", E19°18'07.7", 645 m, 5.11.2011, leg. T. Kovács, G. Magos (1 male, OPC).

#### BRACHYCENTRIDAE Ulmer, 1903

*Micrasema minimum* McLachlan, 1876 – **Bulgaria:** Rila Mts, Rilski Manastir, Rilska Reka, N42°07'54.5", E23°20'25.5", 1127 m, 22.06.2011, P. Juhász, T. Kovács, L. Urbán (1 male, 1 female, OPC).

## BERAEIDAE Wallengren, 1891

*Beraea zawadil* Malicky, 1977 – **Greece**: Central Greece, Evrytania peripheral unit, Agios Georgios, forest brook E of the village, N38°51.053', E21°32.720', 565 m, 7.05.2011, leg. J. Kontschán, D. Murányi, T. Szederjesi, Zs. Ujvári (2 males, 2 females, HNHM).

*Beraemyia kutsaftikii* Malicky, 1975 – **Greece**: Ionian Islands, Lefkada peripheral unit, Rahi, stream W of the village, N38°43.363', E20°41.404', 50 m, 6.05.2011, leg. J. Kontschán, D. Murányi, T. Szederjesi, Zs. Ujvári (1 male, HNHM)

## SERICOSTOMATIDAE Stephens, 1836

*Notidobia melanoptera* Stein, 1863 – **Greece**: Thessaly, Trikala peripheral unit, Lakmos Mts, Chaliki, open torrent and brook N of the village, N39°41.908', E21°11.037', 1225 m, 9.05.2011, leg. J. Kontschán, D. Murányi, T. Szederjesi, Zs. Ujvári (8 males, HNHM).

*Notidobia nekibe* Klapálek, 1903 – **Albania**: Diber district, Deje Mts, sidestream of the Varoshit stream along the road to Lure area, N41°39.824', E20°11.720', 1215 m, 18.05.2010, leg. Z. Barina, Z. Fehér, D. Murányi, D. Pifkó, Zs. Ujvári (2 males, 1 female, HNHM). Mat district, Deje Mts, Hurdhe Muhur, open brook E of the village, N39°41.908', E21°11.037', 895 m, 20.05.2010, leg. Z. Barina, D. Pifkó (6 males, 4 females, HNHM). **Macedonia**: Polog region, Bistra Mts, Galicnik, stream at the village, N41°35.615', E20°39.965', 1435 m, 1.07.2010, leg. D. Pifkó, Z. Barina (1 males, HNHM).

*Sericostoma schneideri* (Kolenati, 1848) – **Greece**: Olympos, 1100 m, 9.08.1986, leg. Á. Uherkovich (1 male, OPC).

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