

New species and records of Balkan Trichoptera II.

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ABSTRACT: Our knowledge on the Balkan Trichoptera, especially in Albania, Macedonia, and Montenegro is still very limited. Here we report 68 species collected mostly on higher elevations. Two new species are described: *Agapetus campos* Oláh sp. n., *Drusus gombos* Oláh sp. n. The unknown females of *Drusus klapaleki* and *Potamophylax juliani* have been discovered and described.

Introduction

The Balkan Peninsula is one of the least collected regions in Europe. In addition, the collection on higher elevation is even more limited. The Sakertour Eastern Europe, Birdwatching and Hide Photography Company of the Carpathian Basin and Danube Delta has financed both spring and autumnal collecting trips in the year of 2013. We have applied the collecting, processing, clearing, cleaning, and drawing methods described by OLÁH (2011). The new method and nomenclature developed for the detailed examination and drawing of the vaginal sclerite complex of the female genitalia was described by OLÁH et al. (2013). The results of new species records as well as the descriptions of new species are presented here.

Abbreviations: JP = Péter Juhász, KJ = Jenő Kontschán, KT = Tibor Kovács, MD = Dávid Murányi, MG = Gábor Magos, PG = Gellért Puskás, SzT = Tímea Szederjesi; HNHM = Hungarian Natural History Museum (Budapest), MM = Mátra Museum of the Hungarian Natural History Museum (Gyöngyös), OPC = Oláh Private Collection under national protection of the Hungarian Natural History Museum, Budapest.

Results

PHILOPOTAMIDAE Stephens, 1829

Philopotamus montanus (Donovan, 1813) – **Albania**, Delvinë district, Gjerë Mts, Bistricë, forest karst spring E of the village, N39°55.125', E20°08.799', 105 m, 13.10.2013, JP-KT-MD-PG (3♂, OPC). Delvinë district, Gjerë Mts, Muzinë, Syri i Kaltër, karst springs SW of the village, N39°55.286', E20°11.330', 155 m, 13.10.2013, JP-KT-MD-PG (6♂, 2♀, OPC). Gjirokastër district, Tsamantas Mts, Sotirë, stream and its plane tree gallery in the village, N39°49.150', E20°21.612', 500 m, 13.10.2013, JP-KT-MD-PG (3♂, OPC). Tepelenë district, Dragot, sidebrook of Vjosë River and its plane tree gallery S of the village, N40°17.030', E20°04.100', 145 m, 14.10.2013, JP-KT-MD-PG (4♂, OPC). Tepelenë district, Kurveleshi area, Progonat, Gurrit Stream spring area, E of the village, N40°12.629', E19°58.237', 1045 m, 14.10.2013, JP-KT-MD-PG (8♂, 1♀, OPC).

PSYCHOMYIIDAE Walker, 1852

Lype reducta (Hagen, 1868) – **Albania**, Delvinë district, Gjerë Mts, Bistricë, forest karst spring E of the village, N39°55.125', E20°08.799', 105 m, 13.10.2013, JP-KT-MD-PG (1♂, OPC). Delvinë district, Gjerë Mts, Muzinë, Syri i Kaltër, karst springs SW of the village, N39°55.286', E20°11.330', 155 m, 13.10.2013, JP-KT-MD-PG (1♀, OPC).

Psychomyia pusilla (Fabricius, 1781) – **Albania**, Bulqizë district, Çermenikë Mts, brooks in open forest beneath Mt. Kaptinë, N41°23.199', E20°17.338', 1600 m, 27.05.2013, JP-KT-MG-PG (1♂, OPC).

Tinodes braueri McLachlan, 1878 – **Albania**, Gjirokastrë district, Tsamantas Mts, Sotirë, stream and its plane tree gallery in the village, N39°49.150', E20°21.612', 500 m, 13.10.2013, JP-KT-MD-PG (1♂, OPC). Sarandë district, Borsh, Ixour Spring and its outlet stream in the village, N40°03.686', E19°51.462', 105 m, 12.10.2013, JP-KT-MD-PG (1♂, OPC).

Tinodes janssensi Jacquemart, 1957 – **Macedonia**, Southeastern region, Plavuş Hills, Valandovo, stream at Motel Izvor, N (above) of the city, N41°19.598', E22°33.364', 250 m, 04.10.2013, KT-MD (1♂, 1♀, OPC).

Tinodes raina Botosaneanu, 1960 – **Albania**, Tepelenë district, Kurveleshi area, Progonat, Gurrit Stream spring area, E of the village, N40°12.629', E19°58.237', 1045 m, 14.10.2013, JP-KT-MD-PG (1♂, OPC).

Tinodes rostocki McLachlan, 1878 – **Albania**, Korçë district, Opari area, Moglicë, torrent in bushy flysh vegetation E of the village, N40°42.387', E20°25.067', 500 m, 16.10.2013, JP-KT-MD-PG (3♂, OPC). Librazhd district, Çermenikë Mts, tributary of stream Zalli i Steblevës at forest edge 4 km SW of Steblevë, N41°18'29.8", E20°26'33.2", 1270 m, 31.05.2013, JP-KT-MG-PG (3♂, 2♀, OPC).

POLYCENTROPODIDAE Ulmer, 1903

Cyrnus trimaculatus (Curtis, 1834) – **Albania**, Bulqizë district, Çermenikë Mts, brooks in open forest beneath Mt. Kaptinë, N41°23.199', E20°17.338', 1600 m, 27.05.2013, JP-KT-MG-PG (1♂, OPC).

Plectrocnemia conspersa Curtis, 1834 – **Serbia**, Zlatibor district, Zlatibor Mts, spring brook of Crni Rzav Stream beneath Mt. Cigota, N43°37.932', E19°46.305', 1160 m, 25.05.2013, JP-KT-MG-PG (1♂, OPC).

HYDROPSYCHIDAE Curtis, 1835

Hydropsyche incognita Pitsch, 1993 – **Bulgaria**, Blagoevgrad province, Mesta valley, Ognjanovo, hotel by the Kanina Stream, 565 m, N41°37.070', E23°47.729', 25.10.2013, KJ-MD-SzT (1♂, HNHM).

Diplectrona atra McLachlan, 1878 – **Montenegro**, Bar municipality, Rumija Mts, Sutorman, Basa spring, N42°09'25.6", E19°06'06.3", 770 m, 26.05.2013, JP-KT-MG-PG (4♂, 2♀, OPC).

Diplectrona vairyra Schmid, 1959 – **Albania**, Korçë district, Opari area, Moglicë, torrent in bushy flysh vegetation E of the village, N40°42.387', E20°25.067', 500 m, 16.10.2013, JP-KT-MD-PG (3♂, OPC).

RHYACOPHILIDAE Stephens, 1836

Rhyacophila balcanica Radovanovic, 1953 – **Albania**, Tepelenë district, Kurveleshi area, Progonat, Gurrit Stream spring area, E of the village, N40°12.629', E19°58.237', 1045 m, 14.10.2013, JP-KT-MD-PG (3♂, 1♀, OPC). **Macedonia**, Vardar region, Jakupica Mts, Nežilovo, Babuna Spring NW of the village, N41°41.417', E21°24.974', 1275 m, 03.10.2013, KT-MD (2♂, 2♀, OPC).

Rhyacophila biegelmeieri Malicky, 1984 – **Albania**, Librazhd district, Qukës Shkumbin, Shkumbin River and its karst sidespring at the quarry, 41°05.786', E20°26.551', 380 m, 11.10.2013, JP-KT-MD-PG (1♂, OPC).

Rhyacophila fasciata Hagen, 1859 – **Bulgaria**, Blagoevgrad province, Maleševska planina, Sušica, Sušicka Stream E of the village, 735 m, N41°49.142', E23°04.522', 27.10.2013, KJ-MD-SzT (2♂, 2♀, HNHM).

Rhyacophila obliterata McLachlan, 1863 – **Albania**, Kolonjë district, Grammos Mts, German, forest brook and pine wood S of the village, N40°13.304', E20°40.546', 1235 m, 15.10.2013, JP-KT-MD-PG (1♂, OPC). **Bulgaria**, Blagoevgrad province, Maleševska planina, Sušica, Sušicka Stream E of the village, 735 m, N41°49.142', E23°04.522', 27.10.2013, KJ-MD-SzT (4♂, 3♀, HNHM). Blagoevgrad province, Pirin Mts, Bansko, Demyanitsa Stream and its gorge S of the city, 1535 m, N41°47.125', E23°27.688'24.10.2013, KJ-MD-SzT (4♂, 4♀, HNHM). Blagoevgrad province, Pirin Mts, Sugarevo, Sugarevska Stream NE of the village, 855 m, N41°34.322', E23°26.195', 26.10.2013, KJ-MD-SzT (1♂, 1♀, HNHM).

Rhyacophila tristis Pictet 1834 – **Albania**, Dibër district, Korab Mts, Radomirë, brook E (above) of the village, N41°49.152', E20°30.111', 1495 m, 01.06.2013, JP-KT-MG-PG (5♂, 2♀, OPC). Librazhd district, Çermenikë Mts, tributary of stream Zalli i Steblevës at forest edge 4 km SW of Steblevë, N41°18'29.8", E20°26'33.2", 1270 m, 31.05.2013, JP-KT-MG-PG (6♂, 4♀, OPC). **Macedonia**, Vardar region, Jakupica Mts, Nežilovo, Babuna Spring NW of the village, N41°41.417', E21°24.974', 1275 m, 03.10.2013, KT-MD (12♂, 2♀, OPC). **Montenegro**, Bar municipality, Rumija Mts, Stari Bar, M. Mikulići, Rikavac, N42°06'16.7", E19°08'55.8", 320 m, 26.05.2013, JP-KT-MG-PG (2♂, 1♀, OPC).

Rhyacophila tsurakiana Malicky, 1984 – **Albania**, Tepelenë district, Dragot, sidebrook of Vjosë River and its plane tree gallery S of the village, N40°17.030', E20°04.100', 145 m, 14.10.2013, JP-KT-MD-PG (1♂, OPC).

GLOSSOSOMATIDAE Wallengren, 1891

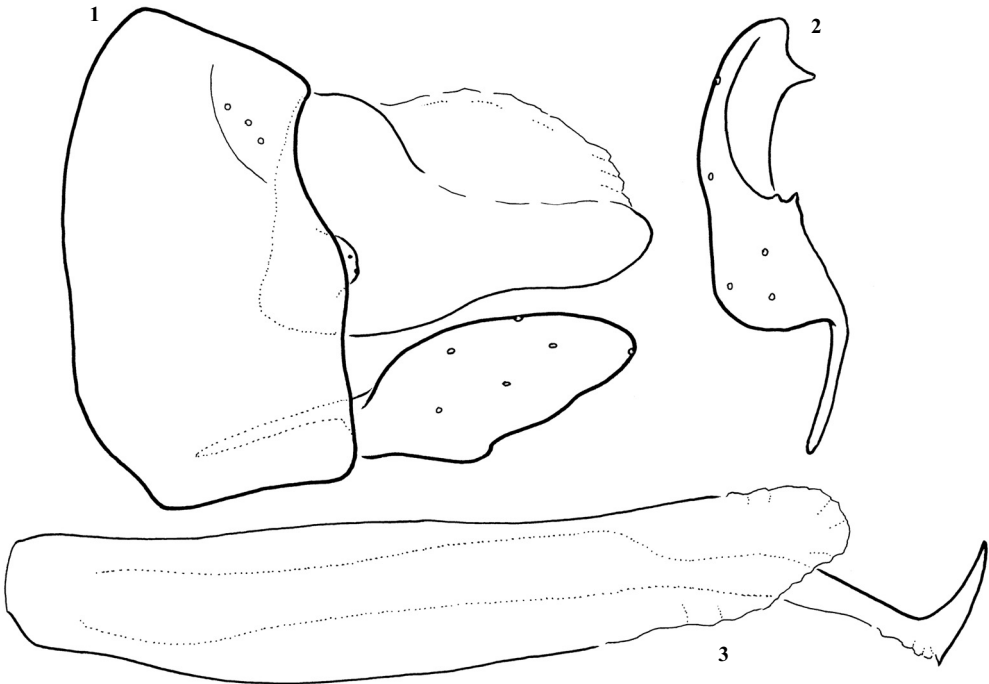
Agapetus iridipennis (Mclachlan, 1879) – **Montenegro**, Bar municipality, Rumija Mts, Sutorman, Basa spring, N42°09'25.6", E19°06'06.3", 770 m, 26.05.2013, JP-KT-MG-PG (2♂, OPC).

***Agapetus kampos* Oláh sp. n. (Figs 1–3)**

Diagnosis – Its characteristic bifid hook-headed structure of the phallic organ differentiates this species from all the known European species.

Description – Male (in alcohol). Dark brown animal, with legs and venter slightly lighter. Maxillary palp formula: II-I-IV-V-III, second segment with globular mesolateral projection. Wing membrane brown; forewing length 4 mm; fork I on hindwing lost. Large blister-like protuberance on the dorsal margin of sternite V present; ventral process on sternite VI long.

Male genitalia. Segment IX synsclerotized with convex anterior and posterior margin in lateral view. Segment X partially pigmented, short and high; its sclerotized part deeply excised in dorsal view and deeply retracted anterad into the annular segment IX. Cerci hidden into retracted lateral cavity. Paraproctal lateral vertical plates (lateral lobe of segment X) indistinct. Gonopods in lateral view short ovoid; armed with subapical pointed black, mesad directed tooth and two small teeth mesad on the basal lobe. Phallic organ composed of long phallosome, of



Figs 1–3. *Agapetus kampos* Oláh sp. n. male holotype:

1 = genitalia in lateral view; 2 = gonopod with basal plate in ventral view, 3 = phallic organ in left lateral view

a single sclerotized long structure with a pair of hooked terminal spines and of the embedding and protruding membranous matrix.

Type material – Holotype. **Montenegro**, Bar municipality, Rumija Mts, Sutorman, Basa spring, N42°09'25.6", E19°06'06.3", 770 m, 26.05.2013, JP-KT-MG-PG (1♂, OPC). Allotype. Same as holotype (1♀, OPC). Paratype. Same as holotype (1♂, OPC).

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

Note – the single female was damaged during the clearing and cleaning process, apodemes and the spermathecal sclerite complex detached, insufficient for description.

LEPIDOSTOMATIDAE Ulmer, 1903

Lepidostoma doehleri (Malicky, 1976) – **Albania**, Korçë district, Opari area, Moglicë, torrent in bushy flysh vegetation E of the village, N40°42.387', E20°25.067', 500 m, 16.10.2013, JP-KT-MD-PG (3♂, OPC).

Lepidostoma hirtum (Fabricius, 1775) – **Albania**, Bulqizë district, Çermenikë Mts, brooks in open forest beneath Mt. Kaptinë, N41°23.199', E20°17.338', 1600 m, 27.05.2013, JP-KT-MG-PG (1♂, OPC).

UENOIDAE Iwata, 1927

Thremma anomalum McLachlan, 1876 – **Albania**, Delvinë district, Gjerë Mts, Bistricë, forest karst spring E of the village, N39°55.125', E20°08.799', 105 m, 13.10.2013, JP-KT-MD-PG (9♂, OPC). Gjirokaštër district, Tsamantas Mts, Sotirë, stream and its plane tree gallery in the village, N39°49.150', E20°21.612', 500 m, 13.10.2013, JP-KT-MD-PG (9♂, 5♀, OPC). Tepelenë district, Kurveleshi area, Progonat, Gurrit Stream spring area, E of the village, N40°12.629', E19°58.237', 1045 m, 14.10.2013, JP-KT-MD-PG (2♂, OPC).

GOERIDAE Ulmer, 1903

Silo nigricornis (Pictet, 1834) – **Montenegro**, Bar municipality, Rumija Mts, Sutorman, Basa spring, N42°09'25.6", E19°06'06.3", 770 m, 26.05.2013, JP-KT-MG-PG (9♂, 6♀, OPC).

Silo pallipes (Fabricius, 1781) – **Serbia**, Zlatibor district, Zlatibor Mts, spring brook of Crni Rzav Stream beneath Mt. Cigota, N43°37.932', E19°46.305', 1160 m, 25.05.2013, JP-KT-MG-PG (2♂, 3♀, OPC).

LIMNEPHILIDAE Kolenati, 1848

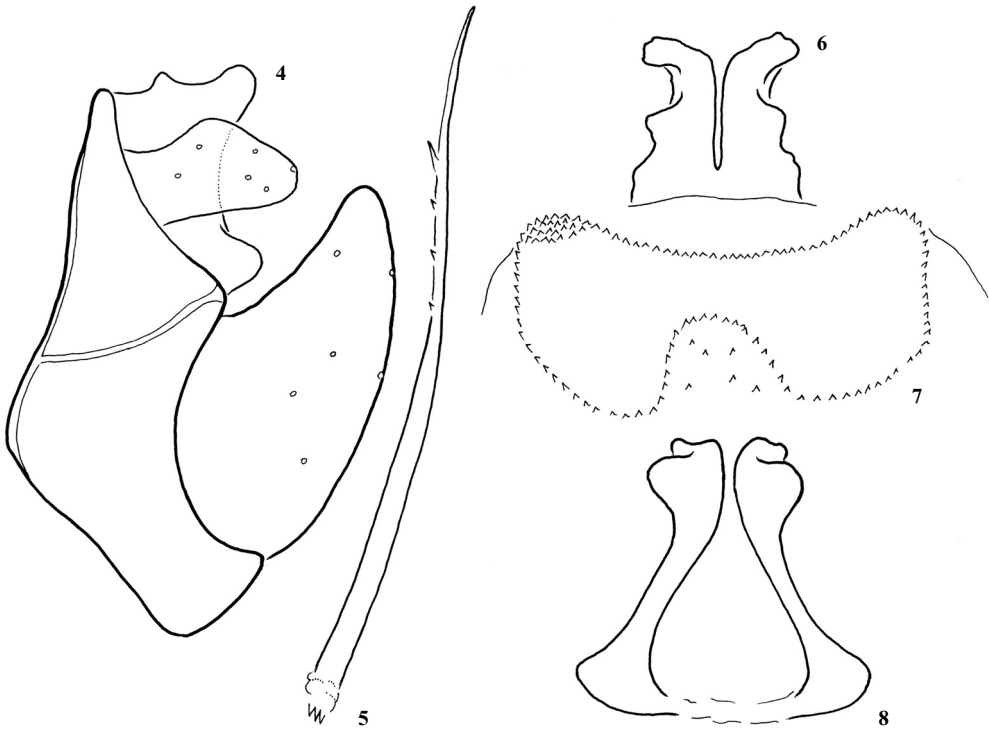
Drusus arbanios Oláh, 2010 – **Albania**, Korçë district, Ostrovicë Mts, Çemericë, open brook W (above) the village, N40°32'38.9", E20°26'33.5", 1820 m, 28.05.2013, JP-KT-MG-PG (2♂, 7♀, OPC). Skrapar district, Ostrovicë Mts, Backë, brook and spring NE of the village, N40°31.346', E20°25.096', 1650 m, 29.05.2013, JP-KT-MG-PG (10♂, 13♀, OPC). Skrapar district, Ostrovicë Mts, Backë, Krojmbret Spring and its outlet brook NE of the village, N40°31.753', E20°25.152', 1965 m, 28.05.2013, JP-KT-MG-PG (19♂, 7♀, OPC). Skrapar district, Ostrovicë Mts, open stream 3 km S of village Faqekuq, N40°32'19.3, E20°24'22.0", 1730 m, 29.05.2013, JP-KT-MG-PG (3♂, 9♀, OPC).

Drusus botosaneanui Kumanski, 1968 – **Macedonia**, Pelagonia region, Pelister Mts, Nižepole, open brook at the ski station, N40°58.787', E21°15.218', 1375 m, 02.10.2013, KT-MD (2♂, 3♀, OPC).

Drusus discolor Rambur, 1842 – **Albania**, Skrapar district, Ostrovicë Mts, Backë, brook and spring NE of the village, N40°31.346', E20°25.096', 1650 m, 29.05.2013, JP-KT-MG-PG (4♂, 11♀, OPC). **Bulgaria**, Blagoevgrad province, Belasica Mts, Petriç, spring of Lesniska Stream SW of the city, 1025 m, N41°21.021', E23°10.767', 27.10.2013, KJ-MD-SzT (1♀, HNHM).

Drusus gombos Oláh sp. n. (Figs 4–12)

Diagnosis – This castanean brown species belongs to the species complex with large upward arching triangular gonopods inhabiting the Balkan Mountains. Most close to *Drusus klapaleki* Marinković-Gospodnetić, 1970, but differs by having cerci less slender with more bulky

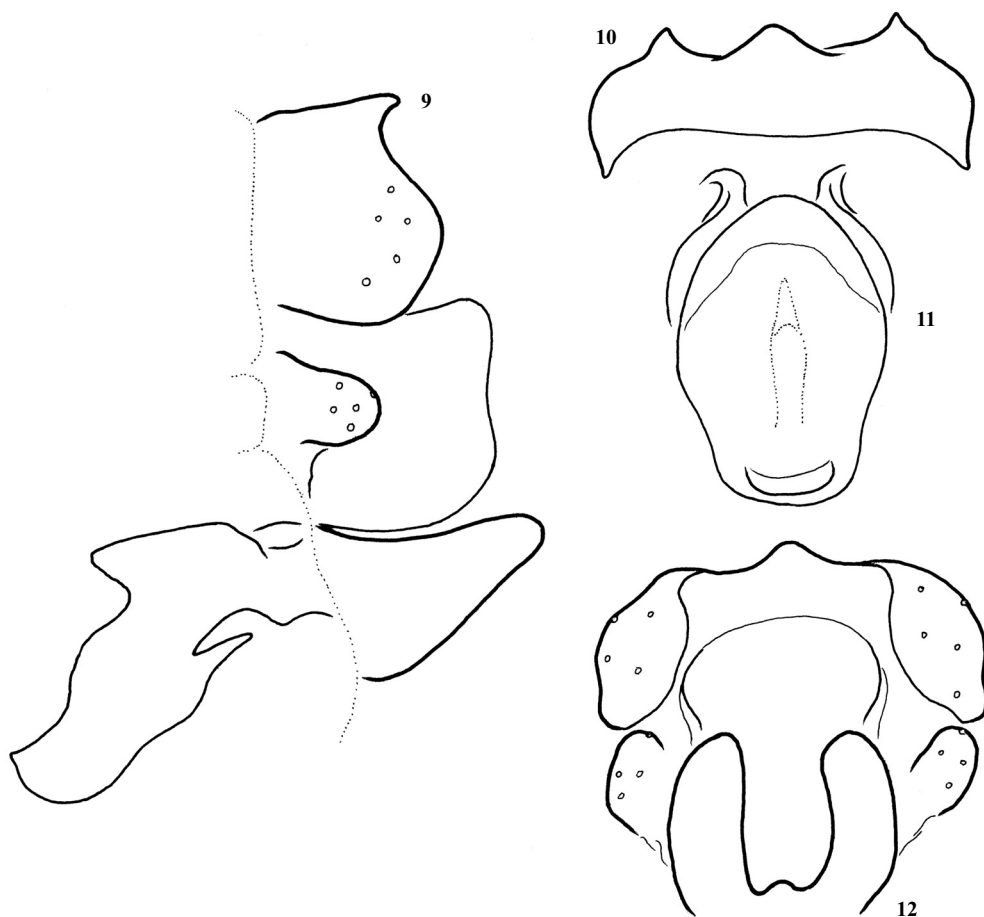


Figs 4–8. *Drusus gombos* Oláh sp. n. male holotype: 4 = male genitalia in lateral view; 5 = left paramere in lateral view, 6 = paraproct in dorsal view, 7 = posterodorsal black spinate area on tergite VIII in dorsal view, 8 = paraproct complex in caudal view

ventroapical corner; lateral profile of the paraproct different, and the female has trilobed, not bilobed, apical margin on the anal tube in dorsal view; the median lobe on the vulvar scale present, not absent; the dorsal profile of the vaginal sclerite complex different.

Description – Male (in alcohol). Dark castaneous brown species; 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 light. Spurs of male 1.3.3. Forewing length 12 mm.

Male genitalia (Figs 4–8). Posterodorsal black spinate area on tergite VIII slightly extended posteriorly, bilobed in dorsal view forming mesal concavity. Segment IX longer ventrally, very short bridle-like dorsally; its lateral elongated by rounded triangular lobe anteriad; midlateral sclerotized strips of sternite IX not pronounced; vestige of sternal lateral suture of the fused segment IX well developed. Segment X appearing as the basement of paraproct and cerci. Cerci are quadrangular with obliquely truncate apex in lateral view. Paraproctal complex together with its basement representing segment X forming a semi closed structure around the anal opening with ventrolateral triangular corners and the elaborated dorsal arms. Gonopods are upward arching broad triangular large lobe. Both aedeagus and parameres are slender; parameres with a larger and three small just discernible spines.



Figs 9–12. *Drusus gombos* Oláh sp. n. female allotype:

9 = female genitalia with the vaginal sclerite complex in lateral view; 10 = female genitalia in dorsal view; 11 = vaginal sclerite complex in dorsal view; 12 = female genitalia in ventral view

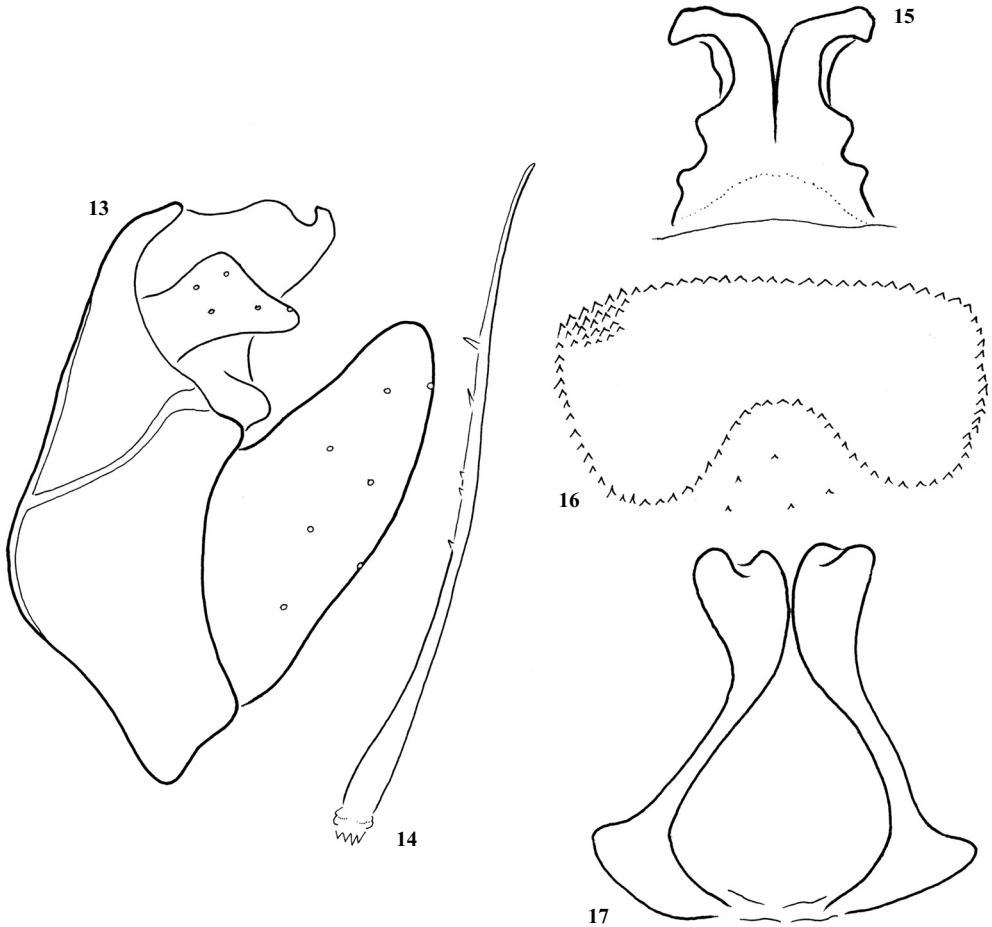
Female genitalia (Figs 9–12). Segment IX short tube open ventrally and embedded inside by membranous segment X encircling anus, its dorsum trilobed in dorsal view. Lateral setose lobe, the sternite of segment IX rounded. Supragenital plate of sternum X well-developed and quadrangular in lateral view. Median lobe of the vulvar scale (lower vaginal lip) very small, but present. Vaginal chamber medium sized reaching almost to the anterior margin of sternite VIII, vaginal sclerite complex oviform in dorsal view.

Type material – Holotype. **Montenegro**, Žabljak municipality, Sinjajevina Mts, Dobrilovina, forest stream at the monastery, N43°01.652', E19°24.086', 765 m, 25.05.2013, JP-KT-MG-PG (1♂, OPC). Allotype. Same as holotype (1♀, OPC). Paratypes. Same as holotype (2♀, OPC).

Etymology – *gombos*, from “gombos” (= button-like) in Hungarian, referring to the rounded knob-shaped dorsoapical lateral processes of the paraproct.

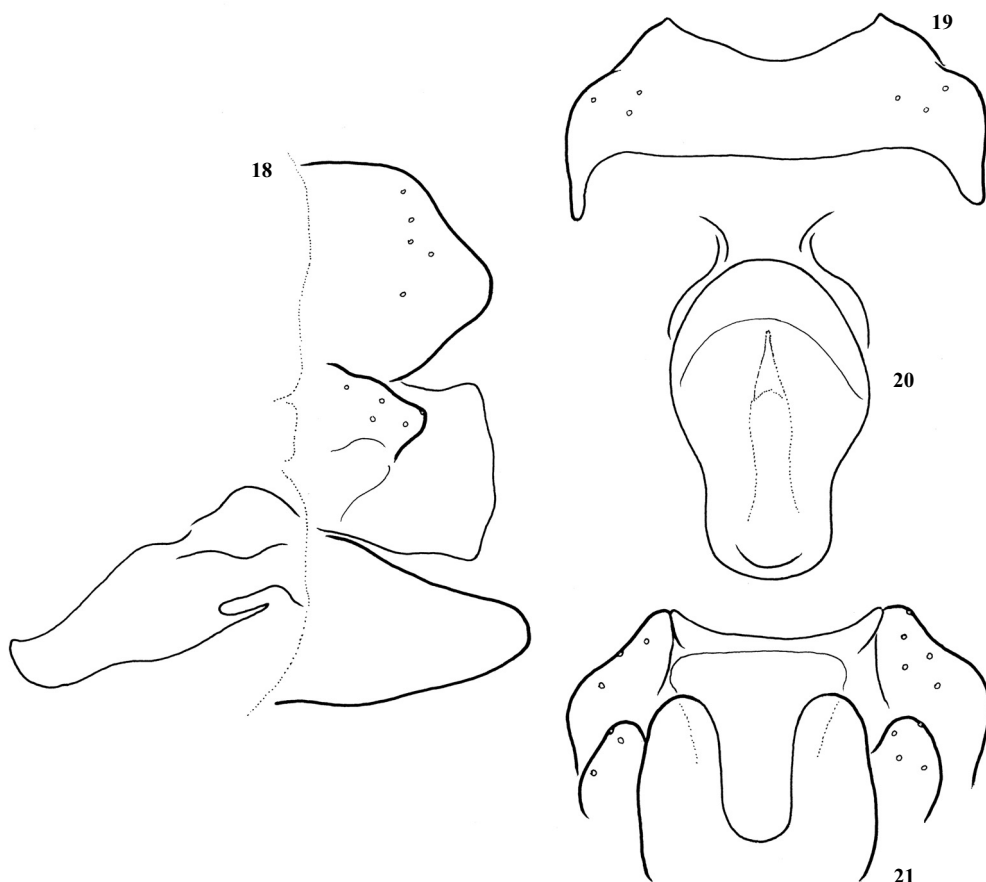
Drusus klapaleki Marinković-Gospodnetić, 1970 (Figs 13–21)

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.



Figs 13–17. *Drusus klapaleki* Marinković-Gospodnetić, 1970 male: 13 = male genitalia in lateral view; 14 = left paramere in lateral view, 15 = paraproct in dorsal view, 16 = posterodorsal black spinate area on tergite VIII in dorsal view, 17 = paraproct complex in caudal view

Description of female (Figs 18–21) – Dark castanean brown. Forewing length 12 mm. Segment IX short tube open ventrally and embedded inside by membranous segment X encircling anus, its dorsum bilobed in dorsal view. Lateral setose lobe, the sternite of segment IX rounded triangular. Supragenital plate of sternum X well-developed and quadrangular in lateral view. Median lobe of the vulvar scale (lower vaginal lip) completely reduced. Vaginal chamber



Figs 18–21. *Drusus klapaleki* Marinković-Gospodnetić, 1970 female:

18 = female genitalia with the vaginal sclerite complex in lateral view; 19 = female genitalia in dorsal view; 20 = vaginal sclerite complex in dorsal view; 21 = female genitalia in ventral view

medium sized reaching almost to the anterior margin of sternite VIII, vaginal sclerite complex in dorsal view elongated oviform.

Material examined – Bosnia-Herzegovina: Jablanica, spring stream, 04.09.1988, singled, J. Oláh (1♂, 1♀, OPC).

Drusus plicatus Radovanovic, 1942 – **Albania**, Bulqizë district, Çermenikë Mts, brooks in open forest beneath Mt. Kaptinë, N41°23.199', E20°17.338', 1600 m, 27.05.2013, JP-KT-MG-PG (3♂, OPC). Librazhd district, Çermenikë Mts, tributary of stream Zalli i Steblevës at forest edge 4 km SW of Steblevë, 31.05.2013, N41°18'29.8", E20°26'33.2", 1270 m, JP-KT-MG-PG (2♂, 2♀, OPC).

Drusus tenellus (Klapálek, 1898) – **Macedonia**, Vardar region, Jakupica Mts, Nežilovo, Babuna Stream S of the village, N41°38.238', E21°27.368', 630 m, 03.10.2013, KT-MD (15♂, 5♀, OPC).

Annitella ostrovicensis Oláh et Kovács, 2012 – **Albania**, Korçë district, Vallamarë Mts, forest stream and deforestation towards Lenija Lakes, N40°46.910', E20°29.749', 1765 m, 10.10.2013, JP-KT-MD-PG (1♀, OPC). Korçë district, Vallamarë Mts, open brook above Lower Lenija Lake, SE of Vallamarë Peak, N40°47.374', E20°28.250', 2100 m, 10.10.2013, JP-KT-MD-PG (7♂, 1♀, OPC).

Annitella triloba Marinković-Gospodnetić, 1955 – **Bulgaria**, Blagoevgrad province, Pirin Mts, Bansko, Demyanitsa Stream and its gorge S of the city, 1535 m, N41°47.125', E23°27.688' 24.10.2013, KJ-MD-SzT (1♂, 1♀, HNHM). Blagoevgrad province, Pirin Mts, Bansko, stream in pine shrub above the Vihren hut, N41°45.293', E23°24.933', 1995 m, 24.10.2013, KJ-MD-SzT (1♂, 2♀, HNHM).

Chaetopterygopsis siveci Malicky, 1988 – **Albania**, Korçë district, Vallamarë Mts, open brook above Lower Lenija Lake, SE of Vallamarë Peak, N40°47.374', E20°28.250', 2100 m, 10.10.2013, JP-KT-MD-PG (9♂, OPC).

Chaetopteryx bosniaca Marinković-Gospodnetić, 1955 – **Bulgaria**, Blagoevgrad province, Pirin Mts, Bansko, stream in alder forest S (above) of the city, 1060 m, N41°49.070', E23°28.396', KJ-MD-SzT 24.10.2013 (1♂, 1♀, HNHM). Blagoevgrad province, Pirin Mts, Sugarevo, Sugarevska Stream NE of the village, 855 m, N41°34.322', E23°26.195', 26.10.2013, KJ-MD-SzT (1♂, HNHM).

Chaetopteryx stankovići Marinković-Gospodnetić, 1966 – **Albania**, Kolonjë district, Grammos Mts, forest brook and deforestation on the slope of Mt. Kamenik, N40°11.739', E20°40.394', 1315 m, 15.10.2013, JP-KT-MD-PG (2♂, OPC). Kolonjë district, Grammos Mts, Rehovë, brook at forest edge, mountain pasture E of the village, N40°20.111', E20°43.467', 1445 m, 15.10.2013, JP-KT-MD-PG (5♂, 4♀, OPC). **Bulgaria**, Blagoevgrad province, Pirin Mts, Dobrinishte, Desilitsa Stream S of the village, 1305 m, N41°46.119', E23°33.056', 24.10.2013, KJ-MD-SzT (2♂, 2♀, HNHM). Blagoevgrad province, Pirin Mts, Popovi Livadi, beech forest below the settlement, 1335 m, N41°32.285', E23°36.832', 26.10.2013, KJ-MD-SzT (1♂, 1♀, HNHM). Kyustendil province, Osogovska planina, Novo selo, beech forest stream W of the village, 1205 m, N42°11.223', E22°39.135', 23.10.2013, KJ-MD-SzT (2♂, 2♀, HNHM). Pazardzhik province, Bataska planina, Velingrad, Lepenica Stream below the cave, 1020 m, N41°57.332', E24°00.460', 25.10.2013, KJ-MD-SzT (3♂, 3♀, HNHM). **Macedonia**, Pelagonia region, Pelister Mts, Nižepole, open brook at the ski station, N40°58.787', E21°15.218', 1375 m, 02.10.2013, KT-MD (1♀, OPC).

Polog region, Bistra Mts, Galičnik, fast, bushy brook in the village, N41°35.695', E20°39.050', 1395 m, 01.10.2013, KT-MD (1♂, OPC). Polog region, Šar Planina, Vešala (Veshallë), open, rocky stream at the village, N42°03.865', E20°50.866', 1290 m, 01.10.2013, KT-MD (1♂, OPC).

Psilopteryx montanus Kumanski, 1968 – **Bulgaria**, Blagoevgrad province, Pirin Mts, Bansko, stream in alder forest S (above) of the city, 1060 m, N41°49.070', E23°28.396', KJ-MD-SzT 24.10.2013 (1♂, 1♀, HNHM). Blagoevgrad province, Pirin Mts, Dobrinishte, brook in spruce forest towards Mocharata hut, 1615 m, N41°45.927', E23°31.501', 24.10.2013, KJ-MD-SzT (4♂, 1♀, HNHM). Blagoevgrad province, Pirin Mts, Dobrinishte, Desilitsa Stream S of the village, 1305 m, N41°46.119', E23°33.056', 24.10.2013, KJ-MD-SzT (2♂, 4♀, HNHM). Kyustendil province, Osogovska planina, beech forest and open brook at Osogovo hut, 1625 m, N42°11.791', E22°37.409', 23.10.2013, KJ-MD-SzT (5♂, 6♀, HNHM). Kyustendil province, Osogovska planina, spruce forest, forest brook below Trite buki hut, 1520 m, N42°10.463', E22°38.066', 23.10.2013, KJ-MD-SzT (1♂, 1♀, HNHM). Pazardzhik province, Bataska planina, Batak, forest brook SW of the village, 1520 m, N41°53.412', E24°10.366', 25.10.2013, KJ-MD-SzT (1♂, 1♀, HNHM). **Macedonia**, Pelagonia region, Pelister Mts, Nižepole, forest brook below the ski station, N40°58.889', E21°15.246', 1370 m, 02.10.2013, KT-MD (1♂, 2♀, OPC). Pelagonia region, Pelister Mts, Nižepole, open brook and seep above the ski station, N40°58.877', E21°15.450', 1440 m, 02.10.2013, KT-MD (16♂, 4♀, OPC). Pelagonia region, Pelister Mts, Nižepole, open brook at the ski station, N40°58.787', E21°15.218', 1375 m, 02.10.2013, KT-MD (21♂, 14♀, OPC).

Psilopteryx schmidi Kumanski, 1970 – **Bulgaria**, Blagoevgrad province, Belasica Mts, Petrič, sping of Lesniska Stream SW of the city, 1025 m, N41°21.021', E23°10.767', 27.10.2013, KJ-MD-SzT (7♂, 4♀, HNHM). Blagoevgrad province, Pirin Mts, Bansko, brook in pine shrub below the Vihren hut, 1965 m, N41°45.494', E23°24.962', 24.10.2013, KJ-MD-SzT (1♂, 2♀, HNHM). Blagoevgrad province, Pirin Mts, Bansko, Demyanitsa Stream and its gorge S of the city, 1535 m, N41°47.125', E23°27.688' 24.10.2013, KJ-MD-SzT (2♂, 3♀, HNHM). Blagoevgrad province, Pirin Mts, Bansko, stream in pine shrub above the Vihren hut, N41°45.293', E23°24.933', 1995 m, 24.10.2013, KJ-MD-SzT (1♂, HNHM). Blagoevgrad province, Pirin Mts, Dobrinishte, brook in spruce forest towards Mocharata hut, 1615 m, N41°45.927', E23°31.501', 24.10.2013, KJ-MD-SzT (2♂, 2♀, HNHM). Blagoevgrad province, Pirin Mts, Pirin, forest brook towards the Malina hut, 1335 m, N41°36.194', E23°32.213', 26.10.2013, KJ-MD-SzT (2♂, 2♀, HNHM).

Limnephilus bipunctatus Curtis, 1834 – **Macedonia**, Polog region, Bistra Mts, open stream and puddles on the karst plateau, N41°38.665', E20°41.957', 1685 m, 01.10.2013, KT-MD (11♂, 9♀, OPC).

Limnephilus flavicornis (Fabricius, 1787) – **Serbia**, Zlatibor district, Zlatibor Mts, spring brook of Crni Rzav Stream beneath Mt. Cigota, N43°37.932', E19°46.305', 1160 m, 25.05.2013, JP-KT-MG-PG (2♂, 2♀, OPC).

Limnephilus lunatus Curtis, 1834 – **Albania**, Delvinë district, Gjerë Mts, Muzinë, Syri i Kaltër, karst springs SW of the village, N39°55.286', E20°11.330', 155 m, 13.10.2013, JP-KT-MD-PG (1♀, OPC).

Limnephilus sparsus Curtis, 1834 – **Albania**, Korçë district, Ostrovicë Mts, brook between villages Shtyllë and Çemerricë, N40°31'48.8", E20°31'16.0", 1540 m, 28.05.2013, JP-KT-MG-PG (1 ♀, OPC).

Limnephilus vittatus (Fabricius, 1798) – **Albania**, Korçë district, Vallamarë Mts, open brook below Lenija Lakes, SE of Vallamarë Peak N40°47.420', E20°28.504', 2025 m, 10.10.2013, JP-KT-MD-PG (3 ♂, OPC). Korçë district, Vallamarë Mts, Velçan i Gorec, bushy brook and pasture NW of the village, N40°46.737', E20°31.144', 1415 m, 10.10.2013, JP-KT-MD-PG (1 ♀, OPC).

Allogamus auricollis (Pictet, 1834) – **Macedonia**, Polog region, Šar Planina, Bozovce, seeps and woody pasture W (above) of the village, N42°03.125', E20°49.377', 1350 m, 01.10.2013, KT-MD (2 ♂, OPC). Polog region, Šar Planina, Vešala (Veshallë), open, rocky stream at the village, N42°03.865', E20°50.866', 1290 m, 01.10.2013, KT-MD (2 ♂, 5 ♀, OPC).

Allogamus uncatius (Brauer, 1857) – **Albania**, Korçë district, Vallamarë Mts, open brook above Lower Lenija Lake, SE of Vallamarë Peak, N40°47.374', E20°28.250', 2100 m, 10.10.2013, JP-KT-MD-PG (16 ♂, 21 ♀, OPC).

Bulgaria, Blagoevgrad province, Pirin Mts, Bansko, stream in pine shrub above the Vihren hut, N41°45.293', E23°24.933', 1995 m, 24.10.2013, KJ-MD-SzT (3 ♀, HNHM). Pazardzhik province, Bataska planina, Batak, forest brook SW of the village, 1520 m, N41°53.412', E24°10.366', 25.10.2013, KJ-MD-SzT (1 ♀, HNHM). **Macedonia**, Pelagonia region, Pelister Mts, Nižepole, open brook at the ski station, N40°58.787', E21°15.218', 1375 m, 02.10.2013, KT-MD (17 ♂, 16 ♀, OPC).

Enoicyla costae McLachlan, 1876 – **Albania**, Kolonjë district, Grammos Mts, Rehovë, brook at forest edge, mountain pasture E of the village, N40°20.111', E20°43.467', 1445 m, 15.10.2013, JP-KT-MD-PG (1 ♂, OPC).

Halesus digitatus (Schrank, 1781) – **Albania**, Kolonjë district, Grammos Mts, Rehovë, brook at forest edge, mountain pasture E of the village, N40°20.111', E20°43.467', 1445 m, 15.10.2013, JP-KT-MD-PG (2 ♂, OPC).

Potamophylax cingulatus (Stephens, 1837) – **Bulgaria**, Blagoevgrad province, Pirin Mts, Bansko, Demyanitsa Stream and its gorge S of the city, 1535 m, N41°47.125', E23°27.688' 24.10.2013, KJ-MD-SzT (1 ♀, HNHM).

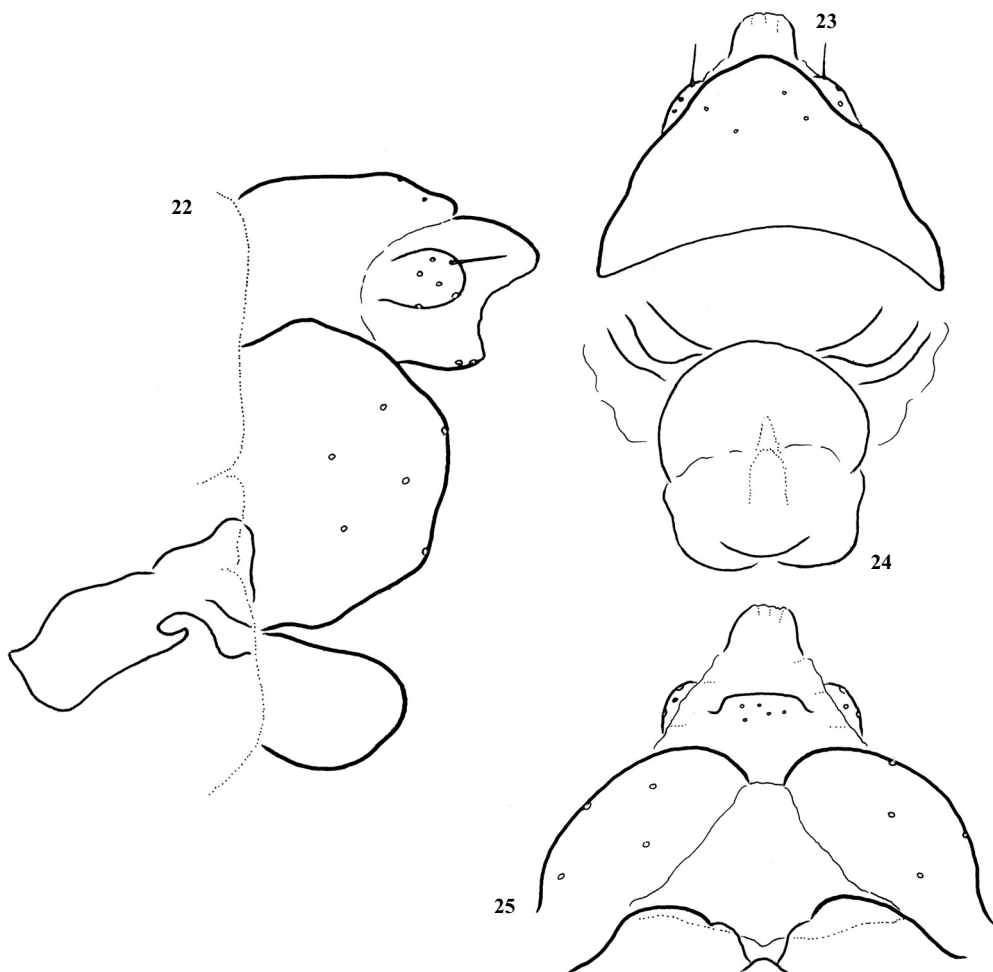
Potamophylax goulandrionum Malicky, 1975 – **Albania**, Korçë district, Vallamarë Mts, open brook above Lower Lenija Lake, SE of Vallamarë Peak, N40°47.374', E20°28.250', 2100 m, 10.10.2013, JP-KT-MD-PG (1 ♀, OPC). Tepelenë district, Kurveleshi area, Progonat, Gurrit Stream spring area, E of the village, N40°12.629', E19°58.237', 1045 m, 14.10.2013, JP-KT-MD-PG (1 ♂, OPC). **Macedonia**, Pelagonia region, Pelister Mts, Nižepole, open brook at the ski station, N40°58.787', E21°15.218', 1375 m, 02.10.2013, KT-MD (2 ♀, OPC).

Potamophylax juliani Kumanski, 1999 (Figs 22–25)

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.

Description of female – Brachypterous, forewings only slightly reach over the abdomen. Forewing length 10 mm. Male forewing length is 19 mm. Strong erected setae with alveoli mostly on veins, few on the wing membrane. Thoracic sclerite brown, contrasting to the dark castanean sclerites of the male thorax. Anal tube formed by the fusion of tergite IX and segment X short and almost closed. Vestigial suture separating tergite IX and segment X discernible delineating the more sclerotized setose basal part (tergite IX) and the more membranous apical part (segment X); segment X with dorsal and ventral lobes as visible both in lateral and ventral view; ventral lobe with a few setae; a pair well sclerotized setose lateral lobes present on segment X with a few elongated setae among the dense small setae. Setose sternite IX rounded in lateral view. Setaless, glabrous supragenital plate of segment X narrow in ventral view, compressed to various shape by the enlarged sternite IX; supragenital plate functions as the upper lip of the vulva. Vulvar scale (lower vulvar lip) composed of large rounded lateral and small, almost reduced mesal lobe. Vaginal sclerite pattern complex.

Material examined – **Bulgaria**, Kyustendil province, Osogovska planina, beech forest and open brook at Osogovo hut, 1625 m, N42°11.791', E22°37.409', 23.10.2013, KJ-MD-



Figs 22–25. *Potamophylax juliani* Kumanski, 1999 female:

22 = female genitalia with the vaginal sclerite complex in lateral view; 23 = female genitalia in dorsal view; 24 = vaginal sclerite complex in dorsal view; 25 = female genitalia in ventral view

SzT (1♂, HNHM). Kyustendil province, Osogovska planina, spruce forest, forest brook below Trite buki hut, 1520 m, N42°10.463', E22°38.066', 23.10.2013, KJ-MD-SzT (2♂, 3♀, HNHM).

Potamophylax luctuosus (Piller & Mitterpacher, 1783) – **Albania**, Librazhd district, Çermenikë Mts, tributary of stream Zalli i Steblevës at forest edge 4 km SW of Steblevë, 31.05.2013, N41°18'29.8", E20°26'33.2", 1270 m, 31.05.2013, JP-KT-MG-PG (2♂, 2♀, OPC).

Potamophylax pallidus (Klapálek, 1899) – **Albania**, Kolonjë district, Grammos Mts, forest brook and deforestation on the slope of Mt. Kamenik, N40°11.739', E20°40.394', 1315 m, 15.10.2013, JP-KT-MD-PG (1♀, OPC). Kolonjë district, Grammos Mts, Rehovë, brook at forest edge, mountain pasture E of the village, N40°20.111', E20°43.467', 1445 m, 15.10.2013, JP-KT-MD-PG (1♀, OPC). Korçë district, Opari area, Moglicë, torrent

in bushy flysh vegetation E of the village, N40°42.387', E20°25.067', 500 m, 16.10.2013, JP-KT-MD-PG (3♂, 1♀, OPC). **Macedonia**, Pelagonia region, Pelister Mts, Nižepole, open brook and seep above the ski station, N40°58.877', E21°15.450', 1440 m, 02.10.2013, KT-MD (1♂, 3♀, OPC). Pelagonia region, Pelister Mts, Nižepole, open brook at the ski station, N40°58.787', E21°15.218', 1375 m, 02.10.2013, KT-MD (1♀, OPC). Vardar region, Kožuf Mts, lake and open brook in alpine grassland towards Ski Kožuf, N41°12.560', E22°13.170', 1670 m, 04.10.2013, KT-MD (1♀, OPC).

Rhadicleptus alpestris (Kolenati, 1848) – **Serbia**, Zlatibor district, Zlatibor Mts, spring brook of Crni Rzav Stream beneath Mt. Cigota, N43°37.932', E19°46.305', 1160 m, 25.05.2013, JP-KT-MG-PG (14♂, 12♀, OPC).

Stenophylax fissus (McLachlan, 1875) – **Albania**, Kolonjë district, Grammos Mts, forest brook and deforestation on the slope of Mt. Kamenik, N40°11.739', E20°40.394', 1315 m, 15.10.2013, JP-KT-MD-PG (1♂, OPC).

Stenophylax meridionalis Malicky, 1982 – **Albania**, Korçë district, Ostrovicë Mts, brook between villages Shtyllë and Çemericë, N40°31'48.8", E20°31'16.0", 1540 m, 28.05.2013, JP-KT-MG-PG (2♂, 3♀, OPC).

Macedonia, Pelagonia region, Pelister Mts, Nižepole, open brook at the ski station, N40°58.787', E21°15.218', 1375 m, 02.10.2013, KT-MD (1♀, OPC). Polog region, Šar Planina, Bozovce, seeps and woody pasture W (above) of the village, N42°03.125', E20°49.377', 1350 m, 01.10.2013, KT-MD (1♂, OPC).

Stenophylax mitis McLachlan, 1875 – **Albania**, Bulqizë district, Çermenikë Mts, open brook beneath Mt. Kaptinë, N41°23.212', E20°17.506', 1610 m, 27.05.2013, JP-KT-MG-PG (2♂, OPC). Korçë district, Ostrovicë Mts, brook between villages Çemericë and Backë, N40°31'24.4", E20°26'21.0", 1820 m, 28.05.2013, JP-KT-MG-PG (1♂, OPC). **Macedonia**, Southeastern region, Plavuš Hills, Valandovo, stream at Motel Izvor, N (above) of the city, N41°19.598', E22°33.364', 250 m, 04.10.2013, KT-MD (1♀, OPC). **Montenegro**, Bar municipality, Rumija Mts, Sutorman, Basa spring, N42°09'25.6", E19°06'06.3", 770 m, 26.05.2013, JP-KT-MG-PG (1♂, OPC).

Stenophylax nycterobius (McLachlan, 1875) – **Albania**, Kolonjë district, Grammos Mts, Rehovë, brook at forest edge, mountain pasture E of the village, N40°20.111', E20°43.467', 1445 m, 15.10.2013, JP-KT-MD-PG (1♀, OPC). Korçë district, Peshkopi, N41°41.150', E20°25.528', 650 m, 31.05.2013, JP-KT-MG-PG (1♂, OPC). **Macedonia**, Polog region, Bistra Mts, open stream and puddles on the karst plateau, N41°38.665', E20°41.957', 1685 m, 01.10.2013, KT-MD (3♂, 2♀, OPC). Polog region, Šar Planina, Popova Šapka, open brook at the ski resorts, N42°00.939', E20°52.835', 1750 m, 01.10.2013, KT-MD (3♂, OPC).

Stenophylax sequax (McLachlan, 1875) – **Albania**, Përmet district, Përmet, hotel terrace by the Vjosë River, in the city, N40°14.077', E20°21.264', 245 m, 15.10.2013, JP-KT-MD-PG (1♀, OPC). **Macedonia**, Polog region, Šar Planina, Bozovce, seeps and woody pasture W (above) of the village, N42°03.125', E20°49.377', 1350 m, 01.10.2013, KT-MD (2♂, OPC).

LEPTOCERIDAE Leach, 1815

Adicella balcanica Botosaneanu & Novak, 1965 – **Macedonia**, Southeastern region, Plavuš Hills, Valandovo, stream at Motel Izvor, N (above) of the city, N41°19.598', E22°33.364', 250 m, 04.10.2013, KT-MD (1♂, 1♀, OPC).

Adicella filicornis (Pictet, 1834) – **Montenegro**, Bar municipality, Rumija Mts, Sutorman, Basa spring, N42°09'25.6", E19°06'06.3", 770 m, 26.05.2013, JP-KT-MG-PG (1♂, OPC).

Mystacides azureus (Linnaeus, 1761) – **Albania**, Bulqizë district, Çermenikë Mts, brooks in open forest beneath Mt. Kaptinë, N41°23.199', E20°17.338', 1600 m, 27.05.2013, JP-KT-MG-PG (1♂, OPC).

Mystacides longicornis (Linnaeus, 1758) – **Albania**, Pogradec district, Piskupat, Ohrid Lake at Hotel Leon S of the village, N41°01.152', E20°38.196', 695 m, 16.10.2013, JP-KT-MD-PG (14♂, 3♀, OPC).

Oecetis ochracea (Curtis, 1825) – **Albania**, Pogradec district, Piskupat, Ohrid Lake at Hotel Leon S of the village, N41°01.152', E20°38.196', 695 m, 16.10.2013, JP-KT-MD-PG (1♂, OPC).

SERICOSTOMATIDAE Stephens, 1836

Notidobia ciliaris (Linnaeus, 1761) – **Serbia**, Zlatibor district, Zlatibor Mts, spring brook of Crni Rzav Stream beneath Mt. Cigota, N43°37.932', E19°46.305', 1160 m, 25.05.2013, JP-KT-MG-PG (8♂, 10♀, OPC).

Notidobia nekibe Klapálek, 1903 – **Albania**, Bulqizë district, Çermenikë Mts, spring with Juncus, 2 km W of Bizë, N41°20'22.5", E20°08'04.5", 1390 m, 27.05.2013, JP-KT-MG-PG (6♂, 9♀, OPC). Skrapar district, Ostrovicë Mts, Backë, spring with Juncus, N (above) the village, N40°31'13.2", E20°24'31.0", 1610 m, 29.05.2013, JP-KT-MG-PG (19♂, 4♀, OPC).

Sericostoma schneideri (Kolenati, 1848) – **Montenegro**, Bar municipality, Rumija Mts, Stari Bar, M. Mikulići, Rikavac, N42°06'16.7", E19°08'55.8", 320 m, 26.05.2013, JP-KT-MG-PG (1♂, 3♀, OPC). **Serbia**, Zlatibor district, Zlatibor Mts, spring brook of Crni Rzav Stream beneath Mt. Cigota, N43°37.932', E19°46.305', 1160 m, 25.05.2013, JP-KT-MG-PG (1♂, OPC).

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