

New species and new records of Palearctic Trichoptera in the material of the Hungarian Natural History Museum

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Abstract – 223 Trichoptera species were determined from the Palearctic material of the Hungarian Natural History Museum collected in Iran, Pakistan, Kazakhstan, and from several countries along the Mediterranean Sea. Fifteen new species are described: *Wormaldia albanica* sp. n. (Albania), *Pseudoneureclipsis adiabenorum* sp. n. (Iran), *Pseudoneureclipsis parthus* sp. n. (Iran), *Tinodes andrasi* sp. n. (Croatia), *Tinodes urdhva* sp. n. (Albania), *Rhyacophila akutila* sp. n. (Bulgaria), *Rhyacophila liutika* sp. n. (Macedonia), *Rhyacophila masula* sp. n. (Iran), *Lepidostoma yuechiorum* sp. n. (Kazakhstan), *Drusus arbanios* sp. n. (Albania), *Drusus dacothracus* sp. n. (Albania), *Drusus illyricus* sp. n. (Albania), *Drusus muranyorum* sp. n. (Greece), *Drusus pelagus* sp. n. (Albania) and *Notidobia nogradorum* sp. n. (Albania) Three species are redrawn: *Wormaldia subnigra* MCLACHLAN, 1865 (from Albania), *Rhyacophila brevifurcata* KUMANSKI, 1986 (from Montenegro) and *Allogamus auricollis* (PICTET, 1834) (from Montenegro). With 76 figures.

Key words – Trichoptera, caddisflies, Albania, Bosnia-Herzegovina, Bulgaria, Croatia, France, Greece, Hungary, Iran, Italy, Kazakhstan, Kosovo, Macedonia, Mongolia, Montenegro, Pakistan, Poland, Romania, Russia, Serbia, Slovenia, Spain, Turkey.

INTRODUCTION

The recently accessed Palearctic caddisfly material in the Hungarian Natural History Museum was collected from Iran, Pakistan, Kazakhstan, and from several countries along the Mediterranean Sea. Altogether 223 species were determined and many of them were either not collected at all, or only very rarely after their original descriptions. In materials from poorly studied areas, like Iran, Kazakhstan and Albania thirteen new species were found and described. The relatively well-collected countries of Croatia and Greece also produced one new species each.

MATERIAL AND METHODS

This study is based on specimens 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 cm³ with 10% KOH solution and boiled for 5 to 15 minutes for digestion. When sufficient material was available, the rest of the body, the head and the thorax without wings were also placed in the same glass beaker together with the abdomen and boiled in order to remove the soft tissues for reliable detection of the sclerotised groove and wart pattern on head and thorax. The setal wart pattern of the entire head and thorax with all the anatomical parts are rarely described and figured in species descriptions or performed only on intact animals, without tissue treatment. In many untreated specimens the wart and groove patterns are poorly visible and frequently indiscernible, especially if the warts have the same colour as the cranial sclerites, or if the setae on the warts are not detached and the warts are densely covered by intact setae. Clearing the entire wingless body give us very useful information on the setal wart pattern for species descriptions. Here we use our trinominal terminology to describe the groove and setal wart patterns on the head (OLÁH & JOHANSON 2007). We used our functional appendicular terminology and not the conventional anatomical directional terminology to describe the genital structures in species descriptions (OLÁH & JOHANSON 2008).

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, head and thorax were subsequently transferred to distilled water and the macerated tissue was removed mechanically by fine-tipped forceps and needles. The cleared wingless animal was transferred to 80% ethyl alcohol, then to glycerine for examination under microscope. Different sized pins modified to support ring bottom were 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 structures were traced using a drawing tube mounted on a WILD M3Z microscope.

Careful studies of wing venation were carried out on the right wings mounted on dry permanent slides or on freshly cut right wings if permanent wing preparation was not produced. The cut right wings were carefully managed under glass cover in deep glycerine solution in order to stretch perfectly. A simplified presentation of the wing shape and wing pattern was prepared by bold wing shape contour and dotted pattern lines. The wing pattern delineated by dotted lines is not specified whether dark, light or coloured and not distinguished whether membrane or setal origin. If pattern was not contrasting the dotted line was set on the middle on the density transition. Studies on the maxillary palps, groove and wart pattern or other head and thoracic characters, leg claws and spurs, were carried

out in deep glycerine column applying different sized pins with supporting ring to establish and stabilise the appropriate views. The head drawings are also drawn exactly as seen in the microscope. However, we have to emphasize the extreme importance of the plane and angle of view which may change considerably the form and ratio of structural elements in the final drawings as was clearly demonstrated by MALICKY (1988). In addition to the spur formula, we have introduced the maxillary palp formula in order to simplify the presentation of the length ratio of the 5 palp segments. The segment sequence represents the increasing segment length, with equally long segments given in (bracket). In maxillary palps when segment I is the shortest, segments II and IV equally long but longer than segment I, segment III shorter than II and IV, segment V the longest, the maxillary palp formula is I-III-(II,IV)-V. Species descriptions were standardized to ensure consistently formatted and comparable template descriptions almost according to EVENHUIS (2007).

Species descriptions were standardized to ensure consistently formatted and comparable description in general accord with EVENHUIS' (2007) template principle. 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.

All specimens are deposited in the Hungarian Natural History Museum (HNHM), Budapest.

NEW SPECIES AND NEW RECORDS

PHILOPOTAMIDAE

Chimarra zagrosensis CHVOJKA, 1996 – **Iran**: Province Busher, S-Zagros, Thang e Ram near Dalekhi, 400 m, 18.VI.2005, leg. P. GYULAI & A. GARAY (2 males).

Dolophilodes ornata ULMER, 1909 – **Pakistan**: Hindukush Mts. 5 km E. of Shandur Pass, 3750 m, 21.VIII.2001, leg. B. BENEDEK & L. RONKAY (3 males). Khanjan, 30.VIII.2001, leg. B. BENEDEK & G. RONKAY (2 males).

Philopotamus achemenus SCHMID, 1959 – **Greece**: Rodopi prefecture, Sapka Mts, Nea Sanda, torrent in an oak forest, E of the village, 650 m, N41°07.672', E25°53.223', 4.IV.2007, leg. L. DÁNYI, Z. ERŐSS, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (1 male). - **Turkey**: Kırklareli province, Istranca Mts, Degirmen Stream at Canli Alabalik (1 km of Demirköy), 255 m, N41°49.300', E27°45.085', 6.IV.2007, leg. L. DÁNYI, Z. ERŐSS, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (1 male, 2 females).

Philopotamus ludificatus MCLACHLAN, 1878 – **France**: La Condamine, Provence Alps, 1263 m, 44.451 6.741, 11.VII.2007, leg. M. BÁLINT (1 male). Western Alps, Lalley, 1221 m, 44.732, 5.679, 16.VII.2007, leg. M. BÁLINT (9 males, 1 female).

Philopotamus montanus (DONOVAN, 1813) – **Greece**: Rodopi prefecture, Papikio Mts, Vronti, stream and its gorge at the village (N of Kerasia), 425 m, N41°11.421', E25°17.693', 4.IV.2007, leg. L. DÁNYI, Z. ERÖSS, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (5 males, 3 females). Serres prefecture, Kerkiní Mts, Ano Poroia, stream and spring in a platan forest, 510 m, N41°17.637', E23°02.187', 30.III.2007, leg. L. DÁNYI, Z. ERÖSS, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (5 males, 1 female). Xanthi prefecture, Koula Mts, Oreó, Aspro Stream beneath the village, 550 m, N41°16.369', E24°51.275', 3.IV.2007, leg. L. DÁNYI, Z. ERÖSS, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (1 male, 1 female). – **Hungary**: Nógrád county, Börzsöny Mts, Diósjenő, Kemence Stream, 700 m, 3.V.2006, leg. M. FÖLDVÁRI, D. MURÁNYI & L. PAPP (2 males).

Philopotamus variegatus (SCOPLI, 1763) – **Greece**: Rodopi prefecture, Papikio Mts, Vronti, karst spring at the village (N of Kerasia), 445 m, N41°11.412', E25°17.752', 4.IV.2007, leg. L. DÁNYI, Z. ERÖSS, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (1 male). Phocis prefecture, Giona Mts, Prosilio, stream S of the village, 680 m, N38°33.827', E22°20.939', 8.IV.2009, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (2 males, 1 female).

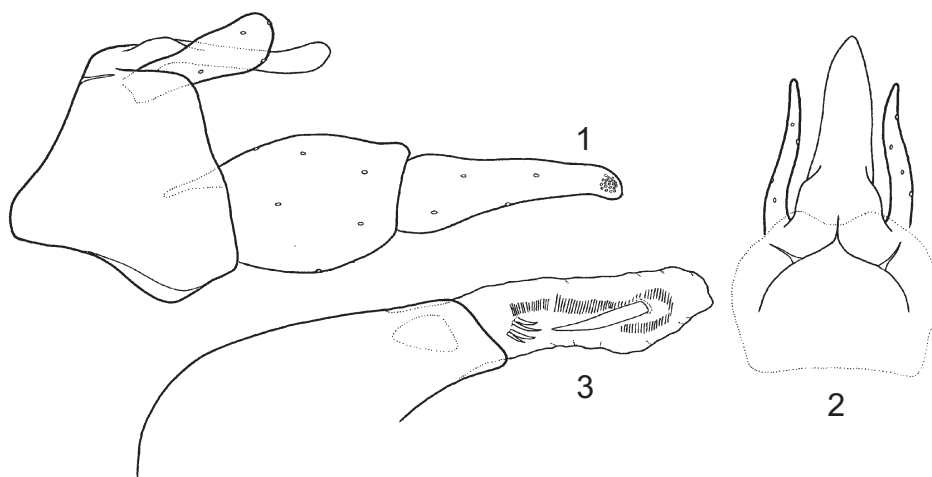
***Wormaldia albanica* sp. n.**

(Figs 1–3)

Description – Male (in alcohol). Small-sized, medium brown animal with light brown wing membrane. Maxillary palp formula is I-II-IV-(III,V). Forewing length 4.8 mm, hyaline forewing pattern composed of anastomose, median and Cu2 windows; window around anastomosis linear; median window along m-cu cross vein and along primary bifurcation of median vein extending two times longer along M3+4 than along m-cu crossvein; Cu2 window at arculus elongated linear extending to wing margin.

Male genitalia (Fig. 1). VIIIth tergite slightly modified with a short apicodorsal excision at its centre. IXth segment pentagonal with well developed antecostal suture on ventroanterior corner and subtriangulat lobe on anterior margin. In dorsal view Xth segment is a narrow long triangular hood (Fig. 2); in lateral view digitiform without any excision or saddle-shaped depression and without any dorsal subapical hook, dent, projection or elevation; however, a pair of unusual and conspicuous flange of sclerites visible basolaterally. Cerci broad in lateral view, narrow, tapering and slightly S-shaped in dorsal view. Harpagones longer than coxopodites, slender, tapering and slightly downcurving apicad in lateral view. Phallic apparatus (Fig. 3) consisting of phallosome and evertile membranous endosoma armed with a long cluster of microspines, a single large spine and four small spines detached from basal end of microspine cluster and slightly enlarged.

Type material – Holotype, male, HNHM. **Albania**: Tepelenë district, Tepelenë, Uji i Frohtë (Cold Water Spring), 165 m, N40°15.011', E20°03.548', 13.III.2008, leg. SZ. CZIGÁNY & D. MURÁNYI.



Figs 1–3. *Wormaldia albanica* sp. n., holotype, male: 1 = genitalia in left lateral view; 2 = Xth segment, cerci, IXth tergite and VIIIth tergite in dorsal view; 3 = phallic organ in lateral view

Etyymology – It is named for the country in which the type was collected.

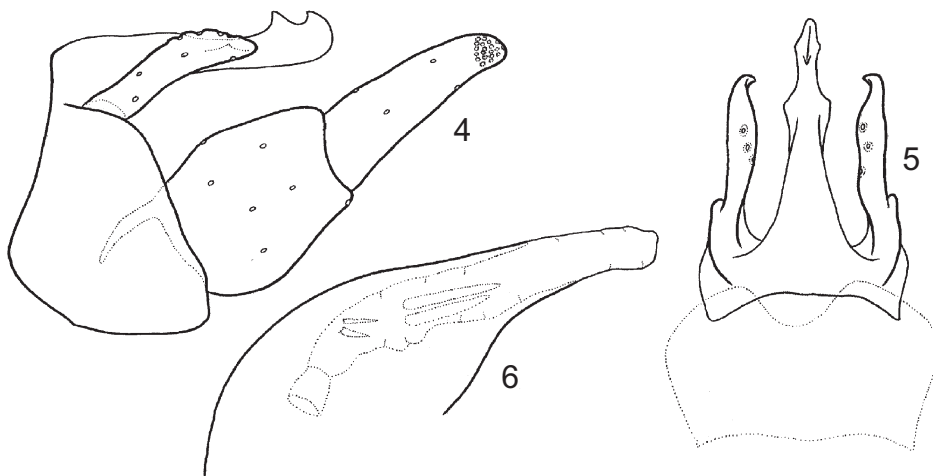
Diagnosis – This new species belongs to the species described from the Balkan Mountains with enlarged endothecal microspine cluster and tapering harpagones: *W. kimminsi* BOTOSANEANU, 1960; *W. khourmai* SCHMID, 1959; *W. balcanica* KUMANSKI, 1979; *W. bulgarica* NOVÁK, 1971. It is closest to *W. bulgarica* 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, tooth 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 down-curving 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.

Wormaldia niiensis KOBAYASHI, 1985 – **Kazakhstan**: Province Almaty, valley of River Ili, 20 km NNW of Kapchugay, 550 m, 77°00' E, 44°00' N, 31.VIII.1997, leg. A. OROSZ (1 male).

Wormaldia kimminsi BOTOSANEANU, 1960 – **Greece**: Phocis prefecture, Vargiani, springs and torrent in the village, 970 m, N38°38.499', E22°25.515', 8.IV.2009, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (1 male).

Wormaldia occipitalis PICTET, 1834 – **Albania**: Malësia district, Madhë Mts, Gropa e Selcës, cave spring on the left bank of Cem River, S of the village, 900 m, N42°31.937', E19°39.052', 4.X.2005, leg. D. MURÁNYI (3 males). – **Bulgaria**: Montana province, Stara Planina, Berkovitsa, stream E of Kom settlement, 1590 m, N43°10.722', E23°04.922', 14.VIII.2009, leg. D. MURÁNYI (1 male). Sofia province, Rila Mts, Borovec, spring of Prava Marica Stream at Zavratica Pass, 2505 m, N42°09.640', E23°37.337', 13.VIII.2009, leg. D. MURÁNYI (1 male, 1 female). – **Hungary**: Nógrád county, Börzsöny Mts, Diósjenő, Kemenecse Stream, 700 m, 3.V.2006, leg. M. FÖLDVÁRI, D. MURÁNYI & L. PAPP (1 male). – **Italy**: Lombardia, Solto Collina, Valle del Ferro, 500 m, 9.VII.2007, leg. M. BÁLINT, O. LODOVICI & M. VALLE (7 males, 6 females). – **Montenegro**: Kolašin municipality, Ibristica Stream, 8.V.2007, leg. V. PEŠIĆ (1 male). Kolašin municipality, Sinjajevina Mts, Gornji Lipovo, forest brook NW of the village, 1350 m, N42°53.829', E19°23.140', 11.X.2008, leg. L. DÁNYI, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (2 males).

Wormaldia subnigra MCLACHLAN, 1865 (Figs 4–6) – **Albania**: Vlorë district, Dhërmi, Dhërmi Stream in the village, 140 m, N40°09.330', E19°38.374', 11.III.2008, leg. Sz. CZIGÁNY & D. MURÁNYI (2 males). – **Croatia**: Lika-Senj county, Plitvicka Jezera NP., Great Waterfall, 9.VII.2006, leg. L. DÁNYI (1 male). – **Greece**: Lamia, Sperchias, 38.878, 22.163, 185 m, 29.VII.2007, leg. M. BÁLINT (9 males). – **Montenegro**: Šavnik municipality, Sinjajevina Mts, Boan, brook and its gorge E of the village, 1185 m, N42°55.616', E19°16.333', 10.X.2008, leg. L. DÁNYI, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (1 male).



Figs 4–6. *Wormaldia subnigra* MCLACHLAN, 1865, male: 4 = genitalia in left lateral view; 5 = Xth segment, cerci, IXth tergite and VIIIth tergite in dorsal view; 6 = phallic organ in lateral view

– **Serbia:** Zaječar district, Gamzigrad, Crni Timok River, 185 m, N43°55.510', E22°07.770', 14.X.2006, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (14 males, 3 females). – Specimens from Albania have unusually well-developed dorsoapical hook formation additional to the dorsosubapical hook on the Xth segment in lateral view.

Wormaldia triangulifera MCLACHLAN, 1878 – **France:** Citou, Aude, 43.408 2.591, 906 m, 14.VII.2007, M. BÁLINT (12 males), Lespinassière 43.402, 2.532, 450 m, 14.VII.2007, leg. M. BÁLINT (5 males, 2 females).

DIPSEUDOPSIDAE

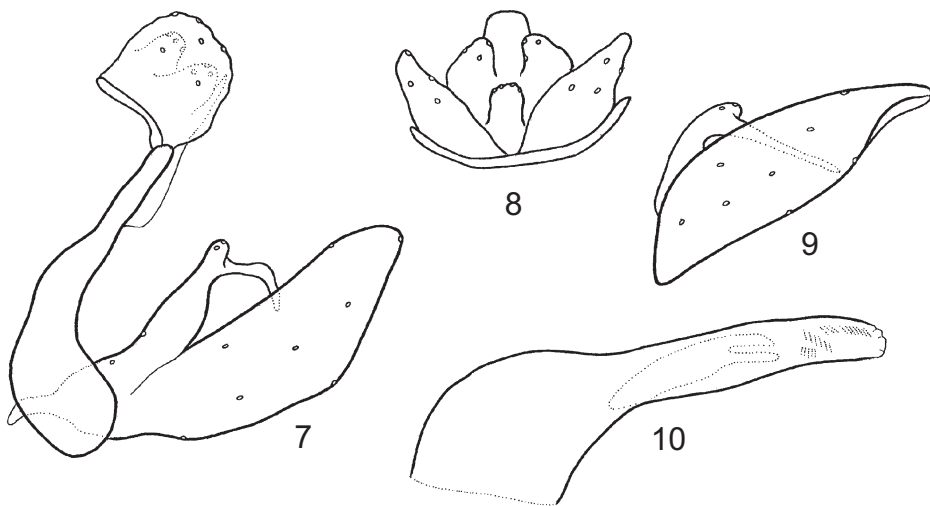
Pseudoneureclipsis adiabenorum sp. n.

(Figs 7–10)

Description – Male (in alcohol). Head almost quadrangular. Ocelli absent. Eyes about half of vertex width. Maxillary palp formula II-I-III-IV-V. Antennae stout, 1.4 times longer than forewing; scape short, 1/4 as long as head; inteantennal distance wider than scape. Cephalic and thoracic groove and setal wart structure following general pattern of genus. Spur formula 244, posteroapical spur on foreleg only half length of anteroapical, posteroapical and posterosubapical spurs 1/3 longer than anteroapical and anterosubapical both on midleg and hindleg. Claws on legs are small and symmetrical. Forewing length 5 mm. Forewing membrane and veins are light brown covered with scarce cinereus setae. Forewing with Forks I,II,III,V and with closed discoidal, median and thyridial cells, crossvein m-cu closing thyridial cell not reaching first fork of longitudinal vein M; on forewing Fork I is smaller than Fork III; hindwing with Fork II,III,V and only thyridial cell closed, but very narrow.

Male genitalia (Fig. 7). IXth abdominal segment consisting of a narrow tergite and short sternite; the narrow tergite reduced to antecostal ridge articulating to narrow dorsal rod of IXth sternite in hinge-joints. Segment X reduced to a short setose monolobe as visible in dorsal view (Fig. 8). The pair of paraproctal processes (intermediate appendages) is fused mesally to base of cerci and produced a pair of short processes directed slightly mesad in dorsal view and armed with setae. Cerci short and rounded in lateral view. Coxopodite of the gonopod elongated, subtriangular on its apical half; second segment of gonopods, harpagones moved dorsobasad and forming bipartite mesad curving process with tapering apex; its basal part produced into an additional short process midway; intersegmental membrane, articulation line of harpagones well-visible (Fig. 9). Phallic apparatus with downcurving broader phallobase and broad and slightly arching horizontal phallosheath with transparent, almost hyaline membranous apical part, the endosheath with three setal bunches (Fig. 10).

Type material – Holotype, male, HNHM. **Iran:** Province Busher, S-Zagros, Thang e Ram near Dalekhi, 400 m, 7–8.VI.2005, leg. P. GYULAI & A. GARAI.



Figs 7–10. *Pseudoneureclipsis adiabenorum* sp. n., holotype, male: 7 = genitalia without phallic organ in left lateral view; 8 = IXth tergite, Xth segment, cerci, paraproct in dorsal view; 9 = coxopodite and harpago of the left gonopod in ventral view; 10 = phallic organ in lateral view

Etymology – The name was chosen to remember the Parthian Prince Adiabene, bearing in mind his relation to Jesus Chrestos and their possible relations to the type locality.

Diagnosis – This small-sized brown caddisfly is similar to *P. amana* MALICKY, 1989 described from Oman. However differs by having (1) the IXth sternum shorter, (2) the semisclerous basal setose lobe of the Xth segment monolobed, not bifid; (3) cerci short and rounded in lateral view; not elongated and triangular (4) paraproct without elongated spine-like ventral process, (5) coxopodite with subtriangular apical half in lateral view, not parallel-sided; (6) harpagones with a short process on midway; (7) phallic organ with three setal bunches without any spines.

***Pseudoneureclipsis parthus* sp. n.**

(Figs 11–14)

Description – Male (in alcohol). Head almost quadrangular. Ocelli absent. Eyes about half of vertex width. Maxillary palp formula II-I-III-IV-V. Antennae stout, 1.4 times

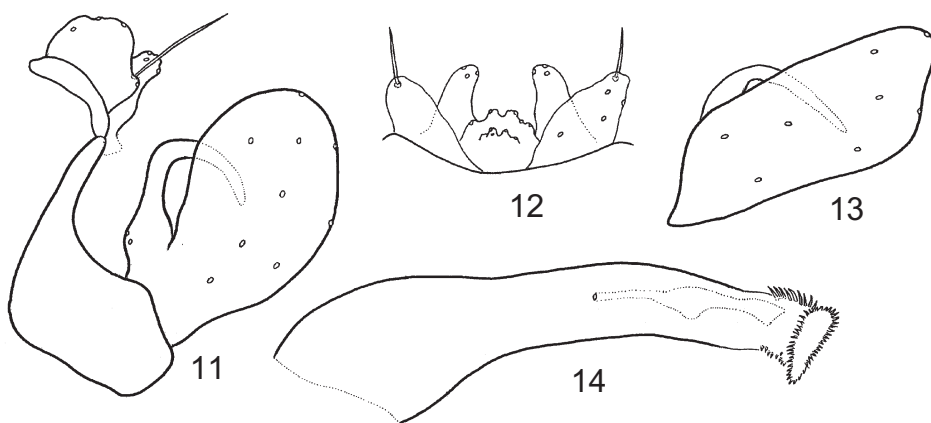
longer than forewing; scape short, 1/4 as long as head; inteantennal distance wider than scape. Cephalic and thoracic groove and setal wart structure following general pattern of the genus. Spur formula 244, posteroapical spur on foreleg only half length of anteroapical, posteroapical and posterosubapical spurs 1/3 longer than anteroapical and anterosubapical both on midleg and hindleg. Claws on legs small and symmetrical. Forewing length 5 mm. Forewing membrane and veins light brown covered with scarce cinereous setae. Forewing with Forks I,II,III,V and with closed discoidal, median and thyridial cells, crossvein m-cu closing the thyridial cell not reaching first fork of longitudinal vein M; on forewing Fork I is smaller than Fork III; hindwing with Fork II,III,V and only thyridial cell closed, but very narrow.

Male genitalia (Fig. 11). IXth abdominal segment consisting of a narrow tergite and well-developed compact sternite, higher than long; narrow tergite reduced to antecostal ridge articulating to narrow dorsal rod of IXth sternite in hinge-joints. Segment X produced into a multidigitate setose and papillated sclerotized short mesal lobe visible only in dorsal view (Fig. 12). The pair of paraproctal processes (intermediate appendages) is fused mesally to base of cerci and produced a pair of short rod directed slightly mesad in dorsal view and armed with setae. Cerci short and high in lateral view bearing a long seta ventroapical on elevated alveolus. Coxopodite of gonopods rounded; second segment of gonopods, harpagones (stylus) moved dorsobasad and forming long and mesad curving rod with tapering apex; intersegmental membrane, articulation line of harpagones well-visible (Fig. 13). Phallic apparatus with downcurving broader phallobase and broad and slightly arching horizontal phallosome with transparent, almost hyaline membranous apical part; this protruding apical endotheca densely covered microtrichia froming a terminal corona (Fig. 14).

Type material – Holotype, male, HNHM. **Iran:** Province Busher, S-Zagros, Thang e Ram near Dalekhi, 400 m, 7–8.VI.2005, det. P. GYULAI & A. GARAI.

Etymology – The name was chosen to remind the Scythian Alliance of the Parthian Empire ruling the territory of type locality during half thousand years between 238BC and 226AD.

Diagnosis – This small-sized brown animal is similar to *P. iranicus* MALICKY, 1982 described from Iran. However differs by having (1) IXth sternum higher than long, not longer than high, (2) the multidigitate semisclerous basal setose lobe of the Xth segment short, not monolobed and not long; (3) cerci short armed with single long seta on a ventroapical raised alveolus, not long and not unarmed; (4) paraproct short with broadening basal part continuing into a less sclerotized subphallic strap, (5) coxopodite rounded, not subdivided into a dorsobasal lobe; (6) phallic organ with numerous setae froming a setal coronal apex without any spines.



Figs 11–14. *Pseudoneureclipsis parthus* sp. n., holotype, male: 11 = genitalia without phallic organ in left lateral view; 12 = IXth tergite, Xth segment, cerci, paraproct in dorsal view; 13 = coxopodite and harpago of the left gonopod in ventral view; 14 = phallic organ in lateral view

PSYCHOMYIIDAE

Lype reducta HAGEN, 1868 – Greece: Messinia prefecture, Kondovounia Mts, Aetos, karst spring in the village, 370 m, N37°14.587', E21°49.647', 5.IV.2009, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (1 male).

Psychomyia usitata MCLACHLAN, 1875 – Kazakhstan: Province Almaty, valley of River Ili, 20 km NNW of Kapchugay, 400 m, 77°00' E, 44°00' N, 18.VI.1996, leg. GY. FÁBIÁN & L. NÁDAI (9 males). Province Almaty, valley of River Ili, 20 km NNW of Kapchugay, 550 m, 77°00' E, 44°00' N, 31.VIII.1997, leg. A. OROSZ (6 males). Province Almaty, valley of River Ili, 20 km NNW of Kapchugay, 550 m, 77°00' E, 44°00' N, UV light trap 30–31.VIII.1997, leg. A. OROSZ (11 males).

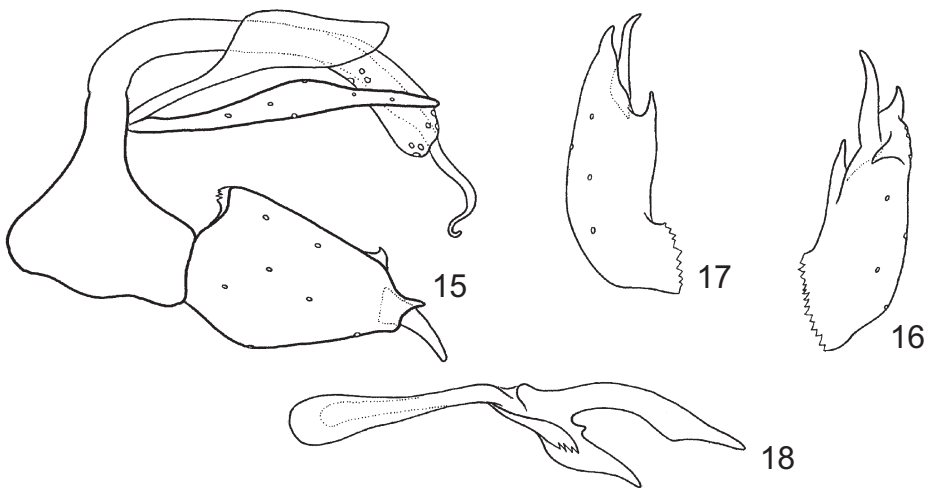
Tinodes andrasi sp. n.

(Figs 15–18)

Description – Male (in alcohol). Small medium brown animal. Sclerites medium brown, setal warts both on head and thorax somewhat lighter, grooves are dark. Appendages pale yellow. Maxillary palp formula is I-IV-II-III-V. Forewing length 4 mm, its membrane pale brown densely covered with hairs.

Male genitalia (Fig. 15). IXth abdominal segment represented by separate sternite and tergite; setaless tergite apron-shaped in dorsal view roofing directly middle phallic apparatus and dorsal paraproctal processes; subquadrangular sternite short and tall; its dorsal elongated apodemes connected to meet paired paraproctal processes and phallic organ rather tall; fulcrum complex where IXth tergite and sternite as well as cerci meeting located almost at middle of sternal apodeme. Vestigial membranous Xth segment frequently fused to IXth tergum not discernible at all. Cerci setose, elongated with narrower basal broad middle and very thin apical thirds. Paraproct is represented by a pair of broad dorsal paraproctal process embracing, almost tubing phallic organ; paraprocts armed with mega-setae housed in well-developed alveoli: 4–5 middle laterad on both sides, 5–6 subapical dorsal and 2–3 subapical ventral. Coxopodite of gonopods short and tall having apical margin with 3 spine-like processes: 1 dorsoapical, 1 subapical oriented anteromesad and 1 mesal oriented posterad; harpagones digitiform rooting mesally subapiad (Figs 16–17); basal plate of gonopods with long enlarged and clavate anterior apodeme; pair of dorsal posterad directed processes only slightly arching and with a ventral hump on midway (Fig. 18). Phallic apparatus weakly discernible as located inside paraproctal processes; its free S-forming apex with very thin ejaculatory duct (Fig. 15).

Type material – Holotype, male, HNHM. **Croatia:** Dubrovnik-Neretva county, Konavli Mts, Ljuta (near Gruda), Ljuta Stream at the Konaviski dvori watermill, 60 m, N42° 32.076', E18°22.610', 7.X.2008, leg. L. DÁNYI, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI.



Figs 15–18. *Tinodes andrasi* sp. n., holotype, male: 15 = genitalia without basal plate of the gonopod in left lateral view; 16 = coxopodite and harpago of the left gonopod in ventral view; 17 = coxopodite and harpago of the left gonopod in dorsal view; 18 = basal plate of the gonopods

Etymology – The name of this tiny *Tinodes* species was dedicated to ANDRÁS, the newly-born son of the collector, DÁVID MURÁNYI.

Diagnosis – This new species is close to the widely distributed *Tinodes rostocki* MCLACHLAN, 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; apicomeres short and blunt processes lacking; (5) dorsal pair of processes on basal plate low-arching, not hooked; (6) anterior apodeme of basal plate very enlarged and clavate.

Tinodes assimilis MCLACHLAN, 1865 – **France**: Mt. Mezenc, Borée, Massif Central, 44.908, 4.228, 1026 m, 15.VII.2007, leg. M. BÁLINT (1 male).

Tinodes braueri MCLACHLAN, 1878 – **Greece**: Messinia prefecture, Ag. Apostoli, stream E of the village, 415 m, N37°04.158', E21°47.275', 5.IV.2009, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (1 male, 2 females). – **Montenegro**: Bar municipality, Rumija Mts, Stari Bar, streams and their gallery towards V. Mikulići, 180 m, N42°06.028', E19°08.514', 14.X.2009, leg. L. DÁNYI, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (1 male).

Tinodes dives (PICTET, 1934) – **Italy**: Lombardia, Monasterolo Del Castello Bergamo, Val Torrezzo Ca Niverzoli, 500 m, 9.VII.2007, leg. M. BÁLINT, O. LODOVICI & M. VALLE (9 males, 5 females). – **France**: Belledune, Villard-Saint-Cristopher, 1100 m, 44.976, 5.813, 16.VII.2007, leg. M. BÁLINT (1 male, 2 females). La Condamine, Provence Alps, 1263 m, 44.451 6.741, 11.VII.2007, leg. M. BÁLINT (1 male). Western Alps, Saint-Philibert, Grande Chartreuse, 45.370 5.839, 1020 m, 15.VII.2007, leg. M. BÁLINT (23 males, 3 females).

Tinodes foedella MCLACHLAN, 1884 – **France**: Citou, Aude, 43.408, 2.591, 906 m, 14.VII.2007, leg. M. BÁLINT (3 males, 2 females).

Tinodes furcata LI & MORSE, 1997 – **Kazakhstan**: Province Almaty, valley of River Ili, 20 km NNW of Kapchugay, 550 m, 77°00' E, 44°00' N, 31.VIII.1997, leg. A. OROSZ (4 males, 4 females). Province Almaty, valley of River Ili, 20 km NNW of Kapchugay, 550 m, 77°00' E, 44°00' N, UV light trap 30–31.VIII.1997, leg. A. OROSZ (1 male).

Tinodes kimminsi SYKORA, 1962 – **Bulgaria**: Rodopi Mts. Batak-Dospat, 41.890 24.174, 1500 m, 2.VIII.2007, leg. N.-K. NAGY & M. BÁLINT (1 male, 1 female).

Tinodes maclachlani KIMMINS, 1966 – **France**: Citou, Aude, 43.408, 2.591, 906 m, 14.VII.2007, leg. M. BÁLINT (2 males).

Tinodes raina BOTOSANEANU, 1960 – **Albania**: Gramsh district, Gramsh, S edge of the city, light trap, N40°51.643', E20°11.303', 25.VIII.2006, leg. Z. FEHÉR, A. HUNYADI, T. HUSZÁR & D. MURÁNYI (1 male).

Tinodes rostocki MCLACHLAN, 1878 – **Albania**: Dibër district, Korab Mts, Radomirë, torrent E of the village, 1460 m, N41°49.131', E20°30.160', 26.VI.2007, leg. D. MURÁNYI (1 male, 2 females). Dibër district, Korab Mts, open stream above Fushë Korabit, 1945 m,

N41°49.215', E20°32.738', 28.VI.2007, leg. L. DÁNYI, Z. FEHÉR & D. MURÁNYI (16 males, 7 females). Korçë district, Vithkuq, gorge of the Osum River SW of the village, 1248 m, N40°32.268', E20°34.198', 27.V.2007, leg. Z. BARINA, Cs. NÉMETH & D. PIFKÓ (1 male, 1 female). – **Bosnia-Herzegovina**: Bistrica, Dobro Polje, 43.59483 18.49553, 12.VII.2008, leg. M. BÁLINT & S. LELO (1 male). – **Greece**: Ioannina prefecture, Kalpaki, Vellas Monasteri, karst spring, 420 m, N39°51.950', E20°37.435', 12.V.2006, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (2 males, 1 female).

Tinodes unicolor (PICTET, 1834) – **Italy**: Lombardia, Monasterolo Del Castello Bergamo, Val Torrezzo Ca Niverzoli, 500 m, 9.VII.2007, leg. M. BÁLINT, O. LODOVICI & M. VALLE (1 male). Lombardia, Solto Collina, Valle del Ferro, 500 m, 9.VII.2007, leg. M. BÁLINT, O. LODOVICI & M. VALLE (1 male).

Tinodes urdhva sp. n.

(Figs 19–22)

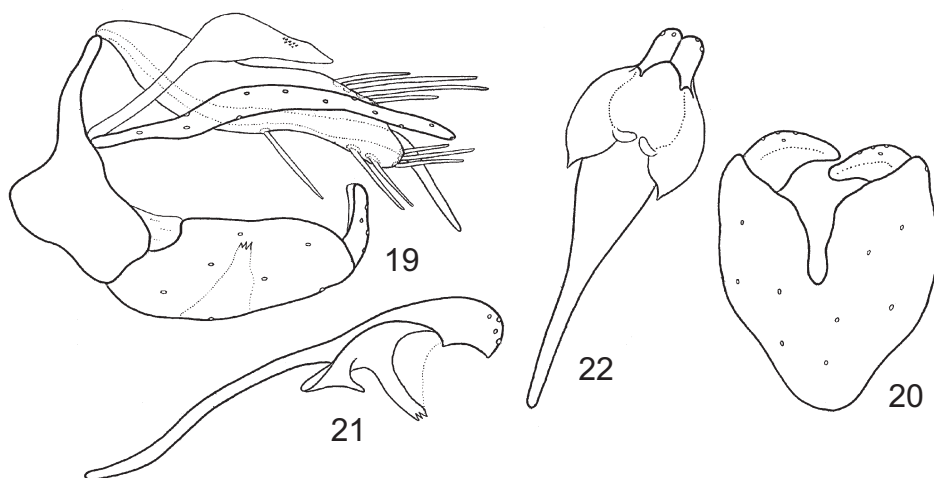
Description – Male (in alcohol). Small medium brown animal. Sclerites medium brown, setal warts both on head and thorax lighter. Grooves dark, cranial areas medium, warts light brown. Appendages pale yellow. Maxillary palp formula is I-IV-II-III-V. Forewing length 4.8 mm, its membrane pale brown densely covered with hairs.

Male genitalia (Fig. 19). IXth abdominal segment represented by separate sternite and tergite; setaless tergite apron-shaped in dorsal view roofing directly middle phallic apparatus and dorsal paraproctal processes; subquadrangular sternite with rounded ventroproximal angle; its dorsoapical angles forming elongated apodemes connected to meet paired paraproctal processes and phallic organ; fulcrum complex where IXth tergite and sternite as well as the cerci meeting located at start of sternal apodeme. Vestigial membranous Xth segment frequently fused to IXth tergum not discernible at all. Cerci setose, elongated as usual with narrower basal and broader middle thirds. Paraproct represented by a pair of broad dorsal paraproctal process shorter than cerci embracing, almost tubing the phallic organ; paraprocts armed with megasetae housed in well-developed alveoli: 1 middle ventral, 2–3 subapical ventral, 3–4 apical and 5–6 subapical dorsal. The coxopodite of the gonopods long oviform; harpagones simple monolobed, curving upward and mesad (Fig. 20); basal plate of gonopods with long anterior apodeme, horizontal middle flanks and capitate apices (Figs 21–22). Phallic apparatus weakly discernible located inside paraproctal processes and being in double cover of cercus and paraproct on both sides; its filiform sclerotized apex discernible besides membranous thin ejaculatory duct (Fig. 19).

Type material – Holotype, male, HNHM. **Albania**: Dibër district, Korab Mts, Radomirë, torrent E of the village, 1460 m, N41°49.131', E20°30.160', 26.VI.2007, leg. D. MURÁNYI.

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

Diagnosis – 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 Greese, 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.



Figs 19–22. *Tinodes urdhva* sp. n., holotype, male: 19 = genitalia without basal plate of the gonopod in left lateral view; 20 = fused coxopodites and the harpagones of the gonopod in ventral view; 21 = basal plate of the gonopods in lateral view; 22 = basal plate of the gonopods in ventral view

POLYCENTROPODIDAE

Holocentropus picicornis (STEPHENS, 1836) – **Turkey:** vil. Erzincan, Ganiefendi, Ciflik Köyü, 1200 m, 27–28.VI.1996, leg. A. PODLUSSÁNY (1 male).

Neureclipsis bimaculata (LINNAEUS, 1758) – **Kazakhstan:** Province Almaty, Chulisky Mt., 10 km NW Krasnogorka, 1250 m, 75°10' E, 43°20' N, 2.IX.1997, leg. A. OROSZ (1 male).

Plectrocnemia conspersa (CURTIS, 1834) – **Croatia**: Virovitica-Podravina county, Papuk Mts, Jankovac Spring, 455 m, N45°31.126', E17°41.198', 1.X.2007, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (1 male).

Plectrocnemia geniculata MCLACHLAN, 1871 – **France**: Provence Alps, Jausiers, 44.390, 6.776, 1500 m, 11.VII.2007, leg. M. BÁLINT (1 male).

Plectrocnemia smiljae MARINKOVIĆ, 1966 – **Bosnia-Herzegovina**: Kadino Selo, Mokro Krzulj Potok, 43.93168 18.64548, 12.VII.2008, leg. M. BÁLINT & S. LELO (1 male).

Plectrocnemia wui (ULMER, 1932) – **Kazakhstan**: Province Almaty, valley of River Ili, 20 km NNW of Kapchugay, 550 m, 77°00' E, 44°00' N, 31.VIII.1997, leg. A. OROSZ (2 males). Province Almaty, valley of River Ili, 20 km NNW of Kapchugay, 550 m, 77°00' E, 44°00' N, UV light trap 30–31.VIII.1997, leg. A. OROSZ (3 males).

Polycentropus irroratus (CURTIS, 1835) – **Greece**: Kavala prefecture, Proastio, Nestos River, E of the village, 30 m, N40°59.458', E24°44.579', 2.IV.2007, leg. L. DÁNYI, Z. ERŐSS, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (1 male).

Polycentropus mazdacus SCHMID, 1959 – **Turkey**: Vil. Artvin, Col Cancurtalan, 800 m, 1–2.VII.1996, leg. A. PODLUSSÁNY (1 male).

HYDROPSYCHIDAE

Diplectrona atra MCLACHLAN, 1878 – **Greece**: Lakonia prefecture, Taigetos Mts, Tripi, karst spring in the village, 500 m, N37°05.622', E22°20.879', 4.IV.2009, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (2 males, 2 females). – **Bosnia-Herzegovina**: Ozre Mt. Gornji Mociocim, Bukovik, N43.93133, E18.44922, 1440 m, 12.VII.2008, leg. M. BÁLINT & S. LELO (39 males, 4 females). – **Italy**: Lombardia, Monasterolo Del Castello Bergamo, Val Torrezzo Ca Niverzoli, 500 m, 9.VII.2007, leg. M. BÁLINT, O. LODOVICI & M. VALLE (2 males).

Diplectrona felix MCLACHLAN, 1878 – **France**: Citou, Aude, 43.408, 2.591, 906 m, 14.VII.2007, leg. M. BÁLINT (15 males). Mt. Mezenc, Borée, Massif Central, 44.908 4.228, 1026 m, 15.VII.2007, leg. M. BÁLINT (2 males).

Diplectrona vairyra SCHMID, 1959 – **Albania**: Ersekë district, Grammos Mts, Starje, valley of Alikolarë stream NW of Mt. Qukapeci, 1865 m, N40°21.677', E20°45.275', 19.VII.2006, leg. Z. BARINA, G. KIRÁLY, Cs. NÉMETH & D. PIFKÓ (3 males, NHMB). Tepelenë district, Tepelenë, Uji i Ftohtë (Cold Water Spring), 165 m, N40°15.011', E20°03.548', 12.X.2004, leg. Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (2 males).

Cheumatopsyche flavellata MEY, 2004 – **Iran**: Province Busher, 5 km S of Delvaz, 5–6.V.2001, leg. GY. FÁBIÁN (2 males). – **Turkey**: Province Hakkori, 30 km NE of Hakkori, 1500 m, 43°55'E, 37°41'N, 4.VII.2002, leg. B. BENEDEK & T. CSÖVÁRI (12 males). vil. Erzincan Ganiefendi, Ciflik Köyü 1200 m, 27–28.VI.1996, leg. A. PODLUSSÁNY (4 males).

Cheumatopsyche lepida (PICTET, 1934) – **Turkey**: Province Hakkâri, 30 km NE of Hakkâri, 1500 m, 43°55' E, 37°41' N, 4.VII.2002, leg. B. BENEDEK & T. CSÖVÁRI (2 males).

Cheumatopsyche persica MEY, 2004 – **Iran**: Province Busher, S-Zagros, Thang e Ram near Dalekhi, 400 m, 7–8.VI.2005, leg. P. GYULAI & A. GARAI (2 males).

Hydropsyche afghanistanica SCHMID, 1963 – **Pakistan**: Khanjan, 30.VIII.2001, leg. B. BENEDEK & G. RONKAY (1 male).

Hydropsyche angustipennis (CURTIS, 1834) – **Greece**: Florina prefecture, Agios Achillios, Prespa Lake, 860 m, N40°48.942', E21°05.075', 15.V.2006, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (2 males). Kavala prefecture, Nestos Delta, Nea Karia, channel E of the village, 5 m, N40°53.455', E24°44.406', 2.IV.2007, leg. L. DÁNYI, Z. ERÖSS, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (1 male).

Hydropsyche bulbifera MCLACHLAN, 1878 – **Bulgaria**: Burgas province, Strandcha Mts, Jasna Poljana, Ropotamo Stream and its shore vegetation N of the village, 30 m, N42°18.644', E27°37.428', 8.IV.2007, leg. L. DÁNYI, Z. ERÖSS, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (1 male). – **Greece**: Lamia, Sperchias, 38.878, 22.163, 185 m, 29.VII.2007, leg. M. BÁLINT (1 male). – **Iran**: Province Busher, 5 km S of Delvaz, 5–6.V.2001, leg. GY. FÁBIÁN (2 males). – **Spain**: Catalonia, Cabanelles, 800 m, Mare de Deu del Mont, 30.V.2001, leg. A. OROSZ (1 male).

Hydropsyche contubernalis iranica MALICKY, 1977 – **Turkey**: vil. Erzincan, Ganiefendi, Ciflik Köyü 1200 m, 27–28.VI.1996, leg. A. PODLUSSÁNY (2 males).

Hydropsyche cornuta MARTYNOV, 1909 – **Turkey**: Province Hakkâri, 30 km NE of Hakkâri, 1500 m, 43°55'E, 37°41'N, 4.VII.2002, leg. B. BENEDEK & T. CSÖVÁRI (1 male). vil. Erzurum, 12 km S of Tortum, 2100 m, 28.VI.1996, leg. A. PODLUSSÁNY (2 males).

Hydropsyche incognita PITSCH, 1993 – **Albania**: Skrapar district, Ostrovicë Mts, Backë, beneath the Frengu Peak, light trap, 1750 m, N40°31.314', E20°24.833', 20.VIII.2006, leg. Z. FEHÉR, A. HUNYADI, T. HUSZÁR & D. MURÁNYI (2 males). – **Iran**: Before Rast, 27.IX.2000, leg. B. HERCZIG (1 male, 2 females). Province Busher, 5 km S of Delvaz, 5–6.V.2001, GY. FÁBIÁN (31 males). – **Turkey**: Province Sivas, Gürün, 1500 m, 37°12' E, 38°45' N, 18–19.VI.1991, leg. CS. SZABÓKI (1 male).

Hydropsyche instabilis (CURTIS, 1834) – **Turkey**: Vil. Artvin, Col Cancurtalan, 800 m, 1–2.VII.1996, leg. A. PODLUSSÁNY (1 male).

Hydropsyche kebab MALICKY, 1974 – **Turkey**: Province Hakkâri, 30 km NE of Hakkâri, 1500 m, 43°55'E, 37°41'N, 4.VII.2002, leg. B. BENEDEK & T. CSÖVÁRI (2 males).

Hydropsyche kozhantschikovi MARTYNOV, 1924 – **Kazakhstan**: Province Almaty, Almatinsky Zapovednik, Issyk valley, 1800–2000 m, 77°30' E, 43°15' N, UV light trap, 21.VIII.1997, leg. A. OROSZ (8 males, 2 females). Province Almaty, Almatinsky Zapovednik, Issyk valley, 1800–2000 m, 77°30' E, 43°15' N, UV light trap, 22.VIII.1997, leg. A. OROSZ (11 males). Province Almaty, Kuluktau, Temerlik Mt., Kegen Pass, 1600 m, 79°20'E, 43°10'N, UV light trap, 25.VIII.1997, leg. A. OROSZ (19 males). Province Almaty, valley of River Ili, 20 km NNW of Kapchugay, 400 m, 77°00'E, 44°00'N, 18.VI.1996, leg. GY. FÁBIÁN & L. NÁDAI (5 males). Province Almaty, valley of River Ili, 20 km NNW of Kapchugay, 550 m, 77°00'E, 44°00'N, UV light trap 30–31.VIII.1997, leg. A. OROSZ (11 males).

Hydropsyche modesta NAVÁS, 1925 – **Albania**: Gramsh district, Gramsh, S edge of the city, light trap, N40°51.643', E20°11.303', 25.VIII.2006, leg. Z. FEHÉR, A. HUNYADI, T. HUSZÁR & D. MURÁNYI (2 males, 2 females). Skrapar district, Tomor Mts, Kulmak Pass, mountain grassland near the bektashi teqe, light trap, 1485 m, N40°37.116', E20°11.945', 23.VIII.2006, leg. Z. FEHÉR, A. HUNYADI, T. HUSZÁR & D. MURÁNYI (2 males, 2 females).

– **Bulgaria**, Pirin, Banska, 41.806 23.472, 1200 m, 1.VIII.2007, leg. L. UJVÁROSI & N.-K. NAGY (1 male).

Hydropsyche mostarensis Klapálek, 1898 – **Albania**: Skrapar district, Ostrovicë Mts, Backë, beneath the Frengu Peak, light trap, 1750 m, N40°31.314', E20°24.833', 20.VIII.2006, leg. Z. FEHÉR, A. HUNYADI, T. HUSZÁR & D. MURÁNYI (1 male).

Hydropsyche nuristanica Schmid, 1963 – **Pakistan**, Barseen, 28.VIII.2001, leg. B. BENEDEK & G. RONKAY (2 males). Kashmir, 30 km N of Murree, Anyubia, 2600 m, 10.viii.2001, leg. B. BENEDEK & G. RONKAY (1 male). Valley of Indus, 1100 m, Motel Barseen, 11.VIII.2001, leg. B. BENEDEK & G. RONKAY (6 males).

Hydropsyche pellucidula (Curtis, 1834) – **Greece**: Lamia, Sperchias, 38.878, 22.163, 185 m, 29.VII.2007, leg. M. BÁLINT (9 males).

Hydropsyche peristerica Botosaneanu et Marinković-Gospodnetić, 1966 – **Albania**: Dibër district, Korab Mts, Radomirë, torrent E of the village, 1460 m, N41°49.131', E20°30.160', 26.VI.2007, leg. D. MURÁNYI (1 male). Dibër district, Korab Mts, open stream above Fushë Korabit, 1945 m, N41°49.215', E20°32.738', 28.VI.2007, leg. L. DÁNYI, Z. FEHÉR & D. MURÁNYI (2 males). – **Greece**: Messinia prefecture, Egaleo Mts, Platanovrisi, stream W of the village, 400 m, N37°07.214', E21°47.925', 5.IV.2009, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (1 male). Messinia prefecture, Haravgi, Polilimnio, stream and its gorge S of the village, light trap, 290 m, N36°58.916', E21°51.036', 5.IV.2009, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (15 males, 24 females).

Hydropsyche poushyamittra Schmid, 1961 – **Pakistan**: Barseen, 28.VIII.2001, leg. B. BENEDEK & G. RONKAY (2 males).

Hydropsyche stimulans McLachlan, 1878 – **Kazakhstan**: Province Almaty, Alma-tinsky Zapovednik, Issyk valley, 1800–2000 m, 77°30' E, 43°15' N, UV light trap, 20–21.VII.1997, leg. A. OROSZ (1 male).

Hydropsyche tabacarui Botosaneanu, 1960 – **Albania**: Korçë district, Vithkuq, gorge of the Osum River SW of the village, 1250 m, N40°32.263', E20°34.153', 27.V.2007, leg. Z. BARINA, Cs. NÉMETH & D. PIFKÓ (1 male, 1 female).

Hydropsyche tenuis Navás, 1932 – **France**: Western Alps, Lalley, 44.732, 5.679, 1221 m, 16.VII.2007, leg. M. BÁLINT (3 males).

Hydropsyche vasoumittra Schmid, 1961 – **Pakistan**: Barseen, 28.VIII.2001, leg. B. BENEDEK & G. RONKAY (5 males). Hindukush Mts. 3 km W of Pingal, 19.VIII.2001, Karakoram Mts, 40 km N of Gilgit Juglat, 2400 m, 12.VIII.2001, leg. B. BENEDEK & G. RONKAY (5 males). Kashmir, Bubin, lower area, 17.VIII.2001, leg. B. BENEDEK & G. RONKAY (1 male). Kashmir, Deosai Mts, Bubin 3150 m, 13.VIII.2001, leg. B. BENEDEK & G. RONKAY (6 males). Kashmir, 30 km N of Murree, Anyubia, 2600 m, 10.VIII.2001, leg. B. BENEDEK & G. RONKAY (1 male). Khanjan, 30.VIII.2001, leg. B. BENEDEK & G. RONKAY (42 males). Valley of Indus, 1100 m, Motel Barseen, 11.VIII.2001, leg. B. BENEDEK & G. RONKAY (4 males).

Potamyia straminea McLachlan, 1875 – **Kazakhstan**: Province Almaty, valley of River Ili, 20 km NNW of Kapchugay, 550 m, 77°00' E, 44°00' N, 31.VIII.1997, leg. A. OROSZ (1 male).

RHYACOPHILIDAE

Himalopsyche todma SCHMID, 1963 – Pakistan: Kashmir, Bubin, lower area, 17.VIII.2001. leg. B. BENEDEK & G. RONKAY (2 males, 1 female). Kashmir, Deosai Mts, Bubin, 3300 m, 14.VIII.2001, leg. B. BENEDEK & G. RONKAY (2 males, 1 female).

Rhyacophila akutila sp. n.

(Figs 23–26)

Description – Male (in alcohol). Small-sized, medium brown animal with lighter appendages and light brown wing membrane. Maxillary palp formula I-II-V-IV-III. Abdominal tergites and sternites light spotted with rather large and less pigmented alveolar haloes. Forewing length 9 mm.

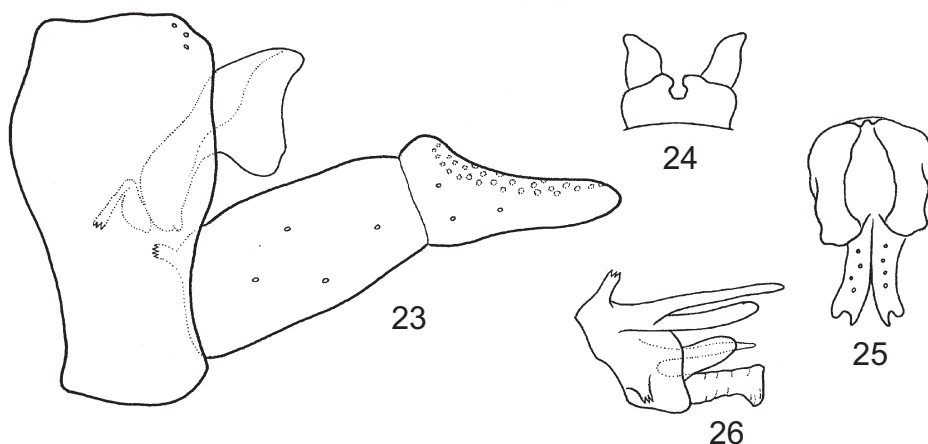
Male genitalia (Fig. 23). In lateral view IXth segment quadrangular, short and tall, ventral half shorter than dorsal; dorsoapical area with erect setae. Segment X composed of dorsal branch with subapical flaps and straight ventral branch (Figs 23, 25); in dorsal view apical excision pentagonal and subapical flaps laterad directed (Fig. 24); apices of ventral branch without anal sclerites, deeply bifid, its mesal lobe pointed; weakly discernible U-shaped paraproct shifted anterad at the apices of the ventral branch, its tergal band connecting paraproct to phallobase short. Cerci reduced. Ventrum of harpagones shorter than dorsum of coxopodites. Phallic apparatus consisting of very short phalotheca with phallobase (Fig. 26); dorsal processes of phalotheca composed of longer unpaired upper and less sclerotized slightly shorter lower lobes divided medially to its half; phallobase connected to U-shaped paraproct by median tergal band and by tenons (clasper hanger of ROSS) and tendons (clasper tendon of ROSS) to dorsobasal area of coxopodite; aedeagus (phallicata) with a more sclerotized digitiform dorsal process and less sclerotized, more robust ventral arm with hammer-shaped apex; a pair of membranous, weakly discernible blunt lateral arm or parameres shorter than dorsal processes.

Type material – Holotype, male, HNHM. **Bulgaria:** Sofia province, Rila Mts, Borovec, Prava Marica Stream at Zavratica 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.

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

Diagnosis – This new species belongs to the *R. tristis* species group. It is closest 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 pentagonal, 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.



Figs 23–26. *Rhyacophila akutila* sp. n., holotype, male: 23 = genitalia without phallic organ in left lateral view; 24 = Xth segment in dorsal view; 25 = Xth segment in caudal view; 26 = phallic organ in left lateral view

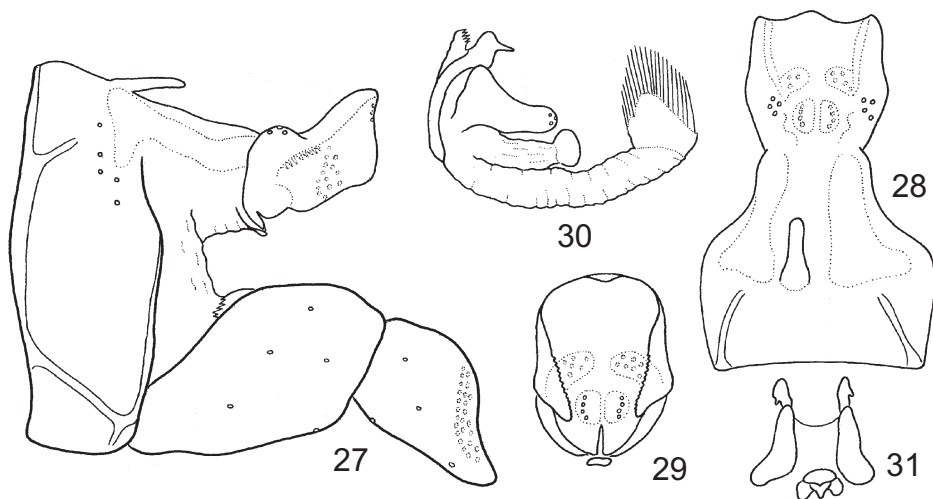
Rhyacophila aquitanica MCLACHLAN, 1879 – France: Lespinassière, Aude, 43.415, 2.533, 650 m, 14.VII.2007, M. BÁLINT (11 males, 2 females).

Rhyacophila balcanica RADOVANOVIĆ, 1953 – Bosnia-Herzegovina: Kadino Selo, Mokro Krzulj Potok, 43.93168 18.64548, 12.VII.2008, leg. M. BÁLINT & S. LELO (1 male). – Kosovo: Peć (Pejë) district, Novoselo (Novosellë), Beli Drim (Drinit te Bardhë) Spring, 580 m, N42°44.239', E20°18.408', 12.X.2005, leg. T. DELI, Z. ERÖSS, Z. FEHÉR & D. MURÁNYI (2 males, 1 female). – Montenegro: Kolašin municipality, Sinjajevina Mts, Gornji Lipovo, forest brook NW of the village, 1350 m, N42°53.829', E19°23.140', 11.X.2008, leg. L. DÁNYI, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (1 male).

Rhyacophila biegelmeieri MALICKY, 1984 – **Albania**: Tropojë district, Bajram Curri, Valbona River at the influence of Shijës Stream, S of the city, 220 m, N42°17.927', E20°01.731', 7.X.2005 leg. T. DELI, Z. ERŐSS, Z. FEHÉR & D. MURÁNYI (1 male, 2 females).

Rhyacophila bosnica SCHMID, 1970 – **Albania**: Tropojë district, Prokletije Mts, Tropojë, open stream on Mt. Callumit, 1970 m, N42°29.917', E20°07.466', 7.VII.2009, leg. Z. BARINA, G. LUNK, D. PIFKÓ & D. SCHMIDT (1 male).

Rhyacophila brevifurcata KUMANSKI, 1986 (Figs 27–31) – **Montenegro**: Šavnik municipality, Sinjajevina Mts, Boan, brook and its gorge E of the village, 1185 m, N42°55.616', E19°16.333', 10.X.2008, leg. L. DÁNYI, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (1 male). Kolašin municipality, Sinjajevina Mts, Bratkovicki Stream along the Podgorica–Bijelo Polje road, 560 m, N42°50.921', E19°20.069', 10.X.2008, leg. L. DÁNYI, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (1 male, 1 possible female associated). Kolašin municipality, Sinjajevina Mts, Gornji Lipovo, alpine grassland NW of the village, 1645 m, N42°54.181', E19°22.933', 11.X.2009, leg. L. DÁNYI, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (1 male). Kolašin municipality, Sinjajevina Mts, Gornji Lipovo, forest brook NW of the village, 1350 m, N42°53.829', E19°23.140', 11.X.2008, leg. L. DÁNYI, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (2 males).



Figs 27–31. *Rhyacophila brevifurcata* KUMANSKI, 1986, male: 27 = genitalia without phallic organ in left lateral view; 28 = Xth segment in dorsal view; 29 = Xth segment in caudal view; 30 = phallic organ in left lateral view; 31 = part of the phallic organ in dorsal view

Rhyacophila denticulifera KUMANSKI, 1986 – **Bulgaria**: Rylska River, light leg. 19.VIII.1984, leg. J. OLÁH (2 males). Sofia province, Rila Mts, Borovec, Marica hut, 1805 m, N42°11.407', E23°38.446', 13.VIII.2009, leg. D. MURÁNYI (1 male).

Rhyacophila dorsalis (CURTIS, 1834) – **France**: Massif Central, Lachapelle-Grail-louse, 44.817, 4.021, 1074 m, 15.VII.2007 leg. M. BÁLINT (1 male).

Rhyacophila fasciata HAGEN, 1859 – **Croatia**: Primorsko-goranska županija, Novi Vinodolski, 50–500 m, oak forest, netted with car at sunset, 22–27.VII.2006, leg. O. MERKL (1 male). – **Pakistan**: Kashmir, Bubin, lower area, 17.VIII.2001, leg. B. BENEDEK & G. RONKAY (14 males).

Rhyacophily hydasypica SCHMID, 1959 – **Pakistan**: Barseen, 28.VIII.2001, leg. B. BENEDEK & G. RONKAY (1 male, 1 female).

Rhyacophila intermedia MCLACHLAN, 1868 – **France**: Citou, Aude, 43.408, 2.591, 906 m, 14.VII.2007, leg. M. BÁLINT (4 males).

Rhyacophila kadaphes SCHMID, 1959 – **Pakistan**: Hindukush Mts, 5 km E of Shandur Pass, 3750 m, 21.VIII.2001, leg. B. BENEDEK & G. RONKAY (1 male). Karakoram Mts, 40 km N of Gilgit, Juglat, 2400 m, 12.VIII.2001, leg. B. BENEDEK & G. RONKAY (1 male). Kashmir, Bubin, lower area, 17.VIII.2001, leg. B. BENEDEK & G. RONKAY (1 male). Kashmir, Deosai Mts, Bubin, 3150 m, 13.VIII.2001, leg. B. BENEDEK & G. RONKAY (1 male). Kashmir, Deosai Mts, Bubin, 3300 m, 14.VIII.2001, leg. B. BENEDEK & G. RONKAY (1 male). Khanjan, 30.VIII.2001, leg. B. BENEDEK & G. RONKAY (1 male).

Rhyacophila kownackiana SZCZESNY, 1970 – **Bulgaria**: Stara Planina Mts, 42.791 24.377, 868 m, 4.VII.2007, leg. L. UJVÁROSI & M. BÁLINT (1 male).

Rhyacophila kumanskii SPURIS, 1988 – **Pakistan**: Kashmir, Bubin, lower area, 17.VIII.2001, leg. B. BENEDEK & G. RONKAY (5 males).

Rhyacophila laevis PICTET, 1834 – **Bosnia-Herzegovina**: Foča region, Zelengora, Tjentšte, sidebrook of the Sutjeska River above the settlement, 765 m, N43°17.372', E18°37.067', 9.V.2006, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (1 male).

Rhyacophila liutika sp. n.

(Figs 32–36)

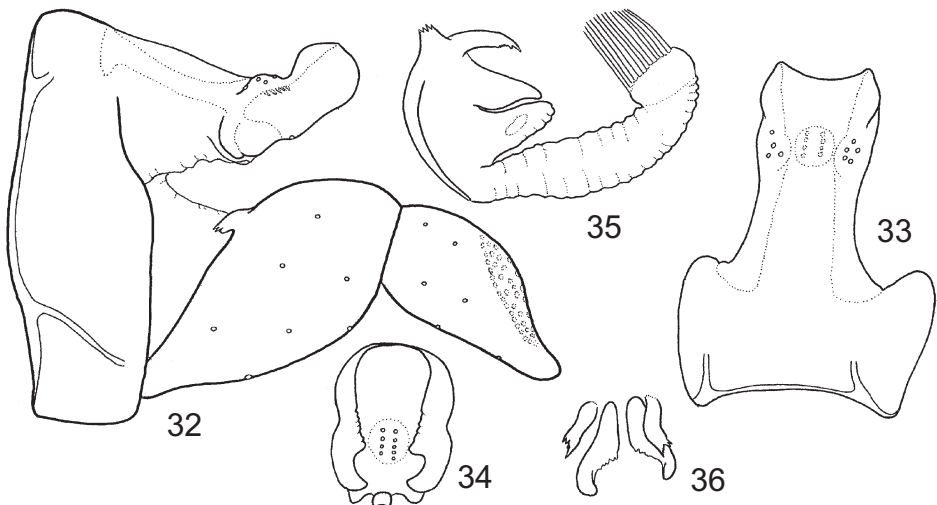
Description – Male (in alcohol). Small-sized, medium brown animal with lighter appendages and light brown wing membrane. Maxillary palp formula II-I-III-V-IV. Ventral surface of coxa on forelegs and midlegs spotted with darker brown regular circles around alveoli. Forewing length 7 mm.

Male genitalia (Fig. 32). In lateral view IXth segment quadrangular, short and tall, dorsomedian process, this apomorphic structure of this species complex lost; antecostal suture, external groove of antecosta having shorter dorsolateral and longer ventrolateral sutures. Segment X composed of horizontal basal and oblique distal parts; basal part enforced by two strongly sclerotized rods; distal part having balloon-shaped apex (Fig. 32); in caudal view two vertical spine lines visible located in regular circular area of deep apical concavity, possibly the vestigial anal sclerite or epiproct (Fig. 34); a small sclerite with long root at very ventral end of apical structure of segment X may represent vestigial U-shaped structure, paraproct (Fig. 32). Vestigial cerci as dorsal setose subapical humps present on basodorsum of oblique distal structure of Xth segment (Fig. 33). Ventrums of harpagones is

slightly longer than dorsum of coxopodites. Phallic apparatus consisting of very short phallosome, fused evertile membranous paramere and short and membranous aedeagus (phallicata); phallosome reduced to a short band of phallobase (Fig. 35); sclerotized U-shaped phallobase very short ventrad, little longer dorsad where two upper ends of U-shape fused to basodorsal part of coxopodites; basodorsal articulation where tenon of phallosome (clasper hanger at ROSS) and tendon of gonopod (clasper tendon of ROSS) meeting poorly discernible, however, continued both side into strongly sclerotized multipointed or serrated process (Fig. 36); a pair of dorsal processes with poorly discernible sclerotized connection to phallobase visible in caudal view with smooth mesad curving apical lobes and denticulated mesal angles.

Type material – Holotype, male, HNHM. **Macedonia**: Southeastern region, Belasica Mts, Kolešino, 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.

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



Figs 32–36. *Rhyacophila liutika* sp. n., holotype, male: 32 = genitalia without phallic organ in left lateral view; 33 = Xth segment in dorsal view; 34 = Xth segment in caudal view; 35 = phallic organ in left lateral view; 36 = part of the phallic organ in dorsal view

Diagnosis – This new species belongs to the species group of *R. stigmatica* and close to species described from the Carpathians (*R. furcifera*) and from various parts of the Balkan (*R. kownackiana* SZCZESNY, *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.

Rhyacophila loxias SCHMID, 1970 – **Albania**: Malësia district, Madhë Mts, Lepushë Stream along the Shkodër–Gushinjë road, 1080 m, N42°34.325', E19°44.395', 4.X.2005, leg. T. DELI, Z. ERÖSS, Z. FEHÉR & D. MURÁNYI (1 male). – **Bulgaria**: Pirin Mts Banska, 41.766 23.424, 1800 m, 31.VII.2007, leg. L. UJVÁROSI & M. BÁLINT (4 males).

Rhyacophila masula sp. n. (Figs 37–40)

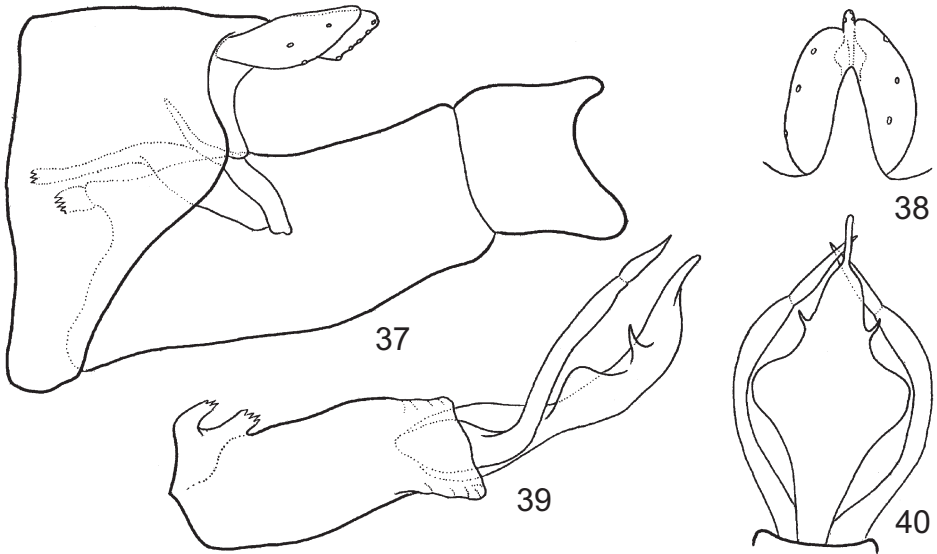
Description – Male (in alcohol). Medium-sized, light brown animal having light brown wing membrane marbled in darker brown. Maxillary palp formula II-I-IV-V-III. Forewing length 13 mm.

Male genitalia (Fig. 37). Ventrum of IXth segment strongly abbreviated; dorsal apical lobe short with pointing indistinct apex. Segment X L-shaped, its horizontal dorsal half narrow filiform in dorsal view (Fig. 38), higher in lateral view with obliquely truncate setose apex; epiproct (anal sclerite) elongated, heavily sclerotized with well-developed internal root; paraproct (U-shaped apical band) well-developed continuing into semi-sclerotized tergal strap connecting to phallobase. Cerci foliform in dorsal view and fused to segment X and to dorsal apical lobe of segment IX (Fig. 38). Harpagones bilobed, slightly excised. Phallic apparatus large; phallobase fixed to the paraproct by tergal strap without visible suture and to dorsobasal corner of coxopodites by tenons of phallosome (clasper hanger at ROSS) and tendons of gonopods (clasper tendon of ROSS) (Fig. 39); juncture or suture between tenon and tendon discernible; phallosome without dorsal process; endosoma visible as slightly sclerotized membranous apical area of the phallosome; a pair of upward and mesad curving parameres having apical black spine-like joint; aedeagus (phallicata) long and flat due to pair of well-developed lateral flanks, supplied with a pair of lateral subapical spines (Fig. 40); apex of aedeagus filiform.

Type material – Holotype, male, HNHM. **Iran**: Gilan Province, River Masula, 27.X.1990, leg. J. OLÁH.

Etymology – It is named for River Masula, where this species was collected.

Diagnosis – This new species belongs to the species group of *R. vulgaris*. It is closest to *R. forcipulata* MARTYNOV, 1929 described from Caucasus but differs by having (1) abbreviated dorsal apical lobe of IXth segment with indistinct apical ending both in dorsal and lateral view, not with distinct apical end; (2) apex of Xth segment filiform in dorsal view, not broad trifid; (3) fused cerci foliiform in dorsal view, not pottery form; (4) harpagones with short excision, not with long, (5) aedeagus with pairs of large lateral flanks and of lateral spines, not simple.



Figs 37–40. *Rhyacophila masula* sp. n., holotype, male: 37 = genitalia without phallic organ in left lateral view; 38 = Xth segment in dorsal view; 39 = phallic organ in left lateral view; 40 = aedeagus (phallicata) and parameres of the phallic organ in ventral view

Rhyacophila mocsaryi KLAPÁLEK, 1898 – **Bosnia-Herzegovina**: Bistrica, Dobro Polje, 43.59483, 18.49553, 12.VII.2008, leg. M. BÁLINT & S. LELO (1 male).

Rhyacophila morettina BOTOSANEANU, 1980 – **Bosnia-Herzegovina**: Drinjaca, small stream, 31.VIII.1988, singled, leg. J. OLÁH (36 males, 13 females). Jadar, small

stream, 6.IX.1988, singled, leg. J. OLÁH (6 males, 2 females). Neretva, small tributary, 14.IX.1989, singled, leg. J. OLÁH (12 males). Vucjaluka, 43.93393, 18.50159, 12.VII.2008, leg. M. BÁLINT & S. LELO (2 males). – **Serbia**: Drina, tributary, 12.IX.1989, singled, leg. J. OLÁH (17 males).

Rhyacophila nubila ZETTERSTEDT, 1840 – **Macedonia**: Pelagonia region, Pelister Mts, Brajcino, Brajcino Stream beneath the village, 985 m, N40°54.013', E21°09.363', 16.X.2006, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (1 male, male-female in copula). – **Turkey**: vil. Erzurum, 12 km S of Tortum, 2100 m, 28.VI.1996, leg. A. PODLUSSÁNYI (1 male).

Rhyacophila obliterate MCLACHLAN, 1863 – **Macedonia**: Southeastern region, Belasica Mts, Kolešino, 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 (1 male). Polog region, Korab Mts, Ničpur, Radika River N of the village, 975 m, N41°45.617', E20°40.183', 15.X.2006, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (5 males, 2 females).

Rhyacophila obscura MARTYNOV, 1927 – **Kazakhstan**: Province Almaty, Almatinsky Zapovednik, Issyk valley, 1800–2000 m, 77°30'E, 43°15'N, UV light trap, 20–21.VII.1997, leg. A. OROSZ (1 male). – **Pakistan**: Hindukush Mts. 5 km E of Shandur Pass, 3750 m, 21.viii.2001, leg. B. BENEDEK & G. RONKAY (1 male). Karakoram Mts, Chapurson valley, near Rhaminji, 2500 m, 27.VIII.2001, leg. B. BENEDEK & G. RONKAY (1 male). Kashmir, Bubin, lower area, 17.VIII.2001, leg. B. BENEDEK & G. RONKAY (5 males). Kashmir, Deosai Mts, Bubin, 3150 m, 13.VIII.2001, leg. B. BENEDEK & G. RONKAY (1 male).

Rhyacophila obtusa KLAPÁLEK, 1894 – **Bulgaria**: Sliven province, Stara Planina (Stidovska Planina), Gradec, brook and spring at the village, 5.IX.2005, leg. M. FÖLDVÁRI, J. KONTSCHÁN, D. MURÁNYI & T. SZÜTS (5 males). – **Greece**: Rodopi prefecture, Papikio Mts, Vronti, karst spring at the village (N of Kerasia), 445 m, N41°11.412', E25°17.752', 4.IV.2007, leg. L. DÁNYI, Z. ERŐSS, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (2 males). – **Macedonia**: Eastern region, Osogovski Planina, Kočani, mountain spring and creek on the S slope of Mt. Carev, 1750 m, N42°06.399', E22°25.716', 20.IX.2009, leg. Z. BARINA, L. SOMAY & G. PUSKÁS (1 male, 2 females) – **Turkey**: Kırklareli province, Istranca Mts, Alabalik Stream along the Pınarhisar-Demirköy road, 540 m, N41°44.667', E27°39.279', 6.IV.2007, leg. L. DÁNYI, Z. ERŐSS, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (1 male).

Rhyacophila palmeni MCLACHLAN, 1879 – **Greece**: Lamia, Sperchias, 38.878, 22.163, 185 m, 29.VII.2007, leg. M. BÁLINT (2 males).

Rhyacophila pendayica MALICKY, 1975 – **Greece**: Messinia prefecture, Egaleo Mts, Platanovrisi, stream W of the village, 400 m, N37°07.214', E21°47.925', 5.IV.2009, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (1 male). Messinia prefecture, Haravgi, Polilimnio, stream and its gorge S of the village, 290 m, N36°58.916', E21°51.036', 5.IV.2009, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (2 males, 1 female).

Rhyacophila polonica MCLACHLAN, 1879 – **Montenegro**: Plav municipality, Velika, forest torrent towards the Čakor Pass, 1475 m, N42°40.685', E19°59.779', 5.X.2005, leg. T. DELI, Z. ERŐSS, Z. FEHÉR & D. MURÁNYI (1 male).

Rhyacophila stigmatica (KOLENATI, 1859) – **Slovenia**: Podravska region, Pohorje Mts, Oplotnica, stream in a beech forest above the village, 9.VIII.2005, leg. D. MURÁNYI (1 male).

Rhyacophila torrentium PICTET, 1834 – **France**: Western Alps, Lalley, 44.732, 5.679, 1221 m, 16.VII.2007, leg. M. BÁLINT (2 males).

Rhyacophila trescavicensis BOTOSANEANU, 1960 – **Albania**: Shkodër district, Koman, right sidestream of the Koman Lake, 1.5 km upstream from the dam, 180 m, N42° 07.302', E19°49.882', 14.IV.2006, leg. Z. ERÖSS, Z. FEHÉR, A. HUNYADI & D. MURÁNYI (2 males, 1 female). Shkodër district, Lac-Qyrsac, brook in a macchia NE of the city, 115 m, N42°01.013', E19°39.636', 8.III.2008, leg. SZ. CZIGÁNY & D. MURÁNYI (1 male). Tropojë district, Prokletije Mts, Rrogam, spring system of the Valbona River, 1455 m, N 42°24.620', E19°49.366', 2.VI.2005, leg. K. BALOGH, Z. BARINA, D. MURÁNYI & D. PIFKÓ (8 males, 2 females). – **Bosnia-Herzegovina**: Foča region, Zelengora, Suha, forest spring above the settlement, 1110 m, 43°15.892', 18°35.595', 10.V.2006, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (1 male).

Rhyacophila tristis PICTET, 1934 – **Bulgaria**: Sofia province, Rila Mts, Kirilova Poljana, outlet stream of Smradlivo Lake, 2305 m, N42°07.498', E23°28.398', 6.IX.2005, leg. M. FÖLDVÁRI & D. MURÁNYI (3 males). – **Croatia**: Dubrovnik-Neretva county, Konavli Mts, Ljuta (near Gruda), Ljuta Stream at the Konaviski dvori watermill, 60 m, N42° 32.076', E18°22.610', 7.X.2008, leg. L. DÁNYI, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (1 male). – **Greece**: Serres prefecture, Kerkinii Mts, Ano Poroia, stream and spring in a platan forest, 510 m, N41°17.637', E23°02.187', 30.III.2007, leg. L. DÁNYI, Z. ERÖSS, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (1 male). – **Romania**: Bihor county, Padiş Mts, Statiunea Boga, Bazarul Someşului, 1200–1300 m, 17.VII.2006, leg. D. MURÁNYI (1 male). Bihor county, Padiş Mts, Statiunea Boga, Rece Spring, 1100 m, 15.VII.2006, leg. D. MURÁNYI (1 male, 1 female).

Rhyacophila tsurakiana MALICKY, 1984 – **Albania**: Përmet district, Nemerçkë Mts, Leushe, N slope of Mt. Poliçani NE of the Dhembël Pass, 660 m, N40°13.205', E20°21.388', 24.V.2006, leg. Z. BARINA, T. DELI & D. PIFKÓ (1 male).

Rhyacophila vranitzensis MARINKOVIĆ et BOTOSANEANU, 1967 – **Bosnia-Herzegovina**: Foča region, Zelengora, Tjentište, sidestream of the Sutjeska River in the settlement, 1110 m, 43°15.892', 18°35.595', 10.V.2006, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (1 male).

Rhyacophila vulgaris PICTET, 1834 – **France**: La Condamine, Provence Alps, 1263 m, 44.451, 6.741, 11.vii.2007, leg. M. BÁLINT (1 male). Western Alps, Lalley, 44.732, 5.679, 1221 m, 16.VII.2007, leg. M. BÁLINT (3 males). Western Alps, Lalley, 44.732, 5.679, 1221 m, 16.VII.2007, leg. M. BÁLINT (1 male). Western Alps, Saint-Philibert, Grande Chartreuse, 45.370, 5.839, 1020 m, 15.VII.2007, leg. M. BÁLINT (1 male).

GLOSSOSOMATIDAE

Agapetus arvernensis MALICKY, 1980 – **France**: Citou, Aude, 43.408, 2.591, 906 m, 14.VII.2007, leg. M. BÁLINT (5 males).

Agapetus iridipennis (MCLACHLAN, 1879) – **Montenegro**: Kolašin municipality, Ibristica Stream, 8.V.2007, leg. V. PEŠIĆ (1 male). – **Bosnia-Herzegovina**, Dobro Polje, 43.60129, 18.49049, 12.VII.2008, leg. M. BÁLINT & S. LELO (1 male). Ozre Mt., Gornji

Mociocim, Bukovik, N4393133, E18.44922, 1440 m, 12.VII.2008, leg. M. BÁLINT, S. LELO & B. LELO (4 males).

Agapetus kirgisorum MARTYNOV, 1927 – **Kazakhstan**: Province Almaty, Almatinsky Zapovednik, Almatynka valley at Kozmostan, 3200 m, 76°95' E, 43°05' N, 24.VIII.1997, leg. A. OROSZ (4 males, 4 females).

Agapetus laniger PICTET, 1834 – **Albania**: Librazhd district, Mirakë, Shkumbin River at Kamarë bridge, 190 m, N41°09.809', E20°13.821', 20.VIII.2006, leg. Z. FEHÉR, A. HUNYADI, T. HUSZÁR & D. MURÁNYI (1 male).

Catagapetus nigrans McLACHLAN, 1884 – **Italy**: Abruzzo region, Appenino Abruzzese, Gran Sasso d'Italia Mts, Prati di Tivo, spring below Monte Corno, 2.VIII.2005, leg. D. MURÁNYI (1 male).

Glossosoma ambhi SCHMID, 1959 – **Pakistan**: Kashmir, Deosai Mts, Bubin, 3150 m, 13.VIII.2001, leg. B. BENEDEK & G. RONKAY (1 male). Kashmir, Deosai Mts, Bubin, 3300 m, 14.VIII.2001, leg. B. BENEDEK & G. RONKAY (7 males).

Glossosoma capitatum MARTYNOV, 1913 – **Turkey**: Vil. Artvin, Col Cancurtalan, 800 m, 1–2.VII.1996, leg. A. PODLUSSÁNYI (1 male).

Glossosoma conformis NEBOISS, 1963 – **France**: Belledone, Villard-Saint-Cristopher, 1100 m, 44.976, 5.813, 16.VII.2007, leg. M. BÁLINT (1 male, 2 females). Western Alps, Saint-Philibert, Grande Chartreuse, 45.370, 5.839, 1020 m, 15.VII.2007, leg. M. BÁLINT (1 male).

Glossosoma kirke MALICKY, 2003 – **Greece**: Arkadia prefecture, Aroania Mts, Planitero, Aroanios (Ladon) Stream W of the village, 360 m, N37°55.985', E22°09.503', 7.IV.2009, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (2 males).

Glossosoma klotho MALICKY, 2003 – **Albania**: Delvinë district, Gjerë Mts, Muzinë, Syri i Kaltër (Blue Eye Spring), 155 m, N39°55.286', E20°11.330', 12.III.2008, Sz. CZIGÁNY & D. MURÁNYI (1 male, 1 female).

PTILOCOLEPIDAE

Ptilocolepus granulatus (PICTET, 1934) – **France**: Citou, Aude, 43.408, 2.591, 906 m, 14.VII.2007, leg. M. BÁLINT (2 males).

HYDROPTILIDAE

Agraylea sexmaculata CURTIS, 1834 – **Macedonia**: Pelagonia region, Oteševo, Prespa Lake S of the village, 850 m, N40°57.930', E20°54.352', 16.X.2006, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (2 males).

Hydroptila aegyptia ULMER, 1963 – **Turkey**: vil. Erzincan, Ganiefendi, Ciflik Köyü 1200 m, 27–28.VI.1996, leg. A. PODLUSSÁNYI (3 males).

Hydroptila angustata MOSELY, 1939 – **Greece**: Lamia, Sperchias, 38.878, 22.163, 185 m, 29.VII.2007, leg. M. BÁLINT (2 males).

Hydroptila phaon MALICKY, 1976 – **Greece**: Lamia, Sperchias, 38.878, 22.163, 185 m, 29.VII.2007, leg. M. BÁLINT (2 males).

Hydroptila vectis CURTIS, 1834 – **Greece**: Lamia, Sperchias, 38.878, 22.163, 185 m, 29.VII.2007, leg. M. BÁLINT (2 males).

APATANIIDAE

Apatania fimbriata (PICTET, 1934) – **France**: Massif Central, Mt. Mezene, 44.92, 4.18, 1538 m, 15.VII.2007, leg. M. BÁLINT (15 males).

Apatania kalariana SCHMID, 1961 – **Pakistan**: Deosai Mts. Bubin, 3150 m, 13.VIII.2001, leg. B. BENEDEK & G. RONKAY (2 males, 1 female). Kashmir, Bubin, lower area, 17.viii.2001, leg. B. BENEDEK & G. RONKAY (12 males, 3 females). Kashmir, Deosai Mts, Bubin, 3300 m, 14.VIII.2001, leg. B. BENEDEK & G. RONKAY (35 males, 7 females).

Apatania zonella ZETTERSTEDT, 1840 – **Kazakhstan**: Province Almaty, Altyn-Emel Mt., Altyn-Emel, 1700 m, 78°30' E, 44°10' N, 4–5.IX.1997, leg. A. OROSZ (18 males).

Apataniana pamirensis MEY et LEVANIDOVA, 1989 – **Kazakhstan**: Province Almaty, Altyn-Emel Mt., Altyn-Emel, 1700 m, 78°30' E, 44°10' N, 4–5.IX.1997, leg. A. OROSZ (1 male).

BRACHYCENTRIDAE

Brachycentrus americanus (BANKS, 1899) – **Mongolia**: Ulan Bator, light leg., 24.VI.2007, leg. G. RONKAY (1 male). – **Russia**: West Altai, R. Charish Pokrovka, light leg., 17–20.VII.1993, leg. Z. VARGA (8 males, 28 females). Central Altai, 20 km S of Ongoday, light leg., 3.VIII.1993, leg. Z. VARGA (18 males, 2 females).

Brachycentrus koslovi MARTYNOV, 1909 – **Pakistan**: Gupis, 2000 m, light trap. 20.VI.1992, leg. G. CSORBA & M. HREBLAY (30 males). Shandur, 3600 m, light leg. 21.VI.1992, leg. G. CSORBA & M. HREBLAY (3 males).

Brachycentrus montanus KLAPÁLEK, 1892 – **Albania**: Kukës district, Turaj, stream and its gorge along the Novoselë–Kolesjan road, 1450 m, N41°56.298', E20°33.480', 24.VI.2007, leg. L. DÁNYI, Z. ERÖSS, Z. FEHÉR, A. HUNYADI & D. MURÁNYI (8 males, 1 female).

Micrasema longulum MCLACHLAN, 1876 – **France**: Massif Central, Lachapelle-Grailhouse, 44.817, 4.021, 1074 m, 15.VII.2007, leg. M. BÁLINT (1 male).

Micrasema minimum MCLACHLAN, 1876 – **Albania**: Dibër district, Korab Mts, Radomirë, Radomirë Stream E of the village, 1445 m, N41°49.022', E20°30.022', 28.VI.2007, leg. L. DÁNYI, Z. FEHÉR & D. MURÁNYI (1 male). – **Slovenia**: Julian Alp, Radovna stream, 21.VI.1988, light leg. J. OLÁH (11 males, 16 females).

Micrasema moestum (HAGEN, 1868) – **France**: Pyreneus, River System Nivelles, 12–18.VII.1986, singled, leg. J. OLÁH (2 males).

Micrasema morosum (MCLACHLAN, 1868) – **Slovenia**: Julian Alp, Slava Boh. side stream, 24.VI.1988, singled, leg. J. OLÁH (12 males). Julian Alp, Soca valley, spring stream, 23.VI.1988, singled, leg. J. OLÁH (17 males, 16 females). – **Italy**, Lombardia, Monasterolo Del Castello Bergamo, Val Torrezzo Ca Niverzoli, 500 m, 9.VII.2007, leg. M. BÁLINT, O. LODOVICI & M. VALLE (6 males, 5 females).

Micrasema setiferum (PICTET, 1834) – **Slovenia**: Julian Alp, Slava Boh. side stream, 24.VI.1988, singled, leg. J. OLÁH (1 male).

GOERIDAE

Goera japonica BANKS, 1906 – **Kazakhstan**: Province Almaty, valley of River Ili, 20 km NNW of Kapchugay, 550 m, 77°00' E, 44°00' N, 31.VIII.1997, leg. A. OROSZ (5 males). – Resolution of taxonomic status of problematic goerid caddisflies from the Eastern Palearctic Region needs more material. In Kazakhstan we found five male specimens of *Goera japonica* BANKS that was considered to occur only in Japan and restricted locations along the mainland coast (GALL *et al.* 2007). The two males from Kazakhstan have typically divided appendages of the Xth segment and “japonica” structure of gonopods. The only difference discernible compared to the holotype drawing is the ventromesal lobe of IXth sternum that is more slender on specimens from Kazakhstan; however, its width seems not stable, it varies even between the two specimens examined.

Goera pilosa (FABRICIUS, 1775) – **Greece**: Sidirokastro, 41.274 23.427, 177 m, 31.VII.2007, leg. L. UJVÁROSI & M. BÁLINT (4 males).

Lithax incanus (HAGEN, 1859) – **Turkey**: Vil. Artvin, Col Cancurtalan, 800 m, 1–2.VII.1996, leg. A. PODLUSSÁNY (5 males, 3 females).

Silo nigricornis (PICTET, 1834) – **Croatia**: Dubrovnik-Neretva county, Konavli Mts, Ljuta (near Gruda), Ljuta Stream at the Konaviski dvori watermill, 60 m, N42°32.076', E18°22.610', 7.X.2008, leg. L. DÁNYI, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (1 male).

Silo piceus (BRAUER 1857) – **Albania**: Mat district, Mat River at Vashë Bridge, 360 m, N41°28.064', E20°06.283', 30.VI.2007, L. DÁNYI, Z. ERÖSS, Z. FEHÉR, A. HUNYADI & D. MURÁNYI (1 male). – **Macedonia**: Prov. Mak.Brod., Treska Valley, 4 km E of Manastirec, 3.VI.1998, leg. A. PODLUSSÁNY (1 male).

LEPIDOSTOMATIDAE

Crunoecia irrorata (CURTIS, 1834) – **France**: Citou, Aude, 43.408, 2.591, 906 m, 14.VII.2007, leg. M. BÁLINT (7 males).

Lepidostoma basale (KOLENATI, 1848) – **Albania**: Mat district, Mat River at Vashë Bridge, 360 m, N41°28.064', E20°06.283', 30.VI.2007, L. DÁNYI, Z. ERÖSS, Z. FEHÉR, A. HUNYADI & D. MURÁNYI (1 male).

Lepidostoma doehleri MALICKY, 1976 – **Greece**: Arkadia prefecture, Aroania Mts, Planitero, Planitero (Ladon) Springs in the village, 640 m, N37°55.985', E22°09.503',

7.IV.2009, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (1 male). Arkadia prefecture, Aroania Mts, Planitero, Aroanios (Ladon) Stream W of the village, 360 m, N37°55.985', E22°09.503', 7.IV.2009, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (1 male).

Lepidostoma inerme (MCLACHLAN, 1878) – **Pakistan**: Hindukush Mts. 5 km E of Shandur Pass, 3750 m, 21.VIII.2001, leg. B. BENEDEK & G. RONKAY (47 males, 9 females).

Lepidostoma itoae (KUMANSKI et WEAVER, 1992) – **Kazakhstan**: Province Almaty, valley of River Ili, 20 km NNW of Kapchugay, 550 m, 77°00' E, 44°00' N, UV light trap 30–31.VIII.1997, leg. A. OROSZ (2 males). – This species was described from Korea as closely related to and sympatric species of *Lepidostoma elongatum* (MARTYNOV, 1935) found together in the same habitat and at the same date in Korea.

Lepidostoma reductum (MARTYNOV, 1915) – **Kazakhstan**: Province Almaty, Almatinsky Zapovednik, Issyk valley, 1800–2000 m, 77°30' E, 43°15' N, UV light trap, 20–21.VII.1997, leg. A. OROSZ (15 males, 7 females).

***Lepidostoma yuechiorum* sp. n.**

(Figs 41–46)

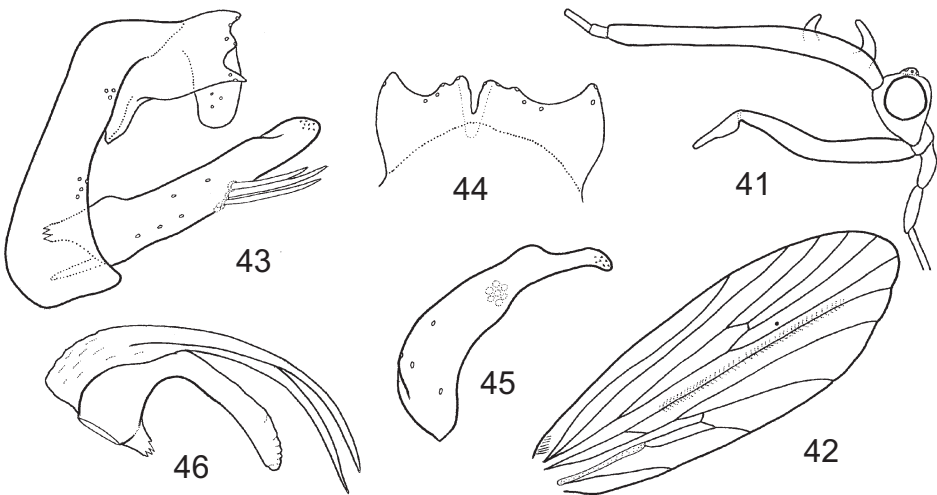
Description – Male (in alcohol). Small-sized dark brown animal. Forewing length only 6 mm; M unbranched; thyridial cell small, moved basad and enclosed by obliquely running crossvein m-cu; Fork V well developed; costal margin with extreme edge folded over and supplied with a tuft of elongated setae basad; median groove, furrow or rather a fold developed on M appears free of scales and its bottom covered with shorter setae compared to slope or margin of groove; anal groove much shorter and produced by coalescence of basal section of Cu2 and A; anal groove is not a fold, it is fused and thickened veins (Fig. 42). Two basomedian processes of scapes occupy only about one fourth of scape (Fig. 41).

Male genitalia (Fig. 43). IXth abdominal segment fused annular and short. Xth segment, cerci and paraproct fused into a complex embracing phallic organ dorsad; difficult to demarcate their boundaries; setose dorsolateral lobe, possible cerci trilobed both in dorsal and lateral view; mesal pair of vertical plates may represent part of Xth segment rather long and high in lateral view bearing some setae or setal alveoli; ventrolateral tip of fused complex, pair of rudimentary paraprocts more sclerotized turning mesad as narrow straps (Fig. 44). Gonopods long almost parallel-sided stout rod-like in lateral view with pronounced dorsosubapical hump, especially well visible in ventral view (Fig. 45); below this dorsal bump towards basad the setiferous area on ventral surface bearing 7–8 very particularly developed, stout megasetae; gonopods apex covered with microsetae (Fig. 43). Phallic organ accompanied by a pair of slender parameres (Fig. 46).

Type material – Holotype, male, HNHM. **Kazakhstan**: Province Almaty, Almatinsky Zapovednik, Issyk valley, 1800–2000 m, 77°30' E, 43°15' N, UV light trap, 20–21.VII.1997, leg. A. OROSZ (1 male).

Etymology – The name was given to remember the ancient Scythian inhabitants of the Heavenly Tian Shan Mountains, the *yuechi* Hun tribes, the ancestor of Kushans who established the great Kushan Empire in North and Middle India including Baktria, Gandhara and Malva during the 1st to 3rd centuries AD.

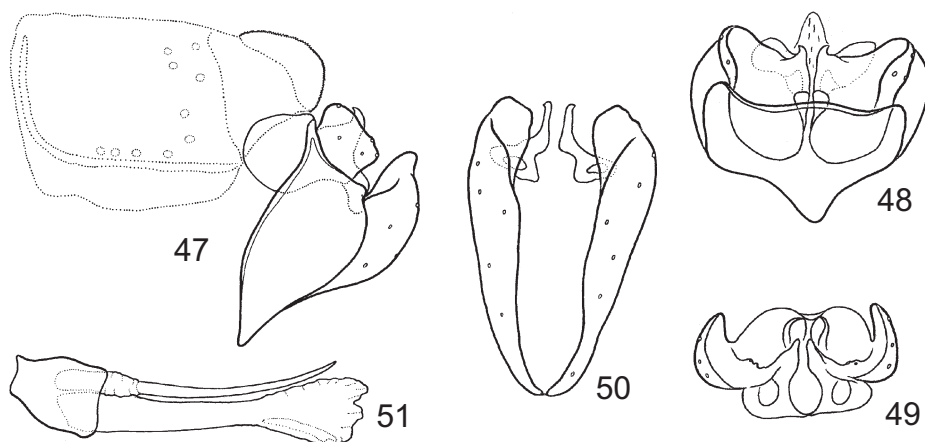
Diagnosis – This new species belongs to *Lepidostoma ferox* branch, but without pseudocells on forewing; most similar to *Lepidostoma nigrescens* (MEY et JUNG, 1989) described from Kirgizistan. The new species differs by having smaller size, discoidal cell much longer than its stalk on forewing, not shorter or equal; much shorter fork V on forewing, not reaching almost to wing base; the two basomedian processes on scape occupy only one fourth of the scape, not one third; cerci trilobed, its shortly bilobed mesal lobes produced posterad, as a result the pair of cerci together not straight or excised in dorsal view; gonopods with dorsosubapical hump and armed with very characteristic stout megasetae on ventral setiferous area.



Figs 41–46. *Lepidostoma yuechiorum* sp. n., holotype, male: 41 = head with appendages in left lateral; 42 = forewing venation; 43 = genitalia without phallic organ in left lateral view; 44 = Xth segment, cerci in dorsal view; 45 = left gonopod in ventral view; 46 = phallic organ in left lateral view

LIMNEPHILIDAE

Allogamus auricollis (PICTET, 1834) (Figs 47–51) – **Montenegro**: Berane municipality, Bjelasica Mts, Kurikuce, Suvoda Stream, 1170 m, N42°52.781', E19°44.467', 11.X.2008, L. DÁNYI, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (11 females). Plav municipality, Gusinje, Alipašini Springs, 935 m, N42°33.014', E19°49.486', 4.X.2005, leg. T. DELI, Z. ERÖSS, Z. FEHÉR & D. MURÁNYI (2 males, 1 female). Plav municipality, Prokletije Mts, Vusanje, Oko Spring and Grlja Stream, 1035 m, N42°30.704', E19°50.088', 12.X.2008, leg. L. DÁNYI, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (1 female). Šavnik municipality, Sinjajevina Mts, Boan, Bukavica Stream W of the village, 1005 m, N42°57.042', E19°10.410', 10.X.2008, leg. L. DÁNYI, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (1 female). Šavnik municipality, Vojnik Mts, Mokro, forest spring and its outlet brook at the village, 1060 m, N42°56.858', E19°05.463', 9.X.2008, leg. L. DÁNYI, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (3 males, 1 female).



Figs 47–51. *Allogamus auricollis* (PICTET, 1834), male: 47 = genitalia without phallic organ in left lateral view; 48 = IXth tergite, cerci, paraproct in dorsal view; 49 = IXth tergite, cerci, paraproct in caudal view; 50 = gonopods and paraprocts in ventrocaudal view; 51 = aedeagus (phallicata) and paramer of the phallic organ in left lateral view

Allogamus uncatus (BRAUER, 1857) – **Montenegro**: Plav municipality, Prokletije Mts, Vusanje, Oko Spring and Grlja Stream, 1035 m, N42°30.704', E19°50.088', 12.X.2008, leg. L. DÁNYI, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (1 male). Plav municipality, Velika, subalpine grassland towards the Čakor Pass, 1555 m, N42°40.001', E19°59.800',

5.X.2005, leg. T. DELI, Z. ERŐSS, Z. FEHÉR & D. MURÁNYI (1 male). Šavnik municipality, Vojnik Mts, Mokro, forest spring and its outlet brook at the village, 1060 m, N42°56.858', E19°05.463', 9.X.2008, leg. L. DÁNYI, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (1 male).

Annitella apfelbecki (KLAPÁLEK, 1899) – **Montenegro**: Kolašin municipality, Komovi Mts, Verusa, Tara River N of the village, 1135 m, N42°40.527', E19°31.375', 13.X.2008, leg. L. DÁNYI, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (7 males). Bijelo Polje municipality, Savino Polje, Bistrica River in the Đalovica Gorge, 610 m, N43°04.244', E19°51.687', 15.X.2008, leg. L. DÁNYI, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (7 males). Podgorica municipality, Žijovo Mts, inflow brook of the Rikavačko Lake near Katun Rikavač, 1325 m, N42°34.165', E19°36.150', 13.X.2008, leg. L. DÁNYI, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (1 male).

Annitella triloba MARINKOVIĆ-GOSPODNETIC, 1955 – **Albania**: Malësia district, Madhë Mts, Lepushë Stream along the Shkodër–Gushinjë road, 1080 m, N42°34.325', E19°44.395', 4.X.2005, leg. T. DELI, Z. ERŐSS, Z. FEHÉR & D. MURÁNYI (1 male, 1 female). Tropojë district, Prokletije Mts, Dragobi, gorge of the Thatë Stream at the village, 540 m, N42°26.184', E19°59.079', 6.X.2005, leg. T. DELI, Z. ERŐSS, Z. FEHÉR & D. MURÁNYI (1 male, 3 females). – **Montenegro**: Kolašin municipality, Sinjajevina Mts, Gornji Lipovo, alpine grassland NW of the village, 1645 m, N42°54.181', E19°22.933', 11.X.2009, leg. L. DÁNYI, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (1 male). Šavnik municipality, Treskavac Mts, Pošćenje (near Šavnik), Komarnica Stream above Kanjon Nevidio, 950 m, N42°59.298', E19°04.070', 10.X.2008, leg. L. DÁNYI, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (1 male).

Aplatyphylax eupalinus SCHMID, 1991 – **Kazakhstan**: Province Almaty, Dzhungar-Alatau, Koksul valley, 5 km NE Koksul, 1250 m, 78°55' E, 44°45' N, 6.IX.1997, leg. A. OROSZ (4 males, 1 female).

Astratodina inermis MOSELY, 1936 – **Kazakhstan**: Province Almaty, Altyn-Emel Mt., Altyn-Emel, 1700 m, 78°30' E, 44°10' N, 4–5.IX.1997, leg. A. OROSZ (4 males).

Astratodina mibirakula SCHMID, 1961 – **Pakistan**: Garam Chashma, 2600 m, 24.VI.1992, leg. G. CSORBA & M. HREBLAY (1 male). Gilgit, 1700 m, 29.V.1992, leg. G. CSORBA & M. HREBLAY (1 male). Karakoram Mts, 40 km N of Gilgit, Juglat, 2400 m, 12.VIII.2001, leg. B. BENEDEK & L. RONKAY (3 males). Naltar, 2900 m, 19.VI.1992, leg. G. CSORBA & M. HREBLAY (1 male). – This species was described by SCHMID (1961) and later its status confirmed (SCHMID 1991). IVANOV (1991) has synonymised as junior synonym of *Astratodina inermis* MOSELY. Based on material from various habitats in Pakistan, we found the male paraprocts (intermediate appendages) with dorsomesal process well visible in caudal view significantly differ from paraprocts of *A. inermis* without this dorsomesal process. The width and length may vary (IVANOV 1991), but we accept SCHMID's reconfirmation that this is a valid species due to its rounded shape of cerci and especially to the presence of well produced dorsomesal process on the paraprocts.

Chaetopteryx bosniaca MARINKOVIĆ-GOSPODNETIC, 1959 – **Macedonia**: South-eastern region, Ogražden Mts, forest brook at the Prevedena Pass, 1165 m, N41°33.960', E22°50.643', 18.X.2006, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (1 male). Pelagonia region, Pelister Mts, Nižepole, brooks in alpine grasslands and in beech forest around the sky course, 1375 m, N40°58.812', E21°15.165', 17.X.2006, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (1 male). – **Montenegro**: Šavnik municipality, Sinjajevina Mts, outflow

brook of a peatbog on the pass of the Šavnik–Kolašin road, 1585 m, N42°54.541', E19°16.271', 10.X.2008, leg. L. DÁNYI, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (2 males). – **Serbia:** Bor district, Đerdap Mts, Mosna, stream valley at the village, 100 m, N44°26.777', E22°10.633', 12.X.2006, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (6 males).

Chaetopteryx rugulosa mecsekensis NÓGRÁDI, 1986 – **Croatia:** Virovitica-Podravina county, Papuk Mts, Jankovac Spring, 455 m, N45°31.126', E17°41.198', 1.X.2007, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (6 males). – **Serbia:** Bor district, Đerdap Mts, Donji Milanovac, Grgeci Spring and its outlet brook above the city, 500 m, N44°28', E22°02', 13.X.2006, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (1 male, 1 female, male and female in copula.). Bor district, Đerdap Mts, Golubinje, stream valley N of the village, 90 m, N44°30.993', E22°12.692', 13.X.2006, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (6 males).

Chaetopteryx stankovici MARINKOVIĆ-GOSPODNETIC, 1966 – **Macedonia:** Pelagonia region, Pelister Mts, Brajčino, Brajčinska Stream beneath the village, 985 m, N40°54.133', E21°09.363', 16.X.2006, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (2 males, male and female in copula.). Pelagonia region, Pelister Mts, Nižepole, brooks in alpine grasslands and in beech forest around the sky course, 1375 m, N40°58.812', E21°15.165', 17.X.2006, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (1 male, 1 female). Pelagonia region, Pelister Mts, Nižepole, Sapunčica Stream above the village, 1255 m, N40°59.295', E21°14.793', 17.X.2006, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (1 male). – **Montenegro:** Plav municipality, Velika, forest torrent towards the Čakor Pass, 1475 m, N42°40.685', E19°59.779', 5.X.2005, leg. T. DELI, Z. ERÖSS, Z. FEHÉR & D. MURÁNYI (1 male).

Ecclisopteryx guttulata (PICTET, 1834) – **Italy:** Vinadio, Alps, 44.305, 7.171, 1200 m, 11.VII.2007, leg. N.-K. NAGY & M. BÁLINT (1 male, 1 female).

Drusus aprutiensis (MORETTI, 1981) – **Italy:** Abruzzi, Appenino Abruzzese, Mts Gran Sasso d'Italia, Pagánica, Vera springs, 3.VIII.2005, leg. D. MURÁNYI (1 male).

***Drusus arbanios* sp. n.**

(Figs 52–55)

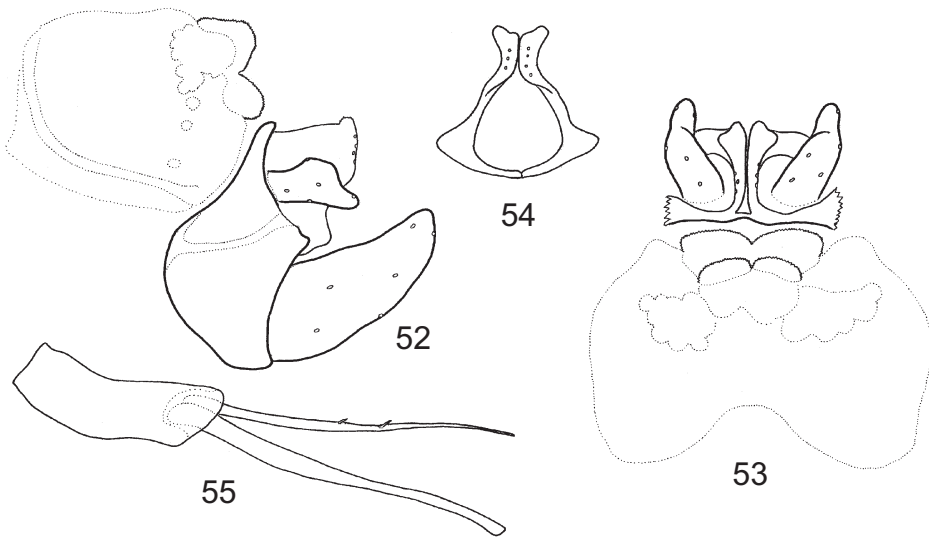
Description – Male (in alcohol). Dark castaneous; cephalic and thoracic sclerites dark, almost shining ebony black brown especially on the dorsum; cephalic and thoracic setose warts pale brown; appendages including legs except coxa lighter brown, haustellum and intersegmental membranous teguments whitish. Maxillary palp formula I-II-III. Spurs of male 1.3.3. Forewing length 8 mm.

Male genitalia (Fig. 52). Posterodorsal black spinate area on tergite VIII not extended posteriorly, four-lobed, stepped and armed with specialized peg-like setae discernible both in lateral and dorsal view; both lower and upper lobes subdivided mesally; less pigmented irregularly shaped area of fused setal alveoli located anteriorly of black spinate area visible both in lateral and dorsal view. Segment IX short ventrally, very short strap or bridle-like dorsally; its lateral length elongated by rounded lobe anteriorly; midlateral sclerotized strips of sternite IX triangular and directed mesad between gonopods and cerci; vestige of sternal abdominal lateral suture of fused IX segment well developed. Xth

segment fused to IXth tergite forming together short dorsal bridle. Cerci bilobed in lateral view; dorsal lobe quadratic, ventral lobe subtriangular and slender. Paraproctal complex forming a closed structure around anal opening by inner and outer branches (Figs 53–54); inner branches forming an upward directed narrow vertical plate quadratic in lateral view with a small dorsoapical wart only; in caudal view with dorsal apices slightly diverting laterad; their upper surface covered with pointed peg-like modified setae similarly to surface of posterodorsal spinate area of VIIIth tergite, exhibiting anchor function during copula; outer branches of paraproct spread laterad triangularly. Gonopods upward arching, broad triangular large lobe like in many other species populating various valleys in the Balkan Mountains. Aedeagus and parameres slender, parameres having two small spines far from each other on midway (Fig. 55).

Type material – Holotype, male, HNHM. **Albania**: Skrapar district, Ostrovicë Mts, Backë, stream beneath the pass between Mt. Frengu and Mt. Faqekuq, 1915 m, N40° 31.614', E20°25.021', 4.VII.2005, leg. Z. BARINA, D. PIFKÓ & D. SCHMIDT.

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



Figs 52–55. *Drusus arbanios* sp. n., holotype, male: 52 = genitalia without phallic organ and with dotted contour of VIIIth tergite with spinate lobes in left lateral view; 53 = dotted contour of VIIIth tergite with spinate lobes, IXth tergite, cerci, paraproct in dorsal view; 54 = paraproct in caudal view; 55 = aedeagus (phallicata) and paramer of the phallic organ in left lateral view

Diagnosis – 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.

Drusus biguttatus (PICTET, 1834) – **Slovenia**: Julian Alp, Radovna stream, 22.VI.1988, singled, leg. J. OLÁH (17 males, 6 females).

Drusus botosaneanui KUMANSKI, 1968 – **Albania**: Dibër district, Korab Mts, open stream above Fushë Korabit, 1945 m, N41°49.215', E20°32.738', 28.VI.2007, leg. L. DÁNYI, Z. FEHÉR & D. MURÁNYI (2 males, 1 female). Ersekë district, Grammos Mts, Starje, Alikorlarë Stream NW of Mt. Qukapeci, 1865 m, N40°21.677', E20°45.275', 19.VII.2006, leg. Z. BARINA, G. KIRÁLY, Cs. NÉMETH & D. PIFKÓ (1 male). Skrapar district, Ostrovicë Mts, Backë, stream beneath the pass between Mt. Frengu and Mt. Faqekuq, 1915 m, N40°31.614', E20°25.021', 4.VII.2005, leg. Z. BARINA, D. PIFKÓ & D. SCHMIDT (5 males, 2 females).

***Drusus dacothracus* sp. n.**

(Figs 56–59)

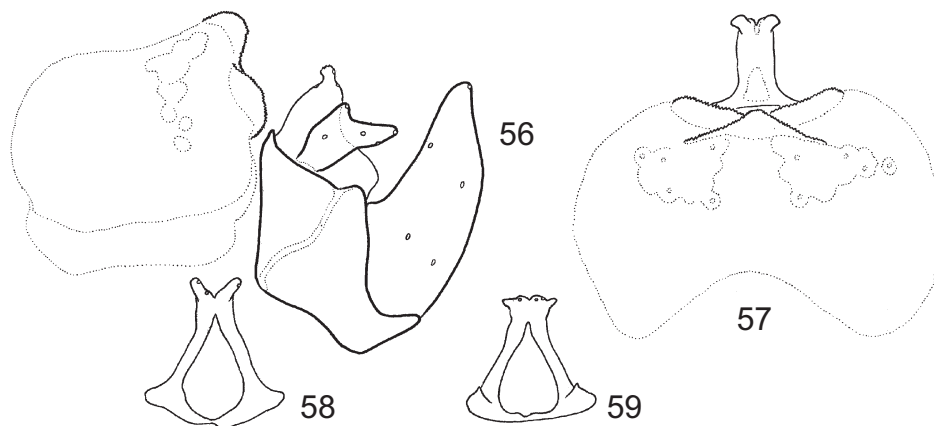
Description – Male (in alcohol). Black species; cephalic and thoracic sclerites dark, black especially on dorsum; appendages including legs brown, haustellum and intersegmental membranous teguments whitish. Spurs of male 1.3.3. Forewing length 11 mm.

Male genitalia (Fig. 56). Posterodorsal black spinate area on tergite VIII three-lobed in dorsal view (Fig. 57) and stepped in lateral view; armed with specialized peg-like setae discernible both in lateral and dorsal view; upper spinate lobe narrow in dorsal view; two patches of less pigmented irregularly shaped area of fused setal alveoli located anteriorly of black spinate area. Segment IX very long ventrally, very short bridle-like dorsally; its lateral length elongated by rounded triangular lobe anteriorly; midlateral sclerotized strips of sternite IX triangular and directed mesad; vestige of sternal lateral suture of fused IXth segment well-developed without middle fork. Xth segment fused to IXth tergite forming together short dorsal bridle. Cerci are triangular and bilobed in lateral view; dorsal lobe short triangular; ventral lobe long triangular. Paraproctal complex forming a closed structure around anal opening by inner and outer branches; upward directed slender dorsal apices of inner branches narrow and diverting laterad both in dorsal and caudal view (Figs 58–59); their upper surface covered with pointed peg-like modified setae similar to surface of posterodorsal spinate area of VIIIth tergite, exhibiting anchor function during copula; outer

branches of paraproct spread laterad triangularly. Gonopods upward arching, broad triangular large lobe like in many other species populating various areas in the Balkan Mountains. Aedeagus and parameres slender; parameres with small spine located dorsad on apical third.

Type material – Holotype male, HHNM. **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, HHNM. **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. ERŐSS, 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. ERŐSS & 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).

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.



Figs 56–59. *Drusus dacothracus* sp. n., holotype, male: 56 = genitalia without phallic organ and with dotted contour of VIIIth tergite with spinate lobes in left lateral view; 57 = dotted contour of VIIIth tergite with spinate lobes, IXth tergite, paraproct in dorsal view; 58 = paraproct in caudal view; 59 = paraproct in ventrocaudal view

Diagnosis – This dark species belongs to the species complex with large upward arching triangular gonopods and triangular or bilobed cerci inhabiting the Balkan Mountains. It is closest 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 without middle fork, not with well-developed middle ventral branch; (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.

Drusus discolor (RAMBUR, 1842) – **Poland**: Gorce Mts, Kamienica stream, 26.VI.1985, singled, leg. J. OLÁH (3 males). – **Slovenia**: Julian Alp, Radovna stream, 22.VI.1988, singled, leg. J. OLÁH (1 male).

Drusus discophorus pallidus KUMANSKI, 1988 – **Bulgaria**: Blagoevgrad province, Rila Mts, Jakoruda, sidebrook of the Ropalica Stream beneath the Grāničar mountain hut, 2100 m, 7.IX.2005, leg. M. FÖLDVÁRI, J. KONTSCHÁN, D. MURÁNYI & T. SZÜTS (1 male). Sofia province, Rila Mts, Borovec, spring of the Prava Marica Stream beneath Mt. Zavratica, 2520 m, N42°09.647', E23°37.270', 8.IX.2005, leg. M. FÖLDVÁRI & D. MURÁNYI (1 male). Sofia province, Rila Mts, Borovec, sidetorrent of Prava Marica Stream beneath Zavratica hut, 2030 m, N42°10.652', E23°38.438', 13.VIII.2009, leg. D. MURÁNYI (2 males).

Drusus franzressli MALICKY, 1974 – **Greece**: Phocis prefecture, Vargiani, springs and torrent in the village, 970 m, N38°38.499', E22°25.515', 8.IV.2009, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (1 male).

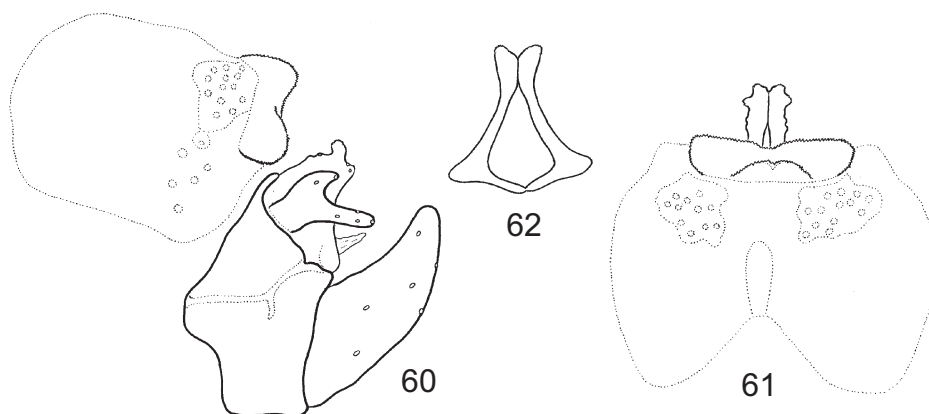
***Drusus illyricus* sp. n.**

(Figs 60–62)

Description – Male (in alcohol). Dark castaneous; cephalic and thoracic sclerites dark, almost black especially on 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 14 mm.

Male genitalia (Fig. 60). Posterodorsal black spinate area on tergite VIII slightly extended posteriorly, three-lobed, stepped and armed with specialized peg-like setae discernible both in lateral (Fig. 60) and dorsal view (Fig. 61); less pigmented irregularly shaped area of fused setal alveoli located anteriorly of black spinate area. Segment IX very long ventrally, very short bridle-like dorsally; its lateral length elongated by rounded triangular lobe anteriorly; midlateral sclerotized strips of sternite IX triangular and directed mesad;

vestige of sternal lateral suture of fused IXth segment well developed with middle fork. Xth segment fused to IXth tergite forming together short dorsal bridle. Cerci triangular and bilobed in lateral view; dorsal lobe broad based with tapering and downcurving apex, ventral lobe slender and longer. Paraproctal complex forming a closed structure around anal opening by inner and outer branches; upward directed obtuse dorsal apices of inner branches short and diverting laterad both in dorsal and caudal view (Fig. 62); their upper surface covered with pointed peg-like modified setae similarly to surface of posterodorsal spinate area of VIIIth tergite, exhibiting anchor function during copula; outer branches of the paraproct spreaded laterad triangularly. Gonopods upward arching, broad triangular large lobe like in many other species populating various areas in the Balkan Mountains. Aedeagus and parameres slender.



Figs 60–62. *Drusus illyricus* sp. n., holotype, male: 60 = genitalia without phallic organ and with dotted contour of VIIIth tergite with spinate lobes in left lateral view; 61 = dotted contour of VIIIth tergite with spinate lobes, paraproct in dorsal view; 62 = paraproct in caudal view

Type material – 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.

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.

Diagnosis – 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 pelagus* 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.

Drusus klapaleki MARINKOVIĆ-GOSPODNETIC, 1970 – **Bosnia-Herzegovina**: Jablanica, spring stream, 4.IX.1988, singled, leg. J. OLÁH (3 males, 1 female).

Drusus krusniki MALICKY, 1981 – **Albania**: Tropojë district, Prokletije Mts, Tropojë, open stream on Mt. Callumit, 1970 m, N42°29.917', E20°07.466', 7.VII.2009, leg. Z. BARINA, G. LUNK, D. PIFKÓ & D. SCHMIDT (3 males). – **Kosovo**, Peć (Pejë) district, Novoselo (Novosellë), Beli Drim (Drinit te Bardhë) Spring, 580 m, N42°44.239', E20° 18.408', 12.X.2005, leg. T. DELI, Z. ERÖSS, Z. FEHÉR & D. MURÁNYI (2 males, 1 female). – **Montenegro**: Plav municipality, Gusinje, Alipašini Springs, 935 m, N42°33.014', E19°49.486', 4.X.2005, leg. T. DELI, Z. ERÖSS, Z. FEHÉR & D. MURÁNYI (5 males). Kolašin municipality, Sinjajevina Mts, Gornji Lipovo, alpine grassland NW of the village, 1645 m, N42°54.181', E19°22.933', 11.X.2009, leg. L. DÁNYI, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (1 male).

***Drusus muranyorum* sp. n.**

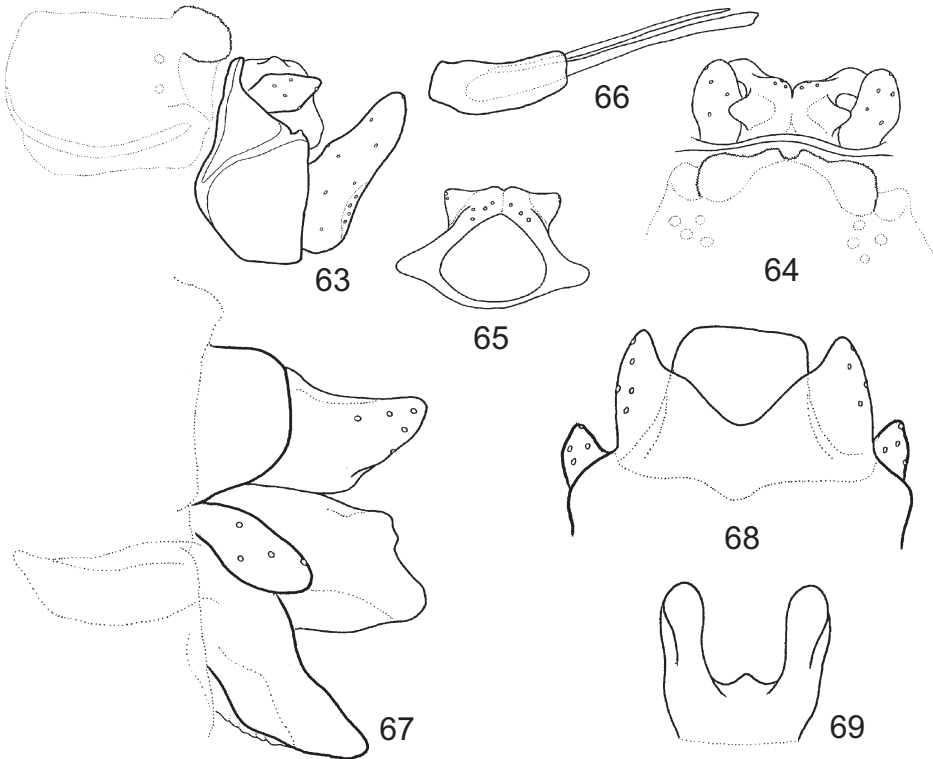
(Figs 63–69)

Description – Male (in alcohol). Cephalic and thoracic sclerites castanean dark, almost black especially on dorsum; cephalic and thoracic setose warts brown; legs except coxa and proximal portion of femur lighter brown, haustellum and intersegmental membranous teguments, including abdominal pleurites light. Spurs of male 1.3.3. Forewing length 9 mm.

Male genitalia (Fig. 63). Posterodorsal black spinate area on tergite VIII bilobed armed with specialized peg-like setae discernible both in dorsal view (Fig. 64); two lateral lobe separated by wide less armed and depigmented mesal area with apicomeres small excision; behind lateral spinate lobes 4–5 setal alveoli present with light rounded hollow. Segment IX long ventrally, very short bridle-like dorsally (Fig. 63); its lateral length elongated by rounded triangular lobe anteriorly; midlateral sclerotized strips on posterior margin of sternite IX small and directed mesad articulating somehow to lateroventral angle of paraproctal complex; vestige of sternal lateral suture of fused IXth segment well developed continuous to antecostal suture. Xth segment fused to IXth tergite forming together the short dorsal bridle. Cerci are subquadrangular in lateral view. Paraproctal complex forming a closed structure around anal opening by inner and outer branches; the upward directed broad and fused dorsal apices of inner branches diverting laterad both in dorsal and caudal view (Fig. 65); their tip armed with 3–4 black setae laterad; outer branches of

paraproct spread ventrolaterad triangularly. Gonopods slightly S-shaped with basoventral heel. Aedeagus and parameres slender, parameres simple filiform (Fig. 66).

Female genitalia. Segment IX short, its lateral setose lobes downcurved foliform in lateral (Fig. 67) and triangular in dorsal view (Fig. 68). Segment X characterized by deep triangular excision apicomesally, forming two lateral lobes of triangular shape both in lateral (Fig. 67) and dorsal view (Fig. 68). Supragenital plate well-developed and quadrangular both in lateral (Fig. 67) and dorsal view (Fig. 68). Median lobe of the vulvar scale vestigial, reduced to a small triangular process in ventral view (Fig. 69).



Figs 63–65. *Drusus muranyorum* sp. n., holotype, male: 63 = genitalia without phallic organ and with dotted contour of VIIIth tergite with spinate lobes in left lateral view; 64 = dotted contour of VIIIth tergite with spinate lobes, IXth tergite, cerci, paraproct in dorsal view; 65 = paraproct in caudal view; 66 = aedeagus (phallicata) and paramer of the phallic organ in left lateral view. – **Figs 67–69.** *Drusus muranyorum* sp. n., female: 67 = genitalia in left lateral view; 68 = genitalia in dorsal view, 69 = vulvar scale in ventral view

Type material – Holotype male, HNHM. **Greece:** Rodopi prefecture, Sapka Mts, Nea Sanda, torrent in an oak forest, E of the village, 650 m, N41°07.672', E25°53.223', 4.IV.2007, leg. L. DÁNYI, Z. ERÖSS, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI. Paratypes, HNHM. **Greece:** Rodopi prefecture, Sapka Mts, Nea Sanda, torrent in an oak forest, E of the village, 650 m, N41°07.672', E25°53.223', 4.IV.2007, leg. L. DÁNYI, Z. ERÖSS, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (5 females).

Etymology – The name was given for the collectors DÁVID MURÁNYI and his wife SZILVIA CZIGÁNY, who made together extensive collectings around alpine springs and streams on the Balkan.

Diagnosis – 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.

***Drusus pelasgus* sp. n.**

(Figs 70–73)

Description – Male (in alcohol). Dark castaneous; cephalic and thoracic sclerites dark, almost shining ebony black especially on dorsum; cephalic and thoracic setose warts pale 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 10 mm.

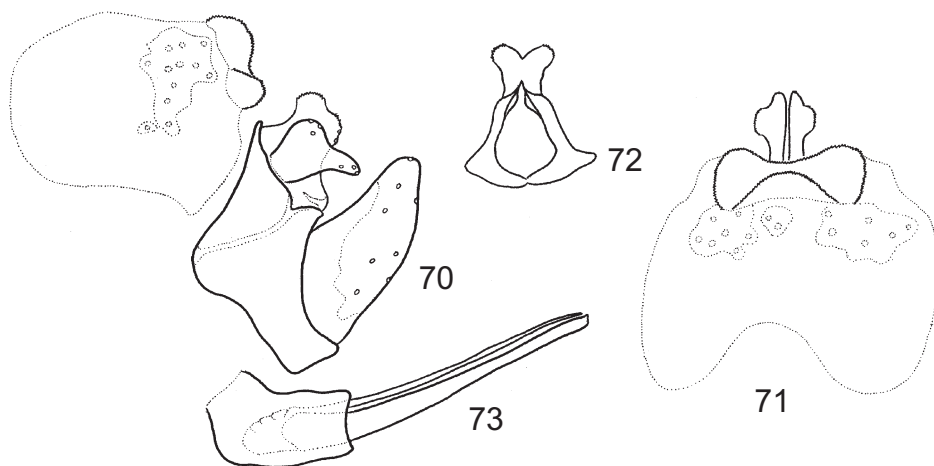
Male genitalia (Fig. 70). Posterodorsal black spinate area on tergite VIII slightly extended posteriorly, three-lobed, stepped and armed with specialized peg-like setae discernible both in lateral and dorsal view (Fig. 71); less pigmented irregularly shaped area of fused setal alveoli located anteriorly of black spinate area visible both in lateral and dorsal view. Segment IX long ventrally, very short strap or bridle-like dorsally; its lateral length elongated by rounded triangular lobe anteriorly; midlateral sclerotized strips of sternite IX triangular and directed mesad; vestige of sternal abdominal lateral suture of the fused IX segment well developed (Fig. 70). Xth segment fused to IXth tergite forming together short dorsal bridle. Cerci triangular and bilobed in lateral view; dorsal lobe broad short, ventral lobe slender and longer. Paraproctal complex forming a closed structure around anal opening by inner and outer branches; upward directed obtuse dorsal apices of inner branches stepped in lateral view and diverting laterad both in dorsal and caudal view (Fig. 72); their upper surface covered with pointed peg-like modified setae similar to surface of postero-

dorsal spinate area of VIII tergite, exhibiting anchor function during copula; outer branches of paraproct spread laterad triangularly. Gonopods are upward arching broad triangular large lobe like in many other species populating various valleys in the Balkan Mountains. Aedeagus and parameres slender (Fig. 73).

Type material – Holotype 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. ERŐSS, 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. ERŐSS, Z. FEHÉR, A. HUNYADI & D. MURÁNYI.

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.

Remarks – Possible associated female stored together in the vial of male paratype.



Figs 70–73. *Drusus pelasgus* sp. n., holotype, male: 70 = genitalia without phallic organ and with dotted contour of VIIIth tergite with spinate lobes in left lateral view; 71 = dotted contour of VIIIth tergite with spinate lobes, paraproct in dorsal view; 72 = paraproct in caudal view; 73 = aedeagus (phallicata) and paramer of the phallic organ in left lateral view

Diagnosis – 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. It is closest to *Drusus plicatus* RADOVANOVIC, 1942, but differs by having (1) postero-dorsal 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.

Drusus radovanovici MARINKOVIĆ-GOSPODNETIC, 1970 – **Bosnia-Herzegovina**: Foča region, Zelengora, Suha, forest spring above the settlement, 1110 m, 43°15.892', 18°35.595', 10.V.2006, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (3 males).

Drusus romanicus meridionalis KUMANSKI, 1973 – **Bulgaria**, Blagoevgrad province, Rila Mts, Jakoruda, sidetorrent of the Grănčarica Stream beneath the Džanka Pass, 2290 m, N42°07.957', E23°35.857', 7.IX.2005, leg. M. FÖLDVÁRI, J. KONTSCHÁN, D. MURÁNYI & T. SZÜTS (1 male).

Drusus schmidi BOTOSANEANU, 1960 – **Bosnia-Herzegovina**: Bistrica, Dobro Polje, 43.59483, 18.49553, 12.VII.2008, leg. M. BÁLINT & S. LELO (8 males, 4 females).

Ecclisopteryx asteryx MALICKY, 1979 – **Slovenia**: Julian Alp, Radovna stream, 22.VI.1988, singled, leg. J. OLÁH (15 males, 12 females).

Glyphotaelius pellucidus (RETZIUS, 1783) – **Greece**: Sidirokastro, 41.274, 23.427, 177 m, 31.VII.2007, leg. L. UJVÁROSI & M. BÁLINT (1 female).

Halesus digitatus (SCHRANK, 1781) – **Albania**: Malësia district, Grnčar/Gërçarë border station along the Gusinje–Shkodër road, 950 m, N42°35.014', E19°46.487', 14.X.2005, leg. T. DELL, Z. ERÖSS, Z. FEHÉR & D. MURÁNYI (3 males, 4 females). – **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 (1 male). – **Pakistan**: Kashmir, Bubin, lower area, 17.VIII.2001, leg. B. BENEDEK & G. RONKAY (1 male).

Limnephilus affinis CURTIS, 1834 – **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 (2 males). Skrapar district, Ostrovicë Mts, Backë, beneath the Frengu Peak, light trap, 1750 m, N40°31.314', E20°24.833', 20.VIII.2006, leg. Z. FEHÉR, A. HUNYADI, T. HUSZÁR & D. MURÁNYI (2 males).

Limnephilus alaicus (MARTYNOV, 1915) – **Kazakhstan**: Province Almaty, Temerlik Mt., 10 km SW of Tuyuk, 2100 m, 79°20'E, 43°05'N, 28.VIII.1997, leg. A. OROSZ (1 male).

Limnephilus bipunctatus CURTIS, 1934 – **France**: Massif Central, Mt. Mezene, 44.92, 4.18, 1538 m, 15.VII.2007, leg. M. BÁLINT (1 male). – **Turkey**: Vil. Artvin, Col Cancurtalan, 800 m, 1–2.VII.1996, leg. A. PODLUSSÁNY (2 males, 2 females).

Limnephilus ignavus MCLACHLAN, 1865 – **Bosnia-Herzegovina**: Pedise, Krselja, 43.96619, 18.74323, 12.VII.2008, leg. M. BÁLINT & S. LELO (1 male).

Limnephilus lunatus CURTIS, 1934 – **France**: Citou, Aude, 43.408, 2.591, 906 m, 14.VII.2007, leg. M. BÁLINT (1 male). – **Turkey**: vil. Gümüşhane, Zigana, 2100 m, 5.VII.1996, leg. A. PODLUSSÁNY (1 male).

Limnephilus sparsus CURTIS, 1834 – **Albania**: Skrapar district, Tomor Mts, Kulmak Pass, mountain grassland near the bektashi teqe, light trap, 1485 m, N40°37.116', E20°11.945', 23.VIII.2006, leg. Z. FEHÉR, A. HUNYADI, T. HUSZÁR & D. MURÁNYI (1 male). – **Macedonia**: Pelagoni region, Pelister Mts, Nižepole, Sapuncica Stream above the village, 1255 m, N40°59.295', E21°14.793', 17.X.2006, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (1 male, 4 females).

Mesophylax aspersus (RAMBUR, 1842) – **Spain**: Catalonia, Cabanelles, 800 m, Mare de Deu del Mont, 30.V.2001, leg. A. OROSZ (1 male).

Potamophylax cingulatus (STEPHENS, 1837) – **Bulgaria**: Pirin Mts. Banska, 41.766 23.424, 1800 m, 31.VII.2007, leg. L. UJVÁROSI & M. BÁLINT (1 male).

Potamophylax goulandrionum MALICKY, 1975 – **Albania**: Skrapar district, Tomor Mts, Kulmak Pass, mountain grassland near the bektashi teqe, light trap, 1485 m, N40°37.116', E20°11.945', 23.VIII.2006, leg. Z. FEHÉR, A. HUNYADI, T. HUSZÁR & D. MURÁNYI (1 male). Skrapar district, Tomor Mts, Ujanik, gorge of the Ujanik Stream in the village, 965 m, N40°37.969', E20°12.969', 23.VIII.2006, leg. Z. FEHÉR, A. HUNYADI, T. HUSZÁR & D. MURÁNYI (1 male). Skrapar district, Ostrovicë Mts, Backë, Krojmbret Spring between the Mt. Frengu and Mt. Faqekuq, 1965 m, N40°31.753', E20°25.152', 21.VIII.2006, leg. Z. FEHÉR, A. HUNYADI, T. HUSZÁR & D. MURÁNYI (1 male).

Potamophylax latipennis (CURTIS, 1834) – **Bulgaria**: Šumen province, Stara Planina (Vârbishka Planina), Medven, stream above the village, 420 m, N42°50.543', E26°33.950', 4–5.IX.2005, leg. M. FÖLDVÁRI, J. KONTSCHÁN, D. MURÁNYI & T. SZÜTS (3 males, 1 female).

Potamophylax luctuosus armeniacus MEY, 1979 – **Turkey**: vil. Gümüşhane, Zigana, 2100 m, 5.VII.1996, leg. A. PODLUSSÁNY (2 males).

Potamophylax nigricornis (PICTET, 1934) – **Bosnia-Herzegovina**: Vucjaluka, 43.93221 18.52135, 12.VII.2008, leg. M. BÁLINT & S. LELO (1 male). – **France**: Citou, Aude, 43.408, 2.591, 906 m, 14.VII.2007, leg. M. BÁLINT (3 males).

Potamophylax pallidus (KLAPÁLEK, 1899) – **Albania**: Ersekë district, Grammos Mts, Starje, Alikolarë Stream NW of Mt. Qukapeci, 1865 m, N40°21.677', E20°45.275', 19.VII.2006, leg. Z. BARINA, G. KIRÁLY, Cs. NÉMETH & D. PIFKÓ (1 male NHMB). Ersekë district, Grammos Mts, Rehova, brook valley on the W slope of Mt. Meci, 1966 m, N40°20.580', E20°44.629', 18.VII.2006, leg. Z. BARINA, G. KIRÁLY, Cs. NÉMETH & D. PIFKÓ (1 male NHMB). Skrapar district, Ostrovicë Mts, Backë, stream beneath the pass between Mt. Frengu and Mt. Faqekuq, 1915 m, N40°31.614', E20°25.021', 4.VII.2005, leg. Z. BARINA, D. PIFKÓ & D. SCHMIDT (5 males, 2 females). – **Montenegro**: Kolašin municipality,

Sinjajevina Mts, Gornji Lipovo, forest torrent NW of the village, 1320 m, N42°53.491', E19°23.351', 11.X.2008, leg. L. DÁNYI, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (1 male).

Pseudostenophylax micraulax (MCLACHLAN, 1878) – **Pakistan:** Kashmir, Bubin, lower area, 17.VIII.2001, leg. B. BENEDEK & G. RONKAY (1 male). Kashmir, Deosai Mts, Bubin 3300 m, 14.VIII.2001, leg. B. BENEDEK & G. RONKAY (2 males).

Psilopterna eukratida SCHMID, 1961 – **Pakistan:** Hindukush Mts. 5 km E. of Shandur Pass, 3750 m, 21.VIII.2001, leg. B. BENEDEK & G. RONKAY (2 males).

Psilopteryx montanus KUMANSKI, 1968 – **Macedonia:** Pelagonia region, Pelister Mts, Nižepole, brooks in alpine grasslands and in beech forest around the sky course, 1375 m, N40°58.812', E21°15.165', 17.X.2006, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (1 male, 1 female).

Rhadicoleptus alpestris (KOLENATI, 1848) – **Albania:** Ersekë district, Grammos Mts, mountaine pasture on the slope of Mt. Varibob, 2249 m, N40°21.973', E20°46.231', 19.VII.2006, leg. Z. BARINA, G. KIRÁLY, Cs. NÉMETH & D. PIFKÓ (3 males, 2 females). Librazhd district, Jablanica Mts, Qarishtë, brook E of the village, 1900m, N41°14.741', E20°30.743', 4.VII.2008, leg. Z. BARINA, D. PIFKÓ & A. VOJTKÓ (3 males).

Stenophylax caesareicus (SCHMID, 1959) – **Turkey:** Vil. Artvin, Col Cancurtalan, 800 m, 1–2.VII.1996, leg. A. PODLUSSÁNY (1 male).

Stenophylax clavatus (MARTYNOV, 1916) – **Turkey:** vil. Gümüşhane, Zigana, 2100 m, 5.VII.1996, leg. A. PODLUSSÁNY (1 male).

Stenophylax fissus (MCLACHLAN, 1875) – **Albania:** Berat district, Tomor Mts, Dardhë, open brook on the N slope of Mt. Çuka Partizan, 810 m, N40°44.584', E20°07.628', 9.IV.2006, leg. Z. ERŐSS, Z. FEHÉR, A. HUNYADI & D. MURÁNYI (1 male). Përmet district, Dhembël Mts, peak region of Mt. Dhembël, 2059 m, N40°11.598', E20°18.857', 22.V.2006, leg. Z. BARINA, T. DELI & D. PIFKÓ (1 male).

Stenophylax indicus (MOSELY, 1936) – **Pakistan:** Hindukush Mts. 5 km E of Shandur Pass, 3750 m, 21.VIII.2001, leg. B. BENEDEK & G. RONKAY (1 male). Karakoram Mts, Chapurson valley near Rhaminji, 2500 m, 27.viii.2001, leg. B. BENEDEK & G. RONKAY (4 males, 1 female).

Stenophylax meridiorientalis MALICKY, 1980 – **Albania:** Bulquizë district, Lopë Mts, Bulquizë, brook near Zi Lake, SE of the city, 1775 m, N41°28.122', E20°15.883', 25.V.2008, leg. Z. BARINA, D. PIFKÓ & B. BINTÉR (1 male). – **Croatia:** Primorsko-goranska županija, Novi Vinodolski, 50–500 m, oak forest, netted with car at sunset, 22–27.VII.2006, leg. O. MERKL (1male). – **Turkey:** Vil. Artvin, Col Cancurtalan, 800 m, 1–2.VII.1996, leg. A. PODLUSSÁNY (1 male).

Stenophylax muehleni (MCLACHLAN, 1884) – **Iran:** Province Fars, 3 km W. of Sangar, 2000 m, 18.IV.1999, at light leg. GY. FÁBIÁN, L. NÁDAI & K. SZÉKELY (1 male, 1 female). – **Turkey:** Province Sivas, Gürün, 1500 m, 37°12' E, 38°45' N, 18–19.VI.1991, leg. Cs. SZABÓKI (2 male, 2 females).

Stenophylax nycterobius (MCLACHLAN, 1875) – **Albania:** Malësia district, Grnçar/Gërçarë border station along the Gusinje–Shkodër road, 950 m, N42°35.014', E19°46.487', 14.X.2005, leg. T. DELI, Z. ERŐSS, Z. FEHÉR & D. MURÁNYI (3 males, 4 females).

Stenophylax sequax (MCLACHLAN, 1875) – **Albania:** Skrapar district, Ostrovicë Mts, Backë, beneath the Frengu Peak, light trap, 1750 m, N40°31.314', E20°24.833',

20.VIII.2006, leg. Z. FEHÉR, A. HUNYADI, T. HUSZÁR & D. MURÁNYI (2 males). – **Bulgaria**: Sofia province, Rila Mts, Rilski Manastir, Camping Zodiak, 1210 m, N42°08.563', E23°21.478', 5–7.IX.2005, leg. M. FÖLDVÁRI, J. KONTSCHÁN, D. MURÁNYI & T. SZÜTS (2 males).

Stenophylax tauricus (MARTYNOV, 1917) – **Iran**: Province Büyer Ahmad, 3 km N of Sisaht, 2700 m, 10–12.V.1998, leg. GY. FÁBIÁN & K. SZÉKELY (2 males). – **Turkey**: Vil. Artvin, Col Cancurtalan, 800 m, 1–2.VII.1996, leg. A. PODLUSSÁNY (1 male).

Stenophylax testaceus (GMELIN, 1789) – **Montenegro**: Šavnik municipality, Treskavac Mts, Pošćenje (near Šavnik), Komarnica Stream above Kanjon Nevidio, 950 m, N42°59.298', E19°04.070', 10.X.2008, leg. L. DÁNYI, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (1 male).

UENOIDAE

Thremma anomalum MCLACHLAN, 1876 – **Bulgaria**: Rodopi Mts, Batak-Dospat, 41.890, 24.174, 1500 m, 2.VIII.2007, leg. N.-K. NAGY & M. BÁLINT (1 male, 1 female). – **Greece**: Arkadia prefecture, Aroania Mts, Zarelia, spring brook under Mt. Nisi, 1600 m, N37°56.543', E22°14.067', 7.IV.2009, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (3 males). Ioannia prefecture, Klidonia, big sidestream of the Aoos River, S of the village, 405 m, N39°58.376', E20°39.555', 14.III.2008, SZ. CZIGÁNY & D. MURÁNYI (7 males, 4 females, 3 larvae). Rodopi prefecture, Papikio Mts, Vronti, karst spring at the village (N of Kerasia), 445 m, N41°11.412', E25°17.752', 4.IV.2007, leg. L. DÁNYI, Z. ERÖSS, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (4 males, 3 females). – **Montenegro**: Kolašin municipality, Sinjajevina Mts, Bratkovicki Stream along the Podgorica-Bijelo Polje road, 560 m, N42°50.921', E19°20.069', 10.X.2008, leg. L. DÁNYI, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (1 male).

Thremma gallicum MCLACHLAN, 1880 – **France**: Mt. Mezenc, Borée, Massif Central, 44.908, 4.228, 1026 m, 15.VII.2007, leg. M. BÁLINT (4 males, 2 females).

LEPTOCERIDAE

Adicella filicornis (PICTET, 1934) – **Albania**: Dibër district, Korab Mts, Radomirë, spring and stream E of the village, 1440 m, N41°49.032', E20°30.016', 26.VI.2007, leg. L. DÁNYI, Z. ERÖSS, Z. FEHÉR, A. HUNYADI & D. MURÁNYI (2 males, 1 female). Kukës district, Turaj, brook in alpine grassland along the Novoselë–Kolesjan road, 1800 m, N41°56.594', E20°29.879', 24.VI.2007, leg. D. MURÁNYI (2 males). – **France**: Citou, Aude, 43.408, 2.591, 906 m, 14.VII.2007, leg. M. BÁLINT (1 male).

Adicella reducta (MCLACHLAN, 1865) – **France**: Mt. Mezenc, Borée, Massif Central, 44.908, 4.228, 1026 m, 15.VII.2007, leg. M. BÁLINT (4 males, 1 female).

Mystacides longicornis (LINNAEUS, 1758) – **Macedonia**: Southwestern region, Peštani, Ohrid Lake N of the village, 695 m, N41°02.857', E20°48.093', 16.X.2006, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (6 males).

Mystacides azurea (LINNAEUS, 1761) – **Greece**: Messinia prefecture, Velika, small river in the village, 10 m, N37°00.310', E21°55.811', 4.IV.2009, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (2 males).

Trienodes conspersus (RAMBUR, 1842) – **Turkey**: vil. Erzincan, Ganiefendi, Ciflik Köyü, 1200 m, 27-28.VI.1996, leg. A. PODLUSSÁNY (1 male).

Trienodes kawraiskii (MARTYNOV, 1909) – **Kazakhstan**: Province Almaty, Kuluktau, Temerlik Mt., Kegen Pass, 1600 m, 79°20' E, 43°10' N, UV light trap, 25.VIII.1997, leg. A. OROSZ (19 males).

Leptocerus tineiformis CURTIS, 1834 – **Turkey**: vil. Erzincan, Ganiefendi, Ciflik Köyü 1200 m, 27-28.VI.1996, leg. A. PODLUSSÁNY (3 males).

MOLANNIDAE

Molanna moesta BANKS, 1906 – **Kazakhstan**: Province Almaty, valley of River Ili, 20 km NNW of Kapchugay, 550 m, 77°00' E, 44°00' N, 31.VIII.1997, leg. A. OROSZ (2 males).

ODONTOCERIDAE

Odontocerum albicorne (SCOPOLI, 1763) – **France**: Massif Central, Lachapelle-Grailhouse, 44.817, 4.021, 1074 m, 15.VII.2007, leg. M. BÁLINT (8 males). – **Greece**: Ioannina prefecture, Kalpaki, Vellas Monasteri, karst spring, 420 m, N39°51.950', E20° 37.435', 12.V.2006, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (1 male).

Odontocerum hellenicum MALICKY, 1972 – **Turkey**: vil. Gümüşhane, Zigana, 2100 m, 5.VII.1996, leg. A. PODLUSSÁNY (1 male).

Odontocerum lusitanicum MALICKY, 1975 – **France**: Mt. Mezenc, Borée, Massif Central, 44.908, 4.228, 1026 m, 15.VII.2007, leg. M. BÁLINT (2 males).

BERAEIDAE

Beraea zawadil MALICKY, 1977 – **Greece**: Thesprotia prefecture, Petrovitsa, gorge near the village, 315 m, N39°33.475', E20°28.130', 12.V.2006, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (1 male).

Beraea pullata (CURTIS, 1834) – **Bosnia-Herzegovina**: Pedise, Krselja, 43.96619 18.74323, 12.VII.2008, leg. M. BÁLINT & S. LELO (6 males, 4 females).

Beraea maura (CURTIS, 1834) – **France**: Lespinassière, 43.402, 2.532, 450 m, 14.VII.2007, leg. M. BÁLINT (5 males).

Ernodes articularis (PICTET, 1934) – **Albania**: Dibër district, Korab Mts, Radomirë, spring and stream E of the village, 1440 m, N41°49.032', E20°30.016', 26.VI.2007, leg. L. DÁNYI, Z. ERÖSS, Z. FEHÉR, A. HUNYADI, & MURÁNYI (4 males, 5 females). Kukës district, Lojme, forest spring outlet N of the village, 815 m, N41°59.898', E20°31.393', 24.VI.2007, leg. L. DÁNYI, Z. ERÖSS, Z. FEHÉR, A. HUNYADI, & MURÁNYI (1 male). Skrapar district, Ostrovicë Mts, Backë, stream beneath the pass between Mt. Frengu and Mt. Faqekuq, 1915 m, N40°31.614', E20°25.021', 4.VII.2005, leg. Z. BARINA, D. PIFKÓ & D. SCHMIDT (2 males). – **France**: Lespinassière, 43.402, 2.532, 450 m, 14.VII.2007, leg. M. BÁLINT (1 male).

Ernodes vicinus (MCLACHLAN, 1879) – **Bosnia-Herzegovina**: Vucjaluka, 43.93393, 18.50159, 12.VII.2008, leg. M. BÁLINT & S. LELO (3 males).

SERICOSTOMATIDAE

Cerasma cairon MALICKY, 1986 – **Turkey**: Vil. Artvin, Col Cancurtalan, 800 m, 1–2.VII.1996, leg. A. PODLUSSÁNY (2 males).

Notidobia salihli MALICKY et SIPAHILER, 1993 – **Greece**: Serres prefecture, Kerkini Mts, Ano Poroia, stream and spring in a platan forest, 510 m, N41°17.637', E23°02.187', 30.III.2007, leg. L. DÁNYI, Z. ERÖSS, Z. FEHÉR, J. KONTSCHÁN & D. MURÁNYI (2 males).

Notidobia bizensis MALICKY et SIPAHILER, 1993 – **Albania**: Dibër district, Korab Mts, Radomirë, open brook E of the village, 1875 m, N41°49.149', E20°31.304', 28.VI.2007, leg. L. DÁNYI, Z. FEHÉR & D. MURÁNYI (1 male). Dibër district, Korab Mts, Radomirë, spring and stream E of the village, 1440 m, N41°49.032', E20°30.016', 26.VI.2007, leg. L. DÁNYI, Z. ERÖSS, Z. FEHÉR, A. HUNYADI & D. MURÁNYI (4 males, 5 females).

Notidobia nekibe K LAPÁLEK, 1903 – **Albania**: Ersekë district, Grammos Mts, Starje, valley of Alikolarë stream NW of Mt. Qukapeci, 1865 m, N40°21.677', E20°45.275', 19.VII.2006, leg. Z. BARINA, G. KIRÁLY, Cs. NÉMETH & D. PIFKÓ (5 males). Berat district, Tomor Mts, Dardhë, open brook on the N slope of Mt. Çuka Partizan, 810 m, N40°44.584', E20°07.628', 9.IV.2006, leg. Z. ERÖSS, Z. FEHÉR, A. HUNYADI & D. MURÁNYI (1 male). Skrapar district, Ostrovicë Mts, Backë, spring section of Mrbret River beneath Mt. Faqekuq, 1970 m, N40°31.752', E20°21.153', 5.VII.2006, leg. Z. BARINA, D. PIFKÓ & D. SCHMIDT (1 male, 2 females). Skrapar district, Ostrovicë Mts, Backë, stream beneath the pass between Mt. Frengu and Mt. Faqekuq, 1915 m, N40°31.614', E20°25.021', 4.VII.2005, leg. Z. BARINA, D. PIFKÓ & D. SCHMIDT (5 males, 2 females). Skrapar district, Ostrovicë Mts, Çeramica, stream W of the village, 1535 m, N40°32.780', E20°27.527', 6.VII.2005, leg. Z. BARINA, D. PIFKÓ & D. SCHMIDT (2 males, 1 female). Skrapar district, Ostrovicë Mts, Backë, Krojmbret Spring between the Mt. Frengu and Mt. Faqekuq, 1965 m, N40°31.753', E20°25.152', 21.VIII.2006, leg. Z. FEHÉR, A. HUNYADI, T. HUSZÁR & D. MURÁNYI (1 male). Skrapar district, Ostrovicë Mts, brook beneath the Mt. Ostrovicë, 1960 m, N40°34.051', E20°26.846', 6.VII.2006, leg. Z. BARINA, D. PIFKÓ & D. SCHMIDT (5 males, 1 female). Vlorë district, Çikë Mts, spring N of the Llogara Pass, 965 m, N40°12.187', E19°35.254', 11.V.2006, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (3 males). – **Greece**: Ioannina prefecture, Metsovo, “Metzoboy 1987” Spring E of the city, 1030 m, N39°45.277', E21°08.940', 13.V.2006, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (2 males). Ioannina

prefecture, Kalpaki, Vellas Monasteri, karst spring, 420 m, N39°51.950', E20°37.435', 12.V.2006, leg. L. DÁNYI, J. KONTSCÁN & D. MURÁNYI (2 males, 1 female).

Notidobia nogradorum sp. n.

(Figs 74–76)

Description – Male (in alcohol). Dark castaneous; cephalic and thoracic sclerites dark brown, almost black especially on dorsum; appendages including legs lighter brown; haustellum and intersclerital membranous teguments whitish. Forewing length 11 mm; wing membrane brown, densely covered with decumbent setae; hyaline window pattern of forewing not very conspicuous due to rich setal cover, but well discernible: 6 depigmented area visible around (1) fork bases of SR and S2-S3; (2) crossvein s; (3) forkbase of M; (4) forkbase of M1-M2; (5) stem M, (6) stem Cu2.

Male genitalia (Fig. 74). In lateral view IXth segment subtriangular with produced dorsoapical and ventroapical margins; in ventral view ventroapical margin excised mesad; in dorsal view dorsoapical margin forming more pigmented rounded apical rim, separating IXth tergite from sclerotized basal part of Xth segment; groove network on segment IX well developed; dorsal groove pattern delineating IXth tergum helping to discern boundary of fused Xth segment (Fig. 75). Xth segment represented by heavily sclerotized basal pair of lateral flaps just at and slightly below apical rim of IXth tergite; after this sclerotized basal part Xth segment less sclerotized, its laterobasal part fused to the strongly sclerotized pair of paraproctal processes. Cerci short, vertically flattened, as a result rounded in lateral and elongated in dorsal view. Paraproctal processes end in huge hook-formation (its dotted shape visible in cover of gonopods). Gonopods each have basomesal pair of spines with separated bases in lateral view (their dotted shapes visible in the cover of gonopods). Phallosome with arching basal and straight apical halves; apical half starting with a ventral heel; membranous endotheca located dorsad and without any visible endothecal sclerites (Fig. 76).

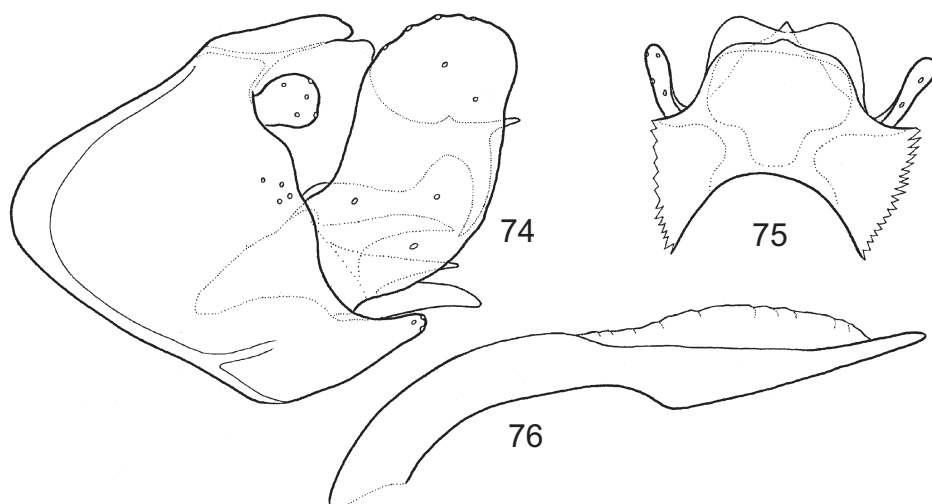
Type material – Holotype, male, HNHM. **Albania**: Korçë district, Zvirine, Trifti Spring N of the village, 835 m, N40°47.644', E20°44.128', 24.V.2007, leg. Z. BARINA, CS. NÉMETH & D. PIFKÓ (1 male).

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.

Remarks – Possible associated female stored together in the vial of paratype.

Diagnosis – 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 et

SIPAHLER, 1993 (Albania) and *N. salihli* MALICKY et SIPAHLER, 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 downcurving 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.



Figs 74–76. *Notidobia nogradorum* sp. n. holotype male: 74 = genitalia without phallic organ in left lateral view; 75 = IXth tergite, Xth segment, cerci in dorsal view; 76 = phallic organ in left lateral view

Oecismus monedula (HAGEN, 1859) – **Bulgaria**: Sofia province, Rila Mts, Rilski Manastir, Camping Zodiak, 1210 m, N42°08.563', E23°21.478', 11.VIII.2009, leg. D. MURÁNYI (1 male). – **Bosnia-Herzegovina**: Vucjaluka, 43.93393 18.50159, 12.VII.2008, leg. M. BÁLINT & S. LELO (1 male).

Oecismus mucidus MCLACHLAN, 1876 – **Albania**: Delvinë district, Gjerë Mts, Mu-
zinë, Syri i Kaltër (Blue Eye Spring), 155 m, N39°55.286', E20°11.330', 12.V.2006, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (1 male). Ersekë district, Grammos Mts, Starje, val-
ley of Alikolarë stream NW of Mt. Qukapeci, 1865 m, N40°21.677', E20°45.275', 19.VII.
2006, leg. Z. BARINA, G. KIRÁLY, CS. NÉMETH & D. PIFKÓ (1 male). Kukës district, Turaj,

open stream along the Novoselë–Kolesjan road, 1430 m, N41°57.222', E20°34.160', 24.VI.2007, leg. L. DÁNYI, Z. ERÖSS, Z. FEHÉR, A. HUNYADI & D. MURÁNYI (1 male).

Schizopelex cachetica MARTYNOV, 1913 – **Turkey**: Vil. Artvin, Col Cancurtalan, 800 m, 1–2.VII.1996, leg. A. PODLUSSÁNY (1 male). Vil. Erzincan, Ganiefendi, Ciflik Köyü, 1200 m, 27–28.VI.1996, leg. A. PODLUSSÁNY (2 males).

Schizopelex furcifera MCLACHLAN, 1880 – **France**: Citou, Aude, 43.408, 2.591, 906 m, 14.VII.2007, leg. M. BÁLINT (2 males).

Sericostoma personatum (KIRBY et SPENCE, 1826) – **France**: Lespinassière, 43.402, 2.532, 450 m, 14.VII.2007, leg. M. BÁLINT (1 male). Mt. Mezenc, Borée, Massif Central, 44.908, 4.228, 1026 m, 15.VII.2007, leg. M. BÁLINT (1 male). Provence Alps, Jausiers, 44.390, 6.776, 1500 m, 11.VII.2007, leg. M. BÁLINT (7 males, 5 females).

Sericostoma schneideri (KOLENATI, 1848) – **Albania**: Dibër district, Lurë area, Fushë Lurë, stream at the lumber-yard, 1055 m, N41°48.567', E20°13.492', 29.VI.2007, leg. L. DÁNYI, Z. ERÖSS, Z. FEHÉR, A. HUNYADI & D. MURÁNYI (1 male). – **Greece**: Ioannina prefecture, Lefkothea, Smolitsas River E of the village, 200 m, N39°43.053', E20°36.645', 12.V.2006, leg. L. DÁNYI, J. KONTSCHÁN & D. MURÁNYI (1 male, 8 females).

*

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