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Description of a new species of the "*Haenydra*" lineage (Coleoptera: Hydraenidae) from the Republic of Macedonia

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Abstract

A new species of *Hydraena* Kugelann, *H. kucinici* (Coleoptera: Hydraenidae), is described from the Republic of Macedonia. Taxonomic and faunistic notes on two closely related species, *H. bosnica* Apfelbeck and *H. leonhardi* Breit, are provided.

Keywords: Coleoptera, Hydraenidae, *Hydraena*, "*Haenydra*" lineage, new species, Balkan Peninsula, Republic of Macedonia

Introduction

Almost 100 species of the so-called "*Haenydra*" lineage (sensu Jäch *et al*. 2000) of *Hydraena* s.str. Kugelann, 1794 have been described so far (see Trizzino *et al*. in press). This clade is geographically confined to the western Palearctic Region (see Ribera *et al*. 2011), the easternmost distribution limit being the Ural Mountains and Iran.

About 50 % of the species of the "*Haenydra*" lineage are narrow range endemics, being known only from a single country, a single small mountain range or even a single mountain (see Audisio *et al*. 1996, Ribera *et al*. 2011, Trizzino et al. 2011a, b, Trizzino *et al*. 2012).

Entomologically, the Republic of Macedonia has so far been rather poorly studied. Our knowledge of the Macedonian "*Haenydra*" fauna is based largely on Pretner (1970), who provided a short review on the "*Haenydra*" species of Yugoslavia. His review included three Macedonian species: *Hydraena excisa* Kiesenwetter, 1849, *H. gracilis* Germar, 1824 and *H. subintegra* Ganglbauer, 1901 (under the name *H. homogyna* Apfelbeck, 1909). Since then four other species have been added to the Macedonian fauna by Jäch (2004): *H. dalmatina* Ganglbauer, 1901, *H. phallica* Orchymont, 1930, *H. saga* Orchymont, 1930, and *H. vedrasi* Orchymont, 1931.

During an excursion to the Republic of Macedonia, a new species of the "*Haenydra*" lineage was collected by the first author in 2010. This species is described below, and some taxonomic and faunistic notes on closely related species are provided.

Material and methods

All line drawings were made using a drawing tube attached to an Olympus CX21 and Adobe Illustrator (Adobe Creative Suite 4 Master Collection). The digital photographs of the specimens were taken with a Leica DFC4590 camera attached to a Leica MZ16 binocular microscope with the help of 1st Leica Application Suite V3 with Zerene Stacker. Afterwards, photographs were arranged in Photoshop (Adobe Creative Suite 4 Master Collection). Specimens were killed in 80 % ethanol in the field.

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Results

Hydraena (s.str.) *kucinici* Mičetić Stanković & Jäch sp. n.

Type locality: Cobbles covered with moss in fast flowing stream, ca. 1–2 m wide, shaded, surrounded by dense forest vegetation; western part of the Republic of Macedonia, 41°22'10.3"N 20°34'08.2"E, ca. 12 km NW of Jablanica, ca. 3 km E of Albanian border (Figs. 1–2).

Type material: Holotype male: "REP. OF MACEDONIA \ Modrič reka \ 41°22'10.3"N \ 20°34'08.2"E \ 813 m a.s.l., 6.VII.2010 \ leg. V. Mičetić Stanković". Right antenna and right maxillary palpus missing. **Paratype** female, same data as holotype. Left antenna and right hind leg missing.

Both specimens are deposited in the Naturhistorisches Museum Wien, Austria.

Diagnosis: Length (labrum to elytral apex): 2.35 (paratype) to 2.45 (holotype) mm long. Habitus as in Figs. 3–4. Externally, the new species cannot be distinguished from *H. bosnica*.

Aedeagus (Figs. 5, 7): Dorsal margin of main piece with two wing-like appendages at position of distal seta; left appendage more or less as in *H. bosnica* (Figs. 6, 8) (somewhat variable in the latter), right appendage more strongly sclerotized than left one and much longer (Fig. 5, arrow a) than in *H. bosnica*. Ventral margin of main piece strongly emarginated subapically (only weakly so in *H. bosnica*) (Fig. 5, arrow b), at apex not produced ventrad (Fig. 5, arrow c). Dorsal part of apex of main piece distinctly smaller and less strongly curved than in *H. bosnica* (Fig. 5, arrow d). Distance between left dorsal wing-like appendage of main piece and dorsal apex distinctly longer than in *H. bosnica*.

Distribution: So far known with certainty only from the type locality.

Very probably, this species also occurs in the northern part of the Šar Planina (Republic of Kosovo). Eight females collected by the second author in 1988 south of Doganović may well belong to *H. kucinici* n. sp.

Etymology: Named after Prof. Mladen Kučinić, mentor of the first author, who enabled the sampling trip to the Republic of Macedonia.

Hydraena (s.str.) *bosnica* Apfelbeck, 1909

Type locality: Pazarić, 43°47'19"N 18°09'39"E, Krupa Valley, SW of Sarajevo, Bosnia and Herzegovina.

Lectotype male (NMW), by present designation: "Pazarić Krupa-Th[al (= Valley)] \ male \ bosnica Typ. Apf.". **Paralectotypes**: 1 female (NMW), same label data as lectotype, except "female"; 1 male (NMW): "Pazarić Krupa-Th \ male \ bosnica Apf. det. Apfelb."; 1 female (NMW): "Pazarić Krupa-Th \ female \ bosnica det. Apflb.[= Apfelbeck]"; 1 male (NMW): "Herzegov. Jablanica \ male \ bosnica Apf. det. Apfelb. \ det.E.Pretner hungarica Rey"; 1 female (NMW): "Herzegov. Jablanica \ bosnica Typ. Apf. \ hungarica Rey det.E.Pretner"; 1 female (NMW): "Herzegov. Jablanica \ female \ bosnica Apf det. Apflb. \ hungarica Rey det.E.Pretner".

Additional paralectotypes are housed in the Pretner collection (Biološki inštitut ZRC SAZU, Slovenian Academy of Sciences and Arts, Ljubljana, Slovenia), the Magyar Természettudományi Múzeum, Budapest, Hungary and probably (if not destroyed during the war in BIH, 1991–1995) in the Zemaljski Muzej BIH Sarajevo, Bosnia and Herzegovina.

The total number of syntypes was not specified in the original description, where the following distribution was cited: "Bosnia merid., prope Sarajevo et Hercegovina, prope Jablanica in rivis alpestribus. Rarissime".

The paralectotypes deposited in the Pretner collection and the Magyar Természettudományi Múzeum are unwarrantedly provided with "holotype", "allotype" and "paratype" labels.

Two syntypes (1 male, 1 female) deposited in the Zemaljski Muzej BIH Sarajevo, Bosnia and Herzegovina, were examined by Orchymont (1930: 377), who did not designate a lectotype.

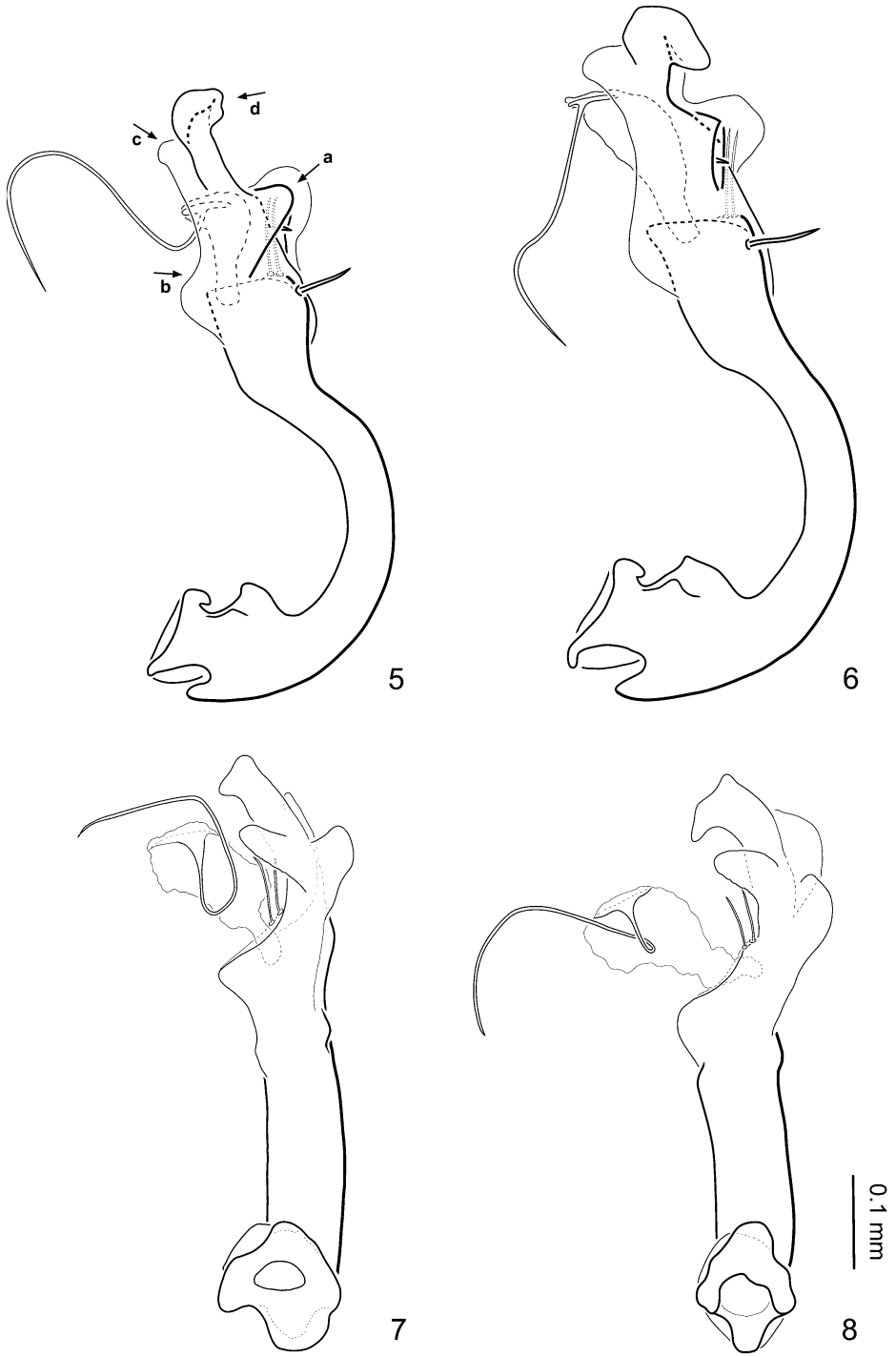
Distribution: So far, this species is known only from the south-eastern part of Bosnia and Herzegovina.

The record from the plain in northern Croatia (Ludbreg) by Apfelbeck (1912) under the name *H. ganglbaueri* Apfelbeck, 1912 is certainly due to an error.

FIGURES 1–2. Overview and detail of Modrič reka (Macedonia), type locality of *Hydraena kucinici*.

FIGURE 3. Habitus of *Hydraena kucinici*, holotype, right antenna and right maxillary palpus added digitally.

FIGURE 4. Habitus of *Hydraena kucinici*, paratype, left antenna and right hind leg added digitally.



FIGURES 5–8. Aedeagi of 5) *Hydraena kucinici*, lateral view, 6) *H. bosnica*, lateral view, 7) *H. kucinici*, ventral view, 8) *H. bosnica*, ventral view. Arrows in Fig. 5 point at diagnostic characters.

Discussion

Hydraena kucinici is a member of the *H. hungarica* complex, which is the sister of the *H. lapidicola* complex. Both of these complexes belong to the *H. dentipes* clade (see Trizzino *et al.* in press). Besides *H. kucinici*, the *H. hungarica* complex includes *H. bosnica*, *H. hungarica* Rey, 1884, and *H. leonhardi* Breit, 1916. All these three previously described species of the *H. hungarica* complex were synonymised by Orchymont (1930) and regarded as a single species until they were resurrected by Audisio *et al.* (1996), who depicted the aedeagi of *H. bosnica* and *H. leonhardi*.

A brief examination of the aedeagi from various populations of *H. leonhardi* deposited in the Naturhistorisches Museum Wien, Austria, has shown, that this species also needs further splitting into at least three discrete species. *Hydraena leonhardi* s.str. seems to be restricted to the Balkan Mountains (= Stara Planina) and Sredna Mountains, in the central part of Bulgaria, while the populations from the Rila Mountains (south-western Bulgaria) on one hand, and from the Rhodope Mountains (southern Bulgaria and northern Greece) on the other hand obviously deserve separate specific status (unpublished).

One cryptic south-east European species of the "*Haenydra*" lineage was recently split off from *H. subintegra* (Jäch & Díaz in press) and another one has to be split off from *H. saga* (unpublished).

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References

Apfelbeck, V. (1912) Fauna insectorum balcanica. V. I. Neue Höhlenkäfer aus Bosnien-Herzegowina und Montenegro. II. Neue Koleopteren von der Balkanhalbinsel. *Wissenschaftliche Mitteilungen aus Bosnien und der Herzegowina*, 12, 642–664.

Audisio, P., De Biase, A. & Jäch, M.A. (1996) Greek species of the genus *Hydraena* (Subgenus *Haenydra* Rey) (Coleoptera, Hydraenidae). *Aquatic Insects*, 18 (2), 65–90.

Jäch, M.A. (2004) Family Hydraenidae Mulsant, 1844. In: Löbl, I. & Smetana, A. (Eds.), Catalogue of Palaearctic Coleoptera, vol. 2, Stenstrup, Apollo Books, 942 pp.

Jäch, M.A. & Díaz, J.A. (in press) New and little known Palearctic species of the genus *Hydraena* (s.l.) Kugelann X. Descriptions of four new species from southern Europe and taxonomic review of the *H. subintegra* species complex (Coleoptera: Hydraenidae). *Koleopterologische Rundschau*, 82.

Jäch, M.A., Beutel, R.G., Díaz, J.A. & Kodada, J. (2000) Subgeneric classification, description of head structures, and world check list of *Hydraena* Kugelann (Insecta: Coleoptera: Hydraenidae). *Annalen des Naturhistorischen Museums in Wien* B, 102, 177–258.

Orchymont, A.d' (1930) Notes sur quelques *Hydraena* paléarctiques. *Bulletin et Annales de la Société Entomologique de Belgique*, LXIX (1929), 367–386.

Pretner, E. (1970) *Hydraena* (subg. *Haenydra*) v Jugoslaviji (Coleoptera: Palpicornia, Hydraenidae). Slovenska Akademija Znanosti in Umetnosti, XIII/3, Ljubljana, 40 pp.

Ribera, I., Castro, A., Díaz, J.A., Garrido, J., Izquierdo A., Jäch, M.A. & Valladares, L.F. (2010) The geography of speciation in narrow range endemics of the "*Haenydra*" lineage (Coleoptera, Hydraenidae, *Hydraena*). *Journal of Biogeography*, 38 (3), 502–516.

Trizzino, M., Audisio, P., Antonini, G., Mancini, E. & Ribera, I. (2011a) Molecular phylogeny and diversification of the "*Haenydra*" lineage (Hydraenidae, genus *Hydraena*) a north-Mediterranean endemic-rich group of rheophilic Coleoptera. *Molecular Phylogenetics and Evolution*, 61, 772–783. http://dx.doi.org/10.1016/j.ympev.2011.07.020.

Trizzino, M., Jäch, M.A., Audisio, P., Alonso, R. & Ribera, I. (in press) A molecular phylogeny of the cosmopolitan hyperdiverse genus *Hydraena* Kugelann (Coleoptera, Hydraenidae). *Systematic Entomology.*

Trizzino, M., Jäch, M.A., Audisio, P. & Ribera, I. (2011b) Molecular and morphological analyses confirm two new species of the *Hydraena emarginata-saga* complex (Coleoptera, Hydraenidae) from Spain and France. *Zootaxa*, 2760, 29–38.

Trizzino, M., Valladares, L.F, Garrido, J. & Audisio, P. (2012) Morphological reply to a DNA call: a new cryptic species of *Hydraena* from western Europe, with a complete overview of the *Hydraena gracilis* complex (Coleoptera: Hydraenidae: *"Haenydra"* lineage). *Journal of Natural History*, 46 (17/18), 1065–1068.