Studies and reports of District Museum Prague-East Taxonomical Series 5 (1-2): 37-42, 2009

Reinholdina deelemanorum gen. n., sp. n. from Bosnia and Herzegovina (Coleoptera: Cholevidae: Leptodirinae)

Pier Mauro GIACHINO¹⁾ & Josef MORAVEC²⁾

 ¹⁾Regione Piemonte, Settore Fitosanitario Regionale, Environment Park, Palazzina A2, Via Livorno 60, I-10144 Torino, Italy e-mail: piermauro.giachino@regione.piemonte.it
²⁾Biospeleological Section at the Professor Karel Absolon Memorial, Dietrichstein Palace, Zelný trh 8, CZ-659 37 Brno, Czech Republic e-mail: morawitz@email.cz

Taxonomy, new genus, new species, Coleoptera, Cholevidae, Leptodirinae, *Reinholdina*, Bosnia and Herzegovina

Abstract. Reinholdina deelemanorum gen. n., sp. n., a new genus and species from Bosnia and Herzegovina is described, illustrated and compared with apparently related genera.

INTRODUCTION

A large collection of the subterranean cholevids (Leptodirinae) collected by P. Robert, Boudewijn and Christa L. Deeleman-Reinhold (The Netherlands) in the Balkans and kept in SMNS, provided for study by the senior author, includes numerous outstanding species with several previously undescribed among them. In the present paper, the description of *Reinholdina deelemanorum* gen. n., sp. n. is given.

MATERIAL AND METHODS

Acronyms used in the following text:

 (\bullet)

- ACSC collection Achille Casale, Torino, Italy;
- JLAC collection Ján Lakota, Ružomberok, Slovak Republic;
- JMOC collection Josef Moravec, Vrdy, Czech Republic;
- PMGC collection Pier Mauro Giachino, Torino, Italy;
- SMNS Staatliches Museum für Naturkunde, Stuttgart, Germany.
- Explanations of morphological measurements and ratios:
- TL total length (measured from the extroflexed head capsula to the apex of elytra);

AL/L antennal elongation index (antennal length/pronotum length plus elytral length ratio);

- PW/L pronotum width/pronotum length ratio;
- EW/L elytral width/elytral length ratio.

Locality labels of the examined material are quoted in the original version. The term "antennal elongation index" is used according to Casale et al. (2004) and Giachino & Vailati

۲

(2005). Nomenclature follow Giachino et al. (1998) for suprageneric taxonomical level and Perreau (2004).

 $(\mathbf{0})$

TAXONOMY

Reinholdina gen. n.

Type species: Reinholdina deelemanorum sp. n., by monotypy.

Description. Body leptodiroid-shaped, eyeless, apterous and weakly pigmented. Head with tempora constricted posteriorly. Occipital carina absent. Terminal segment of maxillary palp elongate, fusiform in males. Labrum transverse, not bilobed. Mandibles with simple apex and one subapical tooth at inner edge. Insertion of antennae situated about at the middle third of head. Pronotal sides protracted, rather narrowly subexplanate, slightly arcuately emarginate before posterior angles. Elytra longer than their combined width, broadly separately rounded at tips. Surface of elytra without distinct transversal strigae. Protibiae without lateral external row of spines; protarsomeres undilated in males. Male genitalia comparatively robust, more or less rounded apically. Female urosternite VIII with well-developed apophysis.

Differential diagnosis. The new genus differs from closely related genera *Nonveilleriella* Perreau et Pavićević, 2008, *Rozajella* S. B. Ćurčić, Brajković et B. P. M. Ćurčić, 2007 and *Parapropus* Ganglbauer, 1899 by the following morphological features:

Character	Reinholdina gen. n.	Nonveilleriella	Rozajella	Parapropus sericeus-group
Ultimate maxillary palpomeres in male	Elongate (Fig. 11)	Not elongate (Fig. 13)	Not elongate	Elongate (Fig. 12)
Length of the first antennomere	1/2 of the antennomere II (Fig. 7)	2/3 of the antennomere II (Fig. 2)	2/3 of the antennomere II	2/3 of the antennomere II
Elytral sculpture	Without transversal strigae	With transversal strigae	With transversal strigae	Without transversal strigae
Elytral pubescence	Less close (Fig. 8)	More close (Fig. 1)	More close	More close
Male protarsi	Undilated	Undilated	Dilated	More or less dilated
Length of basal protarsomere in male	About 1.5 times longer than the 2 nd	About 2.0 times longer than the 2 nd	About 1.5 times longer than the 2 nd	About 2.0 times longer than the 2 nd
Inner sac of median lobe of aedeagus	Without dorsal phanera in basal part (Figs 9-10)	Without dorsal phanera in basal part (Figs 3-4)	Without dorsal phanera in basal part	With a typical dorsal phanera in basal part
Apical setae of parameres (size and disposition)	One bulky apical seta, one long preapical (external) seta, one short preapical (internal) seta (Figs 15-16)	One bulky apical seta, one long preapical (ventral) seta, one long preapical (internal) seta (Figs 5-6)	One bulky apical seta, one long preapical (dorsal) seta, one long preapical (internal) seta	One bulky apical seta, one long preapical (external) seta, one short preapical (internal) seta
Apical shape of	Tapered (Figs 15-16)	Not tapered (Figs 5-6)	Not tapered	Tapered

Etymology. Named after Mrs. Christa L. Deeleman-Reinhold (Ossendrecht, The Netherlands), the excellent specialist in cavernicolous spiders of the Balkans. Gender: feminine.

۲



Figs 1-6. *Nonveilleriella ognjenovici* Perreau & Pavićević, 2008. Male (Jama kod Stovarišta Cave, Šoljani on the mount Žljeb, Prokletije, Montenegro): 1- habitus, dorsal view; 2- antenna; 3- aedeagus, lateral view; 4- ditto, dorsal view; 5- apical portion of left paramere, lateral view; 6- ditto, dorsal view. Scale bars: 1.0 mm (Figs 1, 2) and 0.1 mm (Figs 3-6).

Remarks. Perreau & Pavićević (2008a) described a new leptodiroid genus *Nonveilleriella* and two species, *N. ognjenovici* and *Rozajella deelemani*. They provided in addition to complement the descriptions of *Rozajella* S. B. Ćurčić, Brajković & B. P. M. Ćurčić, 2007, which was recently described by Ćurčić et al. (2007), *Leptostagus Z.* Karaman, 1954 and *Petkovskiella* Guéorguiev, 1976 by the male and female genitalia and suggested their close relationships to the genus *Parapropus* Ganglbauer, 1899 (now under taxonomic revision by Giachino et al., in prep.) currently placed in the subtribe Leptodirina (sensu Perreau 2004). The new genus is also characterized by its general similarity in the shape of aedeagus and by

the absence of lateral external row of spines of protibiae (Perreau & Pavićević 2008b) as in the latter genera. At the same time, the geographic distribution of *Reinholdina* gen. n. is closely related to the Northern Montenegrian genera *Nonveilleriella* and *Rozajella* (see Perreau & Pavićević 2008a, Fig. 20) seem now to be to confirm the relevance of these hypotheses.

 $(\mathbf{0})$

Reinholdina deelemanorum sp. n.

(Figs 7-11, 14-16)

Type locality: Golubnjača Pećina Cave, Avtovac, Gacko, Herzegovina.

Type material. Holotype (\mathcal{C}) labelled: Golubnjaca pecina, Caternja, 21.vii.1968, leg. Deeleman, Sammlung C.+P. Deeleman, SMNS 1987, (SMNS); Paratypes: $(2 \mathcal{C} \mathcal{C} \ 10 \mathcal{Q} \mathcal{Q})$: same data as holotype (SMNS); $(2 \mathcal{C} \mathcal{C} \ 3 \mathcal{Q} \mathcal{Q})$: same data, (PMGC); $(1 \mathcal{C} \ 1 \mathcal{Q})$: same data, (JLAC); $(1 \mathcal{C})$: same data, (ACSC).

Description. Broadly oval (Fig. 8). Head, antennae, pronotum, elytra and legs reddish testaceous, palpi flavous. Ventral portion of body dark brown. Pubescence short, fine and relatively sparse, whitish yellow, microsculpture evident. TL 5.00-5.75 mm in males and 5.87-6.27 mm in females.

Head microsculpture fine, with shallowly impressed punctures. Antenna (Fig. 7) slightly longer than the body, AL/L 1.44-1.46 in males, 1.09-1.13 in females. The lengths of antennomeres are the following (reported to the length of the first one) in males: 1.00: 2.07: 2.35: 2.71: 3.00: 2.92: 3.57: 2.85: 3.57: 3.28: 3.85; in females: 1.00: 1.92: 2.07: 2.30: 2.46: 2.07: 2.46: 1.84: 2.30: 1.79: 2.53.

Pronotum widest before its midlength, PW/L 0.75-0.76 in males, 0.73-0.79 in females, slightly rounded anteriorly. Sides very shallowly emarginate, posterior angles prominent. Base slightly wider than anterior margin. Puncturation of pronotum very sparse, flat and shallow, spaces between punctures moderately shining. Surface of pronotum with fine and sparse pubescence.

Elytra widest at about their midlength, EW/L 0.59-0.60 in males, 0.62-0.64 in females, explanate, broadly separately rounded at apex. Humeral angles slightly prominent. Disc of elytra in the middle convex, moderately shining, with pair of narrow basal impressions. Punctures distinctly impressed, somewhat larger and denser than those of pronotum. Surface bearing rather short and erect setae, without distinct transversal strigae.

Legs very long and slender, with femora not thickened at base. First protarsomere in males undilated and about 1.5 times longer than the 2^{nd} (Fig. 14).

Male genitalia (Figs 9-10, 15-16). Median lobe of aedeagus comparatively large, 1.13 mm long, parallel-sided, rounded apically. Parameres shorter than median lobe, with three apical setae: one apical, bulky and two preapical (one external, long and one internal, short, respectively). Inner sac of median lobe without Y-shaped copulatory piece, as well as dorsal phanera in the basal part.

۲

Female urosternite as above.



Figs 7-16. *Reinholdina deelemanorum* gen. n., sp. n. Holotype, male (Figs 7-11, 14-16), *Parapropus sericeus* (F. J. Schmidt, 1852), male (Fig. 12) and *Nonveilleriella ognjenovici* Perreau & Pavićević, 2008, male (Fig. 13): 7-antenna; 8- habitus, dorsal view; 9- aedeagus, lateral view; 10- ditto, dorsal view; 11-13- left maxillary palp, dorsal view; 14- left protarsomere, dorsal view; 15- apical portion of left paramere, lateral view; 16- apical portion of right paramere, dorsal view. Scale bars: 1.0 mm (Figs 7, 8), 0.5 mm (Figs 11-14) and 0.1 mm (Figs 9, 10, 15, 16).

Differential diagnosis. The new species differs from other related taxa by the morphological features given as in the description of the genus.

Etymology. Dedicated to married couple P. Robert and Christa L. Deeleman-Reinhold (The Netherlands).

Distribution. The new species is known only from the Golubnjača Pećina Cave situated near the village Lipnik, E of town Avtovac in Gacko municipality (Foča Region), on the Montenegrian boundary, Herzegovina (Bosnia and Herzegovina). In the unpublished Deeleman's travelling diary (Deeleman 1968) further mentioned this locality as "Caternja Umgebung" with the same collecting date.

ACKNOWLEDGEMENTS. We are grateful to Wolfgang Schawaller (SMNS) for the possibility to study of type specimens in his charge, as well as our colleagues Achille Casale (Dipartimento di Zoologia e Genetica dell'Università, Sassari, Italy) for useful suggestions and Michel Perreau (Université Paris 7, France) for kindly reviewing the manuscript.

REFERENCES

- CASALE A., GIACHINO P. M. & JALŽIĆ B. 2004: Three new species and one new genus of ultraspecialized cave dwelling Leptodirinae from Croatia (Coleoptera, Cholevidae). *Natura Croatica* 13: 301-317.
- ĆURČIĆ S. B., BRAJKOVIĆ M. M., ĆURČIĆ B. P. M & WAITZBAUER W. 2007: Rozajella jovanvladimiri gen. n., sp. n. (Leptodirini, Leiodidae, Coleoptera), from East Montenegro, with notes on its phylogeny. Archives of Biological Sciences 59 (2): 145-150.
- DEELEMAN P. R. 1968: Reisebericht über den Höhlenbesuch in Bosnien und Istrien. Juli & August 1968. Unpubl. msc. Depon. in the Archives of Ch. L. Deeleman-Reinhold, Ossendrecht, 8 pp.
- GIACHINO P. M., VAILATI D. & CASALE A. 1998: Major questions in the phylogeny and biogeography of Cholevidae (Coleoptera), with emphasis on the subfamily Leptodirinae, pp. 179-209. In: GIACHINO P. M. & PECK S. B. (eds.): *Phylogeny and Evolution of Subterranean and Endogean Cholevidae (= Leiodidae Cholevinae). Proceedings* of a Symposium (30 August, 1996, Florence, Italy) XX International Congress of Entomology. Torino: Atti del Museo Regionale di Scienze Naturali, 295 pp.
- GIACHINO P. M. & VAILATI D. 2005: Nuovi dati sul genere Anthroherpon Reitter, 1889 (Coleoptera, Cholevidae, Leptodirinae). Bollettino del Museo Civico di Storia Naturale di Verona, Botanica Zoologia 29: 149-163.
- GIACHINO P. M., MORAVEC J. & UDRŽAL R. (in prep.): Revision of the genus Parapropus Ganglbauer, 1899 (Coleoptera: Cholevidae: Leptodirinae). Natura Croatica.
- PERREAU M. 2004: Family Leiodidae Fleming, 1821, pp. 133-203. In: LÖBL I. & SMETANA A. (eds.): Catalogue of Palaearctic Coleoptera, Vol. 2: Hydrophiloidea - Histeroidea - Staphylinoidea. Stenstrup: Apollo Books, 942 pp.
- PERREAU M. & PAVIĆEVIĆ D. 2008a: One new genus and two new species of Leptodirina from Montenegro (Coleoptera, Leiodidae, Cholevinae), pp. 199-210. In: PAVIĆEVIĆ D. & PERREAU M. (eds.): Advances in the studies of the fauna of the Balkan Peninsula. Papers dedicated to the memory of Guido Nonveiller. Belgrade: Institute for Nature Conservation of Serbia, Monograph 22, viii+564 pp.
- PERREAU M. & PAVIĆEVIĆ D. 2008b: The genus Hadesia Müller, 1911 and the phylogeny of Anthroherponina (Coleoptera, Leiodidae, Cholevinae, Leptodirini), pp. 215-239. In: PAVIĆEVIĆ D. & PERREAU M. (eds.): Advances in the studies of the fauna of the Balkan Peninsula. Papers dedicated to the memory of Guido Nonveiller. Belgrade: Institute for Nature Conservation of Serbia, Monograph 22, viii+564 pp.

 $(\mathbf{\bullet})$

Received: 29.9.2008 Accepted: 30.10.2008