

Orotrechus novaki sp. n. from isolated subalpine karst in Slovenia
(Coleoptera: Carabidae: Trechini)

Orotrechus novaki sp. n. z izolovaného subalpínského krasu ve Slovinsku
(Coleoptera: Carabidae: Trechini)

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Taxonomy, description, *Orotrechus novaki* sp.n., Coleoptera, Carabidae, Trechini, Slovenia

Abstract. *Orotrechus novaki* sp. n. from the Pavlijeva luknja (Pavlijev Abyss) near Radlje ob Dravi in north-eastern Slovenia is described, illustrated and compared with *O. subpannonicus* Daffner, 1994.

Orotrechus novaki sp. n.

Description. Pitchy yellowish brown, lustrous, head and pronotum mostly darker (Fig. 1). Microsculpture fine, on pronotum more or less denser. All measurements were obtained by 20 males and 20 females.

Length (from apex of mandibles to apex of elytra) in males 3.86 - 4.32 mm (aver. 4.05 mm) (holotype 3.97 mm), in females 3.44 - 3.89 mm (aver. 3.70 mm).

Head rather broad [width : length ratio (measured from anterior margin of clypeus to posterior margin of tempora) = 0.72 - 0.93, aver. 0.87] in males (holotype 0.72); 0.93 - 1.00 (aver. 0.99) in females, slightly narrower than pronotum (width of head : width of pronotum ratio = 0.86 - 0.94, aver. 0.92) in males (holotype 0.94); 0.85 - 0.90 aver. 0.89) in females. Eyes totally reduced. Frontal torus moderately arcuate, tempora and orbitae with very short pubescence. Antennae (Fig. 2) slightly longer than elytra (length of elytra : length of antennae ratio = 0.93 - 0.99, aver. 0.98) in males (holotype 0.95); 0.98 - 1.02 (aver. 1.00) in females. Lengths of antennomeres ratio (in reference to antennomere II) on the average 0.98 : 1.00 : 1.01 : 1.01 : 1.01 : 1.00 : 0.99 : 0.98 : 0.98 : 0.97 : 1.05.

Pronotum (Fig. 3) cordate, flat, width : length ratio = 1.04 - 1.20 (aver. 1.15) in males (holotype 1.04); 1.13 - 1.24 (aver. 1.19) in females, backwards distinctly tapered; maximum width : width of basis ratio = 1.74 - 1.85, (aver. 1.79) in males (holotype 1.75); 1.75 - 1.83 (aver. 1.80) in females. Basis of pronotum almost straight, but as a rule slightly arcuate, without two short setae; shape of posterior corners acuteangular, prominent laterally.

Elytra widely oval, moderately convex (length : width ratio = 1.58 - 1.67, aver. 1.62) in males (holotype 1.64); 1.61 - 1.69 (aver. 1.66) in females, wider than pronotum (width of elytra : width of pronotum ratio = 1.71 - 1.84, aver. 1.76) in males (holotype 1.84); 1.56 - 1.70 (aver. 1.65) in females, the widest in the middle; shoulders very striking, angulate. Two to four inner striae shallowly impressed but distinct, striae 5 to 7 impressed superficially. Stria 3 with 3 setiferous (2

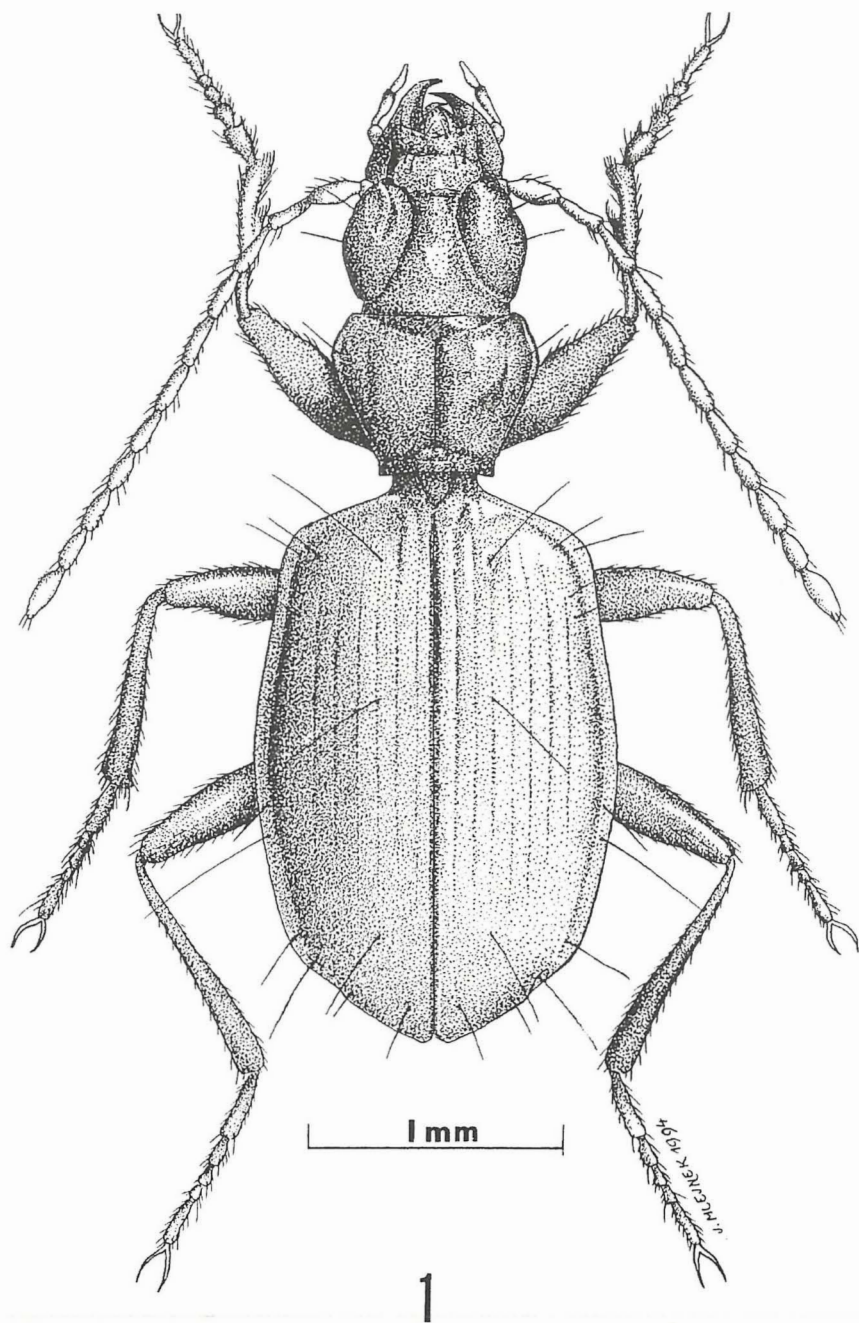


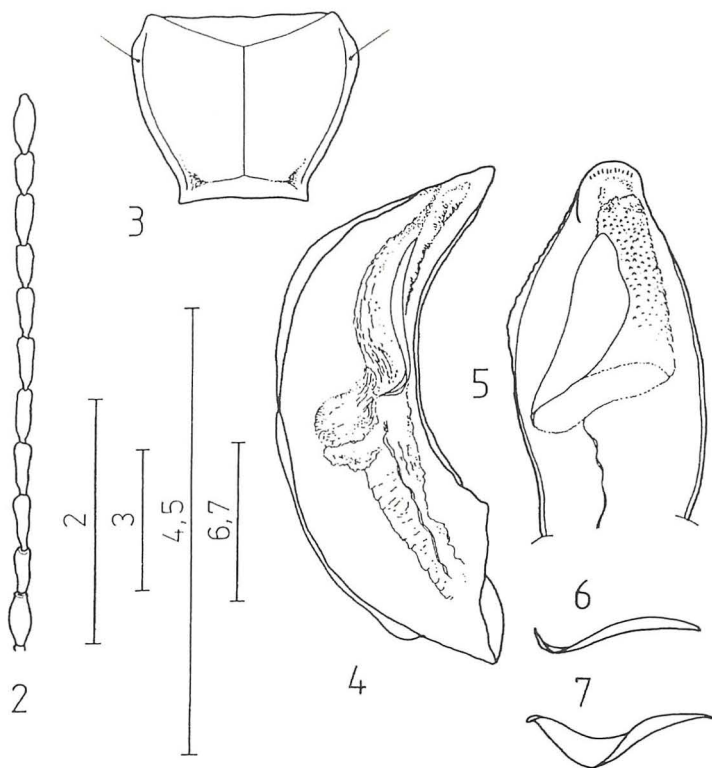
Fig. 1. *Orotrechus novaki* sp. n., holotype.
Obr. 1. *Orotrechus novaki* sp. n., holotypus.

dorsal, 1 apical) pores, pore 1 situated between second and third posthumeral pores; apical striolae shallow, indicated towards the stria 6.

Metatarsi relatively short [length of elytron : length of metatarsus ratio = 2.57 - 2.69 (aver. 2.63) in males (holotype 2.67), 2.50 - 2.67 (aver. 2.57) in females].

Aedeagus (Figs 4, 5) robust, 0.51 - 0.58 mm (aver. 0.54 mm) long (holotype 0.53 mm), strongly curved in lateral view; apical portion broadly rounded dorsally. Copulatory piece of aedeagus as in Figs 4 - 6 (length of aedeagus : length of copulatory piece ratio = 3.18). Parameres broadly extended towards the apex, with 5 short, tough setae on apical edge. Length of elytron : length of aedeagus ratio = 3.98 - 4.26 (aver. 4.10) (holotype 3.98); length of body : length of aedeagus ratio = 7.34 - 7.75 (aver. 7.52) (holotype 7.49).

Type material. Holotype (male): "Slovenija, Kobansko, Pavlijeva luknja (abyss) pr. Radlje ob Dravi, 5.ix. - 6.xi. 1992, traps, R. Mlejnek lgt.". Paratypes: 33 males, 35 females therefrom 24 males and 20 females the same data as in holotype; 9 males and 13 females, ditto, only "4.v. - 5.ix. 1992"; 1 female, ditto, only "5.ix. 1992"; 1 female, ditto, only "13.iii. 1977, A. Novak lgt".



Figs 2-7. 2-6: *Orotrechus novaki* sp. n., holotype. 2 - right antenna; 3 - pronotum; 4 - aedeagus, lateral view; 5 - ditto, dorsal view; 6 - copulatory piece, lateral view; 7: ditto, *Orotrechus subpannonicus* Daffner. Scale bars: 2 = 1 mm; 3 = 0.5 mm; 4, 5 = 0.5 mm; 6, 7 = 0.2 mm.

Obr. 2-7. 2-6: *Orotrechus novaki* sp. n., holotypus. 2 - pravé tykadlo; 3 - štít; 4 - aedeagus, z boku; 5 - totéž, svrchu; 6 - sklerit vnitřního vaku aedeagu, z boku; 7: totéž u *Orotrechus subpannonicus* Daffner. Měřítka: 2 = 1 mm; 3 = 0.5 mm; 4, 5 = 0.5 mm; 6, 7 = 0.2 mm.

Holotype deposited in the collection of R. Mlejnek, Pardubice (RM); paratypes in RM; Institute of Biology, coll. E. Pretner & B. Drovenik, Ljubljana (IBL); J. Moravec, Vrdy (JM) and R. Udržal, Pardubice (RU).

Additional material. All teneral specimens (4 males, 6 females), therefrom 3 males and 4 females from the same locality, with the same date as in holotype; 1 males and 2 females, ditto, only "4.v. - 5.ix. 1992" (all in IBL, RM, JM and RU).

Type locality. NE Slovenia, the Perkolica hill near Radlje ob Dravi, homogenous isolated karstic unit, 601 m alt., Kobansko Mts. (Habič 1993). The Pavlijeva luknja (Pavlijev Abyss) (Cave Register No 3142, Speleological Association of Slovenia, Ljubljana), 594 m alt.

The new species has been taken using pitfall traps, together with *Haasia troglodytes* (Latzel, 1884) (Diplopoda: Anthogonidae), and troglodoxenous Diptera (e.g. Culicidae, Chironomidae, Dolichopodidae, without detailed indication).

Name derivation. Dedicated to the first collector, Mr. Anton Novak (Caving Club Slovenj Gradec, Slovenia).

Differential diagnosis. *Orotrechus novaki* sp. n. belongs to the *O. globulipennis* (Schaum in Erichson, 1860) species group (see Vigna Taglianti 1982) by absence of setae on basis of pronotum (in *O. globulipennis* basal pronotal setae very short, but distinct). *O. novaki* sp. n. differs from the most similar species, *O. subpannonicus*, by its shape of pronotum, which is, generally, more widely and irregularly rounded laterally, and by its copulatory piece (in *O. subpannonicus* the copulatory piece is wider - Fig. 7) and by the different shape of the inner sac. Apex of parameres with 5 setae [in *O. subpannonicus* the apex of parameres improbably with 1 seta (? broken off) (see Daffner 1994)]. Chaetotaxy like in *O. subpannonicus*.

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SOUHRN

Orotrechus novaki sp.n. z propasti Pavlijeva luknja nedaleko Radlje ob Dravi ve Slovinsku je popsán, zobrazen a porovnán s *O. subpannonicus*.

Nový druh patří do skupiny *O. globulipennis*. U *O. globulipennis* jsou sety na bazi štítu velmi krátké, u *O. novaki* sp. n. sety chybí. *O. novaki* sp. n. se od velmi podobného druhu *O. subpannonicus* liší tvarem štítu a vnitřním skleritem aedeagu a též rozdílným tvarem vnitřního vaku. Apikální okraj paramery je opatřen pěti krátkými a tuhými setami [u *O. subpannonicus* je apikální okraj paramer opatřen pouze jednou setou (? odlomeny) (viz Daffner 1994)].

Všechny exempláře typové série byly sbírány ve Slovinsku, v propasti Pavlijeva luknja (kat. č. 3142, Jamarska zveza Slovenije, Ljubljana).

Druh je pojmenován k počtě prvního nálezce, pana Antona Novaka (JK Slovenj Gradec, Slovinsko).

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ERRATUM

There should be on the page 1, 1st line, correctly: Klapalekiana, 30: 1-164, 1994, in the article by B. Březina: The Check-list of the Genus *Carabus* (Coleoptera: Carabidae).

V práci B. Březiny: Check-list rodu *Carabus* (Coleoptera: Carabidae) má na str. 1, první řádek, být správně: Klapalekiana, 30: 1-164, 1994.