

ENDOGEAN AND CAVERNICOLOUS
COLEOPTERA OF THE BALKANS. XI. REVISION
OF THE SUBGENUS *TROGLORHYNCHUS* REITTER
OF THE GENUS *OTIORHYNCHUS* GERMAR
(COLEOPTERA: CURCULIONIDAE: ENTIMINAE)

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Hlaváč, P.: Endogean and cavernicolous Coleoptera of the Balkans. XI. Revision of the subgenus *Trogloorhynchus* Reitter of the genus *Otiiorhynchus* Germar (Coleoptera: Curculionidae). *Nat. Croat.*, Vol. 20, No. 1., 189–200, 2011, Zagreb.

The subgenus *Trogloorhynchus* Reitter, 1854 of the genus *Otiiorhynchus* Germar, 1824 is redescribed, revised and differentiated from other subgenera of *Otiiorhynchus*, which has the micro or anophthalmus species. *T. anophthalmoides omeros* Colonnelli, 2003, *T. pretneri* F. Solari, 1955 as well as *T. celejensis* G. Müller, 1924 are synonymized to *T. anophthalmoides* Reitter, 1914.

Key words: Coleoptera, Curculionidae, Entiminae, *Otiiorhynchus*, *Trogloorhynchus*, revision, biopaleology, Austria, Slovenia, Italy, Croatia, taxonomy

Hlaváč, P.: Endogejski i špiljski Coleoptera Balkana. XI. Revizija podroda *Trogloorhynchus* Reitter roda *Otiiorhynchus* Germar (Coleoptera: Curculionidae). *Nat. Croat.*, Vol. 20, No. 1., 189–200, 2011, Zagreb.

Podrod *Trogloorhynchus* Reitter, 1854 roda *Otiiorhynchus* Germar, 1824 se ponovno opisuje, revidira i diferencira od ostalih podrodova roda *Otiiorhynchus* u kojem su vrste bez ili s izuzetno malim očima. *T. anophthalmoides omeros* Colonnelli, 2003, *T. pretneri* F. Solari, 1955 kao i *T. celejensis* G. Müller, 1924 su sinonimizirane s *T. anophthalmoides* Reitter, 1914.

Ključne riječi: Coleoptera, Curculionidae, Entiminae, *Otiiorhynchus*, *Trogloorhynchus*, revizija, biopaleologija, Austrija, Slovenija, Italija, Hrvatska, taksonomija

INTRODUCTION

Otiiorhynchus Germar, 1824 is very large and diverse assemblage of more than 1500, mainly Palaearctic, species (MAGNANO, 1998) of the subfamily Entiminae, tribe Otiiorhynchini. The genus actually contains 105 subgenera (ALONSO-ZARAZAGA & LYAL, 1999; DAVIDIAN & SAVITSKY, 2006).

No attempt has been made to study the genus *Otiiorhynchus*, nor the tribe Otiiorhynchini, from a phylogenetic and in particular a molecular perspective although

a modern treatment of *Otiiorhynchus* and some closely allied genera has been published relatively recently (MAGNANO, 1998). So the monophyly of the genus still remains doubtful.

Trogloorhynchus Schmidt, 1854 is a relatively small subgenus. For a long time it has served as a basket of all microphthalmous and anophthalmous species of the genus *Otiiorhynchus* Magnano (1998), when he published his new subgeneric concept of *Otiiorhynchus*, placed many of those species in different subgenera such as *Lixorrhynchus* Reitter, 1914, *Jelenatus* Reitter, 1912, *Namertanus* Reitter, 1912 and *Podonebistus* Reitter, 1912. Some anophthalmous species of *Podonebistus* were later separated (MAGRINI *et al.*, 2005) into the independent genus *Ioniorhynchus* Magrini, Meoli & Abbazi, 2005 which was later included in the genus *Otiiorhynchus* (OSELLA, 2008). Magnano also proposed a new status of *Trogloorhynchus* which was reduced to the subgeneric rank of *Otiiorhynchus*. In his work 22 species and subspecies were placed in this subgenus, all distributed in the Austrian, Italian and Slovenian Alps as well as the Croatian Istrian peninsula. Discovery of a new, remarkable species found on the Croatian Island of Vis (DI MARCO & OSELLA, 2002), necessitated description of a new subgenus *Baldorhynchus* Di Marco & Osella, 2002 and also a redefinition of the subgenus *Trogloorhynchus*. As a consequence of this study, all Italian species placed in *Trogloorhynchus* by MAGNANO (1998) have been moved to *Baldorhynchus*, and *Trogloorhynchus* was reduced to containing the following species and subspecies from southern Austria, northern Italy, Slovenia and Croatia: *Otiiorhynchus* (*Trogloorhynchus*) *anophthalmus* Schmidt, 1854; *O. (T.) anophthalmoides anophthalmoides* Reitter, 1914; *O. (T.) anophthalmoides omeros* Colonnelli, 2003; *O. (T.) pretneri* F. Solari, 1955 and *O. (T.) celejensis* Müller, 1924. The status of *O. (T.) prolixus* Rosenhauer, 1847; *O. (T.) bericus* Magnano, 1977 (both from Italy) as well as recently described *O. (T.) triantisi* Alziar & Makris, 2006 from Cyprus should be verified, but it is highly likely they do not belong to subgenus *Trogloorhynchus* either.

The objective of this paper is to revise all species of the subgenus *Trogloorhynchus* as newly defined by MAGNANO (1998) and DI MARCO & OSELLA (2002) but without *O. (T.) prolixus* Rosenhauer, 1847; *O. (T.) bericus* Magnano, 1977 and *O. (T.) triantisi* Alziar & Makris, 2006.

MATERIAL AND METHODS

Studied material was provided from following museums or private persons:

CNHM – Croatian Natural History Museum, Zagreb (B. Jalžić)

HNHM – Hungarian Natural History Museum, Budapest (O. Merkl)

MCST – Museo Civico di Storia Naturale, Trieste (A. Colla)

MSNM – Museo Civico di Storia Naturale, Milan

NHMW – Naturhistorisches Museum Wien, Vienna (H. Schilhammer)

NMPC – National Museum (Natural History), Prague (J. Hájek)

NMPO – Notranjski Museum, Postojna, (Slavko Polak)

CPH – private collection of Peter Hlaváč, Košice, Slovakia

CJL – private collection of Jan Lakota, Ružomberok, Slovakia

The terminology for female genitalia follows HOWDEN (1995) and BOROVEC (2006). Length of body is measured with rostrum.

Abbreviations used in the text are as follows:

HW – width of head, measured at base; MWR – maximal width of rostrum; WRF – width of rostral furrow, measured in the middle; LRF – length of rostral furrow; WRC – width of rostral constriction. The slash symbol '/' separates data from different labels; my remarks and clarification are given in square brackets; [p] denotes printed labels and [h] denotes handwritten labels. All studied specimens bear my identification label.

TAXONOMY

Otiorrhynchus (Troglorrhynchus) Schmidt

Otiorrhynchus (Troglorrhynchus) Schmidt, 1854: 25. Type species: *Troglorrhynchus anophthalmus* Schmidt, 1854, monotypy.

Otiorrhynchus (Troglorrhynchus) Schmidt: Reitter, 1914: 111

Otiorrhynchus (Troglorrhynchus) Schmidt: Magnano, 1998: 55 (subgenus of *Otiorrhynchus*, new status)

Otiorrhynchus (Tirolius) Arnoldi, 1975: 128. Type species: *Otiorrhynchus (Tirolius) prolixus* Rosenhauer, 1847 (synonymy in Magnano, 1998: 55)

Otiorrhynchus (Troglorrhynchus) Schmidt: Di Marco & Osella, 2002: 258 (differential diagnosis, new status of the subgenus)

Troglorrhynchus Schmidt: Dieckmann, 1980: 178 (diagnosis)

Diagnosis: *Troglorrhynchus* belongs in section II as defined by MAGNANO (1998) and it is characterized by the following combination of characters: 1) eyes completely absent, 2) elytral suture lacking preapical cusp, 3) epipleura curved at the level of the hind coxae, base of elytra straight and closely fitting the base of the pronotum, 4) elytra with 10 rows of punctured striae, 5) ventrite II lacking small longitudinal furrows in apical half, 6) male middle tibiae not hollowed and hind tibia lacking a long fringe of hairs along inner edge, 7) at least hind femora dentate, 8) corbels of hind tibiae opened, 9) rostrum without apical flattened area, 10) elytra narrowly elongate, intervals weakly convex, rows of punctures of the same width as intervals, punctures large, intervals with a row of almost recumbent hairs.

Description: Body from light yellowish-brown to dark brown. Length of body 4.10–6.15 mm. Head impunctate, smooth on disc, lateral part of base finely shagreened, eyes atrophied, composed of only one longitudinally oval stemma, anterior part of rostrum wide, scrobe clearly visible dorsally, clypeus lacking punctures and with few longer golden setae on each side and on disc, rostral furrow wide and deep, with or without golden setation, elevated, longitudinal rostral carinae almost parallel. Ventral, posterior part of head transversely finely shagreened, anterior part smooth, gular suture well-defined, reaching posterior third.

Antennae slender and long, scape very long, narrow at base and evenly extended to apex, at apex clavate, pedicel clavate, longer than antennomere III, antennomeres IV–VIII about the same size, about three times shorter than pedicel, antennal club (X–XI) elongate, about 2–2.5 times as long as wide and more than 1.6 times as long as pedicel.

Pronotum elongate, slightly wider than long and slightly longer than head, with very rough irregular puncturation, punctures large, disc lacking setae, smooth between large punctures.

Elytra elongate, oval, about 1.80–2.05 times as long as wide, maximum width in the middle, smooth, with ten rows of punctured striae, sparse setation between intervals, otherwise surface smooth. Triangular scutellum well-defined.

Venter, prosternum with rough structure, irregularly wrinkly, lacking setation, procoxae confluent; metaventrite about 1.5 times as long as mesoventrite, mesoventrite isodiametrically shagreened and with well-defined puncturation on side and base, mesocoxae close but separated by obtuse rectangular mesoventral and pointed metaventral process which are contiguous, middle base of metaventrite with small but well-defined, triangular excavation, metaventrite shiny, smooth, with very few, irregularly placed shallow punctures and setae; metacoxae very distant; first visible sternite (III) transversely wrinkly, first ventral suture sinuate in the middle, twice as long as second ventrite (IV), third and four ventrite (V–VI) together about as long as second in the middle (IV), fifth ventrite (VII) about as long as second (IV), second and third ventral suture straight.

Legs robust, with golden setation, profemora with or without small spine, meso and metafemora with spines, all tibiae smooth, lacking any spines, protibiae with strong inner apical spur and outer comb of stout setae.

Aedeagus weakly sclerotized, with wide apical lobe, apically pointed laterally, with well-defined and species characteristic aggonoporum.

Spermatheca relatively large, nodulus and ramus very short, cornu long, somewhat pointed. Ovipositor (Fig. 14) very weakly sclerotized, styli of discal portion [= gonocoxite] of ovipositor short, oval, tapered with few shorter and longer setae.

Differential diagnosis: *Troglorhynchus* is most closely related to the subgenus *Baldorhynchus* di Marco & Osella, 2002 from which it can be readily separated by the following set of characters (slightly modified from MARCO & OSELLA, 2002: 258): 1) at least metafemora with small tooth, 2) laminae of ventrite VIII apically free (Fig. 13), 3) spermathecal nodulus and ramus short, cornus elongate, pointed apically (Fig. 7, 12) styli of ovipositor coxites short, oval and 5) pronotal punctures usually shallow.

The genus *Troglorhynchus* can be separated from the other subgenera of *Otiiorhynchus*, which have anophthalmous and microphthalmous species, as follows (MAGNANO, 1998):

- 1) from *Namertanus*, *Ioniorhynchus* and *Podonebistus* by having epipleura curved at the level of hind coxae, base of elytra straight and closely fitting the base of the prothorax, elytra with 10–13 striae.
- 2) from *Lixorrhynchus* by having rostrum lacking apical flattened area, or this area is ill-defined and crossed by two oblique furrows.
- 3) from *Jelenatus* by having at least hind femora dentate.

Bionomics: No biological data other than collecting records are available for *Troglorhynchus*. Adult beetles are usually collected in caves or under large stones in forested areas. All *Otiiorhynchus* are phytophagous insects so it is hardly possible that they are true cavernicolous beetles as they do not have proper conditions for development in caves. The most probable possibility is that they develop in the roots of plants in deep soil and fall accidentally into caves. Immature stages of *Troglorhynchus* have never been described.

Distribution: southern Austria (Kärnten), Slovenia, Italy (Friuli-Venezia Giulia), Croatia (Istria and Northern Dinarides)

Key to species of the subgenus *Troglorhynchus*

- 1 Larger species, length of body 5.55–6.15 mm; pro and mesofemora simple, edentate, if tooth present, minuscule, almost invisible; in female nodulus and ramus very weakly separated (Fig. 7) *T. anophthalmus*
- Smaller species, length of body 4.10–5.60 mm; all femora dentate, teeth sometimes small but always well-defined spines; in female nodulus and ramus much more separated (Fig. 12) *T. anophthalmoides*

***Otiorrhynchus (Troglorhynchus) anophthalmus* F. Schmidt (Figs. 1-7)**

Troglorhynchus anophthalmus Schmidt, 1854: 25

Otiorrhynchus (Troglorrhynchus) anophthalmus Schmidt: Reitter, 1914: 112

Otiorrhynchus (Troglorhynchus) anophthalmus Schmidt: Di Marco & Osella, 2002: 258 (illustration of aedeagus and spermatheca)

Troglorhynchus anophthalmus Schmidt: Dieckman, 1980: 179 (redescription, biology, discussion)



Fig. 1. *T. anophthalmus*, habitus



Fig. 2. *T. anophthalmoides*, habitus

Type locality: Grotte von Grosskalenberg [Matjaževa jama, Zavrh, Slovenia] and Grotte am Mokrizberg [Brezno na Skedenici, about 25km south of Ljubljana, Slovenija]

Distribution: Slovenia, Italy, Austria, Croatia (Velebit)

Material examined (1♂, 8♀): **Slovenia:** ♀: (h) Krain, Kitz. / (h) *anophthalmus* Sch. (p) Coll. Reitter / (h) *Troglorrhynchus anophthalmus* Sch. (p) det. Csiki (h) 1944. ♂: (h) Krain, Staudinger / (h) *anophthalmus* (p) det. Formánek/ Nár. Mus. Praha, coll., Formánek. NMPC. ♀: (h) [illegible text, most probably Krain] / (h) *Troglorrhynchus anophthalmus* Sch. (p) det. Csiki (h) 1944 / Coll. K. Fuss. ♀: (p) Carniola / (h) *Troglorrhynchus anophthalmus* Sch. (p) det. Csiki (h) 1944. ♀: (p) Carn. (h) Jelenca, 6.V.17 (p) Staudacher / (h) *Troglorrhynchus anophthalmus* Sch. (p) det. Hlisnikowski 19(h)40 / (p) ex coll. Hlisnikowski, National Museum Prague, Czech Republic. CPH. ♀: (h) Carniola / (h) *anophthalmus* det. Formánek / (p) Coll. Kraatz / Nár. Mus. Praha, coll. Formánek. NMPC. **Croatia:** 1♀: (p) CROATIA: Žumberak, Jamina cave, D. Oštrc, T. Rubinić lgt. CNHM. ♀: (p) Dr. v. Beszedes, M. Maggiore [= Učka Mts.], Istrien / (p) coll. E, Csiki / (h) *Troglorrhynchus v. anophthalmoideus*. ♀: (h) Hercegovina / (p) ex coll. A. Fleischer National Museum Prague, Czech Republic [this is almost certainly a wrong locality]. NMPC.

Description: Body light yellowish-brown. Length of body 5.55–6.15 mm, maximum width of elytra 1.60–1.85 mm. Head unpunctured, eyes atrophied, composed only of one longitudinally oval stemma, anterior part of rostrum wide, ratio HW/MWR = 1.38–1.40, rostral furrow wide and deep, wrinkly, with dense golden setation, ratio WRF/MWR = 0.29–0.31, elevated rostral carinae slightly arched, closest in middle, slender, with or without punctures, rostral furrow short, ratio HL/LRF = 2.43–2.81, ratio MWR/WRC = 3.18–3.40.

Antennae slender and long, scape very long, about 1.08–1.23 mm, narrow at base and evenly extended to apex, at apex clavate and about 2.6–2.7 times as wide as at base, pedicel clavate, about 1.14–1.29 times as long as antennomere III, antennomeres IV–VIII about the same size, about three times shorter than pedicel, antennal club (IX–XI) elongate, about 2.5 times as long as wide and 1.77 times as long as pedicel.

Pronotum elongate, about 1.15 times as long as wide and slightly longer than head, with very rough irregular puncturation, punctures large, shallow, with few golden setae at base and sides, disc lacking setae, smooth between a few large punctures, base with a line of confluent punctures which form shallow, less-defined antibasal sulcus.

Elytra elongate, oval, about 2.00–2.05 times as long as wide, maximum width in the middle, smooth, with ten rows of punctured striae, width of interval variable, from as wide as diameter of punctures to twice the diameter of punctures, with sparse setation at intervals, otherwise surface smooth. Triangular scutellum with fine microsculpture.

Legs robust, with golden setation, pro and meso femora edentate, metafemora with very small tooth which is almost invisible.

Aedeagus as in Figs. 3, 4. Spermatheca as in Fig. 7.

Differential diagnosis: *T. anophthalmus* can be readily separated from its congeners by larger size, longer scape and pro and mesofemora simple, lacking spines.

Distribution: Austria, Slovenia

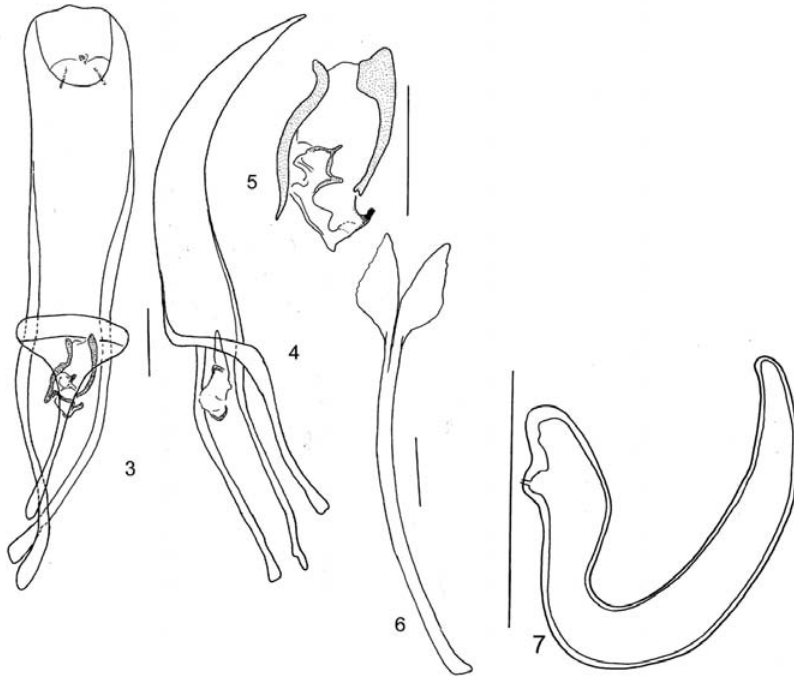


Fig. 3. *T. anophthalmus*, aedeagus, dorsal aspect, scale = 0.2 mm; **Fig. 4.** *T. anophthalmus*, aedeagus, lateral aspect, scale = 0.2 mm; **Fig. 5.** *T. anophthalmus*, aggonopodium, dorsal view, scale = 0.2 mm; **Fig. 6.** *T. anophthalmus*, spiculum gastrale, scale = 0.2 mm; **Fig. 7.** *T. anophthalmus*, spermatheca, scale = 0.2 mm

Otiorhynchus (Troglorhynchus) anophthalmoides (Reitter) (Figs. 8–15)

Otiorhynchus (Troglorhynchus) anophthalmus v. *anophthalmoides* Reitter, 1914: 112

Troglorhynchus anophthalmoides Reitter: F. Solari, 1955: 82; Dieckmann, 1980: 179

Troglorhynchus pretneri F. Solari, 1955: 80 **syn. nov.**

Otiorhynchus anophthalmoides omeros Colonnelli, 2003: 10 new name for *Otiorhynchus anophthalmoides istriensis* (F. Solari, 1955), nec *Otiorhynchus istriensis* Germar, 1824 **syn. nov.**

Troglorhynchus anophthalmoides istriensis F. Solari, 1955: 84

Otiorhynchus (Troglorhynchus) anophthalmoides Reitter: Di Marco & Osella, 2002: 259 (illustration of spermatheca)

Otiorhynchus (Troglorhynchus) celejensis G. Müller, 1924: 78 **syn. nov.**

Type locality: Trnova

Material examined:

Type material:

Troglorhynchus anophthalmoides Reitter: LECTOTYPE, present designation to provide the unique bearer of the species name, 1♀: (h) Ternova [illegible text] 28.7.94 /

Coll. Reitter / (h) v. *anophthalmoides* m. / label with red margin (p) red ink HOLOTYPE (h) 1914, *Otiorrh. anophthalmus* v. *anophthalmoides* Rtt. / red label LECTOTYPE *Otiorrhynchus* sbg. *Trogloorhynchus anophthalmoides* Reitter, P. Hlaváč des., 2009. HNHM.

Trogloorhynchus anophthalmoides istriensis F. Solari: HOLOTYPE, 1 ♀: (p) Castelnuovo. Istr. Pretner. / (h) Jabučinov stržen. 5.920 / red ink (h) *Trogloorhynchus istriensis* m holotypus! (p) det. F. Solari / red label (p) HOLOTYPE *Trogloorhynchus anophthalmoides istriensis* F. Solari, P. Hlaváč des., 2009 / (p) *Trogloorhynchus anophthalmoides* Reitter, P. Hlaváč det., 2009. MSNM. PARATYPE, 1 ♀: (p) Castelnuovo. Istr. Pretner. / (h) Jabučinov stržen. 5.920 / (h) Grotta Jabučinov stržen presso Castelnuovo Istria / (h) *anophthalmus* (p) det. E. Pretner / da entrata della grotto [illegible text] 17.iv.1931 / *Trogloorhynchus istriensis* m. paratypus / red label (p) PARATYPE *Trogloorhynchus anophthalmoides istriensis* F. Solari, P. Hlaváč des., 2009 / (p) *Trogloorhynchus anophthalmoides* Reitter, P. Hlaváč det., 2009. MSNM.

Trogloorhynchus pretneri F. Solari: HOLOTYPE, 1 ♀: (h) Kurent, Bezuljak 23.7.1932 / (p) CARNIOLA, E. PRETNER / (h) red ink *Trogloorhynchus Pretneri* holotypus m. det. F. Solari / (p) red label HOLOTYPE *Otiorrhynchus* sbg. *Trogloorhynchus pretneri* Solari, des. P. Hlaváč, 2009 / *Trogloorhynchus anophthalmoides* Reitter, P. Hlaváč det., 2009. MSNM.

Other material (9♂, 18♀, 13 ex): **Austria:** ♂: (p) Dobratsch Carinthia / (p) lg. Diener (h) 20.VII.10 / (h) *Trogloorhynchus anophthalmus* Sch. (p) det. Csiki (h) 1944. HNHM. 2♀: (p) Dobratsch Carinthia / (p) lg. Diener (h) 20.VII.10 / (h) *Trogloorhynchus anophthalmus* Sch. (p) det. Csiki (h) 1944. HNHM. ♀: (h) Karinthia / (h) v. *anophthalmoides* Reitt. (p) coll. Reitter / (h) *Tr. anophthalmus* v. *anophthalmoides* Rtt. (p) det. Csiki (h) 1944. CPH. ♀: (h) Dobratsch [illegible text] / (h) *Trogl. anophthalmus* / (p) ex coll. A. Fleischer National Museum Prague, Czech Republic. NMPC. ♀: (h) Bodental, Karawanken / (p) ex coll. J. Hlisnikowski National Museum Prague, Czech Republic / (p) vend Moczarski (h) *Trogloorhynchus anophthalmoides*. NMPC. **Slovenia:** 2ex: (h) Wochein [Bohinjska Bistrica], Carniola / (h) *Trogloorhynchus anophthalmus* Sch. (p) det. Hlisnikowski 19 (h) 40 / (p) ex coll. Hlisnikowski, National Museum Prague, Czech Republic. NMPC. 1ex: (p) Wochein [Bohinjska Bistrica], Car. Moczarski / (h) *Trogloorhynchus anophthalmus* Sch. (p) det. Hlisnikowski 19 (h) 40 / (p) ex coll. Hlisnikowski, National Museum Prague, Czech Republic. NMPC. 2ex: blue label (p) Carniola, Wochein [Bohinjska Bistrica] / (h) *Trogloorhynchus anophthalmus* Sch. (p) det. Hlisnikowski 19 (h) 40 / (p) ex coll. Hlisnikowski, National Museum Prague, Czech Republic. NMPC. 1ex: (p) Kranjska Gora, Alp. Jul. / (h) 4.VIII.1913 [illegible text] smrku pod mech / (p) *Ot. (Trogloorhynchus) anophthalmus* Rtt. [sic], Fremuth det., 1998. NMPC. ♀: (p) ♀ / (h) Carniola, (?) Babindol / (h) *Trogloorhynchus anophthalmus* Sch. (p) det. Csiki (h) 1944. HNHM. ♂: (h) Krain Höfer (p) Coll. K. Fuss / (p) Fuss (h) 3967 / (h) *Trogloorhynchus anophthalmus* Sch. (p) det. Csiki (h) 1944 [aedeagus demaged]. HNHM. ♂: (p) Carniola, coll. E. Friv. / (h) *Trogloorhynchus anophthalmus* Sch. (p) det. Csiki (h) 1944 / (h) *anophthalmus* Sch. (p) coll. E. Friv. / (p) FRIV. (h) 5371. HNHM. ♂: (p) Carniola, Laibach. Stussiner / (h) [?] Gr Khlg, grotte, 28.8.79 / (h) *Trogloorhynchus anophthalmus* Sch. (p) det. Csiki (h) 1944 / (h) *anophthalmus* Sch. (p) Coll. Reitter / (p) FRIV. (h) 5371. HNHM. ?: (h) Monti Triglav, a nord del Wocheinersee / (h) Krstenica, m 1600, sotto pietre / (p) Carn. (h) Krstenica (p) Dr. Staudacher / (p) M. Hafner (h) Krstenica V.29 / (h) proprietà Solari *Pretneri*. MSNM. 3?: Slovenija, 17.7.1995, Led-

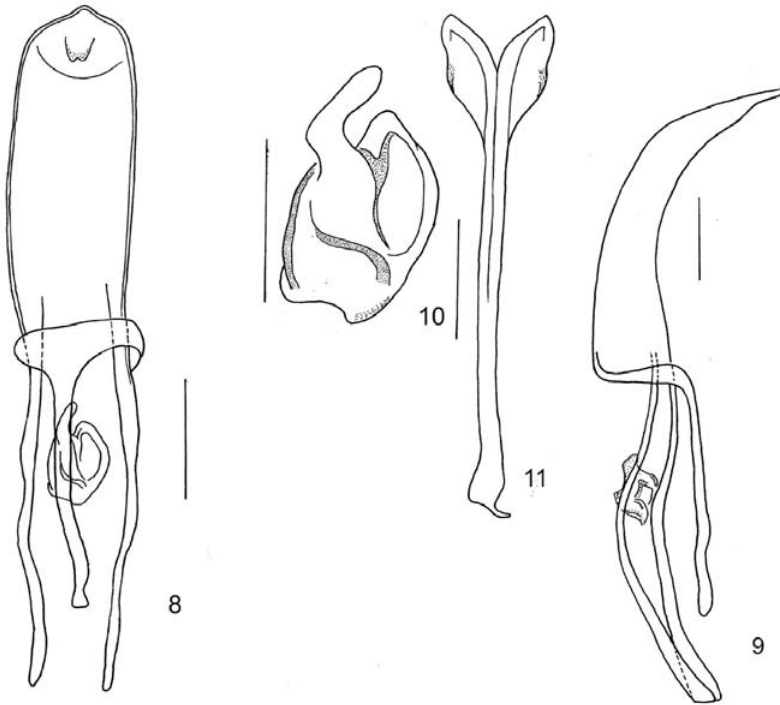


Fig. 8. *T. anophthalmoides*, aedeagus, dorsal view, scale = 0.2 mm; **Fig. 9.** *T. anophthalmoides*, aedeagus, lateral view, scale = 0.2 mm; **Fig. 10.** *T. anophthalmoides*, aggonopodium, dorsal view, scale = 0.2 mm; **Fig. 11.** *T. anophthalmoides*, spiculum gastrale, scale = 0.2 mm

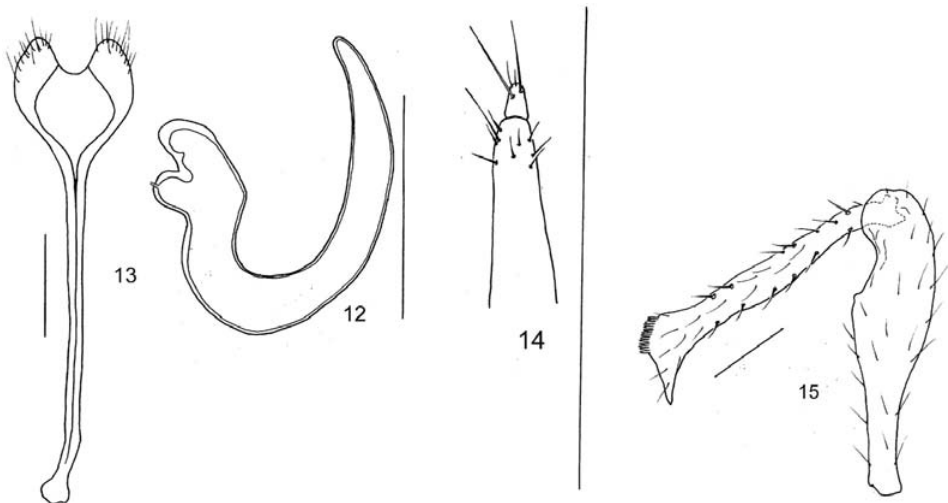


Fig. 12. *T. anophthalmoides*, spermatheca, scale = 0.2 mm; **Fig. 13.** *T. anophthalmoides*, spiculum ventrale, scale = 0.2 mm; **Fig. 14.** *T. anophthalmoides*, ovipositor, scale = 0.2 mm; **Fig. 15.** *T. anophthalmoides*, fore tibia and femora, scale = 0.2 mm

nica pri [near] Orgala, Orgala, Kočevlje, R. Udržal lgt. CPH, CJL. 2ex: Slovenija, Poljane, Bezimena pečina, ? 300 m od Poline pečine, 17.11.2000, R. Udržal lgt. CPH. 1ex: Slovinsko [Slovenia], Vračka zijelka, J. Kritzbech lgt, 5.5.1992–7.9.1992, past [trap]. CJL. ?: (p) SLO: Kurent (254), 8.9.2009, VL 57, Polak, S. leg. NMPO. ?: (p) SLO: Čampava, jama v Kotnicah, (4367) 7.8.1996. P. NMPO. 2ex, 1♂, 1?: (p) Slovenia, Grabrovska jama (378), Dobec, Cerknica, 8.9.2009, S. Polak lgt. NMPO. ?: SLO: Čampava, jama v Kotnicah, (4367) 7.8.1996. P. NMPO. ?: Slovenia, Javor, Snežnik, VL55, 4.11.1995 S.Polak lgt. NMPO. 2?, 1ex: Slovenia, Ponikva, WM13, Gornja steska cave (169), 12.2.1995, S. Polak lgt. NMPO. ♂: Slovenia, Zijavka (1366), Korinj, 25.4.2007, S. Polak lgt. NMPO. **Croatia:** 1 ex: (h) Fužine, Bukova Kosa [Gorski Kotar, Croatia] / (p) coll. E. Csiki. HNHM. ♂: (p) Dr. v. Beszedes, M. Maggiore [= Učka Mts.], Istrien (h) 1943 IV / (p) coll. Dr. R. Streda / (h) *Trogloorhynchus anophthalmus* v. *anophthalmoides* Reitt. HNHM. ?: (p) Dumenčića špilja, Rakovica, Slunj, Kordun, 18.6.2005, leg. B. Jalžić. CNHM. ?: (p) Dumenčića špilja, Rakovica, Slunj, Kordun, 6.6.2009, leg. T. Dražina. CPH. ♀: (p) Mune. Istria 5.925 Pretner / (h) jama Rijavci pri tabor / (h) *Trogloorhynchus istriensis* m., det. F. Solari 1955. MSNM. ♀: (p) Podjaksčić, Špilja u kanjonu Dobre ispod Podjaksčića, Generalski Stol 20.VI.2008, Pavlek lgt. CNHM. 1ex: Croatia, Plitvice, Rodičeva pečina, 25.6.2002, R. Udržal lgt. CJL. 1♂: Croatia, Pečina v Mekoti, Josipdol, 22.7.2001, R. Udržal lgt. CJL. **Records from the literature:** Croatia, Istria: Čičarija s Učkom, Pavletići, Sikirićeva pečina; Sniježnica na Lisini, Lisina (Pretner, 1973: 90)

Description: Colour of body very variable, from light yellowish-brown to dark brown. Length of body 4.10–5.60 mm, maximum width of elytra 1.30–1.65 mm. Head unpunctured, smooth on disc, lateral part of base finely shagreened, eyes atrophied, composed of only one stemma, anterior part of rostrum wide, ratio HW/MWR = 1.38–1.59, clypeus with few punctures and about 5 short golden setae, rostral furrow wide and deep, with dense golden setation, ratio WRF/MWR = 0.35–0.42, elevated rostral carinae parallel and wider, bearing about 5 larger and few fine punctures, rostral furrow long, ratio HL/LRF = 2.06–2.40, ratio MWR/WRC = 2.40–2.82.

Antennae slender and long, scape very long, about 0.8–0.9 mm, narrow at base and evenly extended to apex, at apex clavate and about 2.6 times as wide as at base, pedicel clavate, about 1.2 times as long as antennomere III, antennomeres IV–VIII about the same size, about three times shorter than pedicel, antennal club (IX–XI) elongate, about 2.1 times as long as wide and 1.6 times as long as pedicel.

Pronotum elongate, about 1.05–1.10 times as long as wide and slightly shorter than head, with very rough irregular puncturation, punctures large, very dense in anterior and lateral part, here also with few golden setae, disc lacking setae, smooth between a few large punctures, base with a line of confluent punctures that form shallow antibasal sulcus.

Elytra elongate, oval, about 1.85 times as long as wide, maximum width in the middle, smooth, with ten rows of punctured striae, punctures large and deep, puncturation of first row very dense, distance between punctures same as the diameter of punctures, rows 2 and 3 with sparser puncturation, but close to epipleura and posterior part of elytra denser, distance between rows about 1.5 times the diameter of punctures, sparse setation placed between intervals, otherwise surface smooth. Triangular scutellum smooth.

Legs robust with golden setation, all femora (Fig. 14) dentate, median teeth sometimes small but always well-defined.

Aedeagus as in Figs. 8, 9. Spermatheca as in Fig. 12.

Differential diagnosis: see the differential diagnosis for *T. anophthalmus*.

Distribution: Slovenia, Italy, Austria, Croatia (Istria and Velebit)

Remarks I: SOLARI (1955) gave a very long and detailed description of *T. pretneri*. Due to the dentate femora, the species must belong closely to *T. anophthalmoides*. According to Solari, *T. pretneri* is clearly separated from *T. anophthalmoides* by the shape of antennal club which is oval as in *T. anophthalmus*, by wider pronotum and larger body. After that, Solari gives a long differential diagnosis of *T. pretneri* and *T. anophthalmus*. In my opinion, having examined a larger sample of material, all characters used to separate *T. pretneri* from *T. anophthalmus* are highly variable and without any stability. In addition, as also stated by Solari, *T. anophthalmus* is easily separated from all other *Trogloorhynchus* by having pro and mesofemora edentate. So there is no doubt that *T. pretneri* is not conspecific with *T. anophthalmus*. The problem was to separate *T. pretneri* from *T. anophthalmoides* which also has all femora dentate. SOLARI (1955: 82) avoided this with the explanation that *T. anophthalmoides* was at that stage very badly defined and so indeterminable between dentate *Trogloorhynchus*. I agree with this statement and I would add that the description of new species in this situation and based on classical approach as performed by Solari, just increased the taxonomic problem in the group. Only the discovery of a new subgenus *Baldorhynchus* (DI MARCO & OSELLA, 2002) allowed for the narrowing of the definition of the subgenus *Trogloorhynchus* which was composed of the well-defined *T. anophthalmus* and an assemblage of taxa (*T. anophthalmoides*, *T. pretneri*, *T. anophthalmoides istriensis*, *T. celijensis*) which are based on very weak and highly variable characters as mentioned above. After studying as large number of specimens as possible including type material of *T. anophthalmoides*, *T. pretneri* and *T. anophthalmoides istriensis* I came to the conclusion that it is not possible to find any stable character capable to allow us to separate these three taxa and therefore *T. pretneri* and *T. anophthalmoides istriensis* are considered here to be junior synonyms of *T. anophthalmoides*.

Remarks II: *T. celejensis* was described after unique specimens collected by Albert Winkler at »Cilli (l'antica Celeja) nella Stiria meridionale, tra la Drava e la Sava« in Slovenia. Unfortunately the type of this species has not been found. It is not in the collection of Josef Müller, which is deposited in the Museo Civico di Storia Naturale in Trieste (ANDREA COLLA, pers. comm.) and it is not in the collection of Albert Winkler, the collector of the unique specimen, which is deposited in the Naturhistorisches Museum in Vienna either (HARALD SCHILLHAMMER, pers. comm.). Müller's description (MÜLLER, 1924) of the species is very simplified and absolutely not sufficient for the species to be recognised. We cannot even know whether the species is more closely related to *T. anophthalmus* or *T. anophthalmoides*. In my opinion *T. celejensis*, due to its smaller size 4.3 mm, is nothing but a junior synonym of *T. anophthalmoides*.

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