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A New *Trechus* from Northern Turkey (Coleoptera: Carabidae: Trechinae)

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Abstract

A new species of *Trechus* (s.str.) CLAIRVILLE, 1806 from Turkey (Ordu) is described: *T. orduensis* sp.n. The new species is compared with all closely related species of the *T. osmanilis*-group.

Key words: Carabidae, Trechinae, *Trechus*, new species, taxonomy, Turkey.

Zusammenfassung

Eine neue Art der Gattung *Trechus* (s.str.) CLAIRVILLE, 1806 wird aus der Türkei (Ordu) beschrieben: *T. orduensis* sp.n. Diese und alle nahe verwandten Arten der *osmanilis*-Gruppe werden verglichen.

Introduction

The genus *Trechus* CLAIRVILLE, 1806, is represented in Turkey with more than 60 species, many of very limited distribution (DONABAUER 2004, 2006). One complex within the Turkish *Trechus* fauna – the *osmanilis*-group – is especially rich in species but poorly investigated so far. In Turkey the representatives of this group are distributed in a tight corridor along the Black Sea coast. The majority of species is restricted to humid forests on northern slopes and inhabit rather unspecialized a variety of microhabitats, especially leaf litter and needle duff in moderately shadowed and humid locations between 500 and 2000 m. It is an extraordinary surprising matter of fact that these rather common insects of the forest belt show a pattern of extreme endemism (see distribution map).

One natural subgroup within the *osmanilis*-group is well defined by the symmetric and bottle-like shape of the aedeagus in dorsal view and is strictly endemic to the area Ordu and Giresun in northern Turkey on the Black Sea coast. The main purpose of this paper is to describe one additional species collected by Dr. M. Schülke.

I want to thank David Wrase (Berlin), who sent me the material for determination. Please refer to DONABAUER (2006) for methods and abbreviations.

Trechus (s.str.) *orduensis* sp.n. (Fig. 4A, 4B, 4C, 4D)

Type Material: Holotype ♂ (coll. Wrase) and 20 paratypes (11 ♂♂, 9 ♀♀): "Turkey (Ordu), 15 km S Ordu, S Kabaduz, 990 m (grassy roadside), 40°48'49N, 37°54'28E, 30.VII.2006 M. Schülke [22]" (coll. Wrase, Donabauer).

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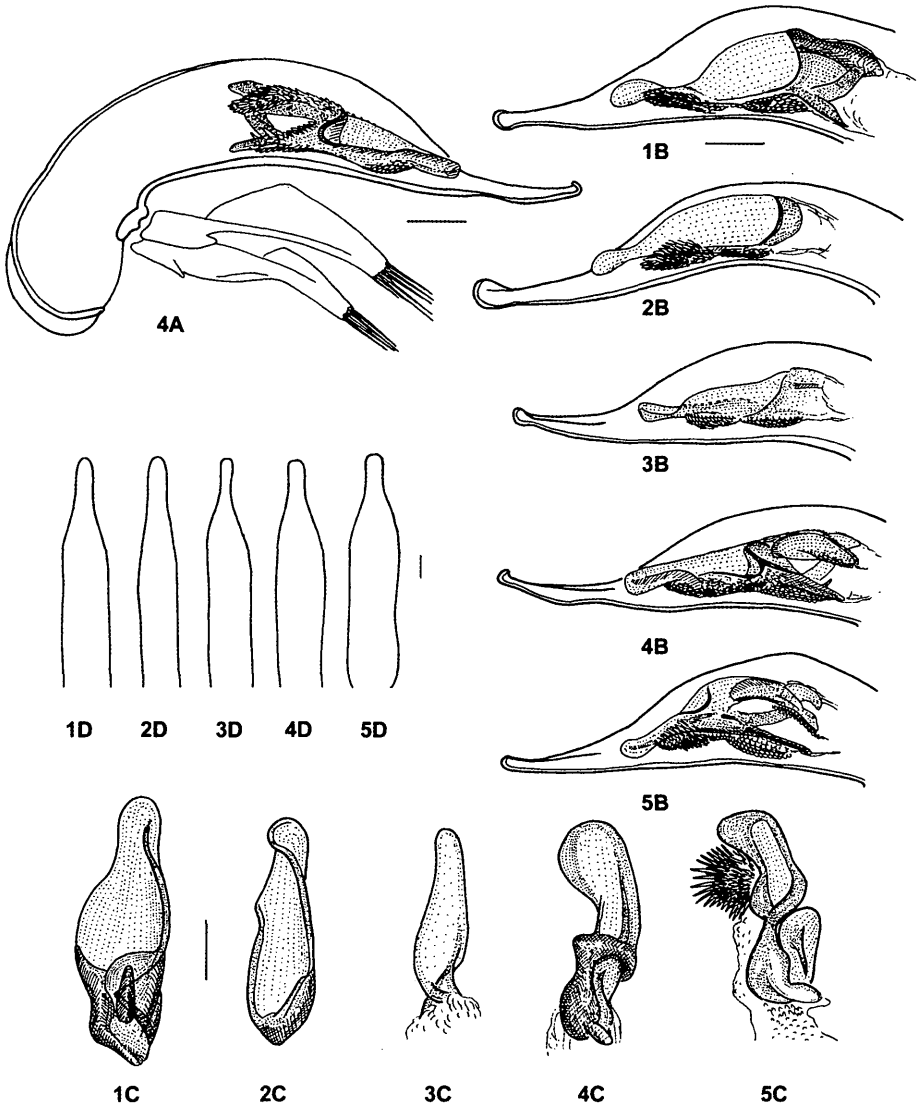

Fig. 1-5: Aedeagus in standard lateral (A), non-standard lateral (B) and dorsal view (D), extracted copulatory pieces (C); scale = 0.1 mm: 1) *T. uenyeensis* DONABAUER, 2006; 2) *T. akkusianus* DONABAUER, 2006; 3) *T. lebenbaueri* DONABAUER, 2004; 4) *T. orduensis* sp.n.; 5) *T. barbaritae* DONABAUER, 2004.

The holotype is stored in the collection of David Wrase (Berlin).

Diagnosis: This new species is closely related to *T. uenyeensis* DONABAUER, 2006 (Fig. 1B, 1C, 1D), *T. akkusianus* DONABAUER, 2006 (Fig. 2B, 2C, 2D), *T. lebenbaueri* DONABAUER, 2004 (Fig. 3B, 3C, 3D) and especially to *T. barbaritae* DONABAUER, 2004

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(Fig. 5B, 5C, 5D) due to the bottle-shaped aedeagus in dorsal view (1D-5D). Therefore this new species belongs to the *T. osmanilis* group sensu DONABAUER, 2004. It can be separated solely by aedeagal characteristics, especially by the shape of the copulatory pieces. The shape of the large copulatory piece and the presence of a second, smaller and leaf-like copulatory piece (4C) separate *T. orduensis* sp.n. from *T. uenyeensis*, *T. akkusianus*, and *T. lebenbaueri*. In comparison to *T. barbaritae* the apex of the aedeagus is more elongated in lateral view (4B, 5B), large copulatory piece with longer apical part and with a distinctly structured central part (4C, 5C).

Description: BL 3.4-3.7 mm; body moderately convex. Body entirely pale reddish, but disc of elytra often and disc of pronotum sometimes significantly darker, elytra along the suture and along sides paler; legs entirely pale; antenna pale reddish.

Head with strong microsculpture; elytra and pronotum shinier and with less developed, but clearly visible microsculpture (examined at 40 x). Antenna moderately slender, of normal length. Eyes moderately large, slightly reduced in size, length of temples shorter than eye diameter.

Pronotum moderately rounded laterally, convex on disc, maximal width before middle, moderately constricted towards base, slightly sinuate before small and slightly obtuse basal angles, anterior and posterior margins nearly straight; front angles rounded and not prominent; basal angles acute and moderately projecting; basal fovae present but very weakly impressed; basal furrow strongly impressed; median line distinct, very shallow, almost extended to margins.

Elytra ovate, moderately convex, rather flat on disc, shoulders completely rounded and not prominent; inner striae (1-4) fine but clearly impressed, not punctuate, all other striae hardly visible or indistinct; stria 3 with two weakly impressed and small dorsal pores.

Aedeagus (Figures 4A, 4B, 4C, 4D): Aedeagus of all male specimens dissected and confirmed to be consistent in diagnostic characters. The aedeagus is almost identical in general appearance to that of several other species in Turkey in lateral and dorsal view (*T. uenyeensis*, *T. akkusianus*, *T. lebenbaueri* and especially *T. barbaritae*), but well characterized by shape of the copulatory pieces. The most similar species is *T. barbaritae*. Aedeagus large (50% of EL); in lateral view basal part of normal size, central part more or less straight, elongate and slender, apex very thin, elongated and slightly knobbed at end; aedeagus in dorsal view symmetric, parallel-sided, slender and straight with even more slender, parallel-sided, symmetric apex (bottle-shaped), tip shortly rounded. Internal sack with dense field of scales on ventral side and armed with two, complex copulatory pieces; smaller copulatory piece well developed of although rather small size, leaf-like (missing in *T. lebenbaueri* and *T. akkusianus*, very small and tooth-like in *T. uenyeensis*); larger copulatory piece very similar to that of *T. barbaritae*, but significantly more elongate, less contracted towards apex and therefore flatter ventral border. Parameres in accordance with general form of aedeagus elongate and slender, with 4 and 6 apical seta (Holotype) as shown in Figure 1A.

ETYMOLOGY: This species is named after the small town of Ordu, close to the type locality.

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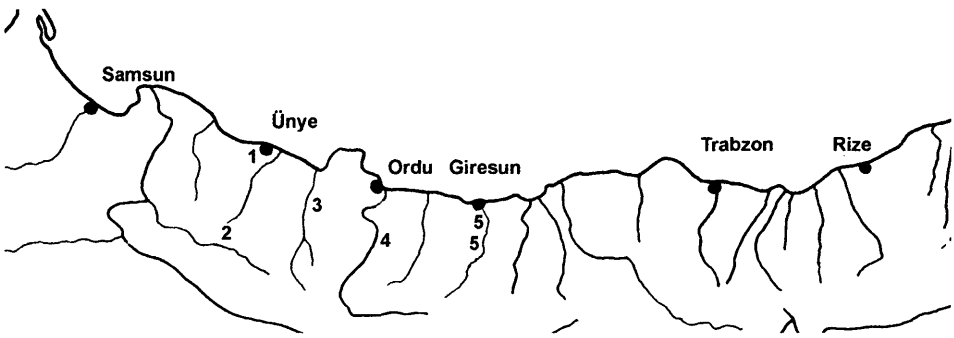

Distribution of the representatives of the *T. osmanilis*-group in the central pontic mountain chain along the Black Sea Coast: (1) *T. uenyeensis* DONABAUER, 2006; (2) *T. akkusianus* DONABAUER, 2006; (3) *T. lebenbaueri* DONABAUER, 2004; (4) *T. orduensis* sp.n.; (5) *T. barbaritae* DONABAUER, 2004.

Table of measurements (mm) and proportions of *T. orduensis* sp.n.

	BL	HW	PWA	PW	PWB	PL	EW	EL	AL	AEL	EL/EW	PW/PL	AL/BL	AE/BL
AVG	3.56	0.73	0.69	1.01	0.73	0.72	1.51	2.12	1.88	1.10	1.40	1.40	0.53	0.51
MIN	3.40	0.70	0.65	0.95	0.70	0.68	1.45	2.00	1.75	1.08	1.37	1.34	0.49	0.49
MAX	3.70	0.75	0.75	1.08	0.78	0.78	1.60	2.28	2.00	1.13	1.45	1.45	0.56	0.52
N	9	9	9	9	9	9	9	9	9	6	9	9	9	6

AVG – Average; MIN – Minimum; MAX – Maximum; N – Number of specimens; BL – Body length from labrum to apex of elytra; HW – Head width including eyes; PWA – Width of pronotum between front angles; PW – Maximal width of pronotum; PWB – Width of pronotum between basal angles; PL – Length of pronotum; EW – maximal width of elytra; EL – Length of elytra; AL – Length of antenna; AEL – Maximal length of aedeagus in lateral view (diagonal).

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