Two new species of *Therates* LATREILLE, 1817 from Vietnam (Coleoptera: Cicindelidae)

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Abstract. Two new tiger beetles species, *Therates belokobylskiyi* sp. nov. and *Therates kaliakini* sp. nov. are described from Vietnam. Both are distinguished by elytral maculation and shape of aedeagus.

Zusammenfassung. Zwei neue Sandlaufkäfer aus Vietnam werden beschrieben, *Therates belokobylskiyi* sp. nov. and *Therates kaliakini* sp. nov. Beide sind an ihrer Flügeldeckenzeichnung und der Form des Aedeagus zu erkennen.

Key words. Coleoptera, Cicindelidae, *Therates*, *Therates belokobylskiyi* sp. nov., *Therates kaliakini* sp. nov., Vietnam, taxonomy, faunistics, new species.

Introduction

Since the last major revision of the genus *Therates* LATREILLE, 1817 (WIESNER 1988), many new species have been described and some significant range extensions have been reported. Recently collected *Therates* specimens from Vietnam were brought to our attention. Among them were two previously undescribed species.

Therates belokobylskiyi sp. nov. (Figs 1, 3, 6, 8)

Holotype. ♂, N. Vietnam, Hoa Bình prov., Mai Cháu distr., Hang Kia, ~1300 m, 20°44'N 104°53'E, 25.–26.IV.2002, leg. S. BELOKOBYLSKIY; in coll. Zoological Institute of Russian Academy of Science (St. Petersburg).

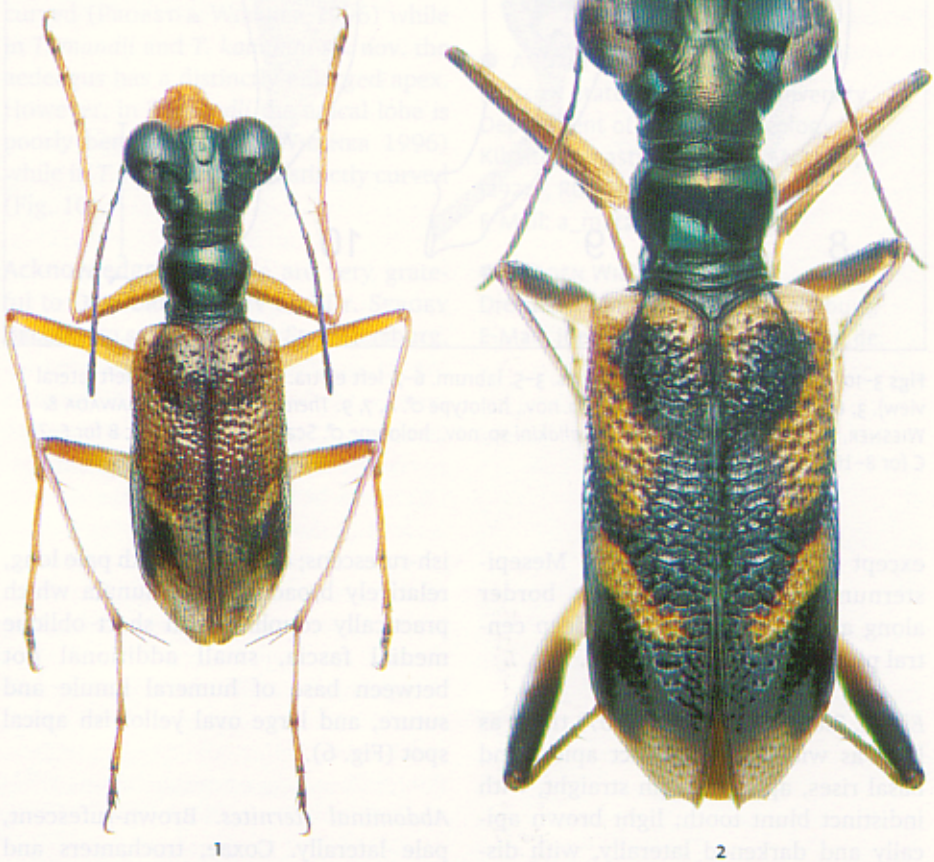
Derivato nominis. This new species is dedicated to the Russian entomologist SERGEY BELOKOBYLSKIY, who collected the type specimens.

Paratype. ♂, same label data as holotype; in coll. Moscow Pedagogical University.

Description. *Total length* (without labrum) 6.0–7.2 mm (mean: 6.8 mm).

Head. Glabrous, with finely shallow striae in the base of supraorbital area; black, lateral edges of clypeus, anterior margin of genae and base of antennal plates rufescent. Clypeus asetose, supraorbital area with a single seta in anterior part. Mandibles yellow, with light brown teeth. Labial and maxillary palpi pale, with slightly darkened apical palpomeres. Labrum as long as wide, entirely rufescent, with six apical teeth and one lateral tooth on each side (Fig. 3). Antennae dark brown except yellowish anterior margin of scapus; antennomeres 1 to 4 glabrous except a single long seta on the scapus tip and thin apical setae on the 3–4 ones, apical half of 5th antennomere and 6th to 11th ones finely pubescent with short brownish hairs.

Pronotum. As long as wide, glabrous and smooth, deep black, with thin but distinct midline. Prothorax deep black, meso- and metathorax brownish-black



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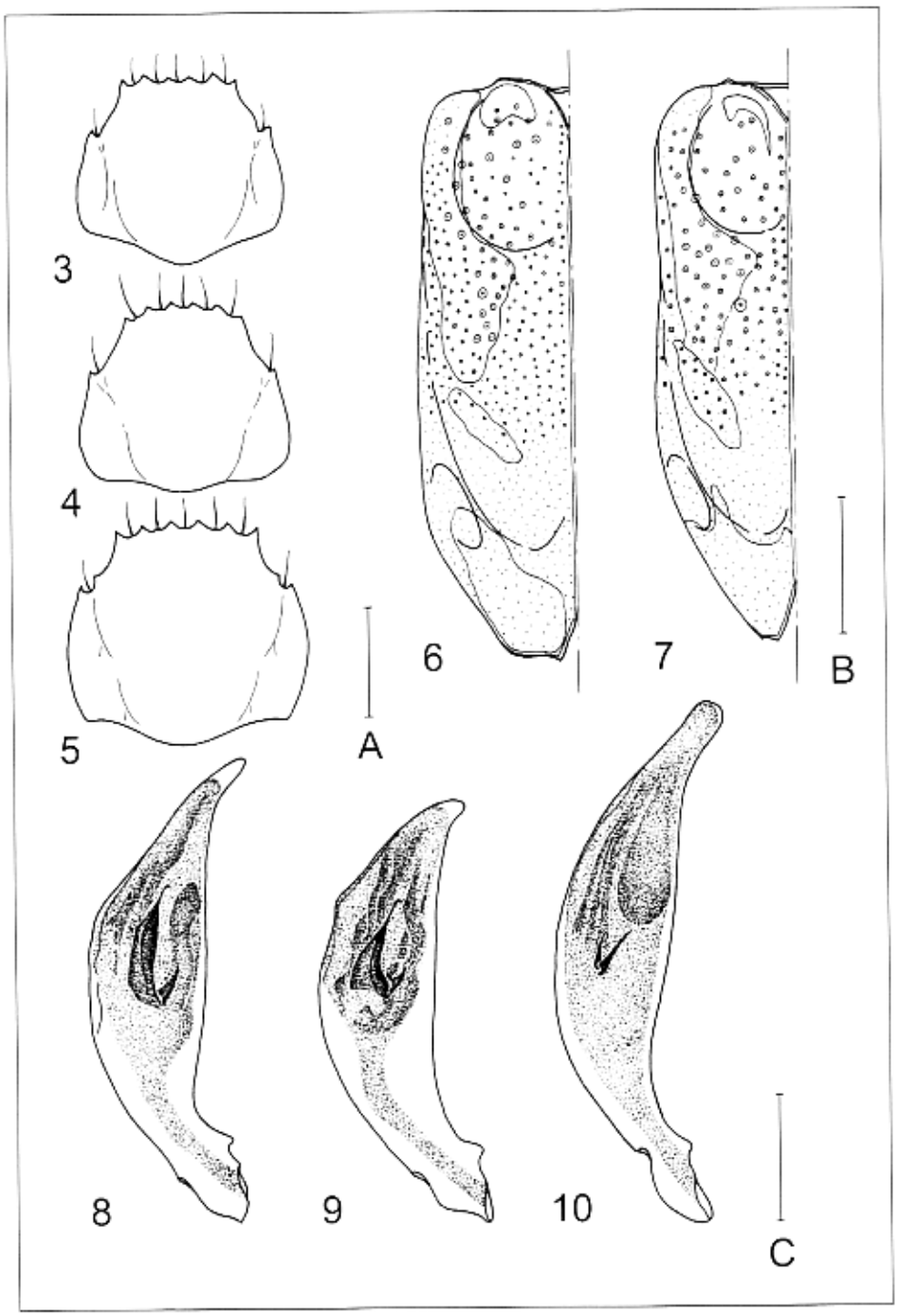
Figs 1–2. *Therates* species, habitus. 1. *Therates belokobylskiyi* sp. nov., holotype ♂. 2. *Therates kalaikini* sp. nov., holotype ♂.

1 89th contribution towards the knowledge of *Cicindelidae*



Figs 3–10. Characters of *Therates* species. **3–5.** labrum. **6–7.** left elytra. **8–10.** aedeagus (left lateral view). **3, 6, 8.** *Therates belokobylskiyi* sp. nov., holotype ♂. **4, 7, 9.** *Therates pacholatkoi* SAWADA & WIESNER, paratype ♂. **5, 10.** *Therates kaliakini* sp. nov., holotype ♂. Scale bars: A for 3–5; B for 6–7; C for 8–10; A, C = 0.5 mm; B = 1 mm.

except rufescens coxal area. Mesepisternum black, with distinct border along anterior margin and a deep central pit.

Elytra. 2.05–2.09 (mean: 2.07) times as long as wide, with distinct apical and basal rises, apical Margin straight, with indistinct blunt tooth; light brown apically and darkened laterally, with distinct blackish lustre and numerous rounded dark-brown pits except humeral tip and elytral apex, scutellum brownish-rufescens; elytral disc with pale long, relatively broad humeral lunula which practically coupling with short oblique medial fascia, small additional dot between base of humeral lunule and suture, and large oval yellowish apical spot (Fig. 6).

Abdominal sternites. Brown-rufescent, pale laterally. Coxae, trochanters and base of femora pale, apical three quarter of femora as well as tibiae and tarsi yellowish-brown.

Aedeagus. 0.40–0.44 (mean: 0.42) times as long as elytra, relatively broad, with thin sharply curved apical lobe; a broad large tooth in the internal sac with long, thin shortly choked apex (Fig. 8).

Female. Unknown.

Diagnosis. The new species belongs to the "*chenneli*" species-group (WIESNER 1988) and is more related to *T. pacholatkoi* SAWADA & WIESNER, 2004. However, these two species can be easily distinguished from each other. In *T. belokobylskiyi* sp. nov. the labrum is as long as wide (Fig. 3) while in *T. pacholatkoi* it is 1.10–1.15 times as wide as long (Fig. 4); in the prior species the mid-elytral dot is smaller and the elytral apex is wider and not pointed (Fig. 6), but in the latter species the mid-elytral dot is larger and the elytral apex distinctly narrower (Fig. 7). Furthermore, in the new species the aedeagus is longer, the mean is 0.42-times as long as elytra, with long, thin and sharply curved apical lobe (Fig. 8) whereas in *T. pacholatkoi* the aedeagus is shorter (mean 0.38-times as long as elytra), with very short, broad and blunt apical lobe (Fig. 9).

Therates kaliakini sp. nov. (Figs 2, 5, 10)

Holotype. ♂, Vietnam, Khánh Hóa prov., Hon Ba Mnts., ~1400 m, 19.–27.IV.2003, leg. M. KALIAKIN; in coll. Zoological Institute of Russian Academy of Science (St. Petersburg).

Paratypes. 3 ♀, same label data as holotype: 1 ♀ in coll. Moscow State Pedagogical University; 1 ♀ in coll. D. FEDORENKO (Moscow, Russia); 1 ♀ in coll. J. WIESNER.

Derivato nominis. This new species is dedicated to the Russian ornithologist MIKHAIL KALIAKIN, who collected the type series.

Description. *Total length* (without labrum). 7.3 mm in male and 7.5–8.2 mm (mean 7.76 mm, n = 3) in females.

Head. Glabrous, with finely shallow striae in the base of supraorbital area and light transversal wrinkles on occiput; deep black except rufescent lateral edges of clypeus and anterior margin of genae. Clypeus asetose, supraorbital area with a single seta in anterior part. Mandibles yellow, with brown tooth. Labial and maxillary palpi pale, with slightly brown-

ish apical palpomeres. Labrum slightly wider than long, 1.09–1.10 (mean 1.09) times as wide as long, entirely rufescent, with six apical teeth and one lateral tooth on each side (Fig. 5). Antennae relatively long, scapus pale except black inner side with single long apical seta, antennomeres 2–5 dark brown or black, glabrous except thin apical setae on the 3–5th antennomeres, 6–11th antennomeres brown, finely pubescent by short yellowish hairs, 10–11th antomeres distinct flatted and dilated especially in male.

Pronotum. Slightly transversal, 1.04–1.11 (mean 1.07) as wide as long, glabrous and smooth, deep black, light wrinkled around thin but distinct midline; anterior groove glabrous, posterior one distinct wrinkled. Thorax deep black except rufescent coxal area. Mesepisternum with shallow pit near anterior margin.

Elytra. 2.06–2.11 (mean 2.08) times as long as wide, with distinct apical and basal rises; apical margin notched, with distinct sharp tooth; deep black with coarse transversal wrinkled sculpture in middle area, numerous rounded pits more dense and deep in humeral area and more diffused and shallow apically; scutellum dark brown or black; elytral disc with bright yellow long, relatively broad humeral lunula, distinct subhumeral stria, long oblique medial fascia and large yellowish apical spot (Fig. 2).
Abdominal sternites. Deep black. Coxae, trochanters, base of hind femora, outer side of fore and middle femora, hind and apical half of middle tibia as well as one third basal hind tarsomeres pale, other parts of legs dark brown.

Aedeagus. 0.44 times as long as elytra, relatively broad, with distinct bulged apex; a small thin tooth in the internal sac (Fig. 10).

Diagnosis. This species belongs to "*obliquus*" species-group (WIESNER 1988) and is most similar to *T. mandli* PROBST, 1986 and *T. pseudomandli* PROBST & WIESNER, 1996. From these species *T. kaliakini* sp. nov. can be well distinguished by larger size (mean total length without labrum in *T. mandli* is 7.06 mm, in *T. pseudomandli* 7.00 mm, but in *T. kaliakini* 7.53 mm); the deep notched apical margin of the elytra with distinct sharp sutural tooth (in *T. mandli* and *T. pseudomandli* apical notches of elytra are shallow with indistinct sutural tooth) and coarse transversal wrinkled sculpture of the elytra (Fig. 2). Moreover, *T. kaliakini* ca be easily recognised by the peculiar elytral markings. In contrast to *T. pseudomandli* in *T. kaliakini* sp. nov. the humeral lunula is always complete and wider as well as the medial fascia. In comparison with *T. mandli* the medial fascia of *T. kaliakini* sp. nov. is less curved and never connected with the humeral lunula. Finally, there are some differences in shape of the aedeagus. In *T. pseudomandli* the apical lobe is thin and sharply curved (PROBST & WIESNER 1996) while in *T. mandli* and *T. kaliakini* sp. nov. the aedeagus has a distinctly enlarged apex. However, in *T. mandli* the apical lobe is poorly bent (PROBST & WIESNER 1996) while in *T. kaliakini* it is distinctly curved (Fig. 10).

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