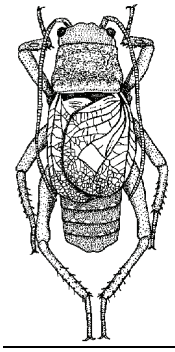

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REVISION OF THE GENUS *KOZLOVITES* JEANNEL, 1935 WITH DESCRIPTION OF A NEW GENUS OF THE TRIBE TRECHINI (COLEOPTERA: CARABIDAE)

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The genus *Kozlovites* (Carabidae: Trechini) is revised. A new synonymy is proposed: *Kozlovites* Jeannel 1935 = *Deuveotrechus* Uéno, 1995, **syn. n.** Four new species of the genus *Kozlovites* are described from Yunnan Province, China: *K. major* **sp. n.**, *K. modestus* **sp. n.**, *K. niger* **sp. n.**, and *K. amplipennis* **sp. n.** Two species, *Kozlovites yuae* Deuve, 1992, **comb. resurr.** and *K. caviceps* Jeannel, 1935, are redescribed based on studying their type specimens. Key to species of *Kozlovites* is given. A new genus *Uenoites* **gen. n.** (type species: *Deuveotrechus yinae* Uéno, 1996) is established for four Chinese species and new combinations are proposed: *Deuveotrechus yinae* Uéno, 1996 = *Uenoites yinae* (Uéno, 1996), **comb. n.**, *Stevensius gregoryi* Jeannel, 1937 = *Deuveotrechus gregoryi* (Jeannel, 1937) = *Uenoites gregoryi* (Jeannel, 1937), **comb. n.**, *Deuveotrechus grebennikovi* Deuve, 2011 = *Uenoites grebennikovi* (Deuve, 2011), **comb. n.**, *Queinnectrechus jiuhecola* Deuve et Kavanaugh, 2015 = *Uenoites jiuhecola* (Deuve et Kavanaugh, 2015), **comb. n.**

KEY WORDS: Coleoptera, Carabidae, ground beetles, Trechini, new taxa, new synonymy, key, fauna, China.

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Проведена ревизия рода *Kozlovites* (Carabidae: Trechini). Установлена новая синонимия: *Kozlovites* Jeannel 1935 = *Deuveotrechus* Uéno, 1995, **syn. n.** Из китайской провинции Юннань описаны 4 новых вида: *K. major* **sp. n.**, *K. modestus* **sp. n.**, *K. niger* **sp. n.** и *K. amplipennis* **sp. n.** Два вида (*Kozlovites yuae* Deuve, 1992, **comb. resurr.** и *K. caviceps* Jeannel, 1935) переописаны на основании изучения типовых экземпляров. Дана определительная таблица видов рода *Kozlovites*. Установлен новый род *Uenoites* **gen. n.** (типовой вид: *Deuveotrechus yinae* Uéno, 1996) для 4 видов из Китая и предложены новые комбинации: *Deuveotrechus yinae* Uéno, 1996 = *Uenoites yinae* (Uéno, 1996), **comb. n.**, *Stevensius gregoryi* Jeannel, 1937 = *Deuveotrechus gregoryi* (Jeannel, 1937) = *Uenoites gregoryi* (Jeannel, 1937), **comb. n.**, *Deuveotrechus grebennikovi* Deuve, 2011 = *Uenoites grebennikovi* (Deuve, 2011), **comb. n.**, *Queinnectrechus jiuhecola* Deuve et Kavanaugh, 2015 = *Uenoites jiuhecola* (Deuve et Kavanaugh, 2015), **comb. n.**

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INTRODUCTION

The *Kozlovites* phylogenetic lineage belongs to the *Agonotrechus* phyletic series (Jeannel, 1928; Uéno, 1977, 1987; Uéno & Yin, 1993), one of the taxonomically most diversified and heterogeneous groups of trechines in southern China.

The genus *Kozlovites* Jeannel, 1935 was described for a single species, *K. caviceps* Jeannel, 1935, based on the only known female specimen from Tibet (Jeannel, 1935). Therefore its exact taxonomic position remained unclear for a long time. The second member of the genus, *K. yuae* Deuve, 1992, was described from Yunnan Province, China. Its description was based on a series of specimens including males (Deuve, 1992a). The genital characters of this species turned out to be very distinctive within the *Agonotrechus* phyletic series. It is worth noting that, externally, *K. yuae* differs significantly from *K. caviceps*. A few years later, S.-I. Uéno described a new genus, *Deuveotrechus* Uéno, 1995, to include two Chinese trechines, with *K. yuae* as the type species (Uéno, 1995). Abundant material collected in recent years, allows us to clarify taxonomic relationships within the *Kozlovites* lineage. It becomes obvious that members of the genera *Kozlovites* and *Deuveotrechus* should be regrouped. As a result, the type species of the latter genus, *Kozlovites yuae*, is re-assigned to the genus *Kozlovites*, and the genus *Deuveotrechus* becomes a junior subjective synonym of *Kozlovites*. In the present paper, we also describe the genus *Uenoites* gen. n. to accommodate *Queinnectrechus jiuhecola* Deuve et Kavanaugh, 2015 and all species earlier assigned to *Deuveotrechus* (Moravec *et al*., 2003) except for *Kozlovites yuae*.

Four new species of the genus *Kozlovites* are found and described below. All the known species of the genus inhabit mountains located along the valleys of the Lancang Jiang (Mekong) and Yangtze κivers in the northern regions of Yunnan Province of China. These new taxa enable us to complete the generic diagnosis of *Kozlovites*.

MATERIAL AND METHODS

The present study is based on the examination of more than 110 specimens of the genus *Kozlovites* and approximately 4500 specimens of allied groups, most of which were collected by the authors in recent years.

Specimens were examined and measured with an MBS-10 stereomicroscope and ocular micrometer, the genital preparations were shot using a Karl Zeiss microscope Axio Imager M1 equipped with an AxioCam MRc5 camera.

The photographs of beetles were taken with a Canon 50D DSLR digital camera, using stacking and subsequently processed with Zerene stacker software version 1.04 (http://zerenesystems.com/stacker).

Twenty specimens, if available, were measured for each geographical locality. Measurements used here are the same as in our previous papers (Belousov & Kabak 2000, 2003, 2014). The body length was measured without mandibles, the width of the pronotal base – at the narrowest point. The position of the anterior setiferous pore of the pronotum and the preapical pore of the elytra, as well as the umbillicate pores is given as percentages of the length of the pronotum and elytra correspondingly. The latter were measured from the apex of the scutellum to the apex of the longest elytron. Average values are given in parentheses.

The nonparametric Mann & Whitney U-test and the parametric Student's *t*-test were applied to study the sexual dimorphism and infraspecific variability as well as to estimate differences between species in morphometric characters. Most of measurements and indices are given in separate tables to facilitate comparisons between species and searching for necessary information (Table 1).

The number of specimens studied is followed by the number of the genital preparations given in parentheses; the numbers for the localities on the map (Fig. 31) are shown in braces.

The consecution of species is determined by their affinities to facilitate their description.

All the holotypes and a part of the paratypes of new species are kept in the collection of the Zoological Museum of Russian Academy of Sciences (ZISP, St. Petersburg, Dr. Boris Kataev). Other paratypes are shared with the following institutions and private collections:

CAG – Private collection of Arthur Gitzen, Neuhofen, Germany.

CAK – Private collection of Alexander Koval, St. Petersburg, Russia.

CBK – Private collection of Igor Belousov and Ilya Kabak, St. Petersburg, Russia.

CDW – Private collection of David W. Wrase, Berlin, Germany.

CJS – Private collection of Joachim Schmidt, Admannshagen, Germany.

CMJ – Private collection of Miroslav Janata, Praha, Check Republic.

CPM – Private collection of Pavel Moravec, Litoměřice, Check Republic.

CVZ – Private collection of Vladimir Zieris, Pardubice, Check Republic.

IZAS – Institute of Zoology, Chinese Academy of Science, Beijing, China, Dr. Hongbin Liang.

MNHN – Muséum national d'histoire naturelle, Paris, France, Dr. T. Deuve.

MPU – Moscow State Pedagogical University, Moscow, Russia, Dr. Kirill Makarov.

ZSM – Zoologische Staatssammlung, Munich, Germany, Dr. Michael Balke.

Abbreviations used in the text and table are as follows:

AL – length of antennae; BH – height of body; DP – distance from the scutellum apex to the level of the preapical setiferous pore of the elytra; EL – length of elytra; EW – width of elytra; HW – width of head; L2 – length of antennomere 2; L3 – length of antennomere 3; PA – width of pronotum at anterior margin; PB – width of pronotum at base; PL – length of pronotum; PSa – distance from the anterior margin of the pronotum to the level of the anterior lateral seta of the pronotum; PW – width of pronotum; TaL – length of hind tarsus; TiL – length of hind tibia; TL – length of tempora; U1–8 – distance from the scutellum apex to the level of the corresponding umbilicate pore of the elytron; W3 – width of antennomere 3; YL – length of eye.

TAXONOMY

Genus *Kozlovites* Jeannel 1935

Kozlovites Jeannel, 1935: 279; Deuve, 1992a: 172; Uéno & Yin, 1993: 358; Belousov & Kabak, 2003: 30; Moravec *et al*., 2003: 313.

Deuveotrechus Uéno, 1995: 99 (type species: *Kozlovites yuae* Deuve, 1992, by original designation); Moravec *et al*., 2003: 298. **Syn. n.**

Type species: *Kozlovites caviceps* Jeannel, 1935, by monotypy.

DESCRIPTION. Head medium to large, subconvex, discoid or more seldom elongate; eyes medium-sized, strongly conically protruding; tempora rather long, moderately to very strongly convex, glabrous. Frontal furrows entire, distinct even in posterior portion, deeply impressed both behind middle and near clypeal suture, irregularly curved in middle part. Parietal impression distinct or effaced. Supraorbital setiferous pores not large, anterior one weakly foveolate, posterior one simple. Labrum with anterior margin deeply emarginate. Mandibles averagely shaped, tooth on the right one with rather short base, tridentate; median denticle weaker than others; without isolated premolar, although the distal denticle is accentuated by deeper emargination. Palpi moderately slender; segment 2 of maxillary palpi with a seta on interior margin; penultimate segment of labial palpi quadrisetose, other segments of palpi glabrous. Mentum and submentum fused, suture between them barely traceable, more distinct laterally. Labial tooth medium-sized, moderately protruding anteriad, truncated or weakly emarginate apically. Usually six submental setae of which the subangular ones are the shortest. Glossum conical, paraglossae long, slender and gradually arcuate.

Table 1. Morphometric characters of *Kozlovites* species.

Indices	**Range (average), number**					
	caviceps	***major***	***modestus***	***yuae***	***niger***	***amplipennis***
Length, mm	5.79, 1	5.30–6.33 (5.77), 21	5.06–5.84 (5.50), 24	3.93, 1	3.39–3.93 (3.69), 26	3.88–4.44 (4.14), 13
EL/BH	2.87, 1	2.42–2.75 (2.56), 21	2.43–2.85 (2.65), 24	–	2.31–2.72 (2.54), 26	2.39–2.81 (2.60), 13
AL/EL	1.09, 1	0.97–1.05 (1.01), 21	0.96–1.05 (1.01), 24	–	0.85–0.94 (0.89), 26	0.80–0.87 (0.83), 13
EL/TiL	1.78, 1	1.83–2.00 (1.92), 21	1.85–2.04 (1.93), 24	–	2.04–2.26 (2.13), 26	2.02–2.30 (2.19), 13
TiL/TaL	1.43, 1	1.33–1.46 (1.41), 21	1.41–1.53 (1.47), 24	–	1.40–1.59 (1.48), 26	1.44–1.56 (1.49), 13
PW/HW	1.09, 1	1.07–1.15 (1.11), 21	1.12–1.18 (1.15), 24	1.08, 1	1.14–1.24 (1.19), 26	1.18–1.28 (1.23), 13
EW/HW	1.91, 1	1.97–2.20 (2.10), 21	2.06–2.25 (2.17), 24	2.12, 1	1.97–2.22 (2.09), 26	2.11–2.36 (2.19), 13
YL/TL	1.41, 1	1.06–1.56 (1.34), 21	1.11–1.32 (1.21), 24	0.93, 1	1.05–1.33 (1.17), 26	1.06–1.41 (1.19), 13
L3/YL	1.23, 1	0.98–1.24 (1.12), 21	1.12–1.26 (1.18), 24	1.04, 1	0.76–1.04 (0.90), 26	0.84–1.02 (0.92), 13
L3/L2	1.52, 1	1.44–1.75 (1.60), 21	1.36–1.58 (1.47), 24	1.45, 1	1.19–1.42 (1.28), 26	1.24–1.43 (1.34), 13
L3/W3	3.40, 1	2.70–3.56 (3.20), 21	3.04–3.43 (3.26), 24	2.54, 1	2.26–2.64 (2.48), 26	2.24–2.50 (2.34), 13
PW/PL	1.09, 1	1.17–1.26 (1.21), 21	1.18–1.28 (1.23), 24	1.30, 1	1.21–1.40 (1.32), 26	1.23–1.33 (1.29), 13
PW/PB	1.67, 1	1.50–1.62 (1.57), 21	1.57–1.67 (1.63), 24	1.65, 1	1.51–1.89 (1.69), 26	1.57–1.77 (1.65), 13
PA/PB	1.21, 1	1.09–1.25 (1.17), 21	1.13–1.20 (1.16), 24	1.23, 1	1.11–1.32 (1.24), 26	1.13–1.25 (1.20), 13
PSa, %	30.6, 1	25.6–35.3 (30.8), 21	31.2–35.1 (32.8), 24	34.0, 1	34.0–42.5 (39.3), 26	39.2–43.0 (41.0), 13
EL/EW	1.58, 1	1.39–1.51 (1.45), 21	1.36–1.46 (1.39), 24	1.30, 1	1.21–1.34 (1.28), 26	1.27–1.39 (1.34), 13
EW/PW	1.76, 1	1.79–1.97 (1.88), 21	1.79–1.96 (1.89), 24	1.95, 1	1.65–1.85 (1.75), 26	1.73–1.88 (1.79), 13
EL/PL	3.04, 1	3.10–3.45 (3.28), 21	3.10–3.37 (3.22), 24	3.30, 1	2.79–3.16 (2.97), 26	3.01–3.14 (3.08), 13
DP, %	88.2, 1	85.6–94.6 (90.5), 21	89.4–94.0 (91.6), 24	87.3, 1	85.7–91.5 (88.7), 26	87.3–91.3 (89.4), 13
U1, %	12.6, 1	9.62–13.0 (11.6), 21	8.82–13.2 (11.2), 24	9.09, 1	6.17–9.52 (7.61), 26	7.35–10.6 (9.04), 13
U2, %	17.3, 1	13.1–19.9 (16.6), 21	14.0–17.8 (15.8), 24	13.3, 1	11.5–14.9 (13.1), 26	12.9–16.5 (14.3), 13

Table 1. Morphometric characters of *Kozlovites* species. (Continued)

Indices	Range (average), number					
	caviceps	***major***	***modestus***	***yuae***	***niger***	***amplipennis***
U3, %	21.9, 1	19.2–26.2 (22.4), 21	18.4–22.5 (20.4), 24	18.8, 1	16.0–20.2 (18.3), 26	17.2–21.8 (18.9), 13
U4, %	27.3, 1	25.4–31.6 (28.3), 21	23.5–28.7 (26.2), 24	24.2, 1	21.9–26.8 (24.1), 26	22.4–28.0 (24.1), 13
U5, %	57.6, 1	58.1–64.0 (60.7), 21	56.4–62.8 (59.0), 24	53.9, 1	50.9–63.8 (55.5), 26	53.4–57.8 (56.3), 13
U6, %	64.0, 1	63.5–69.7 (65.8), 21	61.8–66.7 (64.4), 24	60.0, 1	57.8–68.1 (61.9), 26	59.3–63.6 (61.6), 13
U7, %	79.9, 1	78.5–84.3 (81.1), 21	78.7–82.4 (80.6), 24	77.6, 1	74.7–83.0 (78.9), 26	76.5–80.9 (78.6), 13
U8, %	87.8, 1	85.4–90.6 (88.2), 21	85.3–89.1 (87.5), 24	86.7, 1	81.4–90.5 (86.8), 26	85.0–88.0 (86.6), 13

Pronotum weakly to markedly transverse, cordiform, lateral border entire, usually well developed throughout, seldom very fine in its posterior portion, lateral groove, depending on the species, wide to nearly reduced, especially in posterior portion. Two lateral pores on each side. Hind angles of the pronotum small to rather large, usually pointed apically, more seldom – blunt. Prebasal transverse impression distinct but not deep. Basal foveae always not large and rather shallow.

Elytra oblong-ovate, wide to narrow, with effaced humeri, their maximum width near or behind mid-length. Striation shallow, only striae 1–3 more or less continuous, all striae without distinct punctures. Stria 3 with a row of 4–13 discal setiferous pores. Preapical pore present, located in the apical cross of striae 2 and 3, close to the elytral apex, clearly behind the anterior end of the apical striole. Parascutellar striole well-developed, parascutellar pore present. Three usual groups of the umbilicate series, all pores of which attached to the marginal groove, pores of the humeral group equidistant, umbilicate pores 7 and 8 most distant. Apical triangle of pores (including the preapical pore) complete.

Visible abdominal sternites 3–5, apart from usual paramedian setae, with 7–14 additional short setae along their posterior edge arranged principally in one transverse row, sternite 2 with a small group of short setae in its median part. Anal sternite often with additional setae apart from usual 2 setae in males and 4 setae in females.

Anterior tibiae clearly grooved externally and pubescent on anterior surface in their apical portion.

Male protarsi with two basal segments dilated and dentate, each provided with adhesive setae ventrally. Tarsomere 4 of anterior legs with hyaline appendage, the latter is dilated in median part, attenuated apically.

Male genitalia: median lobe long, with a large apical hook (Figs 3–8, 10–16, 19–23, 25–29), endophallus armature well sclerotized, large, consisting of two long copulatory pieces pointed apically and usually projecting through the apical orifice.

COMPARISION. The differences between *Kozlovites* and allied genera will be discussed more thoroughly in a separate paper since variation of major characters in dozens of still not described species of *Uenoites* gen. n. (see below) should be taken into account. However, all species of *Kozlovites* differ from other allied groups in combination of simple pronotal hind angles, not shaped in digitiform processes (with adjacent portions of the basal margin distinctly emarginate), entire lateral border of the pronotum, small and shallow basal foveae, transverse row of addition setae on visible abdominal sternites 3–5, very characteristic median lobe of the aedeagus with the apical hook and the endophallus armature consisting of two long copulatory pieces pointed apically.

DISCUSSION. As it was indicated above, *Kozlovites yuae* was originally described as a member of the genus *Kozlovites*. Later, S.-I. Uéno has established for it a new genus, *Deuveotrechus* Uéno, 1995, with the type species *Kozlovites yuae*. According to this author, the genus *Deuveotrechus* is related to both *Kozlovites* and *Stevensius* Jeannel, 1923 and characterized by the large number of the elytral setiferous pores (five vs. only one in *Stevensius*), presence of the preapical pore on the elytra and some characters of the male genitalia: a large apical lobe and two long aciculate copulatory pieces. In the elytral chaetotaxy, therefore, this genus is much closer to *Kozlovites* but the latter differs, according to S.-I. Uéno, in having much bigger size with longer appendages, the lateral border of pronotum reduced posteriorly and lateral border of elytra less developed anteriorly. However, in fact, the reduction of the pronotal lateral border is not complete in the type specimen of *K. caviceps*. The discovery of large-sized *Kozlovites*, and especially *K. major* sp. n. with its clear trend to the reduction of the lateral groove on the pronotum, bridges the gap between *Kozlovites* and *Deuveotrechus*, sensu S.-I. Uéno. Despite clear differences in size, length of appendages and number of the elytral setae, the structure of the male genitalia is very similar in the two species groups of *Kozlovites* (see below). In some characters (e.g. elytral chaetotaxy), *K. caviceps* even resembles more small-sized congeners. Therefore, evidently, the type species falls within interspecific variation of other *Kozlovites*. Their direct relationships are beyond question. Since *K. yuae* must be re-classified to *Kozlovites*, the genus *Deuveotrechus* becomes a subjective junior synonym of *Kozlovites*.

All members of the genus *Kozlovites* may be divided into two groups: the *caviceps* species group and the *yuae* species group.

The *caviceps* species group

Body large, length (without mandibles) more than 5 mm, antennae clearly longer than elytra. Number of elytral setae usually more than 6. Maximum head width at eye level. Parietal impression well-developed. Segment 1 of male protarsi elongate. Median lobe of the aedeagus evenly and strongly curved in the proximal third, triangular-shaped in dorsal view; parameres with broad apical portions (Figs 3–8, 10–16). Mountains east of the Mekong River. At least, two species of the group are riparian and inhabit banks of mountain brooks in the upper forest zone near timber-line.

***Kozlovites caviceps* Jeannel, 1935**
Fig. 1

Kozlovites caviceps Jeannel, 1935: 280, Fig. 9. Type locality – Mekong basin: Dze-tshu.
Kozlovites caviceps: Jeannel, 1962: 184; Uéno, 1977: 246; Deuve, 1992a: 172; Uéno & Yin, 1993: 358; Uéno, 1996: 18; Belousov & Kabak, 2003: 30, Figs 26, 40; Moravec *et al*., 2003: 313.

MATERIAL. Holotype – **China:** 1 ♀, "Mekong basin: Dze-tshu [=Za Qu], 11.400′ beginning of IX 1900, Kozlov's exp." [label in Russian: «басс. Меконга: р. Дзэ-чю. 11.400′. Нач. IX. 1900. Эксп. Козлова»] (ZISP) {Fig. 30, black circle}.

DESCRIPTION. Large-sized species, body lenght 5.8 mm, with gracile elongate body (Fig. 1). Legs and antennae very slender, longer that in other congeners. Color of the upper-side amber, yellowish-brown with paler base, margins and suture of elytra. Legs and antennae uniformly yellowish. For morphometric characters see Table 1.

Head elongate, very large compared with pronotum and elytra (see PW/HW, EW/HW), ophthalmic lobes and frons rather convex. Eyes medium-sized, conically protruding. Tempora rather long, moderately and evenly convex, glabrous, their surface wrinkled. Frontal furrows continuous, deeply impressed both behind middle and near clypeal suture, subparallel in middle part. Parietal impression deep. Supraorbital pores not large, anterior one weakly foveolate, posterior one simple, two pores of each side located on lines approximately parallel to the body axis. Labrum weakly emarginate. Palpi rather long. Labial tooth plane, medium-sized, moderately protruding anteriad, weakly emarginate apically.

Pronotum slightly wider than long, cordiform, its sides with a very shallow sinuation before hind angles. Latter obtusangular, blunt at apex, slightly shifted anteriad. Basal margin straight medially, shortly emarginate and obliquely truncated laterally. Anterior margin straight, anterior angles rounded off, not salient. Lateral groove very narrow, a little widened near anterior lateral seta, nearly disappearing in its posterior portion; lateral border distinct, though fine throughout, faint near hind angles. Prebasal transverse impression shallow. Basal surface smooth with a few longitudinal wrinkles medially; basal foveae not large, oblique, rather shallow. Apical transverse impression shallow, more distinct laterally. Discal foveae distinct. Median line shallow but distinct, deeper near prebasal transverse impression.

Elytra elongate, very narrow (Table 1: EL/EW, EW/PW), with maximum width behind mid-length, convex on lateral slopes, impressed on disc. Humeri oblique; each elytron separately rounded at apex; preapical sinuation distinct. Lateral groove rather narrow. Discal striation shallow: stria 1–3 more or less continuous, moderately impressed, stria 4 reduced though traceable on disc, others effaced. All striae not punctured. Inner interspaces slightly convex, the outers flat; interspace 2 more than twice wider than interspace 1. Apical striole rather short, slightly curved, gradually disappearing anteriad at level between umbilicate pores 7 and 8. 6–7 discal setiferous pores, including preapical one, on each elytron attached mostly to stria 3. Angulo-apical seta located closer to the elytral suture than to the exterior pore, apical triangle slightly elongate. Umbilicate series regular and well-aggregated, umbilicate pores 1 slightly removed from lateral margin.

Microsculpture obliterate on head (except for labrum, anterior part of clypeus and occiput), barely traceable on lateral slopes of pronotum and distinct, consisting of transverse lines on elytra; all dorsum finely micropunctured. Elytral surface irridescent.

Each abdominal sternites 3–5 with 7–12 small setae arranged in transverse row; anal sternite quadrisetose.

Fortibiae thin, grooved externally, densely pubescent on anterior surface.

Fig. 1. *Kozlovites caviceps* Jeann., holotype, ♀, habitus. Scale bar – 1 mm.

Fig. 2. *Kozlovites major* sp. n., paratype, ♂ from the pass located 25 km SE Deqin, habitus. Scale bar – 1 mm.

COMPARISION. *K. caviceps* is the type species of the genus. From all other members of *Kozlovites*, it is easily distinguished by: elongate habitus, narrow pronotum which is only slightly wider than long, lateral border and groove of pronotum, both, are very fine in their posterior portion, small and blunt pronotal hind angles, and more elongate elytra.

DISTRIBUTION. So far as is known, there is the northernmost species of the genus. According to the reports of the P. Kozlov's expedition, the coordinates of the base camp were 32°12′50′′N / 96°54′10′′E. Just there a lot of insects were collected during some days. But the altitude indicated in the original label is less than the lowest part of the river valley nearby the base camp. Moreover, even the mouth of the Za Qu River is located at a higher altitude of 3510 м (11.515 feet). The lowest place visited by the expedition in the beginning of September (6.09.1900) was the joss-house Kgardin-Gomba (32°14′15′′N / 96°52′17′′E, 11.790 feet) located in the valley of the Za Qu River. Thus, the altitude data of the original label seem to be wrong. In view of the above, the environs of the base camp are to be considered as the best option for the type locality of *Kozlovites caviceps* (Qinghai, see Fig. 30, black circle).

BIONOMICS. Most likely, the species was collected at an elevation above ca. 3740 m.

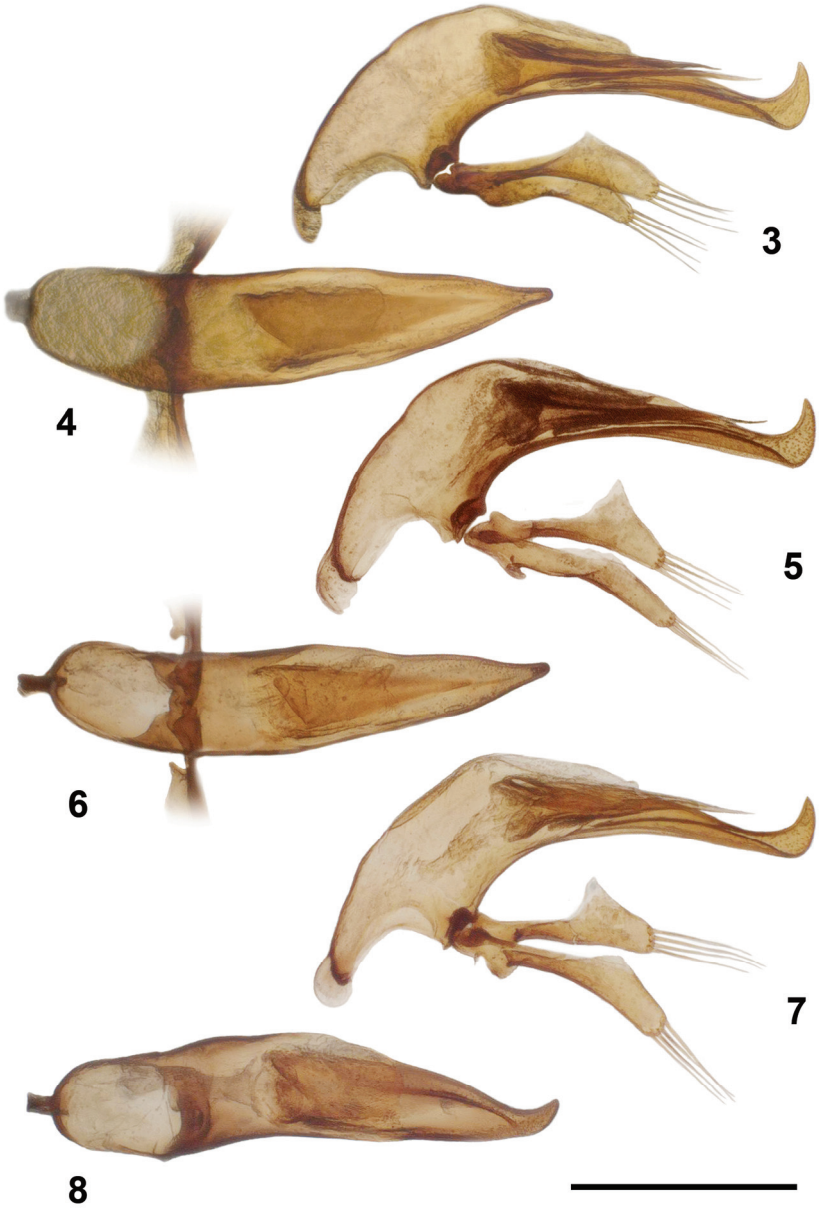
***Kozlovites major* Belousov et Kabak, sp. n.**
Figs 2, 3–8

MATERIAL. Holotype – **China:** 1(1) ♂, "China, (N Yunnan), Diqing, Tibet aut. pref., Deqin Co., Baima Shan, Pass 25 km SE Deqin, 28°19.38′N / 99°05.47′E, 4225 m, (small creek valley, *Rhododendron, Salix*, gravel along creek) 08.06.2005 (Wrase) [06 a]" (ZISP) {Fig. 31: 1}. Paratypes: 8(5) ♂, 1 ♀, collected together with holotype (CBK, CDW); 2 ♀, "China, (N Yunnan), Diqing, Tibet aut. pref., Deqin Co., Baima Shan, E-side, Pass 12 km SE Deqin, 28°23.86′N / 98°59.04′E, ca. 4300 m, 10.06.2005, small creek valley (plane with big stones along creek, in gravel and under stones) (D.W. Wrase) [08C]" (CBK, CDW) {Fig. 31: 2}; 2(2) ♂, "China, (N-Yunnan), Diqing Tibet. aut. pref., Deqin Co., Baima Shan, pass 15 km SE Deqin, 28°22.68′N / 99°00.57′E, ca. 4400–4500 m (alpine meadow, under gravel/stones along creek) 12.06.2005, (D.W. Wrase) [10A]" (CBK, CDW) {Fig. 31: 3}; 6(1) ♂, 1 ♀, "China, NW Yunnan, Pass Hengduan Shan – Deqin, 28°23′01.8′′N / 99°00′21.1′′E, 4300 m, 12.06.2005, M. Janata leg." (CBK, CMJ) {Fig. 31: 4}.

OTHER MATERIAL. 1 ♀, "China, NW Yunnan Prov., NE of Deqen City, 28°29′45′′N / 98°55′27′′E, 14.06.2014, H=3670 m, Belousov I. & Kabak I. leg." (CBK) {Fig. 31: 5}.

DESCRIPTION. Large-sized species, body lenght 5.3–6.3 (5.8) mm, with relatively narrow fore-body and ample, moderately convex elytra (Fig. 2). Legs and antennae very slender. Color of the upper-side pitchy blackish with reddish anterior part of head, base, anterior and lateral margins of pronotum, margins and suture of elytra. Legs and antennae unicolorous, reddish.

Head medium in size, discoid, rather flat; eyes medium-sized (larger than in other congeners, see Table 1: YL/TL), conically protruding; tempora rather long, strongly and evenly convex, glabrous. Frontal furrows continuous, deeply impressed both behind middle and near clypeal suture, irregularly curved in middle part. Parietal impression distinct. Supraorbital pores not large, located on lines clearly convergent posteriad, anterior one weakly foveolate. Anterior margin of labrum emarginate. Palpi rather long. Labial tooth moderately produced anteriad, truncated or weakly emarginate apically.



Figs 3–8. *Kozlovites major* sp. n., paratypes from the pass located 25 km SE Deqin, male genitalia, lateral view (3, 5, 7) and dorsal view (4, 6, 8).

Pronotum slightly transverse, cordiform, its sides with long sinuation before hind angles. Latter rectangular to obtusangular, pointed apically, shifted anteriad. Basal margin rectilinear medially, weakly emarginate and obliquely truncated laterally. Anterior margin straight, anterior angles rounded off or slightly protruding anteriad. Lateral groove relatively narrow, widened near anterior lateral seta, gradually narrowed both anteriad and posteriad; lateral border distinct throughout. Prebasal transverse impression shallow. Basal surface smooth, basal foveae well-developed but not deep. Apical transverse impression barely distinguishable. Discal foveae usually distinct. Median line shallow, not reaching the anterior margin anteriorly, nor surpassing the level of the prebasal transverse impression posteriorly.

Elytra ample, oblong-ovate, with maximum width behind their mid-length, moderately convex, impressed along suture on disc. Humeri obliquely rounded; each elytron broadly and separately rounded at apex; preapical sinuation distinct. Lateral groove rather narrow. Discal striation shallow: stria 1 to 3 more or less continuous, moderately impressed, stria 4 very shallow though traceable for most of its length, others evanescent. All striae without distinct punctures. Stria 3 often irregular, consisting of isolated fragments tending to anastomose with stria 4. Inner interspaces slightly convex, the outers flat; interspace 2 more than twice wider than interspace 1. Apical striole rather short, slightly curved, interrupted anteriorly at level of umbilicate pore 7. Parascutellar pore present, parascutellar striole well-developed. 7–14 (usually 9–10) discal setiferous pores on each elytron attached mostly to stria 3 but often one or two setiferous pores shifted inwards or outwards, especially in anterior third of elytra. Preapical pore well-developed, located in the apical cross, at or behind level of the anterior termination of the apical striole. Adjacent discal setiferous pore tending to be located on interspace 2, quite similarily to the preapical pore. Angulo-apical seta, though variable, normally located closer to the exterior pore than to the suture of elytra. In one specimen, one additional seta present between the angulo-apical and exterior pores on each elytron. Umbilicate series well-aggregated: divided into three compact groups and arranged in one row; umbilicate pores 2 and 3 as well as 7 and 8 being most distant within individual groups.

Microsculpture obliterate on head (except for labrum, anterior part of clypeus and occiput), barely traceable on pronotum (mostly on lateral slopes) and distinct, consisting of transverse lines on elytra; all dorsum finely micropunctured. Elytral surface irridescent.

Visible abdominal sternites 3–5, each with 7–12 small setae arranged in a transverse row; anal sternite bisetose in male, quadrisetose in female (inner pair of setae much shorter).

Fortibiae thin, grooved externally, densely pubescent on its anterior surface.

Male protarsi with two basal segments dilated and dentate, provided with adhesive setae ventrally. Tarsomere 4 of anterior legs with hyaline appendage, the latter is leaf-like: strongly dilated in median part, then attenuated and pointed apically, reaching or nearly reaching apex of tarsomere 5.

Aedeagus (Figs 3–8) medium-sized, its ventral margin markedly and evenly bent in the proximal third, with a large apical hook in lateral view. In dorsal view, the aedeagal tube gradually attenuating in apical portion, apex narrowly rounded. Sagittal

aileron small; basal orifice clearly emarginate. Endophallus armature consisting of two stylus-like sclerites pointed apically. Parameres rather thick, both with weak ventral apophyses which is less defined on the left paramere, each bearing 4 apical setae.

SEXUAL DIMORPHISM. No significant differences in morphometric characters between sexes.

COMPARISION. Despite striking differences in appearance (pitchy blackish color of the body, transverse pronotum and rather broad elytra, see Fig. 2 vs. Fig. 1), the new species is doubtless closely related to *K. caviceps*. Both these species share the same characters: an increased number of the elytral setiferous pores in stria 3, the same pubescence of the foretibiae, the similar structure of the pronotum, etc. Apart from the above mentioned differences in color and proportions, *K. major* sp. n. is distinguished from *K. caviceps* in having rather large hind angles of the pronotum with sharp apices, the lateral groove of the pronotum well developed throughout its length, even in posterior portion, and a larger number of the elytral setiferous pores in the third stria: 7–14 (usually 9–10) setae vs. 6–7 in *caviceps.*

The following morphometric characters of *K. major* sp. n. do not overlap with those of *K. caviceps* (Table 1): body more convex (EL/BH); antennae and tibiae longer (AL/EL and EL/TiL, correspondingly); pronotum wider (PW/PL, PW/PB); elytra proportionally larger (EW/HW, EW/PW, EL/PL) and wider (EL/EW).

DISTRIBUTION. China, Yunnan Province, pass SE of Deqin City, Baima Shan (Fig. 31, white rhomb).

BIONOMICS. The species was collected in the forest litter on banks of small creeks (label data: *Rhododendron, Salix*, gravel along creek; small creek valley, plane with big stones along creek, in gravel and under stones) at elevations of 4225–4300 m.

***Kozlovites modestus* Belousov et Kabak, sp. n.**
Figs 9, 10–16

MATERIAL. Holotype – **China:** 1(1) ♂, “China,Yunnan, Shangrila–>Deqen, 214 Ntn. Road, NE slope of SE Baima Mt.R., SW of Benzilanzhen Vill., 28°08´05´´N / 99°13´21´´E, 07.06.2013, H=3865 m, Belousov I. & Kabak I. leg.” (ZISP) {Fig. 31: 6}. Paratypes: 17(6) ♂, 11 ♀, collected together with holotype (IZAS, MPU, MNHN, ZISP, ZSM, CAG, CAK, CBK, CDW, CMJ, CJS, CPM, CVZ); 1(1) ♂, “China,Yunnan, Shangrila–>Deqen, 214 Ntn. Road, NE slope of SE Baima Mt.R., SW of Benzilanzhen Vill., 28°09´30´´N / 99°13´36´´E, 05.06.2013, H=3655 m, Belousov I. & Kabak I. leg.” (CBK) {Fig. 31: 7}; 2(2) ♂, 1(1) ♀, “China,Yunnan, Shangrila–>Deqen, 214 Ntn. Road, NE slope of SE Baima Mt.R., SW of Benzilanzhen Vill., 28°08´43´´N / 99°13´41´´E, 06.06.2013, H=3930 m, Belousov I. & Kabak I. leg.” (CBK) {Fig. 31: 8}.

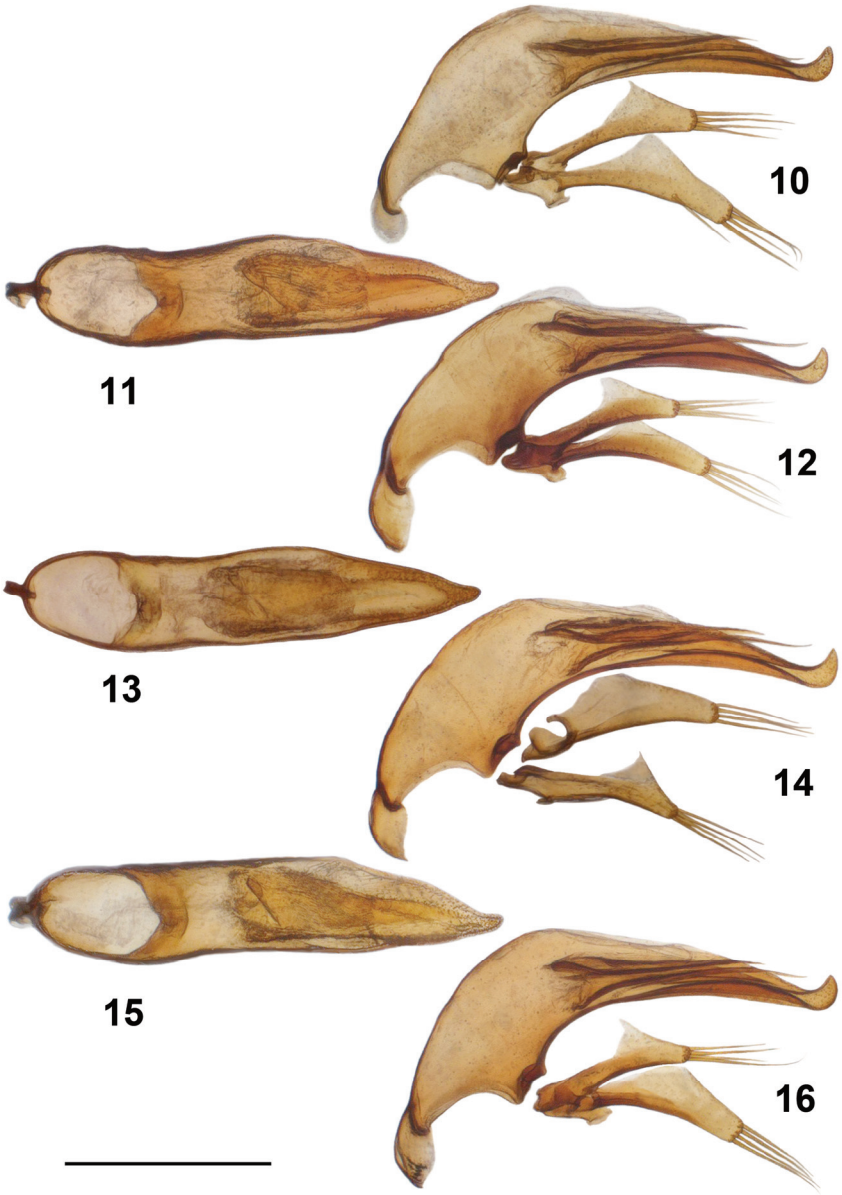
DESCRIPTION. A large-sized species with oblong-ovate body, narrow constriction at pronotal base and slender appendages (Fig. 9). Color of the upper-side pitchy blackish with paler reddish median part of head, basal and anterior portions of

pronotum, narrow suture of elytra. Legs and antennae yellow-reddish, with obscured femora; at most, middle antennomeres vaguely obscured.

Head large, rounded, subconvex, rather wide; eyes medium-sized, strongly protruding; tempora rather long, strongly and evenly convex, glabrous. Frontal furrows continuous, more markedly impressed behind middle and near clypeal suture, irregularly and broadly curved in middle part. Frons moderately convex, transversely rugulose in lateral portions near frontal furrows. Parietal impression distinct. Supraorbital pores located on lines clearly convergent posteriad. Labial tooth medium-sized, moderately salient anteriad, weakly emarginate apically.

Fig. 9. *Kozlovites modestus* sp. n., paratype, ♀ from altitude 3865 m, habitus. Scale bar – 1 mm.

Pronotum rather transverse, cordiform, its sides clearly rounded in anterior portion, nearly straight or even weakly convex up to the hind angles. Latter medium-sized, subrectangular, sharp, slightly shifted anteriad. Basal margin rectilinear to concave medially, weakly emarginate just near hind angles. Anterior margin straight, anterior angles clearly salient. Lateral groove usually rather broad, slightly widened near anterior lateral seta, gradually narrowed both anteriad and posteriad; lateral



Figs 10–16. *Kozlovites modestus* sp. n., paratypes from altitudes 3865 m (10–14, 16) and 3930 m (15). Male genitalia, lateral view (10, 12, 14, 16) and dorsal view (11, 13, 15).

border distinct throughout, though finer in posterior portion. Prebasal transverse impression often redubled, forming a triangular surface. Base smooth or weakly wrinkled; basal foveae rather large but not deep, their internal margin not sharp. Apical transverse impression average, more distinct laterally. Discal foveae usually present. Median line distinct, becoming deeper before the prebasal transverse impression and behind the apical transverse impression.

Elytra ample, oblong-ovate, with maximum width behind mid-length, rather convex on lateral slopes and depressed on disc. Humeri obliquely rounded; each elytron broadly and separately rounded at apex; preapical sinuation distinct. Lateral groove medium in width. Discal striation shallow: striae 1–3 more or less continuous, moderately impressed, though shortened both anteriorly and posteriorly, stria 4 very shallow though traceable mostly on disc, others evanescent. All striae not punctured, waved, especially striae 2 and 3. Inner interspaces slightly convex, the outers flat; interspace 2 more than twice wider than interspace 1. Apical striole rather short, slightly curved, interrupted anteriorly at level slightly before umbilicate pore 7. Parascutellar pore present, parascutellar striole rather long. 6–11 (usually 8) discal setiferous pores on each elytron attached mostly to stria 3, only the anterior pore occasionally shifted inwards to interspace 3 or even stria 2. Preapical pore well-developed, located in the apical cross, in sinuation of striae 2 and 3, at or behind level of the anterior end of the apical striole. Angulo-apical pore markedly smaller than the exterior pore, with seta approximately a half length of the exterior seta, located in the middle between the suture and the exterior pore. Umbilicate series well-aggregated, divided into three compact groups and arranged in one row; umbilicate pore 1 clearly shifted inwards, umbilicate pores 2 and 3 as well as 7 and 8 being most distant from each other.

Microsculpture shallow, consisting of transverse meshes in the anterior half of the head and of nearly isodiametric meshes on the occiput, completely reduced on the posterior portion of the frons and parietal impression, reduced on the pronotal disc, although discernible on its lateral slopes, consisting of transverse lines on the elytra. All dorsum finely micropunctured. Elytral surface irridescent.

Visible abdominal sternites 3–5, each, apart from a pair of longer paramedian setae, with 6–11 additional short setae arranged in a transverse row, clearly spaced from the posterior margin of the sternite; anal sternite with a pair (in males) or two pairs (in females) longer setae and occasionally with still a few shorter setae on each side.

Anterior tibiae grooved externally, densely pubescent on anterior surface. Male protarsi with two basal segments dilated and dentate, provided with adhesive setae shifted to the segment apex.

Aedeagus (Figs 10–16) medium-sized, its ventral margin markedly and evenly bent in the proximal third, with a rather small apical hook in lateral view. Sagittal aileron usually well-developed. Endophallus armature consisting of two sclerites, which are heavily sclerotized and pointed apically. Parameres rather thick, with weak ventral apophyses better developed on the right paramere, each paramere with 4 apical setae.

SEXUAL DIMORPHISM**.** Males differ in having larger body size (body length, on average, 5.3 mm vs. 5.0 mm in females, significance level of $p \leq 0.001$) and less convex elytra (EL/BH, on average, 2.70 vs. 2.59 in females, $p \leq 0.01$), and proportionally larger elytra (EW/HW, on average, 2.20 vs. 2.12 in females; EW/PW, on average, 1.92 vs. 1.85 in females and EL/PL, on average, 3.27 vs. 3.16 in females, $p \leq 0.001$).

COMPARISION. The species is most closely related to *K. major* sp. n., it differs largely in more transverse pronotum (PW/PL, $p \leq 0.01$, U-test) with sides more strongly rounded anteriorly, front angles more protruding anteriad and, on average, in a lower number of the discal elytral setae (on average, 8 vs. 10, $p \leq 0.001$, U-test). The male genitalia of both species are very similar, except for the apical hook which is markedly shorter in *K. modestus* sp. n.

In other morphometrical characters, *K. modestus* sp. n. differs from *K. major* sp. n. in having (see Table 1): body smaller ($p \leq 0.01$, U-test) and less convex (EL/BH $p \leq 0.001$, U-test); head proportionally smaller (PW/HW and EW/HW, for both ratios $p \leq 0.001$, U-test); hind tarsi shorter (TiL/TaL, $p \leq 0.001$, U-test); eyes smaller (YL/TL, $p \leq 0.001$, L3/YL, $p \leq 0.01$, U-test); base of pronotum narrower compared to the anterior margin (PW/PB, $p \leq 0.001$); anterior lateral seta of the pronotum located further from the anterior margin (PSa, $p \leq 0.001$, U-test); elytra wider (EL/EW $p \leq 0.001$, U-test); umbilicate pores located closer to the elytral base (U3, U4 and U5, $p \leq 0.001$; U6, $p \leq 0.01$, U2, $p \leq 0.05$, U-test).

NOTE. *K. modestus* sp. n. may be only a subspecies of *K. major* sp. n. but, for the moment, populations with intermediate genital structure are not found.

DISTRIBUTION. China, Yunnan Province, SW of Benzilanzhen Village, NE slope of the southeastern spur of the Baima Mts (Fig. 31, white square).

BIONOMICS. The species was collected on banks of small brooks at elevations ranging from 3655 to 3930 m.

The *yuae* species group

Body small, length (without mandibles) less than 4.5 mm, antennae shorter than elytra. Head across tempora as wide as across eyes. Parietal impression indistinct. Number of elytral setae usually 6 and less. Segment 1 of male protarsi clearly transverse. Median lobe of the aedeagus curved just near basal bulb, its apical portion more or less attenuated in dorsal view; parameres with slender apical portions (Figs 19–23, 25–29). Mountains west of the Mekong River. The species of this group seem to be associated with melting snow and occur at high elevations, in the alpine zone.

Kozlovites yuae **Deuve, 1992**

Figs 17, 19

Kozlovites yuae Deuve 1992a: 171, Figs 1, 12. Type locality: Yunnan, Dêqên Xian.

"*Kozlovites*" *yuae*: Uéno & Yin, 1993: 358.

Deuveotrechus yuae: Uéno, 1995: 100, Figs 4–5; Deuve 1998: 140; Moravec *et al*., 2003: 298.

MATERIAL. Paratype: 1(1) ♂ without geographical label data; "*Kozlovites yuae* n. sp. T. Deuve det., 1991"; "Paratype"; "IOZ(E) 11364" (IZAS).

DESCRIPTION. The only paratype specimen examined is strongly damaged, therefore some characters should be taken with certain reservations. Rather small-sized species with uniform pale coloration, large head, narrow pronotum and discoid elytra (Fig. 17).

Body length 3.9 mm. Legs and antennae thin, of medium length. Dorsum yellowish-brown with amber-reddish tinge, legs and antennae unicolorous, yellowish.

Head very large especially compared with the pronotum (Table 1: PW/HW), subconvex; sides of ophthalmic lobes clearly convergent anteriad. Eyes small (the only member of the genus with tempora longer than eyes), weakly and evenly convex. Tempora very convex, specifically in their anterior portions, glabrous; head across tempora as wide as across eyes. Frontal furrows continuous, strongly impressed and slightly waved in their middle portion. Parietal impression indistinct. Supraorbital pores located on lines clearly convergent posteriad. In the specimen studied, the anterior supraorbital pore on the left side of the head is reduced. Anterior margin of the labrum bearing 7 setae. Palpi moderately long.

Pronotum transverse, cordiform, its sides strongly convergent posteriad, barely sinuate before hind angles. Latter rather small, obtusangular, with acute apex attenuated upwards. Basal margin rectilinear medially, obliquely truncated and weakly emarginate laterally. Anterior margin straight, anterior angles broadly rounded, slightly prominent anteriad. Lateral border entire. Lateral groove well-developed, continuous, much wider in anterior and median portions. Prebasal transverse impression distinct. Basal surface shallowly rugulose; basal foveae average in size, not deep, their inner margin stroke-like, directed inwards and forewards. Apical transverse impression angularly curved near median line. Discal foveae barely distinguishable. Median line shallow, not reaching the apical transverse impression anteriorly, barely reaching the prebasal transverse impression posteriorly.

Elytra discoid and rather broad, their maximum width near mid-length, slightly impressed along suture, lateral and basal slopes not steep. Humeri broadly rounded; apices of elytra slightly truncated; preapical sinuation distinct. Lateral groove rather narrow. Discal striation moderately impressed, stria 4 distinct for most of its length, though slightly shallower than stria 3, striae 5–7 partially traceable on disc. All striae waved, without distinct punctures. Inner interspaces barely convex, the outers flat; interspace 2 more than twice wider than interspace 1 in their middle portions. Apical striole rather short, slightly curved, interrupted anteriorly at level behind umbilicate pore 7. Parascutellar setiferous pore present, parascutellar striole well-impressed, rather long. 5 discal setiferous pores on each elytron attached to stria 3 and the preapical pore located in the apical cross, in sinuation of stria 2 markedly behind the anterior termination of the apical striole. Angulo-apical seta and exterior seta present. Umbilicate series well-aggregated, umbilical pores 7 and 8 most spaced.

Microsculpture well distinguishable (at 56x magnification) on the elytra and lateral slopes of the pronotum, where it consists of transverse meshes and anastomosing lines. All dorsum finely micropunctured. Elytral surface mat.

Visible sternites 3–5 with a transverse row of small setae; anal sternite bisetose.

Fortibiae grooved externally, pubescent on anterior surface. Male protarsi with two basal segments strongly dilated and provided with adhesive setae ventrally.

Aedeagus (Fig.19) rather large; in lateral view, strongly step-like bent just near basal bulb, with nearly straight ventral margin and rectangular summit, its apical hook large. In dorsal view, the apical portion of the median lobe is markedly attenuated. Sagittal aileron medium in size, well-sclerotized; basal orifice moderately emarginate. Endophallus armature consisting of two heavily sclerotized sclerites. Parameres thin, both with weak ventral apophysis, each paramera bearing 4 apical setae.

COMPARISION. *Kozlovites yuae* differs readily from the above species in smaller size, pale yellowish brown color of the dorsum and very large head with strongly convex tempora which are longer than eyes.

Fig. 17. *Kozlovites yuae* Deuve, paratype, ♂, habitus. Scale bar – 1 mm.

Fig. 18. *Kozlovites niger* sp. n., paratype, ♀ from altitude 4080 m, habitus. Scale bar – 1 mm.

DISTRIBUTION. The holotype has a geographical label (in Chinese): “China, Deqin, Meili Xue Shan, 4300–4680 m, 1982–VII–28” (ca. 28°31´N / 98°42´E) (Fig. 31, black rhomb).

BIONOMICS. The species was collected in the alpine zone at elevations of 4300–4680 m.

***Kozlovites yuae zogangensis* (Deuve, 1998)**

Deuveotrechus yuae zogangensis Deuve 1998: 140. Type locality: Tibet oriental, 20 km au nord-est de Zogang, route entre Zogang et Markam, col de “Tuntala Shan”.

Deuveotrechus yuae zogangensis: Moravec *et al*., 2003: 298.

DESCRIPTION. We do not know this taxon. According to the original description, it differs from the nominotypical subspecies in slightly larger size (body length 4.5 mm) and pronotum with sides more shortly sinuate before more acute hind angles. Number of elytral discal setae ranging from 3 to 6.

DISTRIBUTION. Known only from the type locality – China, Xizang: Tuntala Shan Pass, 20 km NE of Zogang, ca. 29º43´N, 98º00´E (Fig. 30, white circle).

BIONOMICS. The species was collected in the alpine zone at an elevation of 5000 m.

***Kozlovites niger* Belousov et Kabak, sp. n.**
Figs 18, 20–23

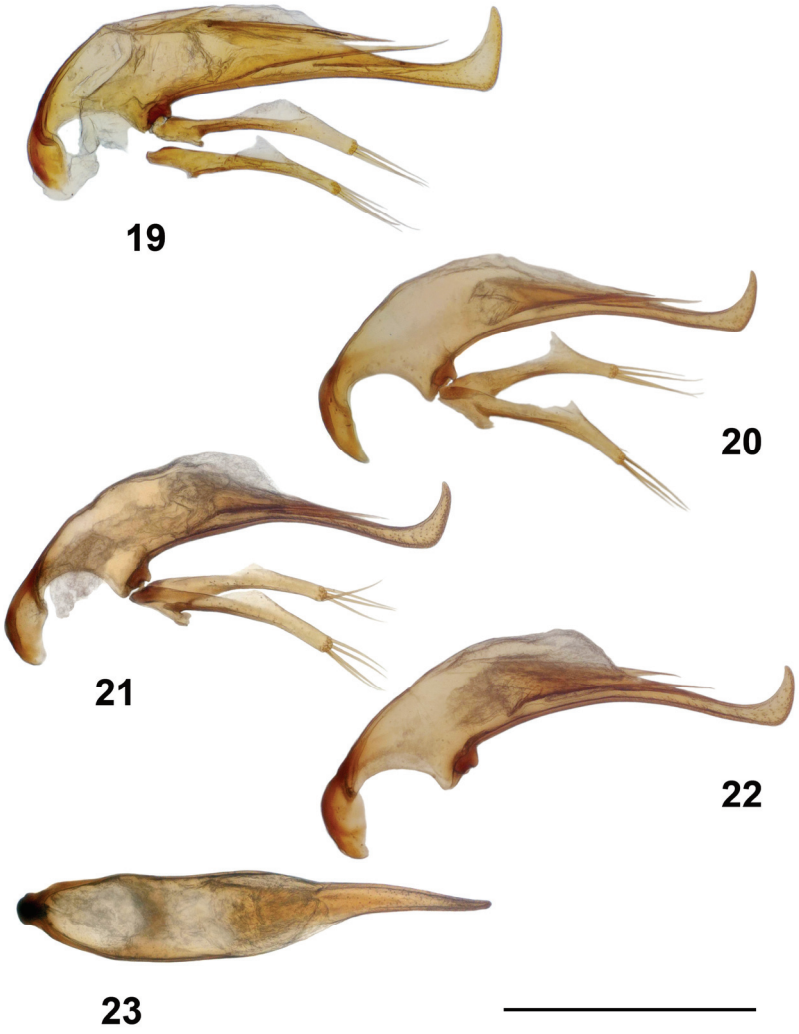
MATERIAL. Holotype – 1(1) ♂, **China:** “CH, Yunnan, N Weixi, l. trib. Luozhua, 7.75 km E Nianjua Mt., 27°44´ 9´´N / 98°57´ 3´´E, 15.06.2015, H=4080 m, Belousov I. & Kabak I. leg. [kozlovites]” (ZISP) {Fig. 31: 10}. Paratypes: 5(5) ♂, 20(1) ♀, collected with the holotype (IZAS, MNHN, MPU, ZISP, ZSM, CAG, CAK, CBK, CDW, CJS, CMJ, CPM, CVZ); 8(6) ♂, 6 ♀, “CH, Yunnan, N Weixi, 8.65 km W Laoantong, 7.35 km E Nianjua Mt., 27°44´41´´N / 98°56´58´´E, 16.06.2015, H=3950 m Belousov I. & Kabak I. leg. [4NT]” (CBK) {Fig. 31: 11}.

DESCRIPTION. The smallest species of the genus, with short, wide and rather flat elytra, large head and markedly transverse pronotum (Fig.18). Legs and antennae thin and rather short. Color of the upper-side dark brownish to piceous, with paler reddish anterior part of head, base, anterior and lateral margins of pronotum, margins and suture of elytra. Legs and antennae unicolorous, yellowish.

Head very large compared to pronotum, with rounded sides. Eyes average, moderately convex, slightly longer than tempora, the latter strongly and evenly convex, glabrous; head across tempora as wide as across eyes. Frontal furrows continuous, strongly impressed behind middle and near clypeal suture, slightly sinuate and angulate in median portion. Parietal impression very shallow or indistinct. Labial tooth clearly protruding anteriad, bifid.

Pronotum transverse, cordiform, its sides strongly convergent posteriad, with a long shallow sinuation before hind angles. Latter obtusangular to rectangular, with attenuated, pointed apex. Basal margin rectilinear medially, weakly emarginate laterally.

Anterior margin straight, anterior angles broadly rounded, distinctly prominent anteriad. Lateral border entire. Lateral groove continuous, rather broad, especially in anterior and median portions. Prebasal transverse impression distinct, angularly curved medially. Basal surface smooth to rugulose, especially in median part; basal foveae average in size, not deep. Apical transverse impression of triangular shape, rather distinct. Discal foveae shallow but usually distinguishable. Median line distinct.



Figs 19–23. *Kozlovites* spp.: 19 – *K. yuae* Deuve, paratype; 20–23 – *K. niger* sp. n., paratypes from altitudes 4080 m (20, 21, 23) and 3950 m (22). Male genitalia, lateral view (19–22) and dorsal view (23).

Elytra shortly ovate (see Table 1: EL/EW, EL/PL), their maximum width near mid-length, markedly depressed on disc. Humeri distinct, though broadly rounded; each elytron separately rounded at apex; preapical sinuation distinct. Lateral groove average. Discal striation shallow but complete and rather homogenous. Even striae 5–7 traceable although much shallower than inner striae. All striae waved and not distinctly punctured. Inner interspaces barely convex, the outers flat; interspace 2 more than twice wider than interspace 1. Apical striole rather short, slightly curved, interrupted anteriorly at level slightly in front of umbilicate pore 8. Parascutellar setiferous pore present, parascutellar striole rather long. 5–7 (usually 6) discal setiferous pores on each elytron attached to stria 3. Preapical pore located in the apical cross of striae 2 and 3 markedly behind the anterior end of the apical striole. Angulo-apical pore located approximately in the middle between the exterior pore and the elytral suture; apical triangle slightly elongate. Umbilicate series well-aggregated: divided into three compact groups and arranged in one regular row along lateral groove.

Microsculpture distinct (at 56x magnification) on the elytra (composed of strongly transverse meshes and anastomosing lines) and head (subisodiametric on the occiput and consisting of markedly transverse meshes on the frons and clypeus), reduced on the pronotal disc, more or less developed on the lateral portions of the pronotum. All dorsum finely micropunctured.

Visible abdominal sternites 3–5, each with 7–10 small setae arranged in transverse row; anal sternite bisetose in male, quadrisetose in female (inner pair of setae much shorter).

Fortibiae grooved externally, densely pubescent on distal anterior surface. Male protarsi with two basal segments dilated and each provided with a strong and thick inner tooth and adhesive setae ventrally; segment 1 distinctly transverse, segment 2 very strongly transverse.

Aedeagus (Figs 20–23) rather large, strongly bent, with very slender apical portion and large apical hook in lateral view. In dorsal view, the median lobe with a distinct constriction before narrow apical portion. Sagittal aileron average. Endophallus armature consisting of two heavily sclerotized copulatory pieces pointed apically which slightly shorter than in allied taxa. Parameres slender, with weak ventral apophyses, more developed on the right paramere, each paramere bearing 4 apical setae.

SEXUAL DIMORPHISM**.** Males differ in having body larger (size, on average, 3.8 mm vs. 3.6 mm in female, significance level $p \leq 0.001$) and less convex (EL/BH, on average, 2.59 vs. 2.49 in females, significance level $p \leq 0.01$), proportionally larger elytra (EW/HW, on average, 2.15 vs. 2.04 in females; EL/PL, on average, 3.04 vs. 2.89 in females, significance level of both $p \leq 0.001$ and EW/PW, on average, 1.78 vs. 1.73 in females, significance level $p \leq 0.05$), and smaller head (PW/HW, on average, 1.20 vs. 1.18 in females, significance level $p \leq 0.05$).

COMPARISION. The new species is most closely related to *K. yuae*, these two species share some important characters, first of all, a very large head with long convex tempora and rather short discoid elytra. However, *K. niger* **sp. n.** differs in

darker, brown to pitchy blackish color of the body (vs. paler, yellowish color of *K. yuae*) and eyes, which are longer than tempora in *K. niger* **sp. n.** (shorter in *K. yuae*, see Table 1: YL/TL). The aedeagal median lobe of *K. niger* **sp. n.** is much more slender, its ventral margin more markedly curved, the apical hook smaller.

Apart from the above mentioned characters, *K. niger* **sp. n**. differs from *K. yuae* in the following morphometric characters (see Table 1): pronotum proportionally larger (PW/HW, EW/PW, EL/PL) and umbilicate pore 1 located closer to the elytral base (U1).

DISTRIBUTION. China, Yunnan, E of Mount Nianjua, right bank of the Lancang Jiang (Mekong) River, (Fig. 31, black square).

BIONOMICS. The species was collected in the alpine zone near melting snow at elevations of 3950–4080 m.

Kozlovites amplipennis **Belousov et Kabak, sp. n.**
Figs 24, 25–29

MATERIAL. Holotype – 1(1) ♂, **China:** "China, W Yunnan, SW Weideng, 26°58′51′′N / 98°58′35′′E – 26°58′51′′N / 98°59′04′′E, H=3725–4150 m, 03.06. 2005, Belousov I. & Kabak I. leg." (ZISP) {Fig. 31: 12}. Paratypes: 4(4) ♂, 6(1) ♀, collected with the holotype (IZAS, MPU, ZSM, CAG, CAK, CBK, CJS); 3(2) ♂, 2(1) ♀, "China, W Yunnan, NE Fugong, 26°58′39′′N / 98°58′04′′E – 26°58′37′′N / 98°58′20′′E, H=3730–4100 m, 02.06.2005, Belousov I. & Kabak I. leg." (ZISP, CBK) {Fig. 31: 13}.

DESCRIPTION. Medium-sized species, extremely variable in size, shape and color, characterized by ample and wide elytra, relatively small pronotum and very small head (see Table 1: PW/HW, EW/HW) (Fig. 24). Legs and antennae thin (except for foretibiae) and short. Color of the upper-side light brownish to piceous, with paler anterior part of head, base, anterior and lateral margins of pronotum, margins and suture of elytra. Legs and antennae unicolorous, yellowish.

Head small, subconvex. Eyes average, weakly convex to relatively flat; tempora strongly and evenly convex, glabrous; head across tempora approximately as wide as across eyes. Frontal furrows continuous, strongly impressed behind middle and near clypeal suture, slightly sinuate and angulate in median portion. Parietal impression indistinct. Supraorbital pores not large, located on lines clearly convergent posteriad, anterior one weakly foveolate. Labial tooth medium-sized, moderately salient, cleft at apex.

Pronotum transverse, cordiform, its sides strongly convergent posteriad, barely concave before hind angles. Latter rather small, with attenuated, pointed apex. Basal margin rectilinear medially, obliquely truncated and weakly emarginate laterally. Anterior margin straight, anterior angles broadly rounded, weakly prominent anteriad. Lateral border entire. Lateral groove well-developed, continuous, much wider in anterior and median portions. Prebasal transverse impression distinct, angularly curved medially. Basal surface smooth; basal foveae average in size, shallow, its inner margin stroke-like, directed inwards and forewards. Apical transverse impression of triangular shape, more sharp laterally. Discal foveae shallow but

usually distinguishable. Median line shallow, not reaching the anterior margin of pronotum anteriorly, nor surpassing the level of the prebasal transverse impression posteriorly, slightly deeper in anterior portion.

Fig. 24. *Kozlovites amplipennis* sp. n., paratype, ♀ from Weideng, habitus. Scale bar – 1 mm.

Elytra ample, broadly ovate, with maximum width near mid-length, lateral and basal slopes rather steep, disc markedly depressed along suture. Humeri broadly rounded; each elytron separately rounded at apex; preapical sinuation distinct. Lateral groove rather narrow. Discal striation shallow and rather even. Stria 1–2 distinct and continuous, striae 3 clearly shortened anteriorly and posteriorly, striae 4–6 very shallow but traceable, stria 5, on average, more reduced. All striae without distinct punctures. Inner interspaces subconvex, the outers flat; interspace 2 more than twice as wide as interspace 1. Apical striole rather short, slightly curved, interrupted anteriorly at level behind umbilicate pore 7. Parascutellar setiferous pore present, parascutellar striole rather long. 5–6 (rarely 7) discal setiferous pores on each elytron attached mostly to stria 3. Preapical pore located in the apical cross of striae 2 and 3,

markedly behind the anterior termination of the apical striole. Angulo-apical pore located approximately in the middle between the exterior pore and elytral suture; apical triangle slightly elongate. Umbilicate series well-aggregated: divided into three compact groups and arranged in one regular row attached to the lateral groove of elytra.

Figs 25–29. *Kozlovites amplipennis* sp. n., paratypes, Fugong (25, 26) and Weideng (27–29). Male genitalia, lateral view (25–28) and dorsal view (29).

Microsculpture well developed, distibguishable (at 56x magnification) throughout all the upper-side, including the disc of the pronotum; consisting of transverse meshes and transverse lines on the elytra and pronotum, subisodiametric sculpticells on the occiput. All dorsum finely micropunctured. Elytral surface mat, with tree-like wrinkle pattern and faint irridescence.

Visible abdominal sternites 3–5 with 5–8 small setae arranged in a transverse row; anal sternite bisetose in male, quadrisetose in female (inner pair of setae much shorter).

Fig. 30. Distribution of *Kozlovites* species. Black circle – *K. caviceps* Jeann.; white circle – *K. yuae zogangensis* Deuve. For more detailed map see Fig. 31.

Fortibiae rather stout, clearly broadened towards apex, grooved externally, densely pubescent on their distal anterior surface. Male protarsi with two basal segments dilated and each provided with a strong and thick inner tooth bearing ventrally adhesive setae; segment 1 distinctly transverse, segment 2 very strongly transverse.

Median lobe of the aedeagus (Figs 25–29) rather large, its ventral margin slightly and evenly bent, apical portion long, apical hook very large. In dorsal view, the aedeagal tube gradually attenuating towards apex which is very narrowly rounded. Sagittal aileron small; basal orifice emarginate. Endophallus armature consisting of two plates pointed distally. Parameres with rather thin apical portions and weak ventral apophyses, better developed on the right paramere; each paramere bearing 4 apical setae.

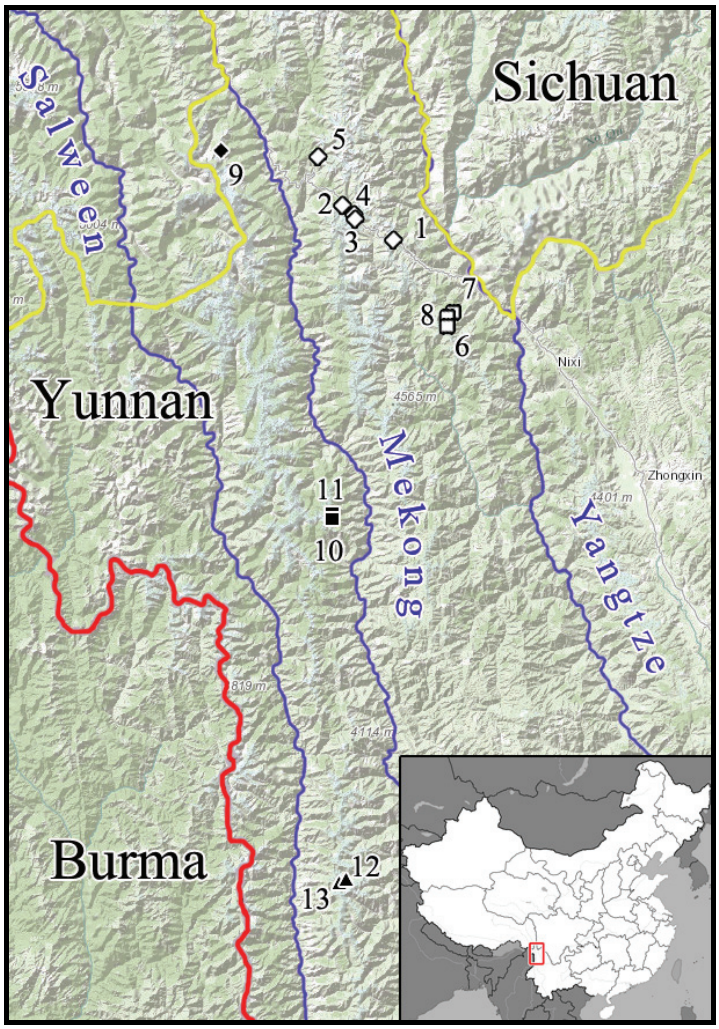


Fig. 31. Distribution of *Kozlovites* species. Black rhomb – *K. yuae* Deuve; white rhomb – *K. major* sp. n.; white square – *K. modestus* sp. n.; black square – *K. niger* sp. n.; black triangle – *K. amplipennis* sp. n.

SEXUAL DIMORPHISM**.** Males differ in having larger body size (on average, 4.3 mm vs. 4.0 mm in females, p≤0.05) and smaller head (PW/HW, on average, 1.24 vs. 1.21 in females, p≤0.05).

COMPARISION. *K. amplipennis* **sp. n.** differs readily from other congeners of the *yuae* species group in having larger elytra, smaller head with less convex tempora and well-developed microsculpture on the pronotal disc.

This species differs from *K. yuae* in the following morphometric characters which do not overlap (see Table 1): pronotum proportionally larger (EL/PL, EW/PW and PW/HW), eyes larger (longer than both tempora and antennomere 3), anterior lateral pore of the pronotum removed further from anterior margin (PSa).

K. amplipennis **sp. n.** differs from *K. niger* **sp. n.** as follows (see Table 1): body larger (p≤0.001, both U-test and *t*-test) and less convex (EL/BH, p≤0.01, *t*-test); antennae shorter (AL/EL and L3/W3, p≤0.001, both U-test and *t*-test); elytra longer (EL/EW, p≤0.001, both U-test and *t*-test; EL/PL, p≤0.001, *t*-test); head proportionally smaller (PW/HW and EW/HW, p≤0.001, *t*-test; PA/PB p≤0.05, both tests); pronotum narrower (PW/PL p≤0.01, both U-test and *t*-test; EW/PW, p≤0.01, *t*-test); umbilicate pores 1 and 2 removed further from the elytral base (U1 and U2 p≤0.001, *t*-test).

DISTRIBUTION. So far as is known, there is the southernmost member of the genus. It was found in the watershed of the Nu Jiang (Salween) and Lancang Jiang (Mekong) rivers between Fugong and Weideng cities, Western Yunnan, China (Fig. 31, black triangle).

BIONOMICS. The species was collected in the alpine zone near melting snow at elevations of 3725–4150 m.

Key to species of the genus *Kozlovites*

1. Large-sized species, body length (without mandibles) more than 5 mm, antennae longer than elytra. Maximum head width at eye level. Parietal impression well-developed. Segment 1 of male protarsi elongate. Median lobe of aedeagus more evenly and strongly curved in the proximal third, its apical portion not attenuated in dorsal view; parameres with broader apical portions (Figs 3–8, 10–16). Mountains east of the Mekong River. (*caviceps* species group) 2
– Body length (without mandibles) less than 4.5 mm, antennae shorter than elytra. Head across tempora, at least, as wide as across eyes. Parietal impression indistinct. Segment 1 of male protarsi clearly transverse. Median lobe of aedeagus less strongly curved in the proximal third, its apical portion more or less attenuated in dorsal view; parameres with narrower apical portions (Figs19–23, 25–29). Mountains west of the Mekong River. (*yuae* species group) 4
2. Body elongate (Fig. 1), pronotum only slightly wider than long (PW/PL = 1.09), its lateral groove very narrow anteriorly, faint posteriorly, lateral border nearly reduced before hind angles which are very small, with blunt apices. Color amber testaceous. 6–7 setiferous pores in stria 3 (including the preapical one) on each elytron. Qinghai: Za Qu River ..... ***K. caviceps***

– Body wider (Figs. 2, 9), pronotum markedly transverse (PW/PL more than 1.17), its lateral groove rather wide throughout all of its length, lateral border well-developed, hind angles rather large, pointed apically. Color pitchy blackish. On average 8–10 setiferous pores in stria 3 (including the preapical one) on each elytron 3

3. Anterior angles of pronotum protruding anteriad, on average, 8 discal setae on each elytron. Apical hook of the median lobe of the aedeagus smaller (Figs 10, 12, 14, 16). Yunnan: mountains between the Mekong and Yangtze rivers .... ***K. modestus* sp. n.**

– Anterior angles of pronotum effaced (very seldom slightly salient), on average, 9–10 discal setae on each elytron. Apical hook of the median lobe of the aedeagus larger (Figs 3, 5, 7). Yunnan: mountains between the Mekong and Yangtze rivers ..... ***K. major* sp. n.**

4. Pronotal disc with distinct microsculpture, its surface mat. Elytra proportionally larger, head smaller, tempora less convex (Fig. 24). Yunnan: interfluve of the Salween and Mekong rivers between Fugong and Weideng cities .... ***K. amplipennis* sp. n.**

– Pronotal disc without distinct microsculpture, its surface mirror-like, shining. Elytra proportionally smaller, discoid, head very large, tempora extremely convex (Figs 17, 18) 5

5. Color yellowish brown (Fig. 17), tempora longer than eyes (YL/TL = 0.93). Aedeagus (Fig. 19). Yunnan: Meili Xue Shan (ssp. *yuae*), Xizang: Tuntala Shan (ssp. *zogangensis* Deuve) ..... ***K. yuae***

– Color pitchy blackish (Fig. 18), eyes longer than tempora (YL/TL more than 1.05). Aedeagus (Figs 20–23). Yunnan: right bank of the Lancang Jiang (Mekong) River, eastern slopes of Mount Nianjua ..... ***K. niger* sp. n.**

Genus *Uenoites* Belousov et Kabak, gen. n.

Type species: *Deuveotrechus yinae* Uéno, 1996, here designated.

DIAGNOSIS. Three (very seldom) and more discal setiferous pores on each elytron, the preapical setiferous pore present, located in the apical cross of stria 2 and 3, normally behind the anterior end of the apical recurrent striole. Visible abdominal sternites 3–5 without regular transverse row of setae. Pronotal hind angles ranging from simple, subrectangular to digitiform (as in most members of *Queinnectrechus*), lateral border of the pronotum entire or reduced in its posterior portion. Median lobe of the aedeagus without large apical hook, endophallus armature usually poorly sclerotized, without two long stylus-like copulatory pieces projecting through the apical orifice.

COMPARISION. Although this genus is based on the species previously classified in the genus *Kozlovites*, in fact, it is much closer to *Queinnectrechus* Deuve, 1992 and *Dactylotrechus* Belousov et Kabak 2003, differing from the former largely in the

presence of the preapical pore; from the latter – in the absence of the additional anterior lateral setae of the pronotum and additional setiferous pores on the elytra other than those in stria 3.

ETYMOLOGY. It is a great pleasure for us to name this genus after Dr. S.-I. Uéno (Tokyo), famous entomologist, who was the first to recognize this group.

NOTES. As it was indicated above, the first member of the *Kozlovites*-lineage, *K. caviceps*, was described by R. Jeannel in 1935. Two years later, the same author described *Stevensius gregoryi* Jeannel, 1937, from the Kari Pass in northwestern Yunnan. In the original description, R. Jeannel noticed certain affinities of the new species with *K. caviceps* and supposed its intermediate position between *Stevensius* from Himalaya and *Kozlovites* from Tibet (Jeannel, 1937). In 1992, T. Deuve described the second species of *Kozlovites*, *K. yuae* (Deuve, 1992a), and one new genus, *Queinnectrechus* Deuve, 1992 (Deuve, 1992b) which later was considered to be related to the lineage *Kozlovites* (Uéno, 1995). Three years later, S.-I. Uéno erected one more genus, *Deuveotrechus* Uéno, 1995, to include *S. gregoryi* and *K. yuae* with the latter as the type species. As it has been shown above, *K. yuae* must be classified in the genus *Kozlovites* and, consequently, the genus *Deuveotrechus* is a junior subjective synonym of the genus *Kozlovites*.

One year after the establishment of the genus *Deuveotrechus,* S.-I. Uéno described one more species of the genus, *D. yinae* Uéno, 1996. This species turned out to be quite distinct from *K. yuae* in some important characters including the structure of the male genitalia. These differences led S.-I. Ueno to suppose that the above two taxa belong actually to two different genera. He, however, refrained from describing a new genus for some reasons, especially in view of uncertain taxonomic position of *K. caviceps* and *Deuveotrechus gregoryi* (males were unknown for both taxa). Now, after the taxonomic position of these two taxa has been clarified due to several thousand specimens available for study, we agree with S.-I. Uéno that *K. yuae*, on one side, and *Deuveotrechus yinae* and *D. gregoryi*, on the other, represent two distinct, though closely related taxa of generic level.

In the present paper, we describe the genus *Uenoites* gen. n. to accommodate the two above species as well as some other species listed below.

An in-depth analysis of this genus will be made in a separate publication which is currently under preparation. For the moment, we know dozens of species to be included in the genus, most of which are still not described. These species show a rather high degree of morphological variation and specific patterns of its distribution across diverse species groups. All these data should be taken into account to prepare a comprehensive description and complete diagnosis of the genus. Thus, in this paper, we restrict the discussion to major diagnostic features and general understanding of its taxonomic position.

COMPOSITION. Defined as above, the genus comprises the following described species: *Uenoites gregoryi* (Jeannel, 1937), **comb. n.**, *U. yinae* (Uéno, 1996), **comb. n.**, *U. grebennikovi* (Deuve, 2011), **comb. n.** and *U. jiuhecola* (Deuve et Kavanaugh, 2015), **comb. n.** The latter species was described in the genus *Queinnectrechus*

(Deuve et al., 2015) but the presence of the elytral preapical pore, shape of tempora and poorly sclerotized endophallus armature indicate clearly that this species should be classified in the genus *Uenoites* gen. n.

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