

New species of the genus *Cymindis* Latreille, 1806 (Coleoptera: Carabidae: Lebiini) from Qinghai, southern China

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A new species *Cymindis (Tarsostinus) liangi* sp. n. from a steppe zone of mountains of Qinghai Province is described. The new species is similar to *C. binotata* Fisch., 1820.

Key words: Coleoptera, Carabidae, Lebiini, *Cymindis liangi* sp. n., Qinghai Province, China.

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INTRODUCTION

The ground beetles of a subgenus *Tarsostinus* Motschulsky, 1864 are mass species of a genus *Cymindis*, customary for arid landscapes of Europe and central Asia. The subgenus consists hardly determinable species (Kryzhanovskij, 1983). There is a lot of intraspecific variability between all *Tarsostinus* species. The systematic review of species of this group is given in the article of Emetz and Kryzhanovskij (1973).

The critical analysis made by the Author on the basis of a collection data from the Institute of Zoology of the Chinese Academy of Sciences, Pekin, China enabled for determination of new species of the subgenus *Tarsostinus*. The present article gives the characteristic of the new taxon.

In the description of morphological characteristics: sizes of beetle body parts and their proportions, the following abbreviations are used: HL – length of the head from forward edge of clypeus up to back edge of temples; HW – width of the

head together with eyes; PA – width of forward edge pronotum; PW – maximum width of pronotum; PB – width of the basis pronotum; PL (t) – maximum length of pronotum; PL (m) – length of pronotum along median line; EW – maximum width of elytra; EL – length of elytra from shoulder up to top; L (s) = HL + PL (t) + EL; L – total length of the body (from top mandibles up to top elytra); \bar{G} – mean.

DESCRIPTION

Cymindis (Tarsostinus) liangi Sundukov, sp. nov.

Type material. Holotype: 1 male, "China, Qinghai, Hoh Xil, Yushu Pref., Wu-xuefeng (mount. peak), about 35°8'N 91°7'E, 4900 m, 5.08.1990, Zhang Xuezhong leg." (IZP). Paratypes: 1 male and 2 female were collected together with holotype. The holotype and 1 paratype are deposited in the collection of the Institute of Zoology, Chinese Academy of Sciences, Pekin, China and 2 paratypes are deposited in the collection of the author.

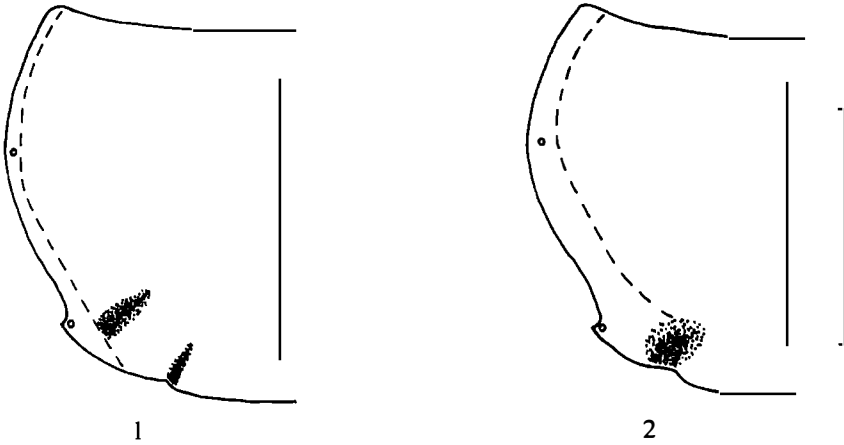


Fig. 1–2 – Pronotum of *Cymindis (Tarsostinus) liangi* sp. n., holotype from Wu-xuefeng Mt., 4900 m, Yushu Prefecture, Qinghai Province, Southern China. (1) and *C. (T.) binotata* Fisch., 1820 from Baingoin, 4800 m, Tibet, China (2). Scale = 1 mm

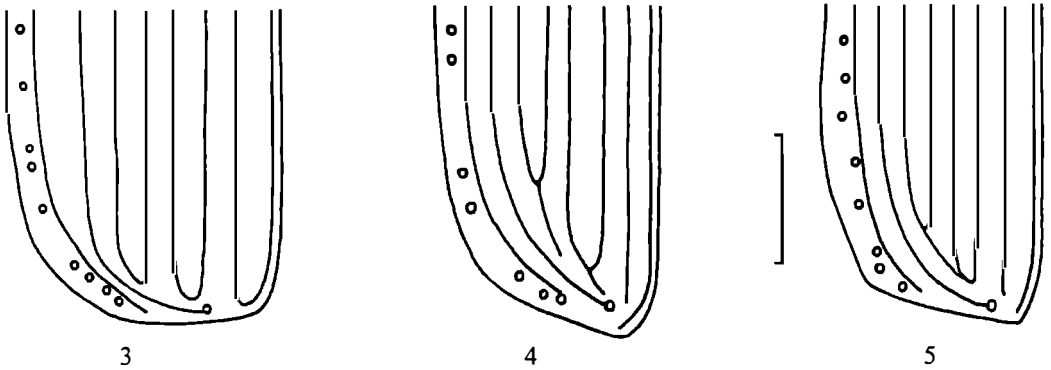


Fig. 3–5 – Apex of elytra of *Cymindis (Tarsostinus) liangi* sp. n., holotype from Wu-xuefeng Mt., 4900 m, Yushu Prefecture, Qinghai Province, Southern China (3), *C. (T.) binotata* Fisch., 1820 from Relong, 4700 m, Gyangze, Tibet, China (4) and *C. (T.) binotata* Fisch., 1820 from Baingoin, 4800 m, Tibet, China (5). Scale = 1 mm.

Type locality. Wu-xuefeng Mt., Yushu Prefecture, Qinghai Province, Southern China.

Description. Body moderately convex. Dorsal side distinctly pubescent-punctate. Pubescence on body rather short, yellowish.

Color. Head, pronotum, lateral margins, basal part

and seam of elytra reddish brown, elytra dark brown. Antennae and labial palpi more light, red brown. Legs from red brown to darkly brown. Elytra usually with shoulder stripes which occupy 5–6 intervals and poorly contrasting with general background color. Sometimes elytra without shoulder stripes, monochrome.

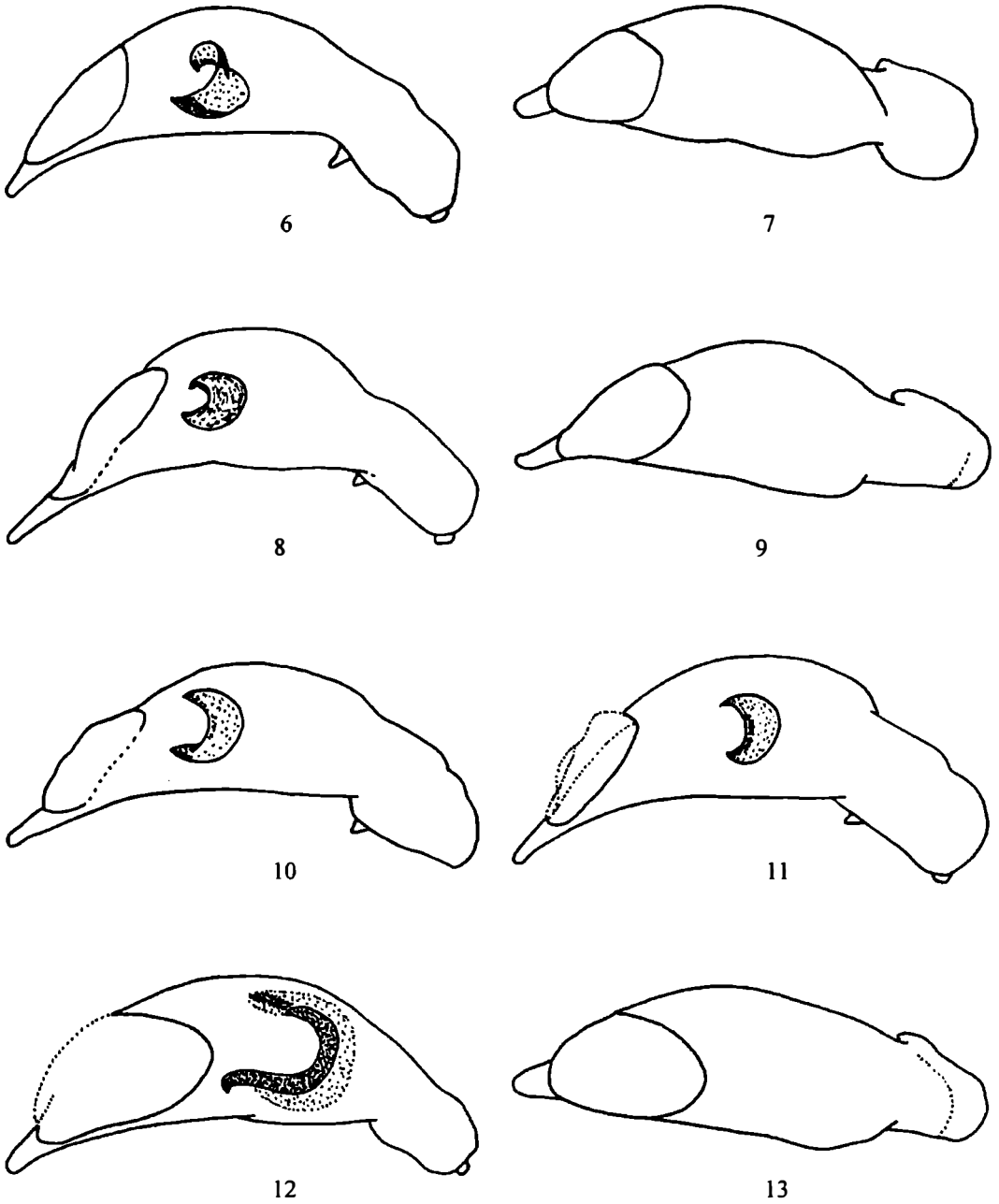


Fig. 6–13 – Penis of *Cymindis (Tarsostinus) liangi* sp. n., holotype from Wu-xuefeng Mt., 4900 m, Yushu Prefecture, Qinghai Province, Southern China (6, 7), *C. (T.) binotata* Fisch., 1820 (8, 9 – Baingoin, 4800 m, Tibet, China; 10 – Relong, 4700 m, Gyangze, Tibet, China; 11 – Mondy, 1250–1285 m, Tunkinsky Mts., Buryatiya, Russia) and *C. (T.) equestris* Gebler, 1825 (12, 13 – Dund Gol, Southern Gobi aimak, Mongolia). 6, 8, 10, 11, 12 – lateral aspect; 7, 9, 13 – dorsal aspect. Scale = 1 mm.

Microsculpture. Head and pronotum of both sexes without microsculpture, shiny. Elytra without microsculpture in male and with distinctly isodiametric meshes in female.

Standard sizes (in mms): HW 1.68–1.93 (M 1.83); HL 1.28–1.53 (M 1.39); PA 1.53–1.78 (M 1.68); PW 2.15–2.40 (M 2.30); PB 1.55–1.80 (M 1.68); PL(t) 1.63–1.93 (M 1.76); PL(m) 1.53–1.75 (M 1.62); EW 3.10–3.73 (M 3.39); EL 4.20–5.25 (M 4.75); Ls 7.11–8.71 (M 7.88); L = 7.4–9.2.

Head. Rather large, convex, width with eyes 1.31–1.38 times greater than length. Eyes of normal size, moderately convex. Two supraorbital setiferous pores: anterior is located at middle of eye, posterior at level back margin. Temples normal, equal about 0.7–0.9 diameter of eyes. Dorsal side densely and rather large punctated on occipital part and on sides (interspaces of punctures approximately equal diameter of punctures) and sparsely, consisting from more small points, on middle and on frons. Lateral areas of frons faintly longitudinally rugose. Apical segment of labial palpi very slightly dilated on top at male, not dilated, cylindrical on female, 1.0–1.1 times longer than preceding segment. Frontal impressions short, distinct. Antennae moderately long (reaching basal 1/3 of elytra or little more short). Basal of first segment 1.21–1.22 (M 1.22) times longer than 3-rd and 1.13–1.17 (M 1.15) times thicker than remaining segments.

Pronotum. Moderately convex, slightly cordiform, very transverse (PW/PL (t) = 1.24–1.41 (M 1.31), PW/PL (m) = 1.37–1.47 (M 1.42), wider than head (PW/HW = 1.24–1.28 (M 1.26), maximum width 2/3 from basis. Basis equal to width anterior margin (PB/PA = 0.98–1.01 (M 1.00), base without lobe, widely rounded. Anterior margin uniformly poorly emarginated. Apical angles widely rounded. Hind angles very small, slightly protruding, obtuse, their tops pointed. Lateral margins rounded up to hind angles uniform, before hind angles very shortly concave. Lateral explanate parts narrowly impressed and moderately bent off. Median line fine, distinct. Disk moderately convex. Two lateral pores on either side, situated at hind angles

and at maximum width. Surface sparsely punctate more or less uniform, puncture about same size as on head, interspaces of punctures usually bigger than punctures.

Elytra. Rather short, moderately wide, almost oval (EL/EW = 1.33–1.48 (M 1.40), EL/PL(t) = 2.58–2.91 (M 2.70), EW/PW = 1.38–1.55 (M 1.47), moderately convex, widest at 3/4 from basis. Shoulders protruding, rounded. Apex rectilinearly truncate, outside apical angle vague, widely rounded, inside apical angle also widely rounded. Basal border complete, bent. Scutellum smooth. Striae complete, shallow, shallowly and densely punctate. Intervals flat, densely punctate, punctures small (2–3 out of incorrect lines in each interval). Seam convex. Interval 3 with 3 discal pores: anterior lay at 3-rd stria, mean on middle interval, posterior at 2 stria. Discal pores small, almost as punctures. Scutellar stria short, is located on 1 interval. Basal pore located on top 1 stria. Wings rudimentary.

Legs. Long, slender. Claws comb inside.

Aedeagus (Fig. 6, 7). The form of penis and arms of endophallus corresponds to a constitution of aedeagus in the subgenus. Lamella of penis short, much shorter than for *C. binotata* Fisch., 1820 (Fig. 8–11). The internal scleritis of endophallus has different shape from *C. binotata* and *C. equestris* Gebler, 1825 (Fig. 12, 13).

Ventral side. Episterna of prosternum without punctures, smooth. Anal sternite with 4 setae in both sexes on top. Metacoxae with two setiferous pores (uninternal).

Ventral side more or less monochrome, red- or dark brown. Legs, coxae, trochanters and stomatic organs more light.

Distribution. The species known only from China, western part of Qinghai province.

Diagnosis. The new species is very close to *C. binotata*, but differs from it in the following characteristics: lateral explanate parts of pronotum narrowly impressed (as in *C. equestris*) (Fig. 1,

2), intervals of elytra flat, striae of elytra superficial, apex of elytra rectilinearly cut off, inner side apical angles widely rounded (Fig. 3–5), other constitution of aedeagus of male (Fig. 6–13).

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Probably, the new species is close to *C. championi* Andrewes, 1928 (= *alticola* Andrewes, 1926, nec Casey), which is described from Kumaon and Tibet. But we did not see specimens of species, and the morphological characters indicated by Andrewes (1926, 1932) do not give the data about similarity of these species.

Name derivation. The new species is named in honour of entomologist from China, Liang Hong-bing.

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