

SIX NEW SPECIES OF GNAPTORINA REITTER, 1887  
(COLEOPTERA, TENEBRIONIDAE: BLAPTINI)  
FROM THE TIBET PLATEAU

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Six new species of the tenebrionid genus *Gnaptorina* REITTER, 1887 are described from the Tibet Plateau: *G. pilifera* sp. n., *G. compressa* sp. n., *G. kangmar* sp. n., *G. himalayana* sp. n., *G. globithoracalis* sp. n., and *G. nigra* sp. n.; all of them and three previously described species, *G. brucei* BLAIR, 1923, *G. cordicollis* MEDVEDEV, 1998 and *G. tishkovi* MEDVEDEV, 1998, differ from other *Gnaptorina* species in the absence of hair brushes on plantar surface of male pro- and mesotarsomeres. A key to all 9 species of *Gnaptorina* lacking hair brushes is given.

Key words: Coleoptera, Tenebrionidae, Blaptini, *Gnaptorina*, new species, Tibet Plateau, identification key

## INTRODUCTION

The genus *Gnaptorina* REITTER, 1887 was erected for its type species, *G. felicitana* REITTER, 1887. The main characters separating it from the closely allied genera of the subtribe Gnaptorinina are the following: prosternum in front of procoxae vertical or nearly vertical; female metatibia with inner spur dilated apically, spatulate; upper spur of protibia very large, rounded apically; parameres abruptly narrowing in apical part, with outer margins deeply sinuate. So far, 21 species were described (REITTER 1887, 1889, BLAIR 1923, KOCH 1965, MEDVEDEV 1998, REN & YU 1998, MEDVEDEV 2001, LI & REN 2004). Members of the genus are distributed mainly in higher altitudes of the Tibet Plateau and adjacent areas. All species were described from China, *G. brucei* BLAIR, 1923 is also known from Sikkim and Nepal.

Most of the species of the genus *Gnaptorina* have hair brushes at least on plantar surface of male protarsomeres 1–2 and mesotarsomeres 1. Three species, *G. brucei* BLAIR, 1923, *G. cordicollis* MEDVEDEV, 1998 and *G. tishkovi* MEDVEDEV, 1998 differ from other *Gnaptorina* species in the absence of hair brushes on

plantar surface of male pro- and mesotarsomeres, only protarsomere 1 has a tuft of light setae at the apical margin of the plantar surface. During the identification of the tenebrionid specimens collected from the Tibet Plateau of China in 2002 and 2004 (see also SHI *et al.* 2005), six species lacking hair brush were found, all proved to be new: *G. pilifera* sp. n. from Nang and Lhuntse, *G. compressa* sp. n. from Nyalam, *G. kangmar* sp. n. from Kangmar, *G. himalayana* sp. n. from Lhuntse, *G. globithoracalis* sp. n. from Nagqu, and *G. nigra* sp. n. from Damxung.

Type specimens are deposited in the Museum of Hebei University, Baoding (MHBHU) and in the Hungarian Natural History Museum (HNHM).

**Gnaptorina pilifera** sp. n.  
(Figs 1–12, 73–74, 85)

*Description* – Body, antennae and legs black, shining; dorsal surface covered with short, light setae. Male body length 9.8–11.5 mm, width 5.4–5.8 mm; female body length 10.6–12.4 mm, width 5.6–6.1 mm.

Male (Fig. 73). Anterior margin of clypeus straight. Outer margin of head with obtuse-angled incision above antennal base. Genae parallel-sided before eyes. Eyes slightly protruding beyond outer margin of head. Dorsal surface of head flat, with dense coarse punctures. Antennae, when posteriorly extended, reaching posterior 1/4 of pronotum. Length (width) ratio of 2nd to 11th antennomeres 9 (10): 27(9): 12(9): 11(9): 12(9): 12(10): 12(13): 11(14): 11(15): 18(15).

Pronotum (Fig. 1) transverse, 1.30–1.37 (1.34 on average,  $n = 14$ ) times as wide as long, widest in the middle, 1.88–1.93 (1.90 on average,  $n = 14$ ) times as wide as head. Ratio of pronotal width at anterior margin to its maximum width and width at base ( $n = 14$ ) 0.52: 1.00: 0.76 on average. Outer margins of pronotum arcuately convex, bordered along entire length. Anterior margin sinuate, basal margin straight, both bordered laterally. Anterior angles obtuse, rounded apically; posterior angles weakly obtuse. Pronotal surface between outer margins convex, punctures denser and coarser than those on head, disc with short median depression. Prothoracic hypomeron concave, with longitudinal wrinkles and very sparse granules. Intercostal process of prosternum with shallow median depression, obliquely sloping behind procoxae.

Elytra elongate oval, 1.35–1.43 (1.38 on average,  $n = 14$ ) times as long as wide, widest before the middle, 1.26–1.31 (1.29 on average,  $n = 14$ ) times as wide as pronotum. Epipleural carina visible from above throughout its entire length. Elytral surface between outer side of epipleura and sutural margin convex, with two rows of tubercles, dense granules and sparse irregular tubercles. Epipleural surface smooth, densely covered with wrinkles. Visible abdominal ventrites with punctures and brown setae, 1st to 3rd ventrite with wrinkles.

Legs (Figs 3–5) strong, length (width) ratio of fore, middle, and hind femora 86(24): 92(24): 100(25); that of corresponding tibiae: 65(10): 66(14): 97(16). Fore tibiae with serrate outer margin, shallow preapical incision, and massive upper spur at apical margin longer than 1st protarsomere, lower spur fine and pointed. Only 1st protarsomeres with a tuft of light setae at apical margin of plantar surface. Middle tibiae slightly incurved; hind tibiae straight, gradually widening toward apex. Length (width) ratio of 1st to 4th metatarsomeres 23(7): 11(6): 10(6): 22(5.5).

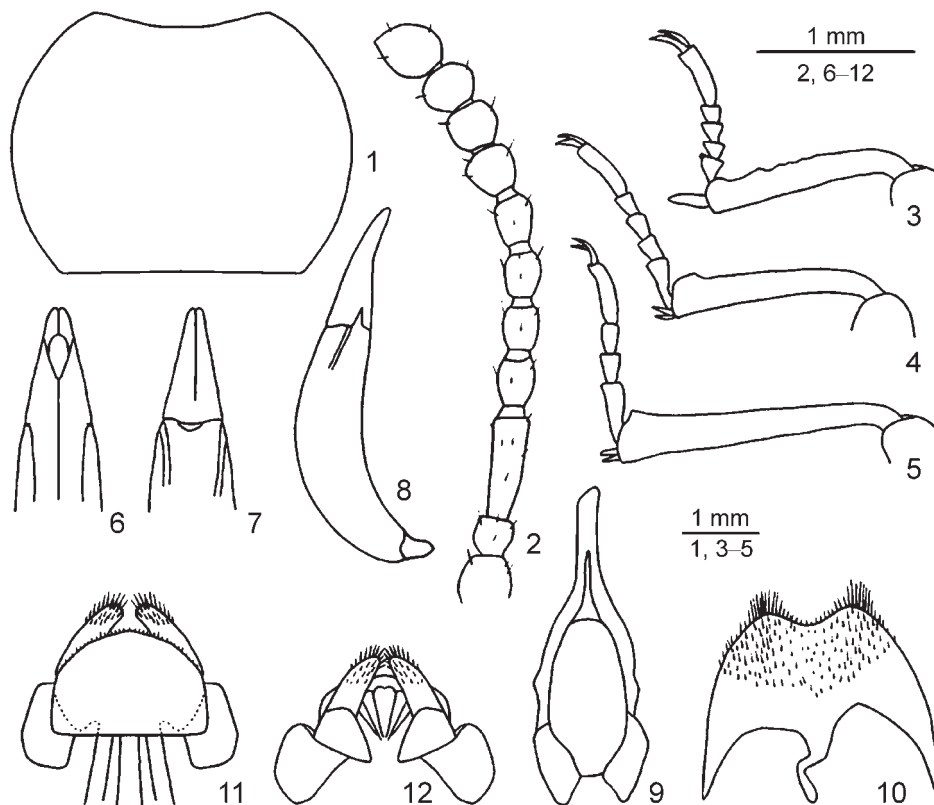
Aedeagus (Figs 6–8): length 2.4 mm, width 0.57 mm. Parameres 0.71 mm long and 0.37 mm wide. Spiculum gastrale as in Fig. 9. Apical margin of abdominal sternite 8 sinuate (Fig. 10).

Female (Fig. 74). Body longer and wider. Epipleural carina visible from above from anterior 1/2 to 2/3. Plantar surface of 1st protarsomeres without tuft of light setae. Ovipositor as in Figs 11–12.

*Type material* – Holotype, male, CHINA: Tibet, Nang, 3200 m, N 29°06', E 93°12', 21 June 2004, Ai-Min Shi and Yi-Bin Ba leg. (MHBUS). First label of the holotype (written with Chinese characters) see Fig. 85. Paratypes: 13 males (1, HNHM, 12, MHBUS) and 9 females (1, HNHM, 8, MHBUS), same data as holotype; 1 female, CHINA: Tibet, Lhuntse, 3900–4100 m, N 28°24', E 92°30', 27 June 2004, Ai-Min Shi and Yi-Bin Ba leg. (MHBUS).

*Etymology* – Named after the dorsal surface of the body covered with short, light setae.

*Diagnosis* – This new species can be distinguished from other species of *Gnaptorina* by the following differences: dorsal surface of body shortly covered



**Figs 1–12.** *Gnaptorina pilifera* sp. n.: 1 = pronotum, 2 = antenna, 3 = fore leg, 4 = middle leg, 5 = hind leg, 6 = apical part of aedeagus in dorsal view, 7 = same, ventral view, 8 = aedeagus in lateral view, 9 = spiculum gastrale, 10 = abdominal sternite 8, 11 = ovipositor in dorsal view, 12 = same, ventral view

with light setae; elytral surface between outer side of epipleura and sutural margin with two rows of tubercles, dense granules and sparse irregular tubercles.

*Distribution* – China: Tibet.

**Gnaptorina compressa** sp. n.  
(Figs 13–24, 75–76, 86)

*Description* – Body black, shining; antennae and legs brownish black. Male body length 9.4–10.7 mm, width 5.0–5.9 mm; female body length 10.0–11.3 mm, width 5.7–6.2 mm.

Male (Fig. 75). Anterior margin of clypeus sinuate. Outer margin of head with obtuse-angled incision above antennal base. Outer genal margin arcuately converging to clypeal base. Eyes slightly protruding beyond outer margin of head. Dorsal surface of head densely covered with well-defined punctures. Antennae, when posteriorly extended, reaching posterior 1/4 of pronotum. Length (width) ratio of 2nd to 11th antennomeres 10 (12): 25(10): 11(10): 11(10): 11(10): 11(10): 11(14): 11(14): 11(14): 16(15).

Pronotum (Fig. 13) transverse, 1.24–1.32 (1.26 on average,  $n = 10$ ) times as wide as long, widest in the middle, 1.72–1.77 (1.74 on average,  $n = 10$ ) times as wide as head. Ratio of pronotal width at anterior margin to its maximum width and width at base ( $n = 10$ ) 0.60: 1.00: 0.87 on average. Outer margins of pronotum distinctly arcuately narrowing to anterior margin in anterior 1/3; in basal half converging to base with almost straight sides, bordered along entire length. Anterior margin straight, bordered laterally; basal margin straight, not bordered. Anterior angles of pronotum nearly rounded; posterior angles almost rectangular. Pronotal surface between outer margins regularly convex, with shallow median depression not reaching anterior margin and base; punctures slightly larger than those on head; a shallow elongate impression on each side of pronotal base; disc sometimes bearing a smooth spot on each side of median depression. Prothoracic hypomeron covered with wrinkles and granules. Middle part of prosternum in front of procoxae sharply concave. Intercostal process of prosternum with wide median depression, steeply sloping behind procoxae.

Elytra oval, 1.26–1.34 (1.30 on average,  $n = 10$ ) times as long as wide, widest before the middle, 1.33–1.40 (1.37 on average,  $n = 10$ ) times as wide as pronotum. Epipleural carina visible from above in anterior 1/3. Elytral surface between outer margin of epipleura and sutural margin weakly convex, with punctures and irregular fine wrinkles. Epipleural surface covered with irregular wrinkles and very sparse granules. Visible abdominal ventrites with punctures and brown setae, 1st to 3rd ventrites with wrinkles.

Legs (Figs 15–17) rather strong, length (width) ratio of fore, middle and hind femora 78(24): 86(23): 100(24); that of corresponding tibiae: 68(10): 66(15): 90(17). Fore tibiae weakly incurved, with massive upper spur at apical margin longer than 1st protarsomere, lower spur missing. Only 1st protarsomere with a tuft of light setae at apical margin of plantar surface. Hind tibiae straight, gradually widening toward apex. Length (width) ratio of 1st to 4th metatarsomeres 21(7.0): 11(6.5): 10(6.5): 23(6.0).

Aedeagus (Figs 18–20): length 2.23 mm, width 0.49 mm. Parameres 0.61 mm long and 0.40 mm wide, with outer margin slightly sinuate. Spiculum gastrale as in Fig. 21. Apical margin of abdominal sternite 8 shallowly sinuate (Fig. 22).

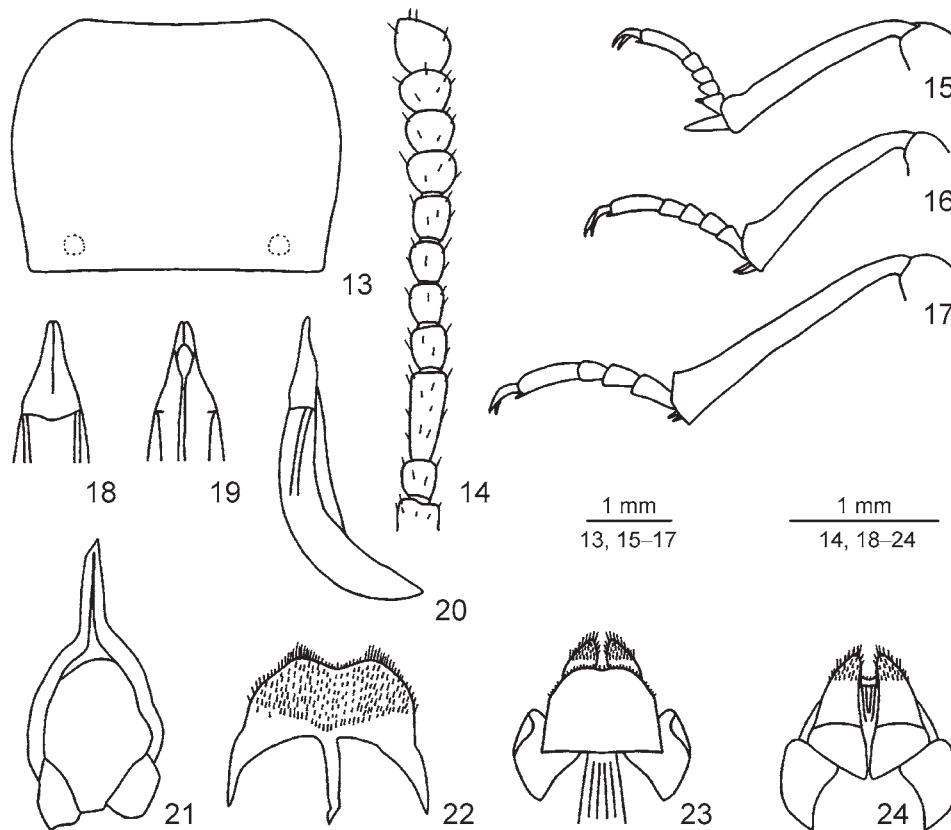
Female (Fig. 76). Body longer and broader. Antennae short, when posteriorly extended, reaching posterior 1/3 of pronotum. Upper spur of fore tibiae massive, gradually widening toward apex,

and apex reaching anterior margin of 3rd protarsomere. Plantar surface of 1st protarsomeres without tuft of light setae. Ovipositor as in Figs 23–24.

*Type material* – Holotype, male, CHINA: Tibet, Nyalam, 3700 m, N 28°12', E 85°54', 5 July 2004, Yi-Bin Ba and Ai-Min Shi leg. (MHBU). First label of the holotype (written with Chinese characters) see Fig. 86. Paratypes: 22 males (1, HNHM, 21, MHBU) and 20 females (1, HNHM, 19, MHBU), same data as holotype.

*Etymology* – Named after sharply concave middle part of prosternum in front of procoxae.

*Diagnosis* – This new species resembles *Gnaptorina brucei* BLAIR, 1923, with the following differences: pronotum transverse, 1.26 times as wide as long;



**Figs 13–24.** *Gnaptorina compressum* sp. n.: 13 = pronotum, 14 = antenna, 15 = fore leg, 16 = middle leg, 17 = hind leg, 18 = apical part of aedeagus in dorsal view, 19 = same, ventral view, 20 = aedeagus in lateral view, 21 = spiculum gastrale, 22 = abdominal sternite 8, 23 = ovipositor in dorsal view, 24 = same, ventral view

middle part of prosternum in front of procoxae sharply concave; elytra widest before the middle; epipleural carina visible from above in anterior 1/3.

*Distribution* – China: Tibet.

**Gnaptorina kangmar** sp. n.  
(Figs 25–36, 77–78, 87)

*Description* – Body black to brownish black, weakly shining. Male body length 8.9–10.5 mm, width 4.5–5.2 mm; female body length 10.2–10.8 mm, width 5.4–5.8 mm.

Male (Fig. 77). Anterior margin of clypeus slightly sinuate to straight. Outer margin of head with weak to very weak obtuse-angled incision above antennal base. Outer genal margin arcuately converging to clypeal base. Eyes not protruding beyond outer margin of head. Dorsal surface of head weakly convex, with moderately strong punctures. Antennae, when posteriorly extended, reaching posterior 1/4 of pronotum. Length (width) ratio of 2nd to 11th antennomeres 9 (9): 21(9): 11(9): 10(9): 11(9): 11(9): 11(13): 10(13): 12(14): 18(14).

Pronotum (Fig. 25) transverse, 1.33–1.37 (1.35 on average,  $n = 9$ ) times as wide as long, widest in the middle, 1.77–1.87 (1.82 on average,  $n = 9$ ) times as wide as head. Ratio of pronotal width at anterior margin to its maximum width and width at base ( $n = 9$ ) 0.58: 1.00: 0.92 on average. Outer margins of pronotum more sharply arcuately converging to anterior margin than to base, bordered along entire length. Anterior and basal margins straight, not bordered. Anterior angles of pronotum obtuse, rounded apically; posterior angles obtuse. Pronotal surface between outer margins regularly convex, punctures as strong as those on head; a very shallow and narrow elongate impression on each side of pronotal base. Prothoracic hypomeron weakly concave, covered with longitudinal wrinkles and very sparse granules. Intercoxal process of prosternum with shallow median depression, steeply sloping behind procoxae.

Elytra oval, 1.35–1.39 (1.37 on average,  $n = 9$ ) times as long as wide, widest before the middle, 1.25–1.35 (1.29 on average,  $n = 9$ ) times as wide as pronotum. Less than basal half of epipleural carina visible from above. Elytral surface between outer margin of epipleura and sutural margin convex, with fine punctures and irregular wrinkles. Epipleural surface smooth, densely covered with fine wrinkles. Visible abdominal ventrites with punctures and brown setae, 1st to 3rd ventrites with longitudinal wrinkles.

Legs (Figs 27–29) strong, length (width) ratio of fore, middle and hind femora 77(23): 85(21): 100(23); that of corresponding tibiae: 64(9): 63(14): 92(17). Fore tibiae with serrate outer margin, shallow preapical incision, and massive upper spur at apical margin longer than 1st protarsomere, lower spur missing. Only 1st protarsomere with a tuft of light setae at apical margin of plantar surface. Hind tibiae weakly incurved, gradually widening toward apex. Length (width) ratio of 1st to 4th metatarsomeres 24(8.0): 11(7): 10(7): 23(6).

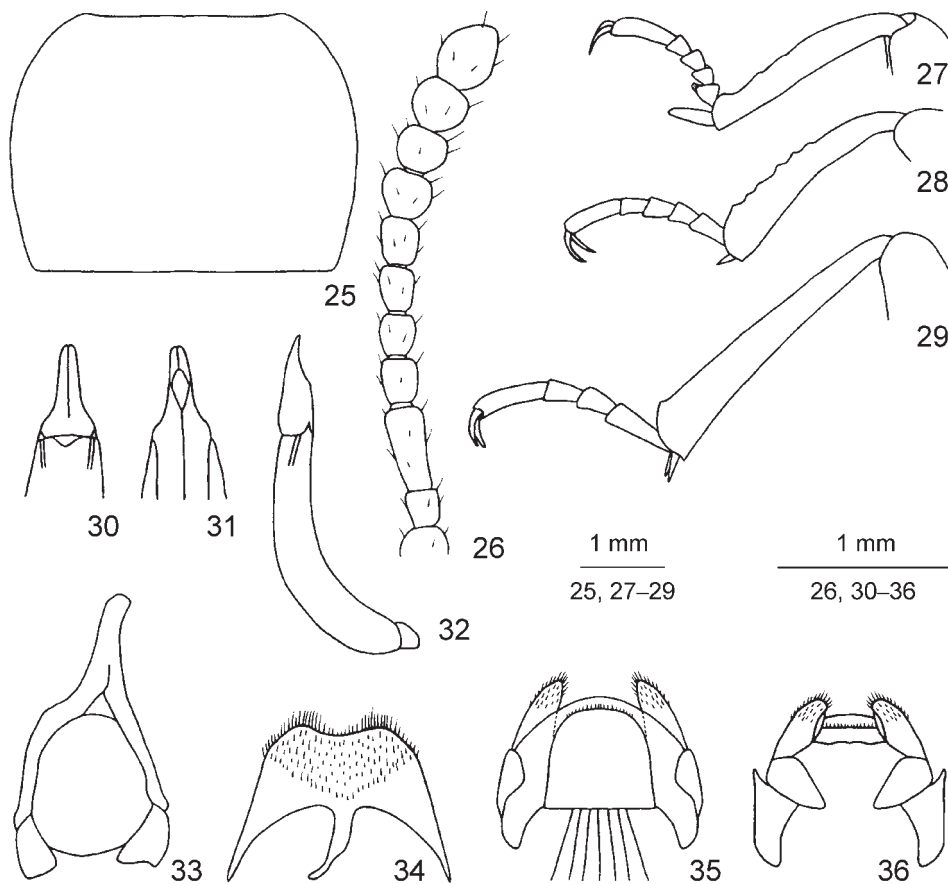
Aedeagus (Figs 30–32): length 2.14 mm, width 0.46 mm. Parameres 0.54 mm long and 0.35 mm wide, with outer margins deeply sinuate, and apical part weakly narrowing toward apex. Spiculum gastrale as in Fig. 33. Apical margin of abdominal sternite 8 shallowly sinuate (Fig. 34).

Female (Fig. 78). Body longer and wider. Antennae shorter and thicker. Epipleural carina visible from above in anterior 1/3 or less. Upper spur of fore tibiae long and wide, and rounded apically. Plantar surface of 1st protarsomeres without tuft of light setae. Ovipositor as in Figs 35–36.

*Type material* – Holotype male, CHINA: Tibet, Kangmar, 4200 m, N 28°36', E 89°42', 2 July 2004, Yi-Bin Ba and Ai-Min Shi leg. (MHBU). First label of the holotype (written with Chinese characters) see Fig. 87. Paratypes: 8 males (1, HNHM, 7, MHBU) and 5 females (1, HNHM, 4, MHBU), same data as holotype.

*Etymology* – Named after the type locality.

*Diagnosis* – This new species resembles *Gnaptorina compressa* sp. n., with the following differences: anterior margin of clypeus slightly sinuate to straight; pronotum with outer margins arcuately narrowing to base in basal half, anterior



**Figs 25–36.** *Gnaptorina kangmar* sp. n.: 25 = pronotum, 26 = antenna, 27 = fore leg, 28 = middle leg, 29 = hind leg, 30 = apical part of aedeagus in dorsal view, 31 = same, ventral view, 32 = aedeagus in lateral view, 33 = spiculum gastrale, 34 = abdominal sternite 8, 35 = ovipositor in dorsal view, 36 = same, ventral view

margin not bordered, posterior angles obtuse, upper surface without smooth spot; middle part of prosternum in front of procoxae not concave; less than basal half of epipleural carina visible from above.

*Distribution* – China: Tibet.

**Gnaptorina himalayana** sp. n.

(Figs 37–48, 79–80, 88)

*Description* – Body black, partially brownish, antennae and legs brownish, weakly shining. Male body length 8.2–8.9 mm, width 4.4–4.8 mm; female body length 9.0–10.3 mm, width 4.8–5.2 mm.

Male (Fig. 79). Anterior margin of clypeus slightly sinuate or straight. Outer margin of head with shallow obtuse-angled incision above base of antennae. Genae parallel-sided before eyes. Eyes not protruding beyond outer margin of head. Dorsal surface of head weakly convex, punctures finer and denser at disc center than laterally. Antennae, when posteriorly extended, reaching beyond posterior 1/4 of pronotum. Length (width) ratio of 2nd to 11th antennomeres 9 (8): 18(9): 10(9): 9(9): 10(9): 11(9): 10(12): 10(12): 11(13): 15(13).

Pronotum (Fig. 37) transverse, 1.30–1.39 (1.36 on average,  $n = 12$ ) times as wide as long, widest in the middle, 1.75–1.84 (1.78 on average,  $n = 12$ ) as wide as head. Ratio of pronotal width at anterior margin to its maximum width and width at base ( $n = 12$ ) 0.62: 1.00: 0.89 on average. Outer margins of pronotum more sharply arcuately narrowing to anterior margin than to base, bordered along entire length. Anterior margin and base straight, not bordered; Anterior angles of pronotum widely obtuse, posterior ones weakly obtuse. Pronotal surface between outer margins regularly convex, without trace of median depression, covered with fine punctures. Prothoracic hypomeron weakly concave, with thick longitudinal wrinkles and very sparse granules. Prosternum steeply sloping before coxae; intercoxal process with wide shallow median depression, obliquely sloping behind procoxae and slightly swelling to apex.

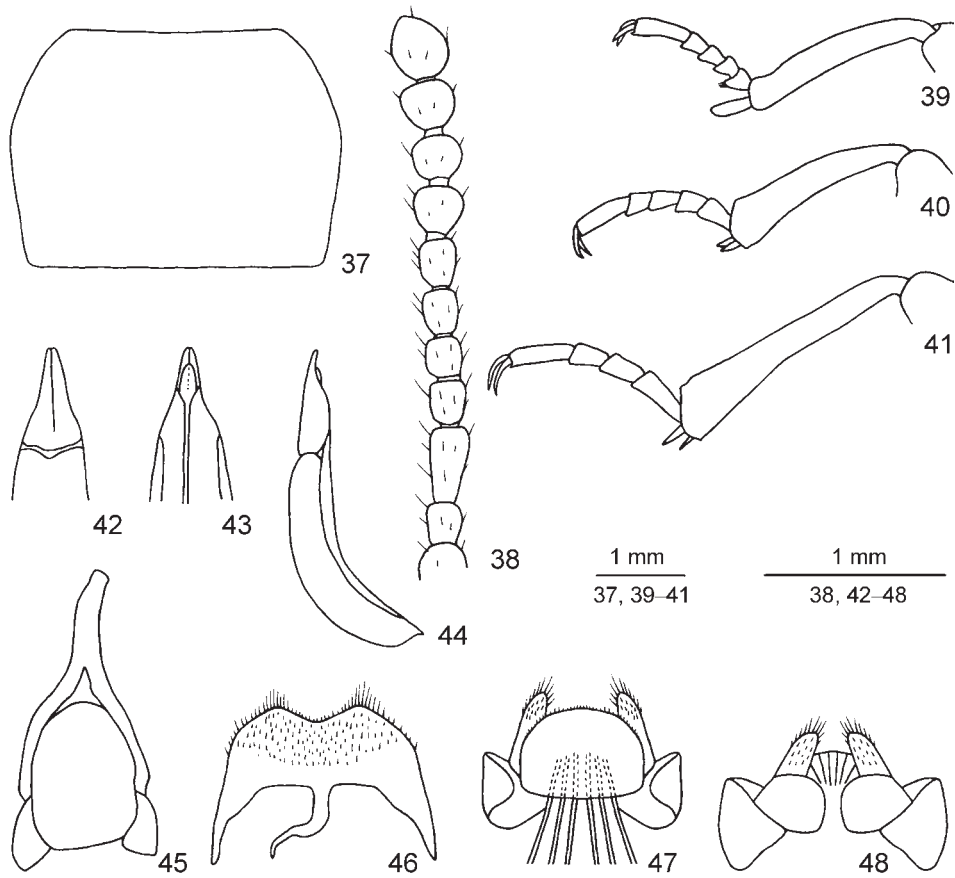
Elytra elongate-oval, 1.37–1.45 (1.43 on average,  $n = 12$ ) times as long as wide, widest immediately before the middle, 1.21–1.27 (1.25 on average,  $n = 12$ ) times as wide as pronotum. More than anterior 2/3 of epipleural carina visible from above, the whole sometimes. Elytral surface with sparse fine punctures and irregular wrinkles. Epipleura surface densely covered with fine wrinkles. Visible abdominal sternites with punctures and brown setae, 1st to 3rd visible abdominal sternite with wrinkles.

Legs (Figs 39–41) rather strong, length (width) ratio of fore, middle and hind femora 80(26): 85(24): 100(25); that of corresponding tibiae: 70(10): 70(15): 92(18). Fore tibiae weakly incurved, with massive upper spur longer than 1st protarsomeres, lower spur missing. Only 1st protarsomeres with a tuft of light setae at apical margin of plantar surface. Middle tibiae distinctly incurved; hind tibiae weakly incurved. Length (width) ratio of 1st to 4th metatarsomeres 24(7.0): 14(6.0): 12(6.0): 21(6.0).

Aedeagus (Figs 42–44): length 1.76 mm, width 0.48 mm. Parameres 0.57 mm long and 0.36 mm wide, with outer margin sinuate. Spiculum gastrale as in Fig. 45. Apical margin of abdominal sternite 8 sinuate (Fig. 46).

Female (Fig. 80). Body longer and wider. Antennae short, when posteriorly extended, reaching posterior 1/3 of pronotum. Upper spur of fore tibiae very large, parallel-side, and rounded apically. Plantar surface of 1st protarsomeres without tuft of light setae. Middle and hind tibiae straight. Ovipositor as in Figs 47–48.





to base in basal half; more than anterior 2/3 (sometimes the whole) of epipleural carina visible from above; elytral surface covered with punctures and wrinkles.

*Distribution* – China: Tibet.

**Gnaptorina globithoracalis** sp. n.  
(Figs 49–60, 81–82, 89)

*Description* – Dorsal surface of head and pronotum black, elytra black or brownish, slightly shining; apices of antennae, tibiae and tarsi somewhat brownish. Male body length 8.5–9.8 mm, width 4.5–4.9 mm; female body length 8.8–9.7 mm, width 4.8–5.3 mm.

Male (Fig. 81). Anterior margin of clypeus weakly sinuate to straight. Outer margin of head with very weak obtuse-angled incision above antennal base. Genae parallel-sided before eyes. Eyes protruding beyond outer margin of head. Dorsal surface of head covered with large, well-defined punctures. Antennae strong and long, when posteriorly extended, reaching pronotal base. Length (width) ratio of 2nd to 11th antennomeres 9 (9): 18(8): 10(8): 11(8): 11(8): 11(9): 11(11): 11(12): 12(13): 16(14).

Pronotum (Fig. 49) transverse, 1.25–1.35 (1.31 on average,  $n = 10$ ) times as wide as long, widest in the middle, 1.69–1.73 (1.72 on average,  $n = 10$ ) times as wide as head. Ratio of pronotal width at anterior margin to its maximum width and width at base ( $n = 10$ ) 0.60: 1.00: 0.91 on average. Outer margins of pronotum more sharply arcuately narrowing to anterior margin than to base, bordered along entire length. Anterior margin shallowly sinuate, basal margin straight, both bordered laterally. Anterior angles of pronotum obtuse, rounded apically; posterior ones nearly rectangular. Pronotal surface between outer margins strongly convex, without well-defined median depression, punctures smaller than those on head. Prothoracic hypomeron with dense longitudinal wrinkles and very sparse granules. Prosternum steeply sloping before coxae; intercoxal process with wide shallow median depression, obliquely sloping behind procoxae and obviously swelling toward apex.

Elytra elongate oval, 1.38–1.48 (1.43 on average,  $n = 10$ ) times as long as wide, widest immediately before the middle, 1.25–1.38 (1.32 on average,  $n = 10$ ) times as wide as pronotum. At least anterior 1/2 (sometimes the whole) of epipleural carina visible from above. Elytral surface between outer margin of epipleura and sutural margin weakly convex, with sparse fine punctation and dense irregular wrinkles. Epipleural surface covered with dense irregular wrinkles and very sparse granules. Apex of epipleura extending to end of elytra. Visible abdominal ventrites with punctures and brown setae, 1st to 3rd ventrites with longitudinal wrinkles.

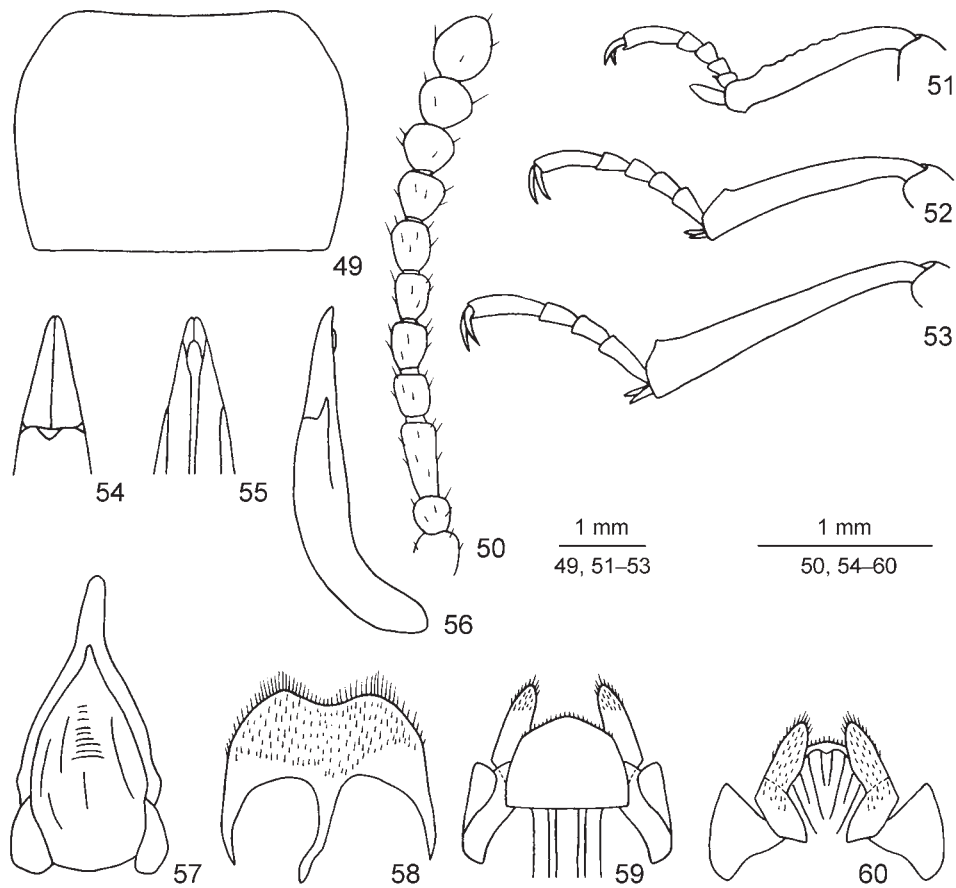
Legs (Figs 51–53) strong, length (width) ratio of fore, middle and hind femora 75(20): 85(20): 100(21); that of corresponding tibiae: 68(9): 70(12): 95(16). Fore tibiae parallel-sided in apical 2/3, with weakly serrate outer margin, and massive upper spur at apical margin longer than 1st protarsomere, lower spur very small. Only 1st protarsomere with a tuft of light setae at apical margin of plantar surface. Hind tibiae straight, gradually widening toward apex. Length (width) ratio of 1st to 4th metatarsomeres 19(7.0): 11(6.3): 10(6.0): 25(6.0).

Aedeagus (Figs 54–56): length 2.2 mm, width 0.64 mm. Parameres 0.64 mm long and 0.38 mm wide, with outer margin linearly narrowing toward apex. Spiculum gastrale as in Fig. 57. Apical margin of abdominal sternite 8 shallowly sinuate (Fig. 58).

Female (Fig. 82). Body wider. Antennae short, when posteriorly extended, reaching posterior 1/4 of pronotum. Upper spur of fore tibiae massive, parallel-sided, and rounded apically, lower spur missing. Plantar surface of 1st protarsomere without tuft of light setae. Ovipositor as in Figs 59–60.

*Type material* – Holotype male, CHINA: Tibet, Nagqu, 4400 m, N 31°30', E 92°06', 6 August 2004, Yi-Bin Ba and Ai-Min Shi leg. (MHBU). First label of the holotype (written with Chinese characters) see Fig. 89. Paratypes: 6 males (1, HNHM, 5, MHBU) and 4 females (1, HNHM, 3, MHBU), same data as holotype; 22 males and 6 females, CHINA: Tibet, Nagqu, 4400–4500 m, 8 July 2002, Yi-Bin Ba and Yang Yu leg. (MHBU).

*Etymology* – Named after the strongly convex pronotal surface between outer margins.



**Figs 49–60.** *Gnaptorina globithoracalis* sp. n.: 49 = pronotum, 50 = antenna, 51 = fore leg, 52 = middle leg, 53 = hind leg, 54 = apical part of aedeagus in dorsal view, 55 = same, ventral view, 56 = aedeagus in lateral view, 57 = spiculum gastrale, 58 = abdominal sternite 8, 59 = ovipositor in dorsal view, 60 = same, ventral view

*Diagnosis* – This new species resembles *Gnaptorina cordicollis* MEDVEDEV, 1998, with the following differences: anterior margin of clypeus weakly sinuate or straight; antennae strong and long, when posteriorly extended, reaching pronotal base; pronotum widest in the middle, outer margins arcuately narrowing to base in basal half, anterior and basal margins bordered laterally; parameres slightly elongate (1.68 times as long as wide), with outer margin narrowing toward apex in straight line.

*Distribution* – China: Tibet.

***Gnaptorina nigra* sp. n.**  
(Figs 61–72, 83–84, 90)

*Description* – Body, antennae and legs black, weakly shining. Male body length 9.0–10.4 mm, width 4.7–5.2 mm; female body length 9.7–11.0 mm, width 5.4–5.7 mm.

Male (Fig. 83). Anterior margin of clypeus straight. Outer margin of head with shallow obtuse-angled incision above base of antennae. Outer genal margin arcuately converging to clypeal base. Eyes protruding beyond outer margin of head. Dorsal surface of head with punctures clear and large. Antennae, when posteriorly extended, reaching posterior 1/4 of pronotum. Length (width) ratio of 2nd to 11th antennomeres 11 (8): 23(9): 9(9): 10(9): 10(9): 11(9): 10(12): 10(12): 11(14): 15(14).

Pronotum (Fig. 61) cordiform, 1.28–1.34 (1.32 on average,  $n = 8$ ) times as wide as long, widest before the middle, 1.85–1.90 (1.88 on average,  $n = 8$ ) times as wide as head. Ratio of pronotal width at anterior margin to its maximum width and width at base ( $n = 8$ ) 0.55: 1.00: 0.82 on average. Outer margins of pronotum more sharply arcuately narrowing to anterior margin than to base, sometimes shallowly sinuate in basal 1/4, bordered along entire length. Anterior margin weakly sinuate, bordered laterally, basal margin straight, not bordered. Anterior angles of pronotum rounded, posterior angles obtuse. Pronotal surface between outer margins convex, with shallow median depression in anterior 3/4; with well-defined punctures slightly smaller than those on head. Prothoracic hypomeron weakly concave, with irregular wrinkles and very sparse granules. Prosternum steeply sloping before coxae, intercoxal process with weak median depression, obliquely sloping behind procoxae.

Elytra elongate-oval, 1.48–1.53 (1.50 on average,  $n = 10$ ) times as long as wide, widest in the middle, 1.26–1.32 (1.30 on average,  $n = 10$ ) times as wide as pronotum. At least anterior 1/2 (sometimes the whole) of epipleural carina visible from above. Elytral surface sparsely covered with shallow punctures and irregular wrinkles. Epipleural surface with irregular wrinkles. Visible abdominal ventrites with punctures and brown setae, 1st to 3rd ventrites with irregular wrinkles.

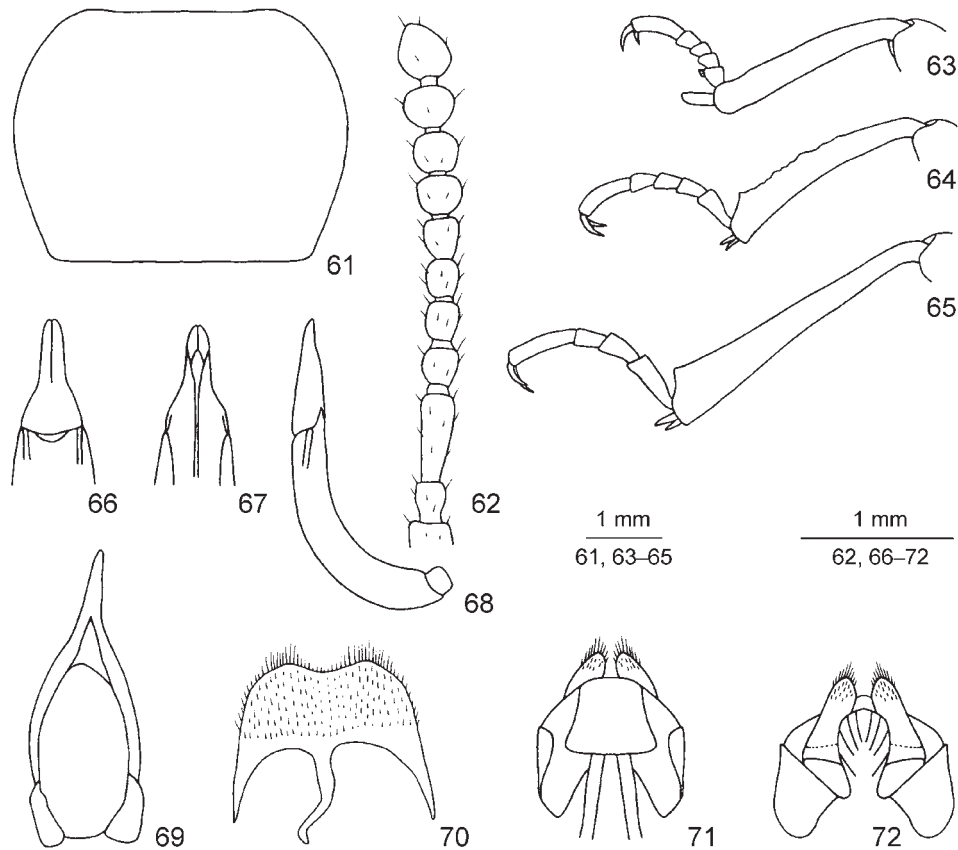
Legs (Figs 63–65) strong, length (width) ratio of fore, middle and hind femora 75(23): 87(21): 100(22); that of corresponding tibiae: 64(10): 68(13): 95(17). Fore tibiae parallel-sided in apical 3/4, with massive upper spur longer than 1st protarsomere, lower spur small. Only 1st protarsomere with a tuft of light setae at apical margin of plantar surface. Hind tibiae straight, gradually widening toward apex. Length (width) ratio of 1st to 4th metatarsomeres 23(6.5): 11(6.0): 10(6.0): 23(6.0).

Aedeagus (Figs 66–68): length 2.34 mm, width 0.57 mm. Parameres 0.72 mm long and 0.41 mm wide, with outer margin sinuate. Spiculum gastrale as in Fig. 69. Apical margin of abdominal sternite 8 shallowly sinuate (Fig. 70).

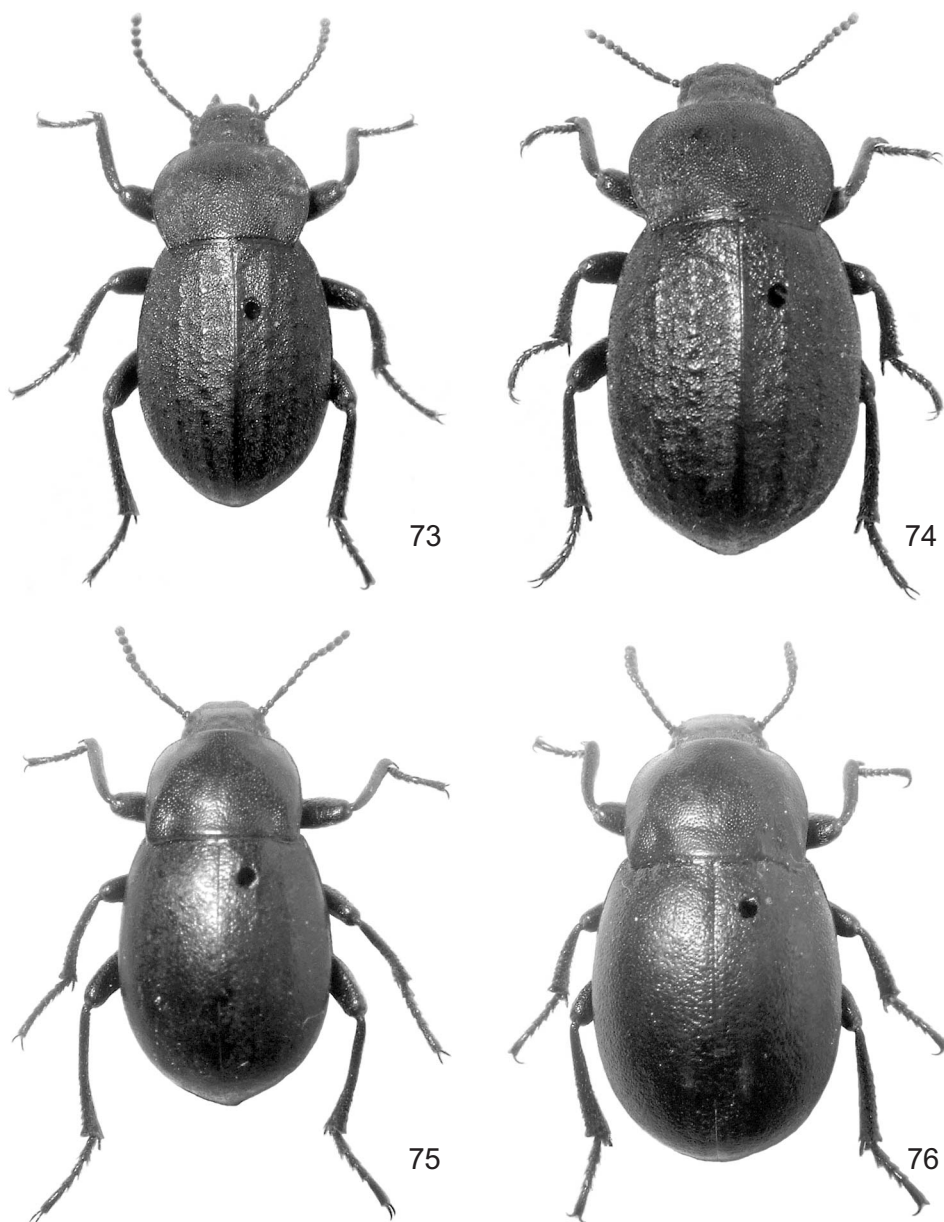
Female (Fig. 84). Body longer and wider. Antennae short, when posteriorly extended, reaching posterior 1/3 of pronotum. Upper spur of fore tibiae very large, regularly widening toward apex. Plantar surface of 1st protarsomere without tuft of light setae. Ovipositor as in Figs 71–72.

*Type material* – Holotype male, CHINA: Tibet, Damxung, Yangbajian, 3700–4100 m, N 31°06', E 90°30', 28 June 2004, Yi-Bin Ba and Ai-Min Shi leg. (MHB). First label of the holotype (written with Chinese characters) see Fig. 90. Paratypes: 19 males (1, HNHM, 18, MHB) and 5 females (1, HNHM, 4, MHB), same data as holotype; 18 males and 21 females, CHINA: Tibet, Damxung, 4000–4300 m, N 30°24', E 91°06', 8 July 2002, Guo-Dong Ren leg. (MHB).

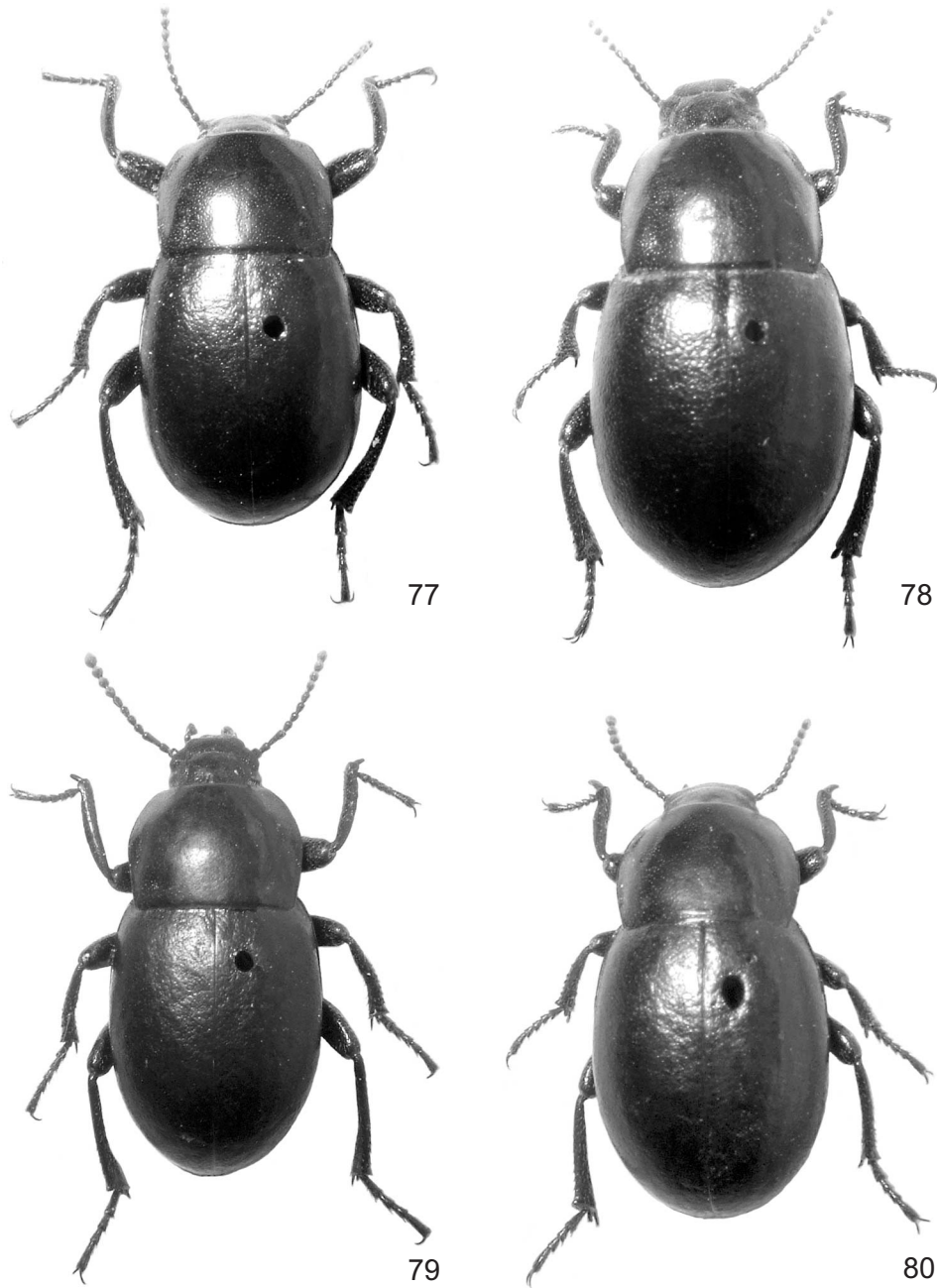
*Etymology* – Named after the black body.



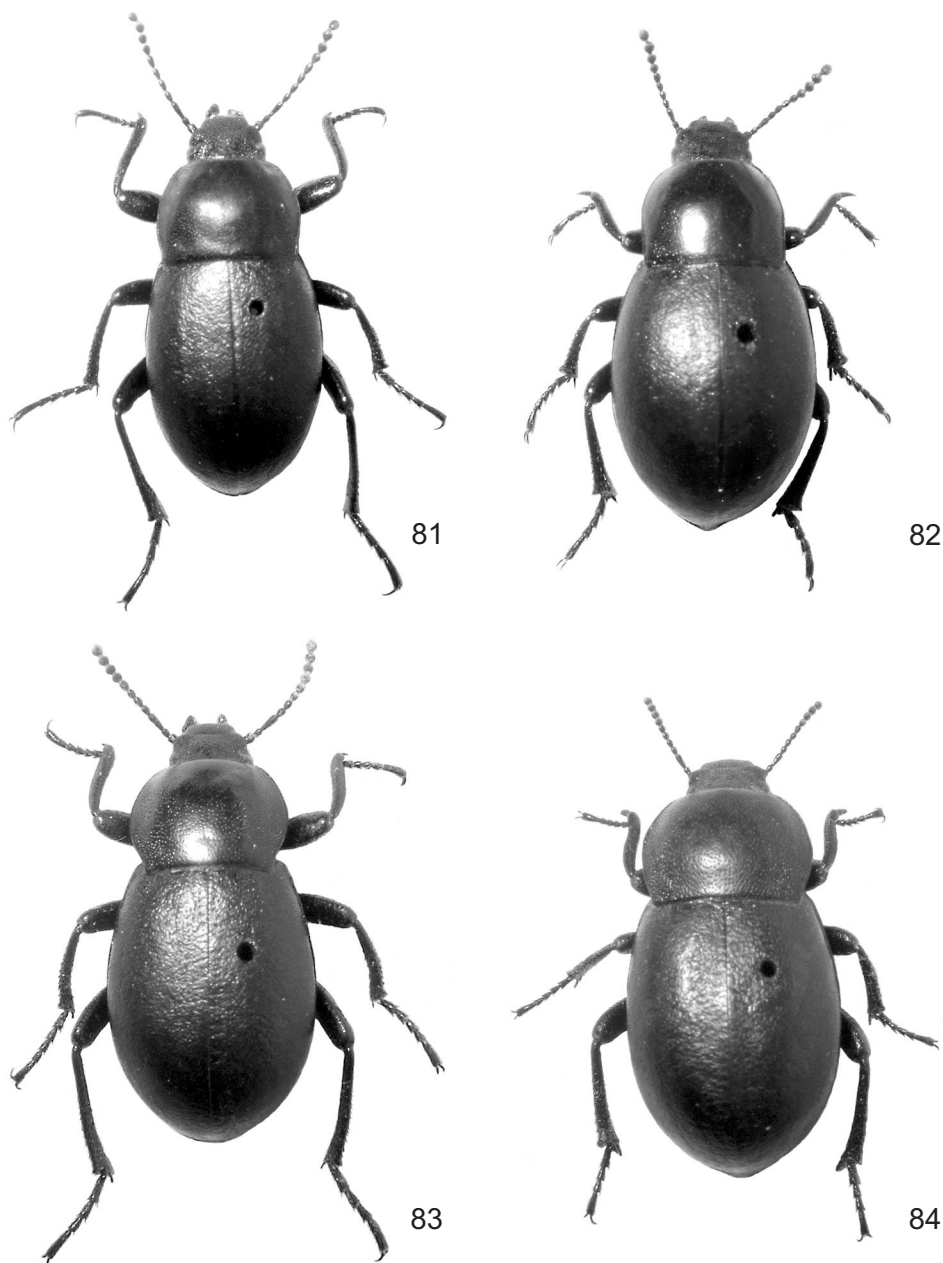
**Figs 61–72.** *Gnaptorina nigra* sp. n.: 61 = pronotum, 62 = antenna, 63 = fore leg, 64 = middle leg, 65 = hind leg, 66 = apical part of aedeagus in dorsal view, 67 = same, ventral view, 68 = aedeagus in lateral view, 69 = spiculum gastrale, 70 = abdominal sternite 8, 71 = ovipositor in dorsal view, 72 = same, ventral view



**Figs 73–76.** 73–74 = *Gnaptorina pilifera* sp. n.: 73 = male, 74 = female. 75–76 = *G. compressa* sp. n.:  
75 = male, 76 = female



**Figs 77–80.** 77–78 = *Gnaptorina kangmar* sp. n.: 77 = male, 78 = female. 79–80 = *G. himalayana* sp. n.: 79 = male, 80 = female

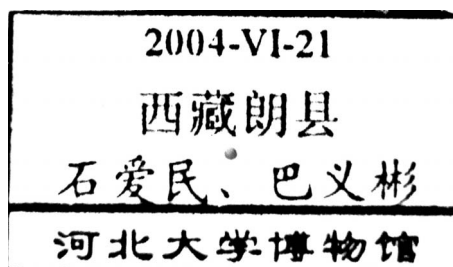


**Figs 81–84.** 81–82 = *Gnaptorina globithoracalis* sp. n.: 81 = male, 82 = female. 83–84 = *G. nigra* sp. n.: 83 = male, 84 = female

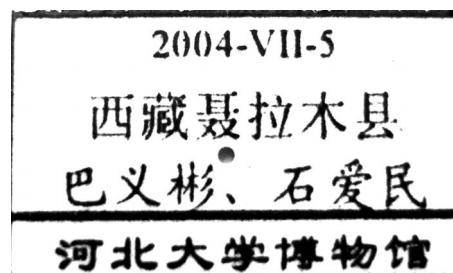


*Diagnosis* – This new species resembles *Gnaptorina globithoracalis* sp. n., with the following differences: outer genal margin arcuately converging to clypeal base; antennae, when posteriorly extended, reaching posterior 1/4 of pronotum; pronotum cordiform, widest before the middle, base not bordered, posterior angles obtuse; parameres with outer margin sinuate.

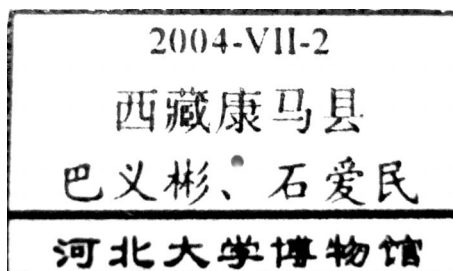
*Distribution* – China: Tibet.



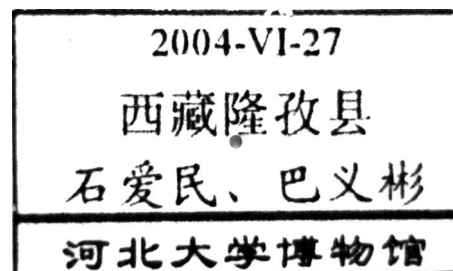
85



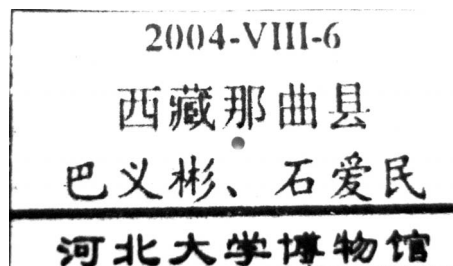
86



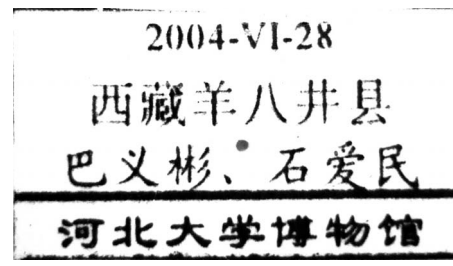
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Figs 85–90. First labels of the holotypes: 85 = *Gnaptorina pilifera* sp. n., 86 = *G. compressa* sp. n., 87 = *G. kangmar* sp. n., 88 = *G. himalayana* sp. n., 89 = *G. globithoracalis* sp. n., 90 = *G. nigra* sp. n.

KEY TO THE SPECIES OF THE GENUS *GNAPTORINA*  
REITTER, 1887 LACKING HAIR BRUSHES

- 1 Elytra widest behind middle 2  
 – Elytra widest in or before middle 3
- 2 Upper surface of head and pronotum with weak punctures. Pronotum transverse, outer margins slightly sinuate in basal 1/3, with very short and shallow median depression at pronotal base. Wrinkles of elytral surface dense and delicate, nearly concealing punctures *G. tishkovi* MEDVEDEV, 1998  
 – Upper surface of head and pronotum with moderately strong punctures. Pronotum subquadrate, outer margins converging to base in straight line, with weak median depression on pronotal surface. Elytral surface without wrinkles and strongly punctate *G. brucei* BLAIR, 1923
- 3 Anterior margin of pronotum sinuate. Elytral surface between outer side of epipleura and sutural margin with 2 rows of tubercles, dense granules and sparse unevenly spaced tubercles. Antennae, when posteriorly extended, reaching posterior 1/4 of pronotum. Pronotum widest in the middle, outer margins arcuately protruding. Epipleural carina visible from above throughout its entire length **G. pilifera** sp. n.  
 – Anterior margin of pronotum weakly sinuate or straight. Elytral surface between outer side of epipleura and sutural margin with punctures and wrinkles, sometimes only with punctures, without carinae, granules and tubercles 4
- 4 Less than basal half of epipleural carina visible from above. Intercoxal process of prosternum steeply sloping behind coxae 5  
 – More than basal half of epipleural carina visible from above. Intercoxal process of prosternum obliquely sloping behind coxae 6
- 5 Anterior margin of clypeus sinuate. Eyes slightly protruding beyond outer margin of head. Pronotum with outer margins converging to base with almost straight sides in basal half, anterior margin bordered laterally, posterior angles almost rectangular, pronotal surface with a shallow elongate impression on each side of pronotal base and a smooth spot on each side of median depression. Middle part of prosternum in front of procoxae sharply concave. Epipleural carina visible from above in anterior 1/3 **G. compressa** sp. n.

- Anterior margin of clypeus slightly sinuate to straight. Eyes not protruding beyond outer margin of head. Pronotum with outer margins arcuately narrowing to base in basal half, anterior margin not bordered, posterior angles obtuse, pronotal surface without smooth spot. Middle part of prosternum in front of procoxae not concave. Less than basal half of epipleural carina visible from above **G. kangmar** sp. n.
- 6 Eyes not protruding beyond outer margin of head. Anterior margin of pronotum straight, not bordered 7
- Eyes protruding beyond outer margin of head. Anterior margin of pronotum shallowly sinuate, bordered laterally 8
- 7 Anterior margin of clypeus sinuate. Pronotum widest before middle, with outer margins shallowly sinuate or narrowing to base with almost straight sides in basal 1/3. Elytra widest in middle. Epipleural carina visible from above in anterior 2/3. Elytral surface with punctures only  
*G. cordicollis* MEDVEDEV, 1998
- Anterior margin of clypeus slightly sinuate to straight. Pronotum widest in middle, with outer margins arcuately narrowing to base in basal half. Elytra widest immediately before middle. More than anterior 2/3 (sometimes the whole) of epipleural carina visible from above. Elytral surface with punctures and wrinkles **G. himalayana** sp. n.
- 8 Genae parallel-sided before eyes. Antennae long, when posteriorly extended, reaching pronotal base. Pronotum not cordiform, widest in middle, base bordered laterally, posterior angles nearly rectangular. Elytra widest immediately before the middle. Parameres with outer margin linearly narrowing toward apex **G. globithoracalis** sp. n.
- Outer genal margin arcuately converging to clypeal base. Antennae short, when posteriorly extended, reaching posterior 1/4 of pronotum. Pronotum cordiform, widest before middle, base not bordered, posterior angles obtuse. Parameres with outer margin sinuate **G. nigra** sp. n.

\*

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