

TWO NEW SPECIES OF PSEUDOGNAPTORINA KASZAB, 1977  
(COLEOPTERA, TENEBRIONIDAE: BLAPTINI)  
FROM THE TIBET PLATEAU

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*Pseudognaptorina exsertogena* sp. n. and *Pseudognaptorina obtusa* sp. n. are described from the Tibet Plateau, China. A key to the species of the genus *Pseudognaptorina* KASZAB, 1977 is given.

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

## INTRODUCTION

The genus *Pseudognaptorina* KASZAB, 1977 was erected for its type species, *P. nepalica* KASZAB, 1977. The main characters differing from its closely allied genera of the tribe Gnaptorinina are the following: tibiae narrow, regularly widening toward apex, outer margins straight, covered with sparse setae and fine hairs, ventral surface of protibiae with large granules, inner margins covered with hairs denser from the middle to apical margin, tarsi slender, plantar surface of male protarsomeres 1 to 3 and at least mesotarsomere 1 with hair brushes, abdominal ventrites of males not concave in the middle. Prior to this study, only the type species was described (KASZAB 1977), which is distributed in Nepal.

During the identification of the tenebrionid specimens collected from the Tibet Plateau of China in 2002 and 2004, two new species of the genus *Pseudognaptorina* were found, which are described below. We follow the current terminology of morphological structures for the tenebrionid beetles (LI & REN 2004, MEDVEDEV 2000, 2001, MEDVEDEV & MERKL 2002).

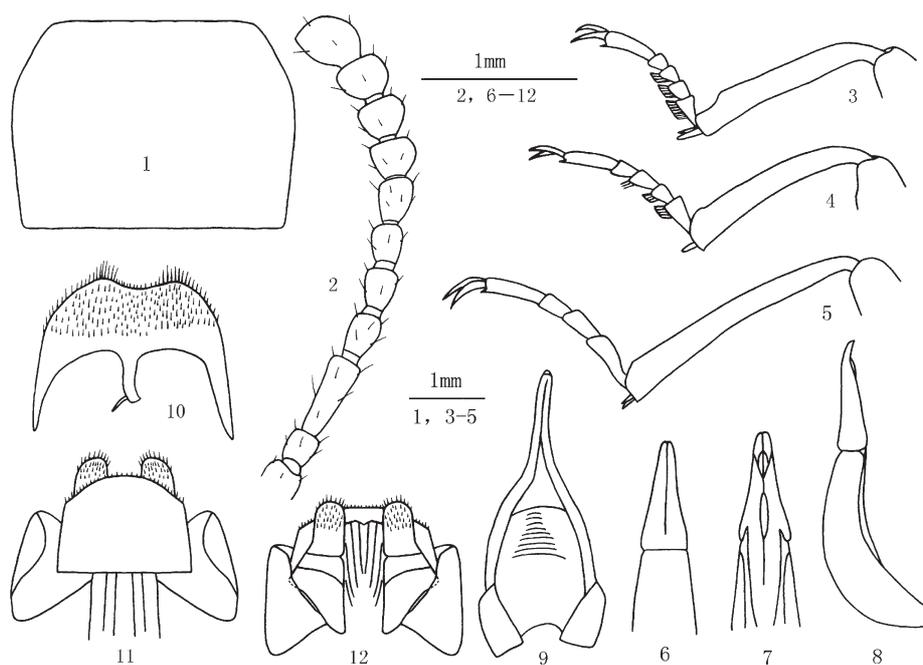
Type specimens are deposited in the Museum of Hebei University, Baoding (MHBUS) and the Hungarian Natural History Museum, Budapest (HNHM).

***Pseudognaptorina exsertogena* sp. n.**  
(Figs 1–12, 25–26, 29)

*Description.* Body black (teneral specimens reddish brown), weakly shining. Male body length 9.6–11.7 mm, width 4.4–5.4 mm; female body length 10.4–12.5 mm, width 5.0–6.1 mm.

Male (Fig. 25). Anterior margin of clypeus straight. Outer margin of head with obtuse-angled incision above antennal base. Genae noticeably convex, parallel sided before eyes. Eyes protruding beyond outer margin of head. Dorsal surface of head weakly convex to flat, covered with moderately large punctures. Frontoclypeal suture fine. Antennae, when posteriorly extended, reaching pronotal base. Length (width) ratio of antennomeres 2 to 11 as follows: 8(8): 22(9): 11(9): 11(9): 10(8): 12(9): 10(12): 10(13): 10(13): 16(13).

Pronotum (Fig. 1) transverse, 1.25–1.32 (1.28, on the average,  $n = 10$ ) times as wide as long, widest behind the middle, 1.67–1.89 (1.76, on the average,  $n = 10$ ) times as wide as head. Ratio of pronotal width at anterior margin to its maximum width and width at base ( $n = 10$ ) 0.64: 1.00: 0.95, on the average. Outer margins of pronotum arcuately narrowing to anterior margin in anterior 1/3; in posterior 1/3 tapering to base with almost straight sides, bordered along entire length. Anterior and basal margins straight, not bordered. Anterior angles of pronotum obtuse, posterior ones almost rect-



**Figs 1–12.** *Pseudognaptorina exsertogena* 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

angular. Pronotal surface between outer margins convex, with fine median depression and moderately large punctures. Prothoracic hypomerion covered with shallow longitudinal wrinkles and granules. Prosternum in front of procoxae oblique to the horizontal plane; intercoxal process of prosternum steeply sloping behind procoxae.

Elytra elongate-oval, 1.45–1.59 (1.53, on the average,  $n = 10$ ) times as long as wide, widest before the middle, 1.34–1.47 (1.44, on the average,  $n = 10$ ) times as wide as pronotum. Epipleural carina visible from above in anterior half and apical 1/5. Elytral surface between outer margin of epipleura and sutural margin weakly convex, sparsely covered with fine punctures and irregular wrinkles. Epipleural surface impunctate, covered with dense wrinkles. Abdominal ventrites covered with punctures and golden setae. Ventrites 1 to 3 covered with wrinkles.

Legs (Figs 3–5) strong, length (width) ratio of pro-, meso-, and metafemora 70(20): 83(19): 100(20); that for corresponding tibiae 71(9): 69(9): 95(12). Upper edge of inner surface of profemur nearly straight. Mesotibiae slightly incurved. Hair brushes present on plantar surface of protarsomeres 1 to 3 and mesotarsomeres 1 and 2. Mesotarsomeres 3 with a bunch of pale hairs. Metatibiae weakly incurved, gradually widening toward apex, length (width) ratio of metatarsomeres 1 to 4 is as follows: 24(6.5): 12(6.3): 11(6.3): 23(6).

Aedeagus (Figs 6–8): length 2.1 mm, width 0.43 mm (when body length 11.6 mm). Parameres strongly elongate, 0.72 mm long, 0.32 mm wide, with outer margins very slightly sinuate. Spiculum gastrale as in Fig. 9. Apical margin of abdominal sternite 8 sinuate (Fig. 10).

Female (Fig. 26.). Body longer and wider. Antennae shorter than in male, not reaching pronotal base when posteriorly extended. Pronotum 1.30–1.39 (1.34, on the average,  $n = 10$ ) times as wide as long, 1.74–1.87 (1.83, on the average,  $n = 10$ ) times as wide as head. Ratio of pronotal width at anterior margin to its maximum width and width at base ( $n = 10$ ) 0.56: 1.00: 0.91, on the average. Elytra more convex than in male, 1.37–1.43 (1.40, on the average,  $n = 10$ ) times as long as wide, 1.33–1.43 (1.36, on the average,  $n = 10$ ) times as wide as pronotum. Lower spur of protibiae small and pointed, upper spur blunt apically, noticeably larger than the lower one, but not particularly enlarged. Apical spurs on metatibiae of female narrow and parallel sided. Plantar surface of tarsal segments without hair brushes or tufts of light setae. Ovipositorial lobes (Figs 11–12) rounded apically, densely covered with setae.

*Type material.* Holotype male, CHINA: Tibet, Damxung county, Yangbajian, 3700–4100 m, N 30°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. 29. Paratypes: 16 males (1, HNHM, 15, MHB) and 24 females (1, HNHM, 15, MHB), same data as holotype; 4 males and 1 female, CHINA: Tibet, Maizhokunggar county, 4100 m, N 29°48' E 91°48', 5 July 2002, Guo-Dong Ren leg. (MHB).

*Etymology.* Named after the noticeably convex genae.

*Diagnosis.* This new species can be distinguished from *Pseudognaptorina nepalica* KASZAB, 1977 by the strongly elongate parameres (2.25 times as long as broad), with outer margins very slightly sinuate, epipleural carina visible from above in anterior half and apical 1/5, hair brushes present on plantar surface of mesotarsomeres 1 and 2.

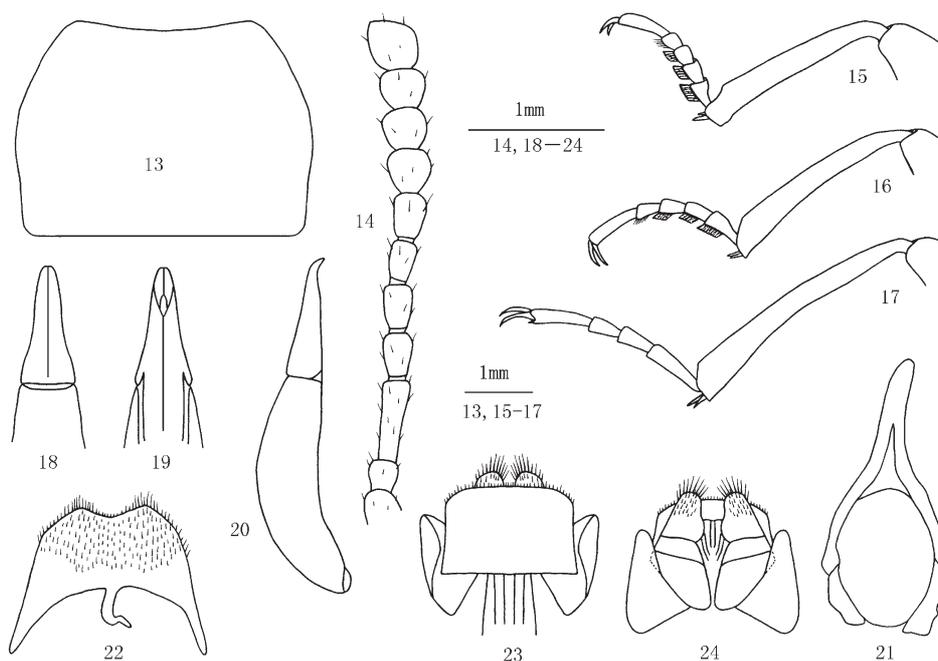
*Distribution.* China: Tibet.

***Pseudognaptorina obtusa* sp. n.**  
(Figs 13–24, 27–28, 30)

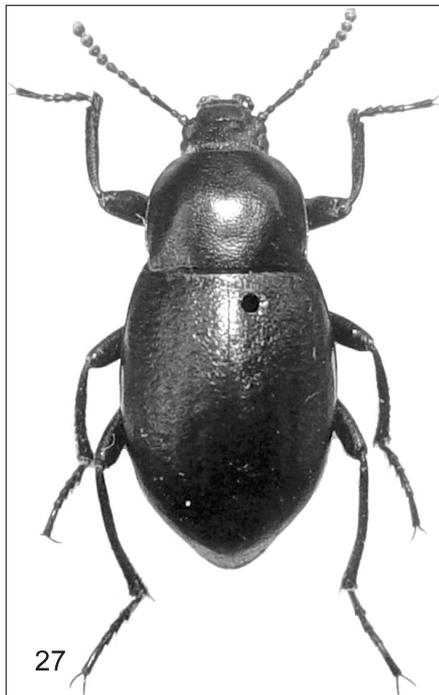
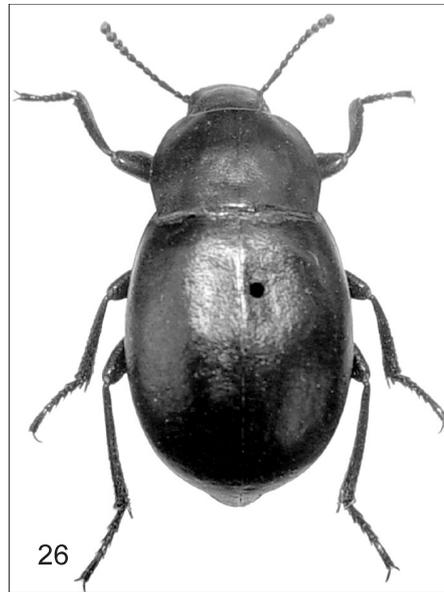
*Description.* Body black, weakly shining; apical segments of antennae and tarsi reddish brown. Male body length 10.2–10.8 mm, width 5.3–5.5 mm; female body length 11.1–11.6 mm, width 6.3–6.4 mm.

Male (Fig. 27). Anterior margin of clypeus straight. Outer margin of head with noticeable obtuse-angled incision above antennal base. Genae slightly convex, parallel sided before eyes. Eyes not protruding beyond outer margin of head. Dorsal surface of head densely covered with fine punctures. Frontoclypeal suture clear. Antennae, when posteriorly extended, reaching pronotal base. Length (width) ratio of antennomeres 2 to 11 as follows: 9(9): 25(9): 13(9): 13(9): 12(8): 14(10): 13(13): 13(14): 12(14): 18(15).

Pronotum (Fig. 13) transverse, 1.31–1.39 times as wide as long, widest behind the middle, 1.84–1.85 times as wide as head. Ratio of pronotal width at anterior margin to its maximum width and width at base ( $n = 2$ ) 0.57: 1.00: 0.91, on the average. Outer margins of pronotum arcuately narrowing to anterior margin; shallowly sinuate in posterior 1/4; bordered along entire length. Anterior margin shallowly arcuately emarginate, bordered only laterally, base straight, not bordered. Anterior angles



**Figs 13–24.** *Pseudognaptorina obtusa* 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



**Figs 25–28.** 25–26 = *Pseudognaptorina obtusa* sp. n.: 25 = male, 26 = female; 27–28 = *P. exsertogena* sp. n.: 27 = male, 28 = female

of pronotum obtuse, rounded apically; posterior ones almost rectangular. Pronotal surface between outer margins slightly convex, with clear median depression in anterior half; densely covered with fine punctures. Prothoracic hypomeron smooth, covered with longitudinal rugae. Prosternum in front of procoxae vertical, with intercoxal process steeply sloping behind coxae.

Elytra elongate-oval (1.46–1.47 times as long as wide), widest before the middle, 1.33–1.36 times as wide as pronotum. Epipleural carina visible from above in more than anterior half and at elytral apices. Elytral surface between outer margin of epipleura and sutural margin weakly convex, sparsely covered with fine punctures and irregular wrinkles. Epipleural surface smooth, densely covered with fine wrinkles. Abdominal ventrites covered with punctures and golden setae. Abdominal ventrites 1 to 3 covered with wrinkles.

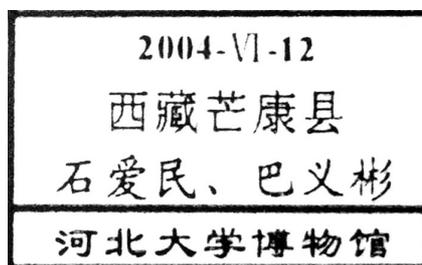
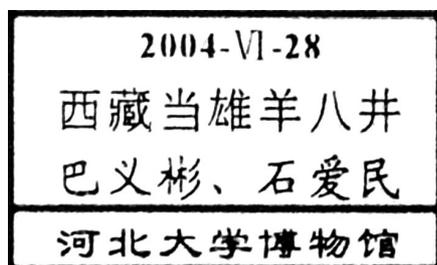
Legs (Figs 15–17) strong, length (width) ratio of pro-, meso-, and metafemora 79(22): 88(21): 100(20); that for corresponding tibiae: 71(10): 72(10): 96(13). Upper edge of inner surface of profemur with angularly arcuate prominence. Mesotibiae slightly incurved. Plantar surface of pro- and mesotarsomeres 1 to 3 with hair brushes; protarsomere 4 with apical tuft of pale hairs divided into two parts on plantar surface. Metatibiae incurved, gradually widening toward apex, length (width) ratio of metatarsomeres 1 to 4 is as follows: 25(6.5): 15(6): 13(5.5): 23(5.5).

Aedeagus (Figs 18–20): length 2.5 mm, width 0.5 mm (when body length 10.2 mm). Parameres strongly elongate, 0.92 mm long, 0.33 mm wide, with outer margins very slightly sinuate. Spiculum gastrale as in Fig. 21. Apical margin of abdominal sternite 8 sinuate (Fig. 22).

Female (Fig. 28). Body longer and wider. Antennae, when posteriorly extended, reaching posterior 1/4 of pronotum. Pronotum 1.37–1.52 times as wide as long, 1.85–2 times as wide as head. Ratio of pronotal width at anterior margin to its maximum width and width at base ( $n = 2$ ) 0.56: 1.00: 0.91, on the average. Elytra more swollen than in male, 1.28–1.29 times as long as wide, 1.32–1.44 times as wide as pronotum. Outer margin of epipleura visible from above in anterior 1/3. Lower spur of protibiae small and pointed, the upper one blunt apically, noticeably larger than the lower one, but not particularly enlarged. Apical spurs on metatibiae of female narrow and parallel sided. Hair brushes or tufts of light setae on plantar surface of tarsal segments absent. Ovipositorial lobes (Figs 23–24) rounded apically, densely covered with setae.

*Type material.* Holotype male, CHINA: Tibet, Markam county, 3800–4000m, N 29°36' E 98°24', 12 Jun. 2004, Ai-Min Shi and Yi-Bin Ba leg. (MHBU). First label of the holotype (written with Chinese characters) see Fig. 30. Paratypes: 1 male (HNHM) and 2 females (MHBU), same data as holotype.

*Etymology.* Named after the prominence on the upper edge of the inner surface of profemur.



Figs 29–30. First labels of the holotypes: 29 (left) = *Pseudognaptorina exsertogena* sp. n.; 30 (right) = *P. obtusa* sp. n.

*Diagnosis.* The new species resembles *Pseudognaptorina exsertogena* sp. n., with the following differences: genae slightly convex; prosternum in front of procoxae vertical; the upper edge of the inner surface of profemur angularly arcuate prominence; mesotarsomeres 1 to 3 with hair brushes on plantar surface.

*Distribution.* China: Tibet.

KEY TO THE SPECIES OF THE GENUS  
PSEUDOGNAPTORINA KASZAB, 1977

- 1 Lateral margin of pronotum regularly arcuate. Pronotal sides explanate and slightly concave. Posterior corners of pronotum obtuse-angled. Parameres moderately elongate (1.8 times as long as broad), with deeply sinuate outer margins. Epipleural carina visible from above in anterior third and at elytral apices. Plantar surface of male protarsomeres 1 to 3 and mesotarsomere 1 with golden hair brushes. Nepal *P. nepalica* KASZAB, 1977
- Lateral margin of pronotum arcuate in anterior half, and nearly straight or slightly sinuate in posterior half. Pronotal sides convex, not explanate. Posterior corners of pronotum rectangular. Parameres strongly elongate (2.2 times longer than broad), with outer margins very slightly sinuate. Tibet 2
- 2 Genae noticeably convex. Prosternum in front of procoxae oblique to the horizontal plane. Upper edge of inner surface of profemur nearly straight. Mesotarsomeres 1 and 2 with hair brushes on plantar surface. Mesotarsomere 3 with a bunch of pale hairs **P. exsertogena** sp. n.
- Genae slightly convex. Prosternum in front of procoxae vertical. Upper edge of inner surface of profemur with angularly arcuate prominence. Mesotarsomeres 1 to 3 with hair brushes on plantar surface **P. obtusa** sp. n.

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