

**Contributions to the knowledge of the *Staphylinus*-complex of China.  
(Coleoptera: Staphylinidae: Staphylinini).  
Part 28. The genus *Dinothenarus* Thomson, 1858, section 2**

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**Taxonomy, description, new species, geographical distribution, Coleoptera, Staphylinidae, Staphylinini, Staphylinina, *Dinothenarus*, China, Palaearctic Region**

**Abstract.** Three new species of the genus *Dinothenarus* Thomson, 1858, subgenus *Parabemus* Reitter, 1909 from China are described as new: *Dinothenarus (Parabemus) lepidus* sp. nov. (Yunnan), *Dinothenarus (Parabemus) ornaticauda* sp. nov. (Sichuan) and *Dinothenarus (Parabemus) tenebrosus* sp. nov. (Yunnan). The *sichuanensis*-species group is newly established, containing *Dinothenarus (Parabemus) lama* Smetana, 2002, *Dinothenarus (Parabemus) ornaticauda* sp. nov., *Dinothenarus (Parabemus) ornatus* Smetana, 2002, *Dinothenarus (Parabemus) szechuanensis* Bernhauer, 1935 and *Dinothenarus (Parabemus) tenebrosus* sp. nov. A key to distinguish these species is presented. A new record for *Dinothenarus (Parabemus) smetanai* Hayashi, 2012 (from Sichuan) is presented.

## INTRODUCTION

This is the second contribution dealing with the species of the genus *Dinothenarus* Thomson, 1858 of mainland China (for the first contribution see Smetana 2002). However, some information on the species of this genus was also published in two papers dealing with various genera of the “*Staphylinus*-complex (Smetana, 2008, 2011).

## MATERIAL AND METHODS

After dissection, the type specimens were glued to the usual mounting plate and the dissected parts, mounted in Canada balsam on transparent plates for each specimen, were attached to the pin with the specimen.

Acronyms used in text when referring to the deposition of the specimens are as follows:  
ASC collection of Aleš Smetana, deposited at The Museum of Nature and Science, Toshiba, Japan;  
CNC Canadian National Collection of Insects, Arachnids and Nematodes, Ottawa, Canada;  
MSC collection of Michael Schülke, Berlin, Germany;  
SIES Shanghai Institute of Entomology, Academia Sinica, Shanghai, People’s Republic of China.

After dissection, the specimens were glued to usual mounting plates and the dissected parts, mounted in Canada balsam on transparent plates for each specimen, were attached to the pin with the specimen.

The measurement ratios given in the descriptions are average values. Label data for all specimens are quoted exactly as they appear on the label.

## TAXONOMIC PART

### *Dinothenarus (Parabemus) smetanai* Hayashi, 2012

*smetanai* Hayashi, 2012: 437 (*Dinothenarus*; subgenus *Dinothenarus*; description); Schülke & Smetana, 2015: 1083 (*Dinothenarus*; subgenus *Dinothenarus*; catalogue; distribution).

**New record:** CHINA: C Sichuan, valley 7 km SE Wodi, 30°44'N 102°11'E 2800 m, 13.-17.VI.2016, mixed forest, meadows, J. Kaláb leg., 1 spec., (MSC).

**Comment.** This is the second known record of the species from Sichuan. It is at present known from Shaanxi and Sichuan (Schülke & Smetana, 2015).

### *Dinothenarus (Parabemus) ornatus* Smetana, 2002

*ornatus* Smetana, 2002: 214 (*Dinothenarus*; subgenus *Parabemus*; description); Schülke & Smetana, 2015: 1083 (*Dinothenarus*; subgenus *Dinothenarus*; catalogue; distribution).

**New record:** CHINA: N-Sichuan Sanggarpar env. S. Hongyuan, 4000 m, VII.95 lgt. Dr. M. Häckel, 2 spec. (ASC).

**Comment.** Another record of this species from Sichuan. It is at present known from Gansu, Qinghai, Sichuan and Xizang.

### *Dinothenarus (Parabemus) lepidus* sp. nov.

(Figs. 1-4)

**Type locality.** CHINA: Yunnan, Xishuangbanna, Nabanhe N.R.

**Type material.** Holotype (♂): "China: Yunnan Prov. Xishuangbanna N. R. 19-VI-2009 MENG Ling-Zeng leg.", (SIES).

**Description.** Species in all external characters similar to *D. pallipes* Smetana, 2020 from Laos, but different as follows: size smaller, body narrower; head slightly narrower, eyes larger, tempora about as long as length of eyes seen from above (in *pallipes* the tempora are longer with ratio 1.18); punctuation of head and pronotum slightly finer; punctuation of elytra distinctly finer.

Male. Sternite 8 with slight, obtusely triangular medioapical emargination. Genital segment with tergite 10 similar to that of *pallipes*, but more distinctly narrowed toward narrower apex (Fig. 1); sternite 9 similar to that of *pallipes*, but wider and somewhat shorter (Fig. 2). Aedeagus (Figs. 3-4) quite similar to that of *pallipes*, but different mainly by the setation of paramere.

Female unknown.

Length 12.5 mm.

**Geographical distribution.** The species is at present known only from the type locality in southern Yunnan.

**Bionomics.** Nothing is known about the collecting circumstances of the holotype.

**Etymology.** The specific epithet is the Latin adjective *lepidus*, *-a*, *-um* (pleasant). It refers to the general appearance of the species.

***Dinothenarus (Parabemus) ornaticauda* sp. nov.**

(Figs. 5-8)

**Type locality.** CHINA: Sichuan, mts. 15 km SW Gezong, 30° 42'N 101° 50'E, 4350-4500 m.

**Type material.** Holotype (♂): "C Sichuan, mts. 15 km SW Gezong, 30° 42'N / 101° 50'E, 4350-4500 m, J. Kaláb leg., 6.-8.vii.2014, alpine meadows, screes", (MSC).

**Description.** Black, head, pronotum, scutellum and abdominal tergites with bronze lustre, rather shiny; labrum bicolored, black with lateral portions yellow; antennae and legs with yellowish hairs; head, neck and pronotum with yellow pubescence; scutellum with black tomentose pubescence; elytra dull black, each with black pubescence, with scattered yellowish hairs on lateral portions and along posterior margin; abdominal tergites 6-8 (4-6 visible) each entirely covered by golden-yellow tomentose pubescence; tergites 3-5 (1-3 visible) each in middle with patch of black tomentose pubescence divided in middle by some golden-yellow pubescence and with some golden-yellow hairs on the rest of the surface; maxillary and labial palps piceous-black; antennae black with base of second segment reddish; legs black. Head of rounded quadrangular shape with entirely rounded posterior angles, wider than long (ratio 1.15), eyes rather small, moderately convex, tempora longer than length of eyes seen from above (ratio 1.35); disc of head with moderately coarse, dense punctation, becoming finer and denser posterolaterally; no impunctate midline apparent, interspaces between punctures on disc without microsculpture. Antennae short, segments 2 and 3 subequal in length, segments 4 and 5 as long as wide, following segments gradually becoming wider than long, last segment short, asymmetrically emarginated, along longer margin slightly longer than penultimate segment. Neck densely, rather finely punctate. Pronotum vaguely longer than wide (ratio 1.08), moderately convex, with rounded posterior margin, parallel-sided; punctation slightly finer than that on head, interspaces between punctures without microsculpture; fine impunctate midline disappearing around midlength but somewhat dilated just before posterior margin of pronotum.

Prescutum with rather coarse microsculpture of mostly transverse striae and with some fine punctures. Scutellum densely, finely punctate. Elytra relatively long, vaguely dilated posteriad, at suture about as long as pronotum at midline, at sides slightly longer (ratio 1.16); punctation rather fine, dense, more or less granulate, elytra therefore appearing somewhat dull. Wings apparently fully developed. Abdomen with fifth visible tergite with distinct, pale apical seam of palisade setae; tergite 2 (in front of first fully visible tergite) with rudimentary microsculpture of transverse striae and with fine punctures along apical margin; remaining

tergites quite finely and sparsely punctate on ground with quite fine, more or less rudimentary microsculpture of mostly transverse striae; first three visible tergites each with lateral spot of extremely dense and fine microsculpture of oblique striae.

Male. Sternite 8 with moderately deep and wide, obtusely triangular medioapical emargination. Genital segment with tergite 10 moderately, evenly narrowed toward widely arcuate apex, with some moderately long setae at and near apex (Fig. 5); sternite 9 (only apical portion available) with deep apical emargination, setose as in Fig. 6. Aedeagus (Figs. 7-8) rather narrow, median lobe slightly asymmetrical apically, with acute apex; paramere asymmetrical anteriorly, with narrowly arcuate apex not reaching apex of median lobe; sensory peg setae on underside forming elongate field along left lateral margin of apical portion of paramere; four apical setae and one shorter seta on right lateral margin below apex (Fig. 8).

Female unknown.

Length 12.0 mm (abdomen slightly extended).

**Geographical distribution.** The species is at present known only from the type locality in north-central Sichuan.

**Bionomics.** The holotype was taken in an alpine habitat, but no details are known.

**Etymology.** The specific epithet is a combination of the Latin adjective *ornatus*, -a, -um (ornamented, adorned) and the noun *cauda*, -ae, f. (abdomen in entomology); noun in apposition.

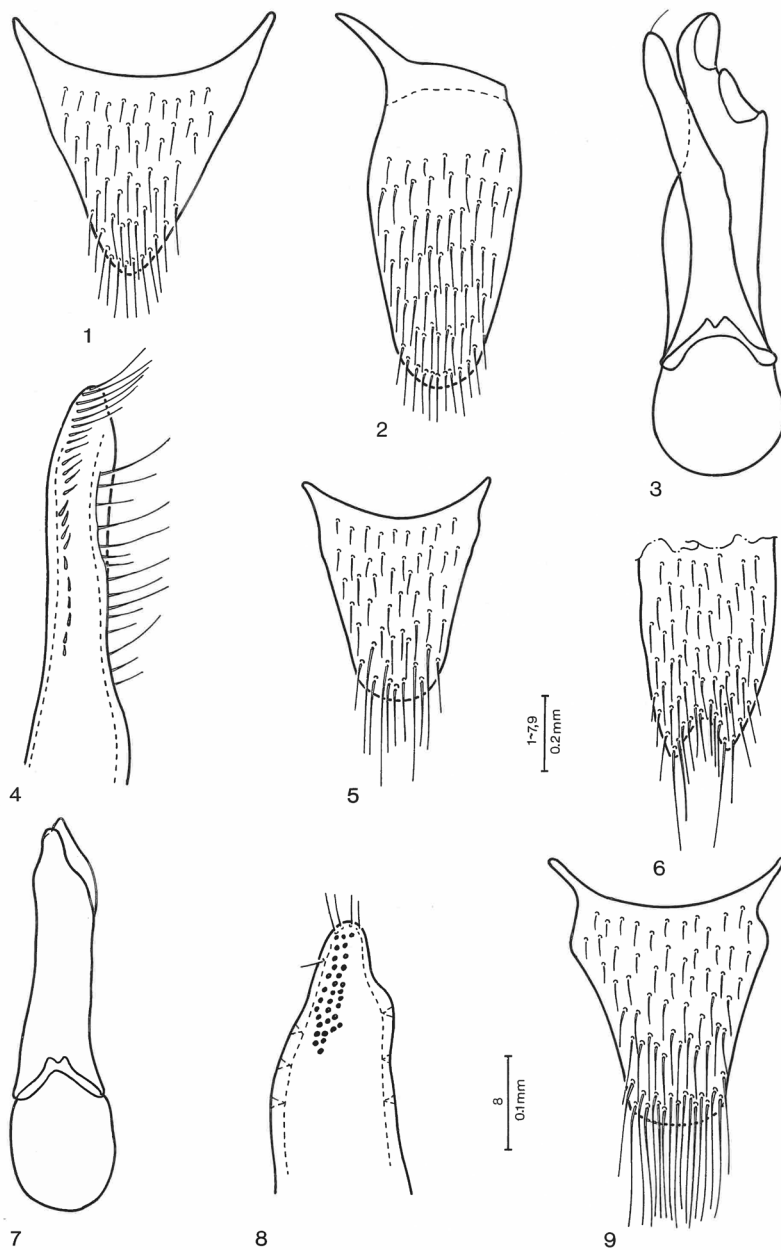
***Dinothenarus (Parabemus) tenebrosus* sp. nov.**

(Figs. 9-14)

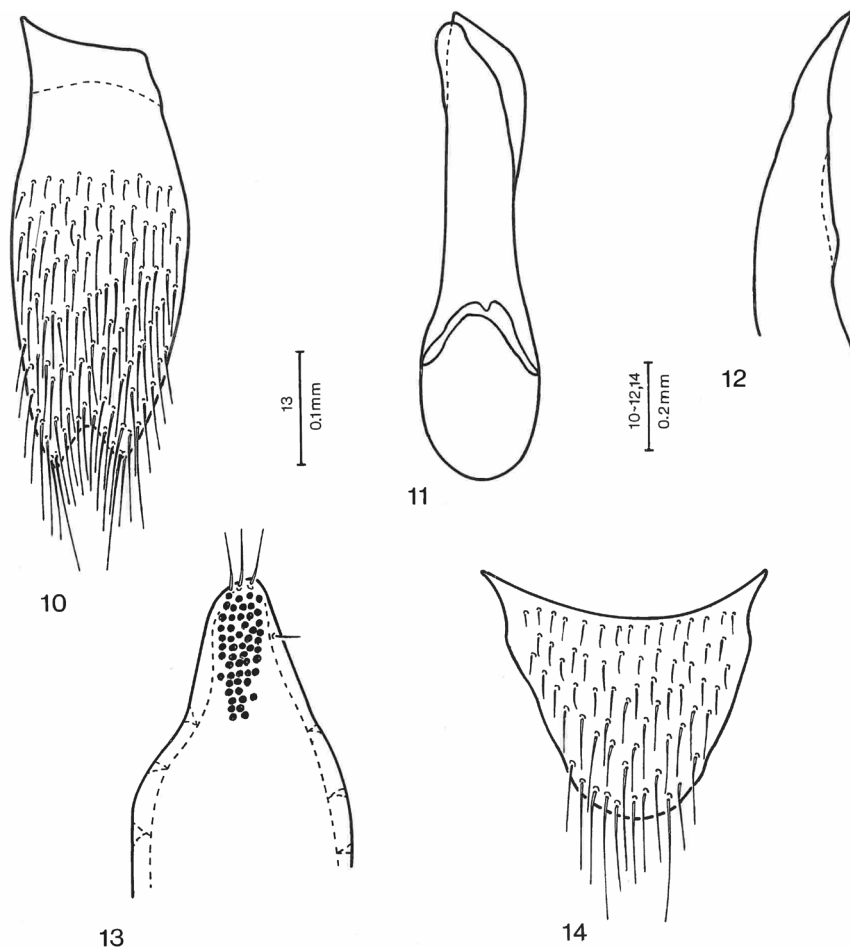
**Type locality.** CHINA: NW Yunnan, Hengduan Shan, W of Shuaqu vill., N of Meili Xue Shan (Kawagarbo), 28° 35' 12" N 98° 40' 36" E, 4268 m.

**Type material.** Holotype (♂) and allotype (♀): "China, NW Yunnan, 21.VI.2018 Hengduan Shan, W of Shuaqu vill. N of Meilixue Shan (Kawagarbo) N 28° 35' 12" E 98° 40' 36", 4268 m, lgt. R. Sehnal & M. Janata", (ASC). Paratypes: (1 ♂, 2 ♀♀): same data as holotype, (ASC, CNC).

**Description.** Black, head, pronotum, and abdominal tergites with bronze lustre, rather shiny, elytra with vague bronze lustre; labrum bicolored, black with lateral portions yellow; head, neck and pronotum with yellow hairs, most noticeable on head; scutellum with black tomentose pubescence; elytra dull black, each with black pubescence; abdominal tergites 3-6 (1-4 visible) each in middle with patch of black tomentose pubescence divided in middle by some golden-yellow hairs and with some golden-yellow hairs on the rest of the surface; tergites 7 and 8 (5-6 visible) with scattered yellowish hairs more concentrated mediobasally; maxillary and labial palps, antennae and legs black. Head of rounded quadrangular shape with entirely rounded posterior angles, wider than long (ratio 1.22), eyes moderately large, moderately convex, tempora somewhat longer than length of eyes seen from above (ratio 1.25); disc of head with moderately coarse, dense punctation, becoming sparser toward



Figs. 1-9. *Dinothenarus lepidus* sp. nov.: 1- tergite 10 of male genital segment; 2- sternite 9 of male genital segment; 3- aedeagus, parameral view; 4- apical portion of paramere with setation; *Dinothenarus ornaticauda* sp. nov.: 5- tergite 10 of male genital segment; 6- apical portion of sternite 9 of male genital segment; 7- aedeagus, parameral view; 8- underside of apical portion of paramere with sensory peg setae; *Dinothenarus tenebrosus* sp. nov.: 9- tergite 10 of male genital segment.



Figs. 10-14. *Dinotherarus tenebrosus*: 10- sternite 9 of male genital segment; 11- aedeagus, parameral view; 12- apical portion of median lobe of aedeagus, lateral view; 13- underside of apical portion of paramere with sensory peg setae; 14- tergite 10 of female genital segment.

clypeus and to the contrary finer and denser posterolaterally; no impunctate midline apparent, interspaces between punctures on disc without microsculpture. Antennae short, segments 2 and 3 subequal in length, segments 4 and 5 as long as wide, following segments gradually becoming more wider than long, last segment short, asymmetrically emarginated, along longer margin slightly longer than penultimate segment. Neck densely, rather finely punctate. Pronotum about as long as wide, moderately convex, with rounded posterior margin, parallel-sided; punctuation slightly finer than that on disc of head, interspaces between punctures without microsculpture; fine impunctate midline, mostly disappearing around midlength but markedly dilated just before posterior margin of pronotum. Prescutum with

fine microsculpture of mostly transverse striae and with some fine punctures, except for middle portion. Scutellum densely, finely punctate. Elytra relatively long, vaguely dilated posteriad, at suture about as long as pronotum at midline, at sides slightly longer (ratio 1.18); punctation rather fine, dense, more or less granulose, elytra therefore appearing somewhat dull, each elytron with scattered, large round depressions lacking the punctation and with one seta in middle. Wings apparently fully developed. Abdomen with fifth visible tergite with distinct, pale apical seam of palisade setae; tergite 2 (in front of first fully visible tergite) with rudimentary microsculpture of transverse striae and with fine punctures along apical margin; remaining tergites quite finely and sparsely punctate on ground with quite fine, more or less rudimentary microsculpture of mostly transverse striae.

Male. Sternite 8 with rather wide, moderately deep, obtusely triangular medioapical emargination. Genital segment with tergite 10 widely arcuate apically, with numerous long setae at and near apical margin (Fig. 9); sternite 9 relatively narrow, deeply, semiarcurately emarginate apically, with densely set, long setae around apex (Fig. 10). Aedeagus (Figs. 11-13) moderately wide, asymmetrical apically, median lobe with very narrow, acute apex; paramere rather wide, slightly asymmetrical apically, with obtuse apex not quite reaching apex of median lobe; sensory peg setae on underside forming a densely set group covering apex of paramere and extended narrowly posteriad; three long apical setae and one shorter seta at right lateral margin (Fig. 13).

Female. Genital segment with tergite 10 wide, moderately, evenly narrowed toward arcuate apex, with numerous moderately long setae at and near apex, rest setose as in Fig. 14.

Length 12.0-13.0 mm.

**Geographical distribution.** The species is at present known only from the type locality in northwestern Yunnan.

**Bionomics.** The specimens were taken from pitfall traps set at very high elevation of 4268 m, therefore apparently in alpine habitat, but no details are known.

**Etymology.** The specific epithet is the Latin adjective *tenebrosus*, *-a*, *-um* (gloomy). It refers to the lack of the patches of golden-yellow pubescence on the abdomen.

## DISCUSSION

The last two described species belong to a group of species around *D. szechuanensis* Bernhauer, 1935, all occurring in mainland China. The species of this group are characterized by the black body with variably developed metallic sheen and with the presence of yellow or golden-yellow hairs forming in most species distinct patches on abdominal tergites, by the black appendages and by the characteristic shape of the heavily sclerotized aedeagus. In addition, all species occur high up in the subalpine and alpine zones of the mountains, occurring at altitudes between 3100-4900 m. Alpine meadows and screes seem to be typical habitats of most of the species. The name *szechuanensis*-group is suggested for this

assemblage of the species. The following species belong to this group:

- Dinothenarus (Parabemus) lama* Smetana, 2002 (Sichuan, Yunnan)  
*Dinothenarus (Parabemus) ornaticauda* sp. nov. (Sichuan)  
*Dinothenarus (Parabemus) ornatus* Smetana, 2002 (Gansu, Qinghai, Sichuan, Xizang)  
*Dinothenarus (Parabemus) szechuanensis* Bernhauer, 1935 (Sichuan, Yunnan)  
*Dinothenarus (Parabemus) tenebrosus* sp. nov. (Yunnan)

The species may be distinguished using the following key:

1. At least one of the abdominal tergites with a distinct patch of yellow, golden-yellow or greyish tomentose pubescence .....2  
- Abdominal tergites without a distinct patch of yellow, golden-yellow or greyish tomentose pubescence. Aedeagus as in figs. 11-13 ..... *D. tenebrosus* sp. nov.
2. Patches of yellow or golden-yellow tomentose pubescence present on more than one abdominal tergite .....3  
- Patch of yellow, golden-yellow or greyish tomentose pubescence present only on tergite 6 (4<sup>th</sup> visible) .....4
3. Small patches of golden-yellow tomentose pubescence present in middle of tergites 3 through 6 (1<sup>st</sup> to 4<sup>th</sup> visible). Aedeagus as in figs. 11-12 in Smetana (2002) ..... *D. szechuanensis* Bernhauer, 1935  
- Entire tergites 6-8 (4-6 visible) covered by golden-yellow tomentose pubescence. Aedeagus as in figs. 7, 8.....  
..... *D. ornaticauda* sp. nov.
4. Head finely punctate, tempora each densely covered with golden-yellow tomentose pubescence; abdominal tergite 6 (4<sup>th</sup> visible) with patch of greyish tomentose pubescence. Aedeagus as in figs. 23-24 in Smetana (2002) ..... *D. lama* Smetana, 2002  
- Head coarsely punctate, tempora each with golden-yellow, non tomentose hairs; abdominal tergite 6 (4<sup>th</sup> visible) with patch of golden-yellow pubescence. Aedeagus as in figs. 16-18 in Smetana (2002) .....  
..... *D. ornatus* Smetana, 2002

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## REFERENCES

- BERNAHUER M. 1935: Neue Kurzflügler aus China. *Entomologisches Nachrichtenblatt* 9: 4-14.
- HAYASHI Y. 2012: Description of a new species of *Dinothenarus*, from China with some notes on the genus (Coleoptera, Staphylinidae). *Japanese Journal of Systematic Entomology* 18: 437-442.
- REITTER E. 1909: *Fauna Germanica. Die Käfer des Deutschen Reiches. Nach der Analytischen Methode Bearbeitet*. 2. Stuttgart: K.G. Lutz, 392 pp.
- SCHÜLKE M. & SMETANA A. 2015: Staphylinidae, Pp. 304-1134. In: LÖBL I. & D. LÖBL (eds.): *Catalogue of Palaearctic Coleoptera. Vol. 2. Revised and updated edition*. Leiden: Brill, 1702 pp.
- SMETANA A. 2002: Contributions to the knowledge of the genera of the “*Staphylinus*-complex” (Coleoptera: Staphylinidae) of China. Part 2. The genus *Dinothenarus*, section 1. *Folia Heyrovskyana* 10: 205-224.
- SMETANA A. 2008: Contributions to the knowledge of the genera of the “*Staphylinus*-complex” (Coleoptera: Staphylinidae) of China. Part 18. Various genera. *Linzer Biologische Beiträge* 40: 943-949.
- SMETANA A. 2011: Contributions to the knowledge of the genera of the “*Staphylinus*-complex” (Coleoptera: Staphylinidae) of China. Part 25. Various genera. Section 2. *Studies and Reports, Taxonomical Series* 7: 397-414.
- THOMSON C. G. 1858: Forsök till uppställning af Sveriges staphyliner. *Öfversigt af Kongliga Vetenskaps-Akademiens Förhandlingar* 15: 27-40.

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