

Two new species of the genus *Stenus* Latreille from China (Coleoptera: Staphylinidae: Steninae)

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Two new species of the genus *Stenus* Latreille (subgenus *Stenus* s. str.) are described: *Stenus* (s. str.) *affinisecretus*, sp. n., from Beijing, and *S.* (s. str.) *guandiensis*, sp. n., from Shanxi, China. These two new species were collected in the mountain areas. Important morphological characters, like those of hind wings, 8th and 9th abdominal sternites of male, and the aedeagus are illustrated for the new species. All the types are deposited in the Institute of Zoology, Chinese Academy of Sciences, Beijing.

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1. Introduction

The name *Stenus* was first erected by Latreille (1797), whereas its taxonomic definition as a subgenus within the genus *Stenus* Latreille, 1797 was developed and accepted gradually by many insect taxonomists. Puthz (2001) designed the subgenus *Nestus* Rey (1884) as a synonym of the subgenus *Stenus* s. str. and re-arranged the species accordingly. The subgenus *Stenus* s. str. is a species-rich group and 37 species have been described merely from China (Herman 2001, Rougemont 2001). These species are now arranged into nine species groups: *clavicornis*-group, *melanarius*-group, *palposus*-group, *rugicollis*-group, *humilis*-group, *comma*-group, *seminiger*-group, *tortuosus*-group and *puberulus*-group (Benick 1938, Puthz 1970a, 1980a, 1988, Rougemont 1983).

Puthz (1988) defined *clavicornis* group by

the following characteristics: the ninth sternite without denticle on out margin of lateral teeth; the base of tergites with three keels. In this paper, we suggest that the following characters are also important to distinguish this species group from the others: meso- or (and) metatibiae with spur on inner margin; median lobe of aedeagus not distinctly constricted toward apex and inner sac simple. In this group, 43 species have been described worldwide and 10 have been found from China before this study (Sharp 1874, Bernhauer 1915, Benick 1914, 1941, Puthz 1964, 1966, 1968a, 1968b, 1970b, 1972, 1973, 1974a, 1974b, 1980a, 1980b, 1981). In this paper, we describe two new species, *S.* (s. str.) *affinisecretus*, from Beijing, and *S.* (s. str.) *guandiensis*, from Shanxi province, China. Thus, the total number of species in the *clavicornis*-group in China is now increased to 12.

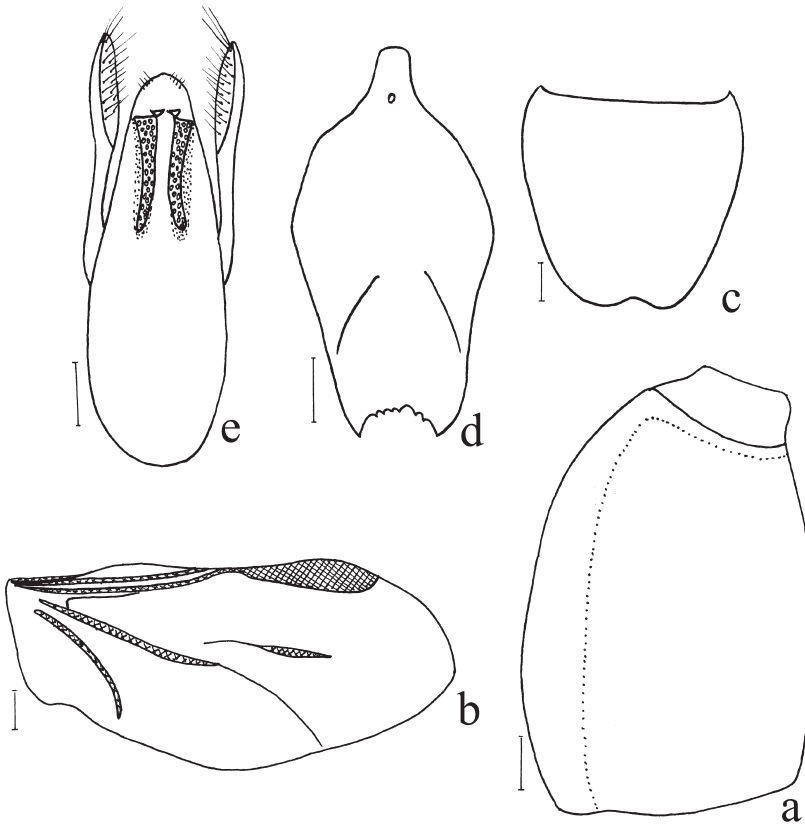


Fig. 1. *Stenus affinisecretus*, new species.
 – a. Elytron. – b. Hind wing. – c. Sternite VIII.
 – d. Sternite IX.
 – e. Aedeagus.

2. Material and methods

Specimens were collected by an aspirator or a net and then preserved in 75% alcohol. The specimens were dissected in order to examine hind wings, 8th and 9th abdominal sternites of males and the aedeagus. The examinations and illustrations were done under a compound microscope (Leica MZ APO). This study was based on the materials in the collections of Institute of Zoology, Chinese Academy of Sciences (IOZ-CAS), Beijing. All the types are deposited in the same institute.

3. Descriptions of species

3.1. *Stenus* (s. str.) *affinisecretus*, sp. n.

Type Material. – Holotype: ♂, China, Beijing, Men-tou-gou, Dongling mountain, 2,300m, 21.IV.1998, collector Luo Tianhong. Paratypes:

3♂♂, 1♀, same data as holotype.

Body length: 4.0–4.5 mm. Body black. Antennae reddish brown except for the first segment black; maxillary palpi with 1st segment yellow, 2nd with the base yellow but the rest yellowish brown, 3rd yellowish brown except for dark apex; labrum and clypeus black with sparse yellow pubescence; paraglossa oval; legs reddish brown but apex of femora and tibiae black. Body covered with punctures, and interstice finely microsculptured.

Head slightly narrower than elytra (ratio: 1:1.12), with an average distance between eyes of 0.47 mm. Interocular area with two shallow longitudinal furrows converged anteriorly; area between furrows almost as wide as each of lateral portions and slightly convex. Surface of head covered with round punctures, their diameter slightly smaller than basal section of 3rd segment of antennae, interstices smaller than diameter of puncture. Vertex covered with white pubescence, anterior half denser than posterior half. Antennae

short, not reach to the middle of pronotum when reflexed. The three apical segments each longer than wide. Pronotum slightly longer than wide (ratio: 1:0.93), widest at posterior 2/3 of its length, sides round anteriorly and strongly constricted posteriorly. Surface of pronotum convex, without median furrow. Punctuations on pronotum larger than basal section but smaller than apical section of 3rd segment of antennae, interstice smaller than diameter of puncture. Mesoscutellum linguiform.

Elytra slightly shorter than pronotum measured along suture (ratio: 1:1.15), wider than long (ratio: 1:0.89). Sides slightly inflated, widest just before hind margin, and slightly constricted afterward. Each elytron with shallow emagination on outer part of hind margin (Fig. 1a). Surface of elytra uneven, humerus with distinct elongate depression, depression along suture deeper anteriorly and shallower posteriorly. Punctuation as large as apical section of 3rd antennal segment. Hind wings short, with an elongate pterostigma near terminal 1/4, whose length occupied about 1/4 length of hind wing (Fig. 1b).

Abdomen robust, paratergites complete and slightly convex, with two rows of loose punctures (but only on those of the 3rd–5th abdominal tergites); 3rd–6th abdominal tergites with three distinct keels on the base, median keels stronger than two lateral ones, and the 7th abdominal tergite with three feeble keels which only observable at base. Punctures on the first visible abdominal tergite same as those on head, interstices smaller than diameter of puncture; punctures gradually smaller and sparser towards hind apex; punctures on 7th abdominal tergite slightly larger than size of an inner eye-facet, interstices distinctly larger than diameter of puncture. Abdomen covered with white pubescence, gradually denser posteriorly. Legs robust, 1st segment of metatarsi longer than 5th, 4th simple.

Male: Mesotibiae with small but distinct spur on the inner margin of apex; median part of metasternum slightly convex and with shallow furrow along median line. The 7th abdominal sternite with depression along longitudinal median, sides of the depression distinctly ridged and covered with long white hairs, posterior margin directly behind depression with shallow emargination; 8th abdominal sternite with depression

along longitudinal median and shallow-notched posterior margin (Fig. 1c), 9th abdominal sternite as shown in Fig. 1d.

Aedeagus (Fig. 1e) with long parameres which distinctly longer than median lobe and covered with long setae; apical part of median lobe round and covered with setae on lateral sides.

Female: Mesotibiae without spurs, sternites complete.

Etymology. The species epithet is derived from Latin words *affinis* and *secretus*.

Remark. This new species is highly similar with *S.* (s. str.) *innuptus* Eppelsheim (Puthz, 1966), but with longer parameres and more round apical part of median lobe. The new species is furnished with four setae on each sides of the apical part of the aedeagus median lobe, whereas *S.* (s. str.) *innuptus* has three. The new species has short hind wings and lives usually in mountain areas.

3.2. *Stenus* (s. str.) *guandiensis*, sp. n.

Type Material. – Holotype: ♂, China, Shanxi, Guandi mountain, Badaogou, near river, 1,800–1,830m, 4.VII.2004, collector Zhao Caiyun. Paratypes: 2♂♂, same data as Holotype.

Body length: 4.4 mm. Body black. Antennae dark reddish brown except for the first segment black, maxillary palpi reddish yellow except for apex of 3rd segment brown. Labium and clypeus black and covered with yellowish pubescence, paraglossae oval. Legs dark brown, but apex of femora black. Interstice of punctures on body covered with coarse microsculpture.

Head narrower than elytra (ratio: 1:1.08), with an average distance between eyes of 0.46 mm. Interocular with two deep longitudinal furrows; area between furrows distinctly narrow and almost half width of each of the lateral portions, distinctly convex, raising to the level of the inner margin of eyes; vertex with an impunctate keel along median line, its width near diameter of puncture. Surface of head covered with coarse punctures, lateral punctures distinctly larger than median ones, and their average diameter larger than basal section but smaller than apical section of 3rd segment of antennae, interstices between

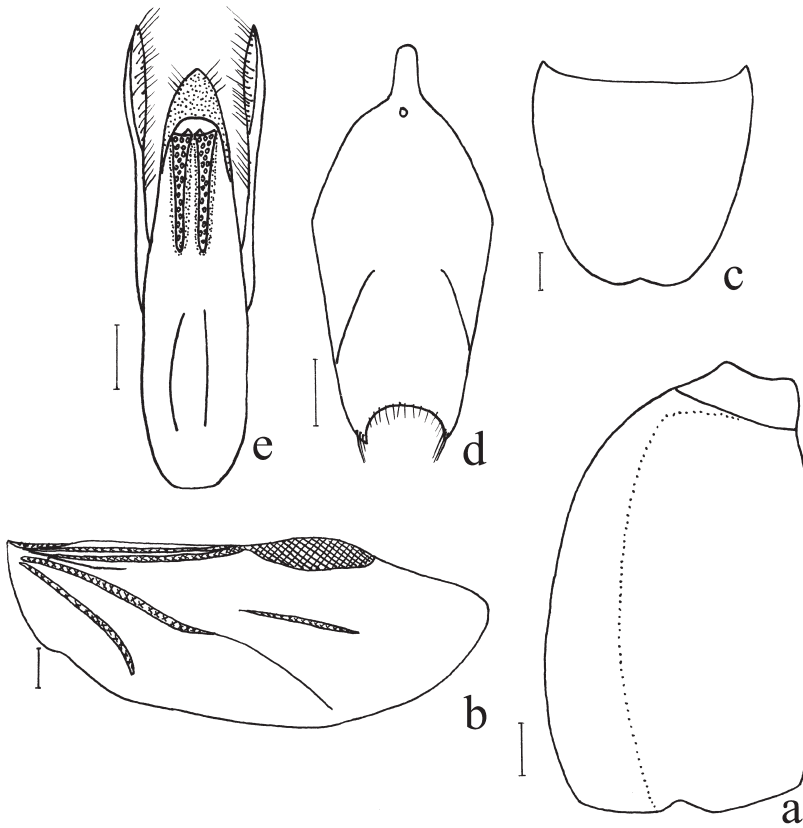


Fig. 2. *Stenus guandensis*, new species.
 – a. Elytron. – b. Hind wing. – c. Sternite VIII.
 – d. Sternite IX.
 – e. Aedeagus.

punctures smaller than diameter of puncture. Vertex covered with white pubescence. Antennae short, not reaching to the middle of pronotum when extended posteriad, and last three segments enlarged into club, the penultimate and antepenultimate wider than long. Pronotum as long as wide, widest near middle, sides slightly constricted anteriorly and moderately constricted posteriorly. Surface of pronotum convex, with longitudinal furrow along median line, which occupied 1/3 length of pronotum. Punctuation of pronotum large, average diameter as large as the apical section of 3rd segment of antennae, interstices smaller than diameter of puncture. Mesoscutellum triangular.

Elytra slightly shorter than pronotum measured along suture (ratio: 1:1.09), wider than long (ratio: 1:0.84). Sides slightly inflated, widest at about posterior 1/4, and distinct constricted posteriad. Each elytron with deep emargination on outer part of hind margin (Fig. 2a). Surface of elytra slightly convex, humerus with very shal-

low depression, along suture without depression. Punctuation of elytra similar to that of pronotum, except for punctures on humeral area, where punctures smaller than apical section of 3rd segment of antennae, and interstices as large as diameter of puncture. Hind wings short, with an elongate pterostigma near terminal 1/4, whose length occupied about 1/4 length of hind wing (Fig. 2b).

Abdomen robust, with complete and almost parallel paratergites, with two rows of tight punctures (but only on those of the 3rd–5th abdominal tergites); 3rd–6th abdominal tergites with three distinct keels on the base, median one stronger than the two lateral ones; 7th abdominal tergite with three indistinct keels. Punctures of abdominal tergites distinct, their diameters on 3rd abdominal tergite as large as basal section of 3rd segment of antennae, and their interstices smaller than diameter of puncture; punctures gradually smaller and sparser towards hind apex, punctures on 7th abdominal tergite slightly larger than the size of an inner eye-facet, interstices distinctly

larger than diameter of puncture. Abdomen covered with yellowish pubescence, gradually denser apically. Leg robust, 1st segment of metatarsi longer than 5th segment, 4th simple.

Male: Mesotibiae with strong spurs on the inner margin of apex; median part of metasternum distinct convex and with deep furrow along median line. 7th abdominal sternite with depression along longitudinal median, sides of the depression feebly ridged and covered with long yellowish hairs, posterior margin directly behind the depression with a shallow broad emargination; 8th abdominal sternite with shallow notches on posterior margin (Fig. 2c), 9th abdominal sternite as shown in Fig. 2d. Aedeagus furnished with four setae on each lateral sides of apex of median lobe, and apical part of median lobe subtriangle (Fig. 2e).

Female: not found.

Etymology. The species epithet is derived from name of type locality, Guandi mt.

Remark. The new species is highly similar with *S. (s.str.) affinisecretus*, but with distinct median furrow on pronotum; its apical part of median lobe is narrower and setae on the apical lateral margins of median lobe are longer than those in *S. (s.str.) affinisecretus*.

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