

**Description of a new *Sarmyds* species from Xizang Autonomous Region in China : *Sarmyds cheni* sp. nov.  
(4<sup>th</sup> contribution to the study of genus *Sarmyds* Pascoe, 1867)  
(Coleoptera, Cerambycidae, Prioninae)**

Alain DRUMONT\* & Wen-Xuan BI\*\*

\* Royal Belgian Institute of Natural Sciences, Entomology Department, Vautier Street 29, B-1000 Brussels, Belgium; e-mail : alain.drumont@naturalsciences.be

\*\* Room 401, No. 2, Lane 155, Lianhua South Road, Shanghai 201100, P. R. China; e-mail : insectb@163.com

**Abstract.** *Sarmyds cheni* sp. nov. is described from the Xizang Autonomous Region in China. The new species is illustrated and compared with *S. subcoriaceus* (Hope, 1831), its closest relative species up to now within the genus.

**Résumé.** *Sarmyds cheni* sp. nov. est décrit de la région autonome du Xizang en Chine. La nouvelle espèce est illustrée et comparée avec *S. subcoriaceus* (Hope, 1831), l'espèce dont elle est la plus proche à l'heure actuelle au sein du genre *Sarmyds* Pascoe, 1867.

**Key words.** Taxonomy, Coleoptera, Cerambycidae, Prioninae, Anacolini, *Sarmyds*, *S. cheni* sp. nov., new species, Palearctic region, China, Xizang.

The genus *Sarmyds* Pascoe, 1867 has been during nearly 140 years only represented by two species, *S. antennatus* Pascoe, 1867 and *S. subcoriaceus* (Hope, 1831), until three new species were described in less than ten years : *S. fujishiroi* Drumont, 2006, *S. loebli* Drumont & Weigel, 2010 and *S. paukstadorum* Drumont, 2011 (DRUMONT, 2006; DRUMONT & WEIGEL, 2010; DRUMONT, 2011).

This genus can be recognised, among others characters, by specimens of rather small size (not exceeding 35 mm.), covered by pubescence except on elytra, by antenna nearly as long as body with segments flattened and covered by punctures and ridges, by transverse pronotum rounded on anterior part and furnished by a triangular carinated spine on the sides in the middle part (LAMEERE, 1919). It should be divided into two groups based on the structure of surface of dorsal part of the pronotum (DRUMONT, 2010).

The first group, called the “*subcoriaceus*” group, has the pronotal surface covered with puncturation composed of shallow depressions and comprises the two species *fujishiroi* and *subcoriaceus*. Another species, *S. trichodes*, which was described by FENG & CHEN from Yunnan province in China in 2006, also belongs to this group and has been recently recognised as a synonym of *S. fujishiroi* (DRUMONT *et al.*, 2010). The second group, called the “*antennatus*” group, is characterised by the dorsal surface of the pronotum being covered with small tubercles and is represented by three species : *antennatus*, *loebli* and *paukstadorum*.

In 2011, the second author collected in Motuo (Médog) county located in Xizang Autonomous Region in China a small series of *Sarmyds* obviously belonging to a new species which can be included into to the “*subcoriaceus*” group. We describe here this new species under the name *S. cheni* sp. nov., which is distinguished from the allied *S. subcoriaceus* relatively easily.

**Collections examined and abbreviations**

ADC : Collection of Alain Drumont, Brussels, Belgium ;

CBWX : Collection of Wen-Xuan Bi, Shanghai, China ;

CCCC : Collection of Chang-Chin Chen, Tianjin, China ;

IZAS : Institute of Zoology, Chinese Academy of Sciences, Beijing, China ;

NDC : Collection of Norbert Delahaye, Plaisir, France ;

RBINS-IRSNB : Royal Belgian Institute of Natural Sciences, Brussels, Belgium ;

SHEM : Shanghai Entomology Museum, Chinese Academy of Sciences, Shanghai, China.

***Sarmyodus cheni* sp. nov.** (figs 1-2)

Type material : **Holotype** ♂ : China, Xizang, Motuo, Hanmi, 2100m., 2011.VII.23-31, collector Wen-Xuan Bi, will be deposited in IZAS under the registration number IOZ(E)1905265. **Paratypes** (17 specimens, 13 males and 4 females) : 1 ♂, same data as holotype (CBWX); 1 ♂, same data as holotype / CTBB-0844 [Barcoding reference] (ADC); 1 ♀, same data as holotype / CTBB-0845 [Barcoding reference] (CBWX); 1 ♂, same locality as holotype, 2011.VIII.2, coll. Xiao-Dong Yang (CCCC, B11Y2515); 2 ♂ ♂, same locality as holotype, 2013.VII.19-29, coll. Wen-Xuan Bi (CBWX); 3 ♂ ♂, same locality as holotype, 2013.VII.19-29, coll. Chao Wu (CBWX and RBINS-IRSNB); 1 ♂, same locality as holotype, 2013.VII.19-29, coll. Wen-Xuan Bi (IZAS, IOZ(E)1905266); 1 ♂, same locality as holotype, 2013.VII.19-29, coll. Wen-Xuan Bi (SHEM); 1 ♂, same locality as holotype, 2013.VII.19-29, coll. Wen-Xuan Bi (CCCC); 1 ♂, Xiang, Linzhi, Motuo, Hanmi, 1989m., 2013.VII.27, leg. Xiao-Dong Yang (CCCC, C13Y1626); 1 ♀, same locality as holotype, 2013.VII.29, leg. Xiao-Dong Yang (CCCC, C13Y1684); 1 ♀, Xizang, Motuo, env. Hanmi, VIII.2013, local collectors (ADC); 1 ♂, 1 ♀, idem (NDC).

**Description**

**Male** : Body brown to dark-brown with only mandibles, antennal tubercles, first two antenna articles and first half of 3rd antenna segment nearly black. Dorsal side almost glabrous but surface of mandibles (except on blade parts), head (except on vertex) and pronotum covered by a scattered pubescence composed of golden-yellowish long setae, while apical margins of pronotum are fringed with hairs which are of smaller length than the previous ones. Some shorts hairs are also recognizable along the external sides of the elytra, denser when approaching to the apex of elytron and directed towards the ventral side. Antennae glabrous except a very few sparse short hairs which can be observed on all segments but more present around the segment 2 and at the tip of the last segment of antenna. Ventral side uniformly covered by a pubescence composed by rather long golden-yellowish setae with are less present on the mentum, front part of prosternum and on all segments of abdomen. Legs covered by orange-yellowish, medium size setae (the size is intermediate between the lengths observed on the setae present on pronotum and on margins of elytra). This pubescence uniformly covers the whole tibiae and tarsi (except the claws) but only the anterior and posterior parts of femora (not the dorsal and ventral sides).

Head. Eyes kidney-shaped and bulging, coarsely faceted; under eye-lobes cover the whole head sides; distance between eyes on dorsal surface of head representing  $\frac{1}{4}$  of the width of the head, a little bit smaller than the width of the 2nd antennal joint. Head uniformly and very densely covered with groove punctures, distances between punctures much smaller than their diameters; front margin of head wide, triangularly incised. Mandibles very robust with parallel sides until  $\frac{2}{3}$  of the length of the mandibles to directly point towards internal side to form at the apex a bifurcated acute tooth; sides of the mandibles are both depressed by a groove carina which is large and deeply punctured on external side (this punctuation being present on the most part of the mandible), and smaller and unpunctured on internal side. Internal sides of left mandible are furnished by two very small and large teeth regularly placed on its length while the right one exhibits a single acute tooth placed on basal part at  $\frac{1}{3}$  of the length of the mandible.) Antennae. Longer as the body length, exceeding the apex of elytra by the last segments; 11 segmented. Scape with apex exceeding the eyes, strongly punctured, with nearly lateral sides. Second antennal segment short, trapezoidal and irregularly punctured. Third segment the longest, flattened, parallel sided, slightly shining at the base and covered with coarse punctures until the middle of the length, then dull and very finely reticulated for the rest of its length, with weak outer ridges. Segments 4th to 11th segments dull and very finely reticulated with apparent weak and interrupted ridges. The length of the segments is slowly decreasing from segment 3 to 10, while the apical angles expanding laterally progressively to form a spine. Eleventh segment longer than the 10th, rounded at its apex. Pronotum. About 0.6 long as wide (the width measured just before the lateral teeth); surface, very densely and deeply punctured and sculptured, some of the points joining together to form some sinuate canals, especially on the disk where can be observed some depressed area. Shining area are nearly absent except near the middle, along the basal and front margin which are nearly straight, very finely bordered and sinuated. Lateral spines long, well developed and distinct, very thin and pointed; lacking punctures and flattened anterior-posteriorly, positioned slightly ahead of the middle of the pronotum and weakly inclined backward. The distance between the apexes of the lateral spines is equal to 0.85 times the distance



**Figs 1-2. *Sarmydsus cheni* sp. nov., habitus, dorsal view.** Fig. 1 : male paratype, 27.5 mm. (China, Xizang, Motuo, Hanmi, 2100m., 2011.VII.23-31, coll. Wen-Xuan Bi, in CBWX). Fig. 2 : female paratype, 28 mm. (same data as the male). **Fig. 3.** Photograph of the biotope where was collected *S. cheni* sp. nov., taken in Hanmi on 20.July.2013 at 15:30 hrs. (Pictures by Wen-Xuan Bi).

observed between the shoulders. Lateral margin of pronotum before the spine wider than behind the spine; anterior angles regularly rounded while the posterior ones are well defined and a little bit expanded. Elytra. About twice as long as wide, ratio of humeral width/length being equal to 0.4, nearly parallel sided; only weakly expanded in the middle. Surface very shiny, crumpled and punctured by deep small points which are larger and denser at the humeri and decreasing in number and size along the elytra. Elytra are covered by two visible costae (the first two along the suture), the second being more raised than the first one; both sinuated and nearly disappearing after the  $\frac{3}{4}$  of the length of the elytra. Each elytron furnished at the apex by a distinct acute tooth directed rearward. Scutellum. As long as wide, rounded behind, punctured on lateral sides while the middle is smooth. Legs. Flattened dorso-ventrally, long and thin. Surface of femora sculptured by rows of irregular small ridges. Tibia punctured with the width regularly increasing from the base to the apex; apex furnished with two small curved spines. Tarsi narrow, scape a little bit longer in length to segments 2 & 3, truncated and with parallel sides apex; segment 2 as long as the half length of scape, nearly as large as scape, truncated at apex which is a little bit dilated; segment 3 nearly as large as segment 2, largely emarginated on 2/3 of its length and composed of two dilated lobes; last segment of tarsi thin and equal in length to scape and segment 2 combined. Underside. Surface densely punctured formed by points separated by very fine grid of small lines (visible at 500 X magnification on binocular), only the area underneath the lateral spine and basal part of mentum lacking punctures; the puncture on mentum composed of deep and large points forming irregular ridges; these points being smaller and sparser on the breast and on sternites; nearly all sternites of approximately the same length, hind margin of the 5th truncated.

**Femelle.** The shape of the female body is rather similar to that of the males. The description of the female is therefore limited to highlight the body parts that differ compared to the males. The body is lighter brown coloured, almost glabrous especially by the pubescence present in the males on the pronotum and tibia and most part of underside which is reduced in females. On the abdomen, this pubescence has completely disappeared. Antennae are also composed of 11 segments and only reach  $\frac{4}{5}$  the length of the body. The antennal segments have the same shape and structure as those of the males but are more elongate and thin, except segments 6-11 shorter but wider as compared with males and exhibiting an external side more convex. Pronotum with the anterior and posterior margins more sinuated (especially in their middle), with teeth located at the middle of pronotum length; the anterior sides more expanded and rounded before the tooth. Scutellum wider and tongue-shaped. Elytra rounded at their extremity with a very small tooth present on apex. Extremity of 5th segment of abdomen rounded and not truncated. Size (body length measured from the clypeus to the apex of elytra). **Males** (average: 22.46+/-2.39 mm., min: 18.5 mm., max: 27.5 mm., n = 12 exs; holotype : 23 mm.), **females** (average: 27.00+/-3.60 mm., min: 23 mm., max: 30 mm., n = 3 exs ).

### Diagnose

By structure of surface of pronotum which exhibits deep punctures instead of granules, the new species, *Sarmydyus cheni* sp. nov. belongs to the “*subcoriaceus*” group as defined in DRUMONT (2006) which comprises two species : *S. subcoriaceus* (Hope, 1841) and *S. fujishiroi* Drumont, 2006.

*Sarmydyus cheni* sp. nov. is closer to *S. subcoriaceus* which inhabits also the Xizang Autonomous Region in China (DRUMONT & KOMIYA, 2010) but from which it can be directly separated by antenna longer, by the presence of an external apical angle expanded in spine shape on segments 8 to 10 of antenna, by longer spine on the sides of pronotum, by the presence of a distinct and acute spine situated on the apex of the elytra (this is especially the case in male specimen), and by longer and thinner tibia and tarsi.

*S. cheni* sp. nov. may be easily differentiated from *S. fujishiroi* by longer antenna (only reaching  $\frac{5}{6}$ <sup>th</sup> of the length of elytra in *S. fujishiroi*) and more elongated antennal segments, by shiny elytra (which are matte in second half of the elytra length in *S. fujishiroi*), by the presence of a distinct and acute spine present on the apex of the elytra, and by straight, longer and thinner tibia and tarsi.

**Derivatio nominis**

This species is dedicated to Mr. Chang-Chin CHEN (Tianjin, China) who offered the second author lots of material, support and kind help in various ways.

**Distribution**

So far only known from the Xizang (Tibet) Autonomous Region in China but should also maybe occur in North-western part of Yunnan province of China or in the Arunachal Pradesh state in India (which has a border in common border with the Motuo county in Xizang Autonomous Region of China where the new species was found). More investigations in these areas will contribute to better define the distribution of *Sarmyds cheni* sp. nov.

**Biotope and ecology**

Hanmi village is located in the foothills of the southeast Xizang Autonomous Region, China (29°22'00»N - 95°07'40»E), which belongs to Motuo National Nature Reserve (MNNR). The MNNR and surrounding areas represent one of the most important sites for biodiversity in China. Hanmi is a stage between Pai town and to Beibeng (Baibung) township with an altitude of 2100m. The biotope (Fig. 3) consisted of an area of mixed coniferous and broad leaved forest. Every year from June to August is the main rainfall season, with more than half of time in the rain.

The specimens of *Sarmyds cheni* sp. nov. were mainly collected by mercury-vapour lamp (250 Watt), to which the beetle was attracted. In addition, one male has been observed standing on the upper-side of a leaf in the forest at night and another female was dug out from its pupal cell in a rotten trunk.

**Acknowledgments**

We wish to express our sincere thanks to Mr. Chang-Chin CHEN (Tianjin, China) for supporting the second author in the collecting trips and offering us the invaluable specimens used in the present study. Special thanks are due to Mr. Xiao-Dong YANG (Sichuan, China) and Mr. Chao WU (Beijing, China) for collecting specimens and their kind help in various ways during the collecting trip in 2013. We thank Dr. Mei-Ying LIN (IZAS, Beijing, China) who apply for the permission and sending the related specimens to the first author for examination and for her useful suggestion to this study.

**Bibliography**

- DRUMONT, A., 2006.** – Une nouvelle espèce de *Sarmyds* Pascoe, 1867, originaire du Vietnam et de Chine (Coleoptera, Cerambycidae, Prioninae). *Coléoptères* 12 (16) : 219-226.
- DRUMONT, A., 2011.** – Description d'une nouvelle espèce de *Sarmyds* Pascoe de l'île de Sumatra en Indonésie (Coleoptera, Cerambycidae, Prioninae). *Lambillionea*, CXI (1) : 25-30.
- DRUMONT, A. & WEIGEL, A., 2010.** – Description of a new *Sarmyds* species from Yunnan province in China : *Sarmyds loebli* sp. n. (Coleoptera, Cerambycidae, Prioninae). *Les Cahiers Magellanes*, NS (2) : 66-72.
- DRUMONT, A. & KOMIYA, Z., 2010.** – Cerambycidae : Prioninae. Catalogue of species [pp. 86-95]. In LÖBL (I.) & SMETANA (A.). Catalogue of Palaearctic Coleoptera, volume 6. Chrysomeloidea. Eds Löbl I. & Smetana A., Apollo Books, Stenstrup, Denmark, 924 pp.
- DRUMONT, A., SAMA, G. & KOMIYA, Z., 2010.** – Cerambycidae : Prioninae. New nomenclatural and taxonomic acts and comments [pp. 38-42]. In LÖBL (I.) & SMETANA (A.). Catalogue of Palaearctic Coleoptera, volume 6. Chrysomeloidea. Eds Löbl I. & Smetana A., Apollo Books, Stenstrup, Denmark, 924 pp.
- FENG, B. & CHEN, L., 2006.** – A review of genus *Sarmyds* with description of a new species from China (Coleoptera, Cerambycidae, Prioninae). *Acta Zootaxonomica Sinica* 31 (3) : 610-612.
- LAMEERE, A., 1919.** – Coleoptera Longicornia Fam. Cerambycidae subfam. Prioninae. In : WYTSMAN, P. (ed.), *Genera Insectorum*, (172): i+1–189, pls. 1–8.