

# A New Genus of Proctotrupinae (Hymenoptera: Proctotrupidae)

HE Jun-hua<sup>1</sup>, XU Zai-fu<sup>2</sup>

(1. Institute of Insect Science, Zhejiang University, Hangzhou, Zhejiang 310029, China;

2. Department of Entomology, South China Agricultural University, Guangzhou, Guangdong 510642, China)

**Abstract:** A new genus of Proctotrupinae is established to receive *Carinaserphus sinensis*, sp. nov. from Mt. Funiu, Henan Province, China. The new genus is described and compared with related genera. The type specimen is deposited in the Hymenopteran Collection of Zhejiang University, China.

**Key words:** Hymenoptera; Proctotrupidae; new genus; new species; China

**CLC number:** Q969.54<sup>+</sup>8.1

**Document code:** A

**Article ID:** 1000-7482(2007)02-0152-05

The hymenopteran family Proctotrupidae, which includes the subfamilies Austroserphinae and Proctotrupinae, belongs to the superfamily Proctotrupioidea. Members of the Austroserphinae, which has three genera, are confined to the Australian Region and southern South America. Proctotrupinae has twenty-four genera, of which seventeen have species with representatives known from China. In this paper, a new genus of Proctotrupinae is established to receive *Carinaserphus sinensis*, sp. nov., which is described from Mt. Funiu, Henan Province. The type specimen is deposited in the Hymenopteran Collection of Zhejiang University, China.

## *Carinaserphus* He et Xu, gen. nov.

Front wing 5.5 mm in length. Mandible with a single tooth. Clypeus about 2.4 times wider than height. Area between antennal sockets with a small median tubercle. Frons with transverse wrinkles above the antennal sockets. Cheek as long as width of mandible at base. Temple 0.9 times as long as eye in dorsal view. Occipital carina in the middorsal area strong, with high brim. Male flagellum slender, with second segment 5.7 times as long as wide, and tenth segment 5.0 times as long as wide. Mesosoma elongate. Mesonotum (including scutellum) 2.0 times as long as distance between two tegulae. Side of pronotum finely wrinkled and punctato-rugulose, only close to spiracle and lower part smooth. Notaulus impressed on anterior 0.5 of mesoscutum. Mesopleurum covered with hairs except for the center of speculum bare and smooth, with some finely and oblique wrinkling along the front edge of mesopleurum, and with some fine weak horizontal wrinkles below the horizontal groove. Metapleurum with a strong median longitudinal wrinkle, with reticulated ruguloses

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Received date: 2006-12-10

below the wrinkle. Propodeum fully reticulate-rugulose, with a strong and complete median longitudinal carina; posterior surface of propodeum abrupt, angularly separated from dorsal surface by a strong transverse carina; lateral longitudinal carinae strong, meeting transverse carina with crestiform prominence. Spurs of middle and hind tibiae straight. All tarsal claws simple. Hind femur 9.0 times as long as deep. Longer spur of hind tibia 0.33 times as long as metatarsus. Costal vein of radial cell 0.33 times as long as depth of stigma. Second part of radial vein weakly curve. First and second discoidal cells confluent. Nervulus distad of basal vein 0.25 times as long as length of nervulus. Petiole of abdomen 1.85 times as long as its median width in dorsal view. Median longitudinal groove at base of syntergite nearly as long as lateral longitudinal grooves. Lower half of lateral part of syntergite with sparse hairs. Head and mesosoma black; metasoma tinged fiery-red.

Type species: *Carinaserphus sinensis* He et Xu, sp. nov.

*Remarks.* This new genus is very similar to *Phaenoserphus* Kieffer, 1908 and *Proctotrupes* Latreille, 1796 within the Proctotrupinae. It differentiated by the following unique characters: occipital carina strong, with high brim; propodeum with a strong and complete median longitudinal carina; posterior surface of propodeum abrupt, angularly separated from dorsal surface by a prominent transverse carina; lateral carinae strong, meeting transverse carina with a crestiform prominence.

*Etymology.* *Carinaserphus* is composed of *Carina* and *serphus*. “*Carina*” means Carina strong, donotes that occipital carina in the middorsal area strong, with high brim, prominent propodeal transverse carina and meeting strong lateral carina with crestiform prominence; “*serphus*” means “serphid” or “proctotrupid”.

***Carinaserphus sinensis*** He et Xu, sp. nov. (Figs.1~6)

Male. Body length 6.3 mm; front wing 5.5 mm in length.

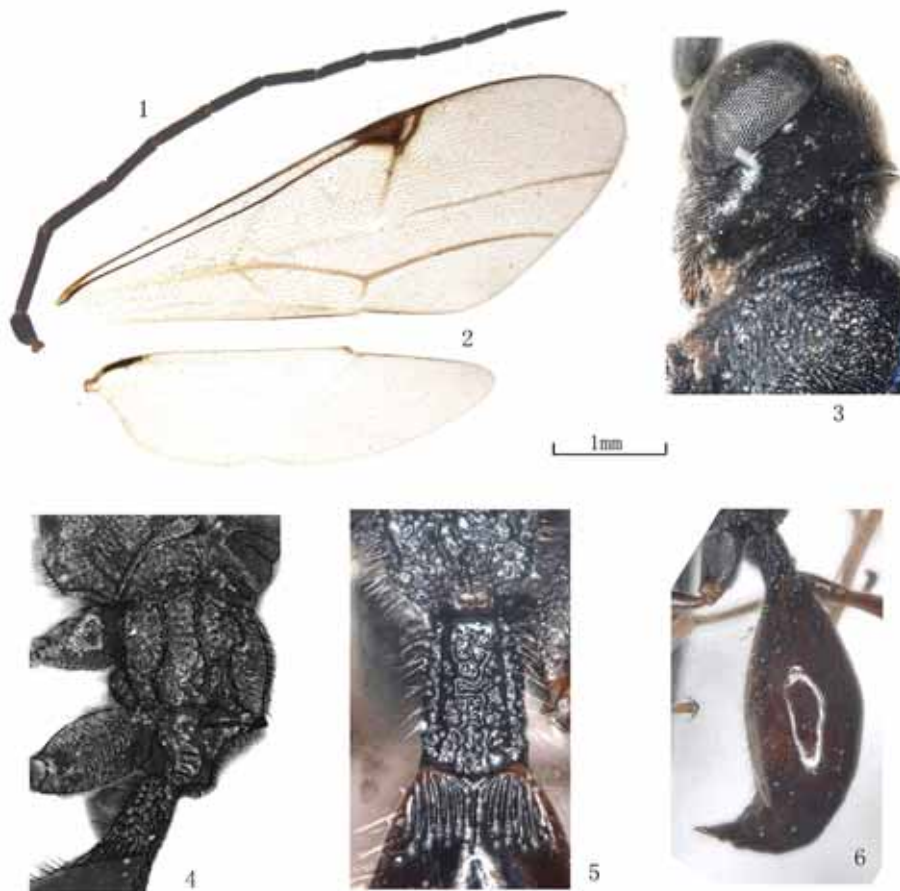
Mandible with a single tooth. Clypeus about 2.4 times as wide as height, with dense, fine setiferous punctures. Face covered with dense, fine setiferous punctures, and its upper part with a tubercle. Frons with transverse wrinkles above antennal socket. Cheek as long as the width of mandible at base. Temple 0.9 times as long as eye in dorsal view. POL: OD: OOL= 17: 11: 19 (100=1 mm). Occipital carina (Fig.3) in the middorsal area strong, with high brim. Genal carina weakly inflection. Antennal flagellum (Fig.1) with second segment 5.7 times as long as wide, and tenth segment 5.0 times as long as wide, eleventh segment 1.35 times as long as that of tenth segment; without distinct tyloids.

Mesosoma elongate. Mesonotum (including scutellum) 2.0 times as long as distance between the two tegulae. Side of pronotum finely wrinkled and punctato-rugulose, only close to spiracle and lower part smooth; front edge of pronotum with a median trifurcate fine sculpture, posterior edge with punctato-reticulate rugulose, and lower hind corner with scrobes. Mesopleuron (Fig.4) covered with dense, fine hairs, except for the center of speculum which bare and smooth; front edge of mesopleuron with fine and oblique sculptures, underside of median horizontal groove with horizontal fine wrinkles. Metapleurum (Fig.4) with a strong median longitudinal wrinkle; anterior half of pleurum above the strong longitudinal wrinkle with weak transverse wrinkles, and posterior half with upper hind corner reticulate rugose and the rest mostly smooth; pleurum below the strong wrinkle with reticulate wrinkles. Propodeum with fully reticulate wrinkles, and a strong and complete median longitudinal carina; posterior

surface of propodeum abrupt, angularly separated from dorsal surface by a strong transversal carina; lateral longitudinal carinae and pleural carina strong, transverse carina meeting lateral longitudinal carina with a crestiform prominence.

Spurs of middle and hind tibiae straight. All tarsal claws simple. Hind femur 9.0 times as long as deep. Longer spur of hind tibia 0.33 times as long as metatarsus.

Stigma of fore wing (Fig. 2) 1.83 times as long as deep. Costal vein of radial cell 0.33 times as long as depth of stigma. First part of radial vein arising vertically from outside of stigma, 0.6 times as long as wide; second part of radial vein weakly curved. Upper part of cubito-cubital crossvein with vein stub. Second part of radial vein weakly curved. First and second discoidal cells confluent. Nervulus distad of basal vein 0.25 times as long as length of nervulus.



Figs. 1~6 *Carinaserphus sinensis* He et Xu, gen. et sp. nov.

1. antenna; 2. wing; 3. head (lateral view); 4. metapleuron, propodeum and petiole (lateral view); 5. petiolar and basal part of syntergite; 6. metasoma (lateral view). 1, 2: 1.0 × scale-line; 3: 6.0 ×; 4: 4.0 ×; 5: 8.0 ×; 6: 2.5 ×

Petiole of abdomen (Fig. 5) 1.85 times as long as its median width in dorsal view, with basal part slightly narrower than distal part, its upper face reticulate rugose and with two incomplete longitudinal wrinkles. Median longitudinal groove at base of syntergite reaching 0.6 times distance of first pair of thyridia, with five lateral longitudinal grooves on each side of median groove; lateral longitudinal groove nearly as long as median longitudinal groove. First pair of thyridia very weak, each 1.4 times as wide as long, separated from each other by about 2.6 times width of a thyridium. Clasper narrowly triangular.

Head and thorax black. Palpi yellow. Mandible brown-reddish except for the black base. Tegulae brown-reddish. Abdomen fiery-red, with petiole and base of harpago black. Coxae, dorsal side of trochanters and femora black brown; ventral side of trochanters and femora fiery-red; tibiae and tarsi fulvus, apex of hind tibiae at 0.4 tinged with light brown. Wing subhyaline, tinged with grey-yellow, strong vein black brown; weak vein achromatous, yellow or light fulvous.

Female. Unknown.

Host. Unknown.

Holotype: , Mt. Funiu, **Henan** Province, 33.6°N, 111.9°E, 11- -1996, by CAI Ping, No.973519.

**Acknowledgements:** We wish to express our grateful appreciation to Prof. CHEN Xue-xin and Assoc. Prof. MA Yun for their kindly help during the study, and to Mr. Keith Wilson and Dr. Matt Buffington for their valuable review on the manuscript.

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## 细蜂亚科一新属一新种

(膜翅目:细蜂科)

何俊华<sup>1</sup>, 许再福<sup>2</sup>

(1. 浙江大学昆虫科学研究所, 浙江 杭州 310029;

2. 华南农业大学资源环境学院昆虫学系, 广东 广州 510642)

本文记述在我国河南省伏牛山发现的细蜂科 Proctotrupidae 细蜂亚科 Proctotrupinae 1 新属新种: 中华强脊细蜂 *Carinaserphus sinensis* gen. et sp. nov.。描述了其形态特征并与近似属做了比较。模式标本存浙江大学寄生蜂标本室。

强脊细蜂属 *Carinaserphus* He et Xu, 新属

前翅长 5.5 mm。上颚单齿。唇基宽为长的 2.4 倍。颜面上方有一小瘤。额在触角窝上方具横皱。颊长为上颚基宽的 1.0 倍。背观上颊长为复眼的 0.9 倍。后头脊强, 有檐边; 背中央突出。雄性触角细长, 第 2、10 鞭节长分别为宽的 5.7 倍和 5.0 倍; 鞭节无角下瘤。胸部狭长, 中胸背板(包括小盾片)长为翅基片间宽的 2.0 倍。前胸背板侧面满布细皱和夹点刻皱, 仅近气门处和背板下方光滑。盾纵沟伸至中胸盾片中央。中胸侧板除镜面区中央光滑外, 满布细毛; 前缘部位具细而斜刻条, 沿中央横沟下方具水平细刻皱。后胸侧板中央有一强纵皱, 强纵皱下方侧板具小室状网皱。并胸腹节满布小室状网皱; 中纵脊强而完整; 后表面陡斜, 与背表面之间有角度且有强横脊分开; 侧纵脊和外侧脊均强, 与横脊相接处呈棘状突出。中后足胫节距直; 所有跗爪简单; 后足腿节长为宽的 9.0 倍; 后足胫节长距长为基附节的 0.33 倍。前翅径室前缘脉长为翅痣宽的 0.33 倍; 径脉第 2 段稍弯曲; 第 1、2 盘室愈合; 小脉在基脉外方, 其距为小脉长的 0.25。背观腹柄长为中宽的 1.85 倍。合背板基部中纵沟及侧纵沟大致等长。合背板侧方下半部具稀疏的毛。头部和胸部黑色; 腹部带火红色。

属模式种: 中华强脊细蜂 *Carinaserphus sinensis* He et Xu, sp. nov.。

鉴别特征: 本新属隶于细蜂族 Proctotrupini, 与光胸细蜂属 *Phaenoserphus* Kieffer, 1908 和细蜂属 *Proctotrupes* Latreille, 1796 最为相近, 最主要特征在于后头脊强, 背中央有檐边状突出; 并胸腹节中纵脊强而完整, 后表面陡斜, 与背表面之间有角度且有强横脊分开, 侧脊强, 与横脊相接处呈脊突状突出。

注: 属名 *Carinaserphus* 为 *Carina*+*serphus* 组合而成, “*Carina*”意为“脊强”, 表示后头脊强, 中央呈檐状突出; 并胸腹节横脊强, 且与侧脊相交处呈脊状突出; “*serphus*”意为“细蜂科过去之名称”。

中华强脊细蜂 *Carinaserphus sinensis* He et Xu, 新种 (图 1~6)

正模: , 河南伏牛山, 1996- -11, 蔡平, No.973519。

关键词: 膜翅目; 细蜂科; 棘腰细蜂属; 新属; 新种; 中国