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Two interesting species of velvet ants from China (Hymenoptera, Mutillidae)

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Abstract

The females of two species with a transversal propodeal row of denticles from subfamily Mutillinae are studied. Genus *Ctenotilla* BISCHOFF, 1920 is newly recorded in China. *Ctenotilla guangdongensis* sp. nov. and hitherto unknown female of *Zeugomutilla* CHEN, 1957 are described.

Zusammenfassung

Die Weibchen von zwei Arten mit einer propodealen Zähnnchen-Querreihe aus der Unterfamilie Mutillinae werden untersucht. Die Gattung *Ctenotilla* BISCHOFF, 1920 wird erstmals in China nachgewiesen. *Ctenotilla guangdongensis* sp. nov. sowie bisher unbekannte Weibchen von *Zeugomutilla* CHEN, 1957 werden beschrieben.

The mutillid fauna of China comprises 141 species in 14 genera (CHEN 1957; TSUNEKI 1972; LELEJ 1985). The real number of species will be increased, especially after collecting and studying small mutillid wasps. In summer of 1990 I

have studied the collection of South China Agricultural University, Guangzhou, and collected some mutillid wasps in Guangdong Province. Among the specimens there are two females from subfamily Mutillinae with a transversal propodeal row of denticles. For the identification of these interesting specimens additional material in Zoological Museum of Moscow University (ZMMU) and Institute of Biology and Pedology, Vladivostok (IBPV), were studied.

Genus *Ctenotilla* BISCHOFF, 1920

Type species: *Mutilla pectinifera* ANDRE, 1893 = *Mutilla caeca* RADOSZKOWSKI, 1879, by original designation.

Remarks: After careful study I found that new species (described below) belong to the group of genera which comprises *Ctenotilla* (Palearctic Region), *Cephalotilla* BISCHOFF, 1920, *Chaetomutilla* NONVEILLER, 1978, *Mimecomutilla* ASHMEAD, 1903 (Ethiopian Region). Females of these genera have transversal a row of denticles or tubercles (*Mimecomutilla*) on posterior margin of mesosoma, basal tubercle on prementum, mandibles without basal tooth within; males of ones have well developed basal tubercle on prementum, segment 3 of antenna 0.5 times and less shorter than segment 4, sternite 8 (hypopygium) with lateral tubercles or long bristles.

The female of the new species is very similar to that of genus *Chaetomutilla* described by NONVEILLER (1978) from South and East Africa. In other hand the males of *Chaetomutilla* and *Ctenotilla* have elongated lateral part of pronotum, penial valvae beneath with acute preapical lobe, very broad volsellae and probably *Chaetomutilla* is a junior synonym of *Ctenotilla*. I think that it is better to regard the new species as *Ctenotilla*. Probably the genus *Ctenotilla* is widely distributed in Oriental Region too (thanks to Dr. B. PETERSEN, Kobenhavn, I have studied female and male of *Ctenotilla porcella* (TURNER, 1911), from Sri Lanka).

***Ctenomutilla guangdongensis* sp. nov.**

(fig. 1)

Holotype: Female. China: Prov. Guangdong, Ding Hu Shan, 9.VIII.1956, Mo Monyi (in South China Agricultural University, Guangzhou).

Paratype: 1 female. China: Prov. Guangdong, Chebaling, open glade with a loess soil near the river, 21.VI.1990, A. LELEJ (IBPV).

Female: Body 6.5 - 8.5 mm long. Head with rounded posterior angles, wider than pronotum for 1.2 times. Eyes moderately convex. Clypeus more or less gently sloping with a small basal median tubercle, anterior margin weakly rounded without any tubercles. Ratio shortest distance between inner margin of eyes : width of head = 0.6. Ratio height of eye : height of gena (head in lateral view) = 1.0.

Genae without any tubercles in posterior margin, with a weak longitudinal carina beneath. Hypostomal carina with one tooth more near to the base of mandible. Prementum with a weak but distinct basal tubercle. Mandibles curved with a small preapical tooth within. Antennal crobes without acute denticle. Segment 3 of antenna 1.4 times longer than segment 4, segment 4-6 weakly emarginate beneath.

Lateral margins of mesosoma slightly convergent to propodeal spiracles and then weakly divergent. Ratio length of mesosoma (from anterior pronotal margin to base of metasoma) : minimal width of mesosoma (before propodeal spiracles) = 1.5. Scutellar scale indistinct. Posterior slope of propodeum separated from dorsal surface by transversal row of eight/nine denticles (one median is larger in size). Anterior margin of propleura is remarkably enlarged. Mesopleural carina well developed and reaching pronotal spiracle.

Ratio width of gastral segment 1 : width of propodeum = 0.8. Gastral sternite 1 with a well developed anteriorly elevated carina. Pygidial area occupying most part of tergite 6 and apical part of sternite 6; its surface granulated with lateral and apical carinae.

Dorsum of head and mesosoma with yellowish recumbent hairs sparsely and long erect ones intermixed. Genae and legs with whitish recumbent and suberect hairs. Gastral tergite 4 and 5 and anterior part of tergite 2 with black recumbent hairs densely and few long yellowish erect hairs intermixed. Mesopleural carina with a row of very long white hairs sparsely. Posterior margin of gastral tergite 1 and sternite 2-5 with yellowish fringe. Lateral parts of tergite 6 with a fascicle of yellowish hairs. Light gastral design consists of broad yellowish interrupted band on posterior half of tergite 2 and yellowish indistinctly interrupted band on tergite 3. Felt lines dirty yellow.

Punctures on frons, vertex and genae dense separated; on dorsum of mesosoma larger, confluent; on gastral tergite 2 dense, smaller than on head; on gastral sternites sparse, more rare than on head. Head, antennae and gaster black, clypeus and antennal scrobes brownish red, mandibles brownish red with dark apex; legs brown with redish tarsi; mesosoma ferruginous red.

Male: Unknown. I suppose that the male of *C. guangdongensis* sp. nov. will have antennal segment 3 more than 2 times shorter than segment 4, mandibles without tooth beneath, prementum with a basal denticle or tubercle and sternite 8 with lateral tubercles or denticles.

Remarks: The female of *C. guangdongensis* sp. nov. is easily distinguished from the female of *C. caeca* (RADOSZKOWSKI, 1879) and *C. porcella* (TURNER, 1911) in having broad light interrupted band on gastral tergite 2 (in mentioned species narrow

light non interrupted band on posterior margin of tergite 2). The female of the new species is very similar to the females of genus *Chaetomutilla*, especially to *C. fornasinii* (GRIBODO, 1894) from South and East Africa; it is distinguished from the latter by the broader gastral segment 1.

Genus *Zeugomutilla* CHEN, 1957

Type species: *Zeugomutilla pycnopyga* Chen, 1957, by original designation.

Remarks: The genus is known only from the male having long antennal segment 3 (equal to segment 4, fig.7) and transversal carina on sternite 8; it belongs to tribe Trogaspidiini. In this tribe the male of *Zeugomutilla* is similar to that of *Artiotilla* INVREA, 1950 and *Tropidotilla* BISCHOFF, 1920 in having simple scutellum and mandibles without large tooth beneath. The female of *Zeugomutilla* was unknown for CHEN (1957). After careful study I suppose that *Pristomutilla saepes* CHEN, 1957 (known only from the female) may be the female of genus *Zeugomutilla* and the opposite sex of *Z. pycnopyga*. This opinion is based on:

1. The female described by CHEN (1957) as *saepes* really belongs to tribe Trogaspidiini. It has no pygidial area, has no comb on fore tarsi, has basal tooth on mandibles within and is considerably distinguished from the females of *Pristomutilla*. In tribe Trogaspidiini the female of *saepes* is similar to that of *Artiotilla* and *Macromyrme* LELEJ, 1984 in having two light spots on gastral tergite 2 and basal tooth on mandibles within; it is easily distinguished from the latter by the mesosoma with a transversal propodeal row of denticles.

2. The holotypes, the male of *Z. pycnopyga* and the female of *P. saepes* were collected both in Province Fujian, Shaowu, China (CHEN 1957).

3. The male of *Z. pycnopyga* has the head with a posterior margin convexly curved (fig.3); the female of *P. saepes* has such posterior margin of head too but less convex (fig.2).

4. The female of *P. saepes* has mandible with basal tooth within (fig.4); the male of *Z. pycnopyga* has mandible with additional enlarged basal tooth within too (fig.5).

Zeugomutilla pycnopyga CHEN, 1957

(figs 3, 5, 7)

Zeugomutilla pycnopyga CHEN, 1957: 157, male (holotype: male, China, Fujian, Shaowu, Suipeichieh, 4.-6.VII.1943).

Specimens examined: China, Prov. Yunnan, 30 km SW from Jinping, 370 m alt., 17.IV.1956, HUANG Ke-ren (ZMMU).

Distribution: China (Fujian, Yunnan).

***Zeugomutilla saepes* (CHEN, 1957) comb nov.**

(figs 2, 4, 6)

Pristomutilla saepes CHEN, 1957: 158, female (holotype: female, China, Fujian, Shaowu, Kuhsienchieh, 1944).

Specimens examined: China, Prov. Guangdong, Guangzhou, 9.VI.1990, A. LELEJ (IBPV).

Distribution: China (Fujian, Guangdong).

Remarks: Finally the problem concerning the sex combination of these species will be solved after studying additional material.

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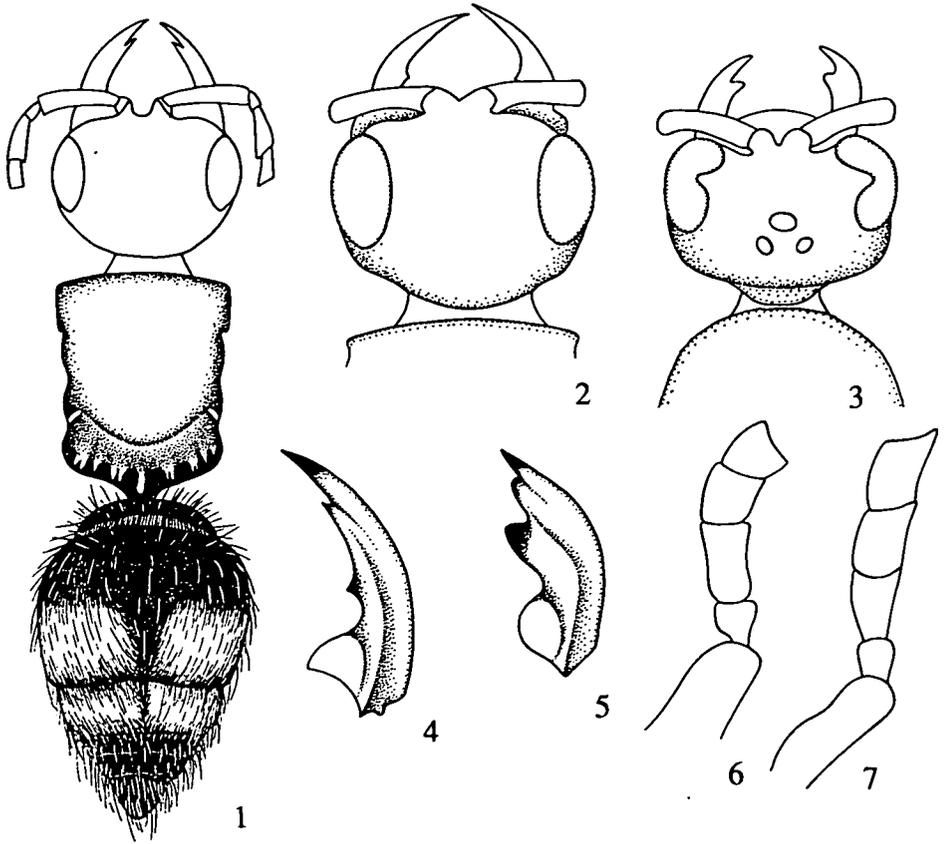


Fig.1: *Ctenotilla guangdongensis* sp. nov., female paratype.

Figs 2, 4, 6: *Zeugomutilla saepes* CHEN, 1957, female. 2) head; 4) mandible; 6) antennal segments 1-5.

Figs 3, 5, 7: *Zeugomutilla pycnopyga* CHEN, 1957, male. 3) head; 5) mandible; 7) antennal segments 1-5.

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