

Rediscovery of *Cerapachys sauteri* Forel, 1913 (Insecta: Hymenoptera: Formicidae) from Taiwan, with Notes on the Taiwanese Species of the Genus *Cerapachys*

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Abstract. The ant genus *Cerapachys* occurring in Taiwan is briefly revised. Female and male of *C. sauteri* Forel are described for the first time. A key to the Taiwanese species including *C. biroi* new to Taiwan is also given.

Introduction

Up to now three cerapachyine species, *C. sauteri*, *C. longitarsus* and *C. reticulatus*, have been known from Taiwan (Forel, 1913; Emery, 1923; Brown, 1973). Of these species, *C. sauteri* was originally described by Forel in 1913 on the basis of the worker from Talin. However, this species has not been recorded since the Forel's description and the type specimen is not available (Brown, 1973).

Recently, we were able to examine worker, female and male specimens of *C. sauteri* and worker specimens of *C. biroi* which is new to this island. In this short paper we briefly review the Taiwanese species of the genus *Cerapachys*, describing the female and male of *C. sauteri*. For the diagnosis of this genus, see Brown (1973).

Before going further we wish to express our hearty thanks to Mr. Y. Hashimoto (Kobe University) for preparing scanning electron micrographs.

Key to the Taiwanese species of *Cerapachys* based on the worker (Worker of *C. reticulatus* is not known.)

1. Petiole with strong dorsolateral margins; antennae 12-segmented.....
..... *C. longitarsus* (Mayr)
- Petiole with dorsum rounding into sides, without dorsolateral margins..... 2
2. Sculpture of head, trunk and petiole strongly costate predominantly; antennae 12-segmented.....*C. sauteri* Forel
- Sculpture predominantly punctate; antennae 9-segmented.....*C. biroi* Forel

Cerapachys sauteri Forel, 1913

(Figs. 1–11)

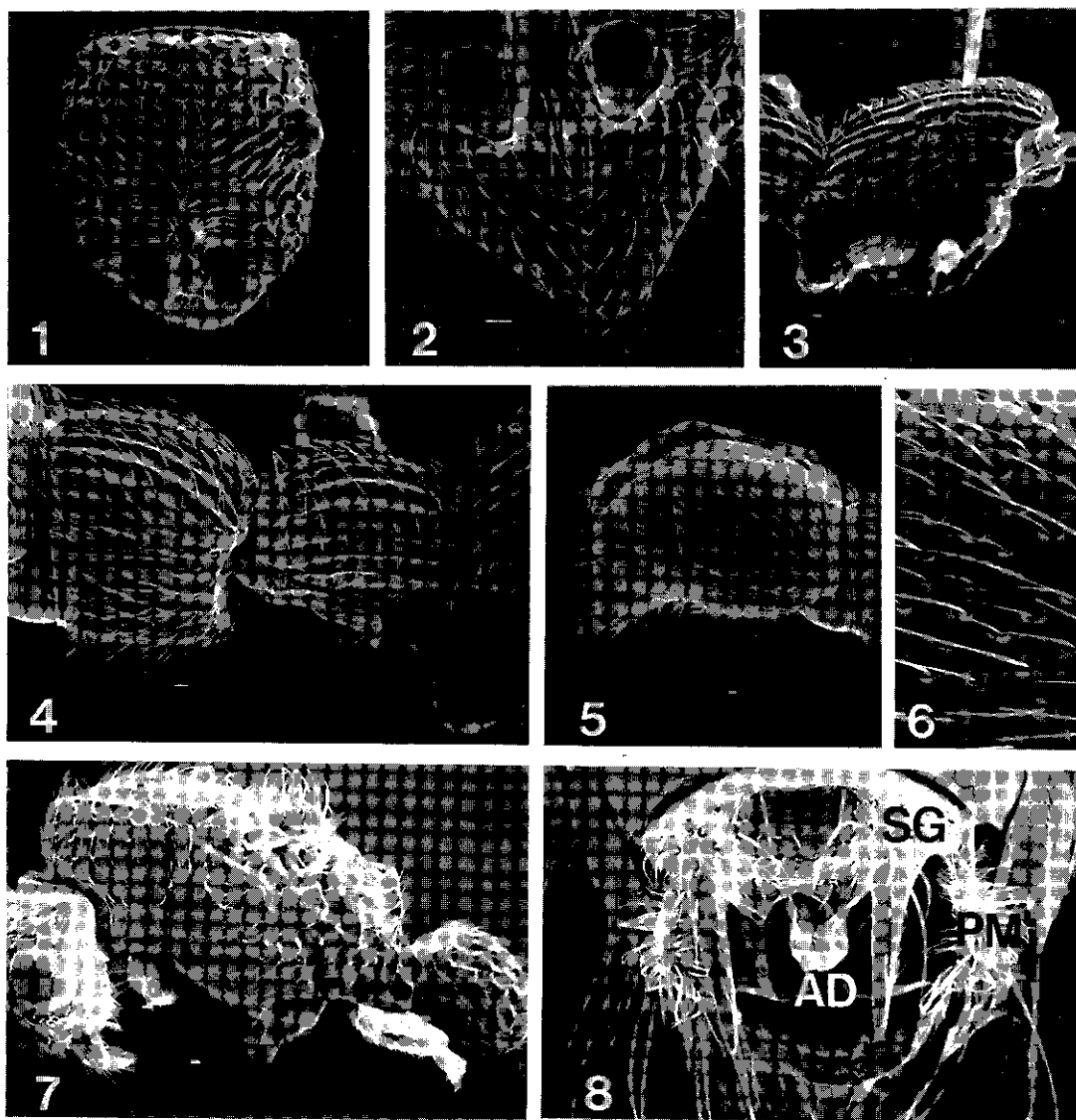
Cerapachys sauteri Forel, 1913, p. 187.

Description of female. Head length (HL) 1.20–1.30 mm; head width (HW) 1.20–1.25 mm; scape length (SL) 0.80–0.85 mm; cephalic index (CI) 96–100; scape index (SI) 67–68; Weber's length of trunk (WL) 2.25–2.30 mm; dorsal truncal width (DTW) 1.10–1.15 mm; petiole length (PL) 0.85–0.88 mm; petiole height (PH) 0.85–0.90 mm; dorsal petiole width (DPW) 0.75–0.80 mm; total length (TL) 6.5–7.0 mm. (Three individuals were measured.)

Head rectangular, with almost parallel sides and straight occipital border. Mandibles subtriangular, with 9 or 10 minute indistinct denticles. Anterior border of clypeus almost straight. Antennae with 12 segments; scape short and clavate, 0.25 mm in maximum width; segment II through XI each broader than long; segment XII $1.6 \times$ as long as broad. Eyes large and convex, 0.28 mm in maximum diameter.

Trunk massive, dorsal outline weakly convex; posterior corner of propodeum dully angulate, declivity of propodeum strongly concave. Petiole squariform, with straight anterior border and convex dorsal border. Subpetiolar process low, with a blunt anterodorsal angle. Seen from above, petiole squariform, as broad as long, anterior border straight; postpetiole trapezoidal, broadest at posterior border, $1.18 \times$ as broad as long. Fore wing 5.0 mm in length, r-m and m-cu cross veins present. Middle and hind tibiae each with a pectinate spur and a simple spur.

Head strongly costate transversely; trunk,



Figs. 1-8. SEM pictures of *Cerapachys sauteri* Forel.—1: Head, female. 2: Mandible, female. 3: Trunk, worker. 4: Petiole and postpetiole, worker. 5: Gaster, worker. 6: Surface structure of first gastric tergite, worker. 7: Trunk and petiole, male. 8: Terminal part of gaster, male, ventral view (SG, subgenital plate; PM, paramere; AD, aedeagus).

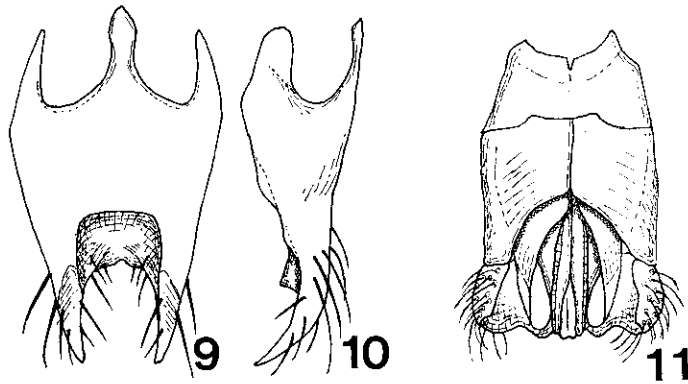
petiole and postpetiole strongly costate longitudinally; gaster subopaque and moderately punctate. Antennae, mandibles and legs opaque and weakly shagreened. Suberect hairs abundant, longest hair of trunk about 0.23 mm in length.

Color black; mandibles, antennae and legs blackish brown to brown.

Description of male. HL 1.10-1.15 mm; HW

1.23-1.25 mm; SL 0.40 mm; CI 109-111; SI 32-33; WL 2.30-2.45 mm; DTW 1.20-1.40 mm; PL 0.85 mm; PH 0.75-0.90 mm; DPW 0.75-0.78 mm; TL 6.5-7.0 mm. (Three individuals were measured.)

Head, excluding eyes, narrower than trunk; occipital border convex in full face view. Mandibles subtriangular, with 7 or 8 minute indistinct denticles. Anterior border of clypeus straight.



Figs. 9–11. Male genitalia and subgenital plate of *Cerapachys sauteri* Forel.—9: Subgenital plate, ventral view. 10: Same, lateral view. 11: Genitalia, ventral view.

Antennae with 13 segments; scape short, $1.53 \times$ as long as broad; segment II broader than long; segment III to XI each almost as long as broad; terminal segment $1.55 \times$ as long as broad. Eyes large and convex, 0.43 mm in maximum diameter. Ocelli in a compact triangle, anteromedian ocellus 0.15 mm in maximum diameter.

General form of trunk as shown in Fig. 7. Petiole longer than high, with straight anterior border and convex dorsal border. Subpetiolar process low, with a blunt anterodorsal angle. Seen from above, petiole squariform, slightly longer than broad; postpetiole trapezoidal, broadest at posterior border, $1.14 \times$ as broad as long. Wing venation as in female, length of fore wing 5.2 mm. Middle and hind tibiae each with a pectinate spur and a simple spur. Subgenital plate as shown in Figs. 9 and 10; genitalia as in Fig. 11.

Head strongly costate transversely. Pronotum and mesoscutellum coarsely punctate; mesoscutum smooth and shining, with V-shaped notauli; propodeum, petiole and postpetiole strongly costate longitudinally. Gaster shining and moderately punctate. Suberect hairs abundant; longest hair of trunk about 0.28 mm in length. Color black; mandibles, antennae and legs blackish brown to brown.

Worker. Three workers with following dimensions and indices: HL 1.20–1.25 mm; HW 1.14–1.17 mm; SL 0.80–0.85 mm; CI 91–95; SI 70–73; WL 1.95–2.00 mm; DTW 0.95–1.00 mm; PL 0.80–0.85 mm; PH 0.73–0.75 mm; DPW 0.73–0.75 mm; TL 6.5–7.0 mm.

Material examined. Six females, 6 males, 3

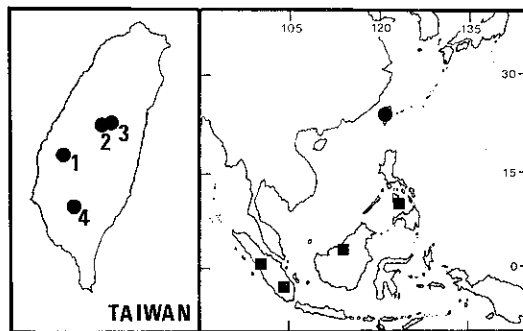


Fig. 12. Distribution of the *crawleyi* group of *Cerapachys*. ●; *C. sauteri*, ■; *C. crawleyi*. 1: Talin, Chai Hsien (Type locality). 2: Nanshan-chi, Nantou Hsien. 3: Wushe, Nantou Hsien. 4: Liuguei, Kaohsiung Hsien.

workers, Nanshan-chi, Nantou Hsien, 14-VIII-1985, M. Terayama leg.; One worker, Liuguei, Kaohsiung Hsien, 17-VIII-1987, S. Kubota leg.; One female, 4 males, 3 workers, Wushe, Nantou Hsien, 22-VIII-1987, A. Kawazoe, H. Sakai and M. Terayama leg.

Other locality previously recorded. Talin, Chai Hsien (=Taiholin).

Distribution. Taiwan.

Remarks. This species belongs to the *crawleyi* group of Brown (1973), which is characterized by the strongly costate sculpture and the 12-segmented antennae. Among the *crawleyi* group, which consists of only two species, this species is easily distinguished from the other species, *C. crawleyi* Wheeler, by the punctate gaster. The distribution of *crawleyi* group is mapped in Fig. 12.

Cerapachys biroï Forel, 1907

Cerapachys biroï Forel, 1907, p. 7.

Cerapachys silvestrii Wheeler, 1909, p. 269.

Cerapachys sinensis Wheeler, 1928, p. 3.

Cerapachys seini Mann, 1931, p. 440.

Cerapachys ierensis Weber, 1939, p. 94.

Material examined. Six workers, Chipen, Taitung City, 21-VII-1282, M. Terayama leg.

This is the first record of this species from Taiwan.

Distribution. Widely distributed in the Oriental region, and also introduced to Pacific islands and West Indies.

Cerapachys longitarsus (Mayr, 1878)

Lioponera longitarsus Mayr, 1878, p. 667.

Lioponera longitarsus var. *australis* Forel, 1895, p. 422.

Lioponera parva Forel, 1900, p. 330.

Lioponera bicolor Wheeler & Chapman, 1925, p. 54.

Phyracaces pygmaeus Clark, 1934, p. 26.

Cerapachys longitarsus: Brown, 1973, p. 181; 1975, p. 23.

No additional material was available.

Localities previously recorded. Henchun, Pingtung Hsien (=Kankau); Anping, Tainan City (=Anpin).

Distribution. India to the Philippines, North Australia.

Cerapachys reticulatus Emery, 1923

Cerapachys reticulatus Emery, 1923, p. 60.

No additional material was available. This species is known only by winged queen.

Locality previously recorded. Zhuqi Xiang, Chiai Hsien (=Suisharyo).

Distribution. Taiwan.

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Cerapachys sauteri Forel の再発見および台湾産 *Cerapachys* 属について

寺山 守・久保田敏・酒井春彦・川添昭夫

Cerapachys sauteri Forel, 1913 は台湾から職蟻によって記載されたアリであるが、記載以降、本種の報告はなく、また模式標本も所在不明の状態であった。今回新たに本種の職蟻とともに雌、雄を検することができたので、これらの記載を行った。また本種が Brown (1973) の *crawleyi* グループに属することを確認するとともに、本グループの分布図を示した。さらに *C. biroï* Forel を台湾から初めて記録するとともに、台湾産 *Cerapachys* 属の種の検索表を提供した。

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