

On the New Species, *Myrmica cadusa*, from Korea (Hymenoptera: Formicidae)

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One new species of the genus *Myrmica* was found from Mt. Moak in Chonbuk, Korea. It was named as *Myrmica cadusa* n. sp. on the basis of external shape of the antennal socket, which is jar-shaped. Accordingly Korean *Myrmica* now includes 13 species in total.

The genus *Myrmica* of the subfamily Myrmicinae varies in size and habitat. They are robust, deliberate-moving ants depending on, nesting in stumps, under stones, or banks. Colonies are relatively small with individuals numbering from a few hundreds to about 5,000 species. They forage on the ground surface (Collingwood, 1979). Their distinct morphological characters are as follows: head oval, clypeus rounded, frontal lobes prominent; alitrunk with pronotum rounded antero-laterally, well defined mesopropodeal furrow and, in most species, strongly developed propodeal spines; petiole with two large nodes - the petiole with a stout antero-ventral tooth and the postpetiole which, rubbed against the fine transverse striae on the first segment, gives an audible stridulation; all tibiae spurs are distinctly pectinate except in a very few semi-parasitic species (Boven, 1959; Bernard, 1968; Collingwood, 1958, 1979, 1981; Bolton & Collingwood, 1975; Elmes, 1991; Kim, 1963, 1970; Kutter, 1977; Morisita et al., 1992).

The first Korean species, *M. ruginodis*, was reported in 1912 by Karawajew from Wonsan (Teranishi, 1931). After that additional species were reported by Teranishi (1940), Kim (1963, 1970), Kim and Kim (1982, 1983), and Ryu (1994).

Upon examining the specimens collected from Mt. Moak in Chōnbuk from 1993 to 1995, one species of *Myrmica* was found and described as a new species, *Myrmica cadusa*.

Materials and Methods

The materials for this paper were from Mt. Moak, Chōnbuk. As soon as they were collected, they were fixed in alcoholic Bouin's solution (150 ml of 80% ethanol, 15 ml of formaldehyde, and 1 g of picric acid), and transferred 2-3 d later to 85% ethanol. Dried

specimens were examined microscopically, using the Wild M8 stereozoom-microscope, and identified on comparison with the voucher specimens of the genus *Myrmica* from Elmes and Collingwood in Great Britain, Onoyama in Japan, Baroni-Urbani in Switzerland, and Rigato in Italy. In order to show the confident taxonomic position, the new taxon was compared with the closely related species, *M. sulcinodis*.

Description

Myrmica cadusa n. sp.
(Fig. 1A-F)

Body reddish brown to dark brown; mandibles, antennae and legs light brown, with longitudinal furrows; brownish yellow, erect hairs present all over (Fig. 1A).

Head dark-reddish brown, length same as width. Mandibles brownish yellow, teeth black and six in number, larger toward the end. Clypeus dark brown, large number of furrows and erect hairs distributed, and occipital margin protruded, anterior intercarinal margin not deeply concaved (Fig. 1B). Frontal triangle subside (Fig. 1B). Compound eyes dark brown and protruded. Antennae 12 segments with a indistinct club of 4 segments. Antennal scape abruptly curved near the base, without toothlike or lamellar outgrowth and extending backward beyond posterior area of head. Antennal lobes with distinct jar because of frontal lobes connected by protrudent clypeus posterior margin (Fig. 1C).

Thorax dark-reddish brown, connected area between pronotum and mesonotum indistinct in dorsal view. A pair of oval spiracles present in propodeum. Propodeum reddish brown, and a pair of spines with horizontal stripe between them. Direction of spines back-upward in lateral view (Fig. 1D-E).

Petiole and postpetiole dark-reddish brown with distinct furrows. Petiole high with long anterior face and rounded steeply sloped dorsal area never truncate

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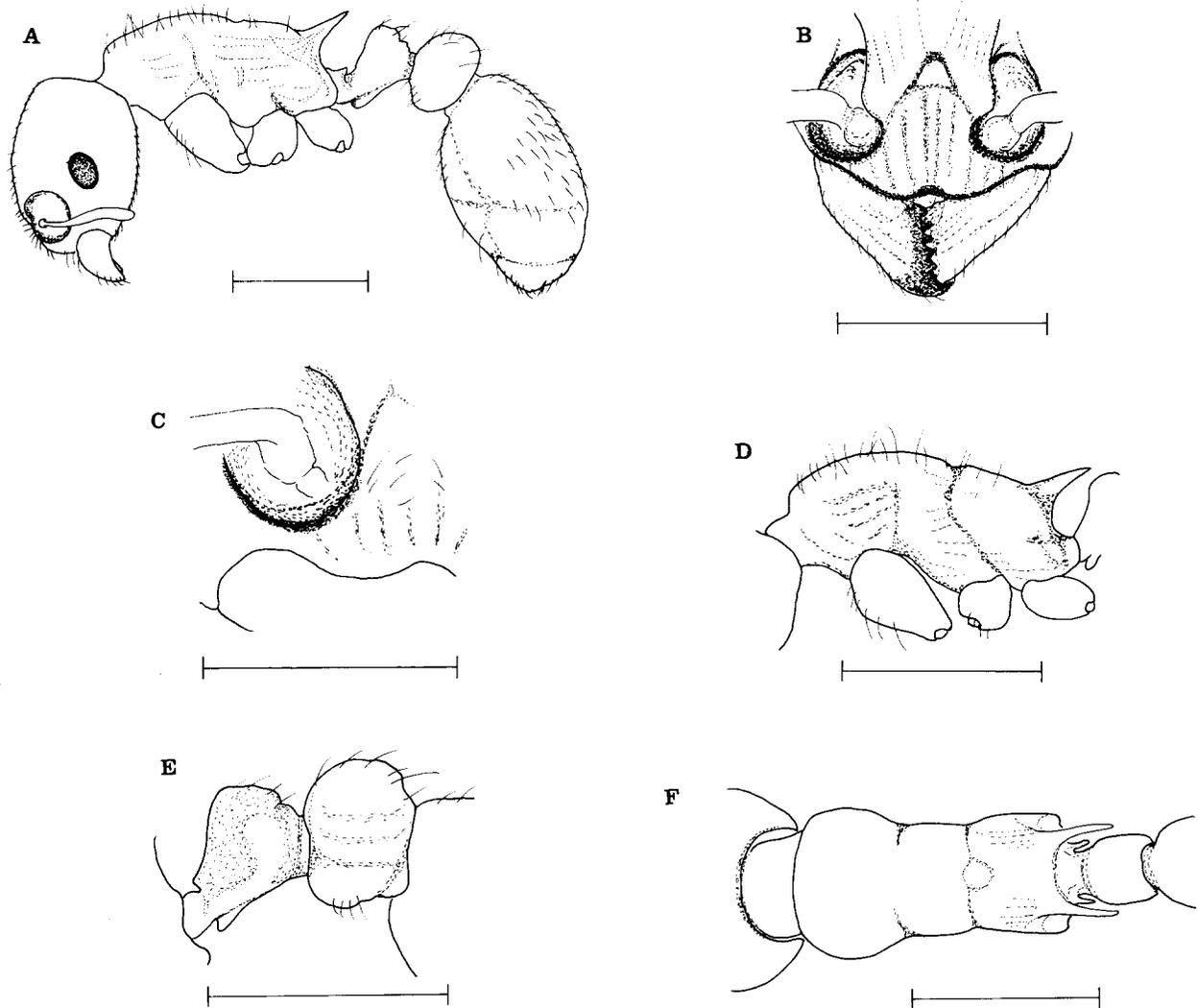


Fig. 1. Contour of *Myrmica cadusa* n. sp. A, Profile view of whole body; B, Frontal view of frons, clypeus and mandibles; C, Antenna socket and scape; D, Profile view of thorax; E, Profile view of petiole; F, Dorsal view of thorax. Scale bars=1 mm.

(Fig. 1E and F). Postpetiole width larger than length and two times as petiole width in dorsal view. Brownish yellow and erect hairs present except in dorsal area of petiole (Fig. 1F).

Abdomen dark brown and lustrous, and brownish yellow, erect hairs present irregularly on each tergite.

Holotype: worker, Mt. Moak, Chŏnbuk, 24 V 1995 (Kim JH and SJ Park).

Paratype: 20 workers, Mt. Moak, Chŏnbuk, 24 V 1995 (Kim JH and Park SJ). They are deposited in the Division of Biological Sciences, Wonkwang University.

Remarks

Though this species resembles *M. sulcinodis*, they can be separated by the following characters:

M. sulcinodis; Scape insertion looks like a distinct jar because frontal lobes are connected by posterior margin of protrudent clypeus. Clypeus little concaved. Body color distinctly bicolored, head and thorax dark-reddish brown, abdomen dark brown to dark.

M. cadusa n. sp.; Scape insertion indistinct because posterior margin of clypeus is not protruded. Clypeus not concaved. Body color distinctly bicolored, head and abdomen dark brown, thorax light-reddish brown.

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