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Korea (Hym., Formicidae)

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摘 要

왕개미屬(*Camponotus*)의 1 新種이 제주도 산방굴사 주변에서 採集확인되었기에 *Camponotus jejuensis* n.sp 로 명명 기재하여 보고하며 走査電子顯微鏡의 形質도 추가하여 기재하였다. 한국산 왕개미속은 모두 9 종이 된다.

INTRODUCTION

Genus *Camponotus* is a world wide genus with a large number of species belonging to the subfamily Formicinae. There have been several works on *Camponotus* from Korea(Teranishi 1940 ; Kim, 1963, 1970)

In the Memorial Volume(1940) of Teranishi two species of this genus were reported. Thereafter six species were reported in "the Hymenoptera of Korea" and "the Illustrated Encyclopedia of Fauna and Flora of Korea.(Insecta)" by Kim.

In consequence of examining collections from Cheju-do during summer in 1985, the authors have found one new species of *Camponotus* and it is described as a new species, *C. jejuensis* Kim et Kim in addition to the ant fauna of this locality.

MATERIALS AND METHOD

Materials for the present paper were derived from

the vicinity of Sanbanguksa, Cheju-do. All of them were fixed in alcoholic Bouin's solution for two or three days. They were removed to eighty five percent ethanol to preserve them and were examined and described under the stereozoom microscope(CIT-OVAL 2, Carl Zeiss aus Jena). On the basis of scanning electron microscopic characters it was analyzed and described also, In this paper the used SEM was Jeoul JSM T-300. Authors suggest that the SEM could revolutionize taxonomic procedures in ants. Firstly it will allow the testing and refinement of existing classifications by revealing characters otherwise not visible, yet valuable as phylogenetic markers. Because nonmyrmecologists worry about holotype coated with gold for photographing, Taylors(1970) discussions are introduced as follows.

"Use of holotypes for SEM photography has one possible controversial aspect, namely that they would need to be thinly coated for study with an electrically conducting materials, usually gold, which is opaque to light. The-colour, patterns of colouration,

and transparent structures would thus be obscured. We consider this a minor advantage since so much is gained through portrayal of other characters by the SEM, and colour can be objectively described using comparator charts."

DESCRIPTION

Camponotus jejuensis n. sp.

Body length up to 3.3mm. Head black and frons, gena, clypeus, mandible, scape and flagellum brownish yellow. Pronotum and legs brownish yellow also. Mesonotum, metanotum, propodeum and petiole dark brown. Abdomen brownish black. The whole body extremely lustrous.

Head more or less longer than width, antennal scape overreaching neck. (fig. 1, 2, 3, 4)

Vertex with minute netformed sculptures which are horizontally striated, a pair of pubescence sparsely distributed and thin long hairs symmetrically located. (fig. 5)

Frons with minute netformed sculptures which are met together at the frontal furrow running toward the frontal triangle, pubescence sparsely distributed and three pairs of long hairs symmetrically located on the both sides of the frontal carinae. (fig. 6)

Frontal triangle indistinct, but seems to be tied netform rugosities like a glomerule. (fig. 7)

Clypeus with netformed sculptures, pubescence sparsely distributed, a pair of long hairs at the posterior border overreaching the anterior border and two or three pairs of more shorter one than those distributed also. (fig. 7)

Mandible with 5 teeth, thin long hairs bending toward the teeth and numerous rugosities facing from the basal area to the teeth. (fig. 8)

Compound eyes oval and more or less protruded, with hexagonal ommatidia which are longer than width and short dull hairs sparsely distributed between ommatidia. (fig. 2, 3, 9)

Pronotum with netformed sculptures which are striated more or less longitudinally horizontal rugosities on the posterior border, pubescence sparsely distributed all in rows. Width of pronotum as long as one half of propodeum width. (fig. 11, 12)

Mesonotum, metanotum and propodeum with nu-

merous rugosities which are striated horizontally, pubescence sparsely distributed. Sutures between them indistinct, a pair of long erect spines on the mesonotum, 2 pairs distributed symmetrically on the ridge of propodeum and 2 pairs on the slope of the propodeum also. (fig. 11, 12)

Mesonotal spiracle very small and oval, circumference of it wide with large sparse striations. (fig. 16)

Propodeal spiracle circularform with narrow circumference. (fig. 15)

Petiole rodform in profile, 4 pairs of long erect spines on the posterior surface tending toward the abdomen. (fig. 11, 12, 13)

Abdomen oval, gaster of the 1st and 2nd abdominal segment with striations running horizontally, pubescence very sparsely distributed. Three long erect spines tending back distributed on the middle area and six on the posterior border of the gaster of the 1st abdominal segment. Spines on the gaster of the 2nd more abundant than those of the 1st. (fig. 13, 16)

MATERIAL EXAMINED: Holotype, worker, Sanbanggulsa, Cheju-do province, 26. VIII, 1985. (B.J. Kim)

Paratypes, 3 workers, Sanbanggulsa, Cheju-do province, 26. VIII, 1985(B.J. Kim); 3 workers, Is. Hŭksando, Chŏllanam-do province, 27. VII, 1985(B.J. Kim), preserved in Dept. of Molecular Biology, Won Kwang University, Iri City, Korea.

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REMARKS. Though the present species resembles *Camponotus gestroi* Emery, 1878 recorded from Europe, they can be separated from the following characters. Spines on the posterior surface of *Camponotus jejuensis* are more longer than those of *Camponotus gestroi*. In contrast to *gestroi* sutures between mesonotum, metanotum and propodeum are indistinct and gaster of the 1st and 2nd abdominal segments has long spines which are tending back.

SUMMARY

One new species of genus *Camponotus* was found from "Sanbanggulsa" of the province Cheju-do.

It was named as *Camponotus jejuensis* n. sp. and

described on the basis of external fine features. Accordingly Korean *Camponotus* will become nine species.

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