

<彙報>

1987年度 秋季研究發表會 發表論文要旨

【特別講演】

A Systematic Study of the Subfamily Formicinae (Hym., Formicidae) from Korea

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In order to study the Korean Formicinae, the author had examined about 700,000 specimens collected from all over the South Korea including several islands from March, 1981 to October, 1986.

Several collections which were preserved at the Korean Entomological Institute, Korea University were also examined.

Since the most important thing is to identify the entities soundly, 170 voucher specimens were received from England and Japan and my collections of Korean Formicinae were classified with voucher specimens using the stereomicroscope and scanning electron microscope.

Up to now thirty seven species of seven genera under Korean Formicinae have been recorded. In this study three species; *Camponotus kiusuensis* Santschi, 1931, *Camponotus nipponensis* Santschi, 1937, *Lasius brunneus* (Latreille, 1978) were added to the fauna of Formicinae from Korea and so Korean Formicinae becomes a total of forty species.

Among them twenty two confirmed species were examined on the basis of external fine features using the scanning electron microscope and analyzed numerically with the degree of the similarities in order to manifest the affinities of species.

As a result of analysis, it is concluded that the shape of the rugosities of clypeus and the epinotal spiracles were important taxonomic characters and

it was proper that *Camponotus nipponensis* should be transferred to the genus *Lasius* considering the degree of similarities evolved from numerical analysis.

A sufficient information on the Korean Formicinae was redescribed according to the species, with the synonyms, arrangement of the cited literatures, values of measurement, localities and distribution. Keys to the genera and species were made in accordance with the taxonomic characters under the stereomicroscope and scanning electron microscope.

Spermatogenesis of the Water Strider, *Gerris paludum* (Heteroptera, Gerridae)

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The spermatozoon of insects has evolved in the direction of increased motility: its shape, structure, metabolism and locomotory capabilities are tremendously differentiated. Typical features of the insect spermatozoon are a generally very slim shape with an extremely elongated head and an exceedingly long tail whose axial filament is flanked by accessory structures usually derived from mitochondrial transformations. Along these lines evolutionary changes have resulted in highly diversified and, in some respects, puzzling picture. The reason for this diversity are unknown. However, the diversity of sperm ultrastructure may give useful indications to the phylogeny of groups of insects (Baccetti and Afzelius, 1976).

The mature spermatozoon of *Gerris paludum* measures more than 5 mm. The acrosome is 2.5 mm long and one of the largest known the animal kingdom, and the remainder consists of a 5- μ m-long