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Genetic Variation of Korean *Formica* Ants  
using RAPD-PCR Analysis

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Study was performed for analysing interspecies similarity to establish the genetic variation among 10 populations of *Formica japonica* collected from 10 localities in Korea. *Formica japonica* occurs widely throughout the country and shows variation in morphological characters, while the other species are consistent in character states and restricted regionally.

In the morphological analyses 13 characters were measured and the molecular analyses RAPD was carried out for the extracted DNA. Local variation of *Formica japonica* was measured with specimens from 10 localities in Korea.

The band sharing values among 10 localities of *Formica japonica* ranged from 0.5090 to 0.9333. The morphological characters are stable, whereas the change of the gene is progressing actively. Also, the similarity between each population was classified certainly into 2 populations - the mountainous population (Chirisan, Kach'ilbong, Kebangsan) and the lowland one (Sihŭngsi, Sŏnamsa, Chinjusi).

RAPD-PCR analysis will be particularly useful for further studies because they are able to identify even little amount of molecules. These method using RAPD-PCR technique is considered to provide more reliable evidence for the molecular taxonomy and genetic variations of localities of ants.

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A Taxonomic Study of Korean Pyrgotidae (Diptera: Tephritoidea)

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Korean Pyrgotidae is taxonomically revised for the first time. They are known as internal parasites of adult beetles of the family Scarabaeidae. In Australia, they are an important factor in regulating the numbers of the beetles which are defoliators of eucalypts. There are about 330 species and 70 genera of Pyrgotidae worldwide with over one-third of these from the Afrotropical Region. Only one species, *Adapsilia fusca* Hendel, is previously known from Korea. As a result of this study, we recognized the following 3 new species and 5 previously unrecorded species from Korea; *A. luteola* Coquillett, *A. coarctata* Waga, *Eupyrgota rufosetosa* Chen, *Paradapsilia trinotata* Chen, *Geloemyia nigrofasciata* Hendel. *A. n.sp.-1*, *A. n.sp.-2*, *Tephritopyrgota n.sp.-1*. These species are described and illustrated for adult external morphology, including genitalic structures of both sexes.