

B107Oviposition and Branch-cutting Behavior
of *Mechoris ursulus* Roelofs (Insecta: Coleoptera: Attelabidae)Kyong Hui Lee and Jae Chun Choe
Department of Biology, Seoul National University

Temporal changes in dry weight and tannin level of acorns, and oviposition frequencies of *Mechoris ursulus* Roelofs (Coleoptera: Attelabidae) were examined for *Quercus mongolica* and *Q. acutissima* on the campus of Seoul National University from July to September 1996. *Mechoris ursulus* oviposited when acorns were relatively small but their tannin levels were high. It does not appear that *M. ursulus* actively chooses in which acorn to oviposit, because there were no significant differences in size and tannin level between oviposited and non-oviposited acorns. Tannin levels in acorns tended to increase after the branch containing them was severed from a tree. It is probably because *M. ursulus* larvae consume mostly the basal half where the tannin level is low. Small sizes and high tannin levels of acorns during the oviposition period did not appear to have negative effects on the growth of *M. ursulus* larvae. Instead, high tannin levels maintained by branch-cutting seemed to prevent predators from eating oviposited acorns. Furthermore, branch-cutting behavior of *M. ursulus* may increase larval survival by protecting oviposited acorns from being oviposited by other insects and by facilitating larval burrowing into the ground where they overwinter.

B108A Study of Polyethism in the Japanese Carpenter Ant
Camponotus japonicus (Hymenoptera: Formicidae)Sang Im Lee and Jae Chun Choe
Department of Biology, Seoul National University

Division of labor was studied in queen-right, queen-dead and queenless colonies of *Camponotus japonicus*. Observations were made over a period of seven days for each colony, during which data on behavioral abundance and time budget were obtained. Workers showed physical dimorphism and size polyethism. Incidence of age polyethism was noted, although precise individual age was not checked. Results of cluster analysis revealed that there were roughly 7 roles performed (caring broods, caring reproductives, caring workers, laying eggs, guarding the nest, necrophoresis, foraging) and the individuals could be grouped as several labor classes according to their similarities in role performance. Oviposition by worker was observed in queen-dead and queenless colonies, and worker-laid eggs developed into all males only in the queenless colony. Whether the differences in several aspects of polyethism among these colonies are due to the presence of queen will be elucidated through further investigation.