

P602

## Review of Behavioral Ecology and Biogeography of Wood-Feeding Cockroaches, Genus *Cryptocercus*

Yung Chul Park

*School of Biological Sciences, Seoul National University, Seoul 151-742*

Wood-feeding cockroaches of the genus *Cryptocercus* have been one of the most important research objectives during recent 20 years from two points of view, behavioral ecology and biogeography. *Cryptocercus*, xylophagous insects, occur in temperate region and live in a family in complicated galleries in rotten logs in high mountainous forests. Especially the xylophagy evolved in *Cryptocercus* is not common in cockroaches and has long been considered as a trait associated to their social behavior, family life, and to gut protistan symbiosis. In addition, the condition remaining present in the lower termites, *Cryptocercus* has often been considered as a key-taxon for understanding the evolution of the termite eusociality. Another aspect of *Cryptocercus* concerns its geographical distribution. A prominent feature of its geographical distribution is the wide disjunction between the Nearctic and the Palearctic species, between the eastern and western species in North America, and between populations of western China and northeastern Asia. Recently, the underlying cause and the temporal dynamics of this disjunctive distribution have been the subject of issued discussion. These current dynamic issues on *Cryptocercus* let our interests drive to two main streams of the studies, why parental care has evolved in the genus, and how it achieved its current wide disjunctive distributions. To access to some cues for the questions, I approach *Cryptocercus* biology with very wide scope, the current topics ranging from natural life history and behavioral ecology to molecular phylogeny and biogeography.