



# Molecular Phylogeny and Evolution of Carabid Ground Beetles

*S. Osawa, Z.-H. Su, Y. Imura*

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Carabid ground beetles, sometimes called "walking jewels", are among the most thoroughly investigated insects in the world. This book presents the results of molecular phylogenetic analyses of 2000 specimens, including 350 species and that cover more than 90% of the known genera, from 500 localities in 35 countries. These comprehensive analyses using mitochondrial DNA-based dating suggest that carabid diversification took place about 40 to 50 million years ago as an explosive radiation of the major genera, coinciding with the collision of the Indian subcontinent and Eurasian land mass. The analyses also lead to surprising conclusions suggesting discontinuous evolution and parallel morphological evolution. With numerous color illustrations, this book presents readers with the dynamic principles of evolution and the magnificent geographic history of the earth as revealed by the study of beetles.

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