

Proceedings of the Symposium “Reconstruction of Hexapod Phylogeny: An Overview from Comparative Reproductive Biology” (Sugadaira, July 5, 2007)

Preface

Reconstruction of phylogenetic relationships of Hexapoda has made remarkable progress during recent years, based on exhaustive comparative morphological as well as critical molecular evolutionary analyses. In spite of these great efforts, however, interordinal relationships among hexapod orders are still far from being well established. Members of the Arthropodan Embryological Society of Japan have been conducting extensive comparative embryological studies, which are expected to contribute to the reconstruction of interordinal relationships of Hexapoda, as the approach should provide one of the most important aspects for the groundplan.

The one-day symposium, “Reconstruction of Hexapod Phylogeny: An Overview from Comparative Reproductive Biology” held during the 43rd Annual Meeting of the Arthropodan Embryological Society of Japan at the Sugadaira Montane Research Center, University of Tsukuba, July 4–7, 2007, highlighted recent advances in comparative reproductive biological approaches for the reconstruction of hexapod interordinal relationships. Two eminent scientists attended the symposium: Dr. Romano Dallai (Siena), invited as the most outstanding researcher in comparative morphology of hexapod spermatozoa, and Dr. Klaus-Dieter Klass (Dresden), a leading researcher in hexapod phylogeny.

The updated hexapod phylogeny was critically reviewed by Dr. Klass, who also chaired the symposium, and Dr. Dallai illustrated the problems to be solved in hexapod phylogeny, presenting major topics in the ultrastructure of their spermatozoa. The members of the Arthropodan Embryological Society of Japan presented talks concerning comparative embryology of each of the hexapod groups: Ryuichiro Machida for basal clades, Koji Tojo for Paleoptera, Toshiki Uchiufne and Ryuichiro Machida for Polyneoptera, Tadaaki Tsutsumi for Paraneoptera, and Yukimasa Kobayashi for Endopterygota. The symposium was undoubtedly successful, demonstrating the frontier of hexapod comparative reproductive biology and indicating future directions.

This symposium was made possible by support from “The JSPS Invitation Fellowship for Research in Japan (Short-term) (2007)” and “The International Cooperative Research Project, University of Tsukuba (Invitation) (2007).”

Ryuichiro Machida
Convener

*Sugadaira Montane Research Center, University of Tsukuba,
Sugadaira Kogen, Ueda, Nagano 386-2204, Japan
machida@sugadaira.tsukuba.ac.jp*