

# Abstracts (oral presentations)

## Section 1 – Systematics and Evolution

### 1. Heraty, J. - In search of *Chiloe* and the Holy Grail of Chalcidoidea

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With more than 400,000 estimated species, Chalcidoidea is one of the most diverse group of parasitic wasps. The phylogenetic relationships of the 19 families and 89 proposed subfamilies have never been addressed rigorously using morphological or molecular methods. Instead relationships have been based on intuitive hypotheses or on limited taxon or character sampling from this vast group. Chalcidoidea are currently being researched for their relative placement within Hymenoptera, and for their internal relationships using morphology and sequences from a number of gene regions (ribosomal 18S and 28S, *wingless*, *forkhead*, and others). Taxon representation is seen as the key to understanding this diverse group. These molecular markers all strongly support a monophyletic Chalcidoidea, but not the proposed sister group relationship with Mymarommatoidea. *Chiloe* is an odd member of the family Rotoitidae, an enigmatic family of Chalcidoidea known only from two monotypic genera endemic to Chile and New Zealand. It has been proposed as the potential sister group of the rest of Chalcidoidea, either with or without Mymaridae. All family groups are now represented as well as approximately 70% of the subfamily groups. The results of our current molecular results for more than 500 taxa will be discussed, with an emphasis on focus studies in Aphelinidae, Trichogrammatidae and Eucharitidae. In general, relationships at the superfamily, subfamily and generic level are all well supported by molecular methods. However, there are mixed results when determining family group relationships and species level boundaries. The highlights of these results will be presented in light of current and future studies, as well as their implications in understanding the behavioral evolution of Chalcidoidea.

*Notes:*

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