

Abstract

Eusociality has evolved independently many times in social Hymenoptera and some of them are now at the brink of eusociality. Eusociality is a complicated set of genomic, ecological and behavioural traits closely interacting with each other. Recent studies presented many interesting outcomes which explain at least partially the possible connections to eusociality on the genomic level. However, the true origin and evolution of eusociality is yet to be refined. Because eusociality is such a dominant quality in the lives of eusocial Hymenoptera, it is important to clarify what causes eusociality to arise. This thesis summarises the most prominent findings in the field of genomics and reviews not only the outcomes but also the issues of this problematic. The thesis deals with the classification of eusociality, brief introduction to the species lifestyles, which are of great importance for understanding the main part. The main part focuses on the concrete genomic data elucidating possible signs of the evolution of eusociality recognised so far.

Key words: eusociality, genomics, evolution, Hymenoptera, Insecta