

**OR186**

*Biogeography, ecology and evolution of ant genus Myrmica from Himalaya*

**Himender Bharti**

Ants of genus *Myrmica* are restricted to high altitude regions of Himalaya. The genus is represented by 31 species placed in 6 species groups with few species still uncertain about their placement. These species have pocketed themselves at different elevations in Himalaya. Most of the Himalayan *Myrmica* species are endemic to this region. Some of the species have restricted distribution being topographic specialists, while few are weedy. Morphologically, most of the Himalayan species represent relic forms/old lineages with plesiomorphic features and differ considerably from rest of the Palearctic species. It seems quite probable that after the formation of Himalaya, these lineages got isolated from rest of the *Myrmica* fauna and diversified here. This view has been authenticated by the recent discoveries. Being subject to high altitude stress in the form of short summers, sub-zero temperatures in winter, paucity of resources and almost negligible nesting sites, these ants have developed different survival strategies. These include various forms and phases of parasitic interactions ranging from temporary parasitism to inquiline (the highest form of which has been discovered recently from this region, the parasite being younger than host and the discovery also points towards sympatric mode of speciation). The other strategies are topographic specialization; polygyny; polydomy. endogenously heterodynamous life cycles (in which the compulsory diapause of queen, workers and immatures, help the evolutionary novel ants to tide over hostile weather conditions). To work out the evolutionary relationships of these species, molecular markers are being used, which will unfold species relationships, work out level of interspecific variations, and unravel cryptic species.