

**OR364***Mating biology of the ant Myrmica ruginodis***Jana Wolf, Perttu Seppä**

Workerless social parasites have been suggested to evolve sympatrically from their hosts, with miniaturization of queens promoting reproductive isolation of the parasite from its host. The aim of this project was to study various aspects of the mating biology to assess whether behaviour of larger (macrogyne) and smaller (microgyne) queens in the red ant *Myrmica ruginodis* has diverged and potentially promote reproductive isolation between them. Dispersing alates were collected from the nests by trapping them in nets spread over the colonies during nuptial flights. Their size was measured and the difference in the propensity to disperse was compared according to their size. Finally duration of matings in the nuptial flight was recorded, and individual males as well as males and females engaged in copula were collected and measured. Thus, potential spatial and temporal isolation in *M. ruginodis* were analysed, including the propensity of sexuals to join a nuptial flight in the first place vs. staying and mating in the nest, size-assortative mating and whether mating behaviour is associated with the size of the mating individuals. This study will provide insight into the composition of nuptial flights in *M. ruginodis*, and will show whether the mating behaviour is connected to size, therefore promoting possible reproductive isolation in this species. This work will show whether the microgynes of *M. ruginodis* have potential to evolve sympatrically from their host, or whether it is just a consequence of alternative dispersal and reproductive strategies, as in some other ants.