

**OR277***Brood discrimination in the ant Formica exsecta***Unni Pulliainen**, Nick Bos, Patrizia d'Ettorre, Liselotte Sundström

In social insects, the ability to recognize and discriminate nestmates from non nestmates plays an important part in maintaining colony integrity and protecting the colony and its resources from unrelated intruders and social parasites. Typical colony intruders are adult individuals, and thus recognition among adults is highly developed and precise. However, whether ants can recognize and discriminate brood of different origins is less clear. From a fitness point of view it would naturally be beneficial for a colony to accept nest mate brood. Accepting alien worker destined brood, especially pupae, might not be harmful either, and it might even be beneficial, as in some cases alien workers, adopted as brood, successfully integrate into adoptive colonies. However, accepting alien sexual brood should be avoided as these individuals may use colony resources without contributing to the colony, and instead act as social parasites. We investigated whether worker ants are efficient in discriminating brood, and whether the discrimination rules differ among brood of different castes. We answer these questions using behavioural assays coupled with chemical analysis in the ant *Formica exsecta*.