

P039*Differential antiseptic brood care in the ant Lasius niger***Christopher D. Pull**, Mark J. F. Brown, Sylvia Cremer

Ants are efficient at detecting and responding to pathogen-exposed nestmates, both at the adult and brood stage. Yet, not all colony members may experience the same level of hazard to a pathogen, with the different brood stages, for example, likely having different levels of exposure (some brood stages are often moved to the surface of the nest to speed up development), and different physiologies, which may make them more or less susceptible to infections. Further, some nest members represent a higher level of investment to the colony than others, such as the pupae, which have consumed more resources and worker care than, for example, the eggs. As a result, we might expect tending ants to invest more care into colony members that 1) have a greater susceptibility to a pathogen, and 2) those that represent a larger colony investment. To test these hypotheses, we studied the sanitary brood care of garden ants (*Lasius niger*) towards fungal pathogen-exposed brood, which comprises the eggs, early-instar larvae, late-instar larvae and the pupae. Using behavioural assays to determine the frequency of worker-brood interactions, we report on how antiseptic worker behaviour differs according to brood age and pathogen treatment. We also investigated the role of the pupal cocoon with regards to the process of infection, as the cocoon appears to act as a barrier, both delaying pathogen infection processes but also likely interfering with the ability of the tending ants to effectively sanitise pathogen-exposed pupae.