

**OR361***The mating biology of social insects***Susanne den Boer**, Tamara Hartke, Boris Baer

The reproductive biology of social insects is truly spectacular, as a number of traits have evolved that are either rare or completely absent in other animals. Because high relatedness among workers increases their helping incentive, social insect colonies are closed genetic systems where mate choice and paternity contributions are typically determined once very early in life. Such "marriages for life" influenced the evolution of social insect mating systems. For example, the high demand on queen fertility over prolonged periods of time required males to produce large, high quality ejaculates, and queens to be able to store these ejaculates for years and to use sperm in highly economized ways. Furthermore, polyandry evolved independently in a number of social insect lineages. As ejaculates of competing males co-occur within the sexual tract of queens in these lineages, post-copulatory sexual selection (sperm competition and cryptic female choice) can be expected to evolve, for example to reduce male contributions to the most competitive or preferred male. Research conducted over the past few years has provided novel insights into the evolution of abovementioned traits, but a number of key questions remain to be studied.

The symposium organizers will start the session by providing a brief summary of advances made in the field of mating biology within the past years and discuss exciting opportunities for future research that arise as a result. We will also briefly introduce the contributions that will be presented in this symposium.