

Wednesday, 4<sup>th</sup> Dec 2024, 16:15 h, BIOM 1060

---

## Maximilian Körner

Evolutionary Animal Ecology Group  
University of Bayreuth, Germany



### The grave consequences of carrion breeding: lessons from beetle families on social evolution

The study of the emergence of group living and its evolution into permanent and complex societal systems is a major topic of interest in evolutionary biology. Recent studies have suggested that social immunity and microbial interactions play a key part in the early emergence of sociality, but so far we know very little on their role in primitive groups, such as facultative family associations where offspring benefit from care from their parents but still survive without it. In my talk I present work aiming to shed light on this issue using subsocial insects, mainly *Nicrophorus* burying beetles. These beetles breed and feed on a highly ephemeral contested resource, small vertebrate carcasses, by collective efforts to monopolize the resource and transform it into an edible nursery. Carrion is both a hazardous environment and bonanza resource and carrion breeders are typically either extremely quick or highly resilient. Our work demonstrates how *Nicrophorus* have carved their niche in carrion through the benefits of sociality, how breeding pairs negotiate how much of the costly care each of them takes on, and what costs and limitations the individual and social adaptations to this lifestyle entail. My talk aims to give an overview over these fascinating systems, and what lessons they can teach us on the evolution of social systems at large.

