

BayCEER Kolloquium

Lectures in Ecology and
Environmental Research

Summer 2025



UNIVERSITÄT
BAYREUTH

Donnerstag/Thursday

26.06.2025

12:30 in H6, GEO



Dr. Maximilian Körner

Evolutionary Animal Ecology, BayCEER

Parenting on a corpse: what family life and immunity teach us about social evolution and the keys to the carrion kingdom

Öffentlicher Vortrag im Habilitationsverfahren (Zwischenevaluation)

The study of social evolution remains one of the central topics of evolutionary biology. Sociality is a powerful phenomenon present across the animal kingdom – yet most species live solitarily. Many mechanisms determining social evolution remain poorly understood – are they driver, hindrance, or double-edged swords? For example, are bacteria and other microbes a reason to stay away from others, or can they bring families together? Or how can cooperation prevail in the face of conflict over tasks that do not actually need doing? These topics are usually discussed in the context of relatively advanced or obligately social structures, such as families in birds or eusocial insect societies. I present work shedding light on unanswered questions during early social evolution in animals that exhibit complex social behaviors but do not require them to survive, namely subsocial *Nicrophorus* burying beetles. These beetles breed and feed on a highly contested resource, small vertebrate carcasses, by collective efforts to monopolize the carcass and transform it into an edible nursery. They can teach us about the merits and dangers of a social lifestyle which is adapted to deal with the high-risk, high-reward resource the beetles reproduce on. I aim to show how *Nicrophorus* have carved their carrion niche through sociality, how breeding pairs negotiate the distribution of the workload among each other, to what degree individuals vary amongst each other in their care, and what other benefits and limitations the adaptations to this lifestyle can 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 across the animal kingdom.



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