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小集会

## [W16] 第4回社会性昆虫研究会：social material exchange in ants—栄養交換と栄養卵

世話人：藤岡春菜、Adam Khalife

2024年3月31日(日) 17:00 ~ 18:30 B会場 (萩)

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17:00 ~ 17:30

### [W16-01] Nutritional and adaptive value of worker-laid trophic eggs in ant colonies

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Storing and sharing food is crucial in sedentary group-living organisms. Several strategies exist in ants, such as using their social stomach (crop) to store and redistribute nutrients through trophallaxis, or laying trophic eggs. Trophic eggs are non-viable eggs that can be laid by queens, but also workers as long as they have ovaries. Even though trophic eggs are morphologically distinct from reproductive eggs, their difference in nutritional value has been overlooked. Furthermore, trophic eggs have been argued to buffer periods of food scarcity, but trophic egg production and fate in such conditions has not been monitored yet. In this study, we compare the nutritional value of reproductive and trophic eggs in two species of ants, *Aphaenogaster rugulosa* (Myrmicinae, endemic to Yonaguni Island, Japan) and *Anoplolepis gracilipes* (Formicinae, invasive). We also monitor trophic egg production and fate in *A. rugulosa* colonies when starved or given contaminated food. We discuss the adaptive value of worker-laid trophic eggs in ant societies.