Q-AOS 九州大学 アジア・オセアニア研究教育機構 ブラウンバッグセミナー

Brown Bag Seminar No.236

2026 6.24 (wed.) 12:10 ~ 12:50

12:10-12:15 ◆ Introduction
12:15-12:40 ◆ Seminar (Presentation)
12:40-12:50 ◆ Q&A

Online (Zoom)
Scan here for Registration

https://us02web.zoom.us/webinar/register/WN_GwcU5qgyQv-6xWz9AaTd2A

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Suspense in Nature:
worker ants manipulated into killing their own mothers and spiders forced to rebuild their webs by parasites

15 LIFE ON LAND

Key Words Parasitic insects　Behavioural manipulation　Host　Temporarily socially parasitic ants　Spider-ectoparasitoids

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I earned both a Master's and a Ph.D. in Agricultural Science from Ehime University. From my doctoral studies through my postdoctoral research, I conducted fieldwork on my own in Indonesia with local assistance, obtained a Level C certification in Indonesian, and finally studied at Gadjah Mada University (Yogyakarta) as a scholarship student of the Heiwa Nakajima Foundation. After completing my degrees, I was affiliated with Kobe University for five years as a JSPS Postdoctoral Fellow. During this period, my research findings on spider web manipulation by spider wasps (Takasuka *et al.*, 2015 *J. Exp. Biol.*) generated significant attention, including coverage by major international media outlets. Subsequently, I was affiliated with the Institute for Advanced Biosciences at Keio University for seven years as a JSPS Research Fellow (RPD) and a Project Research Associate. During this time, I published a review paper of over 100 pages (Takasuka & Broad 2024 *Contrib. Zool.*) that comprehensively covered all existing ecological data on approximately 300 species of spider wasps worldwide. I joined the Graduate School of Science at Kyushu University as an assistant professor just two years ago. Last year, in my second year at the university, I published a paper detailing how social parasitic ants manipulate worker ants to commit matricide (Shimada *et al.* 2025 *Curr. Biol.*), a discovery that was reported worldwide as a groundbreaking revelation.

Nature is teeming with parasites. Moreover, beyond simply parasitizing specific hosts to steal their nutrients, a phenomenon known as "host manipulation" in which parasites control their hosts at will, forcing them to perform actions that benefit the parasite is observed across a wide variety of species. These ingenious strategies truly make them the strategists of the natural world.

In this seminar, I will focus on "parasitoid wasps", often considered the quintessential parasitic insects, and "socially parasitic ants", which infiltrate other colonies to cleverly exploit their labor, introducing a range of astonishingly cunning and diverse host manipulation tactics.

While the word "parasite" might conjure images of horror-movie creatures, their ecology is actually fascinating. Let's take a look together at the ruthless battles played out in nature, where lives are at stake.

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