

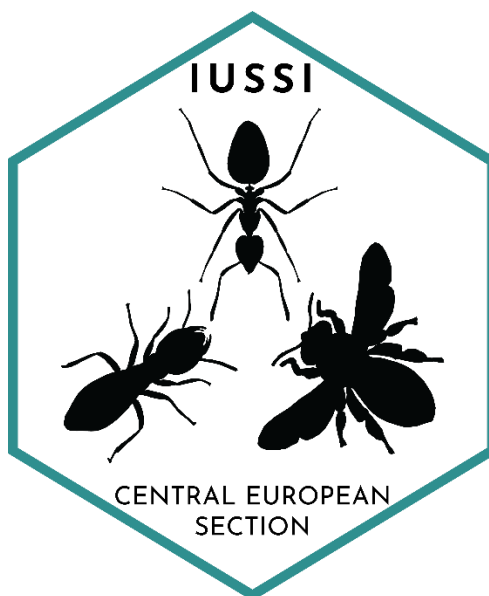
BABEȘ-BOLYAI UNIVERSITY
Hungarian Department of Biology and Ecology



UNIVERSITATEA BABEȘ-BOLYAI
BABEȘ-BOLYAI TUDOMÁNYEGYETEM
BABEȘ-BOLYAI UNIVERSITÄT
BABEȘ-BOLYAI UNIVERSITY
TRADITIO ET EXCELLENTIA

**7th Central European Section Meeting of the
International Union for the Study of Social Insects**

17-20.09.2023 Cluj-Napoca



Programme and book of abstracts

pastures promote environmental and ecological heterogeneity on a small spatial scale: the “ecosystem complex” approach.....	29
18. István Elek Maák, Bálint Markó, Kata Bán, Adam Lőrincz: Effect of different wood-pasture habitat types on ant functional traits.....	30
19. Antoine Melet, Peter Biedermann: Ecological drivers of sociality in <i>Xyleborinus saxesenii</i> , a widely distributed ambrosia beetle.....	31
20. Vanessa Menges, Florian Menzel: Environmentally driven behavioural trait variation may promote species coexistence in ants.....	32
21. Srikrishna Narasimhan, Violette Chiara, Magdalena Witek, Iago Sanmartín-Villar: Problem-solving through individual cognition in invasive social insects.....	33
22. Louis Allan Okwaro, Judith Korb: Histone deacetylase 3 silencing activates transposable elements activity in the dry wood termite <i>Cryptotermes secundus</i> queens.....	34
23. Federico Olivera, Laure-Anne Poissonnier, Tomer Czaczkes: Information provision and use in ant pheromone trails.....	35
24. Lina Pedraza, Nadine Wildemann, Jürgen Heinze, Audrey Dussutour, Abel Bernadou: Effect of unbalanced diets and individual amino acids on the longevity/fecundity trade-off in a clonal ant.....	36
25. Laure-Anne Poissonnier, Yannick Hartmann, Tomer Czaczkes: Ants combine object affordance with latent learning to make efficient foraging decisions.....	37
26. Bonita Ratkai, Kata Bán, Zoltán Bátori, Kata Frei, Gábor Li, Adam Lőrincz, Gábor Lőrinczi, Fanni Pécsy, István Maák: Effects of sinkhole habitats on the functional and behavioural traits of <i>Myrmica ruginodis</i>	38
27. Daniel Rodríguez, Thomas Schmitt, Alice Pinto, Markus Thamm, Ricarda Scheiner: The expression of elongases and desaturases shed light on the CHC plasticity of honey bees (<i>Apis mellifera</i>).....	39
28. Iago Sanmartín-Villar, Everton Cruz da Silva, Violette Chiara, Adolfo Cordero-Rivera, M. Olalla Lorenzo-Carballa: Genetic divergence and aggressiveness within a supercolony of the invasive ant <i>Linepithema humile</i>	40
29. Florian Strahodinsky, Sylvia Cremer: Social immunity behaviors in ant-nematode interactions.....	41
30. Ágota Szabó, Bálint Markó, Enikő Csata: Does the macronutrient composition affect the survival of the <i>Myrmica scabrinodis</i> , Nylander 1846 (Hymenoptera: Formicidae) ants infected with the ectoparasitic fungus <i>Rickia wasmannii</i> ?.....	42
31. Doris Maria Tăușan, Ioan Tăușan, Elena Iulia Iorgu: Revealing a taxonomic mystery: <i>Reticulitermes</i> sp. (Isoptera: Rhinotermitidae) in Romania.....	43
32. Simon Tragust, Pina Brinker, Thomas Schmitt, Zsolt Karpati, Oliver Otti: A new puppet-master and its puppet? Behavioural manipulation in the host-parasite system between the fly <i>Strongygaster globula</i> and its ant host.....	44
33. Gema Trigos Peral, Magdalena Witek, Paulina Chudzik, Adam Lőrincz, Daniel Sánchez-García, Istvan Maák, Jürgen Heinze: Development of ant colonies in an urban-rural gradient.....	45
34. Thomas Wagner, Henrique Galante, Tomer Czaczkes: Comparative choice assays allow simple and high-sensitivity quantification of ant feeding preference.....	46
35. Karoline Wueppenhorst, Abdulrahim Alkassab, Ralf Einspanier, Ulrich Ernst, Elsa Friedrich, Ingrid Illies, Martina Janke, Wolfgang H. Kirchner, Moritz Mating, Richard Odemer, Andrey Yurkov, Silvio Erler: Combined stressors in the agriculture – Investigating more effects than honey bee colony development.....	47

Programme

SUNDAY, 17TH OF SEPTEMBER – *Emanuel de Martonne st. 1, Casa Universitarilor*

17:00 – Arrival and registration of participants

19:00 – Welcome cocktail

MONDAY, 18TH OF SEPTEMBER – *Zoology Building of the Faculty of Biology and Geology, Clinicilor st. 5-7*

8:00–8:45 Registration of participants

8:45–9:00 Conference opening

Plenary talk

9:00 From the past to the present: 100,000,000 years of ant history.

Alexander Radchenko

Section chair: **Simon Traquist**

10:00 Social insect aging from a *Cardiocondyla*-biased perspective.

Luisa María Jaimes Niño

10:15 Effects of colony fusions on evolutionary optimal colony size in a termite species.

Stephan Lohmar

10:30 Convergent evolution of helping behaviour in a neotropical Army ant.

Juan José Lagos-Oviedo

Coffee Break

Section chair: **Tomer J Czaczkes**

11:15 Ecological drivers of sociality in *Xyleborinus saxesenii*, a widely distributed ambrosia beetle. *Antoine Melet*

11:30 Wood-pastures promote environmental and ecological heterogeneity on a small spatial scale: the “ecosystem complex” approach. *Adam Lőrincz*

11:45 Environmentally driven behavioural trait variation may promote species coexistence in ants. *Florian Menzel*

12:00 Effect of different wood-pasture habitat types on ant functional traits.

István Elek Maák

Lunch

Plenary talk

14:00 Ants under parasitic siege: from specialist to generalist fungi. *Enikő Csata*

Section chair: **Heike Feldhaar**

15:00 Social immunity behaviors in ant-nematode interactions. *Florian Strahodinsky*

15:15 A new puppet-master and its puppet? Behavioural manipulation in the host-parasite system between the fly *Strongygaster globula* and its ant host.

Simon Traquist

Effect of different wood-pasture habitat types on ant functional traits

István Elek Maák^{1,2}, Bálint Markó³, Kata Bán¹, Adam Lőrincz^{1,4}

¹ Department of Ecology, University of Szeged, Hungary

² Museum and Institute of Zoology, Polish Academy of Sciences, Warsaw, Poland

³ Hungarian Department of Biology and Ecology, Babeş-Bolyai University, Cluj-Napoca, Romania

⁴ Doctoral School of Biology, University of Szeged, Szeged, Hungary

Wood-pastures accommodate different woody habitat types (solitary trees, forests, and their edges) in a relatively limited spatial scale that creates diverse microclimatic and abiotic conditions, thus enhancing the spatial environmental heterogeneity of the whole system. Moreover, they can provide a glimpse into the rules and underlying patterns of trait adaptation on small spatial scales. In our previous studies on wood pastures, we have found that the ant *Temnothorax crassispinus* is present in all the woody habitats, so we hypothesized that scattered trees, closed forests and forest edges should differentially affect the functional traits of this species. We collected 30 *T. crassispinus* nests from every woody habitat type and assessed their functional traits, such as colony and worker size, but also the number of sexuals and larvae. Our results showed that habitat type had differential effects on the functional traits but also on the nesting site preference of the studied colonies. For example, in solitary trees we found more virgin queens and queen pupae, whereas the worker pupae were more abundant on the forest edges. Considering the different nesting sites, the colonies were larger, and more virgin queens were present in the twig-nests, representing more of the forest habitats. However, more worker larvae were present in galls, a nesting site more abundant in solitary trees. Based on our results we can conclude, that the distribution of our functional traits becomes more or less even among the woody habitat types due to the complementary effects of different habitat characteristics, such as the differences in microclimate and the varying availability of nesting sites.