# APHIDOPHAGA 13
## PROGRAM

29|08 - 01|09|2016

Ecology of Aphidophaga
Freising 2016

### MONDAY 29|08|2016
### SESSION: INVASIVE APHIDOPHAGA | CHAIR: ANNETTE HERZ

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| 13\|00 - 13\|15 | Opening |
| 13\|30 - 14\|15 | Plenary 1: Helen Roy, NERC Centre for Ecology & Hydrology<br>*Harmonia axyridis*: inspiring collaboration around the world |
| 14\|15 - 14\|35 | John Sloggett, Maastricht University<br>*Harmonia axyridis*: smelling the rat in native ladybird declines |
| 14\|35 - 14\|55 | Paul A. Lenhart, University of Kentucky<br>Effects of an aphid's toxic defensive phenotype ripple through the natural enemy community |
| 14\|55 - 15\|15 | Oldřich Nedvěd, University of South Bohemia<br>Thirty years of monitoring ladybirds in Czechia: succession, seasonality, host plants, sampling methods |
| 15\|15 - 15\|45 | Coffee Break |
| 15\|45 - 16\|30 | Plenary 2: Josep A. Jacques, Universitat Jaume I<br>How could we improve safety of aphid biological control? |
| 16\|30 - 19\|00 | Poster Session+Beer+Films by Urs Wyss |
| 20\|00 | Dinner in Bräustüberl |

### TUESDAY 30|08|2016
### SESSION: CHEMICAL ECOLOGY | CHAIR: SHARON ZYTYNSKA

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| 08\|15 - 09\|00 | Plenary 3: François J. Verheggen, Université de Liège<br>Microorganisms and semiochemicals to manipulate aphidophagous predators |
| 09\|00 - 09\|20 | Helmut van Emden, University of Reading<br>Aphid parasitoids (and coccinellids?) protect their offspring against plant toxins |
| 09\|20 - 09\|40 | Antoine Boullis, Gembloux Agro-bio Tech - University of Liège<br>Climate change: atmospheric $CO_2$ concentration affect aphid alarm signalling |
| 09\|40 - 10\|00 | Wolfgang W. Weisser, TU München<br>Aphid-predator interactions unravelled using the zNose technology |
| 10\|00 - 10\|30 | Coffee Break |

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### TUESDAY 30|08|2016
### SESSION: CHEMICAL ECOLOGY | CHAIR: FRANÇOIS VERHEGGEN

10|30 - 11|15 Plenary 4: Toby JA Bruce, Rothamsted Research
The impact of volatile signals on the behaviour of aphids and their parasitoids

11|15 - 11|35 Sharon Zytynska, TU München
Plant chemotype mediates aphid-ant-natural enemy interactions in a metacommunity system

11|35 - 11|55 Eduardo de la Peña, Institute for Subtropical and Mediterranean Horticulture
Glandular trichomes in tomato: implications in the biological control of aphids using parasitoids

11|55 - 12|15 Kerstin Krüger, University of Pretoria
Climate change: effect of heat and water-deprived plants on the potato aphid, *Macrosiphum euphorbiae*, and its parasitoid *Aphidius ervi*

12|15 - 13|45 Lunch

### SESSION: PARASITOIDS AND BIOCONTROL | CHAIR: ŽELJKO TOMANOVIĆ

13|45 - 14|30 Plenary 5: George Heimpel, University of Minnesota
Causes and consequences of fecundity stimulation in aphids as a response to parasitism

14|30 - 14|50 Hugh David Loxdale, Cardiff University
The Generalism debate: do generalists actually exist in nature?

14|50 - 15|10 Kristopher Giles, Oklahoma State University
Landscape level dynamics of the cereal aphid parasitoid *Lysiphlebus testaceipes* in the US Southern Plains

15|10 - 15|30 Vladimir Žikić, University of Niš
New aspects of host range patterning of Aphidiinae parasitoids (Hymenoptera: Braconidae)

15|30 - 15|50 Sana Zouari, University of Sousse
Survey of natural enemies and effectiveness of *Aphidius transcaspicus* Telenga (Hymenoptera: Braconidae: Aphidiinae) on the population dynamics of the mealy aphid *Hyalopterus amygdali* Blanchard (Hemiptera: Aphididae) in a Tunisian organic almond orchard

15|50 - 16|20 Coffee Break

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### TUESDAY 30|08|2016
### SESSION: BEHAVIOURAL ECOLOGY | CHAIR: WOLFGANG W. WEISSER
| devoted to Wolfgang Völkl

16|20 - 16|40 Le Thu Ha Nguyen, INRA
Study of the preference-performance relationship in generalist parasitoids

16|40 - 17|00 Stefan Vidal, Georg-August-Universität, Göttingen
Genes matter as well: Parasitoid species or entomopathogenic fungal strains differently interact with bacterial secondary symbionts of *Sitobion avenae* clones

17|00 - 17|20 Michelangelo La-Spina, Vineland Research & Innovation Centre
Short-term increases in aphid dispersal due to defensive dropping behaviour do not necessarily affect long-term biological control by a parasitic wasp

17|20 - 17|40 William Jessie, Oklahoma State University
Interactions between *Diaeretiella rapae* and *Lysiphlebus testaceipes* in winter canola

17|40 - 18|00 Arash Rasekh, Shahid Chamran University of Ahvaz, College of Agriculture
Varying effects of superparasitism on biological traits between the sexual and asexual strains of an aphid parasitoid, *Lysiphlebus fabarum* (Hym.: Braconidae: Aphidiinae)

19|15 - 19|30 Bus (campus/downtown)

20|00 Conference Dinner

### WEDNESDAY 31|08|2016

08|00 - 18|00 Excursion to Munich

### THURSDAY 01|09|2016
### SESSION: PREDATORS AND BIOCONTROL | CHAIR: ALOIS HONĚK

08|15 - 09|00 Plenary 6: Andreas Vilcinskas, Justus-Liebig-University Gießen
Immunity and pathogens contribute to the invasive success of the aphidophagous ladybird *Harmonia axyridis*

09|00 - 09|20 J.P. Michaud, Kansas State University
Conspecific and heterospecific competitors exert non-consumptive effects on developing aphid predators

09|20 - 09|40 Florian Weihrauch, Bavarian State Research Center for Agriculture,
The arthropod fauna of hop cones, with specific consideration of the Neuroptera

09|40 - 10|00 Sanaa Abed, Swansea University
Natural enemy composition rather than richness determines pest density and plant biomass

10|00 - 10|20 Casi Jessie, Oklahoma State University
Spatial and temporal dynamics of natural enemies in winter canola-wheat agroecosystems

10|20 - 10|50 Coffee Break

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### THURSDAY 01|09|2016
### SESSION: PREDATORS AND BIOCONTROL |CHAIR: J.P. MICHAUD

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| 10\|50 - 11\|10 | Jeroen van Schelt, Koppert<br>New insights in the mating behaviour and practical application of the gall midge *Aphidoletes aphidimyza* |
| 11\|10 - 11\|30 | Gerben Messelink, Wageningen UR<br>Mirid predatory bugs for aphid control in sweet pepper greenhouse crops: is the problem solved? |
| 11\|30 - 11\|50 | Annette Herz, Julius Kühn-Institut, Darmstadt<br>The myrmecophilous ladybird *Platynaspis luteorubra* Goeze - a promising option for Biological Control? |
| 11\|50 - 12\|10 | Milan Plećaš, University of Belgrade, University of Minnesota<br>Effects of biofuel plantings on natural enemies and biological control of soybean aphid |
| 12\|10 - 13\|20 | Lunch |
| 13\|20 - 14\|05 | Plenary 7: Christoph Vorburger, EAWAG & ETH Zurich<br>Symbionts mediate coevolution between aphids and parasitoids |
| 14\|05 - 14\|25 | Sonja Pfister, University Koblenz-Landau<br>Aphids and aphidophaga in pumpkin fields respond differently to management, local and landscape features |
| 14\|25 - 14\|45 | Abid Ali, University of Agriculture Faisalabad<br>Aphids, potential threat to stagnant wheat yield in Pakistan: a case study for the population dynamics of natural enemies attacking wheat aphids in major agro-ecological zones of Pakistan |
| 14\|45 - 15\|00 | Closing |

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### INVASIVE APHIDOPHAGA

**Lukáš Fiedler**
University of South Bohemia
Fifty shades of the Harlequin ladybird and a sexually transmitted disease

**Xavier Pons**
Universitat de Lleida
Current status of the invader *Harmonia axyridis* in the Iberian Peninsula

**Alois Honek**
Crop Research Institute
Correlation of long-term changes in abundance of coccinellid species in communities of host plants with contrast abundance of *Harmonia axyridis*

**Jiri Skuhrovec**
Crop Research Institute
Role of plant stature in determining habitat preferences of coccinellid species

**Roman Bucher**
Philipps-Universität Marburg
Why do some non-native lady beetles become invasive while others remain benign?

**Terezinha Monteiro dos Santos-Cividanes**
Agência Paulista de Tecnologia dos Agronegócios
Populational fluctuation of *Diaphorina citri* and Coccinellidae in citrus orchard in the Northeastern region of São Paulo State, Brazil

**Terezinha Monteiro dos Santos-Cividanes**
Agência Paulista de Tecnologia dos Agronegócios
Predation of *Schizaphim graminum* by Coccinellidae: who consumes more, *Cycloneda sanguinea, Harmonia axyridis* or *Hippodamia convergens*?

**Ilia Zakharov-Gezekhus**
Vavilov Institute of General Genetics
Alien Coccinellidae species in Russia and neighbouring countries

**Gabriele Rondoni**
University of Perugia, Perugia, Italy
Olfactory cues are more effective towards the most competitive among two ovipositing ladybird beetles

### CHEMICAL ECOLOGY

**Donatella Battaglia**
University of Basilicata
Identification and characterization of OBPs by a transcriptomic approach and structural analysis of olfactory receptors in *Aphidius ervi*

**Liza Nemes**
Karl-Franzens-Universität Graz
Tetradecyl acetate: A new non-terpenoid compound of aphid cornicle secretions and its potential role

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### BEHAVIOURAL ECOLOGY

**Nikos Papanikolaou**
Benaki Phytopathological Institute
On the estimation of predators' handling time using the steady-state satiation equation: an application to aphidophagous coccinellids

**Ted Cottrell**
USDA-ARS
Factors affecting capture of Coccinellidae in traps

**Eric Lucas**
Université du Québec à Montréal
Effect of alternative prey or plant resources on cannibalism by Prey- and Pollen-specialized isogroup lines of the zoophytophagous mullein bug *Campylomma verbasci* (Hemiptera: Miridae).

**Donatella Battaglia**
University of Basilicata
Intraguild predation between the generalist predator *Macrolophus pygmaeus* and the aphid parasitoid *Aphidius ervi*

**John J. Sloggett**
Maastricht University
Older male ladybirds: sexually desperate or just worn out?

### PARASITOIDS AND BIOCONTROL

**Annette Herz**
Julius Kühn-Institut, Darmstadt
EcoOrchard: an EU-wide collaborative project to boost functional biodiversity of organic orchards

**Ammar Alhmedi**
pcfruit
Potential role of fruit intercrops for parasitoid assisted integrated apple aphid management

**Maryna Kaliuzhna**
I.I. Schmalhausen Institute of Zoology of National Academy of Sciences of Ukraine
Newly observed morphological characters of head and mesosoma of aphid parasitoids (Braconidae, Aphidiinae)

**Andjeljko Petrović**
University of Belgrade
High population genetic diversity within the potential biocontrol agent *Ephedrus persicae* (Hymenoptera, Braconidae, Aphidiinae)

**Marijana Ilić Milošević**
University of Niš
Potential limiting factors in the distributional pattern of *Ephedrus plagiator* (Nees 1811) (Hymenoptera: Braconidae: Aphidiinae)

**Saša Stanković**
University of Niš
The influence of *Lysiphlebus testaceipes* an introduced species on the autochthonous Aphidiinae parasitoids (Hymenoptera: Braconidae) in Balkans

**Željko Tomanović**
University of Belgrade
Phylogenetic relationships of *Lysiphlebus Foerster* (Hymenoptera: Braconidae: Aphidiinae) on the basis of molecular data

**Helmut van Emden**
University of Reading
Indirect ("non-consumptive mortality") of aphids resulting from parasitoids, and its magnification by partial plant resistance.

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### PREDATORS AND BIOCONTROL

**Kelley Tilmon**
Ohio State University
Density-dependent response of natural enemies to soybean aphid

**Xavier Pons**
Universitat de Lleida
*Oenopia conglobata* as a candidate for biological control in urban green areas: prey acceptance and preferences

**Monia Kamel Ben Halima**
University of Sousse
Aphids and their natural enemies on ornamental plants in the coastal area of Tunisia

**George Broufas**
Democritus University of Thrace
Life-history traits and predation of Chrysopa sp. lacewings on aphids and mealybugs

**Olivier Aubry**
Université du Québec à Montréal
Management chart of *Campylomma verbasci* (Hemiptera: Miridae) in apple orchards of eastern Canada

**George Broufas**
Democritus University of Thrace
Interspecific variation in the performance of five cryptic species of the European *Chrysoperla carnea* group on different diets

**Eric Lucas**
Université du Québec à Montréal
Evaluation of two new potential biological control agents against the foxglove aphid at low temperatures in Canadian greenhouses.

**Rahim Abdolahi Mesbah**
University of Tehran
Rearing of *Hippodamia variegata* in laboratory changed its shape and size: a geometric morphometric study

**Eric Lucas**
Université du Québec à Montréal
Direct and indirect effects of the spatial context on the natural control of an invasive aphid.

**Milan Plećaš**
University of Belgrade, University of Minnesota
Floral resources of bioenergy crops and pollen consumption by natural enemies of soybean aphid

**Ahmad Pervez**
Radhey Hari Govt. P.G. College, Kashipur
Dietary effects on the reproduction and demography of an aphidophagous ladybird, *Hippodamia variegata*

**Antoine Boullis**
Gembloux Agro-bio Tech - University of Liège
Wheat-pea intercropping for aphid control: from laboratory tritrophic approach to field application

**Gabriele Rondoni**
University of Perugia, Perugia, Italy
Detecting and evaluating predation upon aphids and coccinellids in laboratory and field conditions

**Marisa Skaljac**
Fraunhofer IME, Giessen, Germany
Effect of scorpion antimicrobial peptides on bacterial symbionts of aphids