



**RODENS  
ET  
SPATIUM**

**CONFERENCE GUIDE**

**JULY 25 — 29  
OLOMOUC 2016**



Palacký University  
Olomouc



## CONFERENCE VENUE ADDRESS

Palacký University Olomouc  
Faculty of Science  
(Přírodovědecká fakulta  
Univerzity Palackého v Olomouci)  
17. listopadu 1192/12  
771 46 Olomouc

University Wi-Fi connection:  
network name: **upol-guest**  
password: **UPguests**

## THURSDAY BANQUET VENUE ADDRESS

Archbishop's palace in Olomouc  
(Arcibiskupský palác Olomouc)  
Wurmova 562/9  
779 00 Olomouc



## SUNDAY, JULY 24

16:00-19:00 **Registration**, at the entrance of the Faculty of Science, Floor 1

## MONDAY, JULY 25

07:30-09:00 Registration, in front of Aula of the Faculty of Science, Floor 2

### Aula

#### Opening ceremony

09:00-09:15 Welcome: Emil Tkadlec, Ivo Frébort, the Dean of the Faculty of Science

#### Plenary lecture

09:15-10:00 Nancy Solomon: Dispatches from the field: intraspecific variability in prairie vole sociality  
Chair: Tkadlec

10:00-10:30 Coffee break

### Aula

#### Symp 1: Monitoring Rodent Populations

Chairs: Torre and Viñuela

10:30-10:45 Koprowski: Montane mammals at risk of loss: squirrels as indicators of global change

10:45-11:00 Jannett, Jr.: Long-term population pattern, habitat, and trappability of the southern bog lemming (*Synaptomys cooperi*) at high population levels in the apparent absence of the northern bog lemming (*S. borealis*)

11:00-11:15 Torre *et al.*: A monitoring protocol for the Spanish small mammal biodiversity (SEMICE) in the light of environmental change

11:15-11:30 Debenedetti *et al.*: Wood mouse populations as biological tags of environmental disturbances – A twenty two-year study in a burned Mediterranean ecosystem

11:30-11:45 Benedek *et al.*: Which factors shape rodent communities' structure and diversity in the typical rural landscape of central Romania?

11:45-12:00 Torre *et al.*: A monitoring program for the edible dormouse (*Glis glis*) in the Iberian Peninsula

12:00-12:15

12:15-12:30

12:30-14:00 **Lunch (student's cafeteria)**

### Lecture Hall 2.005

#### Symp 5-1: Parasites and pathogens

Chairs: Henttonen and Krasnov

Costa *et al.*: Ecology and patterns of pathogenic *Leptospira* shedding of *Rattus norvegicus* from a Brazilian urban slum community

Debenedetti *et al.*: Rodents and parasites: what can they tell us about wildfires?

Fichet-Calvet *et al.*: Lassa virus infection in *Mastomys natalensis* populations: abundance, prevalence and force of infection

Henttonen *et al.*: Ecology of Puumala hantavirus in Finland

Tagliapietra *et al.*: A recent outbreak of Dobrava-Belgrade hantavirus in a population of wild rodents in northern Italy: causes and implications

Imholt *et al.*: Comparative hantavirus dynamics in two rodent reservoir species

Khalil *et al.*: A diverse ecosystem promotes human health: the dilution effect and Hantavirus infection

Ulrich *et al.*: Viral pathogens in exotic and indigenous squirrels, Central Europe

### Symp 2: African rodent ecology and evolution

Chairs: Bryja and McDonough

- 14:00-14:15 Bryja *et al.*: African rodents: from biodiversity surveys to general evolutionary models
- 14:15-14:30 Mikula *et al.*: Imprints of climate fluctuations in distribution of rodent diversity in the northern part of Zambezi savanna
- 14:30-14:45 Sousa *et al.*: Did climatic changes trapped Ctenodactylidae species on Sahara-Sahel mountains and shaped intraspecific genetic variation?
- 14:45-15:00 Aghova *et al.*: Integrative phylogeography of rodents from Sudanian savanna
- 15:00-15:15 Krásová *et al.*: Multilocus phylogeny of grey-bellied pygmy mouse (*Mus triton*) complex
- 15:15-15:30 McDonough *et al.*: On the use of next-generation sequencing technology and museum specimens to resolve African rodent systematics
- 15:30-15:45
- 15:45-16:15 Coffee break
- 16:15-17:15 **Poster session**
- 17:15-19:00 The guided tour through the downtown
- 19:30-24:00 **Welcome party: Faculty of Science, back yard**

### Symp 5-II: Parasites and pathogens

Chairs: Henttonen and Krasnov

- Kiefer *et al.*: Plague foci in Mongolia
- Goüy de Bellocq *et al.*: Parasitism in the European house mouse hybrid zone
- Occhibove *et al.*: Does biodiversity affect pathogens transmission? Testing dilution effect in Welsh wild rodent communities
- Paulauskas *et al.*: Ticks and mites parasitising small rodents collected from different habitats in Curonian Spit, Lithuania
- Rodríguez-Pastor *et al.*: *Francisella tularensis* in a wild population of common vole (*Microtus arvalis*) from agricultural landscapes of SW Europe
- Sándor *et al.*: Rodents, ticks and pathogens: importance of host species and habitat for tick parasitism and pathogens carried by ticks of small mammals in Romania
- Krasnov and Khokhlova: How do parasites select their host species? Trait-based and phylogenetic associations between fleas and their small mammalian hosts in the Palearctic



## TUESDAY, JULY 26

### Aula

#### Plenary lecture

- 09:00-10:00 Ottar N. Björnstad: Causes and consequences of spatial synchrony in population dynamics – data, statistics and theory  
Chair: Tkadlec
- 10:00-10:30 Coffee break

### Aula

#### Symp 3-I: Rodent population dynamics

Chairs: Tkadlec and Jacob

- 10:30-10:45 Fauteux *et al.*: Lethal and non-lethal effects of predation on arctic lemmings
- 10:45-11:00 Bogdziewicz *et al.*: Negative effects of density on space use of small mammals differ with the phase of the masting-induced population cycle
- 11:00-11:15 Borowski *et al.*: Experimental test of a trade-off between breeding dispersal and fitness in males of the root vole (*Microtus oeconomus*)
- 11:15-11:30 Ecke and Hörnfeldt: Spatio-temporal patterns in the population dynamics of the field vole (*Microtus agrestis*) in Sweden
- 11:30-11:45 Hein and Jacob: Recovery of common vole populations (*Microtus arvalis*) after population collapse
- 11:45-12:00 Petrová *et al.*: Increased productivity by large-sized individuals leads to high population density in the common hamster
- 12:00-12:15 Tkadlec and Pavlučík: The effects of vole population variability on annual productivity of barn owls: testing Jensen's inequality using a predator-prey system

### Lecture Hall 2.005

#### Symp 7-I: Stories from underground

Chairs: Šumbera and Burda

- Hrouzková *et al.*: Seismic signals in subterranean rodents: how is it in spaladics
- Malewski *et al.*: Magnetoreception in rodents – new species, new methods
- Lövy *et al.*: Soil preference in the speciating blind mole rats *Spalax galii*: Do they prefer the fertile or the familiar?
- Burda *et al.*: Mole-rats like it hot
- Šumbera *et al.*: Light or temperature; that is the question. Circadian rhythms of the silvery mole-rat (*Heliophobius argenteocinereus*)
- Moshkin: Nasal construction protects rodent brain from inhaled dust and virus
- Begall *et al.*: Do breeders and non-breeders in eusocial Ansell's mole-rats (*Fukomys anselli*) represent different personalities?

- 12:15-14:00 Lunch (Student's Cafeteria)

### Symp 3-II: Rodent population dynamics

Chairs: Tkadlec and Jacob

- 14:00-14:15 Gasperini *et al.*: Effects of forest management on density and survival in terrestrial small mammals
- 14:15-14:30 Imholt *et al.*: Synchrony of forest rodent abundance and relation to tree damage
- 14:30-14:45 Orozco and Cornejo: Integrated rodent pest management in the campaign against vole in the local board of Plant Health in El Valle Del Fuerte, sin. Mexico
- 14:45-15:00 Tchabovsky *et al.*: Species-specific response of desert rodents to human-induced landscape change from desert to steppe
- 15:00-15:15 Damugi *et al.*: Matrix population modelling of the common hamster life history
- 15:15-15:30 Pyzyna *et al.*: The efficacy of ContraPest<sup>®</sup>, a contraceptive bait, in the management of wild rats (*Rattus norvegicus* and *Rattus rattus*)

15:30-16:00 Coffee break

16:00-17:00 **Poster session**

### Symp 7-II: Stories from underground

Chairs: Šumbera and Burda

- Vlasatá *et al.*: Spatial patterns of activity in the giant root-rat (*Tachyoryctes macrocephalus*), a fossorial rodent endemic to the Bale Mountains, Ethiopia
- Okrouhlik *et al.*: Huddling and socio-physiological effect in a social African mole-rat, the Mashona mole-rat (*Fukomys darlingi*)
- Smorkatcheva and Kuprina: Effect of social environment on female reproduction in the Zaisan mole-vole, *Ellobius tancrei*
- Cerveira *et al.*: Reproduction, postnatal growth and development of two fossorial pine voles, *Microtus duodecimcostatus* and *M. lusitanicus*
- Çolak *et al.*: Notes about reproduction biology of *Nannospalax xanthodon*
- Matur: A new hypothesis for the origin of cytotypic diversity of blind mole rats in Anatolia

**WEDNESDAY, JULY 27**

Mid-conference tour

7:30-19:00

### Museum of Olomouc cheese in Loštice

Try some genuine Olomouc *tvaružek* cheese right on the spot where it is made. The tangy taste and aroma of these golden coins of maturing cheese will enchant all the gourmets among us. These delicacies were first mentioned in the 15<sup>th</sup> century. They are made from unset sour curd cheese and the whole two-stage process of maturation is a natural one. This cheese gains its inimitable flavour thanks to the natural conditions of the geographical area of Haná.

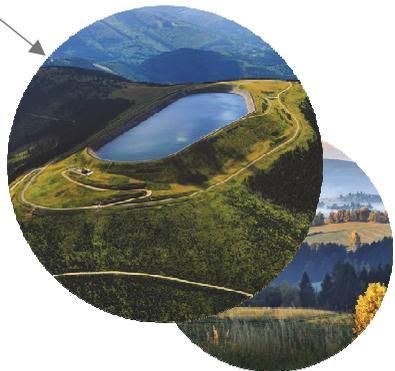


### Bouzov castle

The medieval Bouzov castle ranks among the most striking romantic castles in the historical land of Moravia. Unlike other medieval settlements, this castle has never gone to ruin. Having been an important seat of the Teutonic Knights order since 15<sup>th</sup> century, it acquired its present majestic appearance after an extensive reconstruction in the late 19<sup>th</sup> century.

### Dlouhé Stráně hydroelectric power station

Visit a unique feat of Czech engineering. In the loftiest reaches of the Jeseníky Mountains, the hydroelectric power station is like a secret bunker in a Bond movie. Thanks to its futuristic appearance and the attractiveness of the surrounding landscape, Dlouhé Stráně has become one of the most visited places in the Jeseníky Mountains and one of the seven wonders of Czechia.



## THURSDAY, JULY 28

### Aula

#### Plenary lecture

- 09:00–10:00 Gerald Heckel: Very many and still too few? Charting the limits of vole diversification  
Chair: Tkadlec
- 10:00–10:30 Coffee break

### Aula

#### Symp 6: Rodent behaviour

Chairs: Sedláček and Borowski

- 10:30–10:45 Frynta *et al.*: Exploratory axes in personality of black rats: repeatability and mutual correspondence in open-field and hole-board tests
- 10:45–11:00 Borowski *et al.*: The role of kinship in the formation of dormice aggregations in post breeding season
- 11:00–11:15 Safavian *et al.*: Habitat structure can affect nocturnal activity pattern of jerboas: a comparison of semi-desert and mountainous areas of Iran
- 11:15–11:30 Schlötelburg and Jacob: Maze runners: common voles (*Microtus arvalis*) in T-maze trials for identifying repelling or attracting substances
- 11:30–11:45 Sedláček *et al.*: On the determination of personality traits in the common vole
- 11:45–12:00
- 12:00–12:15
- 12:15–14:00 Lunch (Student's Cafeteria)

### Lecture Hall 2.005

#### Symp 4-I: Exploring rodent genomes

Chairs: Ruiz-Herrera and Kotlík

- Herman *et al.*: Serial colonisation and natural selection in a common rodent, the Eurasian field vole
- Chevret *et al.*: Phylogeography, genetic structure and morphological evolution of the house mouse on the Orkney Archipelago
- Hánová *et al.*: Genetic-based modelling of population history and spread of the European ground squirrel (*Spermophilus citellus*)
- Özkurt and Kandemir: Morphometric, karyologic and mtDNA characterization of *Sciurus vulgaris* and *S. anomalus* in Turkey
- Kotlík *et al.*: SNP versus mtDNA: genomic phylogeography of the bank vole in Europe
- Strážnická *et al.*: Gene-environment interaction in the bank vole (*Clethrionomys glareolus*)
- Ruiz-Herrera *et al.*: Comparative genomics in rodents: genomic signatures of evolutionary reshuffling

**Symp 8: Physiology and Reproduction of Rodents.** Chair: Frynta

- 14:00-14:15 Gromov and Anisimova: Reproductive success and fitness of male common voles (*Microtus arvalis*)
- 14:15-14:30 Kuznetsova *et al.*: Seasonality in the physiology and reproduction of the common hamster from urban population
- 14:30-14:45 Guenther and Trillmich: Seasonality and the wild cavy: effects on physiology, reproduction and behaviour of a highly precocial rodent
- 14:45-15:00 Potashnikova and Feoktistova: The hormonal response of chinese hamster males exposed to con- and heterospecific olfactory signals
- 15:00-15:15 Wang: Geographical physiological adaptation in energy and water metabolism in Mongolian gerbils (*Meriones unguiculatus*)
- 15:15-15:30
- 15:30-15:45
- 15:45-16:00
- 16:00-16:30 Coffee break
- 16:30-17:30 Poster session
- 19:30-24:00 **Banquet (Archbishop's Palace, Wurmova 9)**



**Symp 4-II: Exploring rodent genomes**

Chairs: Ruiz-Herrera and Kotlík

- Maltsev *et al.*: Phylogeography and phylogenetics of the eastern house mice (*Mus musculus*) on polymorphisms of mitochondrial DNA
- Mironova and Gromov: Structure of the natural hybrid zone between two chromosomal forms of common vole
- Poplavskaya *et al.*: Molecular-genetic analysis of urban populations of common hamster (*Cricetus cricetus*)
- Russell *et al.*: Phylogeography of invasive rats in New Zealand
- Shenbrot *et al.*: Phylogeography and taxonomy of the northern three-toed jerboa (*Dipus sagitta* Pallas, 1773) species complex
- D'Elía *et al.*: A phylogenomic appraisal of the sigmodontine radiation (Cricetidae)
- Renaud *et al.*: Bank voles in Southern Eurasia: vicariance and adaptation
- Dabrowski *et al.*: How cold-tolerant species coped after the last glaciation: the case study of the *Microtus oeconomus* subspecies in Europe



# FRIDAY, JULY 29

## Aula

### Plenary lecture

09:00–10:00 Stuart J. E. Baird: Introgression across the European house mouse hybrid zone: mouse genes, mitochondria and parasites  
Chair: Tkadlec

10:00–10:30 Coffee break

## Aula

### Symp 9: Ecology and Biology of Rodents

Chair: Le Boulengé

10:30–10:45 Rivarola and Simberloff: Categorization and effectiveness of protected areas: comparative study of small mammal communities in Nahuel-Huapi National Park, Argentina

10:45–11:00 Jeon *et al.*: Changes of rodent community and habitat structure with time elapse after thinning in Japanese larch (*Larix kaempferi*) plantations

11:00–11:15 Ghazaryan *et al.*: New data on Armenian birch mouse

11:15–11:30 Sözen and Şenol: Population size estimates for *Apodemus* spp., *Myodes glareolus*, *Glis glis* and *Muscardinus avellanarius* inhabit a deciduous forests in Zonguldak Province

11:30–11:45 Amirmardfar: The amount of organic phosphates (like DPG) existing in blood is determining factor of mammal's bulk

11:45–12:00 Kazanis *et al.*: Where does size matter? Common and different aspects in the life of adult Neural Stem Cells in the mouse and the rat brain

12:00–12:15

12:15–12:30

### Closing Ceremony

12:30–14:00 Lunch (Student's Cafeteria)

## Lecture Hall 2.005

### Symp 10: History and morphology of rodents

Chair: Horáček

Horáček *et al.*: Rodents in Central Europe along the Pleistocene/Holocene transition

Naderi *et al.*: Cranial morphometric analysis of the Transcaucasia mole vole in Iran and Caucasian region

Romaniuk and Herman: Rodent osteology from a zooarchaeological perspective – rodent skeletal remains from a Neolithic site at Skara Brae, Orkney, United Kingdom

### Symp 11: Food of rodents

Chair: Verde Arregoitia and Heroldová

Verde Arregoitia: Rethinking omnivory in rodents

Mühlböck and Sedláček: Food preference of the bank vole (*Clethrionomys glareolus*) and yellow-necked mouse (*Apodemus flavicollis*) in a laboratory experiment

Dell'Agnello *et al.*: The diet of Savi's pine vole: a new quantitative approach

Li *et al.*: *Ochotona curzoniae* physiological adaptation to *Oxytropis ochrocephala* toxin





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