



Czech University of Life Sciences Prague

# Faculty of Environmental Sciences

## ECOLOGY AND TAXONOMY OF ARTHROPODS

### Team introduction:

Arthropods are the largest group of organisms, with nearly one million described species. In central Europe, we focus namely on arthropods in the early succession stages and disclimax in human-altered habitats, and on groups of insects and other arthropods with high bioindicative potential (dragonflies, butterflies, ground beetles and necrophilous beetles). The primary focus in taxonomy is on diversity hotspots in Southeast Asia, namely China. Our research team has long-term experience in the following three topics:

1. Ecology and conservation of dragonflies and butterflies (Odonata, Lepidoptera), diversity of human-altered habitats (especially post-industrial areas), predator-prey interactions.
2. Ecology and biology of epigeic insects and other soil dwelling arthropods, including interactions with environmental conditions and plants (effects of temperature on development and activity, seed predation, parasitoidism, physiological adaptations).
3. Ecology, taxonomy and larval morphology of necrophilous beetles (Coleoptera: Staphylinoidea) (carcass-emitted volatiles, attractiveness for beetles; taxonomy and species diversity in the eastern Palearctic region).

### Team members:

The team consists of experienced academic researchers, young researchers and PhD students. The members of the research team are:

#### Assoc. Profs:

[Jan Růžička](#) (head of the team; contact email: [ruzickajan@fzp.czu.cz](mailto:ruzickajan@fzp.czu.cz)),  
[Pavel Saska](#)

#### PhDs:

[Filip Harabiš](#), [Tomáš Kadlec](#), [Michal Knapp](#), [Hana Šípková](#)

#### 5-7 PhD students

[Pavel Jakubec](#), [Lada Jakubíková](#), [Michal Pikner](#)

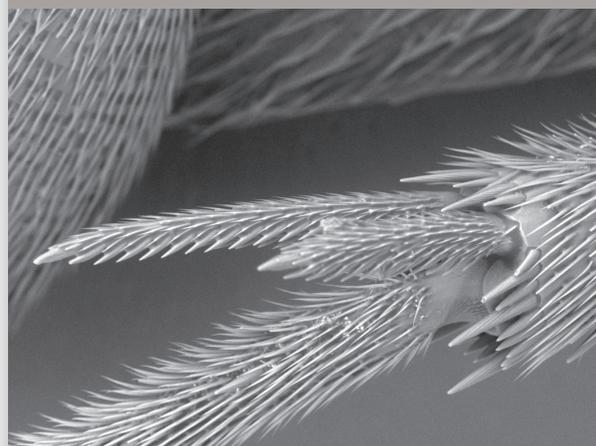
### Contacts

#### Address:

**Faculty of Environmental Sciences, Czech University of Life Science Prague**

Kamýčká 129  
165 21 Prague 6 – Suchbát

Tel. +420 224 382 147  
e-mail: [projekty\\_fzp@fzp.czu.cz](mailto:projekty_fzp@fzp.czu.cz)



**Five most significant recent publications by team members:**

Saska P, Honek A (2012) Efficiency of host utilisation by coleopteran parasitoid. *Journal of Insect Physiology* 58: 35-40.

Dolný A, Harabiš F (2012) Underground mining can contribute to freshwater biodiversity conservation: Allo-genic succession forms suitable habitats for dragonflies. *Biological Conservation* 145: 109-117.

Knapp M (2012): Preservative fluid and storage conditions alter body mass estimation in a terrestrial insect. *Entomologia Experimentalis et Applicata* 143: 185-190.

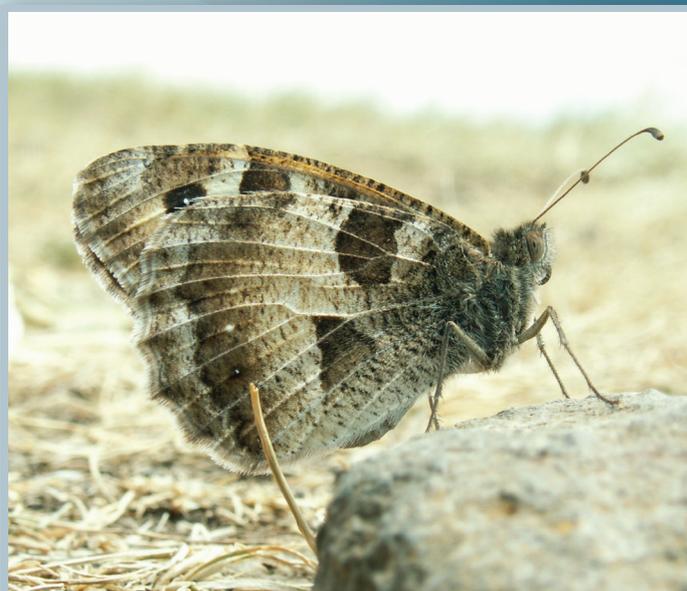
Kadlec T, Vrba P, Kepka P, Schmitt T, Konvicka M (2010) Tracking the decline of the once-common butterfly: delayed oviposition, demography and population genetics in the hermit *Chazara briseis*. *Animal Conservation* 13: 172-183.

Kalinová B, Podskalská H, Růžička J, Hoskovec M (2009): Irresistible bouquet of death – how are burying beetles (Coleoptera: Silphidae: *Nicrophorus*) attracted by carcasses. *Naturwissenschaften* 96: 889-899.

**Applied outcomes of our research and further potential applications of the research:**

Dragonflies, butterflies and carabid beetles are often used as indicators of habitat quality and changes in environmental conditions (e.g. management effectiveness evaluation, indications of anthropogenic inferences to the natural environment at the local, landscape and global scale).

Necrophilous beetle ecology can be applied in forensic entomology (estimation of post-mortem interval, determination of habitat type etc.). Our research may also be directly applied to the development and innovation of insect and other arthropod collection and rearing methodologies.



**Keywords:** Bioindicators, human-altered habitats, dragonflies, butterflies, carabid beetles, taxonomy, necrophilous beetles