



# XVth European Carabidologists Meeting

September 22-27, 2013 • Prague, Czech Republic

Book of Abstracts with Conference Programme

**Carabids and man – can we live with(out) each other?**

Edited by

**P. Saska, M. Knapp, A. Honěk & Z. Martinková**



## XVIth European Carabidologists Meeting

- 14:00 - 14:20 Do recover diversity and composition of indigenous ground-dwelling assemblages after fifty years of afforestation with native oak? - Tóthmérész B., Bogyó D., Mizser S., Nagy D., Magura T. (page 60)
- 14:20 - 14:40 Carabid assemblages in pine stands disturbed by a hurricane in 2002: ten-years responses to hurricane impact (Piska Forest, Poland) - Skłodowski J. (page 57)
- 14:40 - 15:00 Species composition and structure of carabid assemblages along the clear-cut originated succession gradient in pine forests - Aleksandrowicz O., Marczak D. (page 17)
- 15:00 - 15:20 Changing climate associated with homogenization of forest assemblages of boreal ground beetles (Coleoptera: Carabidae) - Spence J.R., Bourassa S. (page 59)
- 15:20 - 15:40 Restoration as a forest-management tool in Northern Europe: effects on carabid beetles - Koivula M., Toivanen T., Heikkila T. (page 39)
- 15:40 - 16:00 Ancient forest species: does the concept apply on carabids? An example in pine and oak forests in French lowlands - Dauffy-Richard E., Fleury J., Martin H., Bergès L., Dupouey, J.L. (page 25)
- 16:00 - 16:30 presentation of the České středohoří Landscape Protected Area
- 16:30 - 16:35 Information about the excursion on Wednesday

### Wednesday, 25<sup>th</sup> September

Full day (ca. 8:30 - 18:00) excursion to the České Středohoří Landscape Protected Area and the town of Žatec, the capital of hop

### Thursday, 26<sup>th</sup> September

- 9:00 - 10:40 **Session 5: WHAT DRIVES THE VARIABILITY IN CARABID LIFE HISTORY TRAITS?** (chaired by Roberto Pizzolotto)
- 9:00 - 9:20 Functional diversity and life-history traits of carabid beetles in agricultural systems - Stockan J.A., Pakeman R.J., Baird J., Young M.R., Iason G.R. (page 59)
- 9:20 - 9:40 Influence of the production system on life history traits of carabid beetles - Marie A., Plantegenest M. (page 42)
- 9:40 - 10:00 The effect of abandonment of mountain meadows on assemblage structure and life traits of ground beetles (Coleoptera, Carabidae) - Skalski T., Armatys P., Kędzior R. (page 55)

## Species composition and structure of carabid assemblages along the clear-cut originated succession gradient in pine forests

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Carabids assemblages were studied for 3 years to explore changes in their structure and species composition during a forestry cycle in the Nerwik (NE Poland). Native pine forest was clear-cut and replanted. Recently planted (2, 3, and 5 years old), young (16 years old), middle-aged (30 and 45 years old) and old pine forests (60, 80, 100 and 135 years old) were studied using pitfall traps. Our results showed that the species richness of carabids was significantly higher in the plantations than in the native pine forest.  $\beta$ -diversity of the 5 year old plantations was the highest. The abundance of the open habitat species remarkably increased on recently established plantations. Carabid assemblages typical for forests were observed in 16-years old forests and older ones.

## Small-scale spatiotemporal variability in body size and body condition of *Anchomenus dorsalis* in agricultural landscape

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Adult body size is one of the most ecologically relevant quantitative traits that determine many other traits of particular organism, including ecological, physiological and ethological ones. There are two different measures of body size: structural body size (e.g. elytron length) and body mass. In carabids, structural body size is determined during preimaginal development, whereas body mass is substantially affected by environmental conditions experienced by adults. Body condition, representing energetic reserves of an animal, is computed as body mass corrected for structural body size. This study investigates variability in structural body size and body condition of carabid *Anchomenus dorsalis* in time and space on small scale. The beetles were collected in four fields near Prague-Suchdol in autumn 2009 and 2010, and in spring 2010, 2011. Structural body size was significantly affected by sex (females are larger in comparison to males) as well as by field identity, overwintering (post-overwintering individuals collected in spring were larger in comparison to pre-overwintering individuals collected in autumn) and overwintering $\times$ year interaction. Our results suggest that particular fields and sampling years differed in environmental conditions experienced by *A. dorsalis* during larval growth, which results in differences in adult structural body size. Mean structural body size in *A. dorsalis* was also affected by overwintering, which was probably caused by size-specific winter mortality. Moreover, the effect of overwintering varied among years,