

*Foreword***Animal Biology special issue arising from the 14th Benelux
Congress of Zoology, Amsterdam, 1-2 November 2007**

Zoological congresses continue to be exciting meeting places for a diverse plumage of scientists interested in how animals behave and adapt to the environment and how they maintain internal homeostasis. Evolutionary theory, the unifying concept of modern biology, is acting as a common theme tying together many animal biologists. The evolutionary view of animal biology has proven particularly fruitful in the last decade. For example, biological principles uncovered in model species have been shown to be valid in a range of non-model species. In addition, comparisons of genomes have provided new insights into the deep phylogenetic splits of the animal kingdom. Finally, knowledge about animal physiology and genetics has even provided useful guidance to the analysis of disease in humans.

All these developments are still ongoing and have brought zoology to the forefront of modern biology. The 14th Benelux Congress of Zoology, held 1 and 2 November 2007 at VU University, Amsterdam in The Netherlands, displayed examples of many of these developments. A selection of contributions from the conference is published in this issue of *Animal Biology*. They illustrate a broad diversity of topics, from the molecular to the ecological domain, thus spanning the whole breadth of zoological sciences.

Starting at the molecular level, Tobbäck et al. (2008) have characterized a cGMP-dependent kinase gene in the wasp *Vespula vulgaris*, with homology to so-called foraging genes in bees and ants. Differential expression of this gene, analyzed by quantitative PCR, marks a transition between behavioural phenotypes for food acquisition.

Van Turnhout et al. (2008) provide a detailed microscopical analysis of the articular cartilage in movable joints of the horse metacarpus. The study shows that the organization of collagen fibres is remodelled in the first months after birth, which suggests that articular cartilage is subject to epigenetic processes.

Wynhoff et al. (2008) present an experimental assessment of the oviposition sites of two species of obligate myrmecophilic butterfly. The butterflies appear to lay eggs not only near the host plant required for larval growth, but also within the range of an ant nest, possibly to allow the larvae to be carried to the ant nest for overwintering.

Another case of behavioural adaptation is reported by Lambeets et al. (2008), in a riparian wolf spider, *Pardosa agricola*, confronted with flooding disturbance. The flood-avoidance behaviour in this species clearly contrasts with a related generalist species, showing the importance of behavioural plasticity in habitat specialization.

Kishe-Machumu et al. (2008) compare stomach contents of cichlid fish in Lake Victoria, before and after the upsurge of Nile perch. Interestingly, species that were detritivores before, have now mainly become zooplankton-feeders. The dietary shift seen in these cichlids is indicative of the great ecological changes in Lake Victoria as a result of the introduction of the Nile perch.

Another aquatic study by Dohet et al. (2008) investigates the use of macroinvertebrates in bioindicator systems of water quality in streams. They identify various indicator groups of insects and water mites and point out that taxa with specific ecological requirements hold the greatest promise for being useful indicator species.

Finally, Schmidt et al. (2008) provide an assessment of habitat quality of rivers in Luxembourg with respect to their suitability for the European otter, *Lutra lutra*. Otters declined heavily in Europe due to environmental pollution, habitat loss and hunting. The authors point out that a harmonized methodology at the European level is badly needed to properly assess otter habitats for conservation purposes.

This proceedings issue, and the whole congress, greatly benefited from the willingness and help of a number of people. Evidently, we need to thank all contributors to the congress, the four plenary lecturers (Geoff Parker, Patricia Beldade, Jaap Koolhaas and Mike Ryan), and especially the people who submitted their work for these proceedings. Moreover, although they remain anonymous, the referees deserve mention for their critical yet constructive comments. The Editor-in-Chief Mees Muller and Assistant Editor Marcel van Oijen were also of great value in guiding us through the journal's editorial process. We furthermore thank the members of the board of the royal Dutch zoological society (KNDV) for their encouragement (Evert Meelis, Simon Verhulst, Thijs Zandbergen, Lia Hemerik and Peter Klaren), and many of our departmental colleagues. Two persons who deserve special mention are our secretary Désirée Hoonhout (for all the time she put into communicating with many of the participants and contributors), and our technician Janine Mariën (for creating the wonderful artwork for the meeting that also features the cover of this issue, unfortunately in black-and-white). And, last but not least, we are grateful for the financial support that we received from the Netherlands Organisation for Scientific Research, Earth & Life Sciences (NWO-ALW) and the sponsoring from Noldus Information Technology b.v. and publishing house Brill.

The 14th Benelux Congress of Zoology was an inspiring and exciting meeting and we sincerely hope that you will enjoy the present witnesses of it.

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Guest editors

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