

WELCOME

Welcome to the delegates of the 30th International Ethological Congress held on the Dalhousie University campus in beautiful Halifax, Nova Scotia. We have an excellent scientific program for the conference with 12 plenary speakers, 17 symposia, 142 oral presentations, and 141 poster presentations by delegates from 34 countries. These presentations will impart to you the newest data and theories in the study of the development, ecology, evolution, and neurobiological control of behaviour. We have lots of space and time for workshops, roundtable discussions, and spontaneous meetings, for one of the purposes of an international meeting is the free exchange of ideas with colleagues from different disciplines and from different countries.

We have also provided the opportunity to experience the history, biological diversity, art, and culture of Nova Scotia with visits to the Halifax Citadel, the Natural History Museum, the Maritime Museum of the Atlantic, and the Art Gallery of Nova Scotia. In addition, the Dalhousie University Art Gallery will welcome IEC 2007 delegates at our opening lecture and throughout the week, and tours have been organized to the historic town of Lunenburg, the Evangeline Trail, and Ovens Natural Park, and Fisherman's Cove.

During the conference, I believe that everyone will be inspired by the scientific presentations and stimulated by the city of Halifax with its rich history and cultural environment. Again, welcome to Halifax and enjoy the conference.

A handwritten signature in cursive script that reads "Richard Brown". The ink is dark and the background is a light, slightly textured grey.

Richard Brown
Organizer
IEC 2007

WEDNESDAY AUGUST 22, 2007- AFTERNOON

13: 30- 15:30 **SYMPOSIA AND ORAL CONTRIBUTIONS**

ONDAATJE THEATRE - McCAIN BUILDING

SYMPOSIUM: Physiology, Ethology and Wildlife Conservation

Chair: Christina D. Buesching

13:30 Introduction

13:35 HANNAH L. DUGDALE, LISA C. POPE, TERRY BURKE & DAVID W. MACDONALD

Reproductive behaviour and genetic relationships within social groups of the European badger *Meles meles* (S14-1)

14:05 YAYOI KANEKO, CHRIS NEWMAN, CHRISTINA BUESCHING & DAVID W. MACDONALD

Variations in temperature and humidity of badger setts in a high population density area (S14-2)

14:35 CHRISTINA D. BUESCHING, JOHN WATERHOUSE, MICHAEL HEISTERMANN & DAVID W. MACDONALD

Olfactory puberty in the European badger (*Meles meles*): individual advertisement vs. group-scent (S14-3)

15:05 General Discussion

SCOTIABANK AUDITORIUM- McCAIN BUILDING

SYMPOSIUM: Prospective cognition and future planning by animals

Chairs: Nicola Clayton and Anthony Dickinson

13:30 Introduction

13:40 NICOLA CLAYTON & ANTHONY DICKINSON

Prospective cognition by food-caching Western Scrub-Jays (S15-1)

14:05 LUCIE H. SALWICZEK, YORK WINTER & NICOLA S. CLAYTON

Mental time travel in bats? (S15-2)

14:30 JOSEP CALL

Future planning by great apes (S15-3)

Title: Reproductive behaviour and genetic relationships within social groups of the European badger *Meles meles*

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Abstract: Mammalian species with a rudimentary social system provide an insight into the evolution of their social behaviour. Despite their sociality in southern England, there is minimal evidence of the functional significance of grouping in the European badger *Meles meles*. Examining the social system of badgers may therefore enhance understanding of factors that promote the evolution of social behaviours. We used 22 microsatellite loci to assign parentage to 630 badger cubs born in a high-density population in Wytham Woods, Oxford between 1988 and 2005. We conducted parentage analyses to assess whether plural breeding, multiple paternity litters and extra-group paternity occurs within badger social groups. We then assessed the relatedness of group members and compared this to the degree of reproductive skew seen within social groups to test predictions of transactional and compromise models of reproductive skew. Finally, we examined the potential for cooperative breeding, which refers to a social system in which group members help care for young that are not their genetic offspring. We recorded the identity of individuals that performed potentially cooperative behaviours such as digging, bedding collection and babysitting and compared this to their breeding success and relatedness, to investigate the possibility of cooperative breeding.

Keywords: Mating system; reproductive skew; cooperative breeding

Species: European badger