

Curriculum Vitae

Marion L East

Department of Evolutionary Ecology, Leibniz Institute for Zoo and Wildlife Research (IZW)

Senior Research Scientist

Phone +49 (0)30 5168 512

Fax +49 (0)30 5126 104

Email east@izw-berlin.de

Job description

Research on the behavioural adaptations and evolutionary ecology of the spotted hyaena, the molecular epidemiology of carnivore pathogens, and conflict between humans and carnivores

Research fields and interests

For the past 27 years I have conducted research on a large population of individually known spotted hyaenas in the Serengeti National Park in northern Tanzania. My research interests include social processes (the acquisition of dominance and its fitness consequences, sexual conflict, and communication), intrinsic and extrinsic factors determining pathogen infection, the impact of infection on individual fitness, the molecular epidemiology of viruses in multi-carnivore host environments, and conflict between humans and large carnivores.

Professional appointments

Since 1999 Senior Research Scientist, Leibniz Institute for Zoo and Wildlife Research
1995-1999 Senior Research Scientist, Max-Planck Institute für Verhaltensphysiologie, Germany
1987-1994 Postdoctoral Researcher, Max-Planck Institute für Verhaltensphysiologie, Germany
1984-1987 Postdoctoral Researcher, University of Aberdeen, UK
1981-1984 Postdoctoral Researcher, University of Oxford, UK

Education

1981 PhD Biological Sciences, University of Sussex, UK

Selected publications

East ML, Kurze C, Wilhelm K, Benhaiem S, Hofer H (2013) Factors influencing *Dipylidium* sp. infection in a free-ranging social carnivore, the spotted hyaena (*Crocuta crocuta*). *International Journal of Parasitology: Parasitology and Wildlife* 2, 257-265

Benhaiem S, Hofer H, Dehnhard M, Helms J, East ML (2013) Sibling competition and hunger increase allostatic load in spotted hyaenas. *Biology Letters* 9, 20130040.

Benhaiem S, Hofer H, Kramer-Schadt S, Brunner E, East ML (2012) Sibling rivalry: training effects, emergence of dominance and incomplete control. *Proceedings of the Royal Society B* 279, 3727-3735.

Nikolin VM, Osterrieder K, von Messling V, Hofer H, Anderson D, Dubovi E, Brunner E, East ML (2012) Antagonistic pleiotropy and fitness trade-offs reveal specialist and generalist traits in strains of canine distemper. *PLoS ONE* 7, e50955.

Hofer H, East ML (2012) Stress and immunosuppression as factors in the decline and extinction of wildlife populations: concepts, evidence and challenges. In: Aguirre AA, Daszak P, Ostfeld RS (eds) *New directions in conservation medicine: applied cases of ecological health*, Oxford University Press, New York, USA, 82-107.

East ML, Nyahongo JW, Goller KV, Hofer H (2012) Does the vastness of the Serengeti limit human-wildlife conflicts? In: Somers MJ, Hayward MW (eds) *Fencing for Conservation: restriction of evolutionary potential or a riposte to threatening processes?* Springer, Heidelberg, New York, 125-151.

East ML, Bassano B, Ytrehus B (2011) The role of pathogens in the population dynamics of European ungulates. In: Putman RJ, Apollonio M, Andersen R (eds) *Ungulate management in Europe: problems and practices* Cambridge University Press, Cambridge, UK, 319-348.

East ML, Hofer H (2010) Social environments, social tactics and their fitness consequences in complex mammalian societies. In: Szekely T, Moore AJ, Komdeur J (eds) *Social behaviour: genes, ecology and evolution*, pp 360-390. Cambridge University Press, Cambridge.

Höner OP, Wachter B, Hofer H, Wilhelm K, Thierer D, Burke T, Trillmich F, East ML (2010) The fitness of dispersing spotted hyaena sons is influenced by maternal social status. *Nature Communications* 1, 60.

East ML, Höner OP, Wachter B, Wilhelm K, Burke T, Hofer H (2009) Maternal effects on offspring social status in spotted hyenas. *Behavioral Ecology*, 20, 478-483.

Burgener N, Dehnhard M, Hofer H, East ML (2009) Does anal gland scent signal identity in the spotted hyena? *Animal Behaviour* 77, 707-715.

Hofer H, East ML (2008) Siblicide in Serengeti spotted hyenas: a long-term study of maternal input and cub survival. *Behavioral Ecology Sociobiology* 62, 341-351.

Höner OP, Wachter B, East ML, Streich WJ, Wilhelm K, Burke T, Hofer H (2007) Female mate-choice drives male-biased dispersal in a social mammal. *Nature* 448, 798-801.

Hofer H, East ML (2003) Behavioral processes and the cost of co-existence in female spotted hyenas: a life-history perspective. *Evolutionary Ecology* 17, 315-333.

East ML, Burke T, Wilhelm K, Greig C, Hofer H (2003) Sexual conflict in spotted hyenas: male and female mating tactics and their reproductive outcome with respect to age, social status and tenure. *Proceedings of the Royal Society B* 270, 1247-1254.

East ML, Hofer H (2002) Conflict and co-operation in a female-dominated society: a re-assessment of the "hyper-aggressive" image of spotted hyenas (*Crocuta crocuta*). *Advances in the Study of Behavior* 31, 1-30.

East ML, Hofer H (2001) Male spotted hyenas queue for status in groups dominated by females. *Behavioral Ecology* 12, 558-568.

East ML, Hofer H, Cox JH, Wulle U, Wiik H, Pitra C (2001) Regular exposure to rabies virus and lack of symptomatic disease in Serengeti spotted hyenas. *Proceedings of the National Academy of Sciences USA* 98, 15026-15031.

Goymann W, East ML, Wachter B, Höner O, Möstl E, Van't Hof TJ, Hofer H (2001) Social, state-dependent and environmental modulation of faecal corticosteroid levels in free-ranging female spotted hyenas. *Proceedings of the Royal Society B* 268, 2453-2459

Patents and licences

Designed a biopsy dart for Teleinject syringes, licensed to Teleinject GmbH

Teaching and education, outreach

Participated in and advised on television and radio programmes on animal behaviour, spotted hyenas and the Serengeti ecosystem produced by various companies in US, Europe and Asia, including the BBC and National Geographic.

Capacity building in Tanzania:

- Training of Tanzanian scientists for advanced degrees (3 scientists trained to PhD and 2 to MSc)
- Established an MSc training programme in USA for lecturers at Mweka College;
- Established an annual field training course in the Serengeti National Park for veterinarian students from Sokoine University of Agriculture, Morogoro, Tanzania
- Regular lectures provided to students from Mweka College of Wildlife Management, Tanzania, during their field course in the Serengeti ecosystem
- Promotion of wildlife education in primary schools in Tanzania

Professional roles and services to the scientific community

Review Editor, *Frontiers in Ecology and Evolution: Behavioral and Evolutionary Ecology*;

International Review Panel, *African Journal of Ecology*

Referee for journals: including *PLoS One*, *Proceeding of the Royal Society B*, *Philosophical Transactions of the Royal Society B*, *Behavioral Ecology*, *Animal Behaviour*, *Behavioral Ecology and Evolution*, *Behavioral Ecology and Sociobiology*, *Functional Ecology*, *Infection*, *Genetics and Evolution*, *Virology Journal*, *Frontiers in Zoology*, *Mammal Biology and others*.

Faculty Member, Humboldt Graduate School, Humboldt University, Berlin

Member of the Interdisciplinary Center for Infection Biology and Immunity (ZIBI), Berlin

Member IUCN/Species Survival Commission Hyena Specialist Group

2013, 2011, 2009, 2007, 2004, 2002, 2000: Co-organiser of Conservation Workshop, International Conference on Behaviour, Physiology and Genetic of Wildlife, Berlin

2011: Co-organiser, International Conference "Chemical Signals in Vertebrates 12", Berlin

2007: main organiser, International Conference on Behaviour, Physiology and Genetics of Wildlife (IZW, EAZA), Berlin