

Dr Thomas Hesselberg

Experienced researcher, course director and educator specialising in behavioural ecology, comparative biomechanics and biomimetics with a research focus on orb webs and spider web-building behaviour. Proficient in a range of methods including behavioural analysis, statistics, numerical modelling and programming.

Research interests: Animal Behaviour, Arachnology, Behavioural Ecology, Biomimetics, Comparative Biomechanics, Invertebrate Zoology, Subterranean Biology

Employment history

Department for Continuing Education, University of Oxford (Jan 2012 – present)
Departmental Lecturer in Biological and Environmental Sciences (July 2018 – present)

Combining both roles (course co-director for the postgraduate certificate ecological survey techniques and director of studies for biological sciences) below into one 0.5 FTE contract.

Departmental Lecturer in Environmental Science (October 2016 – June 2018)
Part-time role (0.3 FTE) Main roles include acting as course co-director for the Postgraduate Certificate in Ecological Survey Techniques, module leader, tutoring on modules, supervising field projects and developing new courses and modules.

Director of Studies in Biological Science (Jan 2012 – June 2018)
Part-time director of studies, tutor and commissioning editor for online courses in biological science (0.2 FTE). Responsible for the public programme (weekly classes, online courses and weekend/day courses) in biology. Coordinator, recruiter and mentor of part-time tutors. Additionally, teaching face-to-face weekly classes and authoring, teaching, planning and commissioning short online courses.

St. Anne's College, University of Oxford (Oct 2017 – present)
Stipendiary Lecturer in Biological Sciences (Oct 2017 – present)
Part-time lecturer (~0.2 FTE), responsible for giving tutorials to St. Anne's biology students in quantitative methods, evolution and animal behaviour as well as providing pastoral care and helping out with admissions.

Department of Animal Care, Wiltshire College (June 2015 – July 2017)
Lecturer in Animal Science and Management (June 2015 – July 2017)
Part-time higher education lecturer (first year 0.4 FTE, second year 0.2 FTE) on the FdSc/BSc degree course in animal science and management. Responsibilities include acting as module leader on a number of FdSc and BSc modules, supervising honours research projects and participating in student recruitment.

School of Natural and Social Sciences, University of Gloucestershire (June 2016 – Aug 2016)
Research Fellow (June 2016 – Aug 2016)

Part-time (0.8 FTE), short-term research fellow in biological data analysis.
Responsible for analysing large data-sets from a citizen science project on nuptial flights in the ant *Lasius niger* with Prof Anne Goodenough and Prof Adam Hart.

Department of Zoology, University of Oxford (Oct 2009 – Sep 2011)

Marie Curie Early Career Fellow (Oct 2009 – Sep 2011)

Full-time researcher in the Oxford Silk Group, where I conducted research on behavioural and biomechanical aspects of orb web design built under different environmental conditions under the supervision of Prof. Fritz Vollrath.

Smithsonian Tropical Research Institute, Panama (Aug 2008 – July 2009)

Smithsonian Institution Postdoctoral Fellow (Aug 2008 – July 2009)

Full-time researcher in the Laboratory of Behavior and Evolutionary Neurobiology, where I conducted research on behavioural plasticity of tropical orb-web spiders under the supervision of Prof. William Eberhard.

Department of Neurobiology, University of Ulm, Germany (July 2006 – July 2007)

Postdoctoral Research Assistant (July 2006 – July 2007)

Full-time researcher in the BioFuture Group, where I conducted research on flight control and sensory integration in the fruit fly under the supervision of Dr. Fritz-Olaf Lehmann.

Other research experiences

Research Fellow, Jersey International Centre of Advanced Studies (Oct 2019 – present).

Non-stipendiary research fellow associated to the MSc in Island Biodiversity & Conservation programme to conduct or supervise research on island invertebrates and on habitat islands (caves).

Visiting Professor, University of the Balearic Islands, Spain (Oct. 2018 – December 2018)

Awarded an 8-week visiting professor fellowship by the University of the Balearic Islands to conduct research on the cave orb spiders in Mallorca. The main focus is to gather behavioural and population genetic data to shed light on their web-building and dispersal behaviour. Visiting Prof Carlos Juan.

Academic Editor, Oxford Language Editing, Oxford University Press (July 2014 – July 2017)

Read through and edit manuscripts from non-native English speaking zoologists prior to submission to peer-reviewed journals. Role includes commenting on clarity, use of statistics and scientific rigour (part-time).

Fellowship Advisor - The Daphne Jackson Trust (Jan 2012 - Nov 2013)

Part-time fellowship advisor, which included being an advisor, assessor and mentor to applicants and Daphne Jackson Fellows from their first initial contact to the last day of their fellowship.

Research Associate - Department of Zoology, University of Oxford (Oct 2011 – present)

Non-stipendiary Research Associate in the Oxford Silk Group; supervisor of undergraduate research projects and tutor in Animal Behaviour and Animal Cognition.

Research Fellow - Wolfson College, University of Oxford (Jan 2010 – Dec 2016)

Non-stipendiary research fellow with dining rights; no official duties but participating in relevant seminar and sessions.

Awards and Grants

Major grants and fellowships

Marie Curie Intra-European Fellowship for Career Development (2009, €171K)

Smithsonian Institution Postdoctoral Fellowship (2008, \$44K)

Minor grants and awards

Visiting Professor fellowship at the University of the Balearic Islands (2018, €4.4K), NERC Industrial Strategy Training Course Award (2017, £26K & 2019, £27K, PI), University of Oxford Teaching Excellence Award (2017, group project award, £3.3K), British Arachnological Society grant (2015, £252, Co-PI), Oxford University Department for Continuing Education Strategy Group funding for CertHE development (2015, £1K), NERC Postgraduate and Professional Skills Development Award (2013, £23K & 2014, £25K, Co-Applicant), Wolfson Academic Fund (2013, £475; 2015, £316), Nordea study abroad scholarship (2000, 10K DKr)

Education

Postgraduate Research Student, Department of Mechanical Engineering, University of Bath (Oct. 2002 – June 2006).

Postgraduate Research Student at the Centre for Biomimetics and Natural Technologies (Supervisor: Prof. Julian F.V. Vincent).

Thesis title: *An analysis of the locomotory behaviour and functional morphology of errant polychaetes* (PhD degree awarded – June 2006).

MSc Student, Institute of Biology, University of Aarhus, Denmark (Jan. 2001 – Oct. 2002).

Master student at the Department of Zoology (Supervisors: Prof. Fritz Vollrath - external: University of Oxford and Dr. Mark Bayley - internal).

Thesis title: *Web-building behaviour in Araneus diadematus Cl.: Effects of temperature and neurotoxins on the behaviour and web-geometry* (Master of Science degree awarded – Oct. 2002).

Undergraduate student, Institute of Biology, University of Aarhus, Denmark

(Aug. 1996 – Dec. 2000).

Undergraduate student in biological sciences.

Professional societies and editorial duties

Grant and fellowship reviewer and other professional duties

- Chevening Reading Committee – Academic Evaluator (2019 - present)
- External Examiner for the University of Surrey (2018 – present).
- Periodic review subject expert, MSc in Biological Recording and Ecological Monitoring, Manchester Metropolitan University (2018).
- Grant reviewer for the British Ecological Society (2017 – present).
- External Examiner for the University of Northampton/Moulton College (2015 – 2019).
- Expert Evaluator for EU Erasmus+ Strategic Partnership projects for the National Agency in Denmark (2014 - present).
- Chairman of the Board of Examiners for the Postgraduate Certificate in Ecological Survey Techniques, Oxford University Department for Continuing Education (2014 – 2017).
- Member of the accreditation panel for the Royal Society of Biology (2013 and 2019).
- Grant reviewer for The Romanian National Council for Development and Innovation (2012, 2016 and 2020).

Ad-hoc reviewer for the following journals

American Naturalist, Animal Behaviour, Behavioral Ecology, Biological Journal of the Linnean Society, Current Zoology, Ecotoxicology, European Journal of Entomology, Evolutionary Ecology, Frontiers in Zoology, Journal of Animal Ecology, Journal of Arachnology, Journal of Chemical Ecology, Journal of Ethology, Journal of Evolutionary Biology, Journal of Insect Behavior, Journal of Insect Conservation, Journal of the Royal Society Interface, Journal of Theoretical Biology, Naturwissenschaften, Oikos, Oriental Insects, PNAS, Proceedings of the Royal Society of London. Series B., Scientific Reports, Sensor Review, Trends in Ecology & Evolution, Zoology.

Member of the following professional societies

The Association for the Study of Animal Behaviour, American Arachnological Society, British Arachnological Society, British Ecological Society, Fellow of the Higher Education Academy, International Society of Bionic Engineering, Royal Society of Biology, International Society for Subterranean Biology.