

Emma Carolan Tecwyn

Doctoral Researcher

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About

PhD Title: Physical cognition and planning in primates

First supervisor: **Dr Jackie Chappell** (<http://www.birmingham.ac.uk/schools/biosciences/staff/profile.aspx?Referenceld=5282&Name=dr-jackie-chappell>) and **Dr Susannah Thorpe** (<http://www.birmingham.ac.uk/schools/biosciences/staff/profile.aspx?Referenceld=9669&Name=dr-susannah-thorpe>)

Emma is interested in the differences in cognitive capacities between monkeys and apes and why such differences may have evolved. She has carried out research in zoos in the UK and the Netherlands with orangutans and bonobos and is currently focusing on designing tasks to test the ability of different primate species to plan ahead.

Qualifications

BSc (Hons) Biological Sciences with Studies in Europe (University of Birmingham and Freie University, Berlin)
MSc Animal Behaviour (Manchester Metropolitan University)

Biography

Emma's first degree was in Biological Sciences at the University of Birmingham, where she initially developed an interest in animal behaviour and cognition. Emma subsequently went on to complete an MSc in Animal Behaviour at Manchester Metropolitan University, where her research focused on competitive grazing interactions between zebra, buffalo and domestic cattle in a Kenyan game reserve.

In 2009 she returned to Birmingham to begin a NERC-funded PhD under the co-supervision of Dr. Jackie Chappell and Dr. Susannah Thorpe working on primate cognition, with a particular focus on differences in cognitive ability between great apes and other primates. Specifically, using orangutans as a model for the last common ancestor of the great apes, she is interested in cognitive capacities that might have evolved in response to the physical selection pressure of locomotion in a complex arboreal habitat for a large-bodied animal. Such a habitat poses the unique challenges of crossing gaps in the canopy and moving on highly compliant branches that deform under an animal's weight. In such a situation, the ability to 'mentally simulate', or 'plan' different possible courses of action and their outcomes prior to implementing behaviour would be extremely useful, and investigating this forms the focus of her current work.

She has designed physical problem-solving tasks that require subjects to consider multiple obstacles or carry out a specific sequence of actions in order to obtain a food reward. Trial-unique task presentations and detailed post-hoc analyses aim to elucidate how such tasks are approached, with regards to the underlying cognitive mechanisms.

Research

Physical cognition, cognitive adaptations, evolution of primate cognition

Other activities

Emma Tecwyn is a member of the Association for the Study of Animal Behaviour and the Primate Society of Great Britain. In collaboration with two fellow Doctoral Researchers, she recently organised the first Physical Cognition and Problem-solving workshop at Birmingham, which attracted researchers from across Europe. Emma is also a member of the Biosciences Graduate School Committee.

Publications

Tecwyn, E. C., Thorpe, S. K. S., & Chappell, J. (2011). What cognitive strategies do orangutans (*Pongo pygmaeus*) use to solve a trial-unique puzzle-tube task incorporating multiple obstacles? *Animal Cognition*, DOI: 10.1007/s10071-011-0438-x