



Inside and Out: Virtual anatomy and cerebrocranial evolution of the temporal regions in anthropoid primates



Abstract

The brain does not preserve in the fossil record making any study of brain evolution reliant on endocasts, moulds of the inside of the skull. The middle cranial fossa of the cranial base is in close spatial proximity to the temporal lobe of the brain. The temporal lobe in primates is involved in visual processing, memory-related tasks and language comprehension in humans. I will present recent work predicting temporal lobe size from the middle cranial fossa in anthropoid primates, quantifying relative temporal lobe to brain size in old world-monkey evolution and quantifying proportional changes of temporal lobe size to brain size in fossil hominins and modern humans. I will then discuss the evolutionary implications of 40 million years of anthropoid brain evolution, the eco-behavioural trajectories for some lineages and the application of phylogenetic comparative methods and virtual anatomy in studying cerebrocranial morphology in primates and other mammals.

Alannah Pearson is a PhD Candidate in Biological Anthropology at the Australian National University. She has research spanning human and non-human primate evolution. Her MPhil research studied cranial bone morphology using virtual anatomy, shape analysis and phylogenetic comparative methods in lesser and great ape subspecies. Her PhD explores changes to the size of the cranial base and temporal lobe of the brain in living and fossil primates spanning 40 million years ago to the present.

Details

4pm AEST, Thursday 29 September 2022

Attend via Zoom:

<https://tinyurl.com/3cj3enkf>

Attend in Person:

Room 2.56, RSSS Building, ANU Acton Campus

Contact

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