

# ROGER A. CLOSE

## TERTIARY EDUCATION

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PERIOD	October 2008 to present		
DEGREE	Doctor of Philosophy		
INSTITUTION	Science Faculty, Monash University	Melbourne, Australia	
SUPERVISORS	Professor Patricia Vickers-Rich & Dr Emily Rayfield		
TITLE	Transformation of a Functional Complex: Early Evolution of the Flight Apparatus of Birds		
	Funded from October 2008 to April 2012 by full-time scholarship (Faculty of Science Dean's Postgraduate Research Scholarship). Eighteen months between January 2009 and October 2010 spent visiting external co-supervisor, Dr Emily Rayfield, at the University of Bristol (Department of Earth Sciences), and visiting other palaeontological institutions in the UK, China, Spain, Germany and the USA.		

PERIOD	2005-2007		
DEGREE	Graduate Diploma of Science (Zoology)		
INSTITUTION	Monash University	Melbourne, Australia	
	Focus on anatomy, ecology and evolution, with semester on exchange at the University of California, Santa Barbara.		

PERIOD	1999-2005		
DEGREE	Bachelor of Arts/Science (Hons)		
INSTITUTION	Monash University	Melbourne, Australia	
	Double-major in Geosciences; major in Archaeology and Ancient History; minor in Geography and Environmental Sciences. Honours in Archaeology and Ancient History.		

## EMPLOYMENT

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EMPLOYER	<b>School of Biological Sciences, Monash University</b>
PERIOD	<b>February 2008 to present</b>
POSITION	<b>Sessional Demonstrator</b>
Laboratory demonstrator in first-year biology practicals. Duties also include report- and essay-marking. Hiatus between mid-2009 and mid-2012 due to eighteen-month stay at University of Bristol and focus on research.	
EMPLOYER	<b>School of Geosciences, Monash University</b>
PERIOD	<b>July 2008 to present</b>
POSITION	<b>Sessional Demonstrator</b>
Laboratory demonstrator in senior-level palaeobiology practicals, including report-marking. Hours intermittent; hiatus between mid-2009 and mid-2012 due to eighteen-month stay at University of Bristol and focus on research.	
EMPLOYER	<b>Museum Victoria</b>
PERIOD	<b>April to June 2012</b>
POSITION	<b>Contract Work Processing 3D Scan Data</b>
Processed a number of high-resolution synchrotron mCT scans of Mesozoic mammal specimens from raw CT stacks to finished surface files suitable for 3D printing. Developed novel techniques for removing high densities of fractures.	

## PUBLICATIONS

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Close, R., Vickers-Rich, P., Trusler, P., Chiappe, L.M., O'Connor, J.K., Rich, T.H., Kool, L. and Komarower, P. (2009) Earliest Gondwanan bird from the Cretaceous of southeastern Australia. *Journal of Vertebrate Paleontology* **29**: 616-619.

Close, R. and Rayfield, E.J. (2012) Functional Morphometric Analysis of the Furcula in Mesozoic Birds. *PLoS ONE* **7**: e36664.

Available: <http://www.plosone.org/article/info:doi/10.1371/journal.pone.0036664>.

## ABSTRACTS

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Close, R. (2008) Earliest Gondwanan bird from the Cretaceous of southeastern Australia.

Close, R. (2009) Australia's Mesozoic Birds: New Material from the Early Cretaceous of Victoria. Society of Vertebrate Paleontology Annual Meeting, September 2009, Bristol.

Close, R. (2010) Modelling the mechanical behaviour of the avian furcula. [Poster] Progressive Palaeontology, Bristol.

Close, R. and Rayfield, E.J. (2012) Functional morphometric analysis of the furcula in Mesozoic birds. The Palaeontological Association 55th Annual Meeting, 17th-20th December 2011, Plymouth.

Close, R. and Evans, A.R. (2012). High-resolution synchrotron microCT of fossils: 3D printing and analysis. Avizo Workshop, 28th August 2012, Australian Synchrotron, Clayton.

## GRANTS AND AWARDS

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<b>October 2008</b>	Monash University Faculty of Science Dean's Scholar Postgraduate Scholarship (3.5 years)
<b>August 2009</b>	Monash University Travel Grant (AU\$2500)
<b>September 2009</b>	Jackson School of Geosciences Student Member Travel Grant (US\$600).

## ADDITIONAL EXPERIENCE

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<b>Field Work</b>	Dig-crew Member, Dinosaur Dreaming, Victoria, Australia — 1999 to present. Excavations with Adelaide Museum at Lake Palankarinna, 1999. Excavations with Flinders University at the Naracoorte Caves, 2000.
<b>Conferences</b>	CAVEPS 2007, Melbourne; SAPE 2008, Sydney; SVP 2009, Bristol; IPC3 2010, London; Progressive Palaeontology 2010, Bristol; PalAss 2011, Plymouth.

## SKILLS

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<b>Key Skills</b>	Comparative anatomy; vertebrate biomechanics; morphometrics; biostatistical analysis, encompassing Phylogenetic Comparative Methods
<b>3D Software</b>	Avizo, Geomagic, Blender
<b>Morphometric Software</b>	James Rohlf's 'tps' suite, Landmark, morphologika, MorphoJ
<b>FEA Software</b>	Abaqus, Hypermesh
<b>Phylogenetics Software</b>	Mesquite, MacClade, FigTree, Dendroscope
<b>Selected R Packages</b>	ape, geiger, caper, picante, adephylo, phytools, shapes, ggplot2
<b>Additional Software</b>	Document preparation with $\text{\LaTeX}$ ; reproducible data analysis practices with <code>knitr</code> and <code>Sweave</code> ; project management via version-control tools <code>git</code> /GitHub