

Justin Winfield Adams

Research Interests

Neogene African mammal palaeontology and evolution, South African hominin and primate palaeoecology and taphonomy, human and comparative anatomy, comparative methods, imaging studies, biochronology

Date and 21 August 1977
Place of Birth: Olympia, Washington, USA

Citizenship: United States of America
Australia (Permanent Resident)

AFFILIATIONS

2013-Present Senior Lecturer
Department of Anatomy and Developmental Biology
Monash University
Clayton, Victoria 3800, Australia
Email: justin.adams@monash.edu
Office: +61 3 9902 4280 Mobile: +61 4 2042 2250

2006-2012 Assistant Professor (2006-2011)/ Associate Professor (2012)
Department of Biomedical Sciences
Grand Valley State University
Grand Rapids, MI USA 49195

2003-2004 Lecturer in Morphological Anatomy and Palaeontology
School of Anatomical Sciences
University of the Witwatersrand Medical School
Johannesburg, South Africa 2193

EDUCATION AND TRAINING

2007 Geometric Morphometrics Short Course, Department of Integrative Biology,
University of California, Berkeley

2006 Ph.D., Washington University, St. Louis, Missouri, USA
Taphonomy and paleoecology of the Gondolin Plio-Pleistocene cave site,
South Africa. (Advisor: Dr. Glenn Conroy)

2004 Stable Light Isotopes Course, University of Cape Town, South Africa

2003 M.A., Anthropology, Washington University, St. Louis, Missouri, USA

1999 B.A. (with Distinction), Anthropology, University of Washington, Seattle,
Washington, USA

TEACHING EXPERIENCE

- 2013-Present Monash University
Courses Taught (Team):
Year A Medicine (Gippsland)
Year 1 Medicine (MED 1011/1022)(MED 1022: Course Coordinator 2014)
Cells, tissues and organisms (BMS 1021)
Structure of the human body: an evolutionary and functional perspective (BMS 2011)(Co-Course Coordinator 2014; Course Coordinator 2015)
Human anatomy and development: Tissues and body systems (DEV 2022)
Developmental and anatomical basis of human health and disease (DEV 3022)
Advances Studies in Clinical Anatomy
- 2006-2012 Grand Valley State University
Courses Taught (Individual):
Human Anatomy (BMS 208)
Laboratory in Human Anatomy (BMS 309)
Anatomy of Joints (BMS 355)
Regional Anatomy (BMS 460)
Prosected Regional Anatomy (BMS 461)
Evolutionary Human Anatomy (BMS 480)
Senior Seminar in Health Sciences (Evolutionary Medicine)(BMS 495)
- 2005 Washington University, St. Louis
Introduction to Human Evolution (ANTH 150), Summer Semester Session
- 2005 Washington University Medical School, St. Louis
Gross Laboratory Assistant, Anatomy for Physical Therapists (Anatomy 611)
- 2003-4 University of the Witwatersrand Medical School
Courses Taught (Team):
Human and Comparative Biology (ANAT 225)
Gross Anatomy Laboratory: Occupational/Physiotherapy II (ANAT 229)
General Medical Practitioners Course (GEMP II)
Human Biology III (ANAT 313)
Physical Anthropology (ANAT 715; M.Sc. Course)
Supervisor, Human Biology III Student Projects
- 2002 Washington University Medical School, St. Louis
Gross Laboratory Assistant, Human Anatomy and Development (M05 501A)
- 2002 Institute of Human Origins/University of the Witwatersrand Paleoanthropology
Summer Field School at Makapansgat Valley
Field Instructor, Paleoecology and Taphonomy
- 2001 Washington University, St. Louis
Teaching Assistant, Paleoanthropology (Dr. Erik Trinkaus)
Teaching Assistant, Introduction to Human Evolution (Dr. Richard J. Smith)

FIELDWORK EXPERIENCE

2015	PI, Haasgat Site Excavations (June-August)
2014	PI, Haasgat Site Excavations (May-August; December)
2013	PI, Haasgat Site Excavations (July)
2011	PI, Hoogland/Haasgat Site Surveys and Excavations (May-August)
2010	PI, Hoogland/Haasgat Site Surveys and Excavations (June-August)
2009	Co-PI, Hoogland Site Excavations (July)
2008	Co-PI, Hoogland Site Excavations (June-July)
2007	Co-PI, South West Coast Fossil Survey Project, Western Cape and Northern Cape Provinces (July-August)
2006	PI, Luleche Research Project Excavations (June – July)
2003-5	Dissertation Collections Work: Gondolin, South Africa (June 2003 – January 2005)
2003	PI, Gondolin Research Project 2003 Excavations (September 13 th – October 15 th , 2003)
2003	Field Assistant, Makapansgat Limeworks Project (June 19 –27) (Dr. Jeff McKee/ Dr. Kevin Kuykendall)
2002	Pre-Dissertation Fieldwork, Gondolin, South Africa (May- August)
2001	Field Assistant, Uinta Basin Project, Utah (July- August) (Dr. D. Tab Rasmussen)
2001	Contract Archaeologist, Illinois Transportation Archaeological Research Project (ITARP) (May – July)
1999	Student, Institute of Human Origins/University of the Witwatersrand Paleoanthropology Summer Field School at Makapansgat Valley, South Africa (July-August) (Dr. Kaye Reed/ Dr. Kevin Kuykendall)

MUSEUM COLLECTIONS EXPERIENCE

- Museum Victoria (Melbourne), Australia
- Council for Geosciences Fossil Collections (Pretoria), South Africa
- Division of Mammals, Field Museum (Chicago), USA
- Museum of Paleontology, University of California (Berkeley), USA
- Departments of Archaeozoology, Mammals and Palaeontology, Ditsong National Museum of Natural History (formerly Transvaal Museum) (Pretoria), South Africa
- Bernard Price Institute, University of the Witwatersrand (Johannesburg), South Africa
- J.C. Middleton-Shaw Mammals Collection, University of the Witwatersrand (Johannesburg), South Africa
- Florisbad Research Station, Bloemfontein National Museum (Florisbad), South Africa
- Department of Archaeology, IZIKO South African Museum (Cape Town), South Africa
- Department of Vertebrates, Muséum National d'Historie Naturelle (Paris), France

RESEARCH GRANTS

2014-15	PI, Leakey Foundation General Research Grant (Haasgat Fossil Locality)
2014	CI-A, Monash MBBS Development Grant (Integrated Anatomy Teaching)
2014	PI, Collier Charitable Fund (Research Equipment Grant)
2014	Co-CI, Monash University Better Teaching, Better Learning Grant (3D Anatomy)

- 2010-11 PI, Senior Research Grant, National Science Foundation, 'Exploring Hoogland, Haasgat and the Plio-Pleistocene landscape of the Schurveberg Mountain Region, South Africa' (NSF BCS 0962564)
- 2009 Co-PI, Ford Foundation/Institute of Human Evolution Research Grant (Hoogland Fossil Locality)
- 2007 PI, Faculty Research and Development Grant, Grand Valley State University (South African Suid Morphology and Biochronology)
- 2004 PI, Faculty Research Fund Grant, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg (Luleche Fossil Locality)
- 2004 PI, Fieldwork Grant, Palaeoanthropological Scientific Trust (P.A.S.T.) (Gondolin Fossil Locality)
- 2004 PI, Dissertation Fieldwork Grant, Wenner-Gren Foundation (Gondolin Fossil Locality)
- 2003 Co-PI, Doctoral Dissertation Improvement Grant, National Science Foundation (NSF #0308014) (Gondolin Fossil Locality)
- 2003 PI, Charles R. Jenkins Award, Lambda Alpha Collegiate Honors Society for Anthropology (Gondolin Fossil Locality)
- 2002 PI, Pre-Dissertation Research Grant, Department of Anthropology, Washington University in St. Louis (Gondolin Fossil Locality)

PUBLICATIONS

- 1) Herries AIR, Rovinsky D, Stone O, Kegley ADT, and **Adams JW**. In press. Lost between Langebaanweg and Makapansgat: the chronology and biogeography of the Pliocene fossil record of South Africa based on a redefined Pliocene-Pleistocene boundary. Accepted 10/2015, *Earth Science Reviews*.
- 2) Lim KHA, Loo ZY, Goldie SJ, **Adams JW**, and McMenamin PG. In press. Use of 3D printed models in medical education: A randomised control trial comparing 3D prints vs cadaveric material for learning external cardiac anatomy. Accepted 09/2015, *Anatomical Sciences Education*
- 3) **Adams JW**, Olah A, McCurry MR, and Potze S. 2015. Surface model and tomographic archive of fossil primate and other mammal holotype and paratype specimens of the Ditsong National Museum of Natural History, Pretoria, South Africa. *PLoS ONE*: e0139800.
- 4) Rovinsky D, Herries AIR, Menter C, and **Adams JW**. 2015. First description of *in situ* primate and faunal remains from the Plio-Pleistocene Drimolen Makondo palaeocave infill, Gauteng, South Africa. *Palaeontologia electronica* 18, Issue 2; 34A:1-21.

- 5) **Adams JW**, Paxton L, Dawes K, Burlak K, Quayle M, and McMenamin P. 2015. 3D printed reproductions of orbital dissections: a novel mode of visualizing anatomy for trainees in ophthalmology or optometry. *British Journal of Ophthalmology* 99(9): 1162-1167.
- 6) McMenamin PG, Quayle MR, McHenry CR and **Adams JW**. 2014. The production of anatomical teaching resources using three-dimensional (3D) printing technology. *Anatomical Sciences Education* 7: 479-486.
- 7) Herries AIR, Kappen P, Kegley A, Paterson D, Howard D, de Jonge M, Potze S, and **Adams JW**. 2014. Palaeomagnetic and synchrotron analysis of >1.95 Ma fossil-bearing palaeokarst at Haasgat, South Africa. *South African Journal of Science* 110; Issue 3/4:12pp.
- 8) Herries AIR and **Adams JW**. 2013. Clarifying the context and dating of the Gondolin hominin tooth and the age range of *Paranthropus* in South Africa: a comment on Grine *et al.* 2012. *Journal of Human Evolution* 65: 676-681.
- 9) **Adams JW**, Kegley ADT, and Krigbaum J. 2013. New faunal stable carbon isotope data from the Haasgat HGD fossil assemblage, South Africa, including the first reported values for *Papio angusticeps* and *Cercopithecoides haasgati*. *Journal of Human Evolution* 64: 693-698.
- 10) Herries AIR, Pickering R, **Adams JW**, Curnoe D, Warr G, Latham A, and Shaw J. 2013. A multi-disciplinary perspective on the age of *Australopithecus* in southern Africa. In: Leakey, R, Fleagle, J and Reed, K (eds.), *The Paleobiology of Australopithecus*. Vertebrate Paleobiology and Paleoanthropology Series, pp. 21-40.
- 11) **Adams JW**. 2012. A revised listing of fossil mammals from the Haasgat cave system *ex situ* deposits (HGD), South Africa. *Palaeontologia electronica* 15, Issue 3; 29A, 88p.
- 12) Brink JS, Herries AIR, Moggi-Cecchi J, Gowlett JAJ, Bousman CB, Hancox JP, Grün R, Eisenmann V, **Adams JW**, and Rossouw L. 2012. First hominine remains from a ~1 million year old bone bed at Cornelia-Uitzoek, Free State Province, South Africa. *Journal of Human Evolution* 63: 527-535.
- 13) **Adams JW**. 2012. Craniodental and postcranial remains of the extinct porcupine *Hystrix makapanensis* Greenwood, 1958 (Rodentia: Hystricidae) from Gondolin, South Africa. *Annals of the Ditsong National Museum of Natural History* 2: 7-17.
- 14) **Adams JW**. 2012. Stable carbon isotope analysis of fauna from the Gondolin GD 2 fossil assemblage, South Africa. *Annals of the Ditsong National Museum of Natural History* 2: 1-5.
- 15) Badlangana NL, **Adams JW**, and Manger PR. 2011. A comparative assessment of the size of the frontal sinus in the giraffe (*Giraffa camelopardalis*). *Anatomical Record* 294: 931-940.
- 16) Herries AIR, Hopley P, **Adams JW**, Curnoe D, and Maslin M. 2010. Geochronology and palaeoenvironments of southern African hominin localities - a reply to Wrangham *et al.* (2009) 'Shallow-water habitats as sources of fallback foods for hominins'. *American Journal of Physical Anthropology* 143: 640-646.

- 17) **Adams JW**, Herries AIR, Hemingway J, Kegley ADT, Kgasi L, Potze S, Hopley P, Reade H, and Thackeray JF. 2010. Initial fossil discoveries from Hoogland, a new primate-bearing karstic system in Gauteng Province, South Africa. *Journal of Human Evolution* 59: 685-691.
- 18) **Adams JW**. 2010. Taphonomy of the Gondolin GD 2 *in situ* deposits and its bearing on interpretations of South African Plio-Pleistocene karstic fossil assemblages. *Journal of Taphonomy* 8: 81-116.
- 19) Herries AIR, Curnoe D, and **Adams JW**. 2009. A multi-disciplinary seriation of *Homo* and *Paranthropus* bearing palaeocave deposits in southern Africa. *Quaternary International* 202: 14-28.
- 20) Badlangana NL, **Adams JW**, and Manger PR. 2009. The giraffe (*Giraffa camelopardalis*) cervical vertebral column: a heuristic example in understanding evolutionary processes? *Zoological Journal of the Linnaean Society* 155: 736-757.
- 21) **Adams JW**, Hemingway J, Kegley A, and Thackeray F. 2007. Luleche, a new paleontological site in the Cradle of Humankind, North West Province, South Africa. *Journal of Human Evolution* 53: 751-754.
- 22) **Adams JW**, Herries AIR, Conroy GC, and Kuykendall KL. 2007. Taphonomy of a South African cave: geological and hydrological influences on the GD 1 fossil assemblage at Gondolin, a Plio-Pleistocene paleocave system in the Northwest Province, South Africa. *Quaternary Science Reviews* 26: 2526-2543.
- 23) Herries AIR, **Adams JW**, Kuykendall KL and Shaw J. 2006. Speleology and magnetobiostratigraphic chronology of the Gondolin hominin palaeocave, South Africa. *Journal of Human Evolution* 51: 617-631.
- 24) Strikālǝ G, **Adams JW** and Wang Q. 2005. Robert Broom's first reconstruction of the adult *Australopithecus*. *South African Journal of Science* 101: 217-218.
- 25) **Adams JW**. 2005. A methodology for the intraspecific assessment of heterogeneously worn hypsodont teeth using computerized tomography. *Journal of Taphonomy* 3(4): 151-162.
- 26) **Adams JW**. 2005. Maxillae and mandibles: P.V. Tobias' contribution to understanding hominin taphonomy. In G. Strkalǝ, N. Pather, B. Kramer, (eds.) *Voyages in Science: Essays by South African Anatomists in Honour of Phillip V. Tobias's 80th Birthday*. Content Solutions, Pretoria, 15-33.
- 27) **Adams JW** and Conroy GC. 2005. Plio-Pleistocene faunal remains from the Gondolin GD 2 *in situ* assemblage, North West Province, South Africa. In D. Lieberman, R.J. Smith and J. Kelley (eds.) *Interpreting the past: essays on human, primate and mammal evolution in honor of David Pilbeam*. Brill Academic Publishers Inc., Boston, 243-261.

PROFESSIONAL PRESENTATIONS

Tallman L, Kegley ADT, **Adams JW**. In review. Using geometric shape for subfamily level taxonomic attribution in mixed, unassociated fossil cercopithecoid postcranial samples. 2016 American Association of Physical Anthropology Meetings, Atlanta, GA.

Bertram J, **Adams JW**, McMenemy PG. 2015. Anatomy and additive manufacturing: Imaging methods and 3D printing for anatomy education. 2015 An International Association for Medical Education (AMEE) Conference, Glasgow, Scotland. *2015 AMEE ePoster Prize Winner*

Adams JW, Bertram J, McMenemy PG. 2015. Anatomy and additive manufacturing: imaging methods and 3D printing in anatomy education and research. 2015 Experimental Biology/Association of American Anatomists Meetings, Boston, MA.

Lim KHA, Loo ZY, Goldie S, **Adams JW**, McMenemy PG. 2015. The use of 3D printing technology in cardiac anatomy teaching – a randomised controlled trial. 2015 ANZAHPE/AMEA Annual Meeting, Newcastle, NSW, Australia.

Olah A, McCurry MR, **Adams JW**. 2015. Establishing the orientation and biobehavioural implications of the semicircular canals of *Cercopithecoides haasgati*. 2015 American Association of Physical Anthropology Meetings, St. Louis, MO.

Adams JW, Olah A, McCurry MR, Tallman M, Kegley ADT, Potze S, Kgasi L, Herries AIR. 2015. Newly discovered *in situ* primates and mammals from the early Pleistocene Haasgat deposits, South Africa. 2015 American Association of Physical Anthropology Meetings, St. Louis, MO.

Adams JW, Paxton L, Dawes K, Burlak K, Quayle M, McMenemy PG. 2014. Non-invasive data capture methods of 3D anatomy for teaching and research. 2014 ANZACA Annual Meeting, 3-5 December, Queenstown, New Zealand.

Leece A, Moggi-Cecchi J, **Adams JW**, Menter C, Herries AIR. 2014. Palaeodemographic studies of early hominins at Drimolen Palaeocave, South Africa. 2014 Australian Archaeological Association/Australasian Society for Historical Archaeology, 1-3 December, Cairns, Australia.

Stammers R, Herries AIR, **Adams JW**, Menter C. 2014. 3D scanning as a tool to quantify use-wear on the world's oldest bone tools from the early hominin bearing cave sites of Drimolen, South Africa. 2014 Australian Archaeological Association/Australasian Society for Historical Archaeology, 1-3 December, Cairns, Australia.

Blackwood A, Stammers A, Mallett T, Armstrong B, Rovinsky D, Boschian G, Hopley P, Parrish R, Donlon J, Bevitt J, Penzo-Kalewski P, Baker S, **Adams JW**, Menter C, Herries AIR. 2014. Discovery of a new, older fossil bearing deposit at the Drimolen hominin site, South Africa. 2014 Australian Archaeological Association/Australasian Society for Historical Archaeology, 1-3 December, Cairns, Australia.

Adams JW. 2011. Down the rabbit hole: a reanalysis of the 1988 Haasgat *ex situ* faunal assemblage, Cradle of Humankind, South Africa. 2011 American Association of Physical Anthropology Meetings, April 13-16 2011, Minneapolis, MN.

Kegley A, Hemingway J, **Adams JW**. 2011. Odontometric analysis of the reanalyzed and expanded *Cercopithecoides* sample from the Haasgat fossil assemblage, Cradle of Humankind, South Africa.

2011 American Association of Physical Anthropology Meetings, April 13-16 2011, Minneapolis, MN.

Herries AIR, **Adams JW**, Braun D, Brink J, Brown K, Marean C, Roberts D, and Warr G. 2009. Palaeomagnetism through space and time in Africa; analysis of the Langebaanweg, Makapansgat, Hoogland, FwJj20, Cornelia and Pinnacle Point fossil and hominid sites. 12th Conference on Australasian Vertebrate Evolution Palaeontology and Systematics (CAVEPS 2009). UNSW, Sydney, Australia. 22-25th June.

Reed JC, **Adams JW**, Burson LK, DeGrande KM, Cray JJ, and Mooney MP. 2009. The use of computerized tomography in the analysis of sagittal suture fusion. Poster Presentation. 2009 American Association of Physical Anthropology Meetings, April 2-4, Chicago, IL USA

Hemingway J, **Adams JW**, Kegley ADT, Herries AIR, Kgazi L, Potze S, and Thackeray JF. 2009. Fossil discoveries at Hoogland, a new primate-bearing karstic system in Gauteng Province, South Africa. Podium Presentation. 2009 Paleoanthropology Society Meetings, March 31-April 1, Chicago, IL USA.

Loney B, Majkszak D, Miller J, Richiert D, and **Adams JW**. 2008. The mysterious meandering mesenteric artery. Poster Presentation. Grand Valley State University Student Scholarship Day, April 9, Allendale, MI USA

Adams JW, Hemingway J, Kegley A, and Thackeray JF. 2008. Luleche, a new paleontological site in the Cradle of Humankind, North West Province, South Africa. Poster Presentation. 2008 American Association of Physical Anthropologists Annual Meeting, April 9-13, Columbus, OH USA

Herries AIR, **Adams JW**, Latham A, Curnoe D, and Warr G. 2007. The age of *Australopithecus* in South Africa: a current perspective. Stony Brook Human Evolution Symposium. September 25-29th, State University of New York at Stony Brook, NY USA

Herries AIR, **Adams JW**, Latham AG, Curnoe D, and Warr G. 2007. An emerging dating framework for the South African hominin sites. East African Quaternary Research Association (EAQUA). Inaugural Workshop. June 7-8, Uganda Museum, Kampala, Uganda

Adams JW. 2006. Exploring the fossil record in South Africa: assessing the taphonomy and paleoecology of Plio-Pleistocene fossil assemblages. Invited presentation, May 9, Department of Anthropology at Stanford University, CA USA

Adams JW. 2006. Taphonomy of the GD 2 *in situ* deposits at Gondolin, North West Province, South Africa. Podium Presentation. 2006 American Association of Physical Anthropologists Annual Meeting, March 8-11, Anchorage, AK USA

Adams JW. 2005. Faunal and paleoecological analyses of the Gondolin GD 2 Plio-Pleistocene fossil assemblage, North West Province, South Africa. Podium Presentation. 2005 Paleoanthropology Society Annual Meeting, April 5-6, Milwaukee, WI USA

Adams JW. 2005. A methodology for assessing heterogeneously occluded hypsodont dental specimens using computerized tomography. Poster Presentation. 2005 American Association of Physical Anthropologists Annual Meeting, April 6-9, Milwaukee, WI USA

Adams JW and Senegas, F. 2004. New and revised faunal samples from *in situ* and dumpsite breccia deposits at Gondolin, North West Province, South Africa. Poster Presentation. 2004 American Association of Physical Anthropologists Annual Meeting, April 13-17, Tampa, Florida USA

Whitman AGB and **Adams JW**. 2004. Examination of the paleoenvironments of two South African caves. Poster Presentation. 2004 American Association of Physical Anthropologists Annual Meeting, April 13-17, Tampa, Florida USA

Adams JW and Kuykendall KL. 2003. Preliminary report on *in situ* and dumpsite breccia deposits from Gondolin, North West Province, South Africa. Poster Presentation. 2003 American Association of Physical Anthropologists Annual Meeting, April 23-26, Tempe, Arizona USA

AWARDS

- 2015 AMEE ePoster Prize, 2015 Association for Medical Education in Europe (AMEE) Glasgow, UK: "Anatomy and additive manufacturing: Imaging methods and 3D printing for anatomy education."
- 2005 2nd Prize, 10th Annual Graduate Student Research Symposium, Washington University, St. Louis, April 2: "A methodology for assessing heterogeneously occluded hypsodont dental specimens using computerized tomography."

PROFESSIONAL SOCIETIES

- 2005 - American Association of Anatomists
2004 - Paleoanthropology Society
2003 Lambda Alpha, National Collegiate Honors Society for Anthropology
2000 - American Association of Physical Anthropologists