

Adam D. Gordon

Curriculum Vitae

Center for the Advanced Study of Hominid Paleobiology
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Current Position

Postdoctoral Research Fellow, Center for the Advanced Study of Hominid Paleobiology, Department of Anthropology, The George Washington University (*Fall 2004-Present*)

Education

Ph.D., 2004, Anthropology, The University of Texas at Austin

Dissertation: Evolution of body size and sexual size dimorphism in the Order Primates: Rensch's rule, quantitative genetics, and phylogenetic effects

Committee: John Kappelman, Claud Bramblett, William Jungers, Deborah Overdorff, Eric Pianka

M.A., 1999, Anthropology, The University of Texas at Austin

Thesis: Sex-specific patterns in the allometric scaling of articular surface area in *Papio cynocephalus* ssp.

B.S. cum laude, 1995, Individual Studies: Paleoanthropology, University of Maryland College Park

Peer-reviewed Publications

2008. **Gordon AD**, Nevell L, Wood B. The *Homo floresiensis* cranium (LB1): Size, scaling, and early *Homo* affinities. *Proceedings of the National Academy of Sciences USA*. 105: 4650-4655.
2008. **Gordon AD**, Green DJ, Richmond BG. Strong postcranial size dimorphism in *Australopithecus afarensis*: results from two new multivariate resampling methods for multivariate data sets with missing data. *American Journal of Physical Anthropology*. 135:311-328.
2008. Green DJ, **Gordon AD**. Metacarpal proportions in *Australopithecus africanus*. *Journal of Human Evolution*. 54:705-719.
2008. Griffin N, **Gordon AD**, Richmond BG, Antón SC. Cross-sectional geometric analysis of a foot bone assemblage from Mangaia, Cook Islands. *HOMO—Journal of Comparative Human Biology*. 59: 27-40.
2007. Green DJ, **Gordon AD**, Richmond BG. Limb-size proportions in *Australopithecus afarensis* and *Australopithecus africanus*. *Journal of Human Evolution*. 52:187-200.
2007. Faith JT, **Gordon AD**. Skeletal element abundances in archaeofaunal assemblages: Economic utility, sample size, and assessment of carcass transport strategies. *Journal of Archaeological Science*. 34:872-882.
2006. Skinner M, **Gordon AD**, Collard NJ. Mandibular size and shape variation in the hominins at Dmanisi, Republic of Georgia. *Journal of Human Evolution*. 51:36-49.
2006. **Gordon AD**. Scaling of size and dimorphism in primates I: Microevolution. *International Journal of Primatology*. 27:27-61.
2006. **Gordon AD**. Scaling of size and dimorphism in primates II: Macroevolution. *International Journal of Primatology*. 27:63-105.
2005. Johnson SE, **Gordon AD**, Stumpf RM, Overdorff DJ, and Wright P. Morphological variation in populations of *Eulemur albocollaris* and *E. fulvus rufus*. *International Journal of Primatology*. 26:1399-1416.

2003. Kappelman J, Rasmussen DT, Sanders WJ, Feseha M, Bown T, Copeland P, Crabaugh J, Fleagle J, Glantz M, **Gordon A**, Jacobs B, Maga M, Muldoon K, Pan A, Pyne L, Richmond B, Ryan T, Seiffert ER, Sen S, Todd L, Wiemann MC, and Winkler A. Oligocene mammals from Ethiopia and faunal exchange between Afro-Arabia and Eurasia. *Nature*. 426:549-552.

Research Funding, Awards, and Honors

- 2007-2009 NSF Grant BCS-0647557, \$118,726, Project: Postcranial Dimorphism in Primates (PI: J. Michael Plavcan, Co-PIs: Adam Gordon, Michael Lague, and Jackson Cothren)
- 2006-2008 Mathers Foundation Grant, \$75,000, Project: Online Human Origins Database (PI: Bernard Wood, Senior Personnel: Adam Gordon)
- 2003-2004 Homer Lindsey Bruce Fellowship, The University of Texas at Austin
- 2002 NSF Dissertation Improvement Grant, \$10,804, Project: Causes of sexual size dimorphism in Primates (PI: John Kappelman, Co-PI: Adam Gordon)
- 2001-2002 University Fellowship, The University of Texas at Austin
- 2001 Sherwood Washburn Award, 70th Meeting of the American Association of Physical Anthropologists, Poster: “Sexual size dimorphism in primates: Consideration of relative variation between sexes”
- 1999 Liberal Arts Graduate Research Fellowship, College of Liberal Arts, The University of Texas at Austin
- 1999-2003 Professional Development Awards (5), University of Texas Office of Graduate Studies
- 1999-2000 University Fellowship, The University of Texas at Austin
- 1997-1998 Preemptive University Fellowship, The University of Texas at Austin
- 1995 Election to Phi Beta Kappa, University of Maryland College Park

Courses Taught

Undergraduate:

- Introduction to Physical Anthropology (Laboratory portion): *F1998, S1999, F2000, S2002, S2003*
- Human Origins and Evolution (Laboratory portion): *S2001*

Graduate:

- Advanced Morphometric Methods: *S2005*
- Statistical and Methodological Approaches to Paleoecology: *S2006*
- Independent Study, Statistical Programming and Monte Carlo Approaches in R: *S2007*
- Independent Study, Basic Biostatistics: *F2007*

Published Abstracts

2008. Hamm KM, **Gordon AD**, McCarthy RC, Lucas L, Strait DS. Metric variation in the genus *Homo*. *American Journal of Physical Anthropology* Supplement. 46:112.
2007. Green DJ, **Gordon AD**. Metacarpal proportions in *Australopithecus africanus*. *American Journal of Physical Anthropology* Supplement. 44:119.
2007. Plavcan JM, **Gordon AD**. Craniodental versus postcranial variables as estimators of size dimorphism in extinct taxa. *American Journal of Physical Anthropology* Supplement. 44:190.
2007. **Gordon AD**, Wood B. Human Origins Database (HOD): managing published data and specimen information for fossil and comparative collections. *American Journal of Physical Anthropology* Supplement. 44:117.
2007. Faith JT, Domínguez-Rodrigo M, **Gordon AD**. Long distance carcass transport at Olduvai Gorge? *PaleoAnthropology*. 2007:A8.
2007. Faith JT, **Gordon AD**. Skeletal element abundances in archaeofaunal assemblages: economic utility, sample size, and carcass transport strategies. *Society for American Archaeology*.

2007. Nevell L, **Gordon A**, Wood B. *Homo floresiensis* and *Homo sapiens* size-adjusted cranial shape variation. *American Journal of Physical Anthropology* Supplement. 44:178.
2006. **Gordon AD**, Green DJ, Richmond BG. Size dimorphism in *Australopithecus afarensis*, modern humans, and the great apes: a non-template multivariate comparison. *American Journal of Physical Anthropology* Supplement. 42:94.
2006. Green DJ, **Gordon AD**, Richmond BG. Limb joint size proportions in *Australopithecus afarensis* and *Australopithecus africanus*. *American Journal of Physical Anthropology* Supplement. 42:95.
2005. **Gordon AD**. Body size dimorphism: do not correct for size. *American Journal of Physical Anthropology* Supplement. 40:108.
2004. **Gordon AD**. Selective forces and size change in the evolution of sexual size dimorphism in Primates. *American Journal of Physical Anthropology* Supplement. 38:102.
2003. **Gordon AD**. Evaluating the effects of sexual selection on sexual size dimorphism in olive baboons (*Papio anubis*) and macaques (*Macaca* sp.) using an iterative selection model. *American Journal of Primatology* Supplement. 60:52-53.
2003. **Gordon AD**. Size matters – does body mass? *American Journal of Physical Anthropology* Supplement. 36:102.
2002. **Gordon AD**. Increasing population sample sizes using global skeletal size variables. *American Journal of Physical Anthropology* Supplement. 34:77.
2002. Johnson S, **Gordon A**, and Stumpf R. Sexual dimorphism and testicle size in white-collared lemurs. *American Journal of Physical Anthropology* Supplement. 34:90-91.
2002. Ketcham R, Ryan T, Maga M, and **Gordon A**. Quantification of anisotropy in trabecular bone fabrics. *American Journal of Physical Anthropology* Supplement. 34:93-94.
2001. **Gordon AD**. Sexual size dimorphism in primates: Consideration of relative variation between sexes. *American Journal of Physical Anthropology* Supplement. 32:72.
2000. **Gordon AD**. Sex-specific estimators of body mass. *American Journal of Physical Anthropology* Supplement. 30:163.
2000. Kappelman J, Ryan T, Zylstra M, Alport L, DeOliveira M, **Gordon A**, Maga M, and Scott R. eSkeletons: A web-based platform for learning anatomical form and function. *American Journal of Physical Anthropology* Supplement. 30:192.
1999. **Gordon AD**. Allometric scaling of articular surface areas in *Papio anubis*. *American Journal of Physical Anthropology* Supplement. 28:138.
1999. Kappelman J, **Gordon A**, Johnson D, Ryan T, Scott R, and Seiffert E. A computer program for delivering virtual multimedia examinations across secure networks and the web. *American Journal of Physical Anthropology* Supplement. 28:164.
1998. Kappelman J, Bramblett C, Feseha M, **Gordon A**, McCardel K, Pearlstein J, Ryan T, Scott R, Seiffert E, Tecot S, and Weiner G. Using the computer for interactive testing: a multimedia application in primatology. *American Journal of Primatology*. 45:189-190.
1998. Kappelman J, Bramblett C, **Gordon A**, McCardel K, Ryan T, Scott R, Seiffert E, and Weiner G. Virtual multimedia examinations: Integrating images, video, and animations into an interactive testing program. *American Journal of Physical Anthropology* Supplement. 26:132-133.

Multimedia Publications

1999. Kappelman J, Scott RS, Bramblett C, **Gordon AD**, and Ryan TM. Genetics and Evolution of Human Populations. In: *Virtual Laboratories for Physical Anthropology on CD ROM* (J. Kappelman, editor), Second Edition. Wadsworth Publishing Co.
1999. Kappelman J, Scott RS, Bramblett C, Ryan TM, and **Gordon AD**. The Archaeological Record. In: *Virtual Laboratories for Physical Anthropology on CD ROM* (J. Kappelman, editor), Second Edition. Wadsworth Publishing Co.

Invited Presentations/Workshops

- The influence of mating system and resource pressure on human evolution. *University at Albany, Feb. 28, 2008, and Michigan State University, Feb. 14, 2008.*
- Sexual selection, natural selection, and size change: evolution of sex-specific size differences in living and fossil primates. *Arizona State University, School of Human Evolution and Social Change Colloquium Series, Feb. 1, 2008.*
- Sexual size dimorphism in *Australopithecus*: current understanding and new directions. Paper submitted as part of *Diversity in Australopithecus Workshop, Turkana Basin Institute, Stony Brook University, Sept. 25-29, 2007.*
- Australopithecus afarensis* and *Homo floresiensis*: two case studies in size and shape variation in the Homininae. *University of Texas at Austin, Apr. 27, 2007.*
- New approaches to measuring variation in the hominin fossil record. *SUNY Albany, Nov. 10, 2006.*
- Comparative models for biological response to climate: how can we represent modern data as paleodata? *Paleoclimates and Human Evolution Workshop, Front Royal, Virginia, Nov. 18, 2005.*
- Causes of primate dimorphism: a phylogenetic comparative approach to body size evolution. *Stony Brook University, Feb. 3, 2005.*
- Reconstructing selection pressures on fossil primates. *New York College of Osteopathic Medicine, May 14, 2004.*
- Selection pressures and size change: evolution of sex-specific size differences in Primates. *The George Washington University Department of Anthropology, Feb. 17, 2004.*
- Evolution of body size and dimorphism in Primates: phylogenetic techniques and an iterative quantitative genetics model. *Duke University Biological Anthropology and Anatomy EvMorph Seminar Series, Oct. 1, 2003, and Yale University Anthropology Brown Beer Lecture Series, Sept. 25, 2003.*
- Evaluating the effects of sexual selection on sexual size dimorphism in olive baboons (*Papio anubis*) and macaques (*Macaca* sp.) using an iterative selection model. *Graduate Student Symposium on Sexual Selection, American Society of Primatologists, July 31, 2003.*
- Statistical approaches in physical anthropology research: using research questions to select statistical techniques. *Guest Lecturer, University of Texas Anthropology Graduate Course "Field Methods in Primatology", Nov. 6, 2002.*

Research Interests

- Sex-specific variation in life history parameters due to ecological effects in living primate populations
- Monte Carlo statistical approaches to assessing size and shape variation in the hominin fossil record
- Relative contributions of sexual selection and natural selection on sex-specific patterns of size, shape, growth, and scaling in human and primate evolution
- Phylogenetic comparative techniques as applied to the evolution of size and shape in the Hominidae

Past Professional Appointments

- Graduate Research Assistant, Department of Anthropology, The University of Texas at Austin*
- Computer-Based Multimedia Examination Formats for the Sciences (National Science Foundation): 1998, 2000, 2001
 - Virtual Skeletons in Three Dimensions: The Digital Library as a Platform for Studying Anatomical Form and Function (National Science Foundation): 2000
- Teaching Assistant, Department of Anthropology, The University of Texas at Austin*
- Introduction to Physical Anthropology (Self-Paced): Fall 2002, Spring 2003
 - Human Origins and Evolution: Spring 2001
 - Introduction to Physical Anthropology (Lecture): Fall 1998, Spring 1999, Fall 2000

Professional Service

- 2007 Committee Member, Dissertation Defense for Paul Constantino, Ph.D.
- 2004-Present Reviewer for *Journal of Human Evolution*, *American Journal of Physical Anthropology*,
Journal of Anatomy, *Journal of Theoretical Biology*, *Primates*, *Geobios*, and the National
Science Foundation
- 2000-2003 Committee Member, Liberal Arts Graduate Research Fellowship Selection Committee,
University of Texas at Austin
- 1998-2000 Student Representative, Graduate Studies Committee for the Department of
Anthropology, University of Texas at Austin
- 1999 Coordinator, Physical Anthropology Lecture Series at the University of Texas at Austin

Software/Computer Resource Development

- Code for customized statistical analyses in the programming language *R*
- Human Origins Database*, an online database of fossil hominin and extant hominoid morphometrics
(www.humanoriginsdatabase.org) funded by the Mathers Charitable Foundation (PI: Bernard Wood)
- Virtual Exams*, a software package for preparing and administering exams with multimedia content,
funded by the National Science Foundation (PI: John Kappelman)
- Virtual Laboratories for Physical Anthropology on CD ROM*, a computer-based multimedia introductory
laboratory course for physical anthropology, funded by the NSF (PI: John Kappelman)

Professional Memberships

- American Association of Physical Anthropologists
American Society of Primatologists
International Primatological Society