

# W. Andrew Barr - Curriculum Vitae

Center for the Advanced Study of Human Paleobiology  
Department of Anthropology  
The George Washington University

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## Education

PhD - 2014 - University of Texas at Austin. Anthropology.  
MA - 2008 - University of Texas at Austin. Anthropology.  
BS - 2005 - Tulane University. Anthropology, French.

## Academic Appointments

**Visiting Assistant Professor.** Center for the Advanced Study of Human Paleobiology. Department of Anthropology. The George Washington University. Spring 2016 - Present  
**Postdoctoral Scientist.** Center for the Advanced Study of Human Paleobiology. Department of Anthropology. The George Washington University. Advisor: Bernard Wood. Fall 2014 - Fall 2015.  
**Research Associate.** Department of Paleobiology. National Museum of Natural History. 2014 - Present.

## Peer Reviewed Publications

### In Review

**Barr WA.** Bovid locomotor functional trait distributions reflect land cover and mean annual precipitation in sub-Saharan Africa. In review in *Evolutionary Ecology Research*.  
Kemp A and **Barr WA.** Rates of homoplasy vary among regions of the mammalian skeleton. In review in *Journal of Human Evolution*.

### 2016

**Barr WA.** Accepted. *Ecomorphology*. To be published in D.A. Croft, S.W. Simpson, and D.F. Su (eds.), *Methods in Paleocology: Reconstructing Cenozoic Terrestrial Environments and Ecological Communities*. Springer (Vertebrate Paleobiology and Paleoanthropology Series), Dordrecht.

### 2015

**Barr WA.** Paleoenvironments of the Shungura Formation (Plio-Pleistocene: Ethiopia) based on ecomorphology of the bovid astragalus. *Journal of Human Evolution*. 88:97-107. doi:10.1016/j.jhevol.2015.05.002  
Reed D, **Barr WA**, McPherron S, Bobe R, Geraads D, Wynn J, Alemseged Z. Digital Data Collection in Paleanthropology. *Evolutionary Anthropology*. 24:238-249. doi:10.1002/evan.21466  
Thompson JC, McPherron S, Bobe R, Reed DN, **Barr WA**, Wynn J, Marean CW, Geraads D, Alemseged Z. Taphonomy of fossils from the hominin-bearing deposits at Dikika, Ethiopia. *Journal of Human Evolution*. 86:112-135. doi:10.1016/j.jhevol.2015.06.013

### 2014

**Barr WA.** Functional Morphology of the Bovid Astragalus In Relation To Habitat: Controlling Phylogenetic Signal In Ecomorphology. *Journal of Morphology*. 275:1201-1216. doi:10.1002/jmor.20279  
**Barr WA** and Scott RS. Phylogenetic comparative methods complement discriminant function analysis in ecomorphology. *American Journal of Physical Anthropology*. 153:663-674. doi:10.1002/ajpa.22462  
Scott RS and **Barr WA.** Ecomorphology and phylogenetic risk: implications for habitat reconstruction using fossil bovids. *Journal of Human Evolution*. 73:47-57. doi:10.1016/j.jhevol.2014.02.023

### 2010

Reed DN, and **Barr WA.** A preliminary account of the rodents from Pleistocene levels at Grotte des Contrebandiers (Smuggler's Cave), Morocco. *Historical Biology*. 22:286-294. doi:10.1080/08912960903562192

## Funding and Awards

### 2015

National Science Foundation (Archaeology) - Middle Pleistocene Hominin Behavior and Paleoecology at Farre, Chalbi Basin, Northern Kenya. PI: Ferraro. Role: Senior Scientist. Amount awarded: \$60,000.

### 2014

Travel Grant - Paleoanthropology Society for meetings in Calgary. \$500.

### 2013

Named Continuing Fellowship - University of Texas at Austin Graduate School. \$29,000.

Pollitzer Student Travel Award - American Association of Physical Anthropologists. \$500.

### 2012

Dissertation Fieldwork Grant - Wenner-Gren Foundation. \$13,317.

### 2008

Professional Development Award - Department of Anthropology, University of Texas at Austin. Also recieved in 2009-2011.

### 2007

Graduate Research Fellowship - National Science Foundation. \$90,000.

Liberal Arts Graduate Research Fellowship - University of Texas at Austin.

Student Prize - Texas Association of Biological Anthropologists.

David Bruton, Jr. Graduate Fellowship - University of Texas at Austin. Also received in 2008.

## Courses Taught

*Introduction to Biological Anthropology.* ANTH 1001. Undergraduate survey course with enrollment of approximately 240 students. This course is designed as a survey of the field of biological anthropology, and fulfills a general science requirement. George Washington University, Anthropology. Taught Fall 2016.

*Analytical Methods in Evolutionary Anthropology.* ANTH 6413. I designed this graduate course covering applied statistical methods (e.g, regression, ANOVA and related techniques, categorical data analysis, resampling approaches) and the R statistical programming language. This is a required course for the Hominid Paleobiology PhD program. George Washington University, Anthropology. Taught Spring 2015, Spring 2016.

*Climate Change and Human Evolution.* ANTH 3491. I designed this upper level undergraduate course covering changes in global climate through evolutionary time and the impacts on evolution, with an emphasis on humans. (Previous course title: Evolutionary Impacts of Cenozoic Climate Change). George Washington University, Anthropology. Taught Spring 2016.

*Public Understanding of Science.* HOMP 8302. Graduate course in which students complete semester-long public service internships. Student projects target underserved Washington, DC-area public schools and general audiences at public museums with a goal of increasing scientific literacy and creating interest in scientific careers. George Washington University, Anthropology. Taught Spring 2016.

*GIS and Remote Sensing for Archaeology and Paleontology.* ANT 391 / GRG 396. Teaching Assistant. University of Texas at Austin, Anthropology. 2010.

*Human Variation.* ANT 394C. Teaching Assistant. University of Texas at Austin, Anthropology. 2009.

*Introduction to Physical Anthropology.* ANT 301. Teaching Assistant. University of Texas at Austin, Anthropology. 2006, 2007, 2010, 2011, 2012.

## Professional Preparation

Research Associate and Software Developer. PaleoCore Project. I am a key member of this NSF Funded project, which aims to create a data-standard for physical anthropology. I contributed heavily to the development of PaleoCore informatics tools for data sharing. 2012 - Present.

Observer. Evolution of Terrestrial Ecosystems Working Group. National Museum of Natural History. 2015

Participant. AnthroTree Workshop in Phylogenetic Methods. Amherst, MA. 2011.

Research Assistant. eSkeletons.org and eFossils.org. PI: John Kappelman. 2010, 2011.

## Fieldwork Experience

Koobi-Fora Field School, East Turkana, Kenya. Directors: David Braun and Purity Kiura. I collected fossil data relating to sub-regional faunal variability in the Koobi Fora Formation from 2.0 - 1.4 Ma. I supervised four undergraduate student research projects that were organized around this topic. Summer 2016.

Mille-Logya Research Project, Afar Region, Ethiopia. PI: Zeresenay Alemseged. I am a member of the scientific team conducting research to recover new fossil evidence of human evolution from this Plio-Pleistocene site. 2014.

Great Divide Basin Project, Wyoming. PI: Robert Anemone. Collected primate and mammalian fossils from Eocene sediments, and prospected for new localities. 2013, 2014.

Dikika Research Project, Afar Region, Ethiopia. PI: Zeresenay Alemseged. Surface collection of Plio- Pleistocene hominin and mammalian fossils. Managed GIS data collection with hand-held computers and high-precision GPS base station. 2010, 2012.

Dalquest Research Site, Big Bend Region, Texas. PI: E. Chris Kirk. Surface collected primate and mammalian fossils in the Devil's Graveyard Formation. (Eocene: Late Uintan). 2007, 2008, 2010.

Contrebandiers Cave, Temara, Morocco. PI: Harrold Dibble & Utsav Schurmans. Excavated site preserving Middle Stone Age archaeology (Aterian) and hominin remains. Performed systematic analysis of rodent fauna. 2009.

## Scholarly Presentations

### Published Abstracts from Conference Presentations

2016

**Barr WA.** Signal or noise? Testing hypotheses about faunal turnover. Paleoanthropology Society.

2015

**Barr WA** and Dunn RH. A method for analyzing complex joint surfaces in ecomorphology using slope rasters derived from Digital Elevation Models. American Association of Physical Anthropology.

Thompson JC, McPherron SP, Bobe R, **Barr WA**, Reed D, Wynn J, Marean CW, and Alemseged Z. Taphonomy of fossils from the hominin-bearing deposits at Dikika, Ethiopia. Paleoanthropology Society.

2014

**Barr WA.** Paleoenvironments of the Hadar and Shungura Formations: Synthesizing multiple lines of evidence using bovid ecomorphology. American Association of Physical Anthropology.

Kemp A and **Barr WA.** Rates of homoplasy in the mammalian skeleton. American Association of Physical Anthropology.

2013

**Barr WA.** Ecomorphology of the bovid astragalus: body size, function, phylogeny and paleoenvironmental reconstruction. *American Journal of Physical Anthropology*. 150:74.

2012

**Barr WA.** Ecomorphology in a phylogenetic statistical context: a case study using the bovid femur. *American Journal of Physical Anthropology*. 147:90-91.

Scott RS and **Barr WA.** Ecomorphology and phylogeny among the Bovidae: implications for habitat reconstruction. *American Journal of Physical Anthropology*.

Kappelman JK, Keane P, Reed D, Tenbarger J, Witzel A, **Barr WA**, Nachman BA, Russo GA. eFossils.org: a collaborative website and community database for the study of human evolution. *American Journal of Physical Anthropology*.

2011

Reed DN, McPherron S, **Barr WA**, Alemseged Z, Bobe R, Geraads D, and Wynn J. A new GPS data collection methodology and data schema for integrating multiple project databases: examples from the Dikika Research Project geodatabase. *American Journal of Physical Anthropology*. 144:249-250.

**2009**

**Barr WA**, Reed DN. Coping with taxonomic ambiguity and inter-observer variation in paleontological and paleoanthropological analyses. *American Journal of Physical Anthropology*. 144:249-250.

Toborowsky CJ, **Barr WA**, Lewis, RJ. Does environmental unpredictability drive lemur life histories? *American Journal of Physical Anthropology*.

**2008**

**Barr WA**. The effects of allometric scaling patterns on the template method for estimating dimorphism. *American Journal of Physical Anthropology*.

**Scholarly Presentations Without Published Abstracts****2013**

**Barr WA**, Nachman B, Shapiro L. The Academic Phylogeny of Physical Anthropology. Annual Meetings of the Texas Association for Biological Anthropologists. Austin, TX.

Reed D, **Barr WA**, Urban T. Free as in speech and beer: open source software solutions for spatial data management in physical anthropology. Annual Meetings of the Texas Association for Biological Anthropologists. Austin, TX.

**2012**

**Barr WA**. Refining hominin paleoenvironmental reconstructions using bovid ecomorphology: the role of phylogenetic comparative methods. Presentation at University of Texas at Austin Paleontology Brown-Bag Seminar Series.

**Barr WA**. Refining hominin paleoenvironmental reconstructions with bovid ecomorphology. Presentation at University of Texas at Austin Informal Physical Anthropology Seminar series.

**2011**

**Barr WA**. Ecomorphology in a phylogenetic statistical context: a case study using the bovid femur. Annual Meetings of Texas Association for Biological Anthropologists. San Marcos, TX.

**2010**

**Barr WA**. Pattern or chaos? Exploring a null model of faunal turnover patterns. Annual Meetings of Texas Association for Biological Anthropologists. Waco, TX.

**Barr WA**. Quantitative ecomorphology of mammalian dentitions: Refining a tool for reconstructing early hominin paleoenvironments. Presentation at University of Texas at Austin Informal Physical Anthropology Seminar series.

**2008**

**Barr WA**. Coping with taxonomic ambiguity and inter-observer variation in paleontological and paleoanthropological analyses. Annual Meetings of Texas Association for Biological Anthropologists. College Station, TX.

**2007**

**Barr WA**. The effects of allometric scaling patterns on the template method for estimating dimorphism. Annual Meetings of Texas Association for Biological Anthropologists. Austin, TX.

**Invited Talks, Symposia, Guest Lectures****2015**

Invited participant in symposium entitled: *Latest methods in reconstructing Cenozoic terrestrial environments and ecological communities*. Cleveland Museum of Natural History. September 10 - 12.

**2013**

Guest Lecture for Denné Reed in graduate-level Statistical Methods course at University of Texas at Austin. Topic: Data reshaping and advanced plotting with ggplot2.

Guest Lecture for E. Christopher Kirk Introduction to Physical Anthropology course at University of Texas at Austin. Topic: Primate Evolution.

## Professional Service

- Coordinator, Capstone Seminar - I coordinate speakers and organize the academic program for this departmental seminar in the Center for the Advanced Study of Human Paleobiology at The George Washington University.
- Academic Phylogeny of Physical Anthropology - In collaboration with Liza Shapiro and Brett Nachman, I created this website as a public resource that tracks academic lineages of Physical Anthropology PhDs. The site has had over 1700 user submissions. 2013.
- Volunteer, Explore UT - University wide K-12 educational open house. Helped organize and run activity "Leaping Lemurs of Madagascar" on locomotion and conservation of lemurs. 2010, 2011.
- Reviewer - University of Texas Liberal Arts Graduate Research Fellowship. Evaluated grant proposals from students competing for \$50,000 in grant funds. 2008.
- Coordinator - Informal Physical Anthropology Seminar Series, University of Texas at Austin. Responsible for planning weekly seminars and recruiting speakers. 2008.

## Manuscript Reviews

- Nature Ecology & Evolution. 2016
- Journal of Human Evolution. 2014, 2015.
- International Journal of Primatology. 2014.
- Methods in Ecology and Evolution. 2012.
- Manning Publications (book proposal review). 2012.

## Professional Memberships

- American Association of Physical Anthropologists
- Paleoanthropology Society