

BIOGRAPHICAL SKETCH
BRIAN A. VILLMOARE

PROFESSIONAL PREPARATION

University of Virginia	Philosophy	BA 1990
Arizona State University	Anthropology	MA 1999
Arizona State University	Anthropology	PhD 2008
George Washington University	Anthropology	Post-doc 2011-2014

APPOINTMENTS

2014-present	Associate Professor, Department of Anthropology, University of Nevada, Las Vegas
2013-2014	Associate Research Professor, George Washington University
2008-2011	Teaching Fellow, Anthropology, University College, London

RESEARCH INTERESTS

Hominid and primate systematics, evolution and development, morphological integration, character analysis, homology, geometric morphometrics, evolutionary theory.

Research Grants

- 2015 \$80,000: NSF Biological Anthropology (Co-Pi) A Multidisciplinary Network Analysis of Muskuloskeletal Complexity, Integration, Modularity, and Evolvability of the Primate Head and Limbs
- 2014 \$275,404: NSF Biological Anthropology (Co-Pi) - Collaborative Research: Paleoanthropology of the Ledi-Geraru: Filling in a temporal gap in hominin evolution
- 2012 \$239,745: NSF Biological Anthropology (Senior personnel) - Collaborative Research: Paleoanthropological investigation of the Ledi-Geraru hominin site (Afar, Ethiopia)
- 2010 \$5,000: AAPA Career Development Grant - Morphological integration of the primate masticatory apparatus.
- 2006 \$12,000: Leakey Foundation Pre-doctoral Research Grant
- 2006 \$3,500: NSF Dissertation Improvement Grant
- 2006 \$2,500: ASU GPSA Grant

PEER- REVIEWED PUBLICATIONS

- 2018 Villmoare, B. Early *Homo* and the role of the genus in paleoanthropology. *Yearbook of Physical Anthropology*. 165: 72–89.
- 2018 Powell, V, Esteve-Altaja, B, Molnar, J, Villmoare, B, Pettit, A, Diogo, R. Primate modularity and evolution: first anatomical network analysis of primate head and neck musculoskeletal system. *Scientific Reports* 8:2341.

- 2016 Kimbel, W, Villmoare, B. From *Australopithecus* to *Homo* : the transition that wasn't. *Philosophical Transactions of The Royal Society B: Biological Sciences* 371(1698): 20150248.
- 2016 Hatala K, Roach, N, Ostrofsky, K, Wunderlich, R, Dingwall, H, Villmoare, B, Green, D, Braun, D, Richmond, B Footprints reveal direct evidence of group behavior and locomotion in *Homo erectus*. *Scientific Reports* 6:28766.
- 2016 Roach, N, Hatala, K, Ostrofsky, K, Villmoare, B, Rees, J, Du, A, Braun, D, Harris, W, Beherensmeyer, K, Richmond, B Pleistocene footprints show intensive use of lake margin habitats by *Homo erectus* groups. *Scientific Reports* 6:26374
- 2016 Tocheri, M, Dommain, R, McFarlin, S., Burnett, S, Case, T, Orr, C, Roach, N, Villmoare, B, Eriksen, A, Kalthoff, D, Senck, S, Assefa, Z, Groves, C, Jungers, W. The Evolutionary Origin and Population History of the Grauer Gorilla. *Yearbook of Physical Anthropology* 159: S4–S18.
- 2015 Villmoare, B, Kimbel, W, Seyoum, C, Campisano, C, DiMaggio, Rowan, J, Braun, D, Arrowsmith, R, Reed, K, Early *Homo* at 2.8 Ma from Ledi-Geraru, Afar, Ethiopia. *Science* 347: 1352-1355.
- 2015 Villmoare, B, Kimbel, W, Seyoum, C, Campisano, C, DiMaggio, Rowan, J, Braun, D, Arrowsmith, R, Reed, K. Response to Comment on “Early *Homo* at 2.8 Ma from Ledi-Geraru, Afar, Ethiopia”. *Science* 348: 1326.
- 2015 Esteve-Altava B, Boughner JC, Diogo R, Villmoare BA, Rasskin-Gutman D. Anatomical Network Analysis Shows Decoupling of Modular Lability and Complexity in the Evolution of the Primate Skull. *PLoS ONE* 10(5): e0127653.doi:10.1371/journal.pone.0127653.
- 2014 Villmoare, B, Dunmore, C, Kilpatrick, S, Oerteltd, N, and Fish, J. Craniofacial modularity, character analysis, and the evolution of the mid-face in early African hominins. *Journal of Human Evolution* 77: 143–154.
- 2013 Villmoare, B, Kuykendall, K., Rae, T., Brimacomb, C. Continuous dental eruption identifies Sts 5 as the developmentally oldest fossil hominin and informs the taxonomy of *Australopithecus africanus*. *Journal of Human Evolution* 64(6):473-698.
- 2013 Villmoare, B. Morphological integration, evolutionary constraints, and extinction: a computer simulation-based study. *Evolutionary Biology* 40:76–83.
- 2011 Villmoare, B. and Kimbel, W. CT-based study of internal structure of the anterior pillar in extinct hominins and its implications for the phylogeny of robust *Australopithecus*. *Proceedings of the National Academy of Sciences* 108: 16200-16205.

- 2011 Villmoare B., Fish J., and Jungers, W. Selection, morphological integration, and strepsirrhine locomotor adaptations. *Evolutionary Biology* 38: 88-99.
- 2011 Fish, J., Villmoare, B., Köbernick, K., Compagnucci, C., Tarabykin, V., and Depew, M., *Satb2*, modularity, and the evolvability of the vertebrate jaw. *Evolution and Development* 13: 549-564.
- 2006 Villmoare B. Metric and non-metric randomization methods, geographic variation, and the single-species hypothesis for Asian and African *Homo erectus*. *Journal of Human Evolution*. 49: 680-701

BOOK CHAPTERS OR OTHER INVITED WORK

- 2017 Villmoare, B. *Australopithecus africanus*. In Shackelford, T., & Weekes-Shackelford, V. (Ed.), *Encyclopedia of Evolutionary Psychological Science*. New York: Springer International Publishing.
- 2017 Villmoare, B. *Australopithecus garhi*. In Shackelford, T., & Weekes-Shackelford, V. (Ed.), *Encyclopedia of Evolutionary Psychological Science* New York: Springer International Publishing.

PRESENTATIONS (INVITED)

- 2016 Early Homo at Ledi-Geraru: taxonomic and adaptive inferences for human evolution at 2.8 MA. Keynote Lecture – presented at the Annual SWABA Meeting, Tempe, AZ.
- 2013 The role of evolutionary constraints in human prehistory. Given at Chatham University, Nov. 20, 2013.
- 2013 Continuous dental eruption in *Australopithecus africanus* and other hominins. Given at the Smithsonian Museum of Natural History, Oct. 25, 2013.
- 2012 Studying *Paranthropus* from the inside out: a CT-based analysis of the anterior pillar, and its importance for the phylogeny of early hominins. Given at the Smithsonian Museum of Natural History, May 16, 2012.
- 2011 Why *Paranthropus* matters: what we can learn from the evolution and extinction of the robust hominins. Given at University College London, May 15, 2011
- 2010 Integration in the face of *Paranthropus* - a geometric morphometric analysis. Given at Roehampton University, Feb. 10, 2010.
- 2010 Villmoare B, and Fish, J. Selection, morphological integration, and strepsirrhine locomotor adaptations. Presented at session in honor of Elizabeth Harmon at the annual meeting of American Association of Physical Anthropologists in Albuquerque, NM, April 14-17.

SYNERGISTIC ACTIVITIES

Field Research

Ethiopia: Since 2008 I have been co-director of the Ledi Geraru Research Project. In 2013 we discovered the earliest specimen of the Genus *Homo*. This project has, so far, resulted in three publications in the journal *Science*. Work is ongoing and in 2015 additional fossils were discovered.

Kenya: I have served as a senior scientist at Koobi Fora, uncovering human footprints at the 1.4 million year horizon KF14 East. Several publications in *Nature Scientific Reports* have been the result, and more are in press.

Student mentoring – I have mentored twelve students (two at UNLV, ten at UCL). They are a diverse group of students, including seven women and one student of African origin. Of the masters students (at UCL), three have co-authored published articles and conference presentations and two have gone on to PhD programs in the United States and Canada.

Professional service – I have served as a grant referee for the National Science Foundation and the Wenner Gren Foundation as well as publications such as *Nature Scientific Reports*, *Proceedings of the National Academy of Sciences*, *Journal of Human Evolution*, the *American Journal of Physical Anthropology*, *Journal of Comparative Human Biology* “HOMO”, and *Quaternary International*, as well as various edited volumes.

K-12 level – I have participated in various public outreach programs, including public presentations of my field research at Las Vegas area elementary, middle, and high schools. I represented George Washington University at the 2012 Science and Engineering Expo in Washington DC and also regularly participated in the “Scientist Is In” program at the Smithsonian Natural History Museum from 2011-2013.

Communication with the public – My field research has generated considerable public interest, and I have given interviews with more than 60 radio, television and newspaper journalists. My work has been featured in NPR’s “Science Friday”, the New York Times, Discover Magazine, CNN, BBC, the Washington Post, Le Monde, the Guardian, and Al Jazeera.

Collaborators & OTHER AFFILIATIONS

Collaborators and Co-Editors:

Prof. William Kimbel (Institute of Human Origins and Arizona State University), Prof. William Jungers (SUNY Stonybrook), Prof. Brian Richmond (George Washington University), Prof. Jennifer Fish (University of Massachusetts Lowell), Dr. Matthew Tocheri (Smithsonian Institute), Prof. Kaye Reed (Institute of Human Origins and Arizona State University), Prof. Christopher Campesano (Institute of Human Origins and Arizona State University), Dr. Charles Lockwood, (University College London), Prof. Ramone Arrowsmith (Arizona State University), Dr. Kevin Kuykendal (University of Sheffield), Dr. Todd Rae (Roehampton University), Dr. Erin DiMaggio (Pennsylvania State University).

Graduate Advisors and Postdoctoral Sponsors:

Dr. Charles Lockwood, Department of Anthropology, University College London.

Prof. William Kimbel, Department of Anthropology, Arizona State University.
Prof. Kaye Reed, Department of Anthropology, Arizona State University.
Prof. David Strait, Department of Anthropology, SUNY Albany.
Prof. Brian Richmond, American Museum of Natural History