

## *Curriculum Vitae*

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### **Karen L. Baab**

Department of Anatomy  
Midwestern University  
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### **Education and Postgraduate Training**

#### **Postgraduate Training**

2008-2010     Research Instructor, Department of Anatomical Sciences, Stony Brook University

#### **Education**

2007            **PhD**, City University of New York, Anthropology

2003            **MA**, Hunter College, Anthropology

1996-2000     **BA** (Honors, Summa cum laude), Muhlenberg College, History and Anthropology

#### **Theses**

2007            **Ph.D.** City University of New York; “Cranial shape variation in *Homo erectus*”

2004            **M.A.** Hunter College; “Nasal morphology and climate in Neanderthals”

### **Academic / Professional Appointments**

2018-present   Associate Professor, Department of Anatomy, Midwestern University  
                    Joint Appointments in College of Health Sciences, College of Dental Medicine  
                    and College of Optometry

2014-2018     Assistant Professor, Department of Anatomy, Midwestern University

2010-2014     Assistant Professor, Department of Anthropology, Stony Brook University

2008-2010     Research Instructor, Department of Anatomical Sciences, Stony Brook University

2000-2007     Graduate Student Researcher, American Museum of Natural History

2002-2005     Adjunct Lecturer, Department of Anthropology, Lehman College

2003-2004     Adjunct Lecturer, Department of Cell Biology and Anatomy, Sophie Davis  
                    School of Biomedical Education (CUNY)

### **Professional Society Memberships**

American Association of Physical Anthropologists

Paleoanthropology Society

European Virtual Anthropology Network (EVAN) Society

American Association of Anatomists

### **Professional Honors and Awards**

Phi Beta Kappa (Muhlenberg College)

### **Extramural Grant Support**

- 2020-2023 **National Science Foundation**, Biological Anthropology Program (BSC/SBE)  
 “Testing Adaptive Hypotheses of Plio-Pleistocene Hominin Craniofacial Evolution” (\$312,878) **Principal Investigator**
- 2013-2015 **L.B.S. Leakey Foundation Research Grant**  
 “Integration of Robust Features Across the Cranial and Postcranial Skeleton” (\$19,100)
- 2005-2007 **L.B.S. Leakey Foundation Research Grant**  
 “Cranial Shape Variation in *Homo erectus*: A Geometric Approach” (\$4,500)
- 2004-2007 **National Science Foundation** Doctoral Dissertation Improvement Grant  
 “Cranial Variation in *Homo erectus*” (\$10,000)
- 2004 **Sigma Xi** Grants-In-Aid of Research

## Service

### Intra-University

- 2019-Current Senator, Midwestern University Senate
- 2019-Current Member, College of Graduate Studies Research Committee
- 2020-Current Co-Chair, College of Graduate Studies Diversity and Inclusion Committee, Curriculum Subcommittee
- 2020-Current Member, College of Graduate Studies Diversity and Inclusion Committee, Admissions Subcommittee
- 2018 Member, Search Committee for Department of Anatomy Faculty Position
- 2016-2019 Member, Admissions Committee (PA Program, MWU)
- 2017-2019 Member, Bioethics Committee
- 2018-Current Member, Faculty Development Committee
- 2017-2018 Member, Intramural Grant Committee
- 2016 Chair, Search Committee for Department of Anatomy Research Assistant
- 2016 Member, Anatomy Scholars Committee (Department Committee)
- 2016-2018 Judge, Kenneth Suarez Research Day
- 2015-2016 Member, Wellness Committee (MWU)
- 2015-2016 Member, College of Health Sciences, Student Promotion and Graduation Committee (MWU)
- 2014 Chair, Search Committee for Department of Anatomy Research Assistant
- 2014-Current Department Administrator for Web-Ex technology

### External

- 2016-Current Member, Review Committee for AAPA Professional Development Grant Program

### Stony Brook University

- 2010-2017 Ph.D. Supervisor for Allison Nesbitt (SBU)

- 2013 Member, Admissions Committee for M.A. in Department of Anthropology (SBU)
- 2013 Member, Teaching Assistance Committee for Interdepartmental Doctoral Program in Anthropological Sciences (SBU)
- 2012 Member, Search Committee for Biostatistician Position in Department of Anthropology (SBU)
- 2011-2013 Served on MA committees for Ronda Graves, Katherine Goodenberger, Stephanie Blatch, and Molly Elmer (SBU)
- 2010-2014 Library Representative, Department of Anthropology, Stony Brook University

## **Professional and Public Service Activities**

### **Grant Reviews for**

*National Science Foundation*

*Leakey Foundation*

### **Peer Reviews for**

*Science, Journal of Human Evolution, American Journal of Physical Anthropology, Anthropological Science, Journal of Anthropological Science, Anthropologischer Anzeiger, Anatomical Record, PLOS ONE*

### **Participant in Professional Conferences**

- 10/2014 “What made us human? Biological and cultural Evolution of *Homo sapiens*” Symposium, The International School of Ethology of the Ettore Majorana Centre for Scientific Culture. Erice, Italy.
- 05/2014 Peking Man International Research Conference, Confucius Institute, Stony Brook University
- 02/2009 “Darwin’s Legacy: Early Human Evolution in Africa” Conference (NYCEP), New York City
- 2011 Organized informal eight week “Geometric Morphometrics” seminar for graduate students at Stony Brook University

## **Seminars and Professional Presentations**

### **Chaired Symposia**

- 06/2017 “The Evolution of Form and Function in the Hominin Pelvis” Symposium, American Association of Physical Anthropology, New Orleans

### **Invited Symposia**

- 10/2015 “The Shape of Things To Come: Geometric Morphometrics in Vertebrate Paleontology” Symposium, Society of Vertebrate Paleontology Meetings. Dallas
- 08/2010 “Stop the Presses! A Magazine to Shout for Statistics!” Special Presentation, Joint Statistical Meetings. Vancouver

### **Invited Seminars**

- 04/2019 Seminar, Institute of Human Origins, Arizona State University
- 04/2018 Seminar, Department of Anthropology, University of Tennessee
- 11/2014 Seminar, National Museum of Nature and Science, Anthropology Department, Tsukuba, Japan

- 06/2012 Seminar, Département Hommes, Nature, Sociétés, Muséum national d'Histoire naturelle, Paris
- 04/2011 New York Regional Primatology colloquia, NYCEP
- 04/2009 Seminar, Department of Evolutionary Anthropology, Duke University
- 02/2008 Seminar, Turkana Basin Institute and Paleobiology Seminar Series, Stony Brook University

## Teaching Experience

### Midwestern University

- ANAT 1551/1552/1553 Human Anatomy and Embryology
- ANATG 1520/1521 Gross Anatomy (Module Leader, 2016; Course Director, 2018, 2020)
- BASI 1509/1518 Head and Neck Anatomy (Module Leader 2017-2021)
- ANAT 503 Human Anatomy

### Stony Brook University

- Human Anatomy (Undergraduate)
- Introduction to Physical Anthropology
- Seminar: Hominins in the Headlines
- Human Gross Anatomy (Dental)

### City University of New York

- Human Gross Anatomy Medical (*Sophie Davis School of Biomedical Education*)
- Human Origins
- Introduction to Human Evolution

## Scholarly Publications

### Peer-reviewed Journal Articles and Book Chapters

- 2020 Riede, T., Coyne, M., Tafoya, B., **Baab, K.L.** Postnatal development of the mouse larynx: negative allometry, age-dependent shape changes, morphological integration, and a size-dependent spectral feature. *Journal of Speech, Language, and Hearing Research*. 63: 2680-94.
- 2020 Borgard, H.L., **Baab, K.**, Pasch, B. and Riede, T., The shape of sound: a geometric morphometrics approach to laryngeal functional morphology. *Journal of Mammalian Evolution*, 27: 577-590.
- 2018 **Baab, K.L.** Evolvability and craniofacial diversification in genus *Homo*. *Evolution*. 72: 2781-2791.
- 2018 Zichello, J., **Baab, K.L.**, McNulty, K.P., Raxworthy, C.J. and Steiper, M.E. Hominoid intraspecific cranial variation mirrors neutral genetic diversity. *Proceedings of the National Academy of Sciences*. 115: 11501-11506.
- 2018 **Baab, K.L.**, Copes, L.E., Ward, D., Wells, N., Grine, F.E. Using modern human cortical bone distribution to test the systemic robusticity hypothesis. *Journal of Human Evolution*. 119: 64-82.
- 2017 **Baab, K.L.** and Zaim, Y. Global and local perspectives on cranial shape variation in Indonesian *Homo erectus*. *Anthropological Science*. 125: 67-83.

- 2016 **Baab K.L.**, Brown P., Falk D., Richtsmeier J.T., Hildebolt C.F., Smith K., Jungers W. A critical evaluation of the Down syndrome diagnosis for LB1, type specimen of *Homo floresiensis*. PLoS ONE. 11(6): e0155731
- 2016 Ledogar, J.A., Dechow, P.C., Wang, Q., Gharpure, P.H., Gordon, A.D., **Baab, K.L.**, Weber, G.W., Grosse, I.R., Ross, C.F., Richmond, B.G., Wright, B.W., Byron, C., Wroe, S., Strait, D.S. Human feeding biomechanics: performance, variation and functional constraints. PeerJ. 4e:2242.
- 2016 **Baab, K.L.** The place of *Homo floresiensis* in human evolution. Journal of Anthropological Studies. 94: 1-14.\*Invited\*
- 2016 **Baab, K.L.** The role of neurocranial shape in defining the boundaries of an expanded *Homo erectus* hypodigm. Journal of Human Evolution. 92: 1-21.
- 2015 **Baab, K.L.** Defining *Homo erectus*. Henke, W. and Tattersall, I. (Eds.). Handbook of Paleoanthropology. New York: Springer, pp. 2189-2219. \*Invited\*
- 2014 **Baab, K.L.**, Perry, J.M.G., Rohlf, F.J. and Jungers, W.L. Phylogenetic, ecological, and allometric correlates of cranial shape in Malagasy lemuriforms. Evolution. 68: 1450–1468.
- 2013 **Baab, K. L.** The impact of superimposition choice in geometric morphometric approaches to morphological integration. Journal of Human Evolution. 65: 689-692.
- 2013 **Baab, K.L.**, McNulty, K.P., and Harvati, K. *Homo floresiensis* contextualized: A geometric morphometric comparative analysis of fossil and pathological human samples. PLoS ONE 8(7): e69119.
- 2012 **Baab, K.L.**, McNulty, K.P. and Rohlf, F.J. The shape of human evolution: a geometric morphometrics perspective. Evolutionary Anthropology. 21: 151-165. \*Invited\*
- 2010 McNulty, K.P. and **Baab, K.L.** Keeping asymmetry in perspective: A reply to Eckhardt and Henneberg. American Journal of Physical Anthropology. 143: 337-339.
- 2010 **Baab, K.L.** Cranial shape in Asian *Homo erectus*: geographic, anagenetic, and size-related variation. In: Norton, C.J., Braun, D.R. (Eds.) Asian Paleoanthropology: From Africa to China and Beyond. New York: Springer, pp. 57-80.
- 2010 **Baab, K.L.**, Freidline, S.E., Wang, S.L, Hanson, T. Relationship of cranial robusticity to cranial form, geography and climate in *Homo sapiens*. American Journal of Physical Anthropology. 141: 97-115.
- 2009 **Baab, K.L.**, McNulty, K.P. Size, shape and asymmetry in fossil hominins: the status of the LB1 cranium based on 3D morphometric analyses. Journal of Human Evolution. 57: 608-622.
- 2008 **Baab, K.L.** The taxonomic implications of cranial shape variation in *Homo erectus*. Journal of Human Evolution. 54: 827-847.
- 2008 **Baab, K.L.**, A re-evaluation of the species affinities of KNM-ER 42700. Journal of Human Evolution. 55: 741-746.

#### Published Abstracts

- 2020 **Baab, K.L.**, Freidline, S.E., Harvati, K. Contributions of high dimensional shape analysis to paleoanthropology. *American Journal of Physical Anthropology*. 171(S69): 14.
- 2019 **Baab, K.L.** and Nesbitt, A. Ontogeny of vault shape in *Homo erectus* with implications for KNM-ER 42700. *American Journal of Physical Anthropology*. 168(S68): 10.
- 2018 **Baab, K.L.** Craniofacial integration and evolution of hominins. *American Journal of Physical Anthropology*. Suppl. 66: 15.
- 2018 Ward, D. L., **Baab, K.L.**, Viola, B. and Silcox, M.T. Using unintentional vault modification to evaluate integration of the bony labyrinth and cranium. *American Journal of Physical Anthropology*. Suppl. 66: 295.
- 2017 **Baab, K.L.**, O'Neill, M.C., Hammond, A.S. and Jungers, W.L. Comparative morphometric analysis and digital reconstruction of the *Homo floresiensis* pelvis. *American Journal of Physical Anthropology*. 162: 106.
- 2015 **Baab, K.L.**, Perry, J.M.G., Rohlf, F.J., and Jungers, W.L. Lemur craniomandibular diversification in relation to dietary ecology. *Journal of Vertebrate Paleontology*, Program and Abstracts: 82.
- 2015 **Baab, K.L.**, Falk, D., Brown, P., Richtsmeier, J.T., McNulty, K., Hildebolt, C.F., Prior, F.W., Smith, K.E. and Jungers, W. A re-evaluation of the Down syndrome diagnosis for LB1. *American Journal of Physical Anthropology*. 156 (S60): 74.
- 2015 Nesbitt, A. and **Baab, K.L.** The magnitude of covariation among regions of the human cranium. *American Journal of Physical Anthropology*. 156 (S60): 235.
- 2013 **Baab, K.L.**, Perry, J.M.G. Assessing function via shape: what is the place of geometric morphometrics in functional morphology? *American Journal of Physical Anthropology*.
- 2012 **Baab, K.L.** Using pathology to explore cranial integration in *Homo sapiens*. *American Journal of Physical Anthropology*. 147 (S54): 88.
- 2011 **Baab, K.L.** Rohlf, F.J., Jungers, W.L., Perry, J.M.G. Application of phylogenetic comparative methods to the adaptive radiation of Malagasy lemurs. *American Journal of Physical Anthropology*. 144 (S52): 79.
- 2010 **Baab, K.L.** Comparison of the LB1 neurocranium to extinct hominins, normal and pathological modern humans. *American Journal of Physical Anthropology*. 141 (S50): 59.
- 2009 **Baab, K.L.**, Jungers, W.L. Cranial shape variation in extant and giant subfossil lemurs from Madagascar. *American Journal of Physical Anthropology*. (S48): 81.
- 2008 **Baab, K.L.** A shape-based species definition for *Homo erectus*. *American Journal of Physical Anthropology* (S46): 62.
- 2007 **Baab, K.L.**, McNulty, K.P., Brown, P. Allometric scaling of craniofacial shape: implications for the Liang Bua hominins. *PaleoAnthropology A2*.
- 2007 **Baab, K.L.** Magnitude and pattern of geographic variation in cranial shape within *Homo erectus*, especially from Asia. *American Journal of Physical Anthropology* (S 44): 66-67.
- 2006 **Baab, K.L.**, Friedline, S.E., Wang, S.L. An investigation of robusticity in modern human crania: implications for *Homo erectus*. *PaleoAnthropology A50*.

- 2006 McNulty, K.P., **Baab, K.L.** Sexual dimorphism in hominine supraorbital morphology. *American Journal of Physical Anthropology*. 129 (S42): 128-129
- 2006 McNulty, K.P., **Baab, K.L.** Sexual dimorphism in hominin supraorbital morphology. *PaleoAnthropology*. Appendix: A65.
- 2006 Harvati, K., Panagopoulou, E., Karkanus, P., Frost, S.R., Athanassiou, A., Elefanti, P., Schrein, C., **Baab, K.**, Henderson, E., Tournalonkis, E., Garefalakis, C. New findings of the Aliakmon Paleolithic Survey, Greece 2004-2006. *PaleoAnthropology*. Appendix: A61.
- 2006 Harvati, K., Panagopoulou, E., Karkanus, P., Frost, S.R., Athanassiou, A., Elefanti, P., Schrein, C., **Baab, K.**, Henderson, E., Tournalonkis, E., Garefalakis, C. New findings of the Aliakmon Paleolithic Survey, Greece 2004-2006. Presented to the congress of the International Union for Prehistoric and Protohistoric Sciences, Lisbon, Portugal, September 2006.
- 2004 **Baab, K.L.**, Harvati, K. A 3-D analysis of shape differences in the scapula between Neanderthals and modern humans using geometric morphometrics (abstract). *American Journal of Physical Anthropology*. 123 (S38): 57.
- 2003 **Baab, K.L.**, Ting, N., Capellini, T.D., Hagell, S.E. Precision in 3-D landmark data collection for geometric morphometrics. *American Journal of Physical Anthropology*. 120 (S36): 61-62.
- 2003 Delson, E., Reddy, D., Rohlf, F.J., Frost, S., Friess, M., McNulty, K., **Baab, K.**, Capellini, T., Hagell, S.E. 3-D visualization of inferred intermediates on a phylogenetic tree –implications for paleoanthropology. *American Journal of Physical Anthropology*. 120 (S36): 86-87.

#### **Other Publications & Presentations**

- 2018 **Baab, K.L.** Evidence of early humans outside of Africa. *Desperta Ferro Ediciones* (popular science magazine in Spain). In press. \*Invited\*
- 2018 Arrington, S., Tafoya, B., Parker, T., Schaefer, C., **Baab, K.**, Pasch, B., Riede, T. The Shape of silence: a study of rodent laryngeal structure. **Poster** presented at the 2018 Arizona Imaging and Microanalysis Society (AIMS) Annual Conference at NAU in Flagstaff, AZ; March 30, 2018.
- 2012 **Baab, K.L.** *Homo floresiensis*: Making sense of the small-bodied hominin fossils from Flores. *Nature Education Knowledge* 3(9): 4. \*Invited\*
- 2012 **Baab, K.L.** Book Review of *Wiley-Blackwell Encyclopedia of Human Evolution* (by B. Wood, 2011) *Quarterly Review of Biology*. 87: 59-60. \*Invited\*
- 2011 Delson, E., **Baab, K.L.** Fossil Humans in *McGraw-Hill Encyclopedia of Science and Technology* ed. 10, vol. 7, 464-478. \*Invited\*
- 2010 Jungers, W., **Baab, K.** The geometry of hobbits: *Homo floresiensis* and human evolution. *Significance*. 6: 159-194. \*Invited\*
- 2009 McNulty, K.P, **Baab, K.L.** The Fossil “Hobbits” of Flores: Perspectives from morphometric simulation. *AnthroQuest* (Newsletter of The Leakey Foundation).
- 2009 **Baab, K.L.** Fossil Hominids from Dmanisi. 2009 *McGraw-Hill Encyclopedia of Science and Technology*. \*Invited\*
- 2009 **Baab, K.L.** Paleoanthropology 2009: The Chicago Meetings. *Evolutionary*

- Anthropology. 18: 84.
- 2009 St. Clair, E.M., **Baab, K.L.** Throwing light on human evolution in Africa. Evolutionary Anthropology. 18: 121-122.
- 2008 **Baab, K.L.**, Book Review of *A New Human: The Startling Discovery and Strange Story of the "Hobbits" of Flores, Indonesia* (by M. Morwood and P. van Oosterzee, 2007). American Journal of Physical Anthropology. 136: 369-370.  
\*Invited\*

#### **Public Outreach**

- 2019 Co-organizer and presenter, Highland Lakes Middle School "Women in STEM Day"
- 2017-2020 Highland Lakes Middle School Science Fair
- 2017 Foothills Branch Library Community Health Lecture Series 2017 "The 'Hobbits' of Southeast Asia: A Controversial New Human Species"
- 2016 Interviewed about *Homo floresiensis* for New York Times.
- 2013 Interviewed about *Homo floresiensis* for New York Times and Newsday
- 2009 Interviewed about *Homo floresiensis* for National Geographic News and Newsday.
- 2008 Interviewed about position of *Homo erectus* in human evolution for "A New Hominin" episode in video teaching series "Introduction to Physical Anthropology."