Carrie S. Mongle

Interdepartmental Doctoral Program
in Anthropological Sciences
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EDUCATION

Present	**Stony Brook University**, Stony Brook, NY **Ph.D. Candidate** in the Interdepartmental Doctoral Program in Anthropological Sciences "Modeling hominin variability: The alpha taxonomy of *Australopithecus africanus*" Committee: FE Grine, JB Smaers, JG Fleagle, JB Rossie, WH Kimbel, PD Polly Anticipated defense: July 2019
2015	**Stony Brook University,** Stony Brook, NY **M.A.**, Anthropology; Advisor: Frederick Grine
2012	**University of Virginia**, Charlottesville, VA **BA**, Archaeology with Distinction

EXTERNAL RESEARCH AWARDS ($38,370)

2016	**National Science Foundation** Doctoral Dissertation Improvement Grant ($21,875): "Modeling hominin variability: the alpha taxonomy of *Australopithecus africanus*" NSF BCS 1613401
2016	**Wenner-Gren Foundation** Dissertation Fieldwork Grant ($10,360): "Modeling hominin variability: the alpha taxonomy of *Australopithecus africanus*"
2015-2016	**Wenner-Gren Foundation** Research Grant ($6,135): "The phylogenetic relationships of *Australopithecus sediba*" Project collaborator, PI David Strait

PEER-REVIEWED ARTICLES

In press	**Mongle CS,** Strait DS, Grine FE. Expanded character sampling underscores phylogenetic stability of *Ardipithecus ramidus* as a basal hominin. J Hum Evol.
In press	Grine FE, Leakey MG, Gathago PN, Brown FH, **Mongle CS**, Jungers WL, Leakey LN. Complete permanent mandibular dentition of early *Homo* from the upper Burgi Member of the Koobi Fora Formation, Ileret, Kenya. J Hum Evol.

2018	Fernández PJ, **Mongle CS**, Leakey L, Proctor DJ, Orr CM, Patel BA, Almecija S, Tocheri MW, Jungers WL. Functional morphology and evolution of the hominin forefoot. Proc Natl Acad Sci. 35: 8746-8751.
2018	Márquez S, Pagano AS, **Mongle CS**, Albertine KH, Laitman JT. The Nasal Complex of a Semiaquatic Artiodactyl, the Moose (*Alces alces*): Is it a Good Evolutionary Model for the Ancestors of Cetaceans? Anat Rec. Early View.
2017	Grine FE, Marean CW, Faith JT, Black W, **Mongle CS**, leRoux S, duPlessis A. Further human fossils from the Middle Stone Age deposits at Die Kelders Cave 1, Western Cape Province, South Africa. J Hum Evol. 109:70-78.
2017	Smaers JB, **Mongle CS.** 2017. On the accuracy and theoretical underpinnings of the multiple variance Brownian motion approach for estimating variable rates and inferring ancestral states. Biol J Linn Soc Lond. 121:229-238.
2016	Smaers JB, **Mongle CS**, Kandler A. 2016. A variable variance Brownian motion framework for the estimation of ancestral states and variable rates. Biol J Linn Soc Lond. 118:78-94.
2015	**Mongle CS**, Wallace IJ, Grine FE. 2015a. Cross-sectional structural variation relative to midshaft along hominine diaphyses. I. The forelimb. Am J Phys Anthropol 158:386–397.
2015	**Mongle CS**, Wallace IJ, Grine FE. 2015b. Cross-sectional structural variation relative to midshaft along hominine diaphyses. II. The hind limb. Am J Phys Anthropol 158:398–407.
2014	Wallace IJ, Nesbitt A, **Mongle CS**, Gould ES, Grine FE. 2014. Age-related variation in limb bone diaphyseal structure among Inuit foragers from Point Hope, northern Alaska. Arch Osteoporos 9:202.
2014	Wallace IJ, Demes BB, **Mongle CS**, Pearson OM, Polk JD, Lieberman DE. 2014. Exercise-Induced Bone Formation Is Poorly Linked to Local Strain Magnitude in the Sheep Tibia. PLoS One 9:e99108

FORTHCOMING PEER-REVIEWED ARTICLES & CHAPTERS

In revision	Strait DS, **Mongle CS**, Grine FE. The systematics of the robust Australopiths. In: Wood BA, Constantino P *(eds).* The Forgotten Lineage(s): Paleobiology of Paranthropus.
In review	Grine FE, Lee C, **Mongle CS**, Wallace IJ, Mngomezulu V. Absence of a secular trend in cranial size among 20th century South African Bantu-speaking populations. Am J Hum Biol.
In review	**Mongle CS**, Koenig A, Samonds KE, Smaers JB, Borries C. Costly teeth: gestation length in primates suggests that dentition is *not* expensive to produce. Anat Rec.
In submission	Ksepka DT, Balanoff AM, Smith NA, Bever GS, Bhullar BS, Bourdon E, Braun EL, Burleigh JG, Clarke JA, Colbert MW, Corfield JR, Degrange FJ, De Pietri VL, Early CM, Field DJ, Gignac PM, Gold MEL, Jarvis ED, Kimball RT, Kawabe S, Lefebvre L, Marugán-Lobón J, **Mongle CS**, Morhardt A, Norell MA, Ridgely RC, Scofield RP, Tambussi CP, Torres CR, van Tuinen M, Walsh SA, Watanabe A, Witmer LM, Wright AK, Zanno LE, Smaers JB. Tempo and pattern of avian brain size evolution. **PNAS.**

Invited	Smaers JB & **Mongle CS**. Macroevolutionary signatures of neurodevelopmental shifts in mammals. Progress in Brain Research.
Invited	Smaers JB & **Mongle CS**. On the use of the phylogenetic regression in the study of Brain, Behavior and Evolution. Brain, Behavior and Evolution.
In prep	**Mongle CS**, Nesbitt A, Smaers J, Grine FE. Evidence that developmental processes shape macroevolutionary patterns.

NON PEER-REVIEWED PUBLICATIONS

2017	**Mongle CS**, Nishimura AC, Kling KJ, Lamb AR, Ekanayake-Weber M, de Vries D. Anthropologists get jazzed for science in New Orleans. Evol Anthropol 26:193-195. [News and Reviews]
2016	Perlman RF, Nishimura AC, **Mongle CS**, Kling K, Guevara EE, Arslanian K. 2016. Life's a peach for anthropologists in Atlanta. Evol Anthropol 25:81–83. [News and Reviews]
2014	Thompson NE, Cassalett S, Holowka NB, Perlman RF, **Mongle, CS**. 2014. Anthropology stampede in Calgary. Evol Anthropol 23: 85-87. [News and Reviews]

Book reviews

2018	**Mongle, CS**. The Quarterly Review of Biology: *Evolution's Bite: A Story of Teeth, Diet, and Human Origins*. By Peter Ungar. Princeton (New Jersey): Princeton University Press. $27.95. 248p. ISBN: 9780691160535. 2017.

PUBLISHED CONFERENCE ABSTRACTS

2019	Borries C, **Mongle CS,** Koenig A. Gestation length in African and Asian colobines. Am J Phys Anthropol. [Poster Presentation]
2018	**Mongle CS**, Strait DS, Grine FE. Phylogenetic implications of new craniodental character data for *Ardipithecus ramidus*. Am J Phys Anthropol. [Session Chair; Poster Presentation]
2018	**Mongle CS**, Nesbitt A, Smaers JB, Grine FE. Evidence that developmental processes bias multiple scales of variation and generate a line of least resistance for the evolution of the primate dentition. Northeastern Regional Vertebrate Evolution Symposium [Podium Presentation]
2018	Strait DS, **Mongle CS**, Grine FE. The systematics of robust australopiths. Am J Phys Anthropol. [Invited Symposium: The Forgotten Lineage(s): Paleobiology of Paranthropus]
2017	**Mongle CS,** Nesbitt A, Smaers JB, Grine FE. The developmental cascade biases rates of evolutionary change in the dentition. Am J Phys Anthropol. [Poster Presentation; ***Awarded AAPA-AAA Prize***]

2017	Fernandez PF, **Mongle CS,** Patel BA, Tocheri MW, Jungers WL. Functional morphology and evolution of the early hominin forefoot. Am J Phys Anthropol. [Podium Presentation]
2016	**Mongle CS,** Koenig A, Samonds K, Smaers JB, Borries C. 2016. Expensive tissues and gestation length in primates. Am J Phys Anthropol S159:233. [Podium Presentation]
2015	**Mongle CS,** Nesbitt A, Grine FE. 2015. A re-examination of maxillary shape variation and the attribution of Early Pleistocene fossils to the genus *Homo*. Am J Phys Anthropol S60:228. [Poster Presentation]
2014	**Mongle CS**, Wallace, IJ, Grine FE. 2014. Diaphyseal Cross-sectional Variation in Extant Hominoid Humeri: Implications for Incomplete Hominid Fossils. Am J Phys Anthropol 153: 188-189. [Poster Presentation]
2014	Wallace IJ, Demes B, **Mongle CS**, Pearson OM, Polk JD, et al. 2014. Exercise-Induced Bone Formation Is Poorly Linked to Local Strain Magnitude in the Sheep Tibia. Am J Phys Anthropol 153: 264. [Poster Presentation]

TEACHING APPOINTMENTS

2019	**Instructor,** Mapping Trait Evolution (Workshop) 35-hour course for researchers detailing how phylogenetic comparative methods can be used to map trait evolution. Transmitting Science
2017	**Course Director,** Human Gross Anatomy (ANAT-5001) Lecture and laboratory instruction for dissection-based gross anatomy lab for occupational therapy graduate students 1 Semester; SUNY Downstate Medical Center
2016	**Laboratory Instructor**, Research Skills (ANP 204) 1 Semester, Stony Brook University
2012-2015	**Laboratory Instructor**, Human Anatomy (ANP 300) Laboratory instruction for model-based anatomy lab for undergraduate students. 5 Semesters; Stony Brook University
2014	**Teaching Assistant**, Human Gross Anatomy (HBA 561) Laboratory instruction for dissection-based gross anatomy lab for PA/PT/RT graduate students 1 Semester; Stony Brook University
2012	**Teaching Assistant**, How People Eat (ANP 260) 1 Semester; Stony Brook University

INVITED TALKS & SEMINARS

2019	"From micro to macro: exploring multiple scales of variation and their links with evolution", Washington University in St. Louis Medical School, St Louis, MO
2018	"From micro to macro: exploring multiple scales of variation and their links with evolution", New York Institute of Technology College of Osteopathic Medicine, Old Westbury, NY
2017	"Hominins, Humans, and the Paleolithic Era", University of Virginia, Charlottesville, VA

INVITED WORKSHOPS

2018	**Invited Participant,** Diffeomorphism Workshop. Paul Sabatier University, Toulouse, France.
2015	**Invited Participant**, AVAToL – Next Generation Phenomics for the Tree of Life Workshop. Sponsored by the National Science Foundation, Division of Environmental Biology, "Assembling, Visualizing, and Analyzing the Tree of Life" (DEB-1208256).
2014	**Invited Attendee**, Turkana Basin Institute Human Evolutionary Workshop: *Homo habilis*. Hosted by Richard Leakey.

AWARDS

2019	**President's Award to Distinguished Doctoral Students,** Stony Brook University University-wide award given for 'academic excellence and community contributions'. Accompanied by $1,000 prize and invitation to speak at Doctoral Hooding Ceremony.
2017	**Outstanding Instructor in Anatomy Award,** SUNY Downstate Medical Center
2017	**Anatomy in Anthropology Award for Innovative Anthropological Research**, American Association of Anatomists and American Association of Physical Anthropologist

INTERNAL FUNDING ($56,250)

2012 – 2018	**W. Burghardt Turner Fellowship**, $50,000, Stony Brook University
2014 – 2018	**NSF AGEP-T FRAME Fellowship**, Stony Brook University
2018	**Graduate Student Organization Travel Grant,** $500**,** Stony Brook University
2018	**IDPAS Conference Travel Award,** $300, Stony Brook University

2016	**NSF AGEP Conference Travel Award**, $600, Stony Brook University
2016	**Turner Conference Travel Award**, $600, Stony Brook University
2015	**Turner Summer Research Grant,** $3,500, Stony Brook University
2014	**NSF AGEP Conference Travel Award,** $500, Stony Brook University
2014	**Turner Conference Travel Award**, $1200, Stony Brook University
2014	**IDPAS Research Grant,** $500, Stony Brook University
2013	**Turner Conference Travel Award**, $550, Stony Brook University

PROFESSIONAL SERVICE

Ad-hoc Referee: Journal of Human Evolution; Science Advances; PLOS One

2018-2019	**PhD Admissions Committee,** Department of Anthropology, Stony Brook University
2017-2018	**Executive Committee,** Department of Anthropology, Stony Brook University
2014-2015	**Masters Admissions Committee**, Department of Anthropology, Stony Brook University
2016	**Teaching Assistant Committee,** Department of Anthropology, Stony Brook University

COMMUNITY OUTREACH

2016	**STEP Anatomy Course.** Instructor for cadaver-based anatomy introduction course to historically underrepresented and economically disadvantaged high school students.
2015-2016	**Center for Inclusive Education Mentor** Mentor for junior graduate students in the Center for Inclusive Education Community of Student Mentors program, Stony Brook University.

SUPERVISED UNDERGRADUATE RESEARCH

2019	Devadiga R, Leach B, Wahid T. Does dental topography display sexual dimorphism? Undergraduate Research Symposium [Poster Presentation]. Supervised by D. DeVries, **C.S. Mongle** and J.G. Fleagle

2018	Mazza C, Kim C, Zhou L, Soumounou Y, Brassaragh D, Chen M. Methodological standardization for dental topographic analysis: The effect of scan resolution. Stony Brook Undergraduate Research Symposium [Poster Presentation]. Supervised by **C.S. Mongle** and F.E. Grine.

DEVELOPED SOFTWARE

Smaers JB, **Mongle CS**. Evomap: R package for evolutionary mapping of continuous traits. Github: JeroenSmaers/evomap. doi: 10.5281/zenodo.1253030.

TECHNICAL SKILLS

Programming Proficiency: R, BayesTraits, MrBayes, TNT, BEAST

Analytical: Phylogenetic comparative methods (e.g. OU models, macroevolutionary rate estimation), phylogenetic inference (Bayesian & parsimony), geometric morphometrics, multivariate statistics, Bayesian statistics

3D Visualization: Avizo, Geomagic

ADDITIONAL PROFESSIONAL PREPARATION

2017-2019	**Research Assistant,** Department of Anthropology, Stony Brook University
2016	**Research Assistant,** Department of Anatomy, Stony Brook University "Evolutionary Rates in Crocodylomorpha", PI Alan Turner
2015	**Scientists Teaching Science Pedagogy Course**, STEM Education Solutions
2010-2012	**Research Assistant**, Chaco Research Archive, University of Virginia
2011	**Research Assistant**, National Museum of Archeology, Portugal
2011	**Survey Crew**, National Park Service, Chaco Canyon, New Mexico

PROFESSIONAL MEMBERSHIPS

2012-Present American Association of Physical Anthropologists

POPULAR AND SCIENTIFIC MEDIA *(selected from 19 total)*

- **BBC** https://www.bbc.com/news/science-environment-45183651
- **SmithsonianMag** https://www.smithsonianmag.com/smart-news/researchers-suggest-big-toe-was-last-part-foot-evolve-180970012/

- **NY Post** https://nypost.com/2018/08/16/big-toes-were-the-last-piece-of-humans-to-evolve/
- **Futurity** https://www.futurity.org/bipedal-walking-primates-foot-bones-1839432/
- **NewsWise** http://www.newswise.com/articles/view/698961/?sc=rsla
- **ArsTechnica** https://arstechnica.com/science/2018/08/the-road-to-bipedalism-wasnt-straight-and-narrow/

PROFESSIONAL REFERENCES

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