

# Christina Bergey

Penn State University  
Department of Anthropology  
514 Carpenter Building  
University Park, PA 16802

Phone: (814) 863-3869  
Email: cxb585@psu.edu  
Homepage: www.christinabergey.com

## Education

- 2016-       **Post-doctoral Researcher**, Perry Lab, Penn State University  
2015-2016 **Post-doctoral Researcher**, Besansky Lab, University of Notre Dame  
2009-2015 **Ph.D.** Physical Anthropology, New York University  
2011       **M.A.** Physical Anthropology, New York University  
2005-2009 **B.A.** Anthropology, New York University

## Publications

- Lukindu, M., **Bergey, C. M.**, Wiltshire, R. M., Small, S., Bourke, B., Kayondo, J. K., and Besansky, N. J. (Submitted). Spatio-temporal genetic structure of *Anopheles gambiae* in the Northwestern Lake Victoria Basin, Uganda: implications for genetic control trials in malaria endemic regions.
- Jolly, C. J., Bergman, T. J., **Bergey, C. M.**, Mann, J. J., and Phillips-Conroy, J. E. (Submitted). Species-specific male mating strategies match CSF monoamine metabolite levels in wild hybrid baboons.
- Rogers, J. *et al* (Submitted). The comparative genomics, epigenomics and complex population history of *Papio* baboons.
- 2018       Chiou, K. L.\* and **Bergey, C. M.\*** (2018). Methylation-based enrichment facilitates low-cost, noninvasive genomic scale sequencing of populations from feces. **\*Contributed equally.** *Scientific Reports*, 8(1975). [Preprint available]
- 2017       Miles, A. *et al* (2017). Genetic diversity of the African malaria vector *Anopheles gambiae*. *Nature*, 552, 96-100
- 2016       **Bergey, C. M.**, Phillips-Conroy, J. E., Disotell, T. R., and Jolly, C. J. (2016). Dopamine pathway is highly diverged in primate species that differ markedly in social behavior. *Proceedings of the National Academy of Sciences*, 113(22):6178–6181
- 2015       Burrell, A. S., Disotell, T. R., and **Bergey, C. M.** (2015). The use of museum specimens with high-throughput DNA sequencers. *Journal of Human Evolution*, 79:35–44

- 2014 Pozzi, L., **Bergey, C. M.**, and Burrell, A. S. (2014). The use (and misuse) of phylogenetic trees in comparative behavioral analyses. *International Journal of Primatology*, 35(1):32–54
- 2013 **Bergey, C. M.**, Watkins, A. M., and Arora, P. S. (2013). HippDB: a database of readily targeted helical protein-protein interactions. *Bioinformatics*, 29(21):2806–2807
- Bergey, C. M.**, Pozzi, L., Disotell, T. R., and Burrell, A. S. (2013). A new method for genome-wide marker development and genotyping holds great promise for molecular primatology. *International Journal of Primatology*, 34(2):303–314
- 2012 Pickett, S. B., **Bergey, C. M.**, and Di Fiore, A. (2012). A metagenomic study of primate insect diet diversity. *American Journal of Primatology*, 74(7):622–631
- 2011 **Bergey, C. M.** (2011). AluHunter: a database of potentially polymorphic Alu insertions for use in primate phylogeny and population genetics. *Bioinformatics*, 27(20):2924–2925
- Jolly, C. J., Burrell, A. S., Phillips-Conroy, J. E., **Bergey, C. M.**, and Rogers, J. (2011). Kinda baboons (*Papio kindae*) and grayfoot chacma baboons (*P. ursinus griseipes*) hybridize in the Kafue river valley, Zambia. *American Journal of Primatology*, 73(3):291–303
- 2010 Hodgson, J. A., **Bergey, C. M.**, and Disotell, T. R. (2010). Neandertal genome: the ins and outs of African genetic diversity. *Current Biology*, 20(12):R517–519

## Abstracts

- 2017 **Bergey, C. M.**, Burrell, A. S., and Tosi, A. J. (2017). Evidence of frequent hybridization in guenons (tribe Cercopithecini) from phylogeny with genome-wide markers. *American Journal of Physical Anthropology*, 162(Suppl. 64):119
- Tosi, A. J., **Bergey, C. M.**, and Burrell, A. S. (2017). Ancient hybridization between *Papio* and *Theropithecus* detected at a non-coding region of the X-chromosome. *American Journal of Physical Anthropology*, 162(Suppl. 64):384
- White, J. D., Zaidi, A. A., **Bergey, C. M.**, Gonzalez-Zarzar, T., Claes, P., and Shriver, M. D. (2017). Deflating the Good Genes Hypothesis: Asymmetry may not be an honest indicator of genetic quality in humans. *American Journal of Physical Anthropology*, 162(Suppl. 64):408
- 2016 **Bergey, C. M.**, Phillips-Conroy, J. E., Disotell, T. R., and Jolly, C. J. (2016). Neurophysiological differences between hamadryas and anubis baboons are maintained by natural selection. In *American Journal of Physical Anthropology*, volume 159, pages 92–93

- 2015 **Bergey, C. M.** (2015). An efficient novel technique for genotyping MHC-DRB exon 2 in primates. (Abstract). *American Journal of Physical Anthropology*, 156(Suppl. 60):84
- Burrell, A. S., Disotell, T. R., Haueisen, S., and **Bergey, C. M.** (2015). High-throughput restriction site associated DNA sequencing (RAD-Seq) for genomic studies of primates using museum specimens. (Abstract). *American Journal of Physical Anthropology*, 156(Suppl. 60):96
- Haueisen, S., **Bergey, C. M.**, Disotell, T. R., and Burrell, A. S. (2015). The impact of past climate cycles on the paleodemography of East African ungulates as inferred from genomic RAD-Seq data. (Abstract). *American Journal of Physical Anthropology*, 156(Suppl. 60):161
- 2014 **Bergey, C. M.**, Phillips-Conroy, J. E., Disotell, T. R., and Jolly, C. J. (2014). Hybrid zone genomics: The structure of a baboon contact zone inferred from RAD tags. (Abstract). *American Journal of Physical Anthropology*, 153(Suppl. 58):76–77
- Matthews, L. C., Le, M. D., López, E. H., **Bergey, C. M.**, Sterling, E. J., and Blair, M. E. (2014). Species identification and evolutionary history of slow lorises (genus *Nycticebus*) as inferred from nuclear introns. (Abstract). *American Journal of Physical Anthropology*, 153(Suppl. 58):178–179
- 2013 Burrell, A. S., Jolly, C. J., **Bergey, C. M.**, Phillips-Conroy, J. E., Rogers, J., and Disotell, T. R. (2013). Kinda baboons in phylogenetic and paleogeographic perspective. (Abstract). *American Journal of Physical Anthropology*, 150(Suppl. 56):74
- 2012 **Bergey, C. M.** and Raaum, R. L. (2012). A test of cross-species exome sequencing in the rhesus macaque (*Macaca mulatta*). (Abstract). *American Journal of Physical Anthropology*, 147(Suppl. 54):97
- 2010 **Bergey, C. M.** (2010). AluHunter: A new computer program for large-scale identification of Alu-elements for use in primate phylogeny. (Abstract). *American Journal of Physical Anthropology*, 141(Suppl. 50):66
- Canedo, A. P., Burrell, A. S., Jagoda, E., **Bergey, C. M.**, Tosi, A. J., and Disotell, T. R. (2010). Phylogenetic relationships of the mangabeys inferred from analyses of multiple independent loci. (Abstract). *American Journal of Physical Anthropology*, 141(Suppl. 50):76
- Jolly, C. J., Phillips-Conroy, J. E., Burrell, A. S., **Bergey, C. M.**, Larney, E., and Disotell, T. R. (2010). The circle is unbroken: hybridization occurs between Kinda and chacma baboons in the Kafue Valley, Zambia. (Abstract). *American Journal of Physical Anthropology*, 141(Suppl. 50):136

- 2009 **Bergey, C. M.**, Jolly, C. J., Phillips-Conroy, J. E., Burrell, A. S., and Disotell, T. R. (2009). Mitochondrial population structure of a baboon contact zone. (Abstract). *American Journal of Physical Anthropology*, Suppl. 48(138):89
- 2008 **Bergey, C. M.** and Patel, E. R. (2008). A Preliminary Vocal Repertoire of the Greater Bamboo Lemur (*Prolemur simus*): Classification and Contexts. *Nexus*, 1(1):69–84

## Unpublished Conference Presentations

- 2017 **Bergey, C. M.**, Lukindu, M., Wiltshire, R. M., Kayondo, J., and Besansky, N. J. Structure of selected variation in *Anopheles gambiae* on Lake Victoria islands and implications for genetic control field trials. 66th Annual Meeting of the American Society of Tropical Medicine and Hygiene. Baltimore, MD.
- Lukindu, M., **Bergey, C. M.**, Kayondo, J., Wiltshire, R. M., and Besansky, N. J. Spatio-temporal genetic structure of *Anopheles gambiae* in the Northwestern Lake Victoria Basin, Uganda; implications for genetic control trials in malaria endemic regions. 66th Annual Meeting of the American Society of Tropical Medicine and Hygiene. Baltimore, MD.
- 2016 **Bergey, C. M.**, Phillips-Conroy, J. E., Disotell, T. R., and Jolly, C. J. Serotonin-related genes and pathways display outlier patterns of introgression in a baboon hybrid zone. XXVI Congress of the International Primatological Society. Chicago, IL.
- Bergey, C. M.** and Chiou, K. L. An inexpensive methylation-based enrichment methods enables genomic-scale population-level genotypes of animals from their feces. XXVI Congress of the International Primatological Society. Chicago, IL.
- Burrell, A. S., Disotell, T. R., and **Bergey, C. M.**. Patterns of past admixture in *Papio* inferred from RAD-seq data. XXVI Congress of the International Primatological Society. Chicago, IL.
- 2015 Burrell, A. S., Disotell, T. R., Hauelsen, S., and **Bergey, C. M.** Using museum specimens for genomic analyses of primates. Nor'Eastern Primate Ecology, Evolution, and Biology Group. New Brunswik, NJ.
- 2014 Burrell, A. S., Disotell, T. R., Jolly, C. J., and **Bergey C. M.** A phylogenomic approach to understanding the diversification of common baboons. XXV Congress of the International Primatological Society. Hanoi, Vietnam.

## Current and Completed Grants

**NIH F32 NRSA Postdoctoral Fellowship** for “Functional genomics of growth hormone response in a natural human model for short stature with comparisons to other populations and species” (1 F32 GM125228-01A1) - (2017-2019).

**NSF Senior Research Award** for “The evolutionary mechanics of hybridization across a primate radiation: a case study of the Cercopithecini” (BCS1717188) - co-PI with Anthony J. Tosi and Andrew S. Burrell (2017-2020).

**NSF Senior Research Award** for “The evolution of the anthropoid genome” (BCS1640500) - co-PI with Andrew S. Burrell and Todd R. Disotell - (2017-2019).

**NGS Discovery Project Grand Prize, NGX Bio** for whole genome sequencing from noninvasive samples - with Kenneth L. Chiou - \$5,000 (2016).

**Lewis and Clark Fund for Exploration and Field Research Grant** for study of tsetse fly population genomics in Zambia - \$4,400 (2015).

**Wenner-Gren Foundation Dissertation Fieldwork Grant** for study of introgression and demography of baboons in Awash, Ethiopia - \$7,996 (2013).

**NSF Doctoral Dissertation Improvement Grant** for study of MHC introgression across the baboon hybrid zone in Awash, Ethiopia - \$31,226 (2013).

**NYU Sokol Travel / Research Award** to survey and sample primates in a proposed national park in the TL2 region of the Democratic Republic of the Congo - \$3,000 (2012).

**Explorer’s Club Exploration Fund Grant** for travel to trap and sample Kinda baboons (*Papio kindae*) in Kafue National Park, Zambia - \$2,500 (2011).

**NSF GRFP Travel Grant** for Zambia baboon trip (above) - \$1,000 (2011).

**NSF Graduate Research Fellowship** (2009-2012).

**NYU MacCracken Fellowship** (2012-2015).

**NYU Dean’s Undergraduate Research Fund Grant** for travel to meeting of the American Association of Physical Anthropologists to present hybrid baboon research - \$595 (2008).

**NYU Dean’s Undergraduate Research Fund Grant** for expenses relating to acoustic study of greater bamboo lemurs (*Prolemur simus*) in Madagascar - \$2,000 (2008).

**NSF Research Experience for Undergraduates Grant** for population genetic study of blue monkeys (*Cercopithecus mitis stuhlmanni*) - \$3,000 (2007).

**NYU Dean’s Undergraduate Research Fund Grant** for blue monkey study (above) - \$975 (2007).

## Peer Reviews Completed

Nineteen peer reviews contributed for the following journals: *American Journal of Physical Anthropology*, *American Journal of Primatology*, *Axios Review*, *Bioinformatics*, *Folia Primatologica*, *Frontiers in Zoology*, and *PLOS ONE*.

## Teaching Experience

Summer 2017: **Curriculum developer, Instructor** for two week RNA-seq workshop. Taught methods for transcriptome analysis to students from Universidad Peruana Cayetano Heredia in Lima, Peru.

2014-2015: **Curriculum developer** for “BridgeUp: STEM” at the American Museum of Natural History. Two courses for female low-income New York City youth to explore computer science and bioinformatics using the museum’s scientific datasets.

2009-2012: **Curriculum developer, Instructor** for “Harlem Children’s Society Bioinformatics Class.” Summer-long course on bioinformatics computer programming for New York City public high school students.

Spring 2012: **Course assistant** for “Topical Seminar: Phylogenetic Methods.” (Prof. Todd Disotell) Department of Anthropology, New York University.

Fall 2011: **Teaching assistant** for “Human Evolution.” (Prof. Susan Antón) Department of Anthropology, New York University.

## Field Experience

Summer 2015: Mosquito (*Anopheles gambiae sensu lato*) sampling for whole genome sequencing. Ssese Islands, Uganda.

Summer 2012: Primate surveying and sampling in a proposed national park. TL2 region of the Democratic Republic of Congo.

Summer 2011: Biological sampling of the Kinda baboon. Kafue National Park, Zambia.

Fall 2007 & Summer 2008: Research into acoustic communication of the critically endangered greater bamboo lemur. Ranomafana National Park, Madagascar.