

# DR. ALEXIS PAIGE SULLIVAN

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## CURRICULUM VITAE

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## EDUCATION

- 2014-2020 Ph.D. – Biology, Eberly College of Science, Pennsylvania State University  
Advisor: George H. Perry
- 2010-2014 B.S. – Biology, Chemistry Minor, School of Natural Sciences and Mathematics, Stockton University – Advisors: Guy F. Barbato, Ron S. Hutchison

## RESEARCH AND FIELD EXPERIENCE

### **NEW YORK UNIVERSITY (NYU) LANGONE HEALTH, GROSSMAN SCHOOL OF MEDICINE**

Mar 2021-Present RAtional Microbiome Engineering (RAMEN) Labs Supervisor  
PI: Jonas Schluter – see Publications #9-10

### **PENNSYLVANIA STATE UNIVERSITY**

- Aug-Sept 2017 Dissertation Field Work, Smithsonian Tropical Research Institute, Bocas del Toro, Panama  
PI: George H. Perry, Co-PI: Aaron O’Dea – see Publication #6
- July-Aug 2016 Dissertation Field Work, Beza Mahafaly Special Reserve, Madagascar  
PI: George H. Perry – see Publication #8
- Jan 2016-Dec 2020 Anthropological Genomics Modern Lab Space Manager and Safety Officer  
PI: George H. Perry
- Aug 2014-Dec 2020 Graduate Research Assistant (’14 – ’16) and Research Fellow (’16 – ’20)  
PI: George H. Perry – see Publications #1-5, 7, 11

### **STOCKTON UNIVERSITY**

- Aug 2012-May 2014 Research Assistant, Biology Department  
PI: Guy Barbato
- Jan 2012-May 2014 Laboratory Preparation Assistant, School of Natural Sciences & Mathematics  
Advisor: Jim Brownhill

### **NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA)**

- Summer 2012 Bradford E. Brown Internship, James J. Howard Marine Sciences Lab  
PIs: Matthew Poach, Beth Phelan, and Chris Chambers
- Summer 2010/11 Field Work Volunteer – measuring distribution, expansion rates, and impact of invasive sand sedge, *Carex kobomugi*  
PI: Louise Wootton, Advisor: Liza Baskin

### **MARINE ACADEMY OF SCIENCE AND TECHNOLOGY HIGH SCHOOL**

- May 2009-Apr 2010 Senior Research Project – population assessment of marsh bioindicators in comparison to human activities  
Advisor: Liza Baskin

## TEACHING, TRAINING, AND MENTORSHIP EXPERIENCE

- Spring 2018 Undergraduate Research Volunteers: Catherine M. Roberts, Katie A. Hickmann  
Anthropological Genomics Modern Wet Lab: safety and equipment, sterile techniques, subsampling procedures, DNA extraction and library preparation
- Fall 2015/16/20 Graduate Teaching Assistant, Department of Biology, PSU  
BIOL 110 – Biology: Basic Concepts and Biodiversity (2 lab sections/semester)

## PUBLICATIONS

- 2023** 11. Assis BA\*, **Sullivan AP\***, Marciniak S, Bergey CM, Garcia V, Szpiech ZA, Langkilde T, Perry GH. 2023. Genomic signatures of adaptation in native lizards following the anthropogenic introduction of fire ants. *In preparation*. \*Authors contributed equally
- 2022** 10. Hussey GA, Zhang C, **Sullivan AP**, Schluter J. 2022. The MTIST platform: A microbiome time series inference standardized test simulation, dataset, and scoring systems. *bioRxiv*. doi: 10.1101/2022.10.18.512783.
9. Venzon M, Bernard-Raichon L, Klein J, Axelrad JE, Zhang C, Hussey GA, **Sullivan AP**, Cassanovas-Massana A, Noval MG, Valero-Jimenez AM, Gago J, Putzel G, Pironti A, Wilder E, Yale IMPACT Research Team, Thorpe LE, Littman DR, Dittmen M, Stapleford KA, Shopsin B, Torres VJ, Ko A, Iwasaki A, Cadwell K, Schluter J. 2022. Gut microbiome dysbiosis during COVID-19 is associated with increased risk for bacteremia and microbial translocation. *Nature Communications*. doi: 10.1038/s41467-022-33395-6.
8. **Sullivan AP**, Godfrey LR, Lawler RR, Randrianatoandro H, Eccles L, Culleton B, Ryan TM, Perry GH. 2022. Potential evolutionary body size reduction in a Malagasy primate (*Propithecus verreauxi*) in response to human size-selective hunting pressure. *American Journal of Biological Anthropology*. doi: 10.1002/ajpa.24470.
- 2021** 7. Westfall AK, Telemeco RS, Grizante MB, Waits DS, Clark AD, Simpson DY, Klabacka RL, **Sullivan AP**, Perry GH, Sears MW, Cox CL, Cox RM, Gifford ME, John-Alder HB, Langkilde T, Angilletta Jr. MJ, Leaché AD, Tollis M, Kusumi K, Schwartz TS. 2021. A chromosome-level genome assembly for the Eastern Fence Lizard (*Sceloporus undulatus*), a reptile model for physiological and evolutionary ecology. *GigaScience*. doi: 10.1093/gigascience/giab006.
6. **Sullivan AP**, Marciniak S, O’Dea A, Wake TA, Perry GH. 2021. Modern, archaeological, and paleontological DNA analysis of a human-harvest marine gastropod (*Strombus pugilis*) from Caribbean Panama. *Molecular Ecology Resources*. doi: 10.1111/1755-0998.13361.
- 2018** 5. Aylward ML, **Sullivan AP**, Perry GH, Johnson SE, Louis EE. 2018. An environmental DNA sampling method for aye-ayes from their feeding traces. *Ecology and Evolution* 00: 1-23. doi: 10.1002/ece3.4341.
- 2017** 4. **Sullivan AP**, Bird DW, Perry GH. 2017. Human behavior as a long-term ecological driver of non-human evolution. *Nature Ecology and Evolution* 1: 0065. doi: 10.1038/s41559-016-0065.
3. **Sullivan AP**, de Manuel M, Marques-Bonet T, Perry GH. 2017. An evolutionary medicine perspective on Neandertal extinction. *Journal of Human Evolution* 108: 62-71. doi: 10.1016/j.jhevol.2017.03.004.

2. Vukelic A, Cohen J, **Sullivan AP**, Perry GH. 2017. Extending genome-wide association study (GWAS) results to test classic anthropological hypotheses: Human third molar agenesis and the 'probable mutation effect'. *Human Biology* 89: 157-169. doi: 10.13110/humanbiology.89.2.03.
- 2016** 1. Hubbard TD, Murray IA, Bisson WH, **Sullivan AP**, Sebastian A, Perry GH, Jablonski NG, Perdew GH. 2016. Divergent Ah receptor ligand selectivity during hominin evolution. *Molecular Biology and Evolution* 33(10): 2648-2658. doi: 10.1093/molbev/msw143.

## OPEN ACCESS DATASETS

- 2019 MorphoSource Project: Sullivan/Perry Lab *Propithecus verreauxi* Surface Scans  
[https://www.morphosource.org/Detail/ProjectDetail/Show/project\\_id/698](https://www.morphosource.org/Detail/ProjectDetail/Show/project_id/698)  
 Repository for high-resolution 3D surface scans of modern and subfossil osteological *P. verreauxi* (Verreaux's sifaka) elements. Collected and post-processed by AP Sullivan.
- 2017 MorphoSource Project: Perry Lab Modern and Subfossil Lemur Surface Scans  
[https://www.morphosource.org/Detail/ProjectDetail/Show/project\\_id/347](https://www.morphosource.org/Detail/ProjectDetail/Show/project_id/347)  
 Repository for high-resolution 3D surface scans of modern and subfossil osteological elements collected from both extinct and extant lemur species (University of Antananarivo, Madagascar). Collected by AP Sullivan, H Randrianatoandro, and K Cioffi. Post-processed by AP Sullivan.

## INVITED SEMINARS

- Aug 2019 Human-induced evolution in lemurs, lizards, and l'escargot. Fall 2019 Seminar Series. University Park, Pennsylvania, USA. Pennsylvania State Biology Department.
- Sept 2017 Human behavior as a long-term ecological driver of non-human evolution. Tupper Seminar. Ancón, Panama. Smithsonian Tropical Research Institute.

## SELECTED CONFERENCE AND WORKSHOP PRESENTATIONS

- May 2022 Expanding ecological and evolutionary studies with ancient DNA. The Mansion at Glen Cove, Glen Cove, New York. Microbiology Department Retreat. Poster Session.
- June 2019 Genomic analysis of eastern fence lizard (*Sceloporus undulatus*) morphological adaptation to human-mediated fire ant invasion. Education/outreach 2 Symposium. Providence, Rhode Island. Evolution Meeting. Poster Session.
- Aug 2018 Modern, archaeological, and paleontological DNA analysis of a marine gastropod from Caribbean Panama. The Evolution of Complex Traits and Polygenic Adaptation: Where Do We Stand? Symposium. Montpellier, France. Evolution Meeting. Poster Session.
- Oct 2017 Evolutionary outcomes of human size-selective harvesting on a marine mollusc: Ancient and modern DNA analysis of Panama fighting conch. Catalyzing Interdisciplinary Research at the Frontiers of Human Ecological Dynamics. The Stuckeman School, Pennsylvania State University, University Park, PA. Center for Human Ecology. Lightning talk.
- Apr 2017 Are jumping tree animals getting smaller over time because humans catch and eat the larger ones? Invited symposium: Up Goer Five PhysAnth Edition: Communicate Your

- Science Using English's Ten Hundred Most Common Words. New Orleans, LA. Annual meeting of the American Association of Physical Anthropologists. Podium presentation.
- May 2016 Effects of size-selective hunting pressures on a primate species. Taos, NM. Human Ecological Dynamics Workshop. Podium presentation.
- Apr 2016 Ancient genetic diversity and an evolutionary medicine perspective on Neandertal extinction. Invited symposium: Joint AAPA-AAAG (American Association of Anthropological Genetics) Symposium. Atlanta, GA. Annual meeting of the American Association of Physical Anthropologists. Podium presentation.
- Apr 2014 A novel purification strategy to identify anti-adhesion molecules from *Vaccinium macrocarpon*. Stockton University, Galloway, NJ. NAMS Research Symposium. Poster Session.
- Apr 2013 A study of recombinant frequencies in *Sordaria fimicola* with mutant spore types. Stockton University, Galloway, NJ. NAMS Research Symposium. Poster Session.

## **OUTREACH, LEADERSHIP, SERVICE**

### **NYU LANGONE HEALTH**

Fall 2018-Present Skype A Scientist (>750 students)

### **PENNSYLVANIA STATE UNIVERSITY**

Fall 2019-2020 Letters to a Pre-Scientist pen pal

Jan 2019 Envision: STEM Career Day for Young Women Volunteer

Nov 2018-2019 Social Media and Sci Comm Panel Participant – Eberly College of Science Outreach Class (SC 497)

Apr 2017 GWIS "Think Like a Scientist" Girl Scout Workshop Volunteer

May 2015-2019 Annual Pennsylvania Junior Academy of Science State Competition Judge

July 2015 Arts Fest Kid's Day GWIS Demos Volunteer Activity Leader

### **STOCKTON UNIVERSITY**

Jan 2011-2014 Martin Luther King Jr, Days of Service Volunteer

Sep 2011-2013 Fall Day of Service Volunteer

Nov 2011-May 2014 Day of Leadership Participant

Aug 2011-May 2012 Chair of Student Development for the Student Athlete Advisory Committee

Aug 2011-May 2014 Stockton University Resident Assistant

Oct 2010-May 2014 Residence Hall Association Member

### **MARINE ACADEMY OF SCIENCE AND TECHNOLOGY HIGH SCHOOL**

Summer 2009 JROTC Area 4 Leadership Academy and Sail Training

Sep 2006-June 2010 Naval Junior Reserve Officer Training Corps (NJROTC, Lieutenant Commander)

## FELLOWSHIPS, HONORS, AND AWARDS

### **PENNSYLVANIA STATE UNIVERSITY**

- June 2018 Jeanette Ritter Mohnkern Graduate Student Scholarship in Biology - \$4,395
- Fall 2017 Smithsonian Tropical Research Institute Short Term Fellowship – \$2,000  
Evolutionary outcomes of size-selective harvesting pressure on a marine mollusc: Ancient and modern DNA analysis of *Strombus pugilis* in Bocas del Toro.
- May 2016-May 2019 National Science Foundation Graduate Research Fellowship Program (NSF GRFP) – \$34,000/year  
Evolutionary outcomes of human size-selective hunting pressures in an endangered primate from Madagascar.
- Sept 2014 Homer F. Braddock Award - \$6,000

### **STOCKTON UNIVERSITY**

- Apr 2014 3<sup>rd</sup> Place NAMS Research Poster Symposium
- May 2013 Resident Assistant (RA) of the Year
- Apr 2013 2<sup>nd</sup> Place NAMS Research Poster Symposium
- Aug 2010-May 2014 Stockton Scholarship – \$2,000/year

## PROFESSIONAL MEMBERSHIPS

- Aug 2019-Aug 2020 American Association for the Advancement of Science (AAAS)
- Mar 2018-Mar 2020 Society for the Study of Evolution
- May 2015-Dec 2020 Graduate Women in Science (GWIS)
- Sept 2015-Apr 2017 American Association of Physical Anthropologists

Last updated: September 19, 2023