

Elizabeth Tapanes, Ph.D.

Biologist

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Professional Experience

National Science Foundation Postdoctoral Fellow

08/2021 – present

La Jolla, CA

University of California, San Diego

Supervisor: Dr. Diana Rennison

Description of Duties:

- Analyze large and complex datasets. Specifically, perform data analysis on the genomics and ecology of adaptation of stickleback fish, including genetic mapping of traits, linear modeling, and estimating adaptive capacity.
- Supervise, train, and organize the work of students.
- Communicate research findings. Prepare grants, publications, and oral presentations of results.
- Work and collaborate on an interdisciplinary team (i.e., ecologists, geneticists, and microbiologists).
- Manage biological sample databases and long-term sample curation.

Key Accomplishments:

- Secured \$138,000 in research funding from the National Science Foundation.
- Performed data analysis on three large and complex datasets, all set up with reproducible workflows and thousands (>3,000) lines of code in total.
- Supervised the work of one undergraduate and one masters students to provide feedback, guide data analysis, and visualization, and collaborate on written manuscripts. I helped them devise reproducible data workflows. With this system, I would monitor their performance, fix and catch coding errors, and ensure high-quality code readability and analysis. Thereby, I increased the team's efficacy by 30% and minimized coding errors that would be previously difficult to track. Ensured timely performance and quality work for those I supervised.

Affiliated Research Scientist

09/2018 – present

Remote

University of Utah

Supervisor: Dr. Timothy Webster

Description of Duties:

- Analyze complex datasets. Specifically, perform data analysis on positive selection and population genetics on a group of endangered primates using Snakemake and Python pipelines.
- Collaboratively analyze and update group-based projects on an interdisciplinary team.
- Participate in weekly group meetings with other team members. Discuss genomics, open research practices, data visualization, reproducible data workflows, and critiques of analyses as they pertain to evolution and ecology.

Key Accomplishments:

- Built 1000+ lines of Snakemake and Python code for genomic analyses in collaboration with my supervisor.
- Learned to use various genomic methods, as well as programming tools to analyze data and create summary statistics to aid in data visualization.

Graduate Researcher

08/2016 – 05/2021

Washington, D.C.

The George Washington University

Supervisor: Dr. Brenda Bradley

Description of Duties:

- Perform analysis and modeling on evolutionary and ecological data sets to understand trait evolution in endangered primates (i.e., chimpanzees, siakas) and their habitats.
- Train and mentor undergraduate students in wet-lab genetics work (i.e., PCRs, gel electrophoresis), data curation, data analyses, project development, and grant applications.
- Collaborate with an interdisciplinary team to analyze data, create visualizations, and communicate data/results to other scientists, funding agencies, and the public.
- Communicate research findings via written reports (i.e., peer-reviewed manuscripts) and oral reports at conferences and to other colleagues at the university.

Key Accomplishments:

- Acquisition of ≈\$145,000 in research funding to study endangered mammals.
- Acquired expertise in project development and management spanning the ecology, demography, genetics, climate/ecological monitoring, and trait evolution of endangered animals.
- Led team of seven diverse researchers with distinct expertise (i.e., genomics, fieldwork, macroevolution, GIS) through stages of funding acquisition, biological sample acquisition/transport/storage, data analyses and visualization, creation of reproducible data workflows, and publication of manuscripts.
- Collaborated with experts in other organizations such as international NGOs, and federal government agencies to obtain work permits and establish ongoing scientific collaborations.
- Acquired training in mark-recapture techniques for threatened species.
- Supervised three undergraduate students and one masters student in project development, data analysis, and visualization. Organized their work and provided them with work

standards and job priorities, including what types of visualizations to produce and what analysis to conduct.

- Established one Memorandum of Understanding (MOU) across three institutions for samples from Critically Endangered mammals.
- Acquired experience working in protected and unprotected forests alongside expert local scientists and communities.
- Used expert written communication skills to communicate research findings. Produced three peer-reviewed articles, one academic book chapter (see publications [7, 6, 5, 4]), and one blog entry in my department for public consumption.
- Used expert oral communication skills to communicate research findings via one virtual science outreach event and twelve in-person science outreach events. Gave five oral and two poster presentations at national and international conferences, and over ten presentations within my department.
- Successfully acquired one US Fish & Wildlife permit to import biological samples for CITES regulated mammals listed as Critically Endangered, as well as one export permit from the country of origin (Madagascar).

Graduate Researcher

08/2013 – 05/2016

Boca Raton, FL

Florida Atlantic University

Supervisor: Dr. Kate Detwiler

Description of Duties:

- Project development, data analysis, and general research on the consequences of hybridization in wild animals.
- Project management in the laboratory and the field. Specifically, lead the collection, storage, and transportation of biological samples from Tanzania to the USA.
- Communicate findings from data analysis using written and oral means to various community members, including other scientists and the public.
- Collaborate with an interdisciplinary and diverse team of students and researchers at other academic institutions within and outside the US.

Key Accomplishments:

- Acquired ≈\$8,000 in research funding.
- Performed research and data analysis on data such as behavioral data and morphology data. Also translated raw observational data from Swahili to English before analysis.
- Communicated observed research findings via one published manuscript ([2]), and two podium presentations. Also presented research results to a team of researchers in Tanzania at the end of my five-month field season.
- Supervised and managed a field team in Tanzania for five months, which included three international field assistants who were not primarily English speaking. Also led capacity-building efforts and taught the basics in Microsoft Word, Email, Microsoft Excel, biological sample collection and curation, habitat monitoring, population surveying, and photography for research.

- Organized the team's work (four people total) while in Tanzania, evaluated the ongoing performance, and established project deliverables, which increased the field team's productivity by 50%.

Research Assistant

08/2012 – 08/2013

Miami, FL

Biomechanics Lab at Florida International University

Supervisor: Dr. Kristin Bishop

Description of Duties:

- Perform data collection and analysis on video data. Precisely, extract data for biomechanics studies from videos of animals (i.e., lemurs, cats, dogs) walking horizontally or jumping vertically.
- Work collaboratively on an interdisciplinary team.

Key Accomplishments:

- Analyzed large and complex data, including 100+ videos of lemurs, cats, and dogs to assess the kinematics of walking and jumping.
- Developed a new project to assess walking kinematics in owl monkeys, using camera trap data, to understand how infant carrying affects the gait of expectant and recent mothers.

Research Assistant

09/2006 – 08/2013

Homestead, FL

DuMond Conservancy for Primates and Tropical Forests

Supervisor: Dr. Sian Evans

Description of Duties:

- Collect and analyze data, such as video (camera trap data) and excel tabulated files containing detailed behavioral data.
- Collaborate with a diverse interdisciplinary group of undergraduate, graduate, and post-doctoral scientists to monitor animals and maximize research productivity.

Key Accomplishments:

- Analyzed data and communicated the results in two publications [1, 3] and three conference presentations.
- Led breeding program efforts for Ma's Night Monkey as outlined in the Species Survival Plan (SSP) set forth by the American Association of Zoos and Aquariums. For this, I developed Standard Operating Procedures (SOP) for monitoring animals' health and behavior before, during, and after a pairing or translocation. Led to increase of 30% in captive owl monkey population.
- Qualitatively monitored and evaluated pairing recommendations, balancing genetic data with behavioral data and health concerns for individuals in our managed population. Co- led complex decision-making on when, how, and where to conduct pairings and transfers to other accredited institutions.

Education

Ph.D., Human Paleobiology, The George Washington University

Washington, D.C., 20052; *Awarded*: 05/16/2021

Dissertation: “The impact of ecology, demography, and genetics on primate pelage”

M.Phil., Human Paleobiology, The George Washington University

Washington, D.C., 20052; *Awarded*: 01/10/2020

Thesis: “Hair greying in wild populations of chimpanzees”

M.A., Anthropology, Florida Atlantic University

Boca Raton, FL, 33431; *Awarded*: 05/06/2016

Thesis: “Coat color variation between red-tailed monkeys (*Cercopithecus ascanius*), blue monkeys (*C. mitis*), and hybrids (*C. ascanius* x *C. mitis*) in Gombe National Park, Tanzania

B.S., Biological Sciences, Florida International University

Miami, FL, 33199; *Awarded*: 12/08/2012

Senior Capstone Project: “Impacts of the Serengeti highway project on wildebeest migrations”

Honors & Awards (Total Received: > \$128,000)

2021	Best Student Presentation Award, American Association of Biological Anthropology (\$500)
2021	Best Student Presentation, Northeast Evolutionary Primatologists Conference (\$100)
2020	Provost Diversity Fellowship, The George Washington University (\$26,000)
2020	Summer Institute for Statistical Genetics Travel Scholarship, University of Washington (\$800)
2019	Provost Diversity Fellowship, The George Washington University (\$25,000)
2018	Provost Diversity Fellowship, The George Washington University (\$25,000)
2018	American Association of Anthropological Genetics Travel Award (\$1,000)
2017	Provost Diversity Fellowship, The George Washington University (\$25,000)
2016	Provost Diversity Fellowship, The George Washington University (\$25,000)

Research Grants (Total Received: > \$165,000)

2022	NSF Post-doctoral Fellowship in Biology (\$138,000; PI)
2019	Leakey Foundation Research Grant (\$15,000; PI)
2018	Lewis N. Cotlow Award, The George Washington University (\$1,800; PI)
2018	William Warren Graduate Research Grant, The George Washington University (\$800; PI)
2017	International Primatological Society Research Grant (\$1,500; PI).
2017	Lewis N. Cotlow Award, The George Washington University (\$1,800; PI).
2014	Technology Fee Grant, Florida Atlantic University (\$4,900; co-PI).
2015	Graduate Research and Inquiry Program Grant, Florida Atlantic University (\$480; PI).
2013	Sigma Xi Grants-in-Aid of Research (\$1,000; PI).

Skills & Certifications

Hard Skills:

- **Research:** Project development, data collection, database management, literature reviews
- **Statistical data analysis:** R programming, Python, Snakemake, Git, GitHub, Virtual Studio Code, Google Earth
- **Data visualization:** Photoshop, Adobe, Keynote, Powerpoint, Microsoft Suite

Soft Skills:

- **Written communication:** Scientific writing, grant writing, reports
- **Oral communication:** Presenting complex results to a variety of audiences
- **Relationship building & teamwork:** Collaborating on interdisciplinary and diverse teams
- **Leadership:** Strong ability to lead by consensus & by example
- **Management:** Expert ability to train and mentor others, problem solve, manage time, and delegate tasks
- **Social science:** Making arguments, questioning assumptions, critical evaluations, decision making
- **Collaboration with distinct stakeholders:** NGOs, academia, international governments
- **International work experience:** Tanzania, Madagascar

Language(s):

- Spanish (native/bilingual—read, write, speak)
- Swahili (elementary—speak)
- Malagasy (elementary—speak)

Certifications:

- Valid California driver's license

Field:

- Biological sample collection, mark-recapture of critically endangered mammals, population monitoring, GPS, navigating harsh terrain, bird & mammal identification, camera trapping, canoe/kayak, capacity building, capable of lifting/carrying 30 lbs.

Lab/Genomics:

- Wet-lab: DNA & RNA extractions, PCR, gel electrophoresis, Qubit, etc.
- Computational: GWAS, QTL mapping, bioinformatics (see Hard Skills)

Workshops and Training:

Data Science

- Machine Learning for Ecologists (Center for Wildlife Studies, November 2022)
- IBM Machine Learning with Python (Coursera, November 2022)
- Python Data Structures (Coursera, March 2020)
- Python for Everybody (Coursera, January 2020)

Natural Resource Management

- Structed Decision Making (The Wildlife Society, November 2022)

Genetics

- Population Genetics (University of Washington, SISG, June 2020)
- Quantitative Genetics (University of Washington, SISG, June 2020)
- Genetics of Endangered Populations (University of Washington, SISG, June 2020)
- *De Novo* Genome Assembly Workshop (American Society of Mammologists, 2019)
- Applied Genomics in Anthropological Research (American Association of Anthropological Genetics, 2018)
- Introduction to Genomics & Bioinformatics (University of Maryland, Institute for Genome Sciences, 2016)

Relevant Graduate-Level Coursework in the Life Sciences = 24 credits+

Credit-based courses: Methods in Molecular Anthropology (3 credits); Anthropological Genetics (3 credits); Topics in Behavioral Ecology (3 credits); Analytical Methods [using R] (3 credits); Color Evolution Readings (3 credits); Photographic Methods in Field Primatology (3 credits); Public Understanding of Science Internship (3 credits); Laboratory rotation in RNA-seq and Exome-seq in the lab of Dr. Anelia Horvath at The George Washington University (3 credits)

Relevant Undergraduate-Level Courses in the Life Sciences = 50 credits+

Credit based courses: General Biology I & associated laboratory (4 credits); General Biology II & laboratory (4 credits); Ecology (3 credits); Global Environment & Society (3 credits); Evolution (3 credits); Immunology (3 credits); Genetics & associated laboratory (4 credits); Cell Biology & associated laboratory (4 credits); Earth Ethics (3 credits); Conservation Biology (3 credits); Ecology of South Florida (3 credits); Animal Physiology (3 credits); Histology & associated laboratory (4 credits); Great Ape Conservation (3 credits); Primate Biology (3 credits)

Peer-Reviewed Manuscripts or Book Chapters

[#]Students supervised

7. **Tapanes, E.,** Kamilar, J.M., Nukala, M.[#], Irwin, M.T., & Bradley, B.J. (2022). Melanism in a wild sifaka population: Darker where cold and fragmented. *International Journal of Primatology*. Online first at: <https://doi.org/10.1007/s10764-022-00323-w>
6. **Tapanes, E.,** Jacobs, R.L., Harryman, I.[#], Louis Jr., E.E., Irwin, M.T., Kamilar, J.M., & Bradley, B.J. (2022). Hair phenotype diversity across Indriidae lemurs. *American Journal of Biological Anthropology*, 178(2): 257-272.
5. **Tapanes, E.,** J. M. Kamilar, & Bradley, B.J. (2021). Molecular and cellular Processes underlying hair pigmentation and growth in primate evolution. *In: Evolutionary Cell Processes in Primates: Genes, Skin, Energetics, Breathing, and Feeding; Volume II.* Pitirri, M.K., & Richtsmeier, J.T. (Eds.) CRC Press.

4. **Tapanes, E., T.,** Anestis, S., Kamilar, J.M., & Bradley, B.J. (2020). Does hair greying in chimpanzees provide a salient progressive cue of ageing? *PLOS ONE*, 15(7): e0235610.
3. Wolovich, C.K., **Tapanes, E.,** & Evans, S. (2017). Allogrooming in male-female pairs of captive owl monkeys (*Aotus nancymaae*). *Folia Primatologica*, 88(6), 483-496.
2. **Tapanes, E.,** Cords, M., & Detwiler, K.M. (2016). Predation on bats by *Cercopithecus* monkeys: Implications for zoonotic disease transmission. *EcoHealth*, 13(2), 405-409.
1. Jefferson, J.P., **Tapanes, E.,** & Evans, S. (2014). Owl monkeys (*Aotus* spp.) socially anoint in captivity. *Folia Primatologica*, 85(2), 119-134.

Manuscripts in Preparation

Tapanes, E., & Rennison, D.J. The genetic basis of divergent coloration in benthic-limnetic threespine stickleback.

Tsai, B. #, **Tapanes, E.,** & Rennison, D.J. Geographic distance and climatic similarity impacts divergence estimates in wild stickleback populations.

Conference Presentations (Published Abstracts or Materials) * podium

Tapanes, E.*, Lasisi, T., Kamilar, J.M., & Bradley, B.J. (2022). Genomics and cellular biology of primate pigmentation: Lessons from other taxa. Invited symposium—Integumentary Anthropology: Examining the Exterior. *American Journal of Biological Anthropology*. Virtual.

Tapanes, E.*, Jacobs, R.L., Harryman, I. #, Louis Jr., E.E., Irwin, M.T., Kamilar, J.M., & Bradley, B.J. (2021). Ecology and opsin variation underscore the evolution of hair phenotypes across Indriidae lemurs—implications for human evolution. *American Journal of Biological Anthropology* 174(S71). *Winner of the joint American Journal of Physical Anthropology & Journal of Human Evolution Best Student Presentation Award*. Virtual.

Tapanes, E., Irwin, M.T., Spriggs, A.N., Kamilar, J.M., & Bradley, B.J. (2017). Subtle sexual dichromatism and dimorphism detected in wild *Propithecus diadema*. *American Journal of Physical Anthropology*. 165(S64). Austin, Texas.

Bradley, B.J., Kamilar, J.M., Spriggs, A.N., **Tapanes, E.,** Wilhelm, B.C., & Walsh, S. (2017). Pigmentation in a comparative context: Factors shaping variation and convergence in primate pelage patterns. *American Journal of Physical Anthropology* 165(S64). New Orleans, LA.

Tapanes, E.*, & Evans, S. (2015). The significance of allogrooming to pair-bonded owl monkeys (*Aotus* spp.). *American Journal of Physical Anthropology* 160(S60). St. Louis, MO.

Jefferson, J.P., **Tapanes, E.**, & Evans, S. (2012). Owl monkeys (*Aotus* spp.) socially anoint. *American Journal of Primatology* 74(S1). Sacramento, CA.

Tapanes, E., Wolovich, C.K., & Evans, S. (2007). Leaping into the night: when owl monkeys (*Aotus* spp.) awake. *American Journal of Primatology* 72(S1).

Other Selected Conference Presentations

Tapanes, E.*, Kamilar, J.M., Nukala, M. #, Irwin, M.T., & Bradley, B.J. (2021). Ecological and social factors underlying pelage pigmentation in a wild sifaka (*Propithecus diadema*) population. *American Society of Naturalists*. Virtual.

Tapanes, E.*, Jacobs, R.L., Harryman, I. #, Louis Jr., E.E., Irwin, M.T., Kamilar, J.M., & Bradley, B.J. (2020). Ecology and opsin variation underscore the evolution of hair phenotypes across Indriidae lemurs – implications for human evolution. *Northeastern Evolutionary Primatologists*. Virtual.

Tapanes, E., Kamilar, J.M., Irwin, M.T., Mundy, N.I., & Bradley, B.J. (Accepted). Understanding convergent phenotypes in mammalian pelage: insights from natural primate populations. *Genetics Society of America*. Accepted. – *not presented due to COVID19*

Tapanes, E.*, Irwin, M.T., Kamilar, J.M., & Bradley, B.J. (2019). Evolution of pelage in a wild lemur population. *Northeastern Evolutionary Primatologists*. Amherst, MA.

Tapanes, E.*, Kamilar, J.M., & Bradley, B.J. (2019). Pigmentation changes are (sort of) related To ageing in chimpanzees. *American Society of Mammalogists*. Washington, DC.

Tapanes, E.*, & Detwiler, K.M. (2016). Phenotypic diversity and mating in Gombe National Park's *Cercopithecus* hybrid zone: implications for conservation. *International Primatological Society*. Chicago, IL.

Wolovich, C.K. *, **Tapanes, E.**, & Evans, S. (2016). Patterns of allogrooming in male-female pairs of captive owl monkeys (*Aotus nancymaae*). *International Primatological Society*. Chicago, IL.

Tapanes, E.*, & Detwiler, K.M. (2015). Testing methods for studying color objectively in wild arboreal primates. *South Florida Primatology*. Boca Raton, FL.

Invited Talks

2021	San Diego Zoo Wildlife Alliance, Conservation Genetics Department
2019	Penn State University, Department of Anthropology
2019	The George Washington University, Department of Biology
2019	The George Washington University, Great Ape Behavior and Evolution Class

Mentoring and Training Experience

Ongoing

2021-Pres. Brandon Tsai, BS/MS student, University of California San Diego
Project: “*Characterizing evolutionary divergence in threespine stickleback*”

Previous

2021-2022 Vishwa Pandya, BS student, University of California San Diego
Project: “*Genomic basis of divergent pigment patterns in threespine stickleback*”

2021 WarrenKevin Henderson, MS student, The George Washington University
Project: “*Examining convergence in equids and ursids to understand potential hominin adaptiveness to the cold*”
Current position: Ph.D. candidate at Boston University, Anthropology

2019-2021 Alejandra Paredes Marin, BS student, The George Washington University
Current position: Research Associate, Mount Sinai

2018-2019 Ian Harryman, post-MS student, The George Washington University
Project: “*Hair diversity across Indriidae lemurs*”
Current position: Ph.D. student, Stanford University, Earth System Science

2017-2019 Maanas Nukala, BS student, The George Washington University
Project: “*Ecological niche modeling of the Critically Endangered diademed sifaka (Propithecus diadema)*”
Current position: Data Specialist, World Resources Institute

2016-2017 Lauren Anderson, BS student, The George Washington University
Project: “*Opsin gene variation in wild sifaka lemurs*”
Current position: Ph.D. student, Rockefeller University, Molecular Biology

Professional Service & Volunteering

Student Representative, Graduate Curriculum Committee Washington, D.C.
The George Washington University (GWU) 02/2016 – 01/2021
Human Paleobiology Program
2 hours/week

- Assisted with implementing a yearly student survey of the graduate curriculum for the Human Paleobiology program, and analyzing the data to present results to faculty representatives anonymously.
- Collaborated with two other student representatives to propose changes to the graduate curriculum based on feedback from students. This led to adding core necessary classes (Grant Writing), restructuring other classes (Ethics), and removing others (Problem Based Learning).

Student Liaison, Conservation Earth Day Symposium
The George Washington University (GWU)
2 hours/week

Washington, D.C.
11/2019 – 03/2020

- Organized lineup of speakers for the symposium.
- Proposed and led efforts to offer honoraria to speakers, despite original plans by superiors to not offer this option. This enabled us to offset travel for historically excluded scientists (i.e., international scholars, mothers, Black and Latino scientists). We did this without compromising on total number of speakers by reorganizing efforts to fundraise from different Departments in the University as well as a new pitch to the provost.
- Managed online promotion and engagement with the event among other scientists and the public.
 - *Event cancelled due to COVID-19*

Member, Edward Bouchet Graduate Honors Society
The George Washington University (GWU)
1 hour/week

Washington, D.C.
09/2018 – 05/2021

- Nominated due to outstanding efforts to advance diversity and equity at The George Washington University while showing promise for leadership in the sciences. This is including, but not limited to, efforts in the Diversity of Science group and establishing Peer Advocates.
- Participated in yearly interdisciplinary conferences to talk to others about efforts to advance diversity and equity in the life and social sciences.

Peer Advocate
The George Washington University (GWU)
1 hour/week

Washington, D.C.
01/2019 – 03/2020

- Organized a yearly anonymous survey on safety at field sites abroad and at GWU laboratories. This led to many laboratories and field sites establishing or updating safety standards and reporting guidelines for their groups—many for the first time.
- Organized for eight other students to receive yearly training from the Title IX office to be Peer Advocates.
- Assisted students in navigating difficult procedures and decisions in regards to reporting.
- Served as a mandatory reporter.

Committee Member, Diversity in Science (DIS) Group
The George Washington University (GWU)
2 hours/week

Washington, D.C.
09/2016 – 05/2019

- Led efforts to start an undergraduate tiered mentorship program.
- Co-led efforts to start an off-shoot group, Peer Advocates at GWU, to aid students who have experienced harassment or assault in field programs abroad, at conferences, or at university events.

- Assisted in organizing and volunteering with various outreach events, such as: the USA Science and Engineering Festival in DC, BePolished, and other events targeting historically excluded youth in sciences.

Member, Lambda Alpha National Honors Society

Florida Atlantic University (FAU)

1 hour/week

Boca Raton, FL

09/2013 – 05/2016

- Assisted in organizing efforts to attract undergraduates to summer field programs in Ecuador.
- Assisted with fund raising efforts to collect \$5,000 as yearly scholarship support for an outstanding senior undergraduate.

Alternative Breaks, Invasive Species in Eleuthera, Bahamas

Florida International University (FIU)

5 hours/week

Miami, FL

09/2010 – 01/2011

- Organized fund raising to support travel to Eleuthera, Bahamas.
- Conducted invasive species removal (lionfish) along the Eleuthera coast via spearfishing and snorkeling.
- Assisted in invasive species educational outreach with local fishermen and schools.
- Organized and assisted with the yearly lionfish festival.

President & Founder, Pre-Veterinary Society

Florida International University (FIU)

5 hours/week

Miami, FL

01/2006 – 05/2008

- Founded FIU's current and longest standing Pre-Veterinary Society.
- Organized and led meetings with other elected officers and general membership body.
- Planned volunteer activities for the society such as walks to support adoption agencies, spay/neuter clinics, and donation drives for rehabilitated wildlife.

Science Outreach Experience

Invited Outreach Activities

2019

Scientist-Is-In: Evolution of hair, Smithsonian Natural History Museum

- Led conversational outreach and helped public navigate a hands-on activity I designed to examine their hair (and that of other animals) under a handheld microscope.

2019

Build A Lemur, Smithsonian Natural History Museum

- Led a puzzle/game activity I designed to help youth understand biodiversity in Madagascar and it's connection to conservation needs.

- 2018 *Scientist-Is-In: Evolution of Hair*, Smithsonian Natural History Museum
- Led conversational outreach and helped public navigate a hands-on activity I designed to examine their hair (and that of other animals) under a handheld microscope.
- 2017 *Scientist-Is-In: Evolution of Hair*, Smithsonian Natural History Museum
- Led conversational outreach and helped public navigate a hands-on activity I designed to examine their hair (and that of other animals) under a handheld microscope.
- 2018 USA Science and Engineering Festival
Washington, D.C.
- Led conversational outreach and hands-on activity focused on NSF funded projects across the Human Paleobiology laboratories. Outreach focused on understanding what it means to be human and how that compares to other animals.
- 2017 *World Lemur Festival*, Yale Peabody Museum of Natural History
- Co-led conversational outreach and hands-on activity. Focused on conservation, biology, and vision of endangered lemurs.

Other Outreach Activities

- 2019 – 2020 *Bi-lingual outreach* on evolutionary biology, Wheeler Road Elementary, MD
- Led three-day bilingual activity surrounding key concepts of biodiversity, which I previously co-designed.
- 2019 *Lives of Scientists* (virtual), Shutesbury Elementary School, MA
- Corresponded with elementary school kids about my life as a scientist.
- 2019 *Development of an NGSS 3rd-5th grade lesson plan* aimed to teach concepts in biological diversity, co-led with Christine Ramirez at Discovery
- Co-designed three-day bilingual activity to teach fourth graders key concepts of biodiversity, including habitat and genetic diversity.
- 2019 *Skype-A-Scientist*, Shutesbury Elementary School (MA)
- Skyped in with a classroom about my life as a scientist
- 2018 *Panelist for 'What's Your 'Ology?'*, STEM for Her
- Served as a panelist for girls historically excluded from science (Black, Latina, lower income) living in the DC-metro, focused on pathways to successful careers in science. Shared my own personal experiences growing up in a low-income neighborhood in a Latin family and being the first PhD—and offered advice and one-on-one mentoring.

2016

Volunteer for 'BePolished' Educational Visit to GWU Science facilities

- Co-led efforts to guide group of girls, typically historically excluded from science, through GWU science labs and hands-on science activities. Shared personal stories of why I chose to become a scientist and barriers and mentors I encountered.

Professional Journals Refereed

Peer Review

7 reviews total: Scientific Reports, Ecology & Evolution, Evolutionary Anthropology, Data in Brief, African Journal of Ecology

Professional Society Memberships

The Wildlife Society

Society for the Study of Evolution

SACNAS

International Journal of Primatology

American Association of Biological Anthropologists

References

Diana J. Rennison, Ph.D.

Assistant Professor

Division of Ecology, Behavior and Evolution

Department of Biology

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Timothy H. Webster, Ph.D.

Assistant Professor

Department of Anthropology

University of Utah

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Salt Lake City, UT, 84112

Email: timothy.h.webster@utah.edu

Brenda J. Bradley, Ph.D.

Associate Professor

Center for the Advanced Study of Human Paleobiology

Department of Anthropology

The George Washington University

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Email: bradleyjbrenda@gmail.com

Jason M. Kamilar, Ph.D.

Associate Professor

Department of Anthropology

Graduate Program in Organismic and Evolutionary Biology

University of Massachusetts, Amherst

240 Hicks Way,

Amherst, MA, 01003

Phone: (413) 545-7397

Email: jkamilar@umass.edu