

## ALEXANDRA L. DECANDIA, PH.D.

Assistant Teaching Professor

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### PROFESSIONAL APPOINTMENTS

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**Georgetown University, Department of Biology**, Washington, D.C. Aug. 2021-Present  
Assistant Teaching Professor; Assistant Director of the Regents STEM Scholars Program  
*Courses Taught: Principle & Practice in Biology (BIOL 1200); Foundations in Biology II Lab (BIOL 1214); Ecology + Lab (BIOL 1800); Evolution of Mammalian Diversity (BIOL 4500); Microbiome Pop-Up Labs (BIOL 4947/8); Research Tutorial (BIOL 4950); Research Intensive Senior Experience (BIOL 4951/2)*

**Smithsonian's National Zoo & Conservation Biology Institute**, Washington, D.C. Oct. 2021-Present  
Research Associate, Center for Conservation Genomics  
*Primary Research Areas: epigenetic gene regulation, microbial ecology, and wildlife conservation of black-footed ferrets (*Mustela nigripes*), Channel Island foxes (*Urocyon littoralis*), and island spotted skunks (*Spilogale gracilis amphiala*); environmental microbiome of salt marsh and urban watershed microbial communities*

### POSTDOCTORAL RESEARCH

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**Smithsonian's National Zoo & Conservation Biology Institute**, Washington, D.C. Sept. 2020-Aug. 2021  
Postdoctoral Research Fellow, Center for Conservation Genomics & Center for Species Survival  
*Advisors: Klaus-Peter Koepfli, Ph.D. & Jesús Maldonado, Ph.D.*  
I identified the primary drivers of host-associated microbial diversity in Yellowstone National Park wolves (*Canis lupus*). I additionally studied the roles of epigenetic gene regulation and microbiome diversity on mammalian health and disease in black-footed ferrets (*M. nigripes*) and Channel Island foxes (*U. littoralis*).

### EDUCATION & DISSERTATION

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**Princeton University, Graduate School**, Princeton, NJ Sept. 2015-Aug. 2020  
M.A., Ph.D. in Ecology & Evolutionary Biology  
*Academic Advisor: Bridgett vonHoldt, Ph.D.*  
*Dissertation: "An inclusive understanding of molecular variation in population genetics and wildlife disease ecology"*  
I argued for a more inclusive understanding of molecular diversity within ecology and evolutionary biology. In *Chapter One*, I summarized literature along the intersection of molecular ecology, disease ecology, and wildlife conservation to highlight the utility of diverse molecular techniques. In subsequent chapters, I applied multiple approaches to address questions within wildlife disease ecology and evolutionary and population genetics. In *Chapters Two* and *Three*, I examined the genetic effects of urban colonization to consider host genetic changes within altered disease landscapes. In *Chapters Four* and *Five*, I characterized changes in the host-associated microbiome associated with mite infection to elucidate novel drivers of disease pathology.

**Columbia University, Columbia College**, New York, NY Sept. 2011-May 2015  
B.A. in Environmental Biology, *Magna Cum Laude*, Phi Beta Kappa, Dean's List  
*Thesis Advisor: George Amato, Ph.D.*  
*Departmental Thesis: "Method for the noninvasive sex identification of order Carnivora"*  
2015 Winner of the Dobzhansky Award for Outstanding Thesis in Evolutionary Biology

### PREVIOUS RESEARCH

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**American Museum of Natural History**, New York, NY Sept. 2013-Aug. 2015  
Undergraduate Research Assistant, Sackler Institute for Comparative Genomics  
*Advisor: George Amato, Ph.D. – noninvasive sex identification of mammalian order Carnivora*

**The Earth Institute, Columbia University**, New York, NY Sept. 2012-Jan. 2013  
Undergraduate Research Assistant, Arctic Arthropods Project  
*Advisor: Natalie Boelman, Ph.D. – assessing seasonal biomass at the base of the Arctic food web*

- [21] Yu, E.\*, **A. DeCandia**, A. Graham, E. Whitmer, C. Field, B. vonHoldt, S. Gaughran (*in revision*) Sexual dimorphism and host genetics shape the gut microbiome of northern elephant seal pups (*Mirounga angustirostris*). *Authoria preprint*: <https://www.authorea.com/users/658809/articles/662988-sexual-dimorphism-and-host-genetics-shape-the-gut-microbiome-of-northern-elephant-seal-pups-mirounga-angustirostris>

PEER-REVIEWED PUBLICATIONS (\*UNDERGRADUATE STUDENT COAUTHOR)

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- [20] Bornbusch, S., A. Bamford\*, P. Thacher\*, A. Crosier, P. Marinari, R. Bortner, D. Garelle, T. Livieri, R. Santymire, P. Comizzoli, M. Maslanka, J. Maldonado, K. Koepfli, C. Muletz-Wolz, and **A. DeCandia** (*accepted*) Markers of fertility in reproductive microbiomes of male and female endangered black-footed ferrets (*Mustela nigripes*). *Communications Biology*.
- [19] Pasciullo Boychuck, S.\*, L. Brenner, C. Gagorik, J. Schamel, S. Baker, E. Tran\*, B. vonHoldt, K. Koepfli, J. Maldonado, and **A. DeCandia** (2024) The gut microbiomes of Channel Island foxes and island spotted skunks exhibit fine-scale differentiation across host species and island populations. *Ecology and Evolution* 14(2): e11017. <https://doi.org/10.1002/ece3.11017>
- [18] Tennenbaum, S., R. Bortner, C. Lynch, R. Santymire, A. Crosier, J. Santiestevan, P. Marinari, B. Pukazhenth, M. Hawkins, J. Maldonado, K. Koepfli, B. vonHoldt, and **A. DeCandia** (2024) Epigenetics pathways linked to male fertility in *ex situ* managed black-footed ferrets. *Evolutionary Applications* 17: e13634. <https://doi.org/10.1111/eva.13634>
- [17] **DeCandia, A.**, L. Adeduro\*, P. Thacher\*, A. Crosier, P. Marinari, R. Bortner, D. Garelle, T. Livieri, R. Santymire, P. Comizzoli, M. Maslanka, J. Maldonado, K. Koepfli, C. Muletz-Wolz, S. Bornbusch (*accepted*) Gut bacterial composition shows sex-specific shifts during breeding season in *ex situ* managed black-footed ferrets. *Journal of Heredity* esad065. <https://doi.org/10.1093/jhered/esad065>
- [16] vonHoldt, B., **A. DeCandia**, K. Cassidy, E. Stahler, J. Sinsheimer, D. Smith, and D. Stahler (*accepted*) Patterns of reproduction and autozygosity distinguish the breeding from non-breeding gray wolves of Yellowstone National Park. *Journal of Heredity* esad062. <https://doi.org/10.1093/jhered/esad062> (preprint available: *bioRxiv* 2022.02.18.481090)
- [15] Rippel, T., **A. DeCandia**, M. Collier, C. McIntosh\*, S. Murphy, G. Wimp (2024) Habitat characteristics and plant community dynamics impact the diversity, composition, and co-occurrence of sediment fungal communities. *Wetlands* 44: 3. <https://doi.org/10.1007/s13157-023-01756-6>
- [14] Corder, M., E. Petricoin, Y. Li, T. Cleland, **A. DeCandia**, A. Aguirre, B. Pukazhenth (2023) Metabolomic profiling implicates mitochondrial and immune dysfunction in disease syndromes of the critically endangered black rhinoceros (*Diceros bicornis*). *Scientific Reports* 13: 15464. <https://doi.org/10.1038/s41598-023-41508-4>
- [13] Rippel, T., **A. DeCandia**, J. Tomasula, C. McIntosh\*, S. Murphy, and G. Wimp (2023) Detritivores and exogenous nitrogen influence litter microbial communities in coastal salt marshes. *Marine Ecology Progress Series* 716:17-29. <https://doi.org/10.3354/meps14370>
- [12] Lu, J.\*, E. Hamblen, L. Brenner, B. vonHoldt, and **A. DeCandia** (2023) Ear mite infection restructures otic microbial networks in conservation-reliant Santa Catalina Island foxes (*Urocyon littoralis catalinae*). *Molecular Ecology* 32(4):892-903. <https://doi.org/10.1111/mec.16795>
- Featured on Molecular Ecology cover: <https://doi.org/10.1111/mec.16510>
- [11] **DeCandia, A.**, K. Cassidy, D. Stahler, E. Stahler, and B. vonHoldt (2021) Social environment and genetics underlie body site specific microbiomes of Yellowstone National Park gray wolves (*Canis lupus*). *Ecology and Evolution* 11(14):9472-9488. <https://doi.org/10.1002/ece3.7767>
- [10] **DeCandia, A.**, E. Schrom, E. Brandell, D. Stahler, and B. vonHoldt (2021) Sarcoptic mange severity is associated with reduced genomic variation and evidence of selection in Yellowstone National Park wolves (*Canis lupus*). *Evolutionary Applications* 14(2):429-445. <https://doi.org/10.1111/eva.13127>
- Featured on Evolutionary Applications cover: <https://doi.org/10.1111/eva.13206>

- [9] vonHoldt, B.†, **A. DeCandia**†, E. Heppenheimer, I. Janowitz-Koch, R. Shi, H. Zhou, C. German, K. Brzeski, K. Cassidy, D. Stahler, and J. Sinsheimer (2020) Heritability of inter-pack aggression in a wild pedigreed population of North American gray wolves. *Molecular Ecology* 29(10):1764-1775. <https://doi.org/10.1111/mec.15349> († authors contributed equally)
- Featured on Molecular Ecology cover: <https://doi.org/10.1111/mec.14740>
  - Perspective by C. Schell: <https://doi.org/10.1111/mec.15453>
- [8] **DeCandia, A.**, L. Brenner, J. King, and B. vonHoldt (2020) Ear mite infection is associated with altered microbial communities in genetically depauperate Santa Catalina Island foxes (*Urocyon littoralis catalinae*). *Molecular Ecology* 29(8):1463-1475. <https://doi.org/10.1111/mec.15325> (preprint available: *bioRxiv* 653220)
- Perspective by B. Trevelline, J. Stephenson, and K. Kohl: <https://doi.org/10.1111/mec.15397>
- [7] **DeCandia, A.**, K. Leverett\*, and B. vonHoldt (2019) Of microbes and mange: Consistent changes in the skin microbiome of three canid species infected with *Sarcoptes scabiei* mites. *Parasites and Vectors* 12(1):488. <https://doi.org/10.1186/s13071-019-3724-0> (preprint available: *bioRxiv* 709436)
- [6] **DeCandia, A.**, K. Brzeski, E. Heppenheimer, C. Caro\*, G. Camenisch, C. Driscoll, and B. vonHoldt (2019) Urban colonization through multiple genetic lenses: The city fox phenomenon revisited. *Ecology and Evolution* 9(4):2046-2060. <https://doi.org/10.1002/ece3.4898>
- [5] **DeCandia, A.**†, C. Henger†, A. Krause\*, L. Gormezano, M. Weckel, C. Nagy, J. Munshi-South, and B. vonHoldt (2019) Genetics of urban colonization: Neutral and adaptive variation in coyotes (*Canis latrans*) inhabiting the New York metropolitan area. *Journal of Urban Ecology* 5(1):juz002. <https://doi.org/10.1093/jue/juz002> († authors contributed equally)
- [4] Heppenheimer, E., R. Harrigan, L. Rutledge, K. Koepfli, R. Horwath, **A. DeCandia**, K. Brzeski, J. Benson, T. Wheeldon, B. Patterson, R. Kays, P. Hohenlohe, and B. vonHoldt (2018) Population genomic analysis of North American eastern wolves (*Canis lycaon*) supports their conservation priority status. *Genes* 9(12):606. <https://doi.org/10.3390/genes9120606>
- [3] Heppenheimer, E., K. Brzeski, J. Hinton, B. Patterson, L. Rutledge, **A. DeCandia**, T. Wheeldon, S. Fain, P. Hohenlohe, R. Kays, B. White, M. Chamberlain, and B. vonHoldt (2018) High genomic diversity and candidate genes under selection associated with range expansion in eastern coyote (*Canis latrans*) populations. *Ecology and Evolution* 8(24):12641-12655. <https://doi.org/10.1002/ece3.4688>
- [2] **DeCandia, A.**, A. Dobson, and B. vonHoldt (2018) Toward an integrative molecular approach to wildlife disease. *Conservation Biology* 32(4):798-807. <https://doi.org/10.1111/cobi.13083>
- [1] **DeCandia A.**, S. Gaughran, A. Caragiulo, and G. Amato (2016) A novel molecular method for noninvasive sex identification of order Carnivora. *Conservation Genetics Resources* 8(2):119-121. <https://doi.org/10.1007/s12686-016-0525-z>

## GRANTS & FELLOWSHIPS

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2023: **Friends of the Island Fox 2023 Research Grant**, \$6,000

2023-2024: **Smithsonian Women's Committee Grant**, \$28,000

2022-2023: **Georgetown University Summary Salary Supplement**, \$10,000

2022: **American Society of Mammalogists Early Career Travel Award**, \$700

2021-2022: **Georgetown University Annual Research Grant**, \$10,000

2020-2021: **Smithsonian Institution Fellowship Program Postdoctoral Fellowship**, \$54,550

2015-2020: **National Science Foundation Graduate Research Fellowship**, \$138,000

2020: **Friends of the Island Fox 2020 Research Grant**, \$5,000

2019: **American Society of Mammalogists Student Travel Award**, \$500

2017: **Center for Health & Wellbeing Health Grand Challenge Research Award**, \$5,000

2017: **American Museum of Natural History Theodore Roosevelt Memorial Fund**, \$2,350

2017: **American Society of Mammalogists Grants-in-Aid of Research**, \$1,500

2016: **Princeton University Women Scientists in Conservation Biology Research Award**, \$7,500

2016: **Department of Ecology & Evolutionary Biology First Year Seed Money**, \$2,500

2016: **Center for Health & Wellbeing Health Grand Challenge Research Award**, \$2,000

2016: **Princeton University Graduate School Professional Development Travel Funds**, \$500

## INVITED SEMINARS & GUEST LECTURES

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- 2024: Senior Parents & Family Weekend, Georgetown University (*invited seminar*)  
2022: Meet the Scientist, Smithsonian's National Zoo & Conservation Biology Institute (*guest lecture*)  
2022: Science Research Experience (REX), Princeton Day School (*guest lecture*)  
2021: Conservation Biology (BIOL 365), Georgetown University (*guest lecture*)  
2021: Applied Molecular Ecology (EEB 331), Princeton University (*guest lecture*)  
2021: Cross-Center Seminar, Smithsonian Conservation Biology Institute (*invited seminar*)  
2021: Ecology, Evolution & Conservation Biology Program, University of Hawai'i at Mānoa (*invited seminar*)  
2021: Smithsonian-Mason School of Conservation, George Mason University (*guest lecture*)  
2021: Career Seminar, Department of Ecology & Evolutionary Biology, Princeton University (*invited seminar*)

## CONFERENCE PRESENTATIONS

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- 2023: 102nd Annual Meeting of the American Society of Mammalogists (ASM) (*oral presentation*)  
2023: The Society for Molecular Biology & Evolution Small Populations Meeting (SMBE) (*poster presentation*)  
2023: Annual Island Spotted Skunk Working Group Meeting (*oral presentation*)  
2023: Annual Island Fox Working Group Meeting (*oral presentation*)  
2022: Annual Island Spotted Skunk Working Group Meeting (*oral presentation*)  
2022: Annual Black-footed Ferret Genomics Working Group Meeting (*oral presentation*)  
2022: 101st Annual Meeting of the American Society of Mammalogists (ASM) (*oral presentation*)  
2022: Annual Island Fox Working Group Meeting (*oral presentation*)  
2022: National Zoo & San Diego Zoo Microbial Ecology & Conservation Symposium (*oral presentation*)  
2021: 100th Annual Meeting of the American Society of Mammalogists (ASM) (*oral presentation*)  
2021: Annual Island Fox Working Group Meeting (*oral presentation*)  
2021: Annual Black-footed Ferret Genomics Working Group Meeting (*oral presentation*)  
2020: The Princeton University Center for Health & Wellbeing Student Research Symposium (*oral presentation*)  
2020: North American Congress for Conservation Biology (NACCB) (*oral presentation*)  
\*Recipient of Student Presentation Award for "Best Full Length Presentation"  
2020: Ecological Society of America Annual Meeting (ESA) (*oral presentation*)  
2020: Annual Island Fox Working Group Meeting (*oral presentation*)  
2019: Student Conference on Conservation Science – New York (SCCS-NY) (*oral presentation*)  
2019: 99th Annual Meeting of the American Society of Mammalogists (ASM) (*oral presentation*)  
2019: Ecology & Evolution of Infectious Diseases (EEID) (*poster*)  
2019: Northeast Natural History Conference (NENHC) (*invited oral presentation*)  
2019: Columbia-Rutgers-Princeton-Penn-Yale Student Conference (CRPPY) (*oral presentation*)  
2017: Student Conference on Conservation Science – New York (SCCS-NY) (*oral presentation*)  
\*Recipient of Student Presentation Award for "Best Full Length Presentation"  
2017: The Wildlife Society Annual Meeting (TWS) (*oral presentation*)  
2017: The Society for Molecular Biology & Evolution Annual Meeting (SMBE) (*poster*)  
2016: The Princeton University Center for Health & Wellbeing Student Research Symposium (*poster*)  
2016: Student Conference on Conservation Science – New York (SCCS-NY) (*oral presentation*)  
2014: Student Conference on Conservation Science – New York (SCCS-NY) (*poster*)  
2013: The Columbia University Earth Institute Student Research Showcase (*poster*)

## TEACHING EXPERIENCE

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### 2021-Present: Assistant Teaching Professor, Georgetown University

I design and implement courses for undergraduate and graduate students (Ecology; Evolution of Mammalian Diversity), collaboratively teach introductory courses for biology majors (Foundations in Biology II) and first-generation, low-income, underrepresented minority students (Principle & Practice in Biology), and mentor undergraduate researchers (Microbiome Pop-Up Labs; Research Tutorial; Research Intensive Senior Experience). I additionally train and supervise undergraduate and graduate teaching assistants.

### 2016-2020: Princeton University McGraw Center for Teaching & Learning, Graduate Teaching Fellow

I trained first time science educators in implementing active teaching strategies, creating inclusive classrooms, and leading effective lecture, seminar, and laboratory-based undergraduate courses. I also performed classroom observations to provide real-time feedback to science educators throughout the semester.

- 2016-2020: **Princeton University McGraw Center for Teaching & Learning, Teaching Transcript Recipient**  
I participated in assistant in instruction (AI) orientation, served as an AI for two semesters, attended and led teaching pedagogy workshops, developed a written teaching philosophy, and designed an original syllabus.
- 2019: **Graduate Teaching Assistant for Winter Ecology Field Course (EEB521), Princeton University**  
I guided first year graduate students through design and implementation of short-term research projects in Yellowstone National Park in Wyoming, USA during January 2019.
- 2015-2017: **Graduate Teaching Assistant for Evolution (EEB309), Princeton University** (two semesters)  
I led weekly discussion sections for undergraduates that included critique of primary literature, group activities (e.g., Pokémon phylogeny construction), and Jeopardy-style review to engage students with lecture material. I also implemented a science communication project that challenged students to creatively share science.

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#### **MENTORING EXPERIENCE** (\*STUDENT COAUTHORS ON PEER-REVIEWED PUBLICATIONS & MANUSCRIPTS)

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- 2021-2023: **Georgetown University (Microbiome Pop-Up Labs, Research Tutorial, RISE – *Microbiomes*)**  
Rachel Gaudreau '22, Afua Nyantakyi '22, \*Laura Adeduro '23, \*Alexandra Bamford '23, Dilara Kamrava '23, \*Samantha Pasciullo Boychuck '23, Urooj Ahmed '24, Ameer Ayaz '24, Dawson Hillyer '24, Tyller Mensa '24, Kevin Moreno '24, Nouran Alim '25, Mary Nguyen '25, Carly Rauh '25, Diana Barnes '26, Diane Barnes '26, Andrea Esquivel '26, Sophia Farmer '26, Sara Melese '26, Fabien Muhire '26, Jocelynn Sengsiry '26, Alina Watson '26, Ruth Morgan '27 – **23 total**
- 2022: **Graduate Committee Membership (*Epigenetics*)**  
Loryn Smith (Master's Student, Fort Hays State University) – **1 total**
- 2021: **Smithsonian Institution (UCSB-Smithsonian Scholars Program - *Microbiomes*)**  
\*Cesar Carrasco (Undergraduate, California State University, Los Angeles) – **1 total**
- 2015-2022: **Princeton University (Senior Theses – *Genetics, Epigenetics, & Microbiomes*)**  
Samantha Wu '16, \*Catherine Caro '17, Rohan Hylton '17, Quin Pompei '17, Mikaela Walkup '19, \*Kennedy Leverett '20, \*Jasmine Lu '21, \*Emily Yu '22, \*Elton Tran '22, \*Amelia Krause (high school intern) – **10 total**

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#### **SCIENCE COMMUNICATION, COMMUNITY OUTREACH, & DIVERSITY INITIATIVES**

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- 2023-Present: **Georgetown University Faculty-in-Residence** (*Copley and Ryan/Hawkins Residence Halls*)
- 2023-Present: **Assistant Director of the Regents STEM Scholars Program**
- 2023-Present: **Georgetown University Engelhard Faculty Fellow** (*CNDLS*)
- 2022-Present: **Georgetown Undergraduate Environmental Health Collaborative** (*faculty sponsor*)
- 2021-Present: **Regents STEM Scholars, Microbiome Pop-Up Labs Mentor**
- 2021-Present: **Association of Minority Zoo & Aquarium Professionals** (*member*)
- 2021-Present: **The District Church Youth Ministry** (*servant leader for middle & high school students*)
- 2022: **Smithsonian's National Zoo & Conservation Biology Institute, "Meet the Scientist" Series** (*presenter*)
- 2022: **Wolf Park, "Introduction to the Island Fox" Webinar** (*presenter*)
- 2022: **Princeton Day School, Science Research Experience Program (REx)** (*presenter*)
- 2021: **Friends of the Island Fox, "Date with a Fox" Event** (*presenter*)
- 2021: **Ozarks Science & Engineering Fair** (*senior high division zoology judge*)
- 2021-2022 **American Society of Mammalogists One-on-One Mentoring** (*mentor*)
- 2020-2021: **Skype a Scientist** (*presenter for elementary & middle school students; 12 presentations*)
- 2020-2021: **American Genetic Association** (*blog columnist; 2 posts*)
- 2018-2020: **Princeton University Ecology & Evolutionary Biology Scholars Program** (*mentor & presenter for prospective graduate students from backgrounds historically underrepresented in STEM*)
- 2016-2020: **Princeton Alliance Church Young Adults Ministry** (*member & servant leader*)
- 2015-2020: **Princeton University Women in Science Program** (*member*)
- 2018: **Open Labs Science Café** (*presenter for high school students*)
- 2018: **Bring Your Kids to Work Day** (*roundtable leader for elementary school students*)
- 2017: **Princeton Alliance Church Middle School Ministry** (*servant leader*)
- 2013-2015: **Columbia Science Review** (*blog columnist; 8 posts*)
- 2013-2015: **Columbia University Environmental Biology Society** (*founder & executive board member*)

## ACADEMIC & PROFESSIONAL SERVICE

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Invited Peer Reviewer: **Conservation Genetics Resources; Current Zoology; Ecology & Evolution; Frontiers in Ecology & Evolution; Journal of Heredity; Journal of Urban Ecology; Microbiology Spectrum; Molecular Ecology; Parasites and Vectors; PeerJ; PLoS ONE; Scientific Reports**

2022-Present: **American Society of Mammalogists, Education and Graduate Student Committee** (*member*)

2020-Present: **Black-footed Ferret Genomics Working Group** (*member*)

2020-Present: **Channel Island Fox Conservation Working Group** (*member*)

2020-Present: **Channel Island Spotted Skunk Working Group** (*member*)

2020-2021: **Smithsonian's National Zoo Genomics Journal Club** (*member & presenter*)

2020-2021: **Smithsonian's National Zoo Microbiome Journal Club** (*member & presenter*)

2015-2020: **Princeton University Evolution Group** (*organizer, member, & presenter*)

2015-2020: **Princeton University Disease Group** (*member & presenter*)

2017-2019: **The Wildlife Society Molecular Ecology Working Group** (*student board member*)

2013-2015: **Columbia University Environmental Biology Society** (*founder & executive board member*)

## PROFESSIONAL MEMBERSHIPS & WORKING GROUPS

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**Association of Minority Zoo & Aquarium Professionals; American Genetic Association; American Society of Mammalogists (Education & Graduate Student Committee); Black-Footed Ferret Genomics Working Group; Channel Island Fox Conservation Working Group; Channel Island Spotted Skunk Working Group; Ecological Society of America; Society for Conservation Biology; Phi Beta Kappa Society**

## WORKSHOPS (ATTENDED AS A TRAINEE)

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2018: **Bridging Theory & Experiment in Microbial Communities**

2016: **Evolutionary Biology in Guarda, Switzerland**

2016: **Recent Advances in Conservation Genetics (ConGen) in Tihany, Hungary**

2009: **The Green Schools Alliance Student Climate & Conservation Congress (SC3)**

## FIELD EXPERIENCE

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2019: **Catalina Island Conservancy Fox Trapping, Santa Catalina Island (California, USA)**

I shadowed annual island fox monitoring efforts to observe and aid microbiome sample collection.

2019: **Winter Ecology Field Course, Yellowstone National Park (Wyoming, USA)**

I guided first year graduate students through design and implementation of short-term research projects on patterns of lichen growth and daily animal traffic patterns in different microclimates.

2016: **Tropical Ecology Field Course, Tiptuni Biodiversity Station (Ecuador)**

I designed and implemented a short-term research project on ant-plant mutualisms in the Amazon rainforest.

2015: **Coral Reef Ecology Field Course, Bermuda Institute of Ocean Sciences (Bermuda)**

I learned how to identify local species of coral, fish, and terrestrial vertebrates through classroom, snorkeling, and hiking experiences.

## MEDIA COVERAGE

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2022: "Newly-introduced, diverse species stun at Smithsonian's National Zoo" (*The Hoya*)

2021: "Fox Foto Friday – This is Island Fox Science" (*Friends of the Island Fox*)

2021: "Fox Foto Friday – Island Fox Science in Progress" (*Friends of the Island Fox*)

2021: "Fox Foto Friday – Island Foxes in Washington, D.C.?" (*Friends of the Island Fox*)

2021: "Yellowstone's wolves are fighting mange at the genetic level" (*Wyoming Public Radio*)

2021: "Genetics study shows why some Yellowstone wolves dodge mange" (*Billings Gazette*)

2021: "Study of mange in Yellowstone wolves could inform conservation efforts, scabies research" (*Bozeman Daily Chronicle*)

2021: "Mange in Yellowstone wolves reveals insights into human scabies and conservation biology" (*Princeton University*)

2021: "Fox Foto Friday – Island Foxes Healthy Inside and Out" (*Friends of the Island Fox*)

2020: "FIF Research Grant to Investigate Diversity of Island Fox Microbiome" (*Friends of the Island Fox*)

2020: "Mites, microbes, and cancer in Santa Catalina Island foxes" (*Friends of the Island Fox*)

2020: “Microbes linked to cancer in threatened California foxes, report Princeton researchers” (*Princeton University*)  
2020: “Are coyotes moving into your neighborhood?” (*Science News for Students*)  
2019: “What can the ears of island foxes tell us?” (*Forbes*)  
2019: “The city fox phenomenon” (*Ecology and Evolution Blog*)  
2018: “Montreal turns to coyote hazing after 19 people are bitten” (*New York Times*)