

DANIELLE J. PARSONS

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EEOB, The Ohio State University, 318 W. 12th Avenue., Columbus OH 43210

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EDUCATION

- 2018 - present **The Ohio State University**
Ph.D., Evolution, Ecology, and Organismal Biology
- 2013 - 2018 **University of New Mexico**
Bachelor of Science, Biology, *summa cum laude*
Bachelor of Arts, Chemistry, *summa cum laude*
- 2014 - 2015 **University of Western Australia**
Cross Institutional Exchange

PUBLICATIONS

- E. M. Fonseca, T. A. Pelletier, S. K. Decker, **D. J. Parsons**, B. C. Carstens. 2023. *Pleistocene glaciations caused the latitudinal gradient of within-species genetic diversity*. Evolution Letters. <https://doi.org/10.1093/evlett/grad030>
- D. J. Parsons**, T. A. Pelletier, J. G. Wieringa, D. J. Duckett, B. C. Carstens. 2022. *Analysis of biodiversity data suggest that mammal species are hidden in predictable places*. Proceedings of the National Academy of Science. 119 (14). <https://doi.org/10.1073/pnas.2103400119>
- T. A. Pelletier, **D. J. Parsons**, S. K. Decker, S. Crouch, E. Franz, J. Ohrstrom, B.C. Carstens. 2022. *PhylogatR: Phylogeographic data aggregation and repurposing*. Molecular Ecology Resources. <https://doi.org/10.1111/1755-0998.13673> [PhylogatR Database]
- J. P. Colella, R. B. Stephens, M. L. Campbell, B. A. Kohli, **D. J. Parsons**, B. S. McLean. 2020. *The Open-Specimen Movement*. Bioscience. <https://doi.org/10.1093/biosci/biaa146>
- J. G. Wieringa, M. R. Boot, M. V. Dantas-Queiroz, D. J. Duckett, E. M. Fonseca, H. Glon, N. Hamilton, S. Kong, F. M. Lanna, K. Z. Mattingly, **D. J. Parsons**, M. L. Smith, B. W. Stone, C. Thompson, L. Zuo, B. C. Carstens. 2019. *Does habitat stability over time structure intraspecific genetic diversity? It's complicated....* Frontiers of Biogeography. 12 (2). <http://dx.doi.org/10.21425/F5FBG45377>

Book Chapters, Invited Commentaries, and Other Works:

- D. J. Parsons** & J. D. Satler. 2022. *Species Limits*. In *PhylogatR* by B. C. Carstens, S. K. Decker, A. Espindola, S. Foltz, A. Green, **D. J. Parsons**, T. A. Pelletier, J. D. Satler. <https://phylogatr.org/book/index.html>
- D. J. Parsons** & B. C. Carstens. 2022. *Thousands of undiscovered mammal species may be hidden in plain sight, new research finds*. The Conversation. <https://theconversation.com/thousands-of-undiscovered-mammal-species-may-be-hidden-in-plain-sight-new-research-finds-179988>

In Progress:

- D. J. Parsons**, A. E. Green, B. C. Carstens, T. A. Pelletier. 2022. *Predicting genetic structure in salamanders using geographic, climatic, and life history traits*. Animals. [In review]

PRESENTATIONS

- D. J. Parsons**, S.K. Decker, T.A. Pelletier, and B.C. Carstens. (April 2023). *PhylogatR: phylogeographic data aggregation and repurposing*. Poster presentation, iDigBio Digital Data Conference, Tempe, AZ.
- D. J. Parsons**, S.K. Decker, T.A. Pelletier, and B.C. Carstens. (April 2023). *PhylogatR: Phylogeographic data aggregation and repurposing*. Poster presentation, Ohio Supercomputer Center Statewide User Group Conference, Columbus, OH.
- T.A. Pelletier, **D. J. Parsons**, S.K. Decker, and S. Crouch. (November 2022). *Biodiversity informatics in the classroom: blending biology and computer science using real data via open-source repositories*. Poster presentation, American Association of Colleges and Universities Conference, Washington, DC.
- D. J. Parsons**, T.A. Pelletier, J.G. Wieringa, D.J. Duckett, and B.C. Carstens. (June 2022). *Analysis of biodiversity data suggest that Mammal species are hidden in predictable places*. Oral presentation, American Society of Mammalogists Annual Meeting, Tucson, AZ.
- D. J. Parsons**, T.A. Pelletier, B.C. Carstens. (June 2022). *PhylogatR in the classroom: educational modules and tutorials*. Oral presentation, Evolution, PhylogatR workshop, Cleveland, OH.
- D. J. Parsons**, T.A. Pelletier, J.G. Wieringa, D.J. Duckett, and B.C. Carstens. (October 2021). *Analysis of biodiversity data suggest that Mammal species are hidden in predictable places*. Oral presentation, PhylogatR beta-tester workshop, Pembroke, VA.
- D. J. Parsons**. (September 2020). *Shrew specimen stories*. Oral presentation, Day at the Museum, WestFest: West Campus Science & Sustainability Festival, Columbus, OH.
- D. J. Parsons**. (July 2020). *Spectacular Specimens: So Many Mammals!*. Oral presentation, Natural Wonders Program, The Grandview Heights Public Library, Columbus, OH.
- D. J. Parsons**. (April 2020). *Tiny Terrors: Inside the World of Nature's Most Voracious Predator*. Oral presentation, The Ohio State University Museum of Biological Diversity Open House, Columbus, OH.
- D. J. Parsons**, T.A. Pelletier, D.J. Duckett, J.G. Wieringa, and B.C. Carstens. (October 2019). *Predicting cryptic diversity within class Mammalia*. Poster presentation, Ohio Supercomputer Center Statewide User Group Conference, Columbus, OH.
- D. J. Parsons**, T.A. Pelletier, D.J. Duckett, J.G. Wieringa, and B.C. Carstens. (May 2019). *Estimating levels of cryptic diversity within class Mammalia*. Poster presentation, American Society of Mammalogists Annual Meeting, Washington, DC.
- D. J. Parsons**, T.A. Pelletier, D.J. Duckett, J.G. Wieringa, and B.C. Carstens. (June 2019). *Estimating levels of cryptic diversity within class Mammalia*. Poster presentation, Evolution, Providence, RI.
- D. J. Parsons**. (February 2019). *Genetic mechanisms of adaptation and ecological speciation in the American water shrew, *Sorex palustris**. Poster presentation. EEOB Graduate Recruitment Event, Columbus, OH.
- D. J. Parsons** (September 2018). *Adaptations of the American water shrew*. Oral presentation, STEAM Factory Saturday with a Scholar: Wonder Women and Super Scholars, Columbus, OH.
- D. J. Parsons**, T. Chen, and F.S. Liang. (April 2018). *Chemically Induced Dimerization: Using Chemical Methods to Solve Biological Problems*. Poster presentation, University of New Mexico Undergraduate Research Opportunity Conference, Albuquerque, NM.
- D. J. Parsons**, C.A. Wright, T. Chen, and F.S. Liang. (September 2017). *Small Molecule Induced Axonal Elongation in B35 Neuroblastoma Cells*. Poster presentation, University of New Mexico McNair and ROP Scholars Research Symposium, Albuquerque, NM.
- D. J. Parsons**, C.A. Wright, T. Chen, F.S. Liang. (July 2017). *Spatially Controlled Translation in Neurons*. Poster presentation, University of California at Berkeley Ronald McNair Scholars Symposium, Berkeley, CA.

SCHOLARSHIPS AND AWARDS

- 2023 Presidential Fellowship | The Ohio State University
- 2022 Grant in Aid of Research | American Society of Mammalogists
- 2019 First place, poster competition | Ohio Supercomputer Center: SUG Conference
- 2019 Theodore Roosevelt Memorial Research Grant | American Museum of Natural History
- 2019 Travel Grant | Society for the Preservation of Natural History Collections
- 2018 - 2019 Graduate Enrichment Fellowship | The Ohio State University
- 2018 Outstanding Senior Organic Chemistry Student | American Chemical Society
- 2018 Outstanding Graduating Senior in Biology, honorable mention | University of New Mexico
- 2018 Regents International Study Grant | University of New Mexico
- 2017 Volunteer of the Year | Museum of Southwestern Biology, Division of Mammals
- 2017 Donald Caughran Memorial Scholarship in Biology | University of New Mexico
- 2017 Joan Willard Hemsing Tinoco Scholarship | University of New Mexico
- 2017 Dr. Thomas Williams Whaley Endowed Memorial Scholarship | University of New Mexico
- 2016 - 2018 Ronald E. McNair Scholars Program | U.S. Department of Education
- 2013 - 2018 Dean's List | University of New Mexico: College of Arts and Sciences
- 2013 - 2017 Presidential Scholarship | University of New Mexico

RESEARCH EXPERIENCE

- 2018 - *present* **The Ohio State University** | Graduate Research Assistant
Evolution, Ecology, and Organismal Biology, PI: Dr. Bryan Carstens
- 2017 - 2018 **University of New Mexico** | Research Assistant
Chemistry and Chemical Biology, PI: Dr. Fu-Sen Liang

CURATORIAL EXPERIENCE

- 2018 - *present* **The Ohio State University** | Graduate Assistant
Museum of Biological Diversity, Tetrapods Division, PI: Dr. Bryan Carstens
- 2017 - 2018 **University of New Mexico** | Museum Technician
Museum of Southwestern Biology, Division of Mammals, PI: Dr. Joe Cook

TEACHING AND MENTORSHIP

- 2021 - *present* **The Ohio State University (MBD)** | Graduate Intern
Tetrapods Collection: led team of 5 undergraduate interns/volunteers
- 2020 - 2021 **The Ohio State University (EEOB)** | Teaching Assistant
Ecology and Evolution of Mammals: EEOB4220
- 2019 **The Ohio State University (CLSE)** | Teaching Assistant,
Biological Sciences: Energy Transfer and Development: BIOL1113

Educational Resource Development:

Danielle J. Parsons, Tara A. Pelletier, Sarah Foltz. 2022. *Linking Genetic Diversity and Conservation Status*. Interactive application. https://djparsons.shinyapps.io/IUCN_Conservation_2022/

- Danielle J. Parsons**, Tara A. Pelletier. 2022. *Spatial Genetic Structure*. PhylogatR learning module.
https://phylogatr.org/assets/modules/Spatial_Genetic_Structure.html
- Tara A. Pelletier, **Danielle J. Parsons**. 2022. *Genetic Diversity*. PhylogatR learning module.
https://phylogatr.org/assets/modules/phylogatR_genetic-diversity.html
- Danielle J. Parsons**, Tara A. Pelletier. 2021. *Checking Your Data*. PhylogatR learning module.
https://phylogatr.org/assets/modules/Checking_Your_Data.html
- Danielle J. Parsons**, Tara A. Pelletier. 2021. *Checking Your Data 2*. PhylogatR learning module.
https://phylogatr.org/assets/modules/Checking_Your_Data_2.html

FIELD WORK

The Ohio State University (October 2019)

Field Biologist | Wayne National Forest Small Mammal Survey

Small mammal survey of Wayne national forest. Targeted sampling to examine venom characteristics in the shrew genus *Cryptotis*.

Museum of Southwestern Biology (May 2018 - August 2018)

Field Biologist | Phylogeography of Gila National Forest Rodents

Monthly small mammal collection in unsampled areas of the Greater Gila Region in southwestern NM. Targeted sampling to evaluate occurrences of hybridization within the woodrat genus *Neotoma*.

Museum of Southwestern Biology (March 2018)

Field Biologist | Panamanian mammal and parasite diversity

Collection of small mammals and associated parasites in the cloud forests of Chiriquí Province, Panama in collaboration with the Gorgas Institute of Infectious Diseases.

Museum of Southwestern Biology (March 2017 - August 2018)

Field Biologist | Seasonal Metagenomics of Small Mammals

Small mammal surveys conducted every three weeks in the Pecos Wilderness of NM in collaboration with Drs. Steve Greiman (Georgia Southern University) and Joe Cook (University of New Mexico). Collection and preparation of museum specimens including data collection, small mammal identification, tissue collection, endoparasite and ectoparasite collection, and study skin preparation.

Museum of Southwestern Biology (March 2017 - August 2018)

Field Biologist | El Malpais Small Mammal Survey

Small mammal zoonotic pathogen survey (under Drs. Jon Dunnun and Joseph Cook, University of New Mexico) in collaboration with the Bureau of Land Management. Data collection of species presence and abundance for suitability of future black-footed ferret reintroduction and management initiatives and collection of small mammal specimens for downstream disease screening.

Museum of Southwestern Biology (October 2017)

Volunteer | Sevilleta National Wildlife Refuge

Capture of two wolves at the Sevilleta Wolf Management Facility for vaccination and health checks.

PROFESSIONAL MEMBERSHIPS

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| 2018 - present | The Society for the Preservation of Natural History Collections |
| 2018 - present | The Society of Systematic Biologists |
| 2017 - present | The American Society of Mammologists |

PROFESSIONAL SERVICE

2020 - *present* **Committee Member** | American Society of Mammologists Nomenclatural Committee
2020 - *present* **Graduate Committee Member** | OSU Museum of Biological Diversity, Graduate
Evolution and Ecology Student Organization
2019 - *present* **President** | The Ohio State University Natural History Collections Club
2018, 2020 **Peer review** | Molecular Ecology
2020 - 2021 **Peer review** | Systematic Biology

OUTREACH AND PUBLIC SERVICE

Speaker | WestFest: West Campus Science & Sustainability Fest, Columbus, OH (September 2023)
Speaker | WestFest: West Campus Science & Sustainability Fest, Columbus, OH (September 2020)
Speaker | Natural Wonders Program, Grandview Heights Public Library, Columbus, OH (July 2020)
Speaker | Museum of Biological Diversity Open House, Columbus, OH (April 2020)
Science communicator | Podcast, Tremont Elementary School, Columbus, OH (December 2019)
Science communicator | Museum of Biological Diversity, Metro High School tour, Columbus, OH (May 2019)
Volunteer | COSI Science Festival, Big Science Celebration Exhibitor, Columbus, OH (May 2019)
Science communicator | American Museum of Natural History Dinosaur Gallery, Center for Science and
Industry, Columbus, OH (January 2019 - May 2019)
Volunteer | MBD Open House, The Museum of Biological Diversity, Columbus, OH (March 2019)
Instructor | Scientific Thinkers Afterschool Program, Mansion Day Elementary, Columbus, OH (2018 - 2019)
Judge | Worthington Science Fair, Worthington City School District, Columbus, OH (February 2019)
Instructor | Scientific Thinkers Annual Science Day, Innis Elementary, Columbus, OH (December 2018)
Speaker | LSAMP EEOB Information Session, The Ohio State University, Columbus, OH (December 2018)
Volunteer | Franklinton Friday, STEAM Factory, Columbus, OH (October 2018)
Speaker | Saturday with a Scientist, STEAM Factory, Columbus, OH (December 2018)
Volunteer | Mexican Gray Wolf Workshop, The University of New Mexico, Albuquerque, NM (May 2018)
Volunteer | Research Day Open House, The Museum of Southwestern Biology, Division of Mammals,
Albuquerque, NM (2017 - 2018)

MEDIA

The Guardian | [Hundreds of mammal species still to be identified, predict researchers](#)
Smithsonian Magazine | [Study Finds Hundreds of Mammals Are Waiting to Be Discovered](#)
New Scientist | [Why masses of new species have been staring us in the face all along](#)
Big Think | [Hope for Bigfoot hunters: Hundreds of unknown mammal species may be hidden in plain sight](#)
Mongabay | [Of rats and bats: Hundreds of mammal species still unidentified, study says](#)
Inverse | [New research reveals hundreds of “hidden” animal species may be lurking in plain sight](#)
CNET | [Hundreds of New Mammal Species Waiting to Be Discovered, Scientists Say](#)