

ALEXIS M. MYCHAJLIW

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insectivora.org

Genomes, bones, and sediments hold clues to how organisms responded to anthropogenic and climatic changes in the past. I apply a diverse methodological toolkit to reconstruct the ecological histories of extant species and communities. I then place these results in a conservation context.

APPOINTMENTS

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|--------------|---|
| 2021-present | <i>Assistant Professor, Middlebury College, Vermont, USA</i> Departments of Biology and Environmental Studies |
| 2021-present | <i>Research Associate, Smithsonian Institution, Washington DC, USA</i> Anthropology, National Museum of Natural History |
| 2019-present | <i>Research Associate, La Brea Tar Pits Museum, California, USA</i> Rancho La Brea, Natural History Museum of Los Angeles County |
| 2020-2021 | <i>Postdoctoral Research Associate, University of Oklahoma, Oklahoma, USA</i> Laboratories of Molecular Anthropology & Microbiome Research |
| 2019-2020 | <i>Postdoctoral Research Fellow, Hokkaido University, Sapporo, Japan</i> Institute of Low Temperature Science |
| 2017-2019 | <i>Postdoctoral Fellow, La Brea Tar Pits Museum, California, USA</i> Rancho La Brea, Natural History Museum of Los Angeles County |

EDUCATION

Stanford University, School of Humanities & Sciences. California, USA. 2017.

PhD in Biology (Ecology & Evolution), advisor Elizabeth A. Hadly

Dissertation Title: "From the Pleistocene to the Anthropocene: fossils, genes, and the future of Caribbean mammals"

Cornell University, College of Agriculture & Life Sciences. New York, USA. 2012.

B.S. Biological Sciences (Ecology & Evolutionary Biology)

Minors: 1. Natural Resources

2. Applied Economics & Management (Environmental & Resource Economics)

Magna cum laude with Distinction in Research

FELLOWSHIPS

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|-----------|--|
| 2019 | Japan Society for the Promotion of Science (JSPS) Short-Term Postdoctoral Fellowship |
| 2014-2017 | Stanford Interdisciplinary Graduate Fellow |
| 2015-2016 | Haas Center Graduate Public Service Fellow |
| 2014 | Stanford Graduate Fellowship in Science & Engineering (declined) |
| 2010-2012 | Biology Research Fellow, Cornell University |

PUBLICATIONS

*Indicates equal author contributions, † indicates mentored undergraduate/high school student

23. Mohammed, RS, Turner, G, Fowler, K, Pateman, M, Nieves-Colon, MA, Fanovich, L, Cooke, SB, Fitzpatrick, SM, Giovas, CM, †Stokowski, M, †Wrean, AA, *Kemp, ME, *LeFebvre, MJ, *Mychajliw, AM. 2022. Colonial legacies influence biodiversity lessons: how past trade routes

and power dynamics shape present day scientific research and professional opportunities for Caribbean scientists. The American Naturalist, *In Revision*.

22. Alagona, P & **Mychajliw, AM**. 2022. Southern California's three-bear shuffle: survival, extinction, and recovery in an urban biodiversity hotspot. Environmental History, *Accepted*.
21. Rick, TC, Braje, T, Graham, L, Easterday, K, Hofman, CA, Holguin, B, **Mychajliw, AM**, Reeder-Myers, L, Reynolds, M. 2022. Cultural keystone places and the Chumash landscapes of *Kumqaq'*, Point Conception, California. American Antiquity, *Accepted*.
20. Espino, MM, **Mychajliw, AM**, Almonte, JN, Allentoft, ME, Van Dam, AR. 2022. Raptor roosts as invasion archives: insights from the first black rat mitochondrial genome in the Caribbean. Biological Invasions, 24: 17-25.
19. **Mychajliw, AM**, Rick, TC, Dagtas, N, Erlandson, J, Culleton, B, Kennett, D, Buckley, M, Hofman, CA. 2020. Biogeographic problem-solving reveals the Late Pleistocene translocation of a short-faced bear to the California Channel Islands. Scientific Reports, 10: 15172.
18. Orihuela, J, Viñola, LW, Vázquez Jiménez, O, **Mychajliw, AM**, Hernández de Lara, O, Lorenzo, L, Soto-Centeno, JA. 2020. Assessing the role of humans in Greater Antillean land vertebrate extinctions: New insights from Cuba. Quaternary Science Reviews, 249: 106597.
17. **Mychajliw, AM**, Rice, KA, Tewksbury, LR, Southon, JR, Lindsey EL. 2020. Exceptionally preserved asphaltic coprolites expand the spatiotemporal range of a North American paleoecological proxy. Scientific Reports, 10: 5069.
16. Buckley, M, Harvey, VL, Orihuela, J, **Mychajliw, AM**, Keating, JN, Almonte, JNM, Lawless, C, Chamberlain, AT, Egerton, VM, Manning, PL. 2020. Collagen sequence analysis reveals evolutionary history of extinct West Indies Nesophontes ('island-shrews'). Molecular Biology and Evolution, doi:10.1093/molbev/msaa137
15. **Mychajliw, AM**, Mohammed RS, Rice, KA, Farrell, AB, Rincon, AD, McAfee, R, McDonald, G, Lindsey EL. 2020. The biogeography of "breas": Contextualizing the taphonomy, ecology, and diversity of Trinidad's asphaltic fossil record. Quaternary Science Reviews, 232: 106179.
14. Forbes, ES, Alagona, P, *Adams, AJ, *Anderson, SE, *Brown, KC, *Colby, J, *Cooper, SD, *Denny, SM, *Hiroyasu, EHT, *Heilmayr, R, *Kendall, BE, *Martin, JA, *Hardesty-Moore, M, ***Mychajliw, AM**, *Tyrrell, BP, *Welch, ZS. 2020. Analogies for a no-analog world: tackling uncertainties in reintroduction planning. Trends in Ecology & Evolution, 35: 551-554.
13. Kemp, ME, **Mychajliw, AM**, Wadman J, Goldberg, A. 2020. 7,000 years of turnover: historical contingency and human niche construction shape the Caribbean's Anthropocene biota. Proceedings of the Royal Society B, 287: 20200447.
12. Casewell, NR, Petras D, Card, DR, Suranse, VC, **Mychajliw, AM**, ... + 27, Turvey, ST. 2019. Solenodon genome reveals convergent evolution of venom in eulipotyphlan mammals. Proceedings of the National Academy of Sciences, 116: 25745-25755.
11. †Gibson, LM, **Mychajliw, AM**, Leon, Y, Rupp, E, Hadly EA. 2019. Using the past to contextualize the present and future distribution of an endemic Caribbean mammal. Conservation Biology, 33: 500-510.
10. Swift, J, Roberts, P, Bovin, N, ...+15 incl. **Mychajliw, AM**. Micro-methods for megafauna: novel approaches to the study of Late Quaternary extinctions and their contributions to conservation in the Anthropocene. BioScience, 69: 877-887.
9. Steadman, DW, Almonte, JN, **Mychajliw, AM**. 2019. An extinct eagle (Aves: Accipitridae) from the Quaternary of Hispaniola. Journal of Raptor Research, 53: 319-333.

8. Barnosky, AD, Hadly, EA, Gonzalez, P, Head, J, Polly, D, Lawing, AM, Eronen, J, ...+30 incl. **Mychajliw, AM**. 2017. Merging paleontology with conservation biology to guide the future of terrestrial ecosystems. Science, 355: 594.
7. *Cooke, SB, *Davalos, LM, **Mychajliw, AM**, *Turvey, ST, & *Upham, N. 2017. Anthropogenic extinction dominates Holocene declines of West Indian mammals. Annual Review of Ecology, Evolution, & Systematics, 48: 301-327.
6. Cooke, SB, **Mychajliw, AM**, Southon, J, & MacPhee, RDE. 2017. Jamaica's last monkey: the extinction of *Xenothrix mcgregori*. Journal of Mammalogy, 98: 937-949.
5. Solari, KA, *Frank, HK, *Frishkoff, LO, *Hsu, JL, *Kemp, ME, **Mychajliw, AM**, & Hadly, EA. 2016. Opportunity for some, extinction for others: the fate of species in the Anthropocene. Evolutionary Ecology Research, 17:787-813.
4. Lyons, SK, Miller, JH, Fraser, D, Smith, FA, Boyer, A, Lindsey, E, & **Mychajliw, AM**. 2016. The changing role of mammal life histories in late Quaternary extinction vulnerability on continents and islands. Biology Letters. doi:10.1098/rsbl.2016.0342
3. *Goldberg, A, **Mychajliw, AM**, & Hadly, EA. 2016. Post-invasion demography of prehistoric humans in South America. Nature, 532: 232-235.
2. **Mychajliw, AM**, Kemp, ME, & Hadly, EA. 2015. Using the Anthropocene as a teaching, communication, and community engagement opportunity. The Anthropocene Review, 2:267-278.
1. **Mychajliw, AM** & Harrison, RG. 2014. Genetics reveal the origin and timing of a cryptic insular introduction of muskrats in North America. PLoS One, 9:e111856.

Book Chapters

4. Rick TE, Hofman, CA, & **Mychajliw, AM**. Expected 2022. Historical ecology. Book chapter in: The Oxford Handbook of Island & Coastal Archaeology (Eds. Erlandson, J & Fitzpatrick, S), Oxford University Press.
3. **Mychajliw, AM**. Expected 2022. Terrestrial mammals. Book chapter in: The Living Planet: The Present State of the World's Wildlife (Ed. Maclean, N), Cambridge University Press.
2. **Mychajliw, AM** & Jefferson, TA. Expected 2022. Marine mammals: exploited for centuries, but still holding on. Book chapter in: The Living Planet: The Present State of the World's Wildlife (Ed. Maclean, N), Cambridge University Press.
1. **Mychajliw, AM**, Kemp, ME, Truebe, ST, & Hadly, EA. 2016. A geographic approach to teaching and communicating global change in California. Book chapter in: STEM and GIS in Higher Education (Ed. Cowen, DJ), ESRI Press.

Commentaries & Letters to the Editor

1. *Dávalos, LM, *Austin, RM, *Balisi, MA, *Begay, RL, *Hofman, CA, *Kemp, ME, *Lund, JR, *Monroe, C, **Mychajliw, AM**, *Nelson, EA, *Nieves-Colón, MA, *Redondo, SA, *Sabin, S, *Tsosie, K, *Yracheta, JM. 2020. Pandemics' historical role in creating inequality. Science, 368: 1322-1323.

Book Reviews

2. **Mychajliw, AM**. 2021. Quaternary ecology, evolution, and biogeography. Quarterly Review of Biology, 96: 147.
1. **Mychajliw, AM**. 2019. Smilodon: the iconic sabertooth. Journal of Mammalogy, 100: 2002-2004.

RESEARCH FUNDING

Co-Principal Investigator

- 2021 **NSF Directorate for Geosciences**
Dynamics of Integrated Socio-Environmental Systems (\$1,551,062)
Cultural resilience and shifting baselines of the North American fur trade
- 2021 **Conservation Paleobiology Network (NSF – Research Coordination Network)**
Funded working group with research and community engagement components (\$21,000)
Leveraging lessons of the North American fur trade: integrated cultural and biological legacies
- 2021 **Conservation Paleobiology Network (NSF – Research Coordination Network)**
Funded working group with research and community engagement components (\$18,872)
Conservation decision-making in the insular Anthropocene: finding & restoring the Bahama Archipelago's lost ecosystems
- 2018 **National Socio-Environmental Synthesis Center (SESYNC) Pursuit**
Funding for 15 participants travel, accommodations for 3 meetings over 2 years (>\$30,000)
The death and life of biodiversity: modeling extinction and resilience on islands
- 2016 **NSF Division of Environmental Biology, Population & Community Ecology Program**
Doctoral dissertation improvement grant (\$20,464)
Investigating species interactions across 15,000 years of extinctions and invasions: an isotopic approach

Research Grants

- 2020 University of Oklahoma Libraries Open Access Fund (\$1,500)
- 2019 National Geographic Early Career Grant (\$7,000)
- 2019 Paleontological Society Norman Newell Early Career Grant (\$5,000)
- 2019 Evolving Earth Foundation Grant (\$2,700)
- 2019 The Explorers Club – Mamont Scholar Grant (\$2,780)
- 2018 Society for Science & the Public Advocate Grant (\$3,000)
- 2016 Lewis & Clark Fund for Exploration & Field Research (\$4,500)
- 2016 American Society of Mammalogists Grant in Aid of Research (\$550)
- 2016 Center for African Studies Graduate Research Grant, Stanford (\$3,500)
- 2016 Center for Latin American Studies Field Research Grant, Stanford (\$900)
- 2014 Community Engaged Research Fund, Stanford Humanities & Sciences (\$2,500)
- 2014 Center for Computational, Evolutionary, and Human Genomics, Trainee Grant (\$7,250)
- 2013 Paleontological Society Outreach Grant (\$3,000)
- 2011 Dextra Undergraduate Research Fund (\$1,300)
- 2010 Rawlings Cornell Presidential Research Scholarship (\$5,000)

Awards

- 2020 Raymond M. Alf Award for Excellence in Paleontological Research & Education
- 2017 Romer Dissertation Prize Finalist, Society for Vertebrate Paleontology
- 2016 Student Public Policy Award, American Society of Mammalogists
- 2016 Denise Gaudreau Award for Excellence in Quaternary Studies, American Quaternary Association
- 2013 NSF Graduate Research Fellowship, Honorable Mention
- 2012 NSF Graduate Research Fellowship, Honorable Mention
- 2008 Intel Science Talent Search National Winner, 9th Place

TEACHING EXPERIENCE

Teaching Awards

- Biosciences Excellence in Teaching Award, Stanford School of Medicine
- Norman K. Wessells Award for Outstanding Teaching, Stanford Department of Biology
- Departmental Excellence in Teaching Award, Stanford Department of Biology
- Community Engaged Learning and Research Course Grant Award, Haas Center (\$4,045)

Instructor

Middlebury College

Biol 308. Mammalogy. (Fall 2021)
Biol 392. Conservation Biology. (Spring 2021)
Envs 112. Introduction to Natural Sciences & the Environment. (Spring 2021)
Envs 401. Community Engaged Practicum. (Fall 2021)

Institute for Field Research - Archaeology Field Schools

Arch 300K. *Conservation Paleoecology at the La Brea Tar Pits*. (4 weeks, 2019)
Managed 10 staff members and 12 students. Oversaw teaching of excavation and site maintenance, geologic mapping and stratigraphic methods, microfossil sorting, asphalt cleaning, specimen accessioning. Developed lectures, field trip, and assignments, including overarching theme of informing conservation decision-making in California.

University of the West Indies, St. Augustine, Trinidad & Tobago

UWIZM. *Asphaltic Environments: Ecology, Geology, and Taphonomy*. (2 weeks, 2019)
Instructor in partnership with staff at the University of the West Indies Zoology Museum. Lecture, field, and lab components. 40 students: undergraduate and masters.

Girls Academic Leadership Academy, Los Angeles, California

GALA. *Introduction to Methods in Scientific Research*. (1 semester, 2018)
Led a daily class at an all-girls high school (galacademy.org) in partnership with AP Biology teacher (see *Mentorship* section). Taught topics in ecology, connected students with diverse female mentors, and built confidence in STEM and public speaking.

Stanford University

Bio 128. *Geographic Impacts of Global Change: Mapping the Stories*. (2 quarters, 2014; 2015)
Co-developer of course, with community partners at Governor's Office of California and White House National Security Council. Taught the scientific principles of global change, stakeholder engagement, environmental justice, and bridging the science-policy gap. Syllabus, student podcasts, ArcGIS Story Maps, reflection prompts publicly available: <http://www.mappingglobalchange.org/teaching-materials.html>

Teaching Assistantships

Stanford University

Bio 43. Ecology, Evolution & Plant Biology. (1 quarter; 2014)
Bio 101. Ecology. (1 quarter; 2013)

Cornell University

BioMG 1250. Personal Genomics & Medicine. (2 semesters; 2011, 2012)
BioSM 1780. Evolution & Marine Diversity. (intensive field course- Shoals Marine Lab, 4 weeks; 2012)
BioEE 2740. Vertebrates: Structure, Function, Evolution. (2 semesters; 2010, 2012)
BioEE 2780. Evolutionary Biology. (3 semesters; 2009, 2010)

ADVISING & MENTORSHIP

Undergraduate Thesis/Senior Project Students

Middlebury College:

Audrey Hsi, Ezra Magee, Emma Norton, Olivia Olson

Stanford University:

Laura Cussen [**Honors-2015**], Lauren Gibson [**Honors-2017**], Charlie Jiang, Shane Johnson, Sijo Smith, Delaney Sztraicher [**Honors-2015**]

Universidad Autónoma de Santo Domingo, Dominican Republic:

Maria Caridad Novas [**Thesis-2017**]

High School Science Fair Projects

Girls Academic Leadership Academy & Society for Science and the Public, Los Angeles:

- Independently developed an externally funded high school science research program for 6 low-income/ underrepresented minority female students [2018-2019]
- Students pursued independent research at the La Brea Tar Pits & Museum
- Participated in the Google Science Fair, Los Angeles County Science & Engineering Fair

University Mentorship Programs

(#) Indicates number of students worked with:

- Middlebury Summer Undergraduate Research (1)
- Biology Student Advisor, Undergraduate Office of Biology, Cornell (20)
- East Palo Alto Tennis & Tutoring, Stanford-High School Partnership (1)
- Internship in Human Biology, Undergraduate Human Biology Program, Stanford (1)
- Mentoring Undergraduate Interdisciplinary Research program, Woods Institute, Stanford (2)
- Stanford @ COP21 Undergraduate Paris Climate Research, Stanford (1)
- Stanford Storytelling Project (1)
- Senior Reflection in Art & Science, Department of Biology, Stanford (1)
- Vice Provost for Undergraduate Education, Stanford, Summer Research Internship (4)
- Volpert Scholar in Earth Systems Undergraduate Summer Research, Stanford (1)

RESEARCH QUALIFICATIONS

Active International Field Sites

- 2018-present **Trinidad & Tobago – supported by National Geographic**
Dynamics of past and present biodiversity
Forest Reserve, Aripo Savannah, Massey Energy Fields
Research Partner: University of the West Indies Zoology Museum
- 2013-present **Dominican Republic**
Conservation and paleoecology of endemic vertebrates
La Selle- Jaragua- Bahoruco- Enriquillo UNESCO Biosphere Reserve
Research Partners: Grupo Jaragua (local conservation NGO)
Museo Nacional de Historia Natural of Santo Domingo

US Field Experience

- 2021-present **New England**, Vermont, coastal and insular Maine
- 2017-2019 **Rancho La Brea, Los Angeles**, La Brea Tar Pits & Museum
- 2009-2011 **Isles of Shoals, Gulf of Maine**, Shoals Marine Laboratory
- 2008-2010 **New York & Kings Counties, New York**, New York City Audubon Society
- 2006-2008 **Greene County, New York**, Siuslaw Model Forest – Agroforestry Resource Center

Specialized Technical Training

- National Geographic “Sciencetelling” Bootcamp
- UC Irvine Keck Accelerator Mass Spectrometry Facility
- Stanford University Stable Isotope Biogeochemistry Lab
- Centre for GeoGenetics, Denmark
- Bodega Bay Phylogenetics Workshop

FIRST-AUTHOR PRESENTATIONS

Plenary Addresses

- 2019 Invited Plenary Speaker, **The Wildlife Society**, Yosemite, California
“Of creatures huge, fierce, and strange: the Pleistocene roots of our Anthropocene extinctions in

North America

Chaired Symposia

- 2018 **Joint Meeting of the Canadian and American Quaternary Associations**
"Island biogeography in a changing world: an interdisciplinary roadmap from the Quaternary"
- 2017 **12th International Mammalogical Congress**
"From the Pleistocene to the Anthropocene: the future of Caribbean mammals"

Select Invited Presentations

- 2021 Invited Participant, **16th Annual Early Career Scientists Symposium, University of Michigan.**
"Conflicts in context: natural history collections as archives of human-carnivore interactions through time"
- 2020 Invited Speaker, **Geological Society of Washington**, virtual meeting.
"Tar pit" time capsules: reconstructing Trinidad's Late Pleistocene ecosystems with fossils trapped in asphalt"
- 2019 Invited Animal Ecology Seminar, **School of Environmental Sciences, Hokkaido University**, Japan.
"Fossils are data too! Studying natural experiments from historical and paleontological records"
- 2019 Invited Seminar, **Hokkaido University Museum**, Sapporo, Japan.
"What can ice age fossils tell us about California's extinct ecosystems and brown bears?"
- 2019 Invited Symposium Participant, **North American Paleontological Convention.**
"Holocene arrival and historic loss of the California grizzly bear: Bridging timescales of decline in the 6th mass extinction"
- 2019 Invited Speaker, USC Paleosciences Research Consortium, **University of Southern California.**
"Recent extinctions & current threats: using the fossil record to guide conservation of Caribbean biodiversity"
- 2019 Invited Talk, **Colgate University**, Hamilton, New York.
"Breas, bears & bones: global change lessons from the Quaternary"
- 2019 Invited Talk, **California State University - Channel Islands**, Camarillo, California.
"Changing climates, shifting baselines: the hidden ecological experiments of the historic & fossil records"
- 2018 Invited Talk, **Colby College**, Waterville, Maine.
"What makes a survivor? Using past ecological experiments to avert extinction in the Anthropocene"
- 2018 Invited Talk, **Natural Areas Association Conference**, University of Indiana.
"Fossil and historic collections reveal the ecological legacy of California's lost bears"
- 2018 Invited Talk, **Cheadle Center for Biodiversity and Ecological Restoration**, UC Santa Barbara.
"Fossil and historic collections reveal the ecological legacy of California's lost bears"
- 2018 Featured Presentation, **Biodiversity Heritage Library Annual Meeting**, Los Angeles County Museum of Natural History.
"Eyewitness to extinction: BHL documents the consequences of the Columbian exchange"
- 2017 Invited Talk & Workshop Participant, in: "Megafauna & Methods", **Max Planck Institute for the Science of Human History**, Jena, Germany.
"Mammals, humans, and climate: Caribbean extinctions as a model counterpart to continents"
- 2016 Invited Talk & Symposium Participant, in: "Humanos, cambios climáticos y extinciones".

IX Congreso Latinoamericano de Paleontología, Lima, Peru.
"The relative roles of climate and culture in Late Pleistocene/Holocene human demography"

2015 Invited Talk & Panelist, **UC Berkeley Global Change Biology Center**: Integrating biology and paleobiology to enhance conservation of terrestrial ecosystems on a rapidly changing planet.
"A Role for Ataxic Metrics in Conservation – Island Systems"

Select Presentations & Posters

- 2020 Talk, **North American Congress for Conservation Biology**, virtual meeting.
"Paleobiology in Novel Ecosystems: lessons for conservation from beneath the pavement"
- 2020 Talk, **Latin American & Caribbean Conservation Biology Congress**, virtual meeting.
"Trinidad's tar pit time capsules: what can past responses to climate change tell us about the future?"
- 2020 Talk, **Society of Vertebrate Paleontology**, virtual meeting.
"Ecology and biogeography of an unexpected short-faced bear (Arctodus simus) from the California Channel Islands"
- 2020 Talk, **EcoMunch Seminar Series**, Department of Biology, University of Oklahoma.
"A tale of three bears: extinction, survival, and re-wilding in Southern California"
- 2020 Talk, **4th Annual Digital Data Conference**, iDigBio, virtual meeting.
"Paleobiology in Novel Ecosystems: lessons for conservation from beneath the pavement and diverse digital data sources"
- 2019 eLightening Session, **American Geophysical Union**, Fall Meeting, San Francisco, CA, USA.
"Stable isotope analysis of asphaltic coprolites reveals stability of woodrat diet (Neotoma sp.) from Rancho La Brea, Los Angeles"
- 2018 Talk, **Latin American & Caribbean Conservation Biology Congress**, University of the West Indies.
"Recent extinctions & current threats: using the fossil record to guide conservation of Caribbean biodiversity"
- 2018 Talk, **American Society of Mammalogists**, Kansas State University.
"Paleoecology of a Pleistocene woodrat (Neotoma) midden from the La Brea Tar Pits"
- 2017 Romer Prize Session Talk, **Society of Vertebrate Paleontology**, Calgary, Canada.
"Fossils, feces, & the future: a 20,000 year experiment of mammalian extinctions on islands"
- 2017 Talk, **International Mammalogical Congress**, Perth, Australia.
"Genomic and isotopic approaches reveal mechanisms of persistence in the endemic Hispaniolan solenodon"
- 2017 Talk, **IX Congreso de la Biodiversidad Caribeña**, Santo Domingo, Dominican Republic.
"La flexibilidad dietética promueve la supervivencia de un mamífero relictual, el solenodonte"
- 2016 Colbert Poster Prize Session, **Society of Vertebrate Paleontology**, Salt Lake City, Utah.
"What is 'natural' after 10,000 years of extinction and invasion? Conservation paleobiological approaches in Parque Nacional Jaragua, Dominican Republic"

Facilitated Workshops

- 2020 Student Conference on Conservation Science, American Museum of Natural History.
"From the modern to millennia: temporal techniques for the conservation biologist's toolkit"

OUTREACH

District, County, & State Science Fair Judge – Animal Science, Zoology, Ecology, Chemistry
California State Science Fair • Gaspar de Portola Middle School Science Fair • Hollywood High School
Projects • Intel International Science & Engineering Fair • Los Angeles County Science & Engineering Fair •
Orange County Science & Engineering Fair • Riverside County Science & Engineering Fair

Women in Science

Daises Dig Dire Wolves – Programming for Girl Scout troops that includes hands-on microfossil sorting and exposure to fossil excavations at the La Brea Tar Pits

Project STEM – Guest “STEM Superstar” for Predators Week; Virtual lunch talks during COVID-19

Office of Los Angeles Mayor WiSTEM Initiative – Participant in women in science community events

K-12 Outreach

Skype a Scientist – Skype with classes grades K-12 across US, featuring natural history specimen props

Adventures in Nature, Jr. Scientist Programs– Act as visiting scientist to lead owl pellet dissections and other interactive activities for student events at Natural History Museum of Los Angeles County

Career Days – Participate in local career days at elementary schools in Los Angeles

International Science & Engineering Fair (ISEF) – Selected to serve as “adult in charge” mentor for California delegation of 7 high school students to ISEF

- Volunteer as ISEF 2021 Grand Awards judge (virtual)

National Geographic Explorers in the Classroom – delivered presentation over Zoom/YouTube Live; received 1,000+ views

Podcast, Media, & TV Appearances

Generation Anthropocene Podcast – “The Survivor”

Science... Sort of Podcast – “LOST”

Geovida – TV program in the Dominican Republic. Guest for discussion on Caribbean extinctions

Travel Channel – Guest expert for program on Late Pleistocene ecosystems of North America

ArcLight Theaters Hollywood – Panelist for documentary “Inventing Tomorrow” by Fishbowl Films

Museum Engagement & Informal Education

Exhibit Development – Contributed to museum exhibits about native mammals at the Museo del Hombre and the Museo Nacional de Historia Natural in the Dominican Republic, including 3D printing

Behind the Scenes Tours – Regularly lead tours for diverse audiences at the La Brea Tar Pits & Museum

Community Events – Develop booth programming based on active research, for events such as Nature Fest, Haunted Museum, and Dino Fest at the Natural History Museum of Los Angeles County

Docent Training – Develop lecture programming to train museum docents on paleoecology, natural selection, adaptation, and current research at the La Brea Tar Pits

General Public Speaking

2021 Capacity Building Fossil Workshop, **National Trust of Trinidad & Tobago**.

2021 Fossil Friday Chat, **Western Science Center and Alf Museum of Paleontology**, California.

2021 Yosemite Forum, **Yosemite National Park**, Resources Management and Science, California.

2021 Nightlife – Night School, **California Academy of Sciences**.

2020 Volunteer Seminar Series, **Sam Noble Museum of Natural History**, Oklahoma.

2020 Yukon Public Lecture Series, **Yukon Beringia Interpretive Centre**.

2019 Explorer Spotlight, **National Geographic Headquarters**.

2019 Natural History Public Lecture Series, **Pacific Grove Museum of Natural History**.

2019 Technical Symposia, **Intel International Science & Engineering Fair**. (high school students)

- 2018 Members Lecture Series, **Geological Society of Trinidad & Tobago**.
- 2017 Yukon Public Lecture Series, **Yukon Beringia Interpretive Centre**.
- 2015 Plagiodontia Public Lecture Series, **Museo Nacional de Historia Natural**, Dominican Republic.

Class Guest Lectures During COVID-19

Chapman University; Northern Virginia Community College; Turkana University College (Kenya); University of Oklahoma; University of Texas, Austin; University of the West Indies, St. Augustine

POLICY & SOCIETAL CONTEXT

International Union for the Conservation of Nature (IUCN)

Contributor to IUCN Small Mammal Specialist Group species assessments
 Reviewer for State of Protected Areas Report for Wider Caribbean, IUCN official report

Stakeholder Analysis of Endangered Species Act

Policy assessment and role of judicial review in gray wolf de-listing, Cornell in Washington

Story Mapping Global Change, ArcGIS Story Maps

Mapped geo-referenced media articles and stakeholder interview podcasts about global change, tailored to needs of Governor's Office of CA and White House National Security Council

Federal Science Funding

Participant in Biological & Ecological Sciences Coalition congressional visit days

California Grizzly Bear Reintroduction

Provide scientific data for that may inform considerations to for critical habitat for *Ursus arctos* in California

PROFESSIONAL SERVICE

Ongoing

- 2021- Mammal scientific advisory group, state of Vermont
 2020- Newsletter editor, Conservation Paleobiology Network (conservationpaleorn.org)
 2020- Research presentation, symposia, and travel scholarship reviewer, Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS)
 2019- Member, IUCN Small Mammal Specialist Group (Species Survival Commission)
 2018- Data steward, FAUNMAP constituent database of Neotoma Paleocology Database
 2018- Biodiversity committee, American Society of Mammalogists

One Time

- 2021 Session reviewer, The National Diversity in STEM (NDiSTEM) Digital Conference
 2021 American Society of Mammalogists conference student mentor and presentation judge
 2020 Scientific committee, 2nd Paleontological Virtual Congress (palaeovc.uv.es)
 2019 Applicant selection committee, NSF intern program, La Brea Tar Pits & Museum
 2017 Graduate student feedback coordinator, Stanford Evolution Faculty Search
 2016 Applicant selection committee, Haas Public Service Fellowship
 2016 Departmental teaching assistant mentor, Department of Biology
 2015 Host/visa sponsor for international visiting scholar from Dominican Republic
 2013-2015 PhD admission weekend committee, Department of Biology

Peer reviewer for: American Museum Novitates, Ecography, Ecology and Evolution, Global Ecology & Conservation, International Journal of Osteoarchaeology, Journal of Biogeography, Journal of Human Evolution, Journal of Mammalogy, Novitates Caribaea, PeerJ, Philosophical Transactions of the Royal Society B, PLoS One, Proceedings of the Royal

Society B, Quaternary Science Reviews, Royal Society Open Science, Science, The Anthropocene Review