

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

## APPOINTMENTS

---

- 2017-present      **Postdoctoral Fellow, La Brea Tar Pits & Museum**  
Holocene paleoecology and conservation biology of California vertebrates.
- 2019-present      **Research Affiliate, University of Southern California**

## EDUCATION

---

- Stanford University, School of Humanities & Sciences.** California, USA. 2017.  
PhD in Biology (Ecology & Evolution)  
Advisor: Elizabeth A. Hadly  
*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

---

- 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 student

11. Steadman, DW, Almonte, JN, **Mychajliw, AM**. 2019. An extinct eagle (Aves: Accipitridae) from the Quaternary of Hispaniola. Journal of Raptor Research, *Accepted*.
10. †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, *Online Early View*, <https://doi.org/10.1111/cobi.13290>.
9. \*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.
8. Cooke, SB, **Mychajliw, AM**, Southon, J, & MacPhee, RDE. 2017. Jamaica's last monkey: the extinction of *Xenothrix mcgregori*. Journal of Mammalogy, 98: 937-949.
7. 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.

6. 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.
5. 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
4. **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.
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.

*Manuscripts in Revision, Submitted, & in Preparation (available upon request)*

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 – In Revision

**Mychajliw, AM**, Koenigs, CK, Hadly, EA. Insectivory promotes broad isotopic niches for an endangered mammal across seasons and tissue types in a mosaic landscape. – *In Submission*

**Mychajliw, AM**, Bohmann, K, Nielsen, M, Martinez, P, Rupp, E, Hadly, EA. Fecal metabarcoding illuminates dietary generalism as a mechanism for persistence in an endangered mammal, the Hispaniolan Solenodon. – *In Submission*

**Mychajliw, AM** & Hadly, EA. Historic and ancient DNA uncovers high Holocene genetic diversity prior to range fragmentation in a “last survivor”, the Hispaniolan Solenodon. – *In Submission*

Buckley M, Harvey VL, Orihuela J, **Mychajliw, AM**, Hadly EA, Almonte JN, Lawless C, Chamberlain AT, Egerton VM, Manning PL. Evolutionary history of the extinct 'island shrews' (Nesophontes) from collagen sequence analysis. – *Submitted*

## RESEARCH FUNDING

---

### *Co-Principal Investigator*

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*

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*

- 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, 9<sup>th</sup> 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**)

### *Courses Taught*

#### **Instructor of Record, Stanford University**

- Bio 128. **Geographic Impacts of Global Change: Mapping the Stories.** (2 quarters, 2014; 2015)  
 Instructor of record, co-developer of course, with community partners at Governor's Office of California and White House National Security Council. Documents and course products, including syllabus, podcasts, ArcGIS Story Maps, publicly available: <http://www.mappingglobalchange.org/teaching-materials.html>

#### **Teaching Assistant, Stanford University**

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

#### **Teaching Assistant, Cornell University**

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

### *Guest Lectures*

#### **Institute for Field Research**

- ARCH 300K Introduction to Paleoecology; Conservation and Rancho La Brea Research (2018)  
 Developed full-day, hands-on "Sediment Grain Analysis" lab activity

#### **University of Southern California**

- CORE 103 La Brea Tar Pits: A Window into the Past and a Guide for the Future (2017-8)

#### **La Brea Tar Pits & Museum – Docent Training**

- Paleoecology, Research at La Brea, Natural Selection, Adaptation (quarterly)

## RESEARCH QUALIFICATIONS

---

### *Active International Field Sites*

- 2013-present **Dominican Republic**  
 La Selle- Jaragua- Bahoruco- Enriquillo UNESCO Biosphere Reserve

*Research Partners:* Grupo Jaragua (conservation NGO)  
Museo Nacional de Historia Natural of Santo Domingo

2018-present **Trinidad & Tobago**  
Forest Reserve and Petrotrin Oil Fields  
*Research Partners:* University of the West Indies

*Northeastern US Field Experience*

2009-2011 **Isles of Shoals, Gulf of Maine**  
*Organization:* Shoals Marine Laboratory

2008-2010 **New York & Kings Counties, New York**  
*Organization:* New York City Audubon Society

2006-2008 **Greene County, New York**  
Siuslaw Model Forest – Agroforestry Resource Center  
*Organization:* Cornell Cooperative Extension

*Specialized Technical Training*

2017- UC Irvine Keck Accelerator Mass Spectrometry Facility  
2016-2018 Stanford University Stable Isotope Biogeochemistry Lab  
2016 Centre for GeoGenetics, Denmark

## FIRST-AUTHOR PRESENTATIONS

---

*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 **12<sup>th</sup> International Mammalogical Congress**  
*“From the Pleistocene to the Anthropocene: the future of Caribbean mammals”*

*Select Invited Presentations*

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 Speaker, Natural History Public Lecture Series, **Pacific Grove Museum of Natural History**.  
*“Unearthing the California Grizzly”*

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”*

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 Technical Session, **Geological Society of Trinidad & Tobago**.  
*“La Brea in LA: 150 years of excavation in asphalt”*

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"*
- 2015 Invited Talk, Plagiodontia Lecture Series, **Museo Nacional de Historia Natural**, Santo Domingo, Dominican Republic.  
*"¿Quién murió y cuando? El desarrollo de una cronología y el modelo de la dinámica de extinción en los mamíferos del Caribe"*

#### *Select Presentations & Posters*

- 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"*
- 2013 Poster, **Student Conference on Conservation Science**, American Museum of Natural History.  
*"Integrating ancient and modern DNA to conserve a "living fossil" mammal, the Solenodon"*
- 2012 Poster, **American Society of Mammalogists**, Reno, Nevada.  
*"Origin and timing of a recent insular colonization of muskrats, Ondatra zibethicus"*

## ADVISING & MENTORSHIP

---

### *Undergraduate Thesis/Project Students*

#### **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, Los Angeles:**

Developed an externally funded high school science research program for 6 low-income/underrepresented minority female students. Students pursued independent research at the La Brea Tar Pits & Museum and received mentorship in STEM career pathways. They participated in the Google Science Fair and the Los Angeles County Science & Engineering Fair [2018-2019]

## *Mentorship Programs*

(#) Indicates number of students worked with:

- Biology Student Advisor, Undergraduate Office of Biology, Cornell (20)
- 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)

## OUTREACH

---

### *District, County, & State Science Fair Judge – Zoology, Ecology, Chemistry*

California State Science Fair • Gaspar de Portola Middle School Science Fair • Hollywood High School Senior Projects • 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, using fossil cast props

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

### *K-12 Outreach*

**Skype a Scientist** – Skype with classes grades 4-7 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” chaperone for California delegation of high school students to ISEF [upcoming 2019]

### *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 human colonization of North America

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

### *Museum-Based Community 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

## PROFESSIONAL SERVICE

---

2018-	Data steward, FAUNMAP constituent database of Neotoma Paleoecology Database
2018-	Biodiversity committee, American Society of Mammalogists
2017-	Museum donor engagement, including lectures and behind-the-scenes tours
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, Journal of Human Evolution, Journal of Mammalogy, Novitates Caribaea, Philosophical Transactions of the Royal Society B, PLoS One, Royal Society Open Science, The Anthropocene Review

## **POLICY IMPACTS**

---

### **International Union for the Conservation of Nature (IUCN)**

Contributor to IUCN Small Mammal Specialist Group species assessments

### **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