

Jenny L. McGuire
Spatial Ecology & Paleontology Lab
Georgia Tech

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Jenny L. McGuire
Spatial Ecology & Paleontology Lab
<http://www.mcguire.gatech.edu>

Assistant Professor
School of Biological Sciences (75%)
School of Earth & Atmospheric Sciences (25%)
Georgia Institute of Technology

Contact information:
jmcguire@ gatech.edu
310 Ferst Drive
Atlanta, Georgia 30332

I. Earned Degrees

- 2010 **PhD in Integrative Biology**
University of California, Berkeley
Advisor: Anthony Barnosky
Dissertation: The effects of Quaternary environmental changes on *Microtus* distribution and morphology
- 2002 **Bachelor of Sciences in Earth & Ocean Sciences, Highest Distinctions**
Duke University, Advisor: Bruce Corliss
Thesis: The distribution of marsh foraminifera in Beaufort, NC: implications for sea level studies **Bachelor of Sciences in Biological Anthropology & Anatomy**
Duke University, Mentor: Steve Churchill

II. Employment History

- 2017- **Assistant Professor**
School of Biological Sciences (75%), School of Earth and Atmospheric Sciences (25%)
Georgia Institute of Technology
- 2014-2017 **Independent Research Scientist II**
School of Biological Sciences, Georgia Institute of Technology
- 2012-2014 **Postdoctoral Research Associate**
Landscape Ecology and Conservation Lab
School of Environmental and Forest Sciences, University of Washington
Advisor: Joshua Lawler
Projects: Tracing climate connectivity on a fragmented landscape; Using landscape diversity as a way to conserve biodiversity
- 2010-2012 **Postdoctoral Research Fellow**
National Evolutionary Synthesis Center (NESCent), Durham, NC
Mentors: V. Louise Roth & Todd Vision
Projects: Improving the performance of distribution models using the paleontological record

III. Honors and Awards

2020	Georgia Tech Packard Submission
2020	NSF CAREER Award
2018	Georgia Tech Class of 1969 Teaching Fellow
2018	Georgia Tech Grand Challenges Faculty Fellow
2018	Georgia Tech Climate Change Fellow
2018	Georgia Tech Thank-a-Teacher Certificate
2010	National Evolutionary Synthesis Center Postdoctoral Fellowship
2009	George D. Lauderback Award for outstanding graduate research and fieldwork.
2010	Junea W. Kelly Museum of Vert. Zoology Research Fellowship
2006 & 2009	National Science Foundation GK-12 Graduate Fellow (06-07 & 08-09)
2008	Gray Endowment Summer Research Fellowship
2008	National Sigma Xi Grant
2007	Berkeley Sigma Xi Grant.
2007	UC Museum of Paleontology Welles Fund Grad. Student Research Award
2007	Teaching Effectiveness Award. UC Berkeley.
2007	Outstanding Graduate Student Instructor Award. UC Berkeley.
2002	Graduation with Highest Distinctions in Earth and Ocean Sciences.
2002	Estwing Award for outstanding achievement in earth and ocean sciences.

IV. Research, Scholarship, and Creative Activities

A. Published Books, Book Chapters, and Edited Volumes

List all books or parts of books published. Include only those accepted or in-press and indicate their status.

A1. Books- No Data

A2. Refereed Book Chapters- No Data

A3. Edited Volumes- No Data

B. Refereed Publications and Submitted Articles

* completed at	^{PD} GT	^{GS} GT grad	^{UG} GT	^{LT} GT lab
GT	postdoc	student	undergrad	tech

h-index: 16 5694 citations since 2010 (as of 29 August 2022)

Lab website: <http://www.mcguire.gatech.edu>

Google Scholar Profile:

<https://scholar.google.com/citations?user=ARE8TKQAAAAJ&hl=en>

ORCID: <https://orcid.org/0000-0002-0663-6902>

ResearchGate: https://www.researchgate.net/profile/Jenny_Mcguire2

B1. Published and Accepted Journal Articles (31 total, 18 from GT)

- In press Wang, Y.^{PD}, Pineda Munoz, S.^{PD}, McGuire, J.L. Plant migrations maintain climate fidelity in the face of dynamic climate change. *PNAS*.
- This is the first major result of the 'niche dynamics/climate fidelity' portion of my NSF CAREER. Postdoc Yue Wang and I both had substantial intellectual contributions to this project and both contributed equally to writing. I conceptualized the project, while Yue did most of the coding and analyses. Former postdoc Silvia Pineda Munoz consulted on methods and edited the paper.*
- *2022 McGuire, J.L., Woodruff, A.^{LT}, Iacono, J.^{GS}, **Sethna, J.^{UG}**, **Schap, J.^{GS}** Redman, C., Meachen, J. Evaluating the taphonomic consistency of microvertebrate assemblages at Natural Trap Cave, Wyoming, USA. *Quaternary International*.
<https://doi.org/10.1016/j.quaint.2022.02.009>
- This research forms the foundation for Natural Trap Cave community composition analyses. Fossil Wednesday/Friday events have been crucial to data gathering. Undergraduates, graduate students, and a lab tech employed at GA Tech have also contributed significantly. J Meachen runs the Natural Trap Cave Site and CR collected many bags of microvertebrate matrix. Grad student J. Schap is taking over this project going forward. Published in NTC Special Feature, which I co-edited.*
- *2022 Lovelace, D., Redman, C., Schubert, B., Mahan, S., Minkley, T., Wood, J.R., McGuire, J.L., Laden, J., Meachen, J.A. An age-depth model and revised stratigraphy of vertebrate-bearing units in Natural Trap Cave, Wyoming. *Quaternary International*.
<https://doi.org/10.1016/j.quaint.2022.02.008>
- This is a collaborative project examining and evaluating the dating and stratigraphy of Natural Trap Cave. It was submitted to a special edition of QI about Natural Trap Cave, which I co-edited.*
- *2022 Mahan, S., Wood, J.R., Lovelace, D., Laden, J., McGuire, J.L., and Meachen, J.A. Luminescence ages and new interpretations of the timing and deposition of Quaternary sediments at Natural Trap Cave, Wyoming. *Quaternary International*. <https://doi.org/10.1016/j.quaint.2022.01.005>
- This is a collaborative project examining and evaluating the dating and stratigraphy of Natural Trap Cave. It was submitted to a special edition of QI about Natural Trap Cave, which I co-edited.*

- *2022 **Shipley, B.R.^{GS}, Bach, R.^{UG}, Do, D.^{UG}, Strathearn, H.^{UG}, McGuire, J.L.[¶], Dilkina, B.[¶]** megaSDM: integrating dispersal and time-step analyses into species distribution models. *Ecography*. <https://doi.org/10.1111/ecog.05450>
- This is the result of a collaboration between JM & BD. The R Package was developed by a two undergraduate College of Computing students RB & DD. HS was an REU student who collected dispersal data. MR is an undergrad in our lab who has helped with beta testing and programming. BS is a graduate student under the supervision of JM, who significantly overhauled the program and wrote the paper.*
- [¶]*JM & BD are co-senior authors, both having contributed significant mentorship on this project.*
- *2021 **Shipley, B.R.^{GS} & McGuire, J.L.** Interpreting and integrating multiple endemism metrics to identify hotspots for conservation priorities. *Biological Conservation*. <https://doi.org/10.1016/j.biocon.2021.109403>
- This is the first major product from SEPL grad student Ben Shipley's dissertation topic and GRFP exploring the drivers of endemism.*
- *2021 **Schap, J.^{GS}, Meachen, J.A., McGuire, J.L.** Microfauna relative abundance since the Late Pleistocene at Natural Trap Cave, Wyoming, U.S.A. *Quaternary International*. <https://doi.org/10.1016/j.quaint.2021.11.018>
- This is the first major product from SEPL grad student Julia Schap's dissertation topic. It was submitted to a special edition of QI about Natural Trap Cave, which I co-edited.*
- *2021 Lawing, A.M.[¶], Blois, J., Maguire, K., Goring, S., Wang, Y.^{PD}, McGuire, J.L. [¶] Occupancy models reveal regional differences in detectability and improve relative abundance estimations in fossil pollen assemblages. *Quaternary Science Reviews*. 253:106747. <https://doi.org/10.1016/j.quascirev.2020.106747>
- Collaborative research stemming from International Union of Biological Sciences' International Climate Change Biology program and postdoctoral research performed while at the National Evolutionary Synthesis Center. Idea and writing by JM. Writing and main analyses by AL. Other authors contributed significantly to idea formation, editing, and analyses.*
- [¶]*AL and JM contributed equally to the paper and are co-corresponding authors*

- *2021 Pineda-Munoz, S.^{PD}, Wang, Y.^{PD}, Lyons, K., Tóth, A.B., McGuire, J.L. Mammal species occupy different climates following the expansion of human impacts. *Proceedings of the National Academy of Sciences*. 118(2): e1922859118. <https://doi.org/10.1073/pnas.1922859118>

This is the result of research performed by SPM, while a postdoc at GATech. YW is also a postdoc in the lab. JM is senior author. This paper received considerable public attention (Altmetric = 162).

- *2021 Wang, Y.^{PD}, Widga, C., Graham, R.W., McGuire, J.L., Porter, W., Wårlind, D., & Williams, J.W. Caught in a bottleneck: habitat loss for woolly mammoths in central North America and the ice-free corridor during the last deglaciation. *Global Ecology and Biogeography*. 30: 527– 542. <https://doi.org/10.1111/geb.13238>

JM consulted on the species distribution modeling in this paper and wrote portions of the methods section. This is one of several models used for the paper.

- *2020 Cook-Patton, S.C., Gopalakrishna, T., Daigneault, A., Leavitt, S.M., Platt, J., Scull, S.M., Amarjargal, O., Ellis, P.W., Griscom, B.W., McGuire, J.L., Yeo, S.M., Fargione, J.E. Lower cost and more feasible options to restore forest cover in the contiguous United States for climate mitigation. *One Earth*. 3(6): 739-752. <https://doi.org/10.1016/j.oneear.2020.11.013>

This paper is led by scientists in at The Nature Conservancy, and it uses corridor layers and analyses performed by JM.

- *2020 Wang, Y.^{PD}, Shipley, B.R.^{GS}, Lauer, D.A.^{GS}, Pineau, R.^{GS}, McGuire, J.L. Plant biomes demonstrate that landscape resilience today is the lowest it has been since end-Pleistocene megafaunal extinctions. *Global Change Biology*. 26: 5914– 5927. <https://doi.org/10.1111/gcb.15299>

This is the culmination of the research coming from our NSF grant and YW's postdoctoral research project. BS is a graduate student in our lab who contributed spatial analyses. DA is a student in our lab who, along with RP (Quant. Biosci. grad student) performed some statistical analyses. JM is senior author. This paper received considerable public attention (Altmetric = 142).

- *2020 McGuire, J.L. & Lauer, D.A.^{GS} Linking patterns of intraspecific morphology to changing climates. *Journal of Biogeography*. <https://doi.org/10.1111/jbi.13954>

This is the culmination of research stemming from JM's dissertation research. DA is a grad student in the lab who performed analyses and wrote portions of the paper.

- *2019 Wang, Y.^{PD}, Goring, S., McGuire, J.L. Bayesian ages for pollen records since the last glaciation in North America. *Scientific Data*. 6: 176. <https://doi.org/10.1038/s41597-019-0182-7>

Core lab research & primary project of postdoc YW, funded by NSF attained by JM concurrent with starting her Asst. Prof. position at GA Tech. This paper lays the groundwork paper for NSF-funded project. YW led the project, SG is a research scientist at U Wisconsin who contributed code, and JM is senior author.

- *2017 Badgley, C., Smiley, T.M., Davis, E.B., DeSantis, L.R.G., Fox, D.L., Hopkins, S.B., Jezkova, T., Matocq, M.D., Matzke, N., McGuire, J.L., *et al.* Biodiversity and topographic complexity: Modern and geohistorical perspectives. *Trends in Ecology and Evolution*. 32(3): 211-226. doi:[10.1016/j.tree.2016.12.010](https://doi.org/10.1016/j.tree.2016.12.010)

Working group collaborative effort. JM provides conservation paleontology perspective on this project and wrote this section of the paper. JM also contributed to several meetings leading up to this paper. Authorship is alphabetical after first two authors, indicating equal contribution.

- *2016 McGuire, J.L., Lawler, J., McRae, B., Nuñez, T., and Theobald, D. Achieving climate connectivity in a fragmented landscape. *Proceedings of the National Academy of Sciences*. 113(26): 7195-7200. [doi:10.1073/pnas.1602817113](https://doi.org/10.1073/pnas.1602817113)

Core research from JM's postdoctoral work with JL. JM completed large portions of this work and the final writing while serving as an independent Research Scientist II (with a lab) at GA Tech. This paper received [considerable press](#) (Altmetric = 362) and was featured in over 50 news articles and blogs, including from [the Guardian](#), [Smithsonian Magazine](#), and [Wired](#). It also continues to be used by conservation policy organizations, including the [Nature Conservancy](#), [Eastern Wildways Network](#), and the [UN Frontiers 18/19 Report](#).

- *2015 Orzechowski, E.A., Lockwood, R., Byrnes, J.E., Anderson, S.C., Finnegan, S., Finkel, Z.V., Harnik, P.G., Lindberg, D.R., Liow, L.H., Lotze, H.K., McClain, C.M., **McGuire, J.L.**, O'Dea, A., Pandolfi, J.M., Simpson, C., Tittensor, D.P. Marine extinction risk shaped by trait–environment interactions over 500 million years. *Global Change Biology*. 21(10): 3595-3607. [doi:10.1111/gcb.12963](https://doi.org/10.1111/gcb.12963)

Working group collaborative effort. JM contributed to many meetings leading up to this paper. Authorship is alphabetical after first three authors, indicating equal contribution.

- 2015 Krosby, M., Wilsey, C.B., McGuire, J.L., Duggan, J.M., Noguire, T.M., Heinrichs, J.A., Tewksbury, J.J., Lawler, J.J. Climate-induced range overlap among closely-related species. *Nature Climate Change*. 5:883-886. [doi:10.1038/nclimate2699](https://doi.org/10.1038/nclimate2699)

Collaborative effort started by a group of postdocs at U Washington and completed while JM was an independent Research Scientist II at GA Tech. JM provided significant intellectual contribution and extensive computational work, including making the primary figure for the paper. Authorship is in order of contribution with two senior authors listed last. All postdocs contributed significantly to research effort on many fronts. Altmetric 114, including write ups by [Science Now](#) and [Vox](#).

- *2015 Finnegan, S., Anderson, S.C., Harnik, P.G., Simpson, C., Tittensor, D.P., Byrnes, J.E., Finkel, Z.V., Lindberg, D.R., Liow, L.H., Lockwood, R., Lotze, H.K., McClain, C.M., **McGuire, J.L.**, O’Dea, A., Pandolfi, J.M. Paleontological baselines for evaluating extinction risk in the modern oceans. *Science*. 348(6234): 567-570. [doi:10.1126/science.aaa6635](https://doi.org/10.1126/science.aaa6635)

Working group collaborative effort. JM contributed to many meetings leading up to this paper. Authorship is alphabetical after first four authors, indicating equal contribution. Altmetric 232.

- *2015 Gill, J., Benito, B., Dobrowski, S., Hunter, M., Goring, S., Blois, J., and McGuire, J.L. A 2.5-million-year perspective on coarse-filter strategies for conserving nature’s stage. *Conservation Biology*. 29(3): 640-648. [doi:10.1111/cobi.12504](https://doi.org/10.1111/cobi.12504)

Collaborative effort completed while an independent Research Scientist II at GA Tech. JM was added to the group based on her expertise in land facet analyses and paleontology. JM contributed significantly to writing and editing of this paper.

- 2014 McGuire, J.L. & Davis, E.B. Conservation Paleobiogeography: the past, present, and future of species distributions. *Ecography*. 37(11): 1092-1092. [doi:10.1111/ecog.01337](https://doi.org/10.1111/ecog.01337).

Significant portion of postdoctoral research conducted at the National Evolutionary Synthesis Center. This was the lead article of an [Ecography](#) issue coordinated and edited by JM & EBD. The special issue was the result of a symposium organized by JM & EBD at the International Biogeography Conference in 2013.

- 2014 Davis, E.B., McGuire, J.L., Orcutt, J. Ecological niche models of mammalian glacial refugia show consistent bias. *Ecography*. 37(11): 1133-1138. [doi:10.1111/ecog.01294](https://doi.org/10.1111/ecog.01294).
- Collaborative project conducted while a postdoc at the National Evolutionary Synthesis Center. JM performed a significant amount of analyses and writing. This paper was a part of the special issue of Ecography organized by JM & EBD.*
- 2013 Dawson, M. N., Algar, A. C., Antonelli, A., Dávalos, L., Davis, E., Early, R., Guisan, A., Jansson, R., Lessard, J-P., Marske, K.A., McGuire, J.L., *et al.* An horizontal scan of biogeography. *Frontiers of Biogeography*. 5(2): 130-157. [fb 18854](https://doi.org/10.1111/fb.18854)
- Collaborative project conducted while a postdoc at the National Evolutionary Synthesis Center, following up on a symposium organized by JM & EBD at the International Biogeography Conference in 2013. JM contributed a portion of the writing. Authorship is alphabetical after the first author, indicating equal contributions.*
- 2013 McGuire, J.L. and Davis, E.B. Using the paleontological record of *Microtus* to test species distribution models and reveals responses to climate change. *Journal of Biogeography*. 40: 1490-1500. [doi:10.1111/jbi.12106](https://doi.org/10.1111/jbi.12106)
- A significant portion of graduate research by JM. Co-authored by EBD, a collaborator and former graduate student in JM's graduate lab. EBD contributed assistance with species distribution models.*
- 2012 Harnik, P.G., Lotze, H.K., Anderson, S.C., Byrnes, J.E., Finkel, Z.V., Finnegan, S., Lindberg, D.R., Liow, L.H., Lockwood, R., McClain, C.M., McGuire, J.L., *et al.* Extinctions in ancient and modern seas. *Trends in Ecology and Evolution*. 27(11): 608-617. [doi: 10.1016/j.tree.2012.07.010](https://doi.org/10.1016/j.tree.2012.07.010)
- Working group collaborative effort. JM contributed to many meetings leading up to this paper, as well as a table in the manuscript. Authorship is alphabetical after first two authors, indicating equal contribution.*
- 2011 McGuire, J.L. Identifying California *Microtus* species using geometric morphometrics documents Quaternary geographic range contractions. *Journal of Mammalogy*. 92(6):1383-1394. [doi:10.1644/10-MAMM-A-280.1](https://doi.org/10.1644/10-MAMM-A-280.1)
- A significant portion of graduate research by JM.*

- 2011 Tomiya, S., McGuire, J.L., *et al.* A report on late Quaternary vertebrate fossil assemblages from the eastern San Francisco Bay region, California. *PaleoBios*. 30(2): 50-71. [ucmp_paleobios_21791](https://doi.org/10.21791/ucmp.paleobios.21791)
- Collaborative research performed during graduate school. This paper is the result of a class project. ST did the majority of the writing and was a TA for the class. JM did a significant portion of writing and identification analyses. Following their authorships, there are many undergraduate contributors. Anthony Barnosky, JM's graduate advisor, is the senior author.*
- 2011 Barnosky, A.D., Matzke, N., Wogan, G., Tomiya, S. Swartz, B. Quental, T., Marshall, C., McGuire, J.L., *et al.* Has the Earth's sixth mass extinction already arrived? *Nature*. 471: 51-57. [doi:10.1038/nature09678](https://doi.org/10.1038/nature09678)
- An important contribution to the fields of paleontology and conservation biology. This paper has ~2,500 citations thus far and is still regularly cited. This paper was the result of a graduate seminar, and all participants contributed significant work in pursuit of this research. JM made one of the figures and contributed significantly to writing and research. Authorship is in order of contribution. Altmetric 886, including the [New York Times](#) and [Forbes](#).*
- 2010 Blois, J., McGuire, J.L., and E. Hadly. Small mammal diversity loss in response to late-Pleistocene climate change. *Nature*. 465: 771-774. [doi:10.1038/nature09077](https://doi.org/10.1038/nature09077)
- Collaborative research performed while a graduate student. JM performed radiocarbon dating and species identifications for this paper. JB was a graduate student with EH at Stanford at the time of publication.*
- 2010 McGuire, J.L. Geometric morphometrics of vole (*Microtus californicus*) dentition as a new paleoclimate proxy: shape change along geographic and climatic clines. Quaternary changes of mammalian communities across and between continents. *Quaternary International*. 212(2): 198-205. [doi:10.1016/j.quaint.2009.09.004](https://doi.org/10.1016/j.quaint.2009.09.004)
- A significant portion of graduate research by JM. Part of a contributed issue to [Quaternary International](#).*
- 2006 DeBlieux, D.D., Kirkland, J.I., Smith, J.A., McGuire, J.L., and Santucci, V.L. An overview of the paleontology of Upper Triassic and Lower Jurassic rocks in Zion National Park, Utah. *The Triassic-Jurassic Terrestrial Transition. NMMNH and Science Bulletin*. 37: 490-501.
- Research performed between undergraduate and graduate school as part of a fellowship funded by the Association for Women Geoscientists'*

Scientist in a Park Program. Paper resulted from my prospecting and mapping Zion NP.

- 2006 Mickelson, D. L., A. Milner, D. D. DeBlieux, and McGuire, J.L. The oldest known Early Triassic fossil vertebrate footprints in North America, from Zion National Park, Utah. *Fossils from Federal Lands. New Mexico Museum of Natural History and Sciences Bulletin*. 34: 141-144.

Research performed between undergraduate and graduate school as part of a fellowship funded by the Association for Women Geoscientists' Scientist in a Park Program. AM and I discovered trackway while prospecting and mapping Zion NP.

B2. Conference Presentation with Proceedings (Refereed)-No Data

B3. Other Refereed Material- No Data

B4. Submitted Journal Articles (with Date of Submission)

- *In Review **Lauer, D.A.^{GS}, Shipley, B.R.^{GS}**, & McGuire, J.L. Habitat and not topographic heterogeneity constrains the range sizes of African mammals. *Journal of Biogeography*. Submitted 30 November 2021.

B5. Manuscripts in Preparation

- *In revision **Lauer, D.A.^{GS}**, Lawing, A.M., Manthi, F.K., Müller, J., Head, J.A., McGuire, J.L. Disruption of trait-environment relationships in African megafauna coincident with hominin emergence. Submitted to a Special Feature of *PNAS*, "The past as a lens for biodiversity conservation on a dynamically changing planet." Draft available.
- *In prep **Lauer, D.A.^{GS}** & McGuire, J.L. Resistance-resilience tradeoff in Africa's protected area ecosystems..
- *In prep Short, R.^{PD}, McGuire, J.L., Lawing, M. Trophically-integrated ecometric models highlight areas of functional disruption in mammal communities. Draft available.
- *In revision Wang, Y.^{PD} & McGuire, J.L. Plant biomes shift and expand their climate niche through time. *Journal of Biogeography*. Draft available.
- *In prep McGuire, J.L., Erin K. Castorina^{GS}, Rebecca A. W. Hull^{GS}, Allen Hyde, **Daniel A. Lauer^{GS}**, Evan Mistur^{GS}, Shannon G. Valley^{GS}, **Shipley, B.R.^{GS}**, David Garton, Annika Jersild^{GS}, Jane Lew^{GS}, Evan Mallen^{GS}, Rozenn Pineau^{GS}, Silvia Pineda Munoz^{PD}, Ariel Siegel^{GS}, Yue Wang^{PD}, Bill Witherspoon. Identifying ecological research priorities to inform conservation of climate resilient landscapes: a multidisciplinary perspective. In preparation for *Nature Climate Change*. LOI accepted

*In prep McGuire, J.L. [¶], Lawing, M. [¶], Diaz, S.M., Stenseth, N.C. The past as a lens for biodiversity conservation on a dynamically changing planet. In preparation for Special Feature of *PNAS*, “The past as a lens for biodiversity conservation on a dynamically changing planet.” Draft available.

[¶]*AL and JM are contributing equally to the paper and are co-corresponding authors*

*In prep Shipley, B.R.^{GS} & McGuire, J.L. Disentangling the drivers of continental mammalian endemism. Draft available.

*In prep Shipley, B.R.^{GS} & McGuire, J.L. Tradeoffs in the functional characteristics of endemic mammals. Draft available.

C. Other Publications and Creative Products

*2022 McGuire, J.L. and B. R. Shipley^{GS}. Dynamic priorities for conserving species: Animals’ ranges must be conserved while allowing movement for sustaining biodiversity. *Conservation Perspectives. Science*. 10.1126/science.abq0788

*2022 Reid, R. E. B., McGuire, J. L., Svenning, J.-C., Wingard, G. L., and Moreno-Mateos, D. Review of ESA SYMP 7: A Dynamic Perspective on Ecosystem Restoration—Establishing Temporal Connectivity at the Intersection Between Paleocology and Restoration Ecology. *Bulletin of the Ecological Society of America*. 103(1):e01954. <https://doi.org/10.1002/bes2.1954>

*2016 McGuire, J.L. [Can ‘climate corridors’ help species adapt to warming world?](#) *The Conversation*.

2013 McGuire, J.L. [Extinction and the fossil record](#). *McGraw-Hill Yearbook of Science and Technology & AccessScience*. McGraw-Hill.

2012 Schloss, C., McGuire, J.L., and Lawler, J. [Land facets for conservation planning](#). Prepared as a funding report for *Yale Mapping Framework: Integrating Climate Adaptation and Landscape Conservation Planning*.

2005 DeBlieux, D.D, Smith, J.A., McGuire, J.L., Kirkland, J.I., and Santucci, V.L. Zion National Park Paleontological Survey. NPS Technical Report TIC# D-177, 75 p.

D. Presentations

†presenting author	PDGT postdoc	GS ^{GT} grad student	UG ^{GT} undergrad	LT ^{GT} lab tech
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D1. Invited Campus/Presentations

- 2022 McGuire, J.L.⁺ Paleoecology reveals dynamic ecological responses to global change: the case for conserving for change. University of California Museum of Paleontology Student Invited Speaker. University of California, Berkeley, CA.
- 2022 McGuire, J.L.⁺ Paleoecology reveals dynamic ecological responses to global change: the case for conserving for change. Geology Department Colloquium. University of Georgia, Athens, GA.
- 2022 McGuire, J.L.⁺ Paleoecology reveals dynamic landscapes: the case for conserving for change. Funk Lecture Series. International Biogeography Society (virtual).
- 2022 McGuire, J.L.⁺ Paleoecology reveals dynamic ecological responses to global change. Center for Macroecology, Evolution and Climate. University of Copenhagen, Copenhagen, Denmark.
- 2021 McGuire, J.L.⁺ Exploring dynamic ecological responses to rapid global change using the Quaternary record. Paleontology Seminar. University of Texas, Austin, TX.
- 2021 McGuire, J.L.⁺ Paleo-dynamics: Exploring how plants and animals will respond to climate change. Earth Sciences Department Seminar. University of Oregon, Eugene, OR.
- 2021 McGuire, J.L.⁺ Paleo-dynamics: How species move as climate changes. Paleo Talks. Gray Fossil Site Eastern Tennessee State University, TN.
- 2021 McGuire, J.L.⁺ Planning for connected and resilient landscapes using past ecosystem dynamics. Ecology & Environmental Biology Department Seminar. University of Michigan, Ann Arbor, MI.
- 2019 McGuire, J.L.⁺ Past ecosystem dynamics demonstrate why we must conserve for change. *Margaret H. Lloyd Distinguished Speaker*. The Department of Forestry and Environmental Conservation. Clemson University, Clemson, SC.
- 2018 McGuire, J.L.⁺ Using an historical perspective to plan for dynamic responses to environmental change. Student Invited Speaker: Ecology and Evolutionary Biology Seminar Series at Texas A&M University, College Station, TX.
- 2018 McGuire, J.L.⁺ Conservation paleobiology: using an historical perspective to predict responses to climate change. *University Museum of Zoology Seminar Series*. Cambridge University, Cambridge, Cambridgeshire, U.K.
- 2017 McGuire, J.L.⁺ Spatial and climatic drivers of species variation and distributions through time. Earth and Environmental Science seminar series. Vanderbilt University, Nashville, TN.
- 2017 McGuire, J.L.⁺ Spatial and climatic drivers of species variation and distributions through time. Biological Sciences seminar series. Clemson University, Clemson, SC.

- 2017 McGuire, J.L.⁺ Spatial and climatic drivers of species variation and distributions through time. Population Biology, Ecology, and Evolution (PBEE) seminar series. Emory University, Atlanta, GA.
- 2017 McGuire, J.L.⁺ Using the Quaternary record to determine how species will respond to global change. Florida Museum of Natural History Speaker Series, Gainesville, FL.
- 2016 McGuire, J.L.⁺ Spatial and climatic drivers of species variation, connectivity, and distributions through time. School of Earth & Atmospheric Sciences, Georgia Institute of Technology, Atlanta, GA.
- 2016 McGuire, J.L.⁺ Using the fossil record to examine species responses to climate change. School of Geography, Earth, and Environmental Sciences, University of Birmingham, United Kingdom.
- 2015 McGuire, J.L.⁺ How far can they go? Species responses to climate change through time. Department Seminar, Department of Geosciences, Georgia State University, Atlanta, GA.
- 2015 McGuire, J.L.⁺ How far can they go? Species responses to climate change through time. Student invited speaker: Department Seminar, Department of Ecology & Evolutionary Biology, University of Tennessee, Knoxville, TN.
- 2014 McGuire, J.L.⁺ Testing conservation hypotheses using the Quaternary record. Department Seminar, Department of Geosciences, Eastern Tennessee State University, Johnson City, TN.
- 2013 McGuire, J.L.⁺ Movement, change, and extinction in the face of climate change: a paleoecological perspective. Department Seminar, Department of Biology, Georgia Institute of Technology, Atlanta, Georgia.
- 2011 McGuire, J.L.⁺ Mammalian responses to climate change: a paleontological perspective. Lunch Bunch Seminar, Department of Biology, University of North Carolina, Chapel Hill.
- 2011 McGuire, J.L.⁺ Mammalian responses to climate change: a paleontological perspective. Department Seminar, Department of Earth and Atmospheric Sciences, University of Nebraska at Lincoln.
- 2010 McGuire, J.L.⁺ Small mammal reactions to climate change: a paleontological perspective. Department of Integrative Biology Department Seminar, University of California, Berkeley.
- 2010 McGuire, J.L.⁺ Small mammal reactions to climate change: a paleontological perspective. Department of Geology Department Seminar, University of Oregon, Eugene, OR.
- 2010 McGuire, J.L.⁺ Small mammal reactions to climate change: a paleontological perspective. Paleontology Seminar, Burke Museum, Department of Biology, University of Washington, Seattle, WA.

D2. Invited Conference Presentations

- 2022 McGuire, J.L.⁺ Landscape connectivity and climate change. American Society of Mammalogy. Symposium: Mammal Diversification in Dynamic Landscapes. *turned down for medical reasons.
- 2022 McGuire, J.L.⁺ Keynote: Paleoecology reveals dynamic landscapes: the case for conserving for change. International Biogeography Society, Vancouver, BC, Canada. *turned down for medical reasons- converted to Funk Lecture (see above).
- 2021 McGuire, J.L.⁺ Keynote: Paleoecology reveals dynamic landscapes: the case for conserving for change. Crossing the Palaeontological-Ecological Gap, Berlin, Germany. Virtual oral presentation.
- 2021 McGuire, J.L.⁺ Conservation Paleobiology in Africa. IUBS Scientific Programs Briefing. National Academy of Sciences. Virtual oral presentation.
- 2021 McGuire, J.L.⁺ Creating resilient landscapes through connectivity: lessons learned from the past. Ecological Society of America. Symposium: A Dynamic Perspective on Ecosystem Restoration: Establishing Temporal Connectivity at the Intersection Between Paleoecology and Restoration Ecology. Virtual Conference.
- 2020 McGuire, J.L.⁺ What does changing climate mean for Georgia's ecosystems? Georgia Climate Project. Virtual webinar.
- 2020 McGuire, J.L.⁺ (Moderator) Panel on Climate and Ecosystems. Global Climate Action Symposium. Atlanta, Georgia.
- 2020 McGuire, J.L.⁺ Small mammal taphonomy and paleoecology at Natural Trap Cave, Wyoming. Natural Trap Cave Virtual Symposium.
- 2020 **Schap, J.**^{GS+} Natural Trap Cave small mammal paleoecology informs responses to environmental change. Natural Trap Cave Virtual Symposium.
- 2019 McGuire, J.L.⁺ Terrestrial range shifts are amplified by climate change but hindered by human land use and fragmentation: a paleoecological perspective. International Union of Biological Sciences. Oslo, Norway.
- 2019 McGuire, J.L.⁺ A paleontological perspective to conserving for change. Invited talk in Conservation Paleobiology: natural systems in a human world. North American Paleontological Convention. Riverside, CA.
- 2018 McGuire, J.L.⁺ How well can we predict future distributions? Using paleoecology to inform conservation models. Invited talk in Inspire Section: The Future of Studying the Past: New Directions, Themes, and Techniques in Paleoecology. Ecological Society of America. New Orleans, LA.
- 2017 McGuire, J.L.⁺ Collections data as an historical experiment. NSF Advancing Digitization of Biodiversity Collections (ADBC) Summit. Invited presentation in Workshop on Collections Data in Ecological and Conservation Research. University of Florida, Gainesville, FL.

- 2017 McGuire, J.L.⁺, Lawler, J., McRae, B., Nuñez, T., and Theobald, D. Achieving climate connectivity in a fragmented landscape. The Wildlife Society Conference, Albuquerque, NM. Presented in invited symposium: Conserving Nature's Stages and Helping Wildlife Move Between Them.
- 2017 McGuire, J.L.⁺ Using niche dynamics and paleontological movement patterns to interpret the failings of species distribution models (and improve them). Traits past, present, and future: quantitative approaches to paleontology, conservation, and climate change biology in Africa. Integrating Climate Change Biology, National Museum of Kenya, Nairobi, Kenya.
- 2017 McGuire, J.L.⁺ Using the historic record to test principles underlying conservation practices. Paleoecology & Community Ecology (PACE) to link temporal scales in community dynamics. Population & Community Ecology (PCE) NSF-funded workshop. Schoodic Institute, Schoodic Peninsula, ME.
- 2016 McGuire, J.L.⁺ Climate-linked morphotypes identify populations vulnerable to changing climate. 96th Annual Meeting of the American Society of Mammalogists, Minneapolis, MN. Presented in invited symposium: Morphometric approaches to studying mammalian evolution and ecology.
- 2016 McGuire, J.L.⁺ Evolution and epigenetics: unraveling error in niche models. The Evolution Conference, Austin, TX. Presented in invited symposium: Putting evolution into ecological niche modeling: Building the connection between phylogenies, paleobiology, and species distribution models.
- 2015 McGuire, J.L.⁺ Poster: Using a conservation framework to examine landscape diversity, climate, and vertebrate richness. 75th Annual meeting, Society of Vertebrate Paleontology, Dallas, TX. Presented in invited symposium: Conservation paleobiology: insights into modern ecosystems from vertebrate records.
- 2011 McGuire, J.L.⁺ How Quaternary climate change patterns morphological variation in *Microtus californicus*. 71st Annual Meeting, Society of Vertebrate Paleontology, Las Vegas, NV. Presented in invited symposium: Symposium II- Climate Change and Vertebrate Response in the Evolving Arid West of Plio-Pleistocene North America.
- 2010 McGuire, J.L.⁺ Interpreting recent small-mammal range shifts in Yosemite in light of the Quaternary fossil record. 70th Annual Meeting, Society of Vertebrate Paleontology, Pittsburgh, PA. Romer Student Prize Session.
- 2007 McGuire, J.L.⁺, Barnosky, A.D., and Carrasco, M. Species-area curves & morphoclimate models as tools in forecasting effects of climate change on vertebrate communities. 17th Quadrennial Congress, International Union for Quaternary Research, Cairns, Queensland, AU.

D3. Contributed Conference Presentations

- 2022 **Lauer, D.A.**^{GS+} and McGuire, J.L. 2022. Resistance-resilience trade off in Africa's protected area ecosystems. Oral Presentation. IALE- North American Annual Meeting. 11-14 Apr 2022.
- 2022 **Whitford, A.**^{UG+}, **Shipley, B.R.**^{GS}, and McGuire, J. Examining the effect of novel background point selection methods on species distribution model accuracy. Poster Presentation. IALE- North American Annual Meeting. 11-14 Apr 2022.
- 2022 **Shipley, B.R.**^{GS+} and McGuire, J. 2022. Landscape features and species richness influence mammalian endemism more than species niche breadth. Oral Presentation. IALE- North American Annual Meeting. 11-14 Apr 2022.
- 2022 Short, RA^{PD+}, JL McGuire, and AM Lawing. Expanding ecometric analyses to explore geographic patterns of faunal responses to change. International Biogeography Society. Vancouver, Canada. Postponed until June
- 2022 **Schap, J. A.**^{GS+}, Meachen J. A., McGuire, J. L. Poster: Changes in small mammal community composition over the last 25,000 years across multiple North American cave localities. International Biogeography Society 10th Biennial Conference. Vancouver, BC, Canada. Postponed until June
- 2022 **Shipley B.R.**^{GS+} and McGuire, J.L. Poster: Disentangling the drivers of continental mammalian endemism. International Biogeography Society 10th Biennial Conference, Vancouver, BC, Canada. Postponed until June.
- 2021 Short, RA^{PD+}, JL McGuire, and AM Lawing. Refining ecometric analyses to better understand human effects on functional trait-environment relationships in mammal communities. American Society of Mammalogists. Virtual.
- 2021 **Lauer, D.A.**^{GS+}, **Shipley, B.R.**^{GS}, & McGuire J.L. Habitat and not topographic heterogeneity constrains the range sizes of African mammals. Talk presented virtually at the Ecological Society of America Annual Meeting, and at the International Biogeography Society 10th Biennial Conference, Vancouver, BC, Canada
- 2021 **Schap, J. A.**^{GS+}, Meachen, J. A., McGuire J. L. Changes in the relative abundances of the Microfauna community at natural trap cave, Wyoming over the last 20,000 years. Society of Vertebrate Paleontology 81st Annual Meeting. Minneapolis, MN. Virtual.
- 2021 **Shipley, B.R.**^{GS+} and McGuire, J.L. Consensus hotspots of endemism combine multiple metrics to identify conservation priorities. Oral Presentation. 100th Annual Meeting of the American Society of Mammalogists (Virtual). 14-18 Jun 2021.
- 2021 Pineda-Munoz, S^{PD+}, A.B. Tóth, S.K. Lyons, Y. Wang^{PD}, J.L. McGuire. Humans landscape impacts have shaped North American mammal niches. 2nd Crossing the Palaeontological-Ecological Gap, Berlin, Germany (Virtual oral presentation).
- 2020 **Lauer, D.**^{GS+} & McGuire, J.L. Distinct dimensions of African herbivore biodiversity exhibited unique responses to past climatic and anthropogenic

- changes. Georgia Institute of Technology Graduate and Postdoc (GaP) Seminar Series, Atlanta, GA (Virtual Presentation)
- 2020 **Lauer, D.**^{GS+} & McGuire, J.L. Distinct dimensions of African herbivore biodiversity exhibited unique responses to past climatic and anthropogenic changes. Ecological Society of America Annual Meeting, Salt Lake City, UT. (Virtual Presentation)
- 2020 **Lauer, D.**^{GS+} & McGuire, J.L. African herbivore biodiversity change over time: A multidimensional view. Georgia Institute of Technology Global Climate Action Symposium, Atlanta, GA.
- 2020 Pineda-Munoz, S^{PD+}, A.B. Tóth, S.K. Lyons, Y. Wang^{PD}, J. McGuire. Humans have shaped the climatic distributions of modern North American mammals. 80th Annual Meeting Society of Vertebrate Paleontology, Cincinnati, Ohio (Virtual oral presentation).
- 2020 Wang, Y.^{PD+}, and McGuire, J. L. The climate tolerances of North American plant biomes. Ecological Society of America 105th Annual Meeting, virtual.
- 2020 McGuire, J.L.⁺ Using the paleontological record to demonstrate the importance of conserving for change. Conservation Paleobiology Symposium, Bologna, Italy.
- 2019 **Lauer, D.**^{GS+} & McGuire, J.L. Poster: Geometric morphometric analyses uncover features of climate-linked intraspecific variation in *Microtus californicus* dentition. Biodiversity Symposium: Human & Planetary Health, Emory University, Atlanta, GA.
- 2019 Wang, Y.^{PD+} & McGuire, J.L. Decreases in plant biome resilience set the stage for a major extinction. 20th International Quaternary Association Congress, Dublin, Ireland.
- 2019 **Lauer, D.**^{GS+} & McGuire, J.L. Poster: Geometric morphometric analyses uncover features of climate-linked intraspecific variation in *Microtus californicus* dentition. Annual meeting Ecological Society of America, Louisville, KY.
- 2019 Pineda-Munoz, S.^{PD+}, Tóth, A., Lyons, S.K., Wang, Y.^{PD}, McGuire, J.L. Human land use has shaped realized environmental niche in North American mammals. Annual meeting Ecological Society of America, Louisville, KY.
- 2019 McGuire, J.L.⁺ & Wang, Y.^{PD} Why we need to conserve for change: Plant biomes turnover rapidly in response to changing climates. U.S. International Association of Landscape Ecology, Fort Collins, CO.
- 2019 Wang, Y.^{PD+} & McGuire, J.L. Decreases in plant biome resilience set the stage for a major extinction. 11th North American Paleontological Convention, Riverside, CA.
- 2019 Pineda-Munoz, S.^{PD}, Tóth, A., Lyons, S.K., Wang, Y.^{PD}, McGuire, J.L.⁺. Human landscape impacts have shaped North American mammal niches. 11th North American Paleontological Convention, Riverside, CA.

- 2019 McGuire, J.L.⁺ & Wang, Y.^{PD} Why we need to conserve for change: Plant biomes turnover rapidly in response to changing climates. Evolution of Complex Life 2019, Atlanta, GA.
- 2019 Pineda-Munoz, S.^{PD+}, Tóth, A., Lyons, S.K., Wang, Y.^{PD}, McGuire, J.L. Humans have shaped habitat preference in modern North American mammals. Evolution of Complex Life 2019, Atlanta, GA.
- 2019 **Lauer, D.**^{GS+} & McGuire, J.L. Poster: Geometric morphometric analyses uncover features of climate-linked intraspecific variation in *Microtus californicus* dentition. Evolution of Complex Life, Atlanta, GA.
- 2019 **Shipley, B.**^{GS+}, McGuire, J., and Dilkina, B. Poster: megaSDM: improving species distribution modelling for a changing world. Evolution of Complex Life, Atlanta, GA.
- 2019 Pineda-Muñoz, S.^{PD+}, Tóth, A., Lyons, S.K., Wang, Y.^{PD}, McGuire, J.L. Changes in North American mammal niche preferences from the late Pleistocene to the present. International Biogeography Conference, Málaga, Spain.
- 2019 Wang, Y.^{PD+} & McGuire, J.L. Residence time of vegetation communities during the past 20,000 years in North America. International Biogeography Conference, Málaga, Spain.
- 2019 McGuire, J.L.⁺, Lawing, A.M., Maguire, K., Goring, S., Blois, J. Poster: Paleo-occupancy models reveal species detectability and occupancy in the pollen record. International Biogeography Conference, Málaga, Spain.
- 2018 McGuire, J.L.⁺ & Wang, Y.^{PD} A paleontological perspective on conserving for change. Integrative Conservation Conference, Athens, GA.
- 2018 McGuire, J.L.⁺, Lawler, J.J., McRae, B.H., Theobald, B., Nuñez, T. Fragmentation limits climate connectivity by 24% in the contiguous United States. Ecological Society of America, New Orleans, LA.
- 2018 Wang, Y.^{PD+} & McGuire, J.L. Long-stable vegetation communities in North America since the last glaciation. Ecological Society of America, New Orleans, LA.
- 2017 McGuire, J.L.⁺, Woodruff, A.^{LT}, **Iacono, J.**^{GS}, **Meadows, A.**^{UG}, Redman, C., Meachen, J. Microfauna of Natural Trap Cave: Taphonomic analyses indicate a mixed predator assemblage likely resulting from *Neotoma* (woodrat) gathering. Society of Vertebrate Paleontology, Calgary, Alberta, Canada.
- 2017 Woodruff, A.^{LT+}, McGuire, J.L., **Iacono, J.**^{GS}, **Meadows, A.**^{UG}, Redman, C., Meachen, J. Microfauna of Natural Trap Cave: Taphonomic analyses indicate a mixed predator assemblage likely resulting from *Neotoma* (woodrat) gathering. Southeastern Association of Vertebrate Paleontology, Johnson City, TN.
- 2017 McGuire, J.L.⁺, Davis, E.B., & Koo, M.S. Changing climates, extirpations, and niche models. International Biogeography Society, Tucson, AZ.

- 2016 Dilkina, B.⁺, McGuire, J.L., **Bach, R.**^{UG}. Shifting habitats in response to changing climate in the Southeastern U.S., Ecological Society of America, Ft. Lauderdale, FL.
- 2016 McGuire, J.L.⁺ Making the most of the late Quaternary paleoecology to the Southeast. 65th Annual Meeting of the Geological Society of America Southeastern Section, Columbia, SC. Session co-organizer: Fossil vertebrates of the southeastern United States.
- 2016 Dilkina, B.⁺, McGuire, J.L., **Bach, R.**^{UG}. Shifting habitats in response to changing climate in the Southeastern U.S. International Association of Landscape Ecology, Asheville, NC.
- 2016 McGuire, J.L.⁺, Davis, E.B., & Koo, M.S. Last Glacial Maximum mammal fossils show strong mismatch with ecological niche model hindcasts: ways to improve transferability to novel climates. International Association of Landscape Ecology, Asheville, NC.
- 2015 McGuire, J.L.⁺, Lawler, J., McRae, B., & Nuñez, T. How far can they go?: Fragmentation and warming limit populations' ability to track climate across the landscape. International Association of Landscape Ecology, Portland, OR.
- 2015 McGuire, J.L.⁺, Yu, T.C., **Ganues, M.**^{UG}, Cooper, A., Meachen, J. The microfauna of Natural Trap Cave. Southeast Association of Vertebrate Paleontology, Birmingham, AL.
- 2015 McGuire, J.L.⁺, Lawler, J., McRae, B., & Nuñez, T. How far can they go?: Tracking climate across a fragmented landscape using climate corridors. International Biogeography Society, Bayreuth, Germany.
- 2014 McGuire, J.L.⁺ Landscape diversity, habitat diversity, & rodent richness: cascading effects. Geological Society of America, Vancouver, BC, Canada.
- 2013 McGuire, J.L.⁺, McRae, B., Kavanagh, D.M., Theobald, D.M., Nuñez, T., Lawler, J. Poster: How far can they go?: A climate corridor model of the United States identifies regional potential for tracking climate change. Ecological Society of America, Minneapolis, MN.
- 2013 McGuire, J.L.⁺, Schloss, C., Lawler, J. Are we already conserving the stage? A land facet gap analysis for 14 ecoregions in the western United States. International Congress for Conservation Biology, Baltimore, MD.
- 2013 McGuire, J.L.⁺, Schloss, C., Michalak, J., Lawler, J. Poster: Testing a land-facet approach for capturing biodiversity in a changing world. 6th International Conference of the International Biogeography Society, Miami, FL.
- 2012 Schloss, C.⁺, McGuire, J.L., Lawler, J., and Michalak, J. Poster: Protecting the ecological stage: Testing a land-facet-based approach to conservation planning in a changing climate. Pacific Northwest Climate Conference, Boise, ID.

- 2012 Li, C.⁺, Kraatz, B., McGuire, J.L., Zhou, Z., Millar, C. Solari, K, and Hadly, E. Poster: Environment and American pika morphology. 4th World Lagomorph Conference, Vienna. Student Poster Award.
- 2012 McGuire, J.L.⁺ and Davis, E.B. Using the mammal fossil record to test species distribution models. Society of Conservation Biology North America Congress for Conservation Biology, Oakland, CA.
- 2012 Schloss, C.⁺, Lawler, J., McGuire, J.L., and Michalak, J. Protecting the ecological stage: applying and testing a land-facet-based approach to conservation planning in a changing climate. Society of Conservation Biology North America Congress for Conservation Biology, Oakland, CA. Presented in invited symposium: Towards Conservation Assessments for Climate Adaptation: Presentation and Evaluation of a Framework.
- 2011 McGuire, J.L.⁺ and Davis, E.B. Using the paleontological record of *Microtus* to test species distribution models and reveal responses to climate change. Geological Society of America Annual Meeting, Minneapolis, MN.
- 2011 McGuire, J.L.⁺ Past climate set the stage for future responses to climate change: morphological evolution in *Microtus californicus*. Evolution Annual Meeting, Norman, OK.
- 2010 McGuire, J.L.⁺, Davis, E.B., and Orcutt, J. Using the fossil record to test phylogeographic and ecological niche model hypotheses about the locations of glacial refugia. Society of Integrative and Comparative Biology Annual Meeting, Seattle, WA.
- 2009 Davis, E. B.⁺, McGuire, J. L., and Orcutt, J. Testing phylogeographic and niche model reconstructions of glacial refugia using the fossil record of North American small mammals. Geological Society of America Annual Meeting, Portland, OR.
- 2009 McGuire, J. L.⁺ Quaternary range and population variation shifts in Pacific-coast *Microtus* species in response to environmental pressures. Geological Society of America Annual Meeting, Portland, OR.
- 2009 McGuire, J.L.⁺ *Microtus californicus* tooth shape as a potential paleoclimatic indicator. 69th Annual Meeting, Society of Vertebrate Paleontology, Bristol, UK.
- 2009 McGuire, J.L.⁺ Discrimination of five *Microtus* species using geometric morphometrics informs the paleoecology of Pacific-coast Quaternary fossil localities. 9th North American Paleontological Convention, Cincinnati, Ohio.
- 2009 McGuire, J.L.⁺ Poster: Examining the role of climate in *Microtus* tooth-shape distribution using geometric morphometrics. 4th International Conference of the International Biogeography Society, Mérida, Yucatan, Mexico.
- 2008 McGuire, J.L.⁺ Poster: Examining the role of climate in *Microtus* tooth-shape distribution using geometric morphometrics. Arthur M. Sackler Colloquium of the National Academy of Sciences on Biogeography, Changing Climates and Niche Evolution, Irvine, California.

- 2008 McGuire, J.L.+ et al. Quantifying the extent of time-averaging introduced by rodent bioturbation in mammal-bearing Cenozoic sediments. 68th Annual Meeting, Society of Vertebrate Paleontology, Cleveland, Ohio.
- 2008 Blois, J.+ Hadly, E., McGuire, J., and A. D. Barnosky. Small mammal response to the Pleistocene-Holocene transition in northern California. 68th Annual Meeting, Society of Vertebrate Paleontology, Cleveland, Ohio.
- 2007 McGuire, J.L.+ Geometric morphometrics enables species discrimination amongst five microtines and allows reassessment of California's Quaternary paleoecology. 67th Annual Meeting, Society of Vertebrate Paleontology, Austin, Texas.
- 2007 McGuire, J.L.+ Using geometric morphometrics to distinguish between five Pacific-coast microtine species in the fossil record. 87th Annual Meeting, American Society of Mammalogists, Albuquerque, New Mexico.
- 2006 Barnosky, A.D.+ and McGuire, J.L. The Role of Vertebrate Paleontology in Forecasting Future Ecological Change. 66th Annual Meeting, Society of Vertebrate Paleontology, Ottawa, Ontario, Canada.
- 2005 DeBlieux, D.D.+, Kirkland, J.I., Smith, J.A., McGuire, J.L. et al. An overview of the vertebrate paleontology of late Triassic and early Jurassic rocks in Zion National Park, Utah. Tracking Dinosaur Origins: The Triassic/Jurassic Terrestrial Transition, St. George, UT.
- 2003 DeBlieux, D.D.+, Smith, J.A., McGuire, J.L. et al. Poster: A paleontological inventory of Zion National Park, Utah, and the use of GIS technology of create paleontological sensitivity maps for use in resource management. 63rd Annual Meeting, Society of Vertebrate Paleontology, St. Paul, MN.

E. Grants and Contracts

E1. As Principal Investigator

Currently funded:

Title of Project: **Vertebrate functional traits as indicators of ecosystem function through deep and shallow time**

Agency: NSF GEO-NERC (joint program with the UK)

Total Amount: \$1,200,000

Role: PI

Collaborators: Michelle Lawing (collaborative PI; Texas A&M); Jason Head (collaborative PI; Cambridge); Fredrick Kyalo Manthi (Co-PI; National Museums of Kenya)

Contract Period: 2020-2022

Candidate's Share: \$400,000

Status: NSF-funded; NERC has agreed to fund, but formal status still pending

Title of Project: **Conservation Palaeobiology in Africa (CPiA)**
Agency: International Union of Biological Sciences (IUBS)
Total Amount: ~\$32,600 (30,000 €)
Role: Co-PI
Collaborators: Johannes Muller (collaborative PI; Berlin NHM); Fredrick Kyalo Manthi (Co-PI; National Museums of Kenya)
Contract Period: 2020-2022
Candidate's Share: Not designated- funds travel

Title of Project: **CAREER: Do species track climate? Using paleoecology to disentangle niche dynamics**
Agency: NSF GEO EAR SGP CAREER; co-funded by NSF BIO DEB PCE CAREER
Total Amount: \$636,409
Role: PI
Collaborators: None
Contract Period: February 2020-2025
Candidate's Share: 100%
Status: Funded

Title of Project: **Characterizing climate-resilient landscapes**
Agency: NSF DEB PCE
Total Amount: \$368,260
Role: PI
Collaborators: Jessica Blois (Senior Personnel; UC Merced)
Contract Period: 2017-2020
Candidate's Share: 100%

Previously funded:

Title of Project: **An integrated analysis of climate resilience in social-ecological systems in the southeastern United States**
Agency: Climate Change Fellows Interdisciplinary Research Seed Grant
Total Amount: \$13,500
Role: PI
Collaborators: Allen Hyde (Sociology at GT)
Contract Period: 2018
Candidate's Share: \$8,350

Title of Project: **Examining Paleontological Extinction Patterns to Predict Modern Extinction Vulnerability**

Agency: National Evolutionary Synthesis Center (NSF-funded research center)
Total Amount: \$94,700
Role: PI
Collaborators: None
Contract Period: 2010-2012
Candidate's Share: 100%

E2. As Co-Principal Investigator

Currently funded:

Title of Project: **Fieldwork at Natural Trap Cave**
Agency: David B. Jones Foundation Grant
Total Amount: \$46,597
Role: Co-PI
Collaborators: Julie Meachen (PI; Des Moines U.)
Contract Period: 2018-2021
Candidate's Share: Not designated- funds fieldwork

Previously funded:

Title of Project: **Integrated Climate Change Biology (iCCB)**
Agency: International Union of Biological Sciences (IUBS)
Total Amount: ~\$11,100 (10,000 €)
Role: Co-PI
Collaborators: Johannes Muller (PI; Berlin NHM), Jussi Eronen (co-PI; U. Helsinki), Jason Head (co-PI; Cambridge), Michelle Lawing (co-PI; Texas A&M)
Contract Period: 2018
Candidate's Share: Not designated- funds travel

Title of Project: **The Effects of Environmental Change on Gorilla Carrying Capacity in the Virunga Mountains**
Agency: Elizabeth Smithgall-Watts Grant, GT School of Biological Sciences
Total Amount: \$7,000
Role: Co-PI
Collaborators: Tara Soinski (President and CEO and Chief Scientific Officer for the Dian Fossey Gorilla Fund, Zoo Atlanta)
Contract Period: 2017-2018
Candidate's Share: \$5,500

E3. As Senior Personnel or Contributor

Title of Project: **UPCycle Center: Understanding Past Carbon cycles to inform future carbon solutions**
Agency: NSF STC
Total Amount: Pre-proposal
Role: Contributor
Collaborators: Annalisa Bracco, Mandy Joye, +40 others
Contract Period: TBD

E4. Pending Proposals

Title of Project: **Identifying climate-sensitive taxa using the terrestrial and marine fossil records.**
Agency: NSF GEO-NERC (joint program with the UK)
Total Amount: LOI Approved
Role: PI
Collaborators: Dr. Erin Saupe (Oxford)
Contract Period: 2023-2026

E5. Proposals Submitted but Not Funded (Last Two Years)

Title of Project: **Social-ecological toolkits for climate resilience in the southeastern United States**
Agency: NSF DCL: Growing Convergence Research
Total Amount: Prospectus
Role: PI
Collaborators: Allen Hyde, Kim Cobb, Brian Stone, Ashok Goel, Jennifer Hirsch, Jayma Koval, Emanuele Massetti, Emanuele Di Lorenzo (all GT; co-PIs)
Contract Period: 2018-2019

Title of Project: **BII-Design: Mutualisms in the Rules of Life: From Molecules to Mammals**
Agency: NSF Division of Biological Infrastructure
Total Amount: \$200,000
Role: Co-PI
Collaborators: Loren Williams (PI); Jennifer Glass (Co-PI)
Contract Period: 2020-2021

Title of Project: **Combining spatial modeling and the fossil record to determine how plants and animals track changing climates across a fragmented landscape**
Agency: Packard Foundation
Total Amount: \$800,000
Role: PI

Collaborators: NA
Contract Period: 2020-2025

Title of Project: **Disentangling biotic responses to climate change using the terrestrial and marine fossil record**
Agency: Human Frontier Science Program
Total Amount: Not specified
Role: PI
Collaborators: Dr. Erin Saupe, University of Oxford
Contract Period: 2021-2024

F. Other Scholarly and Creative Accomplishments

No Data

G. Societal and Policy Impacts

G1. Policy Impacts: conservation consultation

2016-2019 Consultant for Eastern Wildways Project, organized by the Wildlands Network

G2. Societal impacts: select media coverage

- 2022 *Geortia Tech Alumni Magazine*. August 18. "[Tech's fossil hunters. 'Citizen Scientists' are welcome during Fossil Fridays at Georgia Tech.](#)"
- 2021 *Georgia Tech News Center*. December 23. "[Focus on Fossils: Paleobiologists to Uneath Ancient Megafauna in East Africa, Forecast How Humans and Climate Affect Wildlife.](#)"
- 2021 *Billings Gazette (& AP)*. July 18. "[Pack rats assist paleontologists in exploration of Wyoming cave's fossils.](#)"
- 2021 *Billings Gazette*. July 17. "[Cave paleontology camping isn't exactly glamping.](#)"
- 2021 *Powell Tribune*. July 22. "[Secrets of the Trap Cave: Scientists from across the nation converge on 'important' site outside of Lovell.](#)"
- 2021 *Phys.org*. January 5. "[Researchers uncover unequal effects of human activity on mammals.](#)"
- 2021 *Georgia Tech News Center*. January 4. "[Survival of the Smallest: Georgia Tech Researchers Uncover Unequal Effects of Human Activity on Mammals](#)" By Audra Davidson.
- 2020 *Georgia Tech News Center*. August 24. "[Fossil Pollen Record Suggests Vulnerability to Mass Extinction Ahead](#)" By John Toon.

- 2020 *The Daily Mail*. August 31. "[Declining resilience of North America's plant biomes may be a sign of a mass extinction last seen nearly 13,000 years ago, experts warn.](#)" By Stacy Liberatore
- 2020 *The Washington Post*. March 18. "[Safe Passages.](#)" By Ben Guarino.
- 2019 *Georgia Tech Research Horizons*. Issue 1. "Cool Solutions: In search of climate refugia." By T.J. Becker.
- 2018 *Lost in the Stacks*. "[Citizen Science in the Fossil Lab.](#)" on WREK radio.
- 2018 *Main Street Wyoming*. "[Natural Trap Cave.](#)" By Wyoming PBS.
- 2018 *Science Matters Podcast*. "[Can lessons from fossils guide Earth's future?](#)" by Renay San Miguel, GT College of Sciences.
- 2016 *Georgia Tech Research Horizons*. Issue 3. "Highway to the survival zone." By John Toon.
- 2016 *The Nature Conservancy*. "[Migrations in motion.](#)" By Dan Majka
- 2016 *Business Insider*. June 13. "[Scientists think 'little plant and animal highways' could help wildlife escape climate change.](#)" By Simone Scully.
- 2016 *Climate Central*. June 13. "[A simple idea could help wildlife survive climate change.](#)" By Brian Kahn.
- 2016 *WABE NPR Atlanta*. June 13. "[Habitat corridors could help animals adapt to climate change.](#)" By Molly Samuel.
- 2016 *Inside the Black Box*. February 10. "Are we in the Sixth Mass Extinction?" on WREK radio.
- 2015 *Live Science*. September 2. "[#JunkOff: Why Animal Genitals Are Important to Science.](#)" By Stephanie Pappas.
- 2015 *Science 2.0*. July 9. "[Previous claims of interbreeding due to climate change exaggerated.](#)"
- 2014 *The Daily Telegraph* (and many others) August 11. "[Hundreds of Ice Age fossils found in ancient sinkhole in Wyoming.](#)" By Rosa Prince.
- 2012 *Huffington Post*. October 12. "[Earth's Oceans 'Facing A Man-Made Major Extinction Event.'](#)" By Ted Thornhill.
- 2012 *US News & World Report*. February 2. "[Bringing Evolutionary Science to the Community.](#)" By Marlene Cmons, NSF.
- 2011 *Miller-McCune*. May 15. "[Scientists take Charles Darwin on the road.](#)" By Craig McClain
- 2011 *Radio In Vivo*. May 4. "[Dr. Jenny McGuire discusses conservation paleontology, the sixth mass extinction, and organisms' responses to climate change.](#)" By Ernie Hood

- 2011 *NY Times*. February 14. "[A nationwide day for honoring Charles Darwin, but handled with caution.](#)" By Amy Harmon.
- 2010 *Science News*. October 15. "[Climate changes, and there goes the neighborhood.](#)" By Susan Milius.
- 2007 *Berkeley Science Review*. Spring. "[Metropolitan Mammoth.](#)" By Nicholas Pyenson.

H. Other Professional Activities

No Data

V. Education

A. Courses Taught

Spring 2022	BIOL 8802	The Sixth Mass Extinction	6 students
Fall 2021	BIOL 2300	General Ecology (co-taught)	102 students
Spring 2021	EAS 1601	Habitable Planet (co-taught)	257 students
Fall 2020	BIOL 8802	Data Science in Conservation	9 students
Spring 2020	BIOL/EAS 4813/8813	Biodiversity on a Changing Planet (same as Spring 2018 course)	12 students
Fall 2019	BIOL 2335	General Ecology (co-taught)	82 students
Spring 2019	EAS 1601	Habitable Planet (co-taught)	176 students
Fall 2018	BIOL/EAS 8802	Climate Resilience	15 students (+5 observers)
Spring 2018	BIOL/EAS 4813/8813	Landscape ecology, biogeography, & GIS methods (created from scratch; renamed Biodiversity on a Changing Planet)	9 students

B. Individual Student Guidance

B1. Ph.D. Students

Katherine Slenker	PhD Student	School of Biological Sciences	Fall 2022- present
Tucker Lancaster	PhD Student	Quant. Biosciences Program	Spring 2021 rotation
Julia Schap	PhD Student	School of Biological Sciences	Fall 2019 – present
Daniel Lauer	PhD Student	Quant. Biosciences Program	Summer 2019 – present
Benjamin Shipley	PhD Student	School of Biological Sciences	Fall 2018 – present

B2. M.S. Students (Indicate Thesis Option for Each Student)- no data**B3. Undergraduate Students**

2021- Present	Nia Gladden <i>ECSEL Program</i>	Biological Sciences	Georgia Tech
2021- Present	Eli Vasquez <i>ECSEL Program</i>	Biological Sciences	Georgia Tech
Summer 2021	Angelica Chukwudebe	Biology	Brown U.
2021- Present	Michael Sketel	Biological Sciences	Georgia Tech
2020- Present	Hannah Payne <i>ECSEL Program</i>	Biological Sciences	Georgia Tech
2020- Present	Megan Wright	Biological Sciences	Georgia Tech
2020- Present	Amna Amir	Biological Sciences	Georgia Tech
2020- Present	Anna Whitford	Industrial & Systems Eng.	Georgia Tech
2019- Present	Audrey Dods	Biological Sciences	Georgia Tech
2019-2020	Manuel Regalado <i>Pura Award</i>	Materials Sciences & Eng.	Georgia Tech
2019- Present	Lily Turner <i>ECSEL Program, McCallum Scholar</i>	Biological Sciences	Georgia Tech
2018-2021	Jadyn Sethna <i>McCallum Scholar</i>	Biological Sciences	Georgia Tech
2018-2020	Kathryn Mccarthy <i>ECSEL Program McCallum Scholar</i>	Biological Sciences	Georgia Tech
2017—2018	Joe Miles	Biological Sciences	Georgia Tech
2015—2018	Amanda Meadows	Biological Sciences	Georgia Tech
2017—2018	Riannon Colton	Earth & Atmospheric Sciences	Georgia Tech
2017	Heather Strathearn <i>Co-advised w. Bistra Dilkina: Bee Inspired REU Program; thesis: "Effect of dispersal rates on species' abilities to track viable habitats given predicted climate change"</i>	Civil Engineering	Perdue U.
2016-2017	Daniel Do <i>Co-advised w. Bistra Dilkina; thesis: "Computational framework for spatial connectivity under climate change and dispersal constraints"</i>	College of Computing	Georgia Tech
2015-2016	Renee Bach	College of Computing	Georgia Tech

Co-advised w. Bistra Dilkina; thesis: "Computational framework to analyze the spatial connectivity of species in Southeastern US under climate change"

2015-2016	Molly Guthrie	Biological Sciences	Georgia Tech
2015-2016	Victoria Contreras	Biological Sciences	Georgia Tech
2015-2016	Simone Siriani	Dept. of Geosciences	Georgia State
2015-2016	Matthew Toro	Dept. of Geosciences	Georgia State
2014-2015	Morgan Ganues	Biological Sciences	Georgia Tech
2014-2015	Tong Yu	Biological Sciences	Georgia Tech
2014-2015	Alissa Schlossberg	Biological Sciences	Georgia Tech
2009-2011	Sue Kim	Integrative Biology	UC Berkeley
2007-2009	Lily Li	Integrative Biology	UC Berkeley
2007-2008	Yamile Colque	Integrative Biology	UC Berkeley
2006-2007	Nathan Shih	Molecular & Cell Biology	UC Berkeley

B4. Service on Thesis or Dissertation Committees

2019- Present	Rozenn Pineau	PhD: Biological Sciences	Advisor: Will Ratcliff
2019	Yuhan Yang	PhD: Earth & Atm. Sci. (quals)	Advisor: Rodney Weber
2018	Miguel Neve	PhD: Earth & Atm. Sci. (quals)	Advisor: Zhigang Peng
2018-2021 (complete)	Minda M. Monteagudo	PhD: Ocean Sciences & Eng.	Advisor: Jean Lynch-Stieglitz
2015-2018 (complete)	John Eric Williams	PhD: Environmental Systems (UC Merced)	Advisor: Jessica Blois

B5. Mentorship of Postdoctoral Fellows or Visiting Scholars

2020- Present	Dr. Rachel Short	NSF Postdoctoral fellow (co-advised with A. Michelle Lawing, Texas A&M)
2017-2021	Dr. Yue Wang	Postdoctoral fellow
2018-2020	Dr. Silvia Pineda-Muñoz	Postdoctoral fellow
2019	Abba Parker	Visiting Grad. Student, Cambridge U., Advisor: Jason Head

B6. Mentorship of Lab Technicians

2017-2018	Rukumani Rimal	Lab Technician
2016-2018	Aaron Woodruff	Lab Technician

C. Educational Innovations and Other Contributions

- 2021 Hosted Georgia Tech GIFT Program teacher, Vanessa Boone, who developed 2 curriculum modules for 3rd and 5th grade classrooms related to the experience.

VI. Service

A. Professional Contributions

- 2021 Co-organizer (along with A. Michelle Lawing, TX A&M; Sandra Diaz, U. Cordoba; Nils Chr. Stenseth, U. Oslo) of PNAS Special Feature Virtual Symposium and Round Table: "The past as a lens for biodiversity conservation on a dynamically changing planet"
- 2021 Co-organizer (along with Rachel Reid, VT) of Ecological Society of America symposium: "A Dynamic Perspective on Ecosystem Restoration: Establishing Temporal Connectivity at the Intersection Between Paleoecology and Restoration Ecology"
- 2021-present Co-organizer and co-editor (along with A. Michelle Lawing, TX A&M; Sandra Diaz, U. Cordoba; Nils Chr. Stenseth, U. Oslo) of *Proceedings of the National Academy of Sciences* Special Feature: "The past as a lens for biodiversity conservation on a dynamically changing planet"
- 2021-present Co-organizer and co-editor (along with Julie Meachen, DMU) of *Quaternary International* Special Issue: "Natural Trap Cave"
- 2021-present Chair of the Paleoecology Section of the Ecological Society of America (ESA)
- 2020 Co-organizer (along with Julie Meachen, DMU) of the Natural Trap Cave Virtual Symposium.
- 2020-present Leadership committee of Conservation Palaeobiology in Africa (CPiA) Programme.
- 2018 Vice Chair of the Paleoecology Section of the Ecological Society of America (ESA)
- 2018 NSF Sedimentary Geology & Paleontology Panelist
- 2017-2019 Leadership committee of Integrating Climate Change Biology (iCCB) program.
- 2016 Guest editor for *Proceedings of the National Academy of Sciences*.
- 2016-present Associate Editor at *Journal of Biogeography*.

- 2016 Co-organizer of Geological Society of America 65th Annual Meeting of the Southeastern 2016 session “Fossil vertebrates of the southeastern United States”
- 2015 International Biogeography Society Symposium Selection Committee (for 2017)
- 2014 Guest editor of invited special issue of *Ecography* resulting from IBS Symposium
- 2010-2013 Co-organizer of International Biogeography 2013 symposium “The convergence of conservation paleontology and biogeography”
- 2008 Integrative Biology University of California Museum of Paleontology Director Search Committee, Student Member
- 2006-2007 Integrative Biology Graduate Student Association Co-President, UC Berkeley
- 2004-2005 Graduate Assembly Delegate, served on Academic Affairs Committee, UC Berkeley

Scientific Working Groups, Catalysis Meetings & Workshops

- 2021 Workshop: North American Rodents and Landscape Ecology and Evolution (NARLEE). NSF-funded RCN.
- 2020 Workshop: Functional Trait Resource for Environmental Studies (FuTRES). NSF-funded workshop.
- 2018 Workshop: Conservation Paleontology in Africa. Leadership Committee. Funded by the International Union of Biological Sciences. Berlin, Germany.
- 2018 Workshop: Taphonomy Workshop. NSF-funded workshop. Cincinnati, OH.
- 2018 Workshop: Conservation Paleontology in Africa. Leadership Committee. Funded by the International Union of Biological Sciences. Cambridge, UK.
- 2017 Forum: The National Forum on Landscape Conservation. Invited Participant. National Conservation Training Center, Shepherdstown, WV.
- 2017 Workshop: Conservation Paleontology in Africa. Leadership Committee. Funded by the International Union of Biological Sciences. Berlin, Germany.
- 2017 Workshop: Collections Data in Ecological and Conservation Research. NSF Advancing Digitization of Biodiversity Collections (ADBC) Summit. University of Florida, Gainesville, FL.
- 2017 Workshop: Paleoecology & Community Ecology (PACE) to link temporal scales in community dynamics. Population & Community Ecology (PCE) NSF-funded workshop. Schoodic Institute, Schoodic Peninsula, ME.
- 2017 Workshop: Traits past, present, and future: quantitative approaches to paleontology, conservation, and climate change biology in Africa. Integrating Climate Change Biology, National Museum of Kenya, Nairobi, Kenya.

- 2017- Working Group: Integrating Collections & Ecological Research (ICER). Integrated Digitized Biocollections (iDigBio), Gainesville, FL.
- 2013 Catalysis Meeting: [Integrating historical biogeography and phylogeography with the fossil record and landscape history](#). Organizers: Catherine Badgley & Brett Riddle National Evolutionary Synthesis Center (NESCent), Durham, NC.
- 2010-2 Working Group: [Determinants of extinction in ancient and modern seas](#). Organizers: Paul Harnik, Rowan Lockwood, & Seth Finnegan. National Evolutionary Research Synthesis Center (NESCent), Durham, NC.
- 2012 Doris Duke Foundation Steering Committee Meeting. Organizer: Steve Buttrick. The Nature Conservancy in Oregon, Portland, OR
- 2012 Western Governors Association Technical Modeling Workshop. Organizers: John Pierce, David Theobald, & Pat Comer. Colorado State, Fort Collins, CO.
- 2010 Catalysis Meeting: [Earth surface processes in the evolution of mammalian tooth shape](#). Organizers: Richard Madden, Caroline Stromberg, & Matthew Kohn. National Evolutionary Research Synthesis Center (NESCent), Durham, NC.

Scientific Reviewer

External reviewer for NSF
NSF Panelist (2018, 2020, 2021, 2022)
Axios
BioLetters
Biological J. of the Linnaean Society
BMC Evolutionary Biology
Conservation Biology
Diversity & Distributions
Ecography
Ecology
Ecology Letters
Ecosphere
Environmental Research Letters
Evolution
Evolutionary Ecology Research
Frontiers of Biogeography
Functional Ecology
Global Change Biology
Global Ecology & Biogeography

Global Environmental Change
Journal of Biogeography
Journal of Paleontology
Nature Climate Change
Nature Communications
One Earth
Open Quaternary
Paleobiology
Palaeo-3
Palaios
PeerJ
PLoS One
Proc. of the National Academy of Sciences
Proceedings of the Royal Society B
Quaternary International
Science
Science Advances
Scientific Report

Professional Society Memberships

American Society of Mammalogists
Ecological Society of America
Geological Society of America
International Assoc. of Landscape Ecology
Int. Quaternary Research Assoc.
Society for the Study of Evolution
Society of Vertebrate Paleontology
The Wildlife Society

International Biogeography Society
Society of Conservation Biology

UT Friends of Paleontology-Hon. Member

B. Public and Community Service

- 2020 Georgia Public Broadcasting [interview](#) & discussion for preview of “The Age of Nature” documentary.
- 2019- Present Fossil Fridays- open labs every Friday to sort fossil specimens & learn about paleontology
- 2019 Lecture at the Paleontological Association of Georgia (PAG), Atlanta, Georgia
- 2017 Lecture at Atlanta Geologic Society
- 2017 Lecture at Alabama Paleontological Society
- 2017 Lecture at Dogwood City Grotto (Speleological Group)
- 2017 Program co-Chair for the March for Science Atlanta, which attracted over 10,000 attendees
- 2016-2019 Fossil Wednesdays- open labs every Wednesday to sort fossil specimens & learn about paleontology
- 2012 Highlighted scientist for Sally Ride Science textbook on climate change
- 2012 Speaker for NESCent’s Darwin Day Road Show- Takoma, WA and Banks, OR
- 2011 Speaker for NESCent’s Darwin Day Road Show to Ringgold, VA
- 2005-2010 Museum Docent, University of California Museum of Paleontology, 2005-2010.
- 2005-2010 Cal Day Graduate Student Participant
- 2009 Expert interview for *Animal Planet* show about end-Pleistocene extinctions
- 2005 Designed material used in expert testimony for *Tammy Kitzmiller, et al. v. Dover Area School District, et al.* trial
- 2005 Publicly [excavated](#) “Lupé,” the San Jose Mammoth, with public Q&A sessions and local news station interviews

C. Institute Contributions

- 2021-Present PROGRESS (PROmoting Geoscience, Research, Education and Success) Collaborator: bringing program to Atlanta
- 2021-Present School of Biological Sciences Strategic Hiring Committee
- 2020 Facilitator in GT 17-Rooms Sustainable Development Forum
- 2019 Highlighted in Georgia Tech’s Research Magazine (2x)

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2018-Present	School of Biological Sciences Elizabeth Smithgall Watts Chair in Ecology & Conservation search committee member
2018-Present	Undergraduate Curriculum Committee, School of Biological Sciences
2017-2018	School of Biological Sciences Retreat Committee co-chair
2018-Present	Global Change Faculty Advisory Council
2017-Present	Member of the Quantitative Biosciences Graduate Program (advising 1 Ph.D. students)
2017	Mentor for the GT NSF Bee-Inspired REU program