

**M. ALLISON STEGNER**  
*CURRICULUM VITAE*

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**EDUCATION**

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**Ph.D.**, 2015, University of California, Berkeley, Department of Integrative Biology.  
**B.S.**, 2010, Stanford University, Department of Biology. Honors in Ecology and Evolution.

**APPOINTMENTS**

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2019-present	Postdoctoral Scholar, Stanford University, Department of Biology
2017	Paleontology Resource Assistant, US Bureau of Land Management.
2016-2019	Postdoctoral Research Associate, University of Wisconsin-Madison, Department of Integrative Biology
2016	STEM Outreach Assistant, US Bureau of Land Management.

**PUBLICATIONS**

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Mychajliw A, Ellwood E, Alagona P, Anderson RS, Balisi M, Biber E, Brown J, George J, Hendy A, Higgins L, Hofman C, Leger A, Ordeñana M, Pauly G, Putman B, Randall J, Riley S, Shultz A, **Stegner MA**, Wake T, Lindsey E (*in review*) Lessons for conservation from beneath the pavement.

Gilmer BB, **Stegner MA** (*in press*) The 85/15 Rule of Arthroscopic Surgery: A Simple Way to Council Patients about Surgical Outcomes. *Arthroscopy*.

Williams M, Leinfelder R, Barnosky AD, Head MJ, McCarthy FM, Cearreta A, Himson S, Holmes R, Waters CN, Zalasiewicz J, Turner S, McGann M, Hadly EA, **Stegner MA**, Pilkington PM, Kaiser J, Berrio JC, Wilkinson IP, Zinke J, DeLong KL (*in press*) Planetary scale change to the biosphere signaled by global species translocations can be used to identify the Anthropocene. *Paleontology*.

Viteri M, **Stegner MA**, Hadly EA (2021) Assessing the reliability of raptor pellets in recording local small mammal diversity. *Quaternary Research*. DOI:10.1017/qua.2021.59

Gay RJ, Huttenlocker AK, Irmis RB, **Stegner MA**, Uglesich J (2020) Paleontology of the Bears Ears National Monument (Utah, USA): History of exploration, study, and designation. *Geology of the Intermountain West* 7: 205-241. <https://doi.org/10.31711/giw.v7.pp205-241>.

**Stegner MA**, Turner MG, Iglesias V, Whitlock C (2019) Post-fire vegetation and climate dynamics in low-elevation forests over the last three millennia in Yellowstone National Park. *Ecography* 41: 1-11. DOI: 10.1111/ecog.00119

**Stegner MA**, Ratajczak Z, Carpenter S, Williams J (2019) Inferring critical transitions in paleoecological time series with irregular sampling and variable time-averaging. *Quaternary Science Reviews*, 207: 49-63 DOI: 10.1016/j.quascirev.2019.01.009

Ramiadantsoa T, **Stegner MA**, Williams J, Ives A (2019) The potential role of intrinsic processes in generating abrupt and synchronous tree declines during the Holocene. *Ecology* 100(2): e02579. DOI: 1002/ecy.2579

- Ratajczak Z, Carpenter SR, Ives AR, Kucharik CJ, Ramiadantsoa T, **Stegner MA**, Williams J, Zhang J, Turner MG (2018). Abrupt changes in ecological systems: Inference and diagnosis. *Trends in Ecology and Evolution*. 33: 513-526. DOI: 10.1016/j.tree.2018.04.013
- Stegner MA**, Karp D, Rominger A, Hadly EA (2017). Can protected areas really maintain mammalian diversity? Insights from a nestedness analysis of the Colorado Plateau. *Biological Conservation*. 209C: 546-553. DOI: 10.1016/j.biocon.2017.03.021
- Barnosky AD, Hadly EA, Gonzalez P, Ackerly D, Alex K, Biber E, Blois J, Brashares J, Ceballos G, Davis E, Dietl G, Dirzo R, Doremus H, Eronen J, Fortelius M, Greene H, Head J, Hellmann J, Hickler T, Jackson S, Kemp M, Koch P, Kremen C, Lawing M, Lindsey E, Looy C, Marshall C, Mendenhall C, Mulch A, Mychaljliw A, Nowak C, Polly PD, Ramakrishnan U, Schnitzler J, Das Shrestha K, Solari K, Stegner L, **Stegner MA**, Chr. Stenseth N, Wake M, Zhang Z (2017). Merging paleontology with conservation biology to guide the future of terrestrial ecosystems. *Science*. DOI: 10.1126/science.aah4787
- Stegner MA** (2016). Stasis and change in Holocene small mammal diversity during a period of aridification in southeastern Utah. *The Holocene* DOI: 10.1177/0959683616632894
- Stegner MA** (2015) Spatial and Temporal Variation in Mammalian Diversity of the Colorado Plateau (USA). University of California, Berkeley Dissertation.
- Stegner MA** (2015) The Mescal Cave fauna (San Bernardino County, California): Testing assumptions of habitat fidelity in the Quaternary fossil record. *Quaternary Research* 83: 582-587.
- Barnosky AD, Holmes M, Kirchholtes R, Lindsey E, Maguire KC, Poust AW, **Stegner MA**, Sunseri J, Swartz B, Swift J, Villavicencio NA, Wogan GOU. (2014) Prelude to the Anthropocene: two newly-defined North American Land-Mammal Ages. *The Anthropocene Review* 1(3): 225-242.
- Stegner MA**, Holmes M. (2013) Using paleontological data to assess mammalian community structure: Potential aid in conservation planning *Palaeogeography, Palaeoclimatology, Palaeoecology* 372: 138-146.

#### **HONORS, AWARDS, AND FELLOWSHIPS**

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- 2014 University of California Museum of Paleontology Fellowship  
 2013 Paleontological Society G. Arthur Cooper Award  
 2011 Outstanding Graduate Student Instructor Award  
 2011 NSF Graduate Research Fellowship

#### **GRANTS**

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- 2021 Conservation Paleobiology Network Working Group Funding  
 2019 INQUA Travel Fellowship  
 2015 Canyonlands Natural History Association Discovery Pool Grant  
 2015 GRAC Research Funding, UC Berkeley  
 2014 GRAC Research Funding, UC Berkeley  
 2014 Integrative Biology Summer Research Fellowship  
 2014 Sigma Xi Berkeley Chapter Research Grant  
 2014 Sigma Xi National, Grant-In-Aid of Research  
 2013 Sigma Xi Berkeley Chapter Research Grant  
 2013 Integrative Biology Summer Research Fellowship  
 2013 Paleontological Society Research Grant  
 2013 Geological Society of America Research Grant

- 2012 UCMP Research Grant
- 2012 Integrative Biology Summer Research Fellowship
- 2011 Paleobiology Database Analytical Methods Workshop
- 2011 Desert Legacy Fund, Riverside & San Bernardino County Community Foundation
- 2009 Vermont Botanical and Bird Club Scholarship
- 2009 Stanford University Vice Provost for Undergraduate Education Grant

#### **SELECTED PROFESSIONAL MEETING PRESENTATIONS \*INVITED TALKS**

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1. **\*Stegner MA**, Barnosky AD, Hadly EA (2022) Searsville Reservoir: Global and local signals of the Anthropocene. Anthropocene Working Group Meeting, Berlin, Germany.
2. **\*Stegner MA**, Barnosky AD, Hadly EA (2021) Searsville Reservoir: Global and local signals of the Anthropocene. Anthropocene Working Group Meeting, Berlin, Germany.
3. **Stegner MA**, La Selle SP, Sherrod B, Barnosky AD, Hadly EA (2021) Dynamics of biotic and abiotic markers of the Anthropocene at Jasper Ridge Biological Preserve, California, USA. European Geophysical Union Meeting.
4. **\*Stegner MA**, Spanbauer T (2020) Abrupt vegetation changes in the Anthropocene exceed Holocene levels of abrupt change. Ecological Society of America Meeting, Salt Lake City, UT.
5. **Stegner MA**, La Selle S, Sherrod B, Barnosky AD, Hadly EA (2019) An extraordinary record of Anthropocene stratigraphy from the San Francisco Peninsula, California, USA. American Geophysical Union, San Francisco, CA.
6. **\*Stegner MA**, Barnosky AD, Hadly EA (2019) Searsville Reservoir sediment cores: 126 years of Anthropogenic change. Meeting of the Anthropocene Working Group, New Orleans, LA.
7. **Stegner MA**, Hadly EA (2019) Late Holocene faunal dynamics in a northern Rocky Mountain forest community. Society of Vertebrate Paleontology Annual Meeting, Brisbane, Australia.
8. **Stegner MA**, Ratajczak Z, Carpenter SR, Williams JW (2019) Spatial and temporal indicators of resilience loss in networks of paleoecological records. International Union for Quaternary Research (INQUA) Congress, Dublin, Ireland.
9. **\*Stegner MA** (2019) Legal and political mechanisms for paleontology advocacy: The battle for Grand Staircase-Escalante and Bears Ears National Monuments. North American Paleontology Convention, Riverside, CA.
10. **\*Stegner MA**, Ratajczak Z, Carpenter SR, Hadly EA, Barnosky AD, Williams JW (2019) Identifying causes of abrupt change and resilience loss in paleoecological records of grassland-woodland systems. North American Paleontology Convention, Riverside, CA.
11. **\*Stegner MA**, Barnosky AD, Hadly EA (2019) Searsville Reservoir sediment cores: 126 years of Anthropogenic change. Meeting of the Anthropocene Working Group, Berlin, Germany.
12. **\*Stegner MA**, Turner M, Iglesias V, Whitlock C (2018) Climate, fire, and trade-offs between conifers. Ecological Society of America Meeting, New Orleans, LA.
13. **Stegner MA**, Williams JW, Ratajczak Z, Carpenter S (2018) Moving from detecting past regime shifts to diagnosing critical transitions. Ecological Society of America Meeting, New Orleans, LA.
14. **\*Stegner MA**, Spanbauer T (2018) Abrupt change in paleoecological records: from a systematic review to a meta-analysis. EcoRe3 workshop, Salt Lake City, UT.

15. **Stegner MA**, Stidham T (2018) New and extralimital tetrapods from middle-late Holocene packrat middens on public lands in the Bears Ears region of southeastern Utah, USA. Society of Vertebrate Paleontology Annual Meeting, Albuquerque, NM.
16. **Stegner MA** (2016) Fluctuation in small mammal community structure during the late Holocene in southeastern Utah. Society of Vertebrate Paleontology Meeting, Salt Lake City, UT.
17. **Stegner MA** (2015) Stasis and change in Holocene small mammal diversity during a period of aridification in southeastern Utah. Conference of Science and Management on the Colorado Plateau and Southwest Region, Northern Arizona University, Flagstaff, AZ.
18. \***Stegner MA** (2015) Paleocology for Land Management. Integrating biology & paleobiology to enhance conservation of terrestrial ecosystems on a rapidly changing planet, Berkeley Initiative in Global Change Biology Symposium, Berkeley, CA.
19. \***Stegner MA** (2014) New Holocene fossil localities and Quaternary faunal change in southeastern Utah. Utah Friends of Paleontology Meeting, Moab, UT.
20. \***Stegner MA** (2014) Tracking variation in small mammal functional group abundance: impacts of Quaternary climate and land use on the Colorado Plateau. Society of Vertebrate Paleontology Meeting, Berlin, Germany.
21. **Stegner MA** (2013). The Mescal Cave Fauna (San Bernardino County, California): Testing assumptions of habitat fidelity in the Quaternary fossil record. Society of Vertebrate Paleontology Meeting, Los Angeles, CA.
22. **Stegner MA**, Rominger A, Karp D, Macway S, Busby P, Hadly EA (2013) Species nestedness as an indicator of biodiversity conservation within Colorado Plateau protected lands. International Biogeography Society Meeting, Miami, FL.
23. **Stegner MA**, Ferrer EA (2012) Drivers of jaw shape in *Neotoma*: mandibular geometric morphometrics and implications for morphological partitioning. Society of Vertebrate Paleontology Meeting, Raleigh, NC.
24. **Stegner MA**, Holmes M (2012) Using paleontological databases to assess spatial and temporal conservation of mammalian community structure as an aid to conservation planning. Ecological Society of America, Portland, OR.
25. **Stegner MA**, Ferrer EA (2012) Holocene biogeography of *Neotoma*: mandibular geometric morphometrics and implications for climate change. Society of Integrative and Comparative Biology, Charleston, SC.
26. \***Stegner MA**, Holmes M (2011) Using paleontological databases to assess spatial and temporal conservation of mammalian community structure as an aid to conservation planning. Society of Vertebrate Paleontology Meeting, Las Vegas, NV.
27. **Stegner MA**, Hadly EA (2010) Using the past to predict the future: blue grouse as a model for climate change. Society of Vertebrate Paleontology Meeting, Pittsburgh, PA.

#### **PROFESSIONAL & SYNERGISTIC ACTIVITIES**

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##### **Invited Working Group & Workshop Participation**

- 2020 Neotoma Paleocology Database Vertebrate Data Workshop
- 2019 Anthropocene Working Group meeting, New Orleans, Louisiana.
- 2019 Anthropocene Working Group meeting, Berlin, Germany.
- 2019 Urban Conservation Paleobiology Workshop, La Brea Tar Pits and Museum
- 2019 Neotoma Database All-Hands Meeting
- 2018 Earth Life Consortium, ePANDDA, and EarthRates Data Demo Derby Workshop, University of Wisconsin-Madison.

- 2018 EcoRe3 - Resistance, Recovery, and Resilience in Long Term Ecological Systems, PAGES Workshop
- 2017 Neotoma Database data steward training
- 2017 PACE: Linking Paleocology and Community Ecology Workshop
- 2017 EcoRe3 - Resistance, Recovery, and Resilience in Long Term Ecological Systems. PAGES Workshop
- 2015 Integrating Biology and Paleobiology to Enhance Conservation of Terrestrial Ecosystems on a Rapidly Changing Planet, UC Berkeley Initiative in Global Change Biology Workshop

### **Conference Symposia/Workshops Organized**

- 2021 Conservation Paleobiology Network “Conservation Paleobiology in Cities: Integrating Geohistorical Data into Urban Greening”
- 2020 Ecoinformatics Advances: Building Technosocial Systems for Open Data and Big Science, Organized Oral Session, Ecological Society of America Meeting.
- 2019 Neotoma Paleocology Database: Facilitating transparent data curation in vertebrate paleontology, Workshop, Society of Vertebrate Paleontology Meeting.
- 2018 Expect the unexpected: Best practices for field and workplace safety, Workshop, Society of Vertebrate Paleontology Meeting.
- 2018 Neotoma paleocology database: Facilitating transparent data curation in vertebrate paleontology, Workshop, Society of Vertebrate Paleontology Meeting.
- 2018 Paleontology of the Bears Ears Region Field Trip, Society of Vertebrate Paleontology Meeting.
- 2018 Understanding extreme events: Linking empirical observation to concepts and theory, Inspire Session, Ecological Society of America Meeting.
- 2017 Paleontology Education: Staying on the Cutting Edge in Research, Pedagogy and Outreach, Workshop, Society of Vertebrate Paleontology Meeting, Calgary, Alberta.

### **Professional Service**

- 2022 WiSTEM ENVISION Research Competition judge
- 2020 Moderator, “The Shape of Practice: Negotiating Context in the Anthropocene” Sensing Seminar, Haus der Kulturen der Welt.
- 2019 Abstract reviewer for the International Biogeography Society
- 2018- Society of Vertebrate Paleontology Government Affairs Committee member (2022- United States Subcommittee co-chair)
- 2017- Neotoma Paleocology Database, data steward.
- 2013- Manuscript Reviewer for: *Annals of the Brazilian Academy of Sciences*; *Biology Letters*; *Biological Diversity*; *Ecography*; *Ecosphere*; *Environmental DNA*; *Global Environmental Change*; *The Holocene*; *Journal of Biogeography*; *Journal of Quaternary Science*
- 2010-2015 Associate Editor. *PaleoBios*
- 2009-2010 Associate Editor. *Stanford Undergraduate Research Journal*.

### **Campus & Departmental Talks**

- 2022 Stegner MA. Local and Global signals of the Anthropocene in the geologic record. University of Texas Paleontology Seminar Series.

- 2022 Stegner MA. Tracking abrupt ecological change in the Quaternary fossil record. PaleoEcoGen PAGES Working Group Invited Seminar.
- 2021 Stegner, MA. Tracking abrupt ecological change in the Quaternary fossil record. Department of Environmental Sciences Seminar, University of Toledo.
- 2019 Stegner, MA. Geological signals of the Anthropocene in sediment cores from Searsville Reservoir. Jasper Ridge Biological Preserve Evening Lecture Series, Stanford University, Stanford, CA.
- 2017 Stegner MA, Williams JW, Ratajczak Z, Carpenter S. Moving from detecting past regime shifts to diagnosing critical transitions. Abrupt Change in Ecological Systems Symposium, University of Wisconsin, Madison, WI.

### Writing for a general audience

- 2019 “An Anthropocene Archive in Searsville Reservoir,” Jasper Ridge Biological Preserve Guest Blog
- 2017 “Surveys of Bears Ears National Monument” myFossil Newsletter article
- 2017 “Packrat paleo in Bears Ears National Monument,” Society of Vertebrate Paleontology Guest Blog
- 2012 “NeoMap: An important step toward answering macro-scale questions.” University of California Museum of Paleontology Guest Blog

### TEACHING

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- Morphology of the Vertebrate Skeleton, UC Berkeley (2010, 2015)
- General Biology Lab, UC Berkeley (2011)

### OUTREACH

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- 2022 “Unearthing the Present” presenter, Haus der Culture der Welt, Berlin, Germany
- 2020 Coordinator for the Hadly Lab Stanford Bass Undergraduate Fellows
- 2019 “Past informs present: What fossils tell us about modern and future diversity in the context of global change,” Invited talk, Friends of Cedar Mesa, Bluff, Utah.
- 2016 Fossil activity booth, Moab Festival of Science, Moab, Utah
- 2016 Fossil Craft Hour, San Juan County Libraries, Utah
- 2016 STEM career fairs, San Juan County High Schools, Utah
- 2016 Fossil talk at the Moab Multicultural Center, Moab, Utah
- 2015 Fossil booth, CalDay, UC Berkeley, California
- 2014 Exploring Mammal Teeth short course, Greensboro Library, Greensboro, Vermont.
- 2012 Cenozoic climate change booth, CalDay, UC Berkeley, California

### MEDIA COVERAGE

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- 2021 “When climate ruled the dinosaurs of Grand Staircase” *EOS*, Mary Caperton Morton.
- 2021 “Debating when the ‘Age of Humans’ began” *NPR Short Wave*
- 2021 “Drawing a line in the mud: Scientists debate when ‘Age of Humans’ began” *NPR Morning Edition*
- 2020 “Humans Have Changed North America More Than an Ice Age” *Gizmodo Earther*
- 2020 “Humans have altered North America’s ecosystems more than melting glaciers” *Science Magazine*
- 2020 “Science Moab: The small mammals in your backyard” *Moab Sun Times*
- 2019 “Paleoecology and climate change,” Science Moab Interview, KZMU Community Radio

- 2019 “‘We need new systems of knowledge production’: In Berlin, scientists meet to prove that the era of the ‘Anthropocene’ has begun” *Süddeutsche Zeitung*, Jörg Häntzschel
- 2019 “Scientists sue to protect Utah monument—and fossils that could rewrite Earth’s history” *Science Magazine*
- 2017 “If we shrink national monuments, science will suffer” *Popular Science*
- 2017 “Trump's Decision to Shrink Utah's Monuments Really Pissed Off Paleontologists” *Earther*
- 2017 “All hands on deck to understand, predict, prevent abrupt ecological change” *University of Wisconsin, Madison News*
- 2017 “Stanford researchers among those discussing the future of conservation” *Stanford News*
- 2017 “Researchers discuss the future of conservation” *Phys.org*
- 2017 “Fossil record should help guide conservation in a changing world” *Science Daily*
- 2017 “Published paper demonstrates paleontology within conservational biology” *Daily Californian*
- 2016 “Digging into the Past for Climate Solutions,” TNC Utah website.
- 2016 “Cattle ranchers, scientists work side by side to keep Utah ranch alive,” KSL News, Utah.
- 2016 Research Feature in *The Sundial Newsletter* of the Canyonlands Research Center.
- 2015 Interview in “America. The Beautiful: Canyonlands,” The Travel Channel.
- 2015 “Researchers work to define a geological era characterized by human impacts,” *Daily Californian*.

#### **SERVICE**

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- 2022- Grand Staircase-Escalante Partners Board Member, Kanab, UT
- 2013- Greensboro Association Trustee (2013-present Conservation Committee Chair; 2020-vice president), Greensboro, VT
- 2013-2017 Greensboro Land Trust Advisory Committee member, Greensboro, VT
- 2011-2018 Barr Hill & Long Pond Preserve Stewardship Committee member, Greensboro, VT.

#### **UNDERGRADUATE RESEARCH ASSISTANTS AND MENTEES**

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- 2021 Olivia Partamian (Stanford)
- 2020- Vrinda Suresh (Stanford)
- 2020- Tanvi Gupta (Stanford)
- 2020 Zack LaGrange (Stanford)
- 2020 Ruslan AlJabari (Stanford)
- 2020 Adonis Pugh (Stanford)
- 2020 Rebecca Jia (Stanford)
- 2018-2020 Jordan Schutz (UW Madison)
- 2018 Jacob Pozezinski (UW Madison)
- 2015 Emily Judd
- 2014-2015 Patrick Garcialuna (UC Berkeley)
- 2013-2014 Prayerna Uppal (UC Berkeley)
- 2013-2014 Harman Bhullar (UC Berkeley)
- 2013-2015 Molly Hardesty-Moore (UC Berkeley)
- 2012 Sarah Tulga (UC Berkeley)
- 2007 Brandon Quinn (UC Berkeley)