

GREER ANDERSEN DOLBY

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EDUCATION

2015	Ph.D.	Biology <i>Physical drivers of spatiotemporal genetic patterns and evolutionary processes among and within species of the North American southwest</i>	UCLA	Los Angeles, CA
2013	MSc.	Biology	UCLA	Los Angeles, CA
2008	B.A.	Major 1. Earth Sciences Major 2. Biology, specialization conservation & ecology	Boston University	Boston, MA

POSITIONS

2019–	<i>Assistant Research Professor</i> Arizona State University, School of Life Sciences • Affiliate, <i>Center for Mechanisms of Evolution</i> , Biodesign Institute	Tempe, AZ
2016–2019	<i>Postdoctoral Research Associate</i> Arizona State University, School of Life Sciences	Tempe, AZ
2014–2015	<i>Instructor of Record</i> UCLA, Department of Ecology and Evolutionary Biology	Los Angeles, CA
2008–2015	<i>Teaching Fellow</i> UCLA, Department of Ecology and Evolutionary Biology	Los Angeles, CA

RESEARCH INTERESTS

I study species formation through the lens of Earth-life evolution. To do this I use quantitative models to integrate how paleo-landscapes change over time along with genomic signatures that record how populations evolved with those landscapes. This marries both empirical and theoretical approaches.

Motivating questions

- *Which geo-climatic processes most generate biodiversity over recent and deep time?*
- *How much do organisms vary in their response to shared extrinsic (geoclimatic) forces?*
- *How can we use physics-based concepts of information and work done to quantify landscape change with genomic divergence that can be compared across geographic/taxonomic systems?*

HONORS & AWARDS

2017–	Desert Tortoise Council, Board of Directors	Elected member
2015	Simons Foundation Junior Fellow	Finalist
2014	UCLA Schechtman Award for Teaching Excellence	Nominee
2013	UCLA Graduate poster competition award	First place
2010	NSF Graduate Research Fellowship Program (GRFP)	Honorable Mention
2006	NSF Research Experience for Undergraduates (REU)	Fellow

GRANTS

Current grants (\$2.70M; \$917k to ASU)

\$2,600,000 (\$838k, ASU)	2019–2024	PI (ASU)	NSF EAR Frontier Research in Earth Sci. Collaborative Research: <i>Testing evolutionary pseudocongruence along the Baja California peninsula through integration of geologic and genomic data</i> Award 1925535 Consortium PIs Dorsey, Dolby
\$25,000	2019–2020	PI	AZ Game & Fish <i>GIS resources for the Sonora mud turtle</i>
\$52,458	2017–2020	CoPI	AZ Game & Fish Heritage Fund <i>Characterizing the Sonoran Desert tortoise through genomic analyses of hybrids and speciation</i>

Pending

\$153,000		PI	NSF IOS Integrative Ecological Phys. (IEP) <i>RAPID: Epigenomic, ecological, behavioral response to wildfire among a long-lived species</i>
NSF EPSCoR RII Track4		host	NSF EAR <i>Linking biological evolution to climate and tectonics by integrating genetic and geomorphic processes</i> (applicant : Dr. Nathan Lyons, Asst Res Prof, Tulane University)

Submission/resubmission near-term (\$1.2M)

\$611,000		CoPI	NSF IOS Integrative Ecological Phys. (IEP) <i>IMAGiNE: Understanding hierarchical controls on adaptation to aridity through physio-genomics</i> (Submission Oct 2020)
\$586,757		PI	NSF DEB Evolutionary Processes (EP) <i>Quantifying the information signature of speciation events</i> (Resubmission Oct 2020)
NSF PRFB		supervisor	NSF DEB Evolutionary Processes (EP) <i>Determining speciation boundary conditions as a function of landscape change</i> (applicant : Maya Stokes, PhD Candidate, MIT)
NSF PRFB		supervisor	NSF DEB Systematics & Biodiversity (SBS) <i>The geospatial and temporal virome of the Baja California peninsula</i> (applicant : Karla Vargas, PhD Candidate, U. Arizona)

Completed grants (\$93k)

\$8,000	2019–2020	PI	Dovetail Genomics™ Tree of Life Award <i>Structural variants across the hybrid zone of a desert tortoise speciation event</i>
100k CPU-hrs	2018–2019	PI	XSEDE Research Computing Allocation: <i>Characterizing the Sonoran Desert tortoise through genomic analyses of hybrids and speciation (TG-BIO180021)</i>

~1.2M CPU-hrs	2018–2019	PI	Blue Waters, National Center for Supercomputing Applications (NCSA) Broadening Participation Allocation: <i>Fine-scale geospatial interpolation of variants across hundreds of genomes to determine drivers of speciation</i>
\$11,970	2017–2019	PI	Desert Tortoise Council Research Grant: <i>Genomic insights into extralimital populations and hybrids of a threatened species</i>
\$33,375	2017–2018	coPI	Dept. of Interior—U.S.G.S. Cooperative agreement, Ecosystem Studies Unit: <i>Differential immune expression of tortoises raised on invasive versus native grasses</i>
\$5,400	2016–2017	coPI	Dovetail Genomics Matching Funds Award: <i>Improved scaffolding for the desert tortoise genome v2.0</i>
\$7,496	2016–2017	PI	ASU Fostering Postdoctoral Research in the Life Sciences <i>Deciphering ecological drivers of speciation & local adaptation in the desert tortoise complex</i>
\$1,900	2014–2015	PI	American Museum of Natural History Lerner Gray Memorial Grant
\$14,960	2011–2013	coPI	NSF Doctoral Dissertation Improvement Grant (DDIG) Dissertation Research: <i>An interdisciplinary approach to testing intraspecific evolutionary processes</i>
\$6,000	2009–2012	PI	UCLA Research Award, N=3
\$4,500	2006–2008	PI	Boston University Undergraduate Research Award , N=3 (w/ Maureen Raymo)

FELLOWSHIPS

Completed fellowships/awards (\$105k)

\$1,000	2015	awardee	Next Generation Sonoran Desert Researchers Travel Award
\$20,500	2014–2015	awardee	UCLA Dissertation Year Fellowship
\$26,000	2008–2014	awardee	UCLA Quarterly Grad. Fellowship (<i>N=4</i>)
\$51,984	2009–2011	awardee	Dept. of Education GAANN Fellowship
\$5,000	2006	awardee	NSF REU Fellowship <i>Lamont Doherty Earth Observatory</i> (w/ S. Pekar, N. Christie-Blick, G. Mountain)

PUBLICATIONS & PRODUCTS

ORCID 0000-0002-5923-0690 [link](#)

In preparation (*corresponding, ^trainee, † contributed equally)

- Baja GeoGenomics consortium***, The Integration of Earth-life systems. *Trends in Ecology and Evolution (TREE)*.

14. Dorsey RJ, Darin MH, Bennett SEK, **Dolby GA**, Hausback B, Wilder BT, Pecha ME, Martinez-Gutierrez G, Pliocene tidal embayment on the central Baja California peninsula: Implications for paleogeography, biodiversity, and Quaternary uplift, *Revista Mexicana de Ciencias Geológicas*.
13. Moore DG, Morales M, Walker SI, **Dolby GA***, The information signature of diverging lineages, *Molecular Biology & Evolution*.
12. Webster TH*, Denbrock GA, Morales M, **Dolby GA**, Fiddes I, DeNardo DF, Wilson MA*. No dosage compensation in the Gila monster. *Genome Research*.
11. **Dolby GA***, Webster TH, McCartney-Melstad E, Shaffer HB, DeNardo D, Wilson MA, Kusumi K*, Speciation by river vicariance and monsoon adaptation via low-coverage genome sequencing of desert tortoises. *Molecular Ecology*.

Peer-reviewed articles

10. **Dolby GA*** (resubmission to *Molecular Ecology*) Phylogeography needs extrinsic causal theory, preprint: <https://doi.org/10.31219/osf.io/mjcba>.
- 9 Xu C, **Dolby GA**, Drake K*, Esque T, Kusumi K* (2020) Immune and Sex-Biased Gene Expression in the threatened Mojave Desert tortoise, *Gopherus agassizii*. *PLoS ONE*, 15, e0238202. DOI: [10.1372/journal.pone.0238202](https://doi.org/10.1372/journal.pone.0238202)
8. **Dolby GA***, Bedolla A, Bennett SEK, Jacobs DK* (2020) Global physical controls on estuarine habitat distribution during sea level change: Consequences for genetic diversification through time, *Global and Planetary Change*, 187, 103128. *Invited*. DOI: [10.1016/j.gloplacha.2020.103128](https://doi.org/10.1016/j.gloplacha.2020.103128)
7. Orton J, Morales M, Schmidlin K, Fontenele RS, Kraberger S, Kraberger S, Leavitt D, Webster TH, Wilson MA, Kusumi K, **Dolby GA***, Varsani A* (2020) Virus discovery in desert tortoise fecal samples: Novel circular single stranded DNA viruses. *Viruses*, 12, 143. DOI: [10.3390/v12020143](https://doi.org/10.3390/v12020143)
6. **Dolby GA***, Morales M, Webster TH, DeNardo DF, Wilson MA, Kusumi K* (2020) Discovery of a new TLR gene and gene expansion event through improved desert tortoise genome assembly with chromosome-scale scaffolds. *Genome Biology and Evolution*, 12, 3917–3925. DOI: [10.1093/gbe/evaa016](https://doi.org/10.1093/gbe/evaa016)
5. **Dolby GA***, Dorsey RJ, Graham MR (2019) A legacy of geo-climatic complexity and speciation along the lower Colorado River: Insights from the geologic record and 33 desert-adapted animals, *Journal of Biogeography*, 46, 2479–2505. DOI: [10.1111/jbi.13685](https://doi.org/10.1111/jbi.13685)
4. **Dolby GA***, Ellingson RA, Findley LT, Jacobs DK* (2018) How sea level change mediates genetic divergence in coastal species across regions with varying tectonic and sediment processes, *Molecular Ecology*, 27, 994–1101. DOI: [10.1111/mec.14487](https://doi.org/10.1111/mec.14487)
3. Tollis M, DeNardo DF, Cornelius JA, **Dolby GA**, Edwards T, Henen BT, Karl AE, Murphy RW, Kusumi K (2017) The Agassiz's Desert tortoise genome provides a resource for the conservation of a threatened species, *PLoS ONE*, 12:5, e0177708. DOI: [10.1371/journal.pone.0177708](https://doi.org/10.1371/journal.pone.0177708)
2. **Dolby GA***, Hechinger R, Ellingson RA, Findley LT, Lorda J, Jacobs DK* (2016) Sea-level driven glacial-age refugia and post-glacial mixing on subtropical coasts, a palaeohabitat and genetic study, *Proceedings of the Royal Society B*, 283:20161571, 1–8. DOI: [10.1098/rspb.2016.1571](https://doi.org/10.1098/rspb.2016.1571)
1. **Dolby GA***, Bennett SEK, Lira-Noriega A, Wilder BT, Munguía-Vega A (2015) The geologic and climatic forcing of biodiversity surrounding the Gulf of California, *Journal of the Southwest*, 57:2–3, 391–455. DOI: [10.1353/jsw.2015.0005](https://doi.org/10.1353/jsw.2015.0005)

Preprints

1. Webster TH*, **Dolby GA***, Wilson Sayres M, Kusumi K, Improved draft of the Mojave Desert tortoise genome, *Gopherus agassizii*, version 1.1. *PeerJ preprint*. <https://peerj.com/preprints/3266/>

Published abstracts

14. **Dolby GA**, Dorsey RJ, Bennett SEK, Hausback B, Lira-Noriega A, Darin M, Araya-Donoso R, Baty S, Orton J, Stokes M, Munguia-Vega A, Kusumi K, Wilder BT (2020) Can we use causal theory to

- understand how Earth processes shape life? Examples from the Baja California peninsula, MX, AGU Fall Meeting, *pending*.
13. Araya-Donoso R[^], Munguía-Vega A, Dorsey RJ, Bennett SEK, Lira-Noriega A, Wilder BT, Kusumi K, **Dolby GA** (2020) Genomic and ecological signatures of landscape change: a geologically-constrained, simulation-based case study in the Baja California Peninsula, AGU Fall Meeting, *pending*.
 12. Bennett SEK, Darin M, Dorsey RJ, Hausback B, **Dolby GA**, Sawlan M, Wilder BT, Martínez-Gutiérrez G, Hernández-Salgado Y, Grandy S (2020) Tectonic controls on landscape evolution and habitat distributions along the central Baja California Peninsula, AGU Fall Meeting, *pending*.
 11. Dorsey RJ, **Dolby GA**, Darin M, Bennett SEK, Hausback B, Wilder BT, Pecha M, Martínez-Gutiérrez G, Hernández-Salgado Y, Grandy S (2020) New Discovery of Pliocene Tidal Deposits Near the Crest of the Central Baja California Peninsula: A Key Constraint on Vertical Crustal Motions and Genetic Divergence, AGU Fall Meeting, *pending*.
 10. Grandy S, Hausback B, Bennett SEK, Dorsey RJ, Darin M, **Dolby GA**, Sawlan M, Wilder B, Martínez-Gutiérrez G, Hernández-Salgado Y (2020) Late Miocene-Pliocene Volcanism in the Sierra de San Francisco, Central Baja Peninsula, AGU Fall Meeting, *pending*.
 9. Hausback B, Dorsey RJ, Bennett SEK, Darin M, **Dolby GA**, Schmitt A, Sawlan M, Wilder B, Pecha M, Martínez-Gutiérrez G, Hernández-Salgado Y (2020) Topographic and Volcanic Evolution of Central Baja California, Mexico – Constraints and Evidence for a Pliocene Marine Embayment or Trans-Peninsular Strait, AGU Fall Meeting, *pending*.
 8. Bennett SEK, Darin M, Dorsey R, Hausback B, **Dolby GA**, Sawlan M, Wilder BT, Martínez-Gutiérrez G, Hernández-Salgado Y, Grandy S (2020) The influence of Miocene to recent tectonics and landscape evolution on genetic diversity along the central Baja California peninsula. *Geological Society of America Abstracts with programs*, 52:4.
 7. Hausback B, Bennett SEK, Darin M, Dorsey R, Grandy S, **Dolby GA**, Sawlan M, Martínez-Gutiérrez G, Hernández-Salgado Y (2020) Long-lived subduction and post-subduction volcanism and incision in the Sierra San Francisco, central Baja California peninsula, Mexico. *Geological Society of America Abstracts with programs*, 52:4.
 6. **Dolby GA**, Bedolla AM[^], Bennett SEK, Jacobs DK (2019) Global physical controls on estuarine habitat abundance during sea level change with implications for richness and diversification of marginal marine faunas. *Geological Society of America Abstracts with programs*, 51:5, 172-11.
 5. **Dolby GA**, Jacobs DK (2017) Sea-level change mediates genetic diversification of coastal fishes. *Geological Society of America Abstracts with Programs*, 49:6.
 4. Jacobs DK, **Dolby GA**, Hechinger R, Lorda J, Ellingson R, Findley L (2017) Sea-level cycles generate glacial age refugia on subtropical coasts. *Society for Integrative and Comparative Biology; Oxford University Press*, 56:E302.
 3. **Dolby GA**, Jacobs DK (2014) Habitat modeling and genetic signatures of postglacial recolonization for tidal estuaries. *American Geophysical Union*, 2014:PP13C-02.
 2. **Dolby GA**, Ellingson RA, Day PP, Jacobs DK (2012) How origination of modern fish lineages may reflect timing of when the Gulf of California opened: a new biological approach. *Geological Society of America Abstracts with Programs*, 44:3, 18.
 1. **Dolby GA**, Pekar SF, Mountain GS, Christie-Blick N (2006) A comparison of stratal geometry in the Greenhouse and Icehouse worlds from multichannel seismic reflection and chirp sonar data from the New York Bight. *Geological Society of America Abstracts with programs*, 38:7, 227.

Animations & educational videos (^student)

1. **Dolby GA**, ^Pataranutaporn P, Jacobs DK, Kusumi K (2017) *Sea level & genetic diversification*. Vimeo. <https://vimeo.com/219921821>

INVITED TALKS

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| 2020 | San Diego Museum of Natural History , Binational Advisory Committee
<i>“Baja GeoGenomics: Understanding Earth-life evolution on the Baja California peninsula”</i> | (zoom) |
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2019	Arizona State University , School of Life Sciences New faculty seminar, SoLS Cafe "How Earth processes shape life & diversity"	Tempe, AZ
2018	Arizona State University , School of Earth and Space Exploration Faculty search—Assistant Professor, Geobiology "Geo-genomics & the coevolution of Earth and life"	Tempe, AZ
2015	Arizona State University , School of Life Sciences	Tempe, AZ
2015	Washington State University , School of Biological Sciences	Pullman, WA

CONFERENCE PRESENTATIONS (Selected)

- Araya-Donoso R, Orton JP, Jones CA, Kusumi K, **Dolby GA** (2020) Factors determining Invasion Risk of Crayfish and Bullfrog in Populations of the Sonora mud turtle (*Kinosternon sonoriense*) in Arizona. *Turtle Survival Alliance*. Virtual meeting.
- Bennett SEK, Darin M, Dorsey R, Hausback B, **Dolby GA**, Sawlan M, Wilder BT, Martínez-Gutierrez G, Hernández-Salgado Y, Grandy S (2020) The influence of Miocene to recent tectonics and landscape evolution on genetic diversity along the central Baja California peninsula. *116th Annual GSA Cordilleran Section Meeting*. Pasadena, CA.
- Hausback B, Bennett SEK, Darin M, Dorsey R, Grandy S, **Dolby GA**, Sawlan M, Martínez-Gutierrez G, Hernández-Salgado Y (2020) Long-lived subduction and post-subduction volcanism and incision in the Sierra San Francisco, central Baja California peninsula, Mexico. *116th Annual GSA Cordilleran Section Meeting*. Pasadena, CA.
- Dolby GA**, Bedolla A, Bennett SEK, Jacobs DK (2019) Global physical controls on estuarine habitat abundance during sea level change with implications for richness and diversification of marginal marine faunas, Oral Presentation. *Geological Society of America Annual Meeting*, Phoenix, AZ.
- Dolby GA**, Kusumi K (2019) Population genomic analysis of speciation among threatened desert tortoises. Oral Presentation. *Conservation and Biology of Tortoises and Freshwater Turtles*, Tucson, AZ. † **Invited**
- Dolby GA** (2019) Speciation by neutral and adaptive forces: disentangling pseudo-congruent genomic signatures within geo-climatically complex regions in Deep Time Paleogenomics. Oral Presentation. *North American Paleontological Convention*, Riverside, CA. † **Invited, Keynote speaker**
- Dolby GA**, Webster TH, DeNardo D, Wilson MA, Kusumi K (2019) Population genomic analysis of speciation among threatened desert tortoises. *Evolution*, Providence, RI.
- Dolby GA**, Webster TH, DeNardo D, Wilson MA, Kusumi K (2019) Genomic insights into speciation of southwestern desert tortoises. *Desert Tortoise Council Annual Symposium*, Tucson, AZ.
- Dolby GA** (2018) Genomic data offers an independent perspective on evolution of the lower Colorado River region in Miocene to Recent evolution of the lower Colorado River corridor and the northern Gulf of California. Oral presentation. *114th Cordilleran Annual Section Meeting, Geological Society of America*, Flagstaff, AZ.
- Dolby GA**, Webster TH, DeNardo D, Wilson Sayres MA, Kusumi K (2018) Geologic history and genomic divergence between *Gopherus agassizii* and *G. morafkai*. Oral presentation. *Annual Meeting and Symposium of the Desert Tortoise Council*, Las Vegas, NV.
- Dolby GA**, Webster TH, DeNardo D, Wilson Sayres MA, Kusumi K (2018) Extrinsic forcing of genomic evolution during speciation: a geo-genomic study of *Gopherus* desert tortoises. Oral presentation. *Plant and Animal Genome XXVI Conference: Population and Conservation Genomics Workshop*, San Diego, CA.
- Dolby GA**, Jacobs DK (2017) Sea-level change mediates genetic diversification of coastal fishes. Oral presentation. *Geological Society of America Annual Meeting*, Seattle, USA.
- Dolby GA**, DeNardo D, Kusumi K (2017) Progress towards a sonoran desert tortoise genome to advance conservation and wildlife management. Oral Presentation. *Annual Meeting and Symposium of the Desert Tortoise Council*, Las Vegas, NV.
- Hutchins ED, Djordjevic D, Cornelius JA, **Dolby GA**, Ho JWK, Kusumi K (2017) The evolution of regeneration in reptiles and amphibians: insights from comparative genomic analysis of gene regulatory

networks *in* Amphibian & reptile genomics: recent success, current progress, and future challenges. Oral presentation, *8th World Congress of Herpetology*, Hangzhou, China.

Dolby GA, Ellingson RA, Findley LT, Jacobs DK (2016) Sea-level mediated refugia as a driver of genetic diversification on subtropical coastlines--a paleohabitat and genetic study. Oral Presentation, *Society for Evolution Annual Meeting*, Austin, TX.

Dolby GA, Jacobs DK (2014) Habitat modeling and genetic signatures of postglacial recolonization for tidal estuaries. Oral Presentation, *American Geophysical Union Fall Meeting*, San Francisco, CA.

Dolby GA, Jacobs DK (2014) Tidal estuarine habitat abundance since the last glacial maximum in southern and Baja California. Poster Presentation, *California Estuarine Research Society Annual Meeting*, Bodega Bay, CA.

Dolby GA, Jacobs DK (2014) Assessing GIS Estuarine habitat predictions with a new statistical approach for genetic signatures of postglacial recolonization. Oral Presentation, *Society for Evolution Annual Meeting*, Raleigh, NC.

Dolby GA, Ellingson R, Day PP, Jacobs DK (2012) How origination of modern fish lineages may reflect timing of when the Gulf of California opened: a new biological approach *in*: What fossil ages and distributions tell us about the history of the ancient gulf of California. Oral Presentation, *Geological Society of America Annual Meeting*, Querétaro, MX. **Invited**

Dolby GA, Ellingson R, Jacobs DK (2011) An Interdisciplinary Approach to Studying Incipient Speciation: The role of seaways in the phylogeography of the American shadow goby *in*: Ecology and evolutionary biology of gobies in north America: conservation concerns in a changing world. Oral Presentation, *American Fisheries Society Annual Meeting*, Seattle, WA.

Dolby GA, Dea JH[^], Lau LF[^], Rose K[^] (2010) Genetically distinct extralimital populations of two fish: evidence of extended ranges during the mid-Holocene climatic optimum in southern California. Poster Presentation, *American Assoc. for the Advancement of Science*, San Diego, CA. [[^]trainees]

Dolby GA, Pekar SF, Mountain GS, Christie-Blick N (2006) A comparison of stratal geometry in the greenhouse and icehouse worlds from multichannel seismic reflection and chirp sonar data from the New York Bight. Poster Presentation, *Geological Society of America Annual Meeting*, Philadelphia, USA.

TEACHING EXPERIENCE

Instructor of record (G-graduate, U-undergraduate)

2017–2018	2x	ASU, co-I	Molecular Genetics & Genomics (<i>G</i>)
2013–2015	2x	UCLA	Introduction to Ecology and Behavior, Lab (<i>U</i>)
2009–2011	2x	UCLA	Directed Research (<i>U</i>)
2009–2011	3x	UCLA	Departmental Honors Contract Course (<i>U</i>)

Teaching Fellow

2015		UCLA	Introduction to GIS (<i>U</i>)
2015		UCLA	Conservation Biology (<i>U</i>)
2009–2015	3x	UCLA	Evolution (<i>U</i>)
2009–2014	4x	UCLA	Molecular Evolution (<i>U</i>)
2011–2013	2x	UCLA	Life: concepts and issues (non-majors course) (<i>U</i>)

Invited lecturer

2019–2020	2x	ASU	Graduate Evolutionary Biology (<i>G</i>)
2018		ASU	Molecular Cell Biology & Neuroscience (<i>G</i>)
2017–2018	2x	ASU	Environ. Life Sciences: Grand Challenges (<i>G</i>)
2017		ECSU	Organismal Bio., <i>Eastern Connecticut State U.</i> (<i>U</i>)
2015		UCLA	Evolution (<i>U</i>)
2013		UCLA	Molecular Evolution (<i>U</i>)

FIELD EXPERIENCE

2019– Baja California, Mexico (multi-week)—ongoing integrated geology-biology fieldwork in the mid-peninsula region.

2017–2019 (9x)	<u>Western Arizona, USA (multi-day ea.)</u> —surveying and subcarapacial blood collection from desert tortoises; habitat descriptions (organizer, permit-holder).
2014–2015 (3x)	<u>Southern California, USA (day trips)</u> —augur coring, seining to collect fishes, geomorphological descriptions of estuary sites, deploying cameras and DO/Temp recorders.
2009–2014 (3x)	<u>Baja California, Mexico (3 weeks ea.)</u> —led measuring, describing, sampling stratigraphic sections; seining and collecting fishes and invertebrates in nearshore and estuarine habitats (organizer).
2008	<u>Queensland, Australia (3 weeks)</u> —field techniques course on effects of coastal sedimentation processes on Great Barrier Reef formation. Work included snorkeling, sediment coring, sketching rock sections, seismic data collection on the James Kirby Research Vessel.
2007	<u>Ecuador & Galápagos Islands (5 months)</u> —independent projects in Andean montane ecosystems, Amazon rainforest (Tiputini Biodiversity Station), Galápagos Islands and Pacific coastal regions focusing on observational and non-invasive projects.

PROFESSIONAL DEVELOPMENT

2020	SABER	Striving for Racial Justice in Academic Biology (<i>7-part series</i>)
2020	Yale/NIST	Scientific Teaching short course (<i>6 weeks</i>)
2019	NSF	National Science Foundation Grants Conference, workshop (<i>2 days</i>)
2018	ASU	Mentoring 101: First-Generation Graduate Success Panel (<i>part day</i>)
2018	Midwestern	PATRIC: Bioinformatic computing platform, workshop (<i>1 day</i>)
2018	AGFD	Arizona Interagency Desert Tortoise Team, meeting (<i>1 day</i>)
2018	ASU	Patenting and IP Protection, trademarking, workshop (<i>part day</i>)
2018	NCSA	Blue Waters new user training, workshop (<i>half day</i>)
2017	ASU	Microsoft Azure Cloud Computing, workshop (<i>half day</i>)
2016–2018	ASU	Postdoctoral Community Association, meetings (<i>weekly</i>)
2016	ASU	Alan Alda Center for Communicating Science, workshop (<i>1 day</i>)
2016	ASU	Python training, workshop (<i>1 day</i>)
2016	ASU	Galaxy Cloud Computing, workshop (<i>1 day</i>)
2016	ASU	ESRI training workshop, webinar (<i>part day</i>)
2015	UCLA	Scientific Visualizations Technical by Texas Advanced Computing Center, workshop (<i>2 days</i>)
2012	UCLA	Preparing Future Faculty training course (<i>20 weeks</i>)

PRESS COVERAGE

- Sam Burdette. “Researchers study differences between northern and southern species.” *The Daily Wildcat*, 12 February 2020. [link](#)
- Mikayla Mace. “Researchers seek to solve decades-long Baja California peninsula mystery.” *UANews*, 29 January 2020. [link](#)
- David Colgan. “How changes in sea level and geography affect genetics of coastal marine life.” *UCLA Institute of the Environment and Sustainability*, 15 January 2018. <https://tinyurl.com/y86c4j7v>.
- Nicholas Gerbis. “Desert Tortoise Genome Reveals Genetic Keys to Surviving Harsh Conditions, Threats.” *NPR-KJZZ*, 31 May 2017. <http://tinyurl.com/y7st3ly6>.
- Editorial staff. “Decoded genome may help Mojave Desert tortoise win race to survive.” *ScienceDaily*, 31 May 2017. <http://tinyurl.com/y778bzcw>.
- Matthew Cabe. “This Desert Life: A massive plane, a decoded genome.” *Daily Press*, 9 June 2017. <http://tinyurl.com/ydatrfxy>.
- Editorial staff. “Research Highlight: Researchers Uncover New Details About California’s Ancient Shoreline.” *Scripps Institution of Oceanography*, 1 Mar 2017. <http://tinyurl.com/y7gb2vk8>.
- David Colgan. “California’s past and future coastal habitat.” *UCLA Institute of the Environment and Sustainability*, 9 Dec 2016. <http://tinyurl.com/y99ju2h9>.

ACADEMIC ADVISING

PhD students

Brianah McCoy	Mentor	2020-	<i>Molecular & Cellular Bio PhD Program</i>
Sarah Baty	Co-Advisor	2020-	<i>Evolutionary Biology PhD Program</i>
Raul Araya-Donoso, MSc	Co-Advisor	2019-	<i>Evolutionary Biology PhD Program</i>
Joey Orton	Co-Advisor	2016-	<i>Evolutionary Biology PhD Program</i>
Cindy Xu (<i>graduated, PhD</i>)	Mentor	2015-2020	<i>Molecular & Cellular Bio PhD Program</i>

Masters students (*present)

Alex Gleason	Mentor	2017-2018	<i>Biomedical Diagnostics</i>
John Cornelius	Mentor	2015-2018	<i>Molecular & Cellular Biology</i>

Undergraduate students (*proceeded to graduate school, ^Honors thesis)

Matheo Morales* ^ – <i>comp sci, biology</i>	Anthony Khalifeh ^ – <i>biology</i>
Pat Pataranutaporn* – <i>art-science</i>	Kate Rose – <i>biology</i>
Arturo Bedolla – <i>GIS</i>	Faiz Tousif * – <i>biology</i>
Jake Staut – <i>GIS, art-science</i>	Boyang Zhang – <i>biology</i>
Hannah Barroga – <i>biology</i>	Rena Emond* – <i>biology</i>
Jessica Dea * – <i>biology</i>	Vivek Mahendra – <i>comp sci, biology</i>
Clive Lau * – <i>biology</i>	Ray Elementi – <i>art-science</i>
Shirin Mostofi * – <i>biology</i>	Clemente Francisco – <i>art-science</i>
Yash Sharma – <i>biology, bioinformatics</i>	Gaspar Manuel – <i>comp sci, GIS</i>
Dylan Wang – <i>biology, bioinformatics</i>	Sandilya Babbepalli – <i>comp sci, biology</i>
Alexander Yu – <i>biology, bioinformatics</i>	Harsha Sidda – <i>comp sci, biology</i>
Kelly Riestenberg – <i>biology</i>	Shruthi Seetharaman – <i>art-science</i>

OUTREACH

2018–2019	Arizona PBS TV show, “Catalyst”—interviewee, field contributor (30-min episode, reptiles of the southwest)
2016, 2019 2017–	Intel ISEF Grand Award Judge: Computational Biology & Bioinformatics <u>CompuGirls</u> : coordinate and lead student outreach panels for underserved and underrepresented adolescent girls
2017	Turtle-trapping at the Phoenix Zoo—checked tortoise traps for nonnative species and processed turtles, interacted with volunteers (one day)
2011–2013	<u>Apprenticeship teacher</u> at SPARK: a program to keep at-risk middle school youths in school

PROFESSIONAL SERVICE

2019–	Co-Founder, Executive Committee Member , Baja GeoGenomics (BGG) consortium [<i>funded by NSF EAR 1925535</i>] – www.BajaGeoGenomics.org <ul style="list-style-type: none">• <i>First-of-its-kind staged and fully cross-referenced repository for all project data products</i>• <i>Educational animations, interactive maps, K-12 interactive exercises</i>
2018–2019	Co-Chair , Student Activities Sub-committee— <i>Geological Society of America National Annual Meeting</i> , 2019.
2017–	Elected Board Member at Large , Desert Tortoise Council, Board of Directors—1) Chairperson, fundraising committee; 2) Student Outreach/Engagement Committee; 3) Ecosystem Advisory Committee for Arizona <i>Write comment letters for construction and management decisions in Arizona to convey scientific knowledge to the public and stakeholders.</i>

- 2016–2017 **Developer**, organizer, and leader of a 30-week bioinformatics reading group for postdocs and graduate students. Syllabi available at www.greerdolby.org
- 2016– **Peer reviewer**, *ad hoc* (20 reviews, 12 journals; Publons profile [here](#)):
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|---------------------------------------|--|
| <i>Nature Ecology & Evolution</i> | <i>Biological Journal of the Linnean Society</i> |
| <i>Molecular Ecology</i> | <i>Journal of Molecular Evolution</i> |
| <i>Journal of Biogeography</i> | <i>Frontiers in Biogeography</i> |
| <i>Zoologica Scripta</i> | <i>Journal of Mammology</i> |
| <i>Journal of Heredity</i> | <i>Chelonian Conservation and Biology</i> |
| <i>Annals of Botany</i> | <i>Journal of Fish Biology</i> |
- 2012 **Contributor**, Next Gen. Sonoran Desert Researchers inaugural meeting to launch the binational, cross-disciplinary society (invited)
- 2011–2012 **Member**, Graduate Awards Committee, Dept. EEB, UCLA

PROFESSIONAL MEMBERSHIPS

- 2015– Desert Tortoise Council (DTC)
- 2014–2015 Coastal and Estuarine Research Federation (CERF)
- 2012– Next Generation Sonoran Desert Researchers (NGEN)
- 2010–2016 American Geophysical Union (AGU)
- 2009– Society for the Study of Evolution (SSE)
- 2006– Geological Society of America (GSA)