

Kevin Edward Bonine

Curriculum Vitae, June 2020

UA Biosphere 2
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EDUCATION

- Ph.D., 2001, University of Wisconsin-Madison, Advisor: Dr. Theodore Garland, Jr.
Dissertation: *Morphological and physiological predictors of lizard locomotor performance: a phylogenetic analysis of trade-offs.*
- B.S., 1995, with Honors, Ecology and Evolutionary Biology, University of Arizona
Honors Thesis - *Biosphere reserve in the upper Gulf of California, Mexico: implications for local economies and ecosystems*
- B.A., 1995, Economics, University of Arizona
- University of Massachusetts Amherst, Salamanca, Spain (July 1994)
Université Paul Valery, Montpellier, France (spring 1994)

EMPLOYMENT

- Director of Education and Outreach, Biosphere 2, University of Arizona, (2013 – present)
- Director of Outreach Initiatives, College of Science, University of Arizona (2013 – present)
- Adjunct Assistant Professor, UA School of Natural Resources & the Environment (2003 – present)
- Adjunct Assistant Professor, UA Department of Ecology & Evolutionary Biology (2002 – present)
- Wildlife Biologist, National Park Service Inventory & Monitoring Program (summer 2002 & 2003)
- Wildlife Biologist, AZ and NM, Herpetological Inventory & Monitoring, USGS/NPS (summer 2002, 2003)
- Herpetologist, Madrona Pools Pulse Project, Saguaro National Park (summer 2003)
- Medical Assistant, Wingra Family Medical Clinic, Madison, WI (1999 – 2001)
- Researcher, Big Bend N.P. Amphibian Survey and Monitoring. United States Geological Survey (1998)
- Intern, Research Corporation Technologies, Life Sciences Group (summer 1995)
- Consultant, Protein Genesis Inc. (summer 1995)
- Student Researcher, Laboratory of Tree-Ring Research, U. of Arizona, Dr. T. W. Swetnam (1992 – 1995)

HONORS & AWARDS

University of Arizona 2002 – present

Biosphere 2 Philecology Endowed Chair (2017 –)

Carson Scholar Program, Mentor, Arizona Institutes for Resilience (formerly IE) (2017 – present)

Fellow, UA Academic Leadership Institute (ALI) (2016 – 2017)

Faculty Fellow, Agnese Nelms Haury Program in Environment and Social Justice (2014 – 2016)

Flinn-Brown Fellow, Arizona Center for Civic Leadership (2014)

Distinguished Early-Career Teaching Award, College of Science, University of Arizona (2012)

Prior to 2002

Best Student Poster, Society for Integrative & Comparative Biology (Div. of Vertebrate Morphology, 2001)

National Science Foundation Graduate Research Fellowship (1996 – 2001)

Visiting Scholar, University of Colorado, Boulder, Dr. Todd T. Gleeson (summers 1997 and 2000)

Organization for Tropical Studies (OTS), Tropical Ecology, Universidad de Costa Rica (Winter 1996)

Wisconsin Alumni Research Foundation Fellowship (1995 – 1996)

Flinn Foundation Scholarship (1990 – 1994/5)

Phi Beta Kappa (inducted 1993)

RESEARCH & SCHOLARSHIP INTERESTS

Herpetology, Conservation, Natural History, Evolutionary & Ecological Physiology, Citizen Science, STE(A)M Teaching/Learning & Assessment, Informal Science Education, Science Communication

PUBLICATIONS

Peer-reviewed journal articles

Baierl, T.-M., **K. Bonine**, B. Johnson, and F.X. Bogner. *In Review*. Effects of informal learning on science motivation, fascination, and system knowledge at Biosphere 2. *International Journal of Science Education*.

Farrar, V., T. Edwards, **K. E. Bonine**. 2017. Elusive does not always equal rare: genetic assessment of a protected Gila monster (*Heloderma suspectum*) population in Saguaro National Park, Arizona. *Amphibia-Reptilia* 38:1-14, doi: 10.1163/15685381-00003079

Sagarin, R. D., J. Adams, C. A. Blanchette, R. C. Brusca, J. Chorover, J. E. Cole, F. Micheli, A. Munguia-Vega, C. M. Rochman, **K. Bonine**, J. van Haren, and P.A. Troch. 2016. Between control and complexity: opportunities and challenges for marine mesocosms. *Frontiers in Ecology and the Environment* 14:1–8, doi: 10.1002/fee.1313

- Bergevin, C., W. Dong, L. Carney, D. S. Velenovsky, **K. E. Bonine**, and J. L. Jarchow. 2013. Comparative auditory biomechanics probed by otoacoustic emissions. *J. Acoustical Society of America* 133:3509.
- Hess, M. R., T. Edwards, D. A. Edmunds, **K. E. Bonine**. 2013. Characterization of STR/microsatellite primers for the Gila monster, *Heloderma suspectum* screened from paired-end Illumina shotgun sequencing. *Conservation Genetics Resources* 5:1121-1123.
- Bergevin, C., W. Dong, L. Carney, D. S. Velenovsky, **K. E. Bonine**, and J. L. Jarchow. 2013. Comparative auditory biomechanics probed by otoacoustic emissions. *J. Acoustical Society of America* 133:3509.
- Bergevin, C., D. S. Velenovsky, **K. E. Bonine**. 2011. Coupled, active oscillators and lizard otoacoustic emissions. *AIP Conference Proceedings* 1403:453-460.
- Bergevin, C., D. S. Velenovsky, and **K. E. Bonine**. 2010. Tectorial membrane morphological variation: effects upon stimulus frequency otoacoustic emissions. *Biophysical Journal* 99:1064-1072.
- Edwards, T., C. J. Jarchow, C. A. Jones, and **K. E. Bonine**. 2010. Tracing genetic lineages of captive desert tortoises in Arizona. *Journal of Wildlife Management* 74:801-807.
- Amarello, M., **K. E. Bonine**, and D. Lazcano. 2008. Factors influencing the antipredator behavior of Mexican lance-headed rattlesnakes (*Crotalus polystictus*) toward humans. Pp. 229-234 in W. K. Hayes, K. R. Beaman, M. D. Cardwell, and S. P. Bush (eds.), *The Biology of Rattlesnakes*. Loma Linda University Press, Loma Linda, California. **Melissa Amarello was an Honors Student in my laboratory and this publication is the fruition of her Honors Thesis research.**
- Daniel, J. A., K. A. Baker, and **K. E. Bonine**. 2006. Retention rates of surface and implantable marking methods in the Mediterranean house gecko (*Hemidactylus turcicus*), with notes on capture methods and rates of skin shedding. *Herpetological Review* 37:319–321. **Jeremy Daniel was an undergraduate in my Herpetology course and this publication was the fruition of his course research project.**
- Bonine K. E.**, E. F. Enderson, and R. L. Bezy. 2006. *Imantodes gemmistratus* (Central American Tree Snake), Geographic Distribution. *Herpetological Review* 37:363.
- E. F. Enderson, **Bonine K. E.**, and R. L. Bezy. 2006. *Gyalopion canum* (Chihuahuan Hook-nosed Snake), Geographic Distribution. *Herpetological Review* 37:362.
- Bonine K. E.**, T. T. Gleeson, and T. Garland, Jr. 2005. Muscle fiber-type variation in lizards (Squamata) and phylogenetic reconstruction of hypothesized ancestral states. *J. Experimental Biology* 208:4529-4547.
- Bonine K. E.**, E. W. Stitt, G. L. Bradley, and J. J. Smith. 2004. *Crotalus atrox* (Western Diamond-backed Rattlesnake) entrapment and opportunistic courtship. *Herpetological Review* 35:176-177.
- Jung, R. E., **K. E. Bonine**, M. L. Rosenshield, A. de la Reza, S. Raimondo, and S. Droege. 2002. Evaluation of canoe surveys for anurans along the Rio Grande in Big Bend National Park, Texas. *Journal of Herpetology*. 36:390-397.
- Bonine K. E.**, T. T. Gleeson, and T. Garland, Jr. 2001. Comparative analysis of fiber-type composition in the iliofibularis muscle of phrynosomatid lizards (Squamata). *Journal of Morphology* 250:265-280.
- Bonine, K. E.**, G. H. Dayton, and R. E. Jung. 2001. Attempted predation of Couch's spadefoot (*Scaphiopus couchii*) juveniles by ants (*Aphaenogaster cockerelli*). *Southwestern Nat.* 46:104-106.
- Bonine, K. E.**, and T. Garland, Jr. 1999. Sprint performance of phrynosomatid lizards, measured on a high-speed treadmill, correlates with hindlimb length. *Journal of Zoology, London* 248:255-265.
- Smith, H. M., D. Chiszar, A. Chiszar, D. L. Auth, J. Auth, C. Henke, C. E. Bock, J. H. Bock, J. A. Rybak, R. L. Holland, **K. Bonine**, and G. J. Watkins-Colwell. 1998. Slevin's bunch grass lizard (*Sceloporus slevini*) decimated on the Sonoita Plain, Arizona. *Herpetological Review* 29:225-226.

Chapters in scholarly books & monographs

- Bonine, K. E.** 2008. Gourmet to Galapagos: experiential learning in the sciences. Chapter 4 in P. A. Machonis, ed. *Shatter the Glassy Stare: Implementing Experiential Learning in Higher Education*, Place as Text Series, National Collegiate Honors Council, Monographs in Honors Education.
- Bonine K. E.** 2007. Physiological correlates of lizard foraging mode. Ch. 3 in S. Reilly, L. McBrayer, and D. Miles, eds. *Lizard Ecology: The Evolutionary Consequences of Foraging Mode*. Cambridge Press.

Other publications & products

- The benefits of team-building and student empowerment for diverse REU cohorts. Poster Abstract, AGU Annual Meeting, December 2019. Katerina Dontsova, **Kevin E Bonine**, and Katherine Morgan. (<https://agu.confex.com/agu/fm19/webprogrampreliminary/Paper614003.html>)
- EarthConnections Geoscience Pathways: An Ecosystem Supporting Learning from K to Career. Poster Abstract, AGU Annual Meeting, December 2019. C. A. Manduca, **Kevin E Bonine**, Donna J Charlevoix, Rajul Pandya, Margie Turrin (<https://agu.confex.com/agu/fm19/meetingapp.cgi/Paper/602358>)
- Immersive undergraduate research experiences: maximizing benefits for diverse students. Poster Abstract, AGU Annual Meeting, December 2018. Katerina Dontsova, **Kevin E Bonine**, Rebecca Lee Batchelor, and Carolyn Brinkworth (<https://agu.confex.com/agu/fm18/meetingapp.cgi/Paper/421217>)
- Accessible Science and Technology: Augmented Reality Simulations Have Positive Impact on Visitor Experience at Biosphere 2. Poster Abstract, AGU Annual Meeting, December 2018. Erin Mae Magoffie, **Kevin E Bonine**, Adam K Chmurzynski, Katherine Morgan and John Adams (<https://agu.confex.com/agu/fm18/meetingapp.cgi/Paper/461376>)
- EarthConnections Pathways: Linking Geoscience Learning and Community Involvement to Develop Community Science Literacy. Poster Abstract, AGU Annual Meeting, December 2018. C. A. Manduca, Tahlia Bear, **Kevin E Bonine**, Donna J Charlevoix, Ellen Iverson, Barbara Nagle, Rajul Pandya, Karen Peterman, Margie Turrin, J Taber (<https://agu.confex.com/agu/fm18/meetingapp.cgi/Paper/454208>)
- Bonine, K. E.** and Dontsova, K. 2018. Pathways, Research, & Broader Impacts Converge at Biosphere 2: The Value of Context for an REU Site. Poster presented at NSF REU Geosciences PI meeting in Boulder, CO.
- Bonine, K.**, C. Brinkworth, R. Haacker, H. Lazrus, D. Wildcat, K. Whyte. 2018. Integrating Indigenous and Western knowledge to transform learning and discovery in the geosciences. Poster presented at NSF INCLUDES Design and Development Launch Pilot, January PI meeting. Arlington, VA.
- Bonine, K. E.** and Dontsova, K. 2016. Effective REU at Remote Site: Biosphere 2 Earth Systems Research for Environmental Solutions. Poster for GEO REU Workshop, University Corporation for Atmospheric Research – Center for Science Education. Boulder, Colorado.
- Dontsova, K., **K. E. Bonine**, M. Pavao-Zuckerman, B. Paavo, D. Hogan, E. Oberg, and J. Gay. 2015. Multilevel approach to mentoring in the Research Experiences for Undergraduates programs. Poster abstract ED13D-0908 presented at 2015 Fall Meeting, American Geophysical Union, San Francisco, Calif., 14-18 Dec.
- iNaturalist citizen science research project website: Gila Monsters at Saguaro National Park. 2015 (<http://www.inaturalist.org/projects/gila-monsters-at-saguaro-national-park>)
- Mt. Lemmon Science Tour App. 2015. UA College of Science & Madden Media. *Contributor*. (www.visittucson.org/mtlemmonsciencetour)

- Park, B. and **K. E. Bonine**. 2012. Ecology and natural history of Gila monsters (*Heloderma suspectum*) at Saguaro National Park: a collaborative study at the wildland-urban interface. Unpublished year-end report submitted to Saguaro National Park, Friends of Saguaro National Park, and the Desert Southwest Cooperative Ecosystem Studies Unit. 112 pp.
- HerpCount.org, Citizen Science Initiative, *co-Creator*, 2011-2013
- Park, B. and **K. E. Bonine**. 2011. Reptiles and amphibians of Saguaro National Park's Cactus Forest Loop Drive, NPS and National Geographic BioBlitz (poster)
- Park, B. and **K. E. Bonine**. 2011. Gila monsters! Rincon Mountain District, Saguaro National Park, NPS and National Geographic BioBlitz (poster)
- Park, B. and **K. E. Bonine**. 2011. Ecology and natural history of Gila monsters (*Heloderma suspectum*) in Saguaro National Park, 2009-2010. Unpublished year-end report submitted to Saguaro National Park and Friends of Saguaro National Park. 53 pp.
- Weiss, M., T. Edwards, and **K. Bonine**. 2010. An assessment of genetic markers for use in Gila monster conservation. First Annual Ecology and Evolutionary Biology Undergraduate Poster Session (April 2010). **Weiss was awarded First Place in the Emerging Research category for this poster. He was also selected as the Outstanding Graduating Senior in EEB in spring 2010.**
- Bergevin, C., D. Velenovsky, and **K. E. Bonine**. 2010. Otacoustic emission temperature dependence across the Lacertilia, Association for Research in Otolaryngology, 33rd Annual Midwinter Research Meeting (poster)
- Bonine, K. E.**, T. Edwards, C. Schirmer, J. Fillinger, and K. Ratzlaff. 2008. Distribution and phylogeography of the canyon treefrog (*Hyla arenicolor*) in the Rincon Mountains, Arizona. *Sonoran Herpetologist* 21:106-109. **Schirmer, Fillinger, and Ratzlaff are all former students whom I advised on undergraduate research projects. This paper represents much of their work.**
- Swann, D. E., **K. E. Bonine**, and R. A. Repp. 2007. The longhorn: Texas horned lizard (*Phrynosoma cornutum*). *Sonoran Herpetologist* 20:80-81.
- Bonine, K. E.** 2006. Yarrow's spiny lizards (*Sceloporus jarrovi*) on Lizard Rock, Santa Catalina Mountains, Pima County, Arizona: adventures of a diaper-bag-toting herpetologist. *Sonoran Herpetologist* 19:78-79.
- Edwards, T., **K. E. Bonine**, C. Ivanyi, and R. Prescott. 2005. The molecular origins of spiny-tailed iguanas (*Ctenosaura*) on the grounds of the Arizona-Sonora Desert Museum. *Sonoran Herpetologist* 18:122-125.
- Bezy, R. L., E. F. Enderson, and **K. E. Bonine**. 2004. Tlaconete Pinto *Pseudoeurycea bellii* (Gray, 1850) Arizona's lost salamander. *Sonoran Herpetologist* 17:119-122.
- Bonine, K. E.** 2004. Book Review of *Lizards: Windows to the Evolution of Diversity* (E. R. Pianka and L. J. Vitt. 2003). *Sonoran Herpetologist* 17:95-96.
- Bonine K. E.** and C.R. Schwalbe. 2003. Herpetofauna inventory at Madrona Pools, Chimenea Creek, Rincon Mountain District, Saguaro National Park. Report submitted to National Park Service. 26 pp.
- Bell, D.M. and **Bonine K. E.**, Herpetological inventory 2002 final draft report. Submitted to NPS Inventory and Monitoring Program, USGS Sonoran Desert Field Station, University of Arizona, Tucson, AZ. 16 pp.
- Phrynosomatid lizards show parallel variation in sprint speed and muscle fiber-type properties. *Society for Integrative and Comparative Biology*, Chicago, January 2001. **Best Student Poster Award.**
- Fiber-type variation in the iliofibularis muscle of phrynosomatid lizards. *American Physiological Society*, 'The Integrative Biology of Exercise,' Portland, Maine, September 2000. (poster)

Bonine, K. E., and E. D. Clotfelter. 1997. Phylogenetic approaches in animal behavior. Book Review of *Phylogenies and the Comparative Method in Animal Behavior* (ed. by Emilia P. Martins) 1996. *Journal of Evolutionary Biology* 10:683-685.

GRANTS & FUNDING

Building Culturally Competent STEM Teacher Leaders for Rural, High-need Schools Near the U.S. Border w/ Mexico
\$1,499,558 – NSF Noyce 17-541 [1950129], 2020-2026 (PI Henrietta G Kralovec; Bonine Co-I)

Agnese Nelms Haury Trust

\$140,000 – Visitor Experience and K-12 Education at Biosphere 2, 2019-2022 (PI Joaquin Ruiz; Bonine Co-I)

Honors Student Engagement with Biosphere 2

\$170,000 – Provost Investment Fund (PIF) at UArizona, new Honors Faculty hire and student residential immersive experiences – including Alternative Spring Break, 2020-2022 (PI John Pollard)

Noyce Border Scholars Program

\$1,449,949 – NSF Noyce [1557396], 2016-21 (PI: Henrietta G Kralovec, UA South; Bonine Co-I)

REU Site: Biosphere 2 Earth Systems Research for Environmental Solutions

\$761,414 – NSF, Directorate for Geosciences [1659546], 2017-20 (PI: K. Dontsova; Bonine Co-I)

Biosphere 2 Podcast Studio

\$1,500 – UA Green Fund, 2020 (GFMG 20.14, Aaron Bugaj lead)

Biosphere 2 Podcast & Outreach

\$1,500 – UA Green Fund, 2019 (GFMG 19.16, Aaron Bugaj lead)

A Conference to Plan an Interdisciplinary Controlled Environment Indoor Agriculture R&D Roadmap and Coordinated Research Plan

\$50,000 – AFRI Foundation and USDA, 2019 (lead PI G. Giacomelli, K.E. Bonine key collaborator)

DCL Synthesis and Design Workshop

Principles of Design of Digital Science, Technology, Engineering, & Mathematics Learning Environments

\$99,825 – NSF EHR/CISE Dear Colleague Letter (NSF 18-017), 2018-2019 (PI Castek, Co-PIs Sult, Nichols, Bonine, Smith)

Stories of Tomorrow: Students' Vision on Future of Space Travel, EU Commission STEM Education

\$15,000 – UA International Research and Program Development Grant (IRPD), 2017-2018 (PI Jill Castek; Co-PIs Bruce Johnson, Kevin Bonine)

Eco-Dorm Sustainability Learning Center at Biosphere 2 – Planning Workshop

\$7,100 – UA Green Fund, 2017-18

Collaborative Research: Integrating Indigenous and Western Knowledge to Transform Learning and Discovery in the Geosciences

\$45,398 – NSF INCLUDES [1649375], 2016-18 (PI Carolyn Brinkworth, UCAR; Co-PIs K.E. Bonine, UA; Kyle Whyte, MSU; Rebecca Haacker & Heather Lazrus, UCAR/NCAR)

Summer Science Academy Scholarships, residential research experiences for middle & high school
\$70,000 – Private Donors via UA Foundation, 2014-2018 (for Biosphere 2)

REU Site: Environmental and Earth Systems Research Experiences at Biosphere 2
\$71,044 – NSF, REU [1638542 supplement to EAR-1263251], 2016-2017 (PI Katerina Dontsova)

Science Academy Indigenous Scholarships, residential research experiences for middle school students
\$5,000 – Desert Diamond Foundation, 2017 (for Biosphere 2)

Science Academy Indigenous Scholarships, residential research experiences for middle & high school
\$20,000 – Native American Advancement Foundation, 2017 (for Biosphere 2)

Artist-in-Residence at Biosphere 2 – STEAM Education Program Development
\$5,000 – Rhode Island School of Design Student Scholarship, summer 2017 (PI Lee Pivnik)

Citizen Science at Saguaro National Park
\$7,500 – Western National Parks Association, 2015-2017 (PI K.E. Bonine, Co-I Don Swann)

Outreach Scholar Support, UA Student 100% Engagement at Biosphere 2
\$4,000 - \$6,000/year – Galileo Circle Scholars, 2015-2017

Haury Faculty Fellow at University of Arizona
\$70,000 – Agnese Nelms Haury Program in Environment and Social Justice, 2014-2016

Bridge Funding, Biosphere 2 REU Site
\$30,000 – Vice-President for Research and Provost, University of Arizona, 2016

Sustainability & Science Curriculum Development at Biosphere 2 – Collaborative Workshop
\$8,585 – UA Green Fund, 2015-16

Arizona Center for STEM Teachers, Summer Residential Professional Development
\$199,369 – Agnese Nelms Haury Program in Environment & Social Justice, 2015 (for Biosphere 2)

Summer Science Academy Scholarship, residential research experiences, middle school students
\$500 – Tucson Sunrise Rotary, 2015

Summer Science Academy Scholarships, residential research experiences for middle & high school
\$11,000 – Private Donors via UA Foundation, 2014-2015

Biosphere 2 Summer Science Academy, residential research experiences for middle & high school
\$3,000 – Private Donors via UA Foundation, 2014-2015

Biosphere 2 Summer Science Academy, residential research experiences for middle & high school
\$10,000 – John Deere Foundation, summer 2015

Outreach Scholar Stipends, 100% Engagement for UA Students (mentoring K-12 students)
\$10,000 – Haury/Green Fund, 2014

Honors Student Field Trip, *Biosphere 2 Research & Philosophy of Science*
\$500 – Student-Faculty Interaction Grant, University of Arizona, 2013

Gila Monsters in Saguaro National Park

\$10,000/year – Friends of Saguaro National Park, 2010-2012 (co-PI Don Swann)

Gila Monsters in Saguaro National Park, Citizen Science Initiative

\$6,000 – Desert Southwest Coop. Ecosystem Studies Unit, 2010 (co-PI Don Swann)

Natural History and Ecology of Gila Monsters in Saguaro National Park

\$15,000 – Desert Southwest Coop. Ecosystem Studies Unit, 2010 (co-PI Don Swann)

National Natural Landmarks Program, Anniversary Project

\$25,000 – NPS Desert Southwest Coop. Ecosystem Studies Unit, 2009 (co-PI Margi Brooks)

Microsatellite Development for the Canyon Treefrog (*Hyla arenicolor*)

\$500 – C.H. Lowe Research Fund, Tucson Herpetological Society, 2009

Elevation Distribution & Prevalence of Emerging Amphibian Disease in the Santa Catalina Mts

\$2,000 – T&E, Inc., spring 2009 (Kim Baker, Masters Research, SNRE)

Gila Monsters in Saguaro National Park

\$10,000 – Friends of Saguaro National Park, fall 2008 (co-PIs Don Swann and Cecil Schwalbe)

Dynamics of Emerging Disease in Amphibians at Saguaro National Park

\$70,000 – USGS, 2008 (PIs Cecil Schwalbe, Phil Rosen, Co-PI Kevin Bonine)

Thermal Ecology and Disease in Canyon Treefrogs (*Hyla arenicolor*)

\$500 – C.H. Lowe Research Fund, Tucson Herpetological Society, 2008 (Kim Baker, Masters Research, SNRE)

The Galápagos Plankton Project (component of Galápagos Marine Ecology, UA ECOL 4960/5960)

\$500 – Bio5, summer 2007 (co-PIs Katrina Mangin and Dave Gori)

Defensive Behavior of *Crotalus polystictus* (Mexican Lance-headed Rattlesnake)

\$2,000 – T&E, Inc., 2004 (Honors Thesis of Melissa Amarello)

PENDING & DECLINED PROPOSALS

Center for Ecoengineering of Life in Arid Landscapes (CELAL STC) – PENDING 2020

\$24,982,910 – NSF Science & Technology Center (19-567) (PI Jon Chorover et al.)

Bonine on proposed CELAL Center Management Team and Lead for a) Education and Human Resource Development (EHR) and b) Broadening Participation objectives of the proposed STC

Angel Charity Ocean Learning Laboratory at Biosphere 2:

Hands-on STEM Inspiration for Pima County Students – (finalist) declined 2020

\$700,000 – Angel Charity for Children (Presenters: K Bonine, J Adams, D Thompson, & A Heyer)

Local partners (TEP, Cox, Research Corporation, Haury Trust) pledged \$250K total match

Transforming Livelihoods of Indigenous Small Farmers: Sustaining Mexico City's Greenbelt – declined 2019

\$100,000,000 – MacArthur 100&Change [PIs Murray (UA), Escalante (UNAM), Ruiz-Gutiérrez (CDMX)]

Bonine key personnel, proposal development/submission

90 sec video pitch: <https://youtu.be/Owz85MPlvk>

K-12 Teacher Professional Learning Residential Workshop – declined 2019

\$100,000 – APS, for summer Educator STEM teaching immersive program, 2019-2020 (for Biosphere 2)

- Biosphere 2 Ocean: Equipping NextGen Systems Scientists to Tackle the Coral Reef Crisis** – *declined 2019*
\$300,000 – W.M. Keck Foundation Undergraduate Education (Co-PIs Diane Thompson & Kevin Bonine)
- Digital Storytelling with Free-choice Learners: Examining Creation & Sharing of Experiences** – *AISL declined 2018*
\$2,125,328 – NSF Advancing Informal STEM Learning (PI Castek, Co-PIs Bonine, Johnson, Storksdieck, Risien)
- How Adolescents Make Sense of Earth’s Systems:**
Examining Implementations of Digital Storytelling with Youth and their Teachers – *declined 2018*
\$2,311,869 – NSF DR PK-12 (PI J. Castek, Co-PIs K.E. Bonine, B. Johnson, M. Storksdieck, J. Risien)
- EarthConnections Pathways to Develop Local Scientific & Workforce Capacity w/ Communities** – *declined 2018*
\$12,417,822 – NSF INCLUDES Alliance (PI C.Manduca, Co-PIs K.Bonine, D.Charlevoix, N.Feinstein, M.Turrin)
- Stories of Tomorrow (STORIES)**
Strategies Design and Development for STEM Education and Workforce Development – *declined 2016*
\$299,000 – NSF ITEST, EAGER (PI B. Johnson, Co-PI K.E. Bonine) www.storiesoftomorrow.eu
- Smart System Integrating Microgrid-Enabled Energy & Water-Efficient Urban Agriculture** – *declined 2016*
\$2,990,077 – NSF-INFIEWS/T3 (PI Murat Kacira, Co-PI K.E. Bonine et al.)
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TEACHING & INSTRUCTION

University of Arizona

- Biosphere 2 Science, from Wonder to Discovery** (proposed RNR388 *Hybrid*) Instructor, pilot fall 2020 [course created by Bonine]
- Biological Scientists’ Approach to Identify and Solve Big Problems** (MCB195J) co-Instructor [course led by Ted Weinert] (spring 2020)
- Environmental Biology** (ECOL 206 *Online*) Instructor (summer & fall 2019; spring & summer 2020) [course created by Bonine]
- Introductory Biology II** (ECOL 182R) Instructor or co-Instructor (2007-2017)
- Galápagos Marine Ecology** (*Field Course*, ECOL 496O/596O) Instructor (summer 2007 & 2015)
- Biosphere 2 Outreach Scholars**, (offered under SCI 491/599) Instructor, UArizona STEM Education Service-Learning course (spring 2015) [course created by Bonine]
- Ecology & Natural History of the Sonoran Desert and Upper Gulf of California** (ECOL463/563) Instructor, field course during summer pre-session 2012, 2014 [course created by Bonine]
- Honors Science Colloquium** (HNRS195I) *Are Humans an Invasive Species?* Instructor (fall 2013 & 2014)
- Sonoran Desert Discovery** (Science Outreach & Service, ECOL 464/564) Instructor (fall 2009-2013) [course created by Bonine]
- Herpetology** (ECOL 483/583) Instructor (spring 2002-2008, 2011-2012)

Vertebrate Physiology (ECOL 437) Instructor (fall 2002-2006, spring 2008-2012)

Conservation Biology (ECOL 406R/506R) Instructor (fall 2003-2011)

Environmental Biology (ECOL 206) Instructor (spring 2003-2007, 2009-2010)

Conservation Biology (*Field Course*, ECOL 406L/506L) Instructor (fall 2004-2010)

Sustainable Living: Ecology & the Human Experience (HNRS 295H) co-Instructor (fall 2006-2008)

Hope College

Field Studies in Biology, Sonoran Desert and Sky Islands: Ecology in a Land of Extremes (Biology 380) Co-instructor (May-term 2015)

UArizona Guest Lectures

Survival Skills and Ethics (SLHS 649) "*First Job Panel*" (May 2020)

Southwest Borderlands, (GEOG 250) "*Our 'Skynoran' Region*" (September 2019)

Fundamentals of Ecology (ECOL 600B) "*Conservation Biology*" (2007-08, 2010, 2012-19)

Heritage & Traditions of UArizona (AED295B) "*Biosphere 2 and the U of A*" (2016-19)

Science Journalism (JOUR 472/572) "*Biosphere 2 Research Overview*" (fall 2014, 2017)

Leadership, Advocacy, and Community Building (HNRS195) "*Career Trajectory Components*" (fall 2015)

Wildlife Ecology, Management, & Conservation (WFSC 444) "*Herpetofauna Research Methods*" (2013, 2015)

Marine Biology (ECOL 183) "*Marine Reptiles*," U of A (fall 2003, spring 2005-2014)

Natural History of the Southwest (ECOL 130) "*Reptiles & Amphibians of Arizona*" (spring 2010-12)

University of Wisconsin, Madison

Human Physiology (Physiology 335), Grad. Teaching Assistant, Dept. Physiology (fall 1997 & 2001)

Evolutionary Biology (Zoology 410), Graduate Teaching Assistant, Dept. of Zoology (spring 1999)

Introductory Ecology (Zoology 260), *Guest Lecture* - "*Adaptation*" (February 2001)

Evolutionary Biology (Zoology 410), *Guest Lecture* - "*Quantitative Genetics*" (March 1999)

Other Teaching, Training, & Instruction

Future Earth Resilience – proposed interdisciplinary Honors Minor to make best use of Biosphere 2 as teaching tool at nexus of Earth Systems, Economics & Externalities, and Innovation & Design, with John Pollard, 2020.

Biosphere 2 Science for the Future of our Planet, Massive Open Online Course (MOOC on Coursera platform), Biosphere 2 and UA Earth Systems Science Expertise - *Organizer, Coordinator, & Contributor*. Launched spring 2018 (with UArizona Office of Digital Learning) <https://www.coursera.org/learn/biosphere-science-future>

Vertically Integrated Projects (VIP) Steering Committee, Increasing Undergraduate Research Engagement, with Win Burleson, Cynthia Demetriou, Greg Heileman, Kasi Keighlbaugh, John Pollard, Kimberly Sierra-Cajas, Jen Fields, 2019-present

- REU Site: Biosphere 2 Earth Systems Research for Environmental Solutions.** Ten undergraduate students from around the U.S. in residence for 10 weeks at Biosphere 2. *Co-Organizer and Co-PI* with Katerina Dontosova (PI), NSF Funding, 2014-2019 (no-cost extension 2020 & 2021) <https://biosphere2.org/education/research-experiences-for-undergraduates>
- Science Communication,** Occasional Committee & Events, with Chris Impey (Astronomy), Carol Schwalbe (Journalism), Chris Cokinos (English), 2017-present
- Global Environmental Leadership & Sustainability (GELS),** residential research immersion for high-school students at Biosphere 2, *Facilitator*, funding/programming with UCSD Academic Extension, 2013-2019
- UA Honors Catalyst Students,** Experiential Introduction to Biosphere 2, for approx. 1,000 UA Honors College Freshmen, in collaboration with Joost Van Haren, Tom Wilson, John Pollard, Katie Morgan, et al. Fall 2017
- STEM Teachers and Researchers (STAR) Fellows Program,** 9-week residential summer research experience for STEM teachers at Biosphere 2. *Director & Facilitator.* Funding through partnership with Cal Poly, 2015-2017
- Biosphere 2 Science Academy,** Residential Science and Leadership Program, *Creator & Organizer*, Middle- and High-School Students, July 2014-2017
- Biosphere 2 Outreach Scholars,** Science Education Professional Development for UA Undergraduate and Graduate Students, *Creator & Organizer*, UA 100% Engagement Opportunity, summer 2014-17
- Biosphere 2 Introduction & Overview,** Science Journalism Immersive Experience, in-Residence at Biosphere 2, *Co-Coordinator and Contributor*, Oct 2017
- Advanced Inquiry** Masters Degree Program, Phoenix Zoo & Miami University Field Course “*Effective Science Communication*” Practicum, *Coordinator and Contributor*, July 2016
- Honors Leadership, Advocacy, & Community Building** (HNRS195), *Guest Panelist*, fall 2015
- UArizona Honors College High School Summer Institute,** Biosphere 2 and Sky Island Science, *Instructor*, June 2014
- Institute of Desert Ecology,** Tucson Audubon Society, *Herpetology Faculty*, 19-22 April 2012
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WORKSHOPS & PROGRAMS

- QUEST Institute Summer STEAM Intensive for High School Students, *Facilitator*, Biosphere 2 Virtual Science Connections/Experiences, July 2020
- Partnerships for Resilience: Reframing Solutions. *Facilitator.* UArizona Washington D.C. Office Opening Event, April 2020 (Invited, to-be Rescheduled)
- Carson Scholars, Cohort Kick-off Retreat at Biosphere 2, Co-Organizer, *Facilitator, & Presenter*, 2016-present
- Science Education Resource Center, SERCKit *Planning Workshop*, (PI Cathy Manduca), Carleton, Minnesota, November 2019 (Invited)
- Center for Climate Adaptation Science and Solutions (CCASS), Climate Adaptation and Food Systems Workshop, Organizer: Kathy Jacob, *Participant*, November 2019 (Invited)
- Biosphere 2 Science. Lifelong Learning in Retirement at the Highlands, An Affiliate of Road Scholar Lifelong Learning Network, *Presenter and Organizer* of three-part series, Dove Mountain, fall 2019

- Sustainable Development for the Americas: Science, Health and Engineering Policy and Diplomacy Conference, *Participant*, October 2019
- Experiential Teacher Professional Development STEM Excursion, Mt. Lemmon with 30 Arizona Educators and UA Arizona Sky School and Laboratory of Tree-Ring Research colleagues, *Organizer & Contributor*, Sept 2019
- Arizona Adult Education Institute, Double-session workshop: Where does the light go? Biosphere 2, climate change, and ecosystem services. September 2019 (Invited)
- National Alliance for Broader Impacts (NABI), Summit *Planning Committee and Panel Moderation*, 2019 (Invited)
- Sonoran Desert Natural History Field Introduction, UA University Fellows Graduate Student Retreat, *Co-Organizer & Presenter*, August 2017-19
- Water, Air, and Life Dynamics (WALD) Research Campaign Planning Workshop, Biosphere 2 Rainforest Research Director Laura Meredith, *Participant*, August 2019
- LIGHT at Biosphere 2: A Teacher Professional Learning Workshop for Secondary Education Science Teachers, in collaboration with UA South and Noyce Border Scholars, *Facilitator and Lead Presenter*, Biosphere 2, June 2019
- Principles of the Design of Digital Science, Technology, Engineering, and Mathematics (STEM) Learning Environments. NSF-funded workshop at Biosphere 2, *Organizer, Facilitator, Contributor* (PI J. Castek, Co-PIs L. Sult, J. Nichols, K.E. Bonine, B. Smith), Feb 2019
- Biosphere 2 Ocean Research Planning Workshop, *Participant*, January 2019
- Rappaccini's Daughter, Opera Dress Rehearsal at Biosphere 2, Cynthia Stokes, UA Stage and Opera Director. Followed by science panel, October 2018
- Artists-in-Residence, Biosphere 2, Kathleen Velo and Chip Hedgcock, Water and Leaf Photography, 2018
- Artist-in-Residence, Biosphere 2, Dorsey Kaufmann, Ripple Effect – visualizing ground water data, Arsenic, Lead, Nitrate, and Fluoride, 12-17 November 2018
- Artist-in-Residence, Biosphere 2, Richelle Gribble, Visual Artistic Interpretation of Life Systems, 01-14 October 2018
- Biosphere 2 – The Future of Life On and Off Earth, Europlanet Webinar, with Katie Morgan, 25 September 2018
- The Southwest Conference on Transforming STEM Education in Hispanic-Serving Institutions (HSIs), NSF Workshop, PI Guadalupe Lozano, Co-PIs William Velez, Anna O'Leary, Vignesh Subbian, Marla Franco, *Facilitator, Moderator, Participant*, 18-20 November 2017
- GLOBE (Global Learning and Observations to Benefit the Environment) Bootcamp, New Orleans, Citizen Science and STEM Education protocol training, *Participant*, 05-10 Nov 2017
- Biosphere 2 Research and Education, UCSD Extension Workshop at Biosphere 2, *Organizer & Presenter*, Oct 2017
- Biosphere 2, an Inspirational Icon for STEM Education. 'Summer School' teacher training workshop promoting innovative and creative teaching methods through the use of technology and digital content. *Presenter & Participant*, Europe-wide with ERASMUS+ Programme support, Attica, Greece, July 2017 (Invited)
- Stories of Tomorrow: Students' Visions on the Future of Space Exploration, Collaborative Project in European Union's 2020 Research and Innovation Programme. *Participant*, 1st Consortium Meeting, Athens, Greece, (PI Franz Bogner) July 2017
- Teacher Professional Development: Exploring School Gardens, Agrivoltaics, & Aquaponics, *Facilitator*, UA South Noyce Border Scholars and Transition-to-Teaching Cohort, UAS M.Ed, June 2017

Arizona Science Teacher Association, Energy Symposium Teacher Professional Development, *Facilitator*, Biosphere 2, June 2017

Physics of Scuba, STEM Teacher Professional Development Workshop, *Facilitator*, Biosphere 2 Marine Biome, May 2017

Summit of Binational Consortium for Regional Scientific Development and Innovation (CAZMEX), *Panelist*, Biosphere 2, May 2017 (Invited)

Science Communication for Students & Staff, with Joe Palca and Maddie Sofia of National Public Radio, at University of Arizona, *Co-Organizer*, April 2017

Rising Voices: Collaborative Science with Indigenous Knowledge for Climate Solutions, *Participant*, National Center for Atmospheric Research, Boulder, Colorado, April 2017

Alan Alda Center for Communicating Science, Haury-funded two-day workshop at UA, *Participant*, February 2017

NSF INCLUDES Launch Pilot PI meeting, *Participant*, Arlington, Virginia, January 2017

NSF INCLUDES Conference: Collective Impact as a Pathway to Reinvigorate Broadening Participation in STEM, *Participant*, UC San Diego, January 2017

Science Communication Training Workshop for UArizona Faculty, offered by American Association for the Advancement of Science, at Biosphere 2, *Co-Organizer & Co-Funder*, Sept 2016

Science & Sustainability, Engagement Workshop at Biosphere 2, City High School, *Organizer & Presenter*, 2016

EdgeMakers, Change Makers High School Residential Experience *Organizer & Presenter*, July 2016

Sustainability, Innovation, and Social Justice: EdgeMakers Summer Camp at Biosphere 2, Residential High School Academy, *Co-Organizer*, July 2016

Teacher STEM Education Professional Development at Biosphere 2, Transition-to-Teaching, *Organizer*, June 2016

Introduction to Sonoran Desert Natural History, *One Young World Summit* at Biosphere 2, *Co-Organizer, Presenter, & Participant*, April 2016

Sustainability, Innovation, and Social Justice: EdgeMakers Spring Academy at Biosphere 2, Residential High School Workshop Pilot, *Co-organizer, Participant, & Presenter*, March 2016

Digital Storytelling Workshop at Biosphere 2, Honors College, Northern Arizona University *Co-Organizer & Participant*, 2016

Arizona Center for STEM Teachers, Summer Residential Professional Development, Science Teaching and Learning, 30 K-8 teachers for 10 days at Biosphere 2. *Co-Organizer*, June 2013-2015

K-12 STEM Education Curriculum, Lawrence Hall of Science, UC Berkeley (ocean literacy and marine activities, causes and effects of climate change), *Facilitator*, Biosphere 2 engagement, 2015

UArizona Early Academic Outreach, Aquaponics STEM-Education Engagement, *Co-Organizer, Presenter, & Participant*, 2015

Science Education, American Council on Rural Special Education, Faculty Professional Development at Biosphere 2, *Co-Organizer, Presenter, & Participant*, Mar 2014

Council of Environmental Deans & Directors, Summer Program Conference, *Participant*, Plittsbrgh, Pennsylvania, June 2013

Conservation of Middle San Pedro Watershed, Optional Conservation Biology Student Field Experience, *Organizer & Lead*, Nov 2012

Gila Monster Ecology & Research, Field Workshop with Cactus Rangers at Saguaro National Park, *Co-Organizer & Lead*, Oct 2012

Saguaro Census, Saguaro National Park, Optional Conservation Biology Student Field Experience, *Organizer & Lead*, Nov 2011

BioBlitz Scientist, Gila Monster Research & Citizen Science, Rincon Mountain District, Saguaro National Park, Public Field Excursion, *Lead*, Oct 2011 (with Brian Park)

BioBlitz Scientist, Canyon Treefrog Variation at Madrona Pools, Rincon Mountain District, Saguaro National Park, Sabino High School Students, *Lead*, Oct 2011

Sky-Island Ecology, Sense of Place, Mt. Lemmon, UA College of Science Galileo Circle, Jim Click and Friends Tour, *Co-Organizer, Presenter & Participant*, Oct 2011 (Invited)

Sky-Island Ecology, Sense of Place, Mt. Lemmon, University of Arizona College of Science Galileo Circle, *Co-Organizer, Presenter & Participant*, 2008-present

DiscoveryDays, Mt. Lemmon SkyCenter, Sky Island Ecology, *Presenter*, summer 2009 & 2010

Amazon: Changing Identities on a Rainforest Frontier, Peruvian Faculty Field Institute, Experiential Education, National Collegiate Honors Council, *Co-Organizer & Co-Lead*, spring break March 2009

Dendrochronology & Sky-Islands Ecology. DiscoveryDays, UA Mt. Lemmon SkyCenter, *Presenter*, August 2008 (Invited)

Borders, Barriers, and Barrios, Arizona/Sonora Faculty Field Institute, Experiential Education, National Collegiate Honors Council, *Facilitator & Lead*, spring break March 2008

SERVICE

Council on Undergraduate Research – Transformations Project (CUR-TP; NSF-IUSE) Nura Dualeh, PI, *Steering Committee & Meeting Facilitation*, 2020-present

Tucson Regional Education Collaborative (TREC), *Steering Committee and Budget Steering Sub-Committee*, 2019-present

STEM Learning Center (SLC) *Operations Team*, UArizona Research, Innovation & Impact, Kimberly Sierra-Cajas, Director, 2018-present

Biosphere 2 Advisory *Board Meetings*, 1-2 per year, 2013-present

Academic Program Review, The UArizona Honors College, *Panelist*, 2020 (Lisa Elfring Internal Reviewer)

NASA Arizona Space Grant *Selection Committee*, 2018, 2020

UA Foundation and School of Middle East and North African Studies' Endowed Michael E. Bonine Research and Travel Award, *Founder and Selection Committee*, 2013-present

UA STEM Center (renamed STEM Learning Center), Participating Member, 2013-present

Embedded Assessment, NSF Citizen Science, Biosphere 2 participating case-study, 2018-present

UA Institute of the Environment (renamed Az Institutes for Resilience), Affiliated Faculty, 2013-present

Arizona Science Education Leadership Association (AzSELA), Member, 2018-present

UA Center for Climate Adaptation Science and Solutions, Associate, 2014-present

Binational Consortium for Regional Scientific Development and Innovation (CAZMEX), UA and National Council for Science and Technology (Mexico), *Proposal Reviewer*, Research Projects and Postdoctoral Fellowships, spring 2017, 2020

New Faculty Orientation, Social & Behavioral Sciences, Biosphere 2 Intro *Presentation*, October 2019

Fulbright Reviews, UArizona applicants, *Campus Committee Evaluator*, Sept 2019

NSF AISL Proposals, UArizona Internal Reviewer, fall 2019

Arizona Student Energy Conference (AzSEC), *Planning Committee*, Neil Armstrong, PI, fall 2019

Student-centered Teaching, Faculty Learning Community, UArizona Office of Instruction & Assessment, 2019 (coordinated by Lisa Elfring)

Broader Research Impacts Opportunities, *Presentation & Discussion*, Biosphere 2 Rainforest Research Campaign Planning Workshop, PI Laura Meredith, January 2019

United Nations Regional Centre of Expertise, Collaborator, Education for Sustainable Development, Borderlands Mexico – U.S.A., 2017-2019

Flinn Foundation, Flinn Scholar *Application Review & Applicant Interviews*, 2005-08, 2011-12, 2014, 2018-19

Institute of the Environment (IE) Program Review, Oct 2018

Fulbright Reviews, UArizona applicants, Sept 2018

NASA Space Grant Arizona, Steering Committee Meeting, Director Tim Swindle, LPL, *Participant*, Phoenix

UAScience Connections, *Advisory Committee*, 2010-2018

"BIOCOSMOS – Our Sense of Place, Our Sense of Life in the Universe", Workshop organized by Dr. Perig Pitrou (Collège de France, Paris), Dr. Istvan Praet (University of Roehampton, London), Dr. Regis Ferriere (University of Arizona and ENS Paris) and Dr. Kevin Bonine (University of Arizona), under direction of CNRS-U. Arizona Joint International Research Center iGLOBES, and with support from Paris-Sciences-Lettres Research University, Interdisciplinary Program on Origin and Conditions of Emergence of Life, February 2018 at Biosphere 2

Biosphere 2 - A Unique Academic Institution, *UA Institute for Language and Innovation* planning workshop, Dr. Sonia Shiri, organizer, Oct 2017 (Invited)

Flinn-Brown Civic Leadership Academy, Professional Development, 1.5 days, Phoenix, AZ, Sept 2017

Sonoran Desert Natural History Field Intro, *UA University Fellows Graduate Student Retreat*, Aug 2017

Stories of Tomorrow: Students' Visions on the Future of Space Exploration, Collaborative Project in European Union's 2020 Research and Innovation Programme. *Participant*, 1st Consortium Meeting, Athens, Greece, (PI Franz Bogner) July 2017

UA Foundation and Haury Program, Fundraising Event, *Past Awardee*, University of Arizona, May 2017

Science Communication for Students & Staff, with Joe Palca and Maddie Sofia of NPR, at UA, 2017

Rising Voices: Collaborative Science with Indigenous Knowledge for Climate Solutions, *Participant*, National Center for Atmospheric Research, Boulder, Colorado, April 2017

UA Office of Instruction and Assessment (OIA): Certificate in College Teaching Program, *Content-Expert Observer*, classrooms of Josh Hoskinson and Angela Kaczowka, spring 2017

Alan Alda Center for Communicating Science, Haury-funded 2-day workshop at UA, *Participant*, 2017

NSF INCLUDES Conference: Collective Impact as a Pathway to Reinvigorate Broadening Participation in STEM, *Participant*, UC San Diego, January 2017

Faculty Fellows and Visiting Fellows, Agnese Nelms Haury Program in Environment and Social Justice, *Review and Selection Panelist*, fall 2016

Faculty Teaching Observer, Department of Ecology & Evolutionary Biology, University of Arizona, 2016

Launch Week, 'Gila Monster Encounter!' UA Office of Student Engagement, *Presenter*, spring 2016

Southern Arizona Leadership Council, *Member* via Flinn-Brown Civic Leadership Academy, Arizona Center for Civic Leadership, 2015

UA Early Academic Outreach, Aquaponics STEM Education Engagement, *Presenter*, 2015

GoFundMe Campaign (\$33,546) – *Organizer*, Rafe Sagarin Memorial & Family Support, 2015

Journalism Department, UArizona, *Faculty Search Committee*, 2014-2015

Fulbright U.S. Student Program *Interview & Selection Committee*, Sept 2014

Gila Monster Research, Undergraduate Biology Research Program Workshop, *Presenter*, summer 2014

Undergraduate Biology Research Program (UBRP), *Selection Committee*, 2013, 2014

Desert Discovery Center, *Ad Hoc Planning Committee*, Stuart Marsh, Chair, 2013-2014

Undergraduate Task Force, Ecology and Evolutionary Biology, *Committee Member*, 2006-2013

College of Science Commencement, *EEB Representative*, December 2012

UAScience Connections, Assessment Working Group, *Co-chair*, 2010–2012

Education and Outreach Committee, Biosphere 2, *Active Member*, 2009-2012

College of Science Commencement, *EEB Representative*, with Rob Robichaux, December 2011

UAScience Connections, Advisory Committee, *Strategic Planning Retreat*, August 18-19, 2011

UA Student Water Ski Club, *Faculty Advisor*, 2010-2011

UA Office of Instruction & Assessment, *Curriculum-focused Faculty/Professional Learning Community*, Coordinator: Lisa Elfring, 2010-2011

Undergraduate Assessment Team, Undergraduate Task Force, Ecology & Evolutionary Biology, 2009-2011

UA Student Chapter, Tucson Herpetological Society, *Faculty Advisor*, 2007 – 2011

Conservation Biology Option, School of Natural Resources & the Environment, *Steering Committee*, 2006-2011

National Collegiate Honors Council, Honors Semester, *Board of Directors*, 2006-2011

Photo Specimen Voucher Initiative, Museum of Natural History, U. of Arizona, Herpetology Collection, 2006-2010

Partners in the Parks, National Collegiate Honors Council, *Steering Committee*, 2008-2010

Reptile & Amphibian Ecology International, *Board of Directors*, 2007-2009

UA Men's Club Ultimate Frisbee Team, *Faculty Advisor*, 2005-2009

Society for Conservation Biology, Smith Postdoctoral Fellows *Application Reviewer*, 2005-2008

Herpetology Reading Group, *Organizer*, each spring 2002-2008

Tucson Herpetological Society, *Vice President*, 2006-2007

EEB Seminar Series, *Host & Facilitator* for John Sabo (ASU), Oct 2007
 Turtle Removal, from campus pond at request of Facilities Management, summer 2007
 National Collegiate Honors Council, Everglades & Miami Beach, FL, City as Text Seminar, *Selected Participant*,
 January 2006
 Courtney Conway (UA SNRE) Lab Meetings, *Participant and Feedback* for his graduate students, 2004-2007
 Tucson Herpetological Society, *Board of Directors*, 2005
 Urbanization Impacts on Desert Tortoise Populations in the Tucson Basin, *Field Assistant*, fall 2003
 Academic Tutor, UW-Madison Department of Athletics, 1999-2001

Manuscript Reviews

Zoomorphology (2014), *Journal of Evolutionary Biology* (2014), *Physiological and Biochemical Zoology* (2014), *The American Naturalist* (1997, 2008, 2012, 2013), *Comparative Biochemistry and Physiology* (2010), *Endangered Species Research* (2009), *The Anatomical Record* (2009-2010), *Cambridge University Press* (book proposal; 2009), *Journal of Experimental Biology* (2001, 2008), *Journal of Herpetology* (2000, 2008), *Evolution* (1996, 2000-2002, 2006), *Herpetologica* (2000, 2005), *The Southwestern Naturalist* (2001, 2003), *Animal Behaviour* (1999, 2001), *Journal of Zoology, London* (2001), *The Herpetological Journal* (1996)

COMMUNITY ENGAGEMENT

ASDM (Arizona-Sonora Desert Museum), Chair, *Board of Trustees*, 2018-2020
 Priscilla & Michael Baldwin Foundation, *Board of Trustees*, 2019-present
 ASDM (Arizona-Sonora Desert Museum), *Board of Trustees*, 2011-present
 Global Learning and Observations to Benefit the Environment (GLOBE) program, University Corporation for Atmospheric Research. *Coordinator*, Citizen Science and STEM Education partnership with Biosphere 2, 2017-present
 CEDO (Intercultural Center for the Study of Deserts and Oceans), *Advisory Board*, 2016-present
 Biosphere 2 Outreach and Public Engagement for 100,000 visitors to Biosphere 2 annually. *Co-leadership*, 2013-present
 Specialty Director and Researcher Tours for the Public, *Co-Organizer and Participant*, Biosphere 2, 2018-present
 STE(A)M Education Programing for > 5,000 K-12 students at Biosphere 2 annually, *Leadership*, 2013-present
 UA Arboretum at Biosphere 2, *Co-Facilitator*, 2016-present
 Rotary Club of Tucson, Arizona-Sonora Desert Museum *Co-Presenter* with Craig Ivanyi and Lynnae Wenker, March 2020
 Superstars of Science, *Bill Buckmaster Radio* Interviewee, The Voice, KVOI AM 1030, 2013-2017, 2020
 Climate Impact on the Environment: Lessons from Biosphere 2. *Climate Jubilee* at Pueblo High School, Feb 2020 (Invited)
 Reptile Natural History, TUSD Miles K-8 Science Club, Feb 2020 (Invited)

STEM Career and Internship Fair, Tohono O’odham Community College (TOCC), with PI Katerina Dontsova (Bonine Co-PI), Biosphere 2 summer REU recruitment, January 2020

Agnese Nelms Haury Program in Environment and Social Justice, Fall Networking Event, *Participant and Facilitator*, October 2019

Science for the Future of our Planet, Tucson Festival of Books Science Café, *Presentation plus Q&A*, March 2019

Vatican Observatory Leadership Team, Biosphere 2 Tour, January 2019

Biosphere 2 Science for the Future of our Planet, *Presentation* to Dove Mountain Democrats, January 2019

Surviving Peak Drought and Warming Workshop, Public Policy and Climate Communication (Andrea Gerlak, Organizer), *Panelist*, March 2018

Carbon Dioxide and Water Traceability in Food Production, Planning Session with Merchant’s Garden and Merlin – Tucson-based agriculture companies, *Participant*, February 2018

ASDM (Arizona-Sonora Desert Museum), Vice-Chair, *Board of Trustees*, 2016-2018

ASDM (Arizona-Sonora Desert Museum), Chair, *Science and Conservation Council*, 2015-2018

Friends of Saguaro National Park, *Board of Directors*, 2010-2018

Biosphere 2 ‘What If?’ Science Series, *Coordinator*, 2015-2017

Astronomical Art Show at Biosphere 2, International Association of Astronomical Artists, *Co-facilitator*, 2014-2017

Tucson, City of Gastronomy: Foodways in a Changing Environment, Panel Discussion, *Organizer*, Earth Day 2017, Biosphere 2.

Biosphere 2: Innovation & Understanding for the Future of our Planet, *TenWest Festival*, Oct 2017, with John Adams & Katie Morgan (Invited)

FallFest 2017, Institute of the Environment, *Outreach Table*, 2017

Conservation of Sonoran Desert Reptiles, *Paulo Freire School*, Sept 2017 (Invited)

Earth Day 2017, A Celebration of Science, Sustainability, & the Environment at the University of Arizona’s Biosphere 2. *Co-facilitator*

Pollinator Garden, Earth Day Installation at Biosphere 2. STEM education and citizen science platform. *Organizer*, Partners include Arizona-Sonora Desert Museum, Tohono Chul, Kendall Kroesen, Watershed Management Group, Borderlands Restoration, and Nighthawk Natives. April 2017.

Wings on Words Preschool, Child Language Center, *Reptile Engagement*, April 2017

UA Mineral Museum at Biosphere 2, Mineral Evolution Exhibit, *Organizer*, 2016-2017

Astronomical Art Show at Biosphere 2, Internat Assoc of Astronomical Artists, *Co-facilitator*, 2014-2017

Superstars of Science, *Bill Buckmaster Radio* Interviewee, The Voice, KVOI AM 1030, 2013-2017

CEDO (Intercultural Center for the Study of Deserts and Oceans), *Board of Directors*, 2008-2016

Arizona Science Teacher Association, Annual Meeting, Grand Canyon University, *Outreach Table*, 2016

Grand Canyon Exploration with Miles Exploratory Learning Center, *Chaperone & Field-team Lead*, April 2016

Biosphere 2 and Gila Monsters, *Pantano Rotary*, May 2016 (Invited)

Science in the Southwest: Biosphere 2, Gila Monsters, & the Sonoran Desert, *Tucson Sunrise Rotary*, May 2016 (Invited)

Careers in #science panel on Science Stage in #ScienceCity! *Panelist*, March 2016

Biosphere 2, Researching the Future of Our Planet for 25 Years, *Saddlebrooke Rotary*, Feb 2016 (Invited)

What If Reptiles Could Reveal Nature's Secrets? *Biosphere 2 'What If?' Science Series*, Jan 2016

Technology in the Real World: Biosphere 2 and the Future of Environment, Technology, and Sustainability, *TENWEST Festival*, Oct 2015 (Invited)

Southern Arizona Regional Orientation Center, Planning Meeting Participant, 2015

Southern Arizona Leadership Council, *Member* via Flinn-Brown Civic Leadership Academy, Arizona Center for Civic Leadership, 2015

Discovery Nights, Public Science Engagement, *Co-developer and organizer*, Biosphere 2, 2013-2015

Sense of Place, UA College of Science, *Outreach and Development*, 2008-2015

Technology in the Real World: Biosphere 2 and the Future of Environment, Technology, and Sustainability, *TENWEST Festival*, Oct 2015 (Invited)

Learning from Rafe Sagarin: A Tribute. *Co-organizer & Speaker*, University of Arizona, September 2015

Beneath the Waves Film Festival, *Co-organizer*, LOFT Cinema, September 2015

K-12 STEM Education Curriculum, Lawrence Hall of Science, UC Berkeley, ocean literacy and marine activities, causes and effects of climate change, *Facilitator*, Biosphere 2 engagement, 2015

Flinn Scholar Recognition Dinner, *Keynote Conversation* with Drew M. Brown, Phoenix, Arizona, May 2015

Discovery Nights, Public Science Engagement, *Co-developer and organizer*, Biosphere 2, 2013-2015

Sonoran Desert Reptiles, *Tucson Bird and Wildlife Festival*, Tucson Audubon Society, Aug 2014 (Invited)

Science Careers, Panelist, Arizona College Preparatory Academy, 2014

Biosphere 2: research and education on the future of the planet, *Gardeners of Tucson*, Apr 2014 (Invited)

Sparking scientific discovery: exploration and understanding in the Sonoran Desert & its Sky Islands, *Ventana Medical Systems*, Mar 2014 (Invited)

Biodiversity in the Sonoran Desert & Sky Island region, *'Eat Dessert First' Men's Group*, Feb 2014 (Invited)

Biodiversity in the Sonoran Desert & Sky Island region, *Splendido Community*, Feb 2014 (Invited)

Meet the Amazing Reptiles & Amphibians of the Sonoran Desert! (Live Critters!) Tucson Festival of Books, Science City, 2013 (Invited)

Gila Monsters! Intriguing Denizens of the Sonoran Desert, Reptile Encounters & Natural History, *Miraval Resort*, 2013

Reptile Ecology, Miles Exploratory Learning Center, Tucson Unified School District, Sept 2013

Governor's Celebration of Innovation, Biosphere 2 & LEO (Landscape Evolution Observatory), Phoenix, AZ, November 2013

HerpCount.org, Citizen Science Initiative, *co-Creator*, 2011-2013

Jarchow Conservation Award Speaker (one of several), Tucson Herpetological Society, Nov 2012

CEDO (Intercultural Center for the Study of Deserts and Oceans), *Business Plan Workshop* with DAI (Development Alternatives Inc.); 26-28 February 2012

Tucson Festival of Books, *Volunteer*, 2009-2012

UA Science: Flandrau, Spring 2012 Exhibit: *Biters, Hiders, Stinkers & Stingers*, Consultant, Animal Loan, Animal Husbandry, fall 2011-summer 2012

Photo Exhibit Coordinator, Caffé Lucé, Fundraiser, College of Social & Behavioral Science, Feb 2012

BioBlitz Outreach, Gila Monster Research & Citizen Science and Sonoran Desert Discovery, Saguaro National Park, Outreach Tent, Oct 2011

Science and Art Meet: Communicating Conservation Awareness, *Student Art Installation*, Biosphere 2, 2010-2011

Tucson Festival of Books, *Moderator*, Conservation and Sustainability Forum, March 2010

Consilience – Creativity, Conservation, & Environmental Biology, *Exhibit*, UA Science Library, 2007

Community Outreach, *Reptiles & Amphibians of the Tucson Basin*, Tucson Community Center, fall 2004

High School Outreach, *Intro. to Herpetology*, Amerischools College Preparatory Academy, Tucson, AZ
- lectures and UA campus lab specimen instruction to two groups, spring 2004

Middle School Outreach, *Introduction to Herpetology*, Amerischools Middle Academy, Tucson, AZ
- lectures and UA campus lab specimen instruction to four groups, spring 2002, 2003

PRESENTATIONS

Flinn Scholar Mentor Dinner, UArizona Honors College, *Keynote Address*, November 2019

Biosphere 2: Helping us better understand Biosphere 1, our planet Earth, *Science Café Series*, The Science Center of Southern Illinois, Sept 2019 (Invited)

Why There is No Planet B, Science Café Series at Tucson Botanical Garden, *Presenter and Organizer* of four talks, fall 2019 (Invited)

Arizona Association for Environmental Education, Annual Meeting, *Presenter, Panelist, Moderator*, Prescott, AZ, fall 2019

Carson Scholars, Cohort 'Graduation' Event, Science Communication/Engagement at Arizona-Sonora Desert Museum, *Co-Organizer, Facilitator, and Presenter*, December 2018

Biosphere 2: Science for the Future of Our Planet, Bisbee Science Lab, April 2018

The Sonoran Desert Ecosystem: Gila Monsters Inc. American College of Laboratory Animal Medicine, April 2017 (Invited)

Geotourism Update, *College of Science Advisory Board Meeting*, Nov 2017 (Invited)

Biosphere 2 Sustainability Outreach & Education, *Solar Guild Board Presentation*, Oct 2017 (Invited)

Biosphere 2 - A Unique Academic Institution, *UA Institute for Language and Innovation* planning workshop, Dr. Sonia Shiri, organizer, Oct 2017 (Invited)

Biosphere 2, an Inspirational Icon for STEM Education. 'Summer School' teacher training workshop promoting innovative and creative teaching methods through the use of technology and digital content. Europe-wide with ERASMUS+ Programme support, Attica, Greece, July 2017 (Invited)

Summit of Binational Consortium for Regional Scientific Development and Innovation (CAZMEX), *Invited Panelist*, Biosphere 2, May 2017

- Carson Scholars, Science Communication/Engagement at Arizona-Sonora Desert Museum, *Keynote Address*, Dec, 2016 (Invited)
- Biosphere 2, Researching the Future of Our Planet for 25 Years, *Saddlebrooke Rotary*, 2016 (Invited)
- Chytridiomycosis & Amphibian Declines, *Veterinary Medicine & Disease*, UA Student Club Meeting, Nov 2012 (Invited)
- Sky-island Ecology, *Sense of Place, Mt. Lemmon*, UA College of Science, Pima Canyon Community, Nov 2012 (Invited)
- Gila Monster Natural History and Research Methods, October 2012 monthly speaker, FreeThought Arizona (Invited)
- Reptile & Amphibian Natural History & Diversity, *Tucson Audubon Society*, Bird and Wildlife Festival, Aug 2012 (Invited)
- Annual Dinner Speaker, *Magellan Circle*, College of Social and Behavioral Science, April 2012 (Invited)
- Gila monsters, *Saguaro National Park*, Feb 2012 (with Brian Park)
- The Iconic Gila Monster (*Heloderma suspectum*) of the Sonoran Desert, *Sabino Canyon Volunteer Naturalists*, Feb 2012 (Invited)
- Nasty, noxious, or not: reptile and amphibian survival strategies, *Western National Parks Association*, Oro Valley, UA College of Science, Science Café series, Jan 2012 (Invited)
- How to survive the heat: herpetofauna in the Sonoran Desert, *Cushing Street Bar & Restaurant*, UA College of Science, Science Café series, May 2011 (Invited)
- BioBlitz Closing Ceremonies, *Scientist Panel*, Interviewed by Dan Marries of KOLD 13, Saguaro National Park, Oct 2011 (Invited)
- Salute to Graduating Seniors, *Ecology & Evolutionary Biology Commencement*, May 2011 (Invited)
- Miles & miles of reptiles, *Tucson Festival of Books*, March 2011 (Invited)
- Gila Monsters, *Saguaro National Park*, Mar 2011 (with Brian Park)
- Reptiles, amphibians, and our sky islands. What might small, cute, big, and ugly tell us about ecological effects of climate change? *Saguaro National Park Climate Change Symposium*, Arizona-Sonora Desert Museum, October 2010 (Invited)
- Salute to Graduating Seniors, *Department of Ecology and Evolutionary Biology*, May 2009 (Invited)
- Sustainability in the Peruvian Amazon, *Honors Forum Luncheon*, UA Honors College, April 2009 (Invited)
- Keynote Address, *Flinn Scholar Finalist Recruitment*, UA Honors College, February 2009 (Invited)
- Canyon treefrogs (*Hyla arenicolor*) in the Tucson area. *Tucson Herpetological Society*, December 2007 (Invited).
- Keynote Address, *Pre-commencement Ceremony*, *Honors College*, University of Arizona, May 2007 (Invited).
- Canyon treefrog (*Hyla arenicolor*) population structure in the Rincon Mountains, Arizona. *Saguaro National Park*, May 2007 (Invited).
- Getting students involved in community projects. *Innovations in College Biology Teaching*, University of Arizona, August 2005 (Invited).
- Arizona black rattlesnake (*Crotalus oreganus* [viridis] *cerberus*) ecology: observations from populations in southeastern Arizona. *Current Research on Herpetofauna of the Sonoran Desert III*, Phoenix, AZ, April 2005.

- What we can learn from lizard limbs: comparative analysis of muscle histochemistry and the evolution of locomotor abilities. *Doings Seminar Series*, Interdisciplinary Training in the Neurobiology of Motor Control, Tucson, Arizona, September 2004 (Invited).
- Predictors of sprint locomotor performance abilities in Phrynosomatidae. *Horned Lizard Conservation Society*, Portal, Arizona, June 2002 (Invited).
- Predicting locomotor performance abilities in lizards: morphology, physiology, and the comparative method. *Departmental Seminar Series*, School of Renewable Natural Resources, Tucson, Arizona, May 2002 (Invited).
- How lizards run across the desert: morphological and physiological predictors of locomotor performance in Phrynosomatidae. *Current Research on the Herpetofauna of the Sonoran Desert II*, Tucson, Arizona, April 2002.
- Morphological and physiological predictors of locomotor performance in lizards. *Zoology Colloquium*, Department of Zoology, Madison, Wisconsin, May 2001.
- Morphology, physiology, and locomotor performance in phrynosomatid lizards. *Society for the Study of Evolution*, Madison, Wisconsin, June 1999.
- Muscle fiber-type variation and locomotion in phrynosomatid lizards. *Society for Integrative and Comparative Biology*, Boston, January 1998.
- Morphometric correlates of lizard sprint performance measured on a high-speed treadmill. *American Society of Ichthyologists and Herpetologists*, Seattle, June 1997.
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UNDERGRADUATE ADVISING AND GRADUATE COMMITTEES

- Earyn McGee, **MS and PhD Committee**, *Linking Perennial Surface Water and Aquatic Food Subsidies to Lizards in Arid Environments*, School of Natural Resources and the Environment, Univ. of Arizona, 2016-present
- Sherri Wasserman, Phd Student ASU School for the Future of Innovation in Society (SFIS), Biosphere 2 Connections, 2018-present
- Lisa Felix, **PhD Committee**, *Using a Competence Model for Environmental Education to investigate the relationships between children's environmental knowledge, attitudes, and ecological behaviors*, College of Education, Department of Teaching, Learning, & Sociocultural Studies, University of Arizona, 2013-2019
- Erin Magoffie, Simpson College, Summer REU Research Intern at Biosphere 2, How do Augmented Reality Experiences Complement Visitor Learning at Biosphere 2? 2018
- Adam Chmurzynski, Graduate Student UArizona Ecology & Evolutionary Biology and Carson Scholar, Augmented Reality Gaming for Biosphere 2 Science Education, 2018 [subsequently successful 2019 Fulbright Scholar applicant]
- Kathryn Beatty, Summer REU Research Intern at Biosphere 2, STEM Education Assessment, 2017
- Robert Riley, Honors undergraduate intern, Biosphere 2 Education & Outreach, spring 2017
- Aletris Neils, **PhD Committee**, *Caracals in a heterogeneous landscape: resolutions for human-carnivore conflicts in Namibia*, School of Natural Resources and the Environment, University of Arizona, 2014-17

Yadi Wang, undergraduate intern / graduate student employee, Biosphere 2, 2014-2016 [Graduate Research Associate in Soil, Water and Environmental Science, UA]

Ryan Mammana, Literacy, Learning, & Leadership Intern, Biosphere 2 Education & Outreach, fall 2016

Erica Oberg, Summer REU Research Intern at Biosphere 2, STEM Education Assessment – Biosphere 2 Summer Science Academy, 2016 [Elementary Science Educator]

Kjersten Erickson, Honors undergraduate intern, Biosphere 2 Education & Outreach, spring 2016

Karina Paredes, Undergraduate Honors Research Thesis, *Gila monster road mortality in and near Saguaro National Park: an analysis of road and landscape characteristics that affect roadkill*, 2015-2016 [College of Veterinary Medicine, Washington State University]

Cheyne White, Honors undergraduate intern, Biosphere 2 Education & Outreach, fall 2015

Emma Reed, NASA Space Grant Fellow, Biosphere 2 Marine Research and Outreach, 2015-16 [PhD student, Boston University then UArizona again with Diane Thompson; also Carson Scholar 2019]

Dieu My Thanh Nguyen, Honors undergraduate intern, Biosphere 2 Education & Outreach, spring 2015

Linzey Leinart, Honors First Year Project, *Tracking Migration Patterns & Territories of Gila Monsters*, 2015 [Veterinary School, UC Davis]

Madison Horton, Honors undergraduate intern, Biosphere 2 Education & Outreach, fall 2014

Gabriel Bustamante, Honors undergraduate intern, Biosphere 2 Education & Outreach, fall 2014

Devon DeRaad, summer research intern, Gila Monster Ecology, Saguaro National Park, summer 2014

Devin McGrane, Honors undergraduate intern, Biosphere 2 Education & Outreach, spring 2014

Leland Sutter, Veteran undergraduate intern, Biosphere 2 Education & Outreach, spring 2014 [MA Geography Student, UA]

Neal Carpenter, Directed Research, *Herpetofauna Surveys- San Pedro Riparian Conservation Area*, 2013-14

David Edmunds, undergraduate, *Reptile Husbandry*, fall 2012-fall 2013 [Research Technician School of Plant Sciences, University of Arizona]

Elizabeth Bercel, undergraduate, *Sonoran Desert Discovery Preceptor*, spring 2013

Kieran Noe, undergraduate, *Sonoran Desert Discovery Preceptor*, spring 2013

James May, undergraduate, *Herpetology Preceptor*, spring 2013

Victoria Farrar, Directed Research, *Conservation Genetics of Gila monsters*, 2012-2013

Lauren Harris, Directed Research, *Conservation Genetics of Gila monsters*, 2012-2013

Michael Hess, Directed Research, *Conservation Genetics of Gila monsters*, fall 2012-spring 2013

Victoria Farrar, Independent Research, *Environmental Correlates of Gila Monster Activity*, fall 2012 [PhD Student, UC Davis]

Lauren Johnston, undergraduate, *Biology 182 Preceptor*, fall 2012

Kieran Noe, undergraduate, *Biology 182 Preceptor*, fall 2012

Kelly LaFrance, undergraduate, *Biology 182 Preceptor*, fall 2012

Victoria Farrar, Undergraduate Biology Research Program, *Ecology and Population Genetics of Gila monsters*, summer 2012

Lauren Harris, Undergraduate Biology Research Program, *Ecology and Population Genetics of Gila monsters*, summer 2012

Arlette Schneider, undergraduate, *Herpetology Preceptor*, spring 2012

Darren Anderson, recent graduate, Gila monster research volunteer, 2011-2012

Katie Gray, **MS Committee**, *Ecology of the desert tortoise and invasive buffelgrass in the Sonoran Desert*, School of Natural Resources, University of Arizona, 2011-2012

Brian Park, non-degree seeking graduate student, Gila monster research field supervisor, 2010-2012

Parker Ashbaugh, undergraduate, Aquatic Habitat Characterization for Reintroduction of the Lowland Leopard Frog, Independent Study, collaborator: Pima County Office of Natural Resources Parks & Recreation, fall 2011

Lindsey Parker, undergraduate, *Biology 182 Preceptor*, fall 2011

Mika Jankowski, undergraduate, *Biology 182 Preceptor*, fall 2011

Nick Massimo, recent graduate, Gila monster research technician, 2011

Doraid Sadideen, undergraduate, *Sonoran Desert Discovery Preceptor*, spring 2011

Caleb Weaver, undergraduate, *Herpetology Preceptor*, spring 2011 [Educational Facilitator, Borderlands Earth Care Youth Institute, Borderlands Restoration L3C, Patagonia & Douglas, AZ]

Caleb Weaver, undergraduate, *Urban green space: how do native vegetation, percent cover, and ecological structure predict communities of birds, reptiles, and amphibians*, Honors Thesis, 2010-2011

Tyler Lansden, undergraduate, *Sonoran Desert Discovery Preceptor*, fall 2010, spring 2011

Joshua Ruddick, undergraduate, *Sonoran Desert Discovery Preceptor*, fall 2010, spring 2011 [Teacher, Natural Resource Management & STEM/Sustainability, Santa Rita High School, TUSD]

David Edmunds, undergraduate, *Reptile Husbandry & Canyon Treefrog Thermal Ecol.*, 2010-2011

Caleb Weaver, undergraduate, *Conservation Biology*, Independent Study, fall 2010

Riley Burnette, undergrad, *Reptile Husbandry, Outreach, Data Synthesis*, Indep. Research, fall 2010

Rudy Philips, undergraduate, *Biology 182 Preceptor*, fall 2010

Erica Beneze, undergraduate, *Biology 182 Preceptor*, fall 2010

Kim Baker, **MS Advisor**, *Hyla arenicolor population and disease ecology*, School of Natural Resources, University of Arizona, Jan 2008 – Dec 2010 [EEB Outstanding Senior, fall 2007]

Kelly Arganbright, undergraduate, *Sonoran Desert Discovery Preceptor*, spring & fall 2010

Tommaso Cioni, undergraduate, *Research and outreach: Gila monsters in Saguaro National Park*, Internship, fall 2009 – summer 2010 [Science and Italian Teacher, BASIS Oro Valley]

Karri Hobaica, undergrad., *Student Sustainability Residence*, Indep. Study, spring & summer 2010

Chelsey Killebrew, undergraduate, *SNRE Conserv. Biol Capstone Experience*, spring & summer 2010

Michael Weiss, undergraduate, *Conservation Genetics of Gila monsters*, Indep. Research, spring 2010
[EEB Outstanding Senior, spring 2010; Vanier Canada Graduate Scholarship 2011]

Bonnie Raschke, undergraduate, *Environmental Biology Preceptor*, spring 2010

- Michael Weiss, undergraduate, *Sonoran Desert Discovery, ECOL464/564 Preceptor*, spring 2010 [Postdoctoral Fellow: International Laboratory for Brain, Music, and Sound Research, University of Toronto]
- Adrien Pesque, undergraduate, *Research & outreach: Gila monsters in Saguaro Natl. Park*, spring 2010
- Alex Podolsky, undergraduate, *Biology 182 Preceptor*, fall 2009 [EEB Excellence in Undergraduate Research, spring 2010]
- Karri Hobaica, undergraduate, *Biology 182 Preceptor*, fall 2009
- Jace Lankow, undergrad, *Gila monster ecology*, Undergraduate Biol. Research Prog., summer 2009
- Matt Lutheran, undergraduate, *Lizard-ear otoacoustic emissions*, Independent Study, spring 2009
- Antje Adams, undergraduate, *Population structure of the mountain spiny lizard (Sceloporus jarrovii) in southern Arizona & origin(s) of the novel S. jarrovii population in the Santa Catalina Mountains*, Independent Research, spring 2009
- Karie Decker, **MS Committee**, *Evolution of avian life-history strategies*, School of Natural Resources, University of Arizona, fall 2007 – 2009 [Invasive Species Program Coordinator for the Nebraska Cooperative Fish and Wildlife Research Unit]
- Isha Saini, undergraduate, *Biology 182 Preceptor*, fall 2008
- Laura Stein, undergraduate, *Biology 182 Preceptor*, fall 2008 [EEB Outstanding Senior, College of Science Outstanding Senior, spring 2009]
- Jacob Durnin, undergraduate, *Herpetology*, Independent Study, spring & fall 2008
- Linda Peery, undergraduate, *Road closures: methodology and monitoring*, SNR Conservation Biology Capstone Experience, in collaboration with Sky Island Alliance, spring 2008 [Outstanding Graduating Senior, School of Natural Resources & the Environment, spring 2008. Wildlife Biologist, USDA Forest Service, Coronado National Forest]
- Linda Peery, undergraduate, SNRE Conserv. Biol Capstone Experience: *United States Forest Service Intern*, spring 2008
- Linda Peery, undergraduate, *Wilderness designations: media reporting and editorial opinions*, Independent Research, spring 2008 [Employed by US Forest Service]
- Jessica Dietrich, undergraduate, *Biology 182 Preceptor*, spring 2008
- Ming Min-Lee, graduate student, *Herpetology*, Independent Study, spring 2008
- Vanessa Buzzard, undergraduate, *Conservation genetics of Bolson Tortoise reintroductions*, Independent Research, spring 2008 [Graduate student, EEB at UA; then lab manager SNRE with Laura Meredith]
- Vangie Rodriguez, undergraduate, *Real-time PCR to quantify amphibian chytrid infections*, Independent Study, spring 2008
- Jessica Dietrich, undergraduate, *Introductory Biology (182R) Preceptor*, spring 2008
- Patricia Wheeler, **MS Advisor**, *PCR test to detect chytrid fungus*, UA General Biology Program for Secondary School Science Teachers, 2005 – 2008
- David Hall, **Ph.D. Committee**, *Mud turtle population ecology and conservation*, School of Natural Resources, University of Arizona, fall 2005 – spring 2008
- Jamia Fillingner, undergraduate, *Hyla arenicolor phylogeography*, Jan-Dec 2007 [Research Technician, Department of Nutritional Sciences. University of Arizona]

- Kelly Donithan, undergraduate, *Implications of invasive buffel grass for lizard communities on Tumamoc Hill*, Jan - Dec 2007 [Animal Management Specialist, White Oak Conservation Center, FL]
- Chris Jarchow, undergraduate, *Population genetics of captive desert tortoises in Arizona*, 2007 [Graduate student in Landscape Architecture, University of Arizona]
- Kris Ratzlaff, undergraduate, *Hyla arenicolor phylogeography*, Jan 2006 – May 2007 [Graduate student in School of Natural Resources at University of Arizona]
- Christine Schirmer, undergraduate, *Hyla arenicolor phylogeography*, fall 2005 - summer 2006. [Recognized for Excellence in Undergraduate Research by the College of Science, 2006. Accepted research technician position at Broad Institute of MIT and Harvard]
- Chip Cochran, undergraduate, *Herpetology Preceptor*, spring 2006
- Chip Cochran, undergraduate, *Herpetofauna of Sonora, MX: Photo-specimen vouchers*, spring 2006
- Nathan Fitzgibbon, high school student, *Ontogeny of metabolism in unisexual whiptail lizards*, 2006
- Saul Guerrero, undergraduate, *Implications of invasive buffel grass for lizard communities on Tumamoc Hill*, fall 2005 – spring 2006
- Nathan Fitzgibbon, high school student, *Histocompatibility in unisexual whiptail lizards*, 2005
- Kelly Mackay, undergraduate, *Herpetological inventory of the Gila Box Wilderness*, 2005
- Leslie Wood, undergrad, *Desert Box Turtles, (Terrapene ornata luteola) in San Simon Valley, AZ*, 2005
- Daniel Post, *Incremental environmental impacts of urban development: a GIS-based modelling approach*. Undergrad. Honors Research Thesis, 2005 [Teaching K-12 biology in NYC]
- Kim Wright, undergraduate, *Herpetology preceptorship*, spring 2005
- Megan Chambers, undergraduate, *Multiscale analysis of legal framework relevant to the Sonoran Desert Conservation Plan, Pima County, Arizona*. Independent Study, spring 2005
- Melissa Amarello, *Defensive behavior of Crotalus polystictus (Mexican lance-headed rattlesnakes) towards humans*. Undergraduate Honors Research Thesis, 2004-2005 [Awarded NSF Predoctoral Fellowship]
- Lauren Merin, undergraduate, *Evaluation of small-scale sustainable food production*, Indep. Study, 2004
- Melissa Amarello, undergraduate, *Herpetology Preceptor*, spring 2004
- Alana Kurosaki, undergraduate, *Herpetology Preceptor*, spring 2004
- Ceit Chesser, undergraduate, *How to teach herpetology*, Independent Study, spring 2003

MEDIA COVERAGE, SELECTED

Program on Biosphere 2 kicks off Science Cafe series in Carbondale. Marilyn Halstead Sep 27, 2019 *The Southern Illinoisan*.

University of Arizona Biosphere 2 Receives \$30 Million Gift, *Philanthropy News Digest*, September 2017.

- Earth Day Celebration at Biosphere 2, *UA News*. April 2017. <https://uanews.arizona.edu/calendar/90446-earth-day-celebration-biosphere-2>
- Celebrate Earth Day at Biosphere 2, *KGUN9 News*. By, Stephanie Dunlap. April 2017
<http://www.kgun9.com/lifestyle/totally-tucson/celebrate-earth-day-at-biosphere-2>
- Down to Earth with Mrs. Green*, podcast - Biosphere 2: The BIG Earth Day Celebration! Bonine Interview. April 2017.
- Scaling Earth: after 30 years, the spirit of exploration that built Biosphere 2 continues, as scientists at the scaled-up laboratory investigate the nexus of food, water, and energy. 2017. *Edible Baja*. By John Washington. Photography by Steven Meckler.
- Applying indigenous and Western knowledge to environmental research. New project partners Native American students, tribal communities, and Western Earth system scientists. November 2016. By Jeff Smith. *NCAR/UCAR AtmosNEWS*. <https://www2.ucar.edu/atmosnews/in-brief/123788/applying-indigenous-and-western-knowledge-environmental-research>
- Biosphere 2 Helps Craft K-12 Curriculum. *The Daily Wildcat*. By, Varuska Patni. October 2016.
- Young Leaders in Tucson Tackle Environmental Challenges: One Young World Summit convenes 500 young adults at Biosphere 2. Vanessa Barchfield, *Arizona Public Media*. 2016.
- Catalina Highway. *Arizona Illustrated*, Arizona Public Media. Tony Paniagua. Bonine segment included. January 2016. <https://tv.azpm.org/p/originals-azill-sci/2016/1/7/79556-catalina-highway/>
- Inside Biosphere 2: Earth Science Under Glass*. 2015. From the "Scientists in the Field" series, by Mary Kay Carson; photographed by Tom Uhlman. HMH Books.
- SALC (Southern Arizona Leadership Council) Cultivates Young Leaders: Partnering to Train Future Civic Visionaries. 2015. *BizTucson*. By Romi Carrell Wittman.
- Teenagers Ask Big Questions at Biosphere 2's Summer Academy. Vanessa Barchfield, *Arizona Public Media*. Summer 2014. <https://www.azpm.org/s/21391-teenagers-ask-big-questions-at-biosphere-2s-summer-academy/>
- Biosphere 2 Hosts 2014 Summer Science Academies. July 2014. *Tucson Local Media*.
http://www.tucsonlocalmedia.com/livenup/article_1e9c46c4-0c70-11e4-b6b2-001a4bcf887a.html
- Park Scientists: Gila Monsters, Geysers, and Grizzly Bears in America's Own Backyard*. 2014. From the "Scientists in the Field" series, by Mary Kay Carson; photographed by Tom Uhlman. HMH Books. Bonine research highlighted.
- Water, *STEM Journals* visit to Biosphere 2 and interview with Peter Troch. 2014. Goeffrey Notkin, COX7 Arizona. Bonine segment included. <http://www.cox7.com/video/biosphere-2/>
- Learning Through Landscapes: A school that was on the verge of closing is now turning out future scientists in Barrio Hollywood. *Tucson Weekly*. By Robert Alcaraz. November 2013.
<https://www.tucsonweekly.com/tucson/learning-through-landscapes/Content?oid=3918303>
- Ecology class takes hands on approach. By Jazmine Woodberry. 2011. *Arizona Daily Wildcat*, March 4, pages 1-2.
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