TRAVIS HAGEY PH.D.
https://travis-hagey.com
Mississippi University for Women
Parkinson Hall 126A
1100 College St. MUW-100
Columbus, MS 39701 USA
thagey@muw.edu

EDUCATION

2013 Ph.D. in Biology. University of Idaho. Advisor: L. Harmon. *Mechanics, Diversity, and Ecology of Gecko Adhesion*
2007 B.Sc. in Cellular Biology with Chemistry minor. Western Washington University

APPOINTMENTS

2018- Assistant Professor of Biology. Mississippi University for Women
2015-2018 Science Communication Postdoctoral Fellow. BEACON Center for the Study of Evolution in Action. Michigan State University
2013-2015 Postdoctoral Researcher. University of Idaho. Funded by BEACON Center for the Study of Evolution in Action. *Optimization of the Gecko Adhesive System*. Sponsor: M. Riley
2010-2013 Teaching Assistantship. University of Idaho
2009-2010 Research Assistantship. University of Idaho. Funded by NSF DEB, RUI: REVSYS: *Integrative Systematics of Gekkotan Lizards - Phylogenetic Resolution, Taxonomic Revision, and Comparative Biology*. PIs: Bauer, A. and T. Jackman, Co-PI: L.J. Harmon
2007-2009 Teaching Assistantship. University of Idaho

RELEVANT RESEARCH SKILLS AND EXPERIENCES

- Laboratory and museum experience with live and preserved specimens
- Field experience in desert and tropical environments inside and outside the US
- Collecting and manipulating morphological data (linear, two and three-dimensional)
- Collecting and analyzing geometric morphometrics data
- Constructing custom field equipment using 3D printing
- Phylogenetic analyses of trait evolution

RELEVANT EDUCATION AND OUTREACH SKILLS AND EXPERIENCES

- Developing active learning classroom activities
- Volunteering and organizing student (K-12 though undergraduate), museum, and public outreach events
- Disseminating outreach training to scientists
- Disseminating evolution training and materials to educators

Journal Publications (*undergraduate authors 5 total)

Hagey, T.J., Uyeda, J.C., Crandell, K.E.*, Cheney, J.*, Autumn, K., and L.J. Harmon. 2017. Tempo and Mode of Performance Evolution Across Independent Origins. *Evolution*, 71(10): 2344–2358.

Hagey, T.J., Harte, S., Vickers, M., Harmon, L.J., and L. Schwarzkopf. 2017. There's more than one way to climb a tree: Limb length and microhabitat use in lizards with toe pads. *PLoS ONE* ,12(9): e0184641.

Hagey, T.J., Puthoff, J.B., Crandell, K.E*., Autumn, K, and L.J. Harmon. 2016. Modeling Observed Animal Performance Using the Weibull Distribution. *Journal of Experimental Biology*, 219: 1603-1607.

Hagey, T.J., Cole, N., Davidson, D.*, Henricks, A.*, Harmon, L.L., and L.J. Harmon. 2016. Temporal Variation in Structural Microhabitat Use of *Phelsuma* Geckos in Mauritius. *Journal of Herpetology*, 50(1): 102-107.

Hagey, T.J., Puthoff, J.B., Holbrook, M.*, Harmon, L.J., and K. Autumn. 2014. Variation in Setal Micromechanics and Performance of Two Gecko Species. *Zoomorphology*, 133 (2): 111-126.

Yoder, J.B., DesRoches, S., Eastman, J.M., Gentry, L., Godsoe, W.K.W., **Hagey, T.J.**, Jochimsen, D., Oswald, B.P., Robertson, J., Sarver, B.A.J., Schenk, J.J., Spear, S.F., and L.J. Harmon. 2010. Ecological Opportunity and the Origin of Adaptive Radiations. *Journal of Evolutionary Biology*, 23: 1581-1596.

Hagey, T.J., Losos, J.B., and L.J. Harmon. 2010. Cruise Foraging of Invasive Chameleon (*Chamaeleo jacksonii xantholophus*) in Hawai'i. *Breviora*, 519: 1-7.

OTHER PUBLICATIONS

Hagey, T.J. "*Evolutionary Biomechanics.*" Oxford Bibliographies in "Evolutionary Biology." Ed. Sarah Kain. New York: Oxford University Press, Oct 25, 2018. DOI: 10.1093/OBO/9780199941728-0117

RECENT INVITED RESEARCH PRESENTATIONS

2018 MUW Science and Mathematics seminar (SM100). "*Geckos, Evolution, and Outreach*"
2018 National Tropical Botanical Garden. *Habitat Use and Life Histories of Hawaii's Invasive Reptiles and Feral Chickens*. Phillips, J.G., **Hagey, T.J.**, and E. Gering
2017 UT Austin guest seminar. *The Evolution and Mechanics of the Gecko Adhesive System*

RECENT PUBLIC DISSEMINATION OF RESEARCH

2018 Anole Annals blog. *Anoles versus Geckos: The Ultimate Showdown*
2017 MSU Today. *An Evolving Sticky Situation.*
2017 Tiatragul, S., Murali, G. and Stroud, J. T. 2017. Digest: Different evolutionary dynamics led to the convergence of clinging performance in lizard toepads. *Evolution*, 71(10): 2537–2538.
2017 Lansing Biology on Tap. *Evolution and Mechanics of the Gecko Adhesive System*
2016 Michigan State University Faculty Voice. *Travis Hagey: Measuring Maximum Animal Performance*
2016 Anole Annals blog post: *Temporal Variation in Structural Microhabitat Use of Phelsuma Geckos*
2016 Atlas of Science layman's summary of Hagey et al. 2016. *Modeling observed animal performance using the Weibull distribution*

FUNDING (RESEARCH, OUTREACH, AND EDUCATION RELATED) **CAREER TOTAL: $414,370**

RESEARCH FUNDING

2018	Mississippi Space Grant Consortium Undergraduate Research Program. B. Howell	$1000
2014	BEACON Request #439 *Supplement: Optimization of the Gecko Adhesive System*. **Hagey T.J.** and M. Riley	$34,948
2013	BEACON Request #302 *Optimization of the Gecko Adhesive System*. **Hagey, T.J.** and M. Riley	$161,059
2012	National Geographic/Waitt Grant. #W216-12. *How Geckos Stick in Nature: Ecology and Biomechanics of Gecko Feet*. **Hagey**, **T.J.,** Harmon, L.J., and L. Schwarzkopf	$14,920
2006	Western Washington University Undergraduate Research Grant for *Phrynosoma platyrhinos* microsatellite research. **Hagey, T.J.** and R. Anderson	$500
Travel awards to present or gather data from the MSU Postdoc Association (2018), MUW Faculty Senate Development Committee (2018), BEACON Center for the Study of Evolution in Action (2018, 2017, 2016, 2015, 2014), Institute for Bioinformatics and Evolutionary Studies (2014), Idaho Graduate and Professional Student Association (2011), Society for the Study of Amphibians and Reptiles (2011), Idea Network of Biomedical Research Excellence (2010), American Society of Naturalists (2010), and the University of Idaho Student Grant Program (2008)		$20,708

OUTREACH AND EDUCATION FUNDING

2018	MUW Faculty Senate Foundation Endowment award to support BSB 485 student poster symposium and active learning materials	$500
2017	BEACON Request #1081. *BEACON and Beyond: Broadening Participation and the Scope of Public*. Solomon-Lane, T., **Hagey, T.J.**, Warwick, A., and H. Hofmann	$56,730
2016	MSU Postdoctoral Enhancement Award for Teaching to assess and disseminate an evolution classroom activity	$1,000
2016	European Society for Evolutionary Biology travel award to present evolution K-16 activity at the National Association of Biology Teachers conference (€1200)	$1,241
2016	BEACON Request #947 *An Evidence-based Framework for Transforming Scientific Communication and Engagement with the Public*. Solomon-Lane, T., **Hagey, T.J.**, Warwick, A., and H. Hofmann	$60,709
2016	BEACON Request #857 *Bringing Data to Life in Science Classrooms*. Baskett, C., Scharnagl, K., Groves, A., Kjelvik, M., Schultheis, E., and **T.J. Hagey**	$61,055

RESEARCH MENTORING — 6 UNDERGRADUATES (2 FROM UNDERREPRESENTED GROUPS, 4 FEMALE)

2019	Bailey Howell	Mississippi University for Women. Mississippi Space Grant awardee
2016	Jordan Garcia	Michigan State University. Student Research Opportunities Program *Quantifying Adhesive Toe Pad Morphology in Hemidactylus Geckos*
	Oacia Fair	Michigan State University. Student Research Opportunities Program *Morphological Similarities of Gecko and Anole Toe Pads*
2009	Meghan Wagner	University of Idaho. Gecko adhesion performance research
	Andy Gygli	University of Idaho. Imaging gecko specimens to quantify morphology
	Katie Pond	University of Idaho. Live animal care

EDUCATION AND OUTREACH RELATED ACTIVITIES

CURRICULUM DEVELOPMENT

2018 Biomechanics and functional morphology related lab activities
2018 MUW library LibGuide for BSB 485 Special Topics in Biomechanics
2016 Data Nugget teaching activity. *Sticky situations: big and small animals with sticky feet*. with video (Schultheis and Kjelvik 2015)
2016 Teaching activity illustrating how traits evolve in a population for middle school through undergraduate students. *Trait Evolution in a Bird Population (TEBird) Activity*. Included in IBIO 445 2018

TEACHING EXPERIENCE

Introductory Biology		
General Biology 1 Lab - Mississippi University for Women BSB 101	Instructor	2018
Cells & the Evolution of Life Lab - University of Idaho BIOL 115	Teaching Assistant	2009, 2008, 2007
Biomechanics		
Special Topics - Mississippi University for Women BSB 485/485L	Instructor	2018
Evolution		
Evolution - Michigan State University IBIO 445	Co-Instructor	2018, 2017
Herpetology		
Herpetology - University of Idaho BIOL 489	Teaching Assistant	2011, 2010, 2008
Miscellaneous Courses		
Ecology and Population Biology Lab - University of Idaho BIOL 314	Teaching Assistant	2013, 2012
Animal Behavior - University of Idaho BIOL 478	Grader	2011

INVITED EDUCATION AND OUTREACH PRESENTATIONS

2018 Invited MSU Microbiology & Molecular Genetics graduate student workshop speaker *Educational and Outreach Activities*
2017 MSU KBS K-12 Partnership Fall Workshop. A Sense of Place: Science in your School Yard. *A Classroom Activity Simulating Population-Level Evolution by Hand*
2017 MSU Undergraduate Honors Seminar speaker. *Why are phylogenies important?*
2017 MSU FAST Fellows program speaker. *Classroom Activity: Trait Evolution in a Bird Population.*
2015 Think Evolution VII: Summer Institute for Science Educators sponsored by the University of California Museum of Paleontology. *The Gecko Adhesive System: how it works and how it evolved*

EDUCATION AND OUTREACH TRAINING INVOLVEMENT

2018 2nd annual BEACON STEM Public Engagement workshop co-organizer
2017 Calibrated as a Reformed Teaching Observation Protocol (RTOP) instrument observer scoring student-driven, active learning classrooms
2017 BEACON Congress Sandbox co-organizer. *Build a Frame: Matching the scientific context to the audience* and *Bridging the gap between STEM and public policy*
2017 Undergrad Diversity at Evolution professional development workshop co-organizer
2016 Postdoctoral Teaching Scholar. Completed the Pathways to Scientific Teaching course. MSU PLB 802
2017 BEACON workshop co-organizer. *Prepare to engage: build your own public engagement experience*
2016 BEACON Congress Sandbox co-organizer. *An integrative approach to public engagement: Building an evidence-based framework within BEACON*

PUBLIC ENGAGEMENT PROGRAMS AND ACTIVITIES

2018 Organized activity booth volunteers and participated in a science night at Mississippi middle school
2018 Organized activity booth volunteers and participated in science nights at five local Michigan elementary schools and the the MSU Expo Zone Science Festival
2018 "Skype a Scientist" talking to multiple K-12 classes
2018 Banana Poka RoundUp forest education fair booth presenter. Kokee State Park, Kauaʻi, Hawai'i
2018 Darwin Day Roadshow organizer and speaker, coordinating scientist visits to eight US middle and high schools in Florida (1), California (1), Texas (1), and Michigan (5)
2017 Darwin Day Roadshow program co-organizer
2017 Organized activity booth volunteers and participated in science nights at seven local Michigan elementary schools, the MSU Museum Darwin Discovery Day, and MSU Science Festival events
2017 SACNAS conference undergraduate ecology/evolution field trip co-organizer
2016 Children's activity volunteer at six local Michigan elementary schools and the MSU Science Festival
2011, 2015 Children's activities volunteer at Palouse-Clearwater Environmental Institute "Animals of the Night"
2015 NESCent Darwin Day Roadshow presenter. 150 10th grade Lewiston high school students attended
2013 Volunteered with children's activities at University of Idaho's "Save the Frogs Day"
2012 Volunteered with children's activities at Palouse Discovery Science Center's "Radical Reptile Rally"
2010 Presented live animal demonstrations at Gig Harbor Academy elementary (pre K-5th grade)