

Michael Tobler

Division of Biology, Kansas State University
 116 Ackert Hall, Manhattan, KS 66506, USA
 Phone: 785-532-6615 • Fax: 785-532-6653 • Email: tobler@ksu.edu
 Web: <http://www.sulfide-life.info/mtobler/>

RESEARCH INTERESTS

Evolutionary ecology with particular emphasis on the interplay between phenotypic evolution, adaptation, and speciation, integrating processes across multiple levels of organization (from genomes to ecosystems), fish biology and extreme environments, as well as H₂S biology.

ACADEMIC EDUCATION

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| 2008 | Dr. Sci. Nat., University of Zürich, Institute of Zoology
Advisors: Ingo Schlupp and Heinz-Ulrich Reyer
Dissertation: The evolutionary ecology of <i>Poecilia mexicana</i> in the Cueva del Azufre system: effects of abiotic and biotic environmental conditions |
| 2004 | Diploma, Swiss Federal Institute of Technology Zürich (ETH), Department of Biology
Advisors: Ingo Schlupp and Paul Schmid-Hempel
Thesis: Sex and parasites in a gynogenetic mating complex |
| 2000-2004 | Studies of Biological Sciences at the Swiss Federal Institute of Technology Zürich (ETH) and the University of Zürich with focus on behavior, ecology, and evolution. |

PROFESSIONAL APPOINTMENTS

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| 2017-present | Associate Professor, Division of Biology, Kansas State University |
| 2014-2017 | Assistant Professor, Division of Biology, Kansas State University |
| 2010-2014 | Assistant Professor, Department of Zoology, Oklahoma State University |
| 2008-2010 | Swiss National Science Foundation Postdoctoral Research Fellow, Department of Wildlife and Fisheries Sciences & Department of Biology, Texas A&M University |
| 2008-2009 | Lecturer, Department of Wildlife and Fisheries Sciences, Texas A&M University |
| 2006-2007 | Research Assistant for the Tar Creek EPA Superfund Project, Department of Zoology, University of Oklahoma |
| 2005-2007 | Affiliated Research Scholar, Department of Zoology, University of Oklahoma |

HONORS AND AWARDS

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| 2014 | Golden Torch Award in recognition of undergraduate teaching, Achafoa chapter of Mortar Board |
| 2013 | Margret S. Ewing Outstanding Mentor Award, OSU Zoology Graduate Student Society |
| 2013 | International Sigma Xi Young Investigator Award |
| 2012 | Young Investigator Award of Sigma Xi's OSU chapter |
| 2010 | Presentation Award of the Texas Chapter of the American Fisheries |
| 2009 | FIRST IV Scholar funded by the National Science Foundation (PI: D. Ebert-May; Co-PI: T. Derting): Professional development program for teaching and learning in undergraduate biology. |
| 2007 | Stoye Award of the American Society of Ichthyologists and Herpetologists. |

2004 Willi Studer Award of the Swiss Federal Institute of Technology Zürich (ETH).

RESEARCH GRANTS, SCHOLARSHIPS, AND FELLOWSHIPS

- 2016-2018 K-State Center for Engagement and Community Development, Engagement Incentive Grant (PI: Tobler, co-PIs: J. Bixby, N. Wade): Developing Capacities in Science Communication and Community Engagement. \$9,926.
- 2016-2017 National Science Foundation, Integrative Organismal Systems, REU-Supplement (PI: Tobler): Physiological adaptation to extreme environments: genes, function, and evolutionary patterns. \$6,000.
- 2016-2017 Department of Defense, Defense University Research Instrumentation Program (PI: Tobler): An integrated laboratory system for the study of physiological effects and processing of hydrogen sulfide. \$127,060.
- 2016-2019 National Science Foundation, Integrative Organismal Systems (PI: Tobler, co-PIs: J. L. Kelley, J. Shaw): Physiological adaptation to extreme environments: genes, function, and evolutionary patterns. \$828,400.
- 2015-2018 Army Research Office (PI: Tobler; co-PI: J. L. Kelley): A comparative approach to understanding the physiological effects and processing of hydrogen sulfide. \$389,240.
- 2015-2016 K-INBRE Postdoctoral Program (PI: Culumber; co-PI: Tobler): Molecular pathways mediating responses to toxic hydrogen sulfide exposure. \$37,440.
- 2015-2016 The Mohamed bin Zayed Species Conservation Fund (PI: Tobler; co-PI: Z. Culumber): Conservation of endangered evolutionary model systems inhabiting extreme environments. \$12,000.
- 2013-2015 National Science Foundation, Integrative Organismal Systems, REU-Supplements (PI: Tobler): Replicated ecological speciation in extreme habitats: patterns, mechanisms, and consequences of multi-trait divergence. \$12,000.
- 2011-2015 National Science Foundation, Integrative Organismal Systems (PI: Tobler; co-author: J. Kelley): Replicated ecological speciation in extreme habitats: patterns, mechanisms, and consequences of multi-trait divergence. \$481,000.
- 2011-2012 Ralph E. Powe Junior Faculty Enhancement Award from Oak Ridge Associated Universities (ORAU) (PI: Tobler): Metabolic rates and transcriptomics in sulfide spring fish. \$10,000.
- 2011-2014 Oklahoma Department of Wildlife Conservation, State Wildlife Grant (PI: Tobler; Co-PI: R. Morehouse): Determining factors affecting the distribution of endangered fish and crayfish species with emphasis on the Ozark region in Northeastern Oklahoma. \$99,900.
- 2011-2014 Oklahoma Department of Wildlife Conservation, State Wildlife Grant (PI: S. Brewer; Co-PI: Tobler): The impacts of flow alterations to crayfishes in southeastern Oklahoma, with an emphasis on the Mena crayfish (*Orconectes menae*). \$93,700.
- 2010-2011 Texas Sea Grant (Co-PIs: L. Fitzgerald & H. Prestridge): Morphological variation in Texas fish communities. \$9,000.
- 2010-2011 National Geographic Society (PI: Tobler): Living in extreme environments - ecology, evolution, and conservation of sulfide fishes. \$14,800.
- 2008-2010 Swiss National Science Foundation (Postdoctoral Fellowship): Evolutionary consequences of extreme environmental conditions: Is living in sulfidic habitats causing speciation in *Poecilia mexicana*? \$79,000.
- 2007 Jordan Research Fund of the American Cichlids Association (PI: Tobler): The

- evolutionary ecology of two distinct morphotypes of *Archocentrus nigrofasciatus* in northeastern Honduras. \$2,300.
- 2007 Wolfermann Nägeli Foundation (Graduate Fellowship): MHC genes, parasites, and sex in a gynogenetic mating complex. \$20,500.
- 2007 Janggen Poehn Foundation (Graduate Fellowship): MHC genes, parasites, and sex in a gynogenetic mating complex. \$34,500.
- 2006 Vern Perish Fund of the American Livebearer Association (PI: Tobler): Darkness and hydrogen sulfide – adaptations of extremophile poeciliids from southern Mexico. \$1,000.
- 2006 Theodore Roosevelt Memorial Fund of the American Museum of Natural History (PI: Tobler): MHC genes, sex, and parasites in a gynogenetic complex of fish (*Poecilia*, Poeciliidae). \$1,100.
- 2006 German Ichthyological Association (Germany; PI: Tobler, Co-PI: M. Plath): The ichthyofauna of sulfidic habitats in southern Mexico. \$2,100.
- 2006 Wolfermann Nägeli Foundation (Graduate Fellowship): MHC genes, parasites, and sex in a gynogenetic mating complex. \$36,500.
- 2005 Basler Foundation for Biological Research (Graduate Fellowship): MHC genes, parasites, and sex in a gynogenetic mating complex. \$9,000.
- 2005 Janggen Poehn Foundation (Graduate Fellowship): MHC genes, parasites, and sex in a gynogenetic mating complex. \$18,000.
- 2005 Roche Research Foundation (Graduate Fellowship): Sex and parasites. \$23,000.
- 2004 Barth Foundation (PI: Tobler): Black spots and female association preferences in a sexual/ asexual mating complex. \$750.
- 2003 Society for Natural Sciences St. Gallen (PI: Tobler): Sex and parasites in gynogenetic fishes. \$500.
- 2003 Swiss Academy of Sciences (PI: Tobler): Sex and parasites in gynogenetic poeciliid fishes. \$1,800.
- 2003 Barth Foundation (PI: Tobler): Sex and parasites in gynogenetic fishes. \$900.

EDITED BOOK

1. Riesch, R., **M. Tobler** & M. Plath (eds.) (2015): Extremophile Fishes: Ecology, Evolution, and Physiology of Teleosts in Extreme Environments. Springer, Heidelberg.

PEER-REVIEWED PUBLICATIONS: JOURNAL ARTICLES AND BOOK CHAPTERS

* denote graduate and ** undergraduate student co-authors directly supervised by MT

Accepted or In Press

112. Culumber, Z. W. & **M. Tobler** (accepted): Sex-specific evolution during the diversification of livebearing fishes. *Nature Ecology & Evolution*.
111. Husemann, M., **M. Tobler**, C. McCauley, B. Ding & P. D. Danley (accepted): Body shape differences in a pair of closely related Malawi cichlids and their hybrids: effects of genetic variation, phenotypic plasticity, and transgressive segregation. *Ecology and Evolution*.
110. Bagley, J. C., W. Matamoros, C. McMahan, **M. Tobler**, P. Chakrabarty & J. B. Johnson (in press): Phylogeography and species delimitation in convict cichlids (Cichlidae: *Amatitlania*): implications for taxonomy and Plio–Pleistocene evolutionary history in Central America. *Biological Journal of the Linnean Society*.

2017

109. Voelker, G., **M. Tobler**, H. L. Prestridge, E. Duijm, D. Groenenberg, M. R. Hutchinson, A. D. Martin, A. Nieman, C. S. Roselaar & J. W. Huntley (2017): Three new species of *Stiphornis* Forest Robins (Aves: Muscicapidae) from the Afro-tropics with a molecular phylogenetic assessment of the genus. *Systematics and Biodiversity* 15 (2): 87-104.
Featured by *Science Daily* and various international online and print media.
108. Hopper, G.* , R. L. Morehouse* & **M. Tobler** (2017): Body shape variation in two species of darters (*Etheostoma*, Percidae) and its relation to the environment. *Ecology of Freshwater Fish* 26 (1): 4-18.

2016

107. **Tobler, M.** & Z. W. Culumber (2016): Perspective: Swimming in polluted waters. *Science* 354 (6317): 1232-1233.
Featured by the *New York Times*.
106. Culumber, Z. W., G. W. Hopper*, N. Barts*, C. N. Passow*, S. Morgan**, A. Brown, L. Arias-Rodriguez & **M. Tobler** (2016): Habitat use of two extremophile, highly endemic, and critically endangered fish species (*Gambusia eurystoma* and *Poecilia sulphuraria*; Poeciliidae). *Aquatic Conservation - Marine and Freshwater Ecosystems* 26 (6): 1155-1167.
105. Greenway, R.* , S. Drexler**, L. Arias-Rodriguez & **M. Tobler** (2016): Adaptive, but not condition-dependent, body shape differences contribute to assortative mating during ecological speciation. *Evolution* 70 (12): 2809-2822.
Featured by *Evolution Digests*.
104. **Tobler, M.**, C. N. Passow*, R. Greenway*, J. L. Kelley & J. H. Shaw (2016): The evolutionary ecology of animals inhabiting hydrogen sulfide rich environments. *Annual Review of Ecology, Evolution, and Systematics* 47: 239-262.
103. Schulz-Mirbach, T., C. Eifert, R. Riesch, M. Farnworth, C. Zimmer, D. Bierbach, S. Klaus, **M. Tobler**, B. Streit, J. R. Indy, L. Arias-Rodriguez & M. Plath (2016): Toxic hydrogen sulphide shapes brain anatomy: a comparative study of sulphide-adapted ecotypes in the *Poecilia mexicana* complex. *Journal of Zoology (London)* 300: 163-176.
102. Palacios, M.* , G. Voelker, L. Arias-Rodriguez, M. Mateos & **M. Tobler** (2016): Phylogenetic analyses of the subgenus *Mollienesia* (*Poecilia*, Poeciliidae, Teleostei) reveal taxonomic inconsistencies, cryptic biodiversity, and spatio-temporal aspects of diversification in Middle America. *Molecular Phylogenetics and Evolution* 103 (10): 230-244.
101. Riesch, R. R., **M. Tobler**, H. Lerp, J. Jourdan, T. Dumas*, P. Nosil, R. B. Langerhans & M. Plath (2016): Extremophile Poeciliidae: multivariate insights into the complexity of speciation along replicated ecological gradients. *BMC Evolutionary Biology* 16: 136.
100. Fitzgerald, D. B., **M. Tobler** & K. O. Winemiller (2016): From richer to poorer: successful invasion by freshwater fishes depends on species richness of donor and recipient basins. *Global Change Biology* 22 (7): 2440-2450.
99. Kelley, J. L., L. Arias-Rodriguez, D. Patocsil Martin, M.-C. Yee, C. Bustamante & **M. Tobler** (2016): Mechanisms underlying adaptation to life in hydrogen sulfide rich environments. *Molecular Biology and Evolution* 33 (6): 1419-1434.
Featured by *MBE News*, *Scientific American*, and various international online and print media.
98. Hopper, G. W.* & **M. Tobler** (2016): Patterns of trophic resource use and individual specialization in two species of darters (*Etheostoma*: Percidae). *Evolutionary Ecology Research* 17 (1): 53-73.

97. Culumber, Z. W. & **M. Tobler** (2016): Ecological divergence and conservatism: spatiotemporal patterns of niche evolution in a genus of livebearing fishes (Poeciliidae: *Xiphophorus*). *BMC Evolutionary Biology* 16: 44.
96. Culumber, Z. W. & **M. Tobler** (2016): Spatiotemporal environmental heterogeneity and the maintenance of the tailspot polymorphism in the variable platyfish (*Xiphophorus variatus*). *Evolution* 70 (2): 408-419.
95. **Tobler, M.**, D. M. Alba*, L. Arias-Rodriguez & P. D. Jeyasingh (2016): Using replicated evolution in extremophile fish to understand diversification in elemental composition and nutrient excretion. *Freshwater Biology* 61 (1): 158-171.

2015

94. Passow, C. N.*, R. Greenway**, L. Arias-Rodriguez, P. D. Jeyasingh & M. Tobler (2015): Reduction of energetic demands through modification of body size and routine metabolic rates in extremophile fish. *Physiological and Biochemical Zoology* 88 (4): 371-383.
93. **Tobler, M.**, K. Scharnweber*, R. Greenway**, C. N. Passow*, L. Arias-Rodriguez & F. J. Garcia-De-Leon (2015): Convergent changes in the trophic ecology of extremophile fish occurring along replicated environmental gradients. *Freshwater Biology* 60 (4): 768-780.
92. **Tobler, M.**, R. Riesch & M. Plath (2015): Extremophile fishes: an integrative synthesis. In: R. Riesch, M. Tobler & M. Plath (eds.): *Extremophile Fishes: Ecology, Evolution, and Physiology of Teleosts in Extreme Environments*. Springer, Heidelberg: 279-296
91. Riesch, R., **M. Tobler** & M. Plath (2015): Hydrogen sulfide-toxic habitats. In: R. Riesch, M. Tobler & M. Plath (eds.): *Extremophile Fishes: Ecology, Evolution, and Physiology of Teleosts in Extreme Environments*. Springer, Heidelberg: 137-159.
90. Plath, M., **M. Tobler** & R. Riesch (2015): Extremophile fishes: an introduction. In: R. Riesch, M. Tobler & M. Plath (eds.): *Extremophile Fishes: Ecology, Evolution, and Physiology of Teleosts in Extreme Environments*. Springer, Heidelberg: 1-7.
89. Culumber, Z. W., M. Schumer, S. Monks & **M. Tobler** (2015): Environmental heterogeneity generates opposite gene-by-environment interactions for two fitness-related traits within a population. *Evolution* 69 (2): 541-550.
88. Eifert, C., M. Farnworth, T. Schulz-Mirbach, R. Riesch, D. Bierbach, S. Klaus, A. Wurster, **M. Tobler**, B. Streit, J. R. Indy, L. Arias-Rodriguez & M. Plath (2015): Brain size variation in extremophile fish: local adaptation vs. phenotypic plasticity. *Journal of Zoology (London)* 295 (2): 143-153.

2014

87. Greenway, R.**, L. Arias-Rodriguez, P. Diaz & **M. Tobler** (2014): Patterns of macroinvertebrate and fish diversity in freshwater sulphide springs. *Diversity* 6 (3): 597-632.
86. Sanchez, J. L., B. B. Boutwel, S. T. Hamontree, G. P. Garrett, R. H. Lewis, A. N. Ragan, **M. Tobler** & R. Deaton Haynes (2014): Reproductive characteristics of two *Gambusia* congeners in west Texas. *Southwestern Naturalist* 59 (3): 438-441.
85. Culumber, Z. W., C. E. Bautista-Hernandez, S. Monk, L. Arias-Rodriguez & M. Tobler (2014): Variation in melanism and female preference in proximate but ecologically distinct environments. *Ethology* 120 (11): 1090-1100.
84. Morehouse, R. L.* & **M. Tobler** (2014): Striped Shiner (*Luxilus chrysocephalus* Rafinesque 1820). In: D. A. Distler, M. E. Eberle, D. R. Edds, K. B. Gido, S. G. Haslouer, D. G. Huggins, T. D. Mosher, W. J. Stark, J. R. Tomelleri, J. R. Triplett & E. O. Wiley (eds.): *Kansas Fishes*. University Press of Kansas, Lawrence, KS, USA: 171-172.

83. Alberici da Barbiano, L., R. J. Robinson, **M. Tobler**, A. S. Aspbury & C. R. Gabor (2014): Differences in resource assimilation between the unisexual Amazon molly, *Poecilia formosa* (Poeciliidae) and its sexual host (*Poecilia latipinna*). *Environmental Biology of Fishes* 97 (8): 875-880.
82. **Tobler, M.**, C. Henpita, B. Bassett**, J. L. Kelley & J. H. Shaw (2014): H₂S exposure elicits differential expression of candidate genes in fish adapted to sulfidic and non-sulfidic environments. *Comparative Biochemistry and Physiology A: Molecular & Integrative Physiology* 175: 7-14.
81. Pfenninger, M., H. Lerp, **M. Tobler**, C. Passow*, J. L. Kelley, E. Funke, B. Greshake, U. K. Erkoç, T. Berberich & M. Plath (2014): Parallel evolution of cox-genes in H₂S-tolerant fish as key adaptation to a toxic environment. *Nature Communications* 5: 3873.
80. **Tobler, M.**, M. Plath, R. Riesch, I. Schlupp, A. Grasse, G. Munimanda, C. Setzer, D. J. Penn & Y. Moodley (2014): Selection from parasites favors immunogenetic diversity but not divergence among locally adapted host populations. *Journal of Evolutionary Biology* 27 (5): 960-974.
79. Husemann, M., **M. Tobler**, C. McCauley, B. Ding & P. D. Danley (2014): Evolution of body shape in differently colored sympatric congeners and allopatric populations of Lake Malawi's rock-dwelling cichlids. *Journal of Evolutionary Biology* 27 (5): 826-839.
78. Jeyasingh, P. D., R. D. Cothran & **M. Tobler** (2014): Testing the ecological consequences of evolutionary change using elements. *Ecology and Evolution* 4 (4): 528-538.
77. **Tobler, M.** & N. Bertrand* (2014): Morphological variation in vanishing Mexican desert fishes of the genus *Characodon* (Goodeidae). *Journal of Fish Biology* 84 (2): 283-296.
76. Riesch, R. W., M. Plath, I. Schlupp, **M. Tobler** & B. Langerhans (2014): Colonization of toxic environments drives predictable life-history evolution in livebearing fishes (Poeciliidae). *Ecology Letters* 17 (1): 65-71.
Featured in the Research Highlights of *Nature* and *Evolutionary Applications*

2013

75. Morehouse, R. L.*, M. Papes & **M. Tobler** (2013): Predicting and mapping the potential distribution of the painted devil crayfish, *Cambarus ludovicianus* Faxon (Decapoda: Cambaridae). *Southwestern Naturalist* 58 (4): 435-439.
74. **Tobler, M.**, K. Roach, K. O. Winemiller, R. L. Morehouse* & M. Plath (2013): Population structure, habitat use, and diet of giant waterbugs in a sulfidic cave. *Southwestern Naturalist* 58 (4): 420-426.
73. Morehouse, R. L. & **M. Tobler** (2013): Crayfishes (Decapoda: Cambaridae) of Oklahoma: identification, distributions, and natural history. *Zootaxa* 3717 (2): 101-157.
72. Plath, M., M. Pfenninger, H. Lerp, R. Riesch, C. Eschenbrenner, P.A. Slattery, D. Bierbach, N. Herrmann, M. Schulte, L. Arias Rodriguez, J.R. Indy, C. Passow* & **M. Tobler** (2013): Genetic differentiation and selection against migrants in evolutionarily replicated extreme environments. *Evolution* 67 (9): 2647-2661.
71. Palacios, M.*, L. Arias-Rodriguez, M. Plath, C. Eifert, H. Lerp, A. Lamboj, G. Voelker & **M. Tobler** (2013): The rediscovery of a long described species reveals additional complexity in speciation patterns of poeciliid fishes in sulfide springs. *PLOS ONE* 8 (8): e71069.
70. Franssen, N.R. & **M. Tobler** (2013): Upstream effects of a reservoir on fish assemblages 45 years following impoundment. *Journal of Fish Biology* 82 (5): 1659-1670.
69. Morehouse, R.* & **M. Tobler** (2013): Invasion of rusty crayfish (*Orconectes rusticus*) in the United States: niche shifts and potential future distribution. *Journal of Crustacean Biology* 33 (2): 293-300.

2012

68. Kelley, J. L., C. N. Passow*, M. Plath, L. Arias Rodriguez, M.-C. Yee & **M. Tobler** (2012): Genomic resources for a model in adaptation and speciation research: characterization of the *Poecilia mexicana* transcriptome. *BMC Genomics* 13: 652.
67. Slattery, P., C. Eschenbrenner, L. Arias-Rodriguez, B. Streit, D. Bierbach, R. Riesch, **M. Tobler**, M. Pfenniger, B. Feldmeyer, M. Plath & H. Lerp (2012): Twelve new microsatellite loci for the sulphur molly (*Poecilia sulphuraria*) and the related Atlantic molly (*P. mexicana*). *Conservation Genetics Resources* 4 (4): 935-937.
66. Culumber, Z. W., D. B. Shepard, S. W. Coleman, G. G. Rosenthal & **M. Tobler** (2012): Physiological adaptation along environmental gradients and replicated hybrid zone structure in swordtails (Teleostei: *Xiphophorus*). *Journal of Evolutionary Biology* 25 (9): 1800-1814.
65. Carson, E. W., **M. Tobler**, W. L. Minckley, R. J. Ainsworth & T. E. Dowling (2012): Relationships between spatio-temporal environmental and genetic variation reveal an important influence of exogenous selection in a pupfish hybrid zone. *Molecular Ecology* 21 (5): 1209-1222.

2011

64. Scharnweber, K.*, M. Plath & **M. Tobler** (2011): Trophic niche segregation between the sexes of two species of livebearing fishes (Poeciliidae). *Bulletin of Fish Biology* 13 (1/2): 11-20.
63. Scharnweber, K.*, M. Plath, K. Winemiller & **M. Tobler** (2011): Dietary niche overlap in sympatric asexual and sexual livebearing fishes (*Poecilia* spp.). *Journal of Fish Biology* 79 (7): 1760-1773.
62. **Tobler, M.** & L. Hastings** (2011): Convergent patterns of body shape differentiation in four different clades of poeciliid fishes inhabiting sulfide springs. *Evolutionary Biology* 38 (4): 412-421.
61. Roach, K., **M. Tobler** & K.O. Winemiller (2011): Hydrogen sulfide, bacteria, and fish: a unique, subterranean food chain. *Ecology* 92 (11): 2056-2062.
Featured by the *Texas Farm Bureau Radio Show* and various international online media
60. Scharnweber, K.*, M. Plath & **M. Tobler** (2011): Examination of boldness traits in sexual and asexual mollies (*Poecilia latipinna*, *P. formosa*). *Acta Ethologica* 14 (2): 77-83.
59. **Tobler, M.**, M. Palacios*, L. J. Chapman, I. Mitrofanov, D. Bierbach, M. Plath, L. Arias-Rodriguez, F. J. Garcia de Leon & M. Mateos (2011): Evolution in extreme environments: replicated phenotypic differentiation in livebearing fish inhabiting sulfidic springs. *Evolution* 65 (8): 2213-2228.
58. Bierbach, D., M. Schulte, N. Herrmann, **M. Tobler**, S. Stadler, C.T. Jung, B. Kunkel, R. Riesch, S. Klaus, M. Ziege, J. Rimber Indy, L. Arias-Rodriguez & M. Plath (2011): Predator-induced changes of female mating preferences: innate and experiential effects. *BMC Evolutionary Biology* 11: 190.
57. **Tobler, M.**, I. Schlupp & M. Plath (2011): Female feeding time reductions in the presence of males: sexual harassment or costly female choice? *Behavioral Ecology* 22 (4): 723-729.
56. Plath, M., R. Riesch, Z.W. Culumber, B. Streit & **M. Tobler** (2011): Predation by a giant water bug (*Belostoma* sp.) on a cavefish (*Poecilia mexicana*): effects of female body size and gestational state. *Evolutionary Ecology Research* 13: 133-144.
55. Franssen, N.R., **M. Tobler** & K.B. Gido (2011): Annual variation of community biomass is lower in more diverse stream fish communities. *Oikos* 120 (4): 582-590.
54. **Tobler, M.**, Z.W. Culumber, M. Plath, K.O. Winemiller & G.G. Rosenthal (2011): An indigenous religious ritual selects for resistance to a toxicant in a livebearing fish. *Biology Letters* 7 (2): 229-232.

Listed among the most read articles in *Biology Letters*; featured by the *AAAS Science Update* podcast, *The Lob Down on Science* podcast, *Smithsonian Magazine*, *MSNBC*, *Fox News*, *Yahoo*, *Livescience.com*, *New Scientist*, *Science Daily*, *Discover Magazine*, *Scienceblog.com*, *Archaeology Magazine*, *The Daily O'Collegian*, and various international online and print media.

53. **Tobler, M.** & M. Plath (2011): Living in extreme environments. In: J. Evans, A. Pilastro & I. Schlupp (eds.): *Ecology and Evolution of Poeciliid Fishes*. Chicago University Press, Chicago, IL, USA: 120-127.
52. Scharnweber, K.*, M. Plath & **M. Tobler** (2011): Feeding efficiency and food competition in coexisting sexual and asexual livebearing fishes of the genus *Poecilia*. *Environmental Biology of Fishes* 90 (2): 197-205.
51. Culumber, Z.W., H.S. Fisher, **M. Tobler**, M. Mateos, P.H. Barber, M.D. Sorenson & G.G. Rosenthal (2011): Replicated hybrid zones of *Xiphophorus* swordtails along an elevational gradient. *Molecular Ecology* 20 (2): 342-356.

2010

50. Ketmaier, V., H. Stuckas, J. Hempel, I. Laneck, **M. Tobler**, M. Plath & R. Tiedemann (2010): Genetic and morphological divergence in the gravel bank grasshopper *Chorthippus pullus* (Acrididae) from contrasting environments. *Organisms Diversity & Evolution* 10 (5): 381-395.
49. Schlupp, I., R. Riesch, **M. Tobler**, M. Plath, J. Parzefall & M. Scharl (2010): A novel, sexually selected trait in poeciliid fishes: female preference for mustache-like, rostral filaments in male *Poecilia sphenops*. *Behavioral Ecology and Sociobiology* 64 (11): 1849-1855.
Featured by *BBC News*, *National Public Radio's "Wait, Wait, Don't Tell Me..."*, and various international online and print media
48. Plath, M., B. Hermann, C. Schröder, R. Riesch, **M. Tobler**, F.J. García de León, I. Schlupp & R. Tiedemann (2010): Catastrophic flood does not lead to loss of small-scale genetic differentiation among locally adapted populations of an extremophile fish (*Poecilia mexicana*, Poeciliidae). *BMC Evolutionary Biology* 10: 256.
47. Voelker, G., R. K. Outlaw, S. Reddy, **M. Tobler**, J. M. Bates, S. J. Hackett, C. Kahindo, B. D. Marks, J. K. Peterhans & T. P. Gnoske (2010): A new species of boubou (Malaconotidae: *Laniarius*) from the Albertine Rift. *The Auk* 127 (3): 678-689.
46. Plath, M., R. Riesch, A. Oranth, J. Dzienko, N. Karau, A. Schiessl, S. Stadler, A. Wigh, C. Zimmer, L. Arias-Rodriguez, I. Schlupp & **M. Tobler** (2010): Complementary effects of natural and sexual selection against immigrants maintains differentiation between locally adapted fish. *Naturwissenschaften* 97 (8): 769-774.
45. **Tobler, M.** & E. W. Carson (2010): Environmental variation, hybridization, and phenotypic diversification in Cuatro Ciénegas pupfishes. *Journal of Evolutionary Biology* 23 (7): 1475-1489.
44. Schlupp, I., A. Taebel-Hellwig & **M. Tobler** (2010): Equal fecundity in asexual and sexual mollies (*Poecilia*). *Environmental Biology of Fishes* 88 (2): 201-206.
43. **Tobler, M.** & I. Schlupp (2010): Differential susceptibility to food stress in neonates of sexual and asexual mollies (*Poecilia*, Poeciliidae). *Evolutionary Ecology* 24 (1): 39-47.
42. **Tobler, M.**, S. W. Coleman, B. D. Perkins & G. G. Rosenthal (2010): Reduced opsin gene expression in a cave-dwelling fish. *Biology Letters* 6 (1): 98-101.
41. Plath, M. & **M. Tobler** (2010): Subterranean fishes of Mexico (*Poecilia mexicana*, Poeciliidae). In: E. Trajano, M. E. Bichuette & B. G. Kapoor (eds.): *The Biology of Subterranean Fishes*. Science Publishers, Enfield, NH, USA: 283-332.

2009

40. **Tobler, M.**, R. Riesch, C. M. Tobler, T. Schulz-Mirbach & M. Plath (2009): Natural and sexual selection against immigrants maintains differentiation among micro-allopatric populations. *Journal of Evolutionary Biology* 22 (11): 2298-2304.
39. Fontanier, M. E.** & **M. Tobler** (2009): A morphological gradient revisited: cave mollies vary not only in eye size. *Environmental Biology of Fishes* 86 (2): 285-292.
38. **Tobler, M.**, R. Riesch, C. M. Tobler & M. Plath (2009): Compensatory behavior in response to sulfide-induced hypoxia affects time budgets, feeding efficiency, and predation risk. *Evolutionary Ecology Research* 11 (3): 935-948.
37. **Tobler, M.** & M. Plath (2009): Threatened fishes of the world: *Poecilia sulphuraria* (Alvarez, 1948) (Poeciliidae). *Environmental Biology of Fishes* 85 (4): 333-334.
36. **Tobler, M.** (2009): Does a predatory insect contribute to the divergence between cave- and surface-adapted fish populations? *Biology Letters* 5 (4): 506-509.
Featured in *Science Magazine*, *Spektrum der Wissenschaft*, and various international online and print media
35. **Tobler, M.** & M. Plath (2009): Threatened fishes of the world: *Gambusia eurystoma* Miller, 1975 (Poeciliidae). *Environmental Biology of Fishes* 85 (3): 251.
34. **Tobler, M.** & I. Schlupp (2009): Threatened fishes of the world: *Poecilia latipunctata* Meek, 1904 (Poeciliidae). *Environmental Biology of Fishes* 85 (1): 31-32.
33. Riesch, R., **M. Tobler**, M. Plath & I. Schlupp (2009): Offspring number in a livebearing fish (*Poecilia mexicana*, Poeciliidae): reduced fecundity and reduced plasticity in a population of cave mollies. *Environmental Biology of Fishes* 84 (1): 89-94.

2008

32. Plath, M., **M. Tobler**, O. Klawonn & J. Parzefall (2008): Male mating behavior and sexual harassment in population hybrids of cave and surface dwelling Atlantic mollies (*Poecilia mexicana*, Poeciliidae). *Bulletin of Fish Biology* 10 (1/2): 69-80.
31. Schaschl, H., **M. Tobler**, M. Plath, D. J. Penn & I. Schlupp (2008): Polymorphic MHC loci in an asexual fish, the Amazon molly (*Poecilia formosa*; Poeciliidae). *Molecular Ecology* 17 (24): 5220-5230.
30. Franssen, C. M., **M. Tobler**, R. Riesch, F. J. García de León, R. Tiedemann, I. Schlupp & M. Plath (2008): Sperm production in an extremophile fish, the cave molly (*Poecilia mexicana*, Poeciliidae, Teleostei). *Aquatic Ecology* 42 (4): 685-692.
29. **Tobler, M.** (2008): Divergence in trophic ecology characterizes colonization of extreme habitats. *Biological Journal of the Linnean Society* 95 (3): 517-528.
28. **Tobler, M.**, T. J. DeWitt, I. Schlupp, F. J. García de León, R. Herrmann, P. G. D. Feulner, R. Tiedemann & M. Plath (2008): Toxic hydrogen sulfide and dark caves: Phenotypic and genetic divergence across two environmental gradients in *Poecilia mexicana*. *Evolution* 62 (10): 2643-2649.
27. **Tobler, M.**, I. Schlupp & M. Plath (2008): Does divergence in female mate choice affect male size distributions in two cave fish populations? *Biology Letters* 4 (5): 452-454.
Featured in *Die Ärztezeitung*, *Biologie in unserer Zeit*, *Scinexx*, *Wallstreet Online*, and various online media.
26. **Tobler, M.** & I. Schlupp (2008): Expanding the horizon: The Red Queen and potential alternatives. *Canadian Journal of Zoology* 86 (8): 765-773.
25. **Tobler, M.**, C. M. Franssen & M. Plath (2008): Male-biased predation on a cavefish by a giant water bug. *Naturwissenschaften* 95 (8): 775-779.
Featured in *BBC Wildlife Magazine*.

24. **Tobler, M.**, R. Riesch, F. J. García de León, I. Schlupp & M. Plath (2008): A new and morphologically distinct cavernicolous population of *Poecilia mexicana* (Poeciliidae, Teleostei). *Environmental Biology of Fishes* 82 (1): 101-108.
23. **Tobler, M.**, R. Riesch, F. J. García de León, I. Schlupp & M. Plath (2008): Two endemic and endangered fishes, *Poecilia sulphuraria* and *Gambusia eurystoma* (Poeciliidae, Teleostei), as only survivors in a small sulfidic habitat. *Journal of Fish Biology* 72 (3): 523-533.
Featured in *Practical Fish Keeping Magazine* and *The Aquarologist*.
22. **Tobler, M.** & I. Schlupp (2008): Influence of black spot disease on shoaling behaviour in female western mosquitofish, *Gambusia affinis* (Poeciliidae, Teleostei). *Environmental Biology of Fishes* 81 (1): 29-34.

2007

21. Plath, M., **M. Tobler**, R. Riesch, F. J. García de León, O. Giere & I. Schlupp (2007): Survival in an extreme habitat: the role of behavior and energy limitation. *Naturwissenschaften* 94 (12): 991-996.
20. **Tobler, M.**, I. Schlupp & M. Plath (2007): Predation of a cave fish (*Poecilia mexicana*, Poeciliidae) by a giant water-bug (*Belostoma*, Belostomatidae) in a Mexican sulfur cave. *Ecological Entomology* 32 (5): 492-495.
19. Parzefall, J., C. Kraus, **M. Tobler** & M. Plath (2007): Photophilic behaviour in a cave fish, *Poecilia mexicana* (Poeciliidae). *Journal of Fish Biology* 71 (4): 1225-1231.
18. Plath, M. & **M. Tobler** (2007): Sex recognition in surface- and cave-dwelling Atlantic molly females (*Poecilia mexicana*, Poeciliidae, Teleostei): influence of visual and non-visual cues. *Acta Ethologica* 10 (2): 81-88.
17. **Tobler, M.** (2007): Reversed sexual dimorphism and female courtship in the Topaz cichlid, *Archocentrus myrmae* (Cichlidae, Teleostei), from Costa Rica. *Southwestern Naturalist* 52 (3): 371-377.
16. Schlupp, I., R. Riesch & **M. Tobler** (2007): Quick guide—Amazon mollies. *Current Biology* 17 (14): R536-R537.
15. Plath, M., A. M. Makowicz, I. Schlupp & **M. Tobler** (2007): Sexual harassment in livebearing fishes (Poeciliidae): comparing courting and non-courting species. *Behavioral Ecology* 18 (4): 680-688.
14. **Tobler, M.**, I. Schlupp, F. J. García de León, M. Glaubrecht & M. Plath (2007): Extreme habitats as refuge from parasite infections? Evidence from an extremophile fish. *Acta Oecologica* 31 (3): 270-275.
13. Plath, M., S. Hauswaldt, K. Moll, **M. Tobler**, F. J. García de León, I. Schlupp & R. Tiedemann (2007): Local adaptation and pronounced genetic differentiation in an extremophile fish, *Poecilia mexicana*, inhabiting a Mexican cave with toxic hydrogen sulfide. *Molecular Ecology* 16 (5): 967-976.

2006

12. **Tobler, M.**, H. Burmeister, I. Schlupp & M. Plath (2006): Regressive evolution of visually mediated preferences in the Cave molly (*Poecilia mexicana*, Poeciliidae, Teleostei). *Subterranean Biology* 4 (1): 59-65.
11. Plath, M. & **M. Tobler** (2006): Coercive mating and genitalia size in two populations of a livebearing toothcarp (*Poecilia mexicana*): do Cave molly males have shorter gonopodia? *Zeitschrift für Fischkunde* 8 (1-2): 103-107.
10. **Tobler, M.** (2006): The eggspots of cichlids: Evolution through sensory exploitation? *Zeitschrift für Fischkunde* 8 (1-2): 39-46.

9. Schlupp, I., J. Poschadel, **M. Tobler** & M. Plath (2006): Male size polymorphism and testis weight in two species of mollies (*Poecilia latipinna*, *P. mexicana*, Poeciliidae, Teleostei). *Zeitschrift für Fischkunde* 8 (1-2): 9-16.
8. **Tobler, M.**, I. Schlupp, K. U. Heubel, R. Riesch, F. J. García de León, O. Giere & M. Plath (2006): Life on the edge: Hydrogen sulfide and the fish communities of a Mexican cave and surrounding waters. *Extremophiles* 10 (6): 577-585.
7. Riesch, R., I. Schlupp, **M. Tobler** & M. Plath (2006): Reduction of the association preference for conspecifics in cave-dwelling Atlantic mollies, *Poecilia mexicana*. *Behavioral Ecology and Sociobiology* 60 (6): 794-802.
6. **Tobler, M.**, M. Plath, H. Burmeister & I. Schlupp (2006): Black spots and female association preferences in a sexual/ asexual mating complex (*Poecilia*, Poeciliidae, Teleostei). *Behavioral Ecology and Sociobiology* 60 (2): 159-165.

2005

5. **Tobler, M.**, K. Wiedemann & M. Plath (2005): Homosexual behaviour in a cavernicolous fish, *Poecilia mexicana* (Poeciliidae, Teleostei). *Zeitschrift für Fischkunde* 7 (2): 95-99.
4. **Tobler, M.**, T. Wahli & I. Schlupp (2005): Comparison of parasite communities in native and introduced populations of sexual and asexual mollies of the genus *Poecilia* (Poeciliidae, Teleostei). *Journal of Fish Biology* 67 (4): 1072-1082.
3. **Tobler, M.** & I. Schlupp (2005): Parasites in sexual and asexual mollies (*Poecilia*, Poeciliidae, Teleostei): A case for the Red Queen? *Biology Letters* 1 (2): 166-168.
2. **Tobler, M.** (2005): Feigning death in the Central American cichlid *Parachromis friedrichsthalii*. *Journal of Fish Biology* 66 (3): 877-881.
Featured in *Science News Magazine*.

2004

1. Plath, M., **M. Tobler** & I. Schlupp (2004): Cave fish looking for mates: A visual mating preference in surface- and cave-dwelling Atlantic mollies (*Poecilia mexicana*, Poeciliidae). *Zeitschrift für Fischkunde* 7 (1): 61-69.

TEACHING EXPERIENCE AND TEACHING EDUCATION

2015-present	Division of Biology, Kansas State University; courses taught: <ul style="list-style-type: none"> • BIOL 201; Organismic Biology • BIOL 542; Ichthyology • BIOL 875; Evolutionary Ecology
2011-2014	Department of Zoology, Oklahoma State University; courses taught: <ul style="list-style-type: none"> • ZOOL 3700/5020; Introduction to Fish Biology • ZOOL 4133; Evolution • ZOOL 5010; Linking Ecology and Evolution (graduate seminar; co-taught with P. Jeyasingh) • ZOOL 5010; Speciation (graduate seminar; co-taught with P. Campbell) • ZOOL 5010; The Flexible Phenotype (graduate seminar; co-taught with P. Jeyasingh)
2009-2010	Participant in FIRST IV, a national dissemination project funded by the National Science Foundation designed to reform undergraduate science education through professional development
2008-2009	Department of Wildlife and Fisheries Sciences, Texas A&M University; courses taught:

- WFSC 311: Introduction to Ichthyology
- 2002-2003 Department of Biology, Swiss Federal Institute of Technology Zürich (ETH);
courses taught:
- Systematic Botany and Plant Ecology (Teaching Assistant)

MENTORSHIP

Post-Doctoral Scholars

- Dr. Zachary Culumber, 2014-2017

Current graduate students

- Henry Camarillo (M.S. student), 2016-date
- Bryan Frenette (Ph.D. student), 2015-date (co-advised with Keith Gido; Kansas State University)
- Nicholas Barts (Ph.D. student), 2015-date
- Ryan Greenway (Ph.D. student), 2014-date

Former graduate students

- Maura Palacios, Ph.D. 2017 (co-advised with Gary Voelker; Texas A&M University). Current position: Lecturer at California State University, Los Angeles.
- Courtney Passow, Ph.D. 2016. Current position: Grand Challenges in Biology Postdoctoral Fellow at the University of Minnesota
- Garrett Hopper, M.S. 2015. Current position: Ph. D. student at Kansas State University
- Danielle Alba, M.S. 2015 (co-advised with Puni Jeyasingh; Oklahoma State University). Current position: Adjunct Faculty at College of Western Idaho
- Tess Doumas, M.S. 2014. Current position: Ph. D. student at the University of Houston
- Reid Morehouse, Ph.D. 2014. Current position: Assistant Professor at Ivy Tech Community College
- Kristin Scharnweber, M.S. 2010 (co-advised with Martin Plath; University of Frankfurt, Germany). Current position: postdoctoral researcher at Uppsala University, Sweden

Graduate committee member

- Lindsey Bruckerhoff, Ph. D. student, 2016-date (KSU, Biology; main advisor: K. Gido)
- Samantha Sharpe, Ph. D. student, 2015-date (KSU, Biology; main advisor: L. Johnson)
- Elsie Shogren, Ph. D. student, 2015-date (KSU, Biology; main advisor: A. Boyle)
- Carly Aulicky, Ph. D. student, 2015-date (KSU, Biology; main advisor: A. Boyle)
- Garrett Hopper, Ph. D. student, 2015-date (KSU, Biology; main advisor: K. Gido)
- Philip Freda, Ph.D. student, 2015-date (KSU, Entomology; main advisors: G. Ragland & T. J. Morgan)
- Ryland Taylor, M.S. student, 2014-date (KSU, Biology; main advisor: M. Mather)
- Chathurika Henpita Ruchirani, 2014-date (OSU, Zoology; main advisor: J. Shaw)
- Megan Trope, Ph. D. student, 2012-date (OSU, Zoology; main advisor: R. Van Den Bussche)
- Lynne Beaty, Ph. D. 2017 (OSU, Zoology; main advisor: B. Luttbeg)
- Casey Pennock, M. S. 2016 (KSU, Biology; main advisor: K. Gido)
- Jared Goos, Ph. D. 2016 (OSU, Zoology; main advisor: P. Jeyasingh)
- Chelsea Baker, M. S. 2015 (OSU, Zoology; main advisor: M. Lovern)
- Ally Loveless, M. S. 2014 (OSU, Zoology; main advisor: M. Papes)

- Christopher Tanner, M. S. 2014 (OSU, NREM; main advisor: J. Long)
- Chris Musselman, M. S. 2014 (OSU, NREM; main advisor: S. Brewer)
- Priyanka Chowdhury, Ph. D. 2014 (OSU, Zoology; main advisor: P. Jeyasingh)
- Joseph Dyer, M. S. 2014 (OSU, NREM; main advisor: S. Brewer)
- Blake Stevison, M. S. 2013 (OSU, Zoology; main advisor: B. Luttbeg)
- Joseph Schmitt, M. S. 2012 (OSU, NREM; main advisor: D. Shoup)

Undergraduate and high school researchers

- Rachel McNemee (2016-date, KSU)
- Gilbert A. Keithline (2016-date, KSU)
- Nichole Nieves (2015-date, KSU)
- Sam Morgan (2015-date, Manhattan High School & KSU); NSF-REU Scholar
- Alexander Okamoto (2016, University of Chicago); NSF-REU Scholar
- Donovan Michael (2016, KSU)
- Shannon Drexler (2015, University of Wisconsin-Platteville); NSF-REU Scholar
- Zeke Gonzalez (2015, University of Maryland); NSF-REU Scholar
- Courtney Saylor (2014-2015, KSU)
- Mattie Bieberly (2014-2015, KSU)
- Brecken Brown (2014, KSU)
- Ryan Greenway (2011-2014, OSU)
- Cierra Keith (2012-2014, OSU)
- Josh Garner (2013-2014, OSU); NSF-URM Scholar
- Shelby Burrige (2013, OSU)
- Daylon Edward (2013, OSU)
- Brandon Bassett (2013, OSU); Fellow of the OSU Center of Veterinary Health Services Summer Research Training Program
- Garrett Hopper (2012-2013, OSU)
- Drew Miller (2011-2013, OSU)
- Emily Laurel (2011-2013, OSU)
- Jennifer Gaither (2012-2013, OSU)
- Tony Balda (2012-2013, OSU)
- Sarah Ball (2012-2013, OSU)
- Alex Williams (2012-2013, OSU)
- Kiara Andrews (2012, OSU)
- Anna Baroni (2011-2012, OSU)
- Jessy Casey (2011, OSU)
- Isabelle Gemmer (2011, University of Landau, Germany); Fellow of the German Academic Exchange Service
- Riva Riley (Harvard University, 2010)
- Logan Hastings (2009-2010, Texas A&M)
- Maxwell Fontanier (2008-2010, Texas A&M)
- Christopher Vaughn (2009, Texas A&M)
- Kelly Gonzales (2009, Texas A&M)

- Colby Crouse (2009, Texas A&M)
- Sarah Richardson (2006-2008, OU)
- Sarah Ali, (2006-2007, OU)
- Naomi Kim (2006-2007, OU)
- Tami Thomason (2005-2006, OU)

ADVISEE ACCOMPLISHMENTS

- 2017 *Nicholas Barts*: K-State Graduate Research, Arts, and Discovery Scholarship (\$500); Graduate Assistance in Areas of National Need (GAANN) Fellowship
- 2016 *Bryan Frenette*: Sunset Zoo Science Communication Scholarship Award; Arts & Sciences Research Travel Scholarship Award (\$400)
- Courtney Passow*: Alvin and RosaLee Sarachek Predoctoral Honors Fellowship in Molecular Biology (\$17,000); Grand Challenges in Biology Postdoctoral Program Fellowship from the University of Minnesota (2016; \$102,000)
- Nicholas Barts*: Travel grant from the K-State Graduate Council (\$500); Reduced registration and housing through the Charlotte Mangum Student Support Program of the Society of Integrative and Comparative Biology
- Nichole Nieves*: College of Arts and Sciences Undergraduate Research Scholarship (\$1,250)
- Ryan Greenway*: Graduate Research Fellowship from the National Science Foundation (\$138,000); Sunset Zoo Science Communication Scholarship Award; Friends of Sunset Zoo Conservation Scholarship (\$2,000); Vern Parish Fund Award of the American Livebearer Association (\$1,000); Theodore Roosevelt Memorial Fund Award from the American Museum of Natural History (\$1,500); James E. Ackert Award for Outstanding Graduate Student Presentation (2016, \$1,000)
- Zachary Culumber*: James K. Langhammer Fund for Conservation Award of the American Livebearer Association (\$1,000)
- 2015 *Courtney Passow*: Scholarship to participate in the 65th Lindau Nobel Laureate Meeting, Lindau, Germany; Dr. Christopher C. Smith Evolutionary Biology Research Award (\$1,000); Sarachek Scientific Travel Award from the K-State Graduate School (\$1,000)
- Mattie Bieberly*: RCI Research Award from KSU's Office of Undergraduate Research & Creative Inquiry; SCITE-sponsored Undergraduate Research Scholarship
- Nicholas Barts*: Arts & Sciences Graduate Student Research Travel Award (\$800)
- Ryan Greenway*: Honorable Mention from the NSF Graduate Research Fellowship Program; Arts & Sciences Graduate Student Research Travel Award (\$1,000)
- Zachary Culumber*: Sunset Zoo Science Communication Scholarship Award
- 2014 *Courtney Passow*: Research Award from the Federation of Texas Aquarium Societies (\$500)
- Danielle Alba*: Vern Parish Fund Award from the American Livebearer Association (\$1,500); Wilhm Zoology Teaching Assistantship Award (OSU; \$1,250)
- Reid Morehouse*: Outstanding Ph.D. Student Award (OSU; \$800)
- Ryan Greenway*: Research Award from the Federation of Texas Aquarium Societies (\$500); Ecological Genomics Symposium Travel Fellowship Award; Best poster presentation in the Life, Physical and Engineering Sciences, Lew Wentz Research Scholars Symposium \$500; Outstanding Senior in Zoology Award

- (OSU; \$500)
- 2013 *Cierra Keith*: Niblack Research Scholar Award (OSU; \$8,000)
Courtney Passow: Honorable Mention from the NSF Graduate Research Fellowship Program; Graduate Student Travel Fellowship from the Society of Integrative and Comparative Biology (\$2,000); Bioinformatics Scholarship for Oklahoma State University's Summer Workshop in Bioinformatics: Disentangling Entangled Genomes
Danielle Alba: Honorable Mention from the Ford Fellowship; Howard McCarley Student Research Award from the Southwestern Association of Naturalists (\$1,000)
Reid Morehouse: Clark Hubbs Best Student Poster Award from Southwestern Association of Naturalists (\$200)
Ryan Greenway: Lew Wentz Research Grant (OSU; \$4,500); Karen L. Smith Undergraduate Research Excellence Award (OSU; \$200); Outstanding Sophomore in Zoology Scholarship (OSU; \$350)
- 2012 *Cierra Keith*: Freshman Research Scholars Award (OSU; \$1,000)
Courtney Passow: Honorable Mention from the NSF Graduate Research Fellowship Program; Reduced registration and housing through the Charlotte Mangum Student Support Program of the Society of Integrative and Comparative Biology; Ecological Genomics Symposium Travel Fellowship Award (\$400); Vern Parish Fund Award from the American Livebearer Association (\$1,500); Burkes Research Award (OSU; \$800)
Danielle Alba: Howard McCarley Student Research Award from the Southwestern Association of Naturalists (\$1,000)
Maura Palacios: Honorable Mention from the Graduate Women in Science Fellowship Program
Reid Morehouse: OSU Zoology Graduate Student Society Outstanding Ph.D. Student Award; Best Student Presentation Award from at the Oklahoma American Fisheries Society Conference
Ryan Greenway: Niblack Research Scholar Award (OSU; \$8,000)
- 2011 *Reid Morehouse*: Nancy Randolph Davis Scholarship (OSU; \$1,000)
Ryan Greenway: Freshman Research Scholars Award (OSU; \$1,000)

INVITED PRESENTATIONS: DEPARTMENTAL SEMINARS AND TALKS AT PROFESSIONAL MEETINGS

2017

- Tobler, M. (2/7/2017): Mechanisms underlying life in extreme environments. School of Life Sciences, Arizona State University, Tempe, AZ, USA.

2016

- Tobler, M. (10/17/2016): Extreme environments, physiological adaptation, and the origin of species. Department of Biology, University of South Dakota, Vermillion, SD, USA.
- Tobler, M. (5/7/2016): Speciation in extreme environments. VII. International Livebearer Weekend, Poecilia Scandinavia, Lyngby, Denmark.
- Tobler, M. (5/6/2016): Diversity and conservation of *Characodon*. VII. International Livebearer Weekend, Poecilia Scandinavia, Lyngby, Denmark.

- Tobler, M. (5/3/2016): Mechanisms underlying life in extreme environments. Biology Department, University of Konstanz, Konstanz, Germany.
- Tobler, M. (4/30/2016): Giftige Höhlen und Quellen: Fische in Extremhabitaten. 10. ÖVVÖ Bundeskongress, Retz, Austria.
- Tobler, M. (4/28/2016): Die Reisen des Carl Heller: Aus Wien zu den Schwefelquellen Mexikos. Haus des Meeres, Vienna, Austria.
- Tobler, M. (4/5/2016): Going to extremes: Discovering the marvelous diversity of fishes. K-State Student Chapter of the American Fisheries Society, Manhattan, KS, USA.
- Tobler, M. (2/22/2016): Mechanisms underlying life in extreme environments. Stowers Institute for Medical Research, Kansas City, MO, USA.

2015

- Tobler, M. (11/7/2015): Finding mechanisms underlying life in extreme environments. 13th Annual Ecological Genomics Symposium. Manhattan, KS, USA.
- Tobler, M. (6/13/2015): Sulfide spring fishes in Mexico and beyond. 2a Jornada de la Ciencia y Desarrollo Sustentable, Calnali, Hidalgo, Mexico.

2014

- Tobler, M. (11/6/2014): Using genomics tools to elucidate mechanisms of adaptation to extreme environments. Simposio Genomica de Peces de Agua Dulce de Mexico, XIV Congreso Nacional de Ictiologia, Morelia Mexico.
- Tobler, M. (11/3/2014): Sulfide spring poeciliids as models in ecology and evolution. IV International Symposium on Viviparous Fishes, Morelia, Mexico.
- Tobler, M. (2/23/2014): Patterns, processes, and consequences of biological diversification: insights from extreme habitats. Biology Program, University of British Columbia, Vancouver, Canada.

2013

- Tobler, M. (12/12/2013): Patterns, processes, and consequences of biological diversification: insights from extreme habitats. Division of Biology, Kansas State University, Manhattan, KS, USA.
- Tobler, M. (11/9/2013): Life in extreme environments as a model in biology. Sigma Xi Student Research Conference, Research Triangle Park, NC, USA.
- Tobler, M. (10/15/2013): Studying life in extreme environments (or how you can make the most of your college experience). Scholars Day, Oklahoma State University, Stillwater, OK, USA.
- Tobler, M. (2/22/2013): Patterns, processes, and consequences of biological diversification: insights from extreme habitats. Research Week, Oklahoma State University, Stillwater, OK, USA.

2012

- Tobler, M. (10/18/2012): Patterns, processes, and consequences of biological diversification: insights from extreme habitats. Department of Biology, Brigham Young University, Provo, UT, USA.
- Tobler, M. (9/7/2012): Patterns, processes, and consequences of biological diversification: insights from extreme habitats. Department of Biological Sciences, University of Southern Mississippi, Hattiesburg, MS, USA.

- Tobler, M. (3/15/2012): Cuevas, sulfuro y peces: Entendiendo la maravillosa biodiversidad de Tabasco. Divison Academica de Ciencias Biological, Universidad Juarez Autonoma de Tabasco, Villahermosa, Mexico.
- Tobler, M. (3/9/2012): Extremophile fishes as models in ecology and evolution. School of Natural Resources, University of Missouri, Columbia, MO, USA.
- Tobler, M. (2/15/2012): Patterns and processes in biological diversification: insights from extreme habitats. Department of Biology, Baylor University, Waco, TX, USA.

2011

- Tobler, M. (11/11/2011): Patterns and processes in biological diversification: insights from extreme habitats. Division of Biology, Kansas State University, Manhattan, KS, USA.
- Tobler, M. (10/8/2011): A natural history of the vanishing Mexican desert fishes of the genus *Characodon*. 2nd International Meeting of the Goodeid Working Group, Pont l'Évêque, France.

2010

- Tobler, M. (6/4/2010): Patterns and processes in biological diversification. Department of Zoology, Oklahoma State University, Stillwater, OK, USA.
- Tobler, M. (2/24/2010): Living in extreme environments: evolutionary and ecological consequences. Department of Biological Sciences, Fordham University, Bronx, NY, USA.
- Tobler, M. (2/15/2010): Patterns and processes in biological diversification: insights from extreme environments. Department of Wildlife & Fisheries Sciences, Texas A&M University, College Station, TX, USA.
- Tobler, M. (2/15/2010): Adaptation and speciation in extreme environments. Section of Integrative Biology, University of Texas at Austin, Austin, TX, USA.

2009

- Tobler, M. (11/23/2009): Adaptation and speciation in extreme environments. Department of Biological Sciences, University of Toronto Scarborough, Toronto, Canada.
- Tobler, M. (9/11/2009): Living in extreme environments: evolutionary and ecological consequences. Department of Ecology and Evolution, University of Tennessee Knoxville, Knoxville, TN, USA.
- Tobler, M. (4/8/2009): A fishy tale from a stinky cave: adaptation and speciation in extreme environments. Department of Biology, Baylor University, Waco, TX, USA.
- Tobler, M. (1/8/2009): Living in extreme environments: ecological and evolutionary consequences. Marine Science Institute, University of Texas at Austin, Port Aransas, TX, USA.

2008

- Tobler, M. (3/3/2008): The evolutionary ecology of *Poecilia mexicana* in extreme environments. Biodiversity Program, El Zamorano University, Honduras.

2007

- Tobler, M. (10/22/2007): Life in extreme environments: ecological and evolutionary consequences. Section of Integrative Biology, University of Texas at Austin, Austin, TX, USA.
- Tobler, M. (10/9/2007): Ecological differentiation and reproductive isolation along abiotic environmental gradients in *Poecilia mexicana*. Department of Zoology, University of Oklahoma, Norman, OK, USA.

- Tobler, M. (2/22/2007): Adaptive diversification in extreme habitats? The ecology and evolution of extremophile poeciliid fishes. Department of Biological Sciences, Sam Houston State University, Huntsville, TX, USA.

2006

- Tobler, M. (10/19/2006): Darkness, hypoxia, and hydrogen sulfide: the ecology of extremophile poeciliid fishes. Department of Wildlife and Fisheries Sciences, Texas A&M University, College Station, TX, USA.

2005

- Tobler, M. (12/21/2005): How and why to survive in a toxic, sulfurous habitat: evidence from a Mexican fish". Zoological Institute, University of Zürich, Zürich, Switzerland.
- Tobler, M. (1/10/2005): Drowning the Red Queen? Sex and parasites in a gynogenetic mating system of fishes. Department of Behavioral Ecology, University of Bern, Bern, Switzerland.

2004

- Tobler, M. (12/22/2004): Drowning the Red Queen? Sex and parasites in a gynogenetic mating system. Zoological Institute, University of Zürich, Zürich, Switzerland.

CONTRIBUTED PRESENTATIONS AT PROFESSIONAL MEETINGS: TALKS AND POSTERS

2017

- Greenway, R.*, J. L. Kelley & M. Tobler (1/5/2017): OXPHOS adaptation and ecological speciation in toxic sulfide springs. Society of Integrative and Comparative Biologists Annual Meeting, New Orleans, LA, USA (talk).
- Tobler, M., N. Barts*, C. N. Passow*, R. Greenway* & J. L. Kelley (1/8/2017): Evolution and expression of oxygen transport genes in replicated lineages of sulfide spring fishes. Society of Integrative and Comparative Biologists Annual Meeting, New Orleans, LA, USA (talk).
- Barts, N.*, G. A. Keithline** & M. Tobler (1/7/2017): The aerobic scope of an extremophile fish and its significance for metabolic physiology in hydrogen sulfide environments. Society of Integrative and Comparative Biologists Annual Meeting, New Orleans, LA, USA (poster).
- Culumber, Z. W., M. E. Gifford & M. Tobler (1/5/2017): Diversification on the macroevolutionary landscape following the loss of lungs in caudate amphibians. Society of Integrative and Comparative Biologists Annual Meeting, New Orleans, LA, USA (talk).

2016

- Brown, A. P., R. Greenway*, M. Tobler & J. L. Kelley (10/29/2016): Genome-scale data reveals that endemic *Poecilia* populations from small sulfidic springs are more diverse and less inbred than populations undergoing range reduction. 14th Annual Ecological Genomics Symposium. Kansas City, MO, USA (talk).
- Barts, N.*, C. Passow*, R. Greenway*, J. L. Kelley & M. Tobler (10/29/2016): Oxygen transport in hydrogen sulfide-rich environments: myoglobin and hemoglobin gene expression and evolution. 14th Annual Ecological Genomics Symposium. Kansas City, MO, USA (poster).
- Greenway, R., J. L. Kelley & M. Tobler (10/29/2016): OXPHOS evolution and ecological speciation in toxic sulfide springs. 14th Annual Ecological Genomics Symposium. Kansas City, MO, USA (poster).

- Kelley, J. L., A. P. Brown, C. Passow*, L. Arias-Rodriguez & M. Tobler (7/5/2016): Transcriptional changes and the genomic basis of adaptation to an extreme environment. Society for Molecular Biology and Evolution, Gold Coast, Australia (talk).
- Kelley, J. L., A. P. Brown, M.-C. Yee, L. Arias-Rodriguez & M. Tobler (2/10/2016): Biomedical insights from transcriptome sequencing of hydrogen sulfide adapted fish. Advances in Genome Biotechnology Annual Meeting, Orlando, FL, USA (poster).
- Tobler, M. & J. L. Kelley (1/5/2015): Using comparative transcriptomics to identify mechanisms of adaptation in livebearing fishes inhabiting toxic, hydrogen sulfide rich springs. Society of Integrative and Comparative Biologists Annual Meeting, Portland, OR, USA (talk).
- Culumber, Z. W. & M. Tobler (1/5/2015): Evolution of the thermal niche: functional physiology and gene expression across a genus of livebearing fishes (Poeciliidae: *Xiphophorus*). Society of Integrative and Comparative Biologists Annual Meeting, Portland, OR, USA (poster).
- Culumber, Z. W. & M. Tobler (1/4/2015): Morphological diversification in livebearing fishes of the family Poeciliidae. Society of Integrative and Comparative Biologists Annual Meeting, Portland, OR, USA (poster).

2015

- Culumber, Z. W. & M. Tobler (11/7/2015): Evolution of the thermal niche: functional physiology and genetics across a genus of livebearing fishes (Poeciliidae: *Xiphophorus*). 13th Annual Ecological Genomics Symposium. Manhattan, KS, USA (poster).
- Passow, C.*, J. L. Kelley & M. Tobler (11/7/2015): Transcriptomic responses to hydrogen sulfide exposure in replicated susceptible and tolerant populations of *Poecilia mexicana*. 13th Annual Ecological Genomics Symposium. Manhattan, KS, USA (poster).
- Greenway, R.*, J. L. Kelley & M. Tobler (11/7/2015): Testing for convergent evolution across disparate fish lineages adapting to toxic hydrogen sulfide. 13th Annual Ecological Genomics Symposium. Manhattan, KS, USA (poster).
- Brown, A. P., L. Arias-Rodriguez, M.-C. Yee, C. Bustamante, M. Tobler & J. L. Kelley (11/7/2015): Distinct pathways to adaptation to extremely sulfidic environments in closely related populations of fish. 13th Annual Ecological Genomics Symposium. Manhattan, KS, USA (poster).
- Passow, C.N.*, J. L. Kelley & M. Tobler (7/14/2015): Comparative transcriptomic analysis among four divergent ecotypes of an extremophile fish. Ecological and Evolutionary Genomics Gordon Research Conference, Biddeford, ME, USA (poster).
- Passow, C.N.*, J. L. Kelley & M. Tobler (1/5/2015): Comparative transcriptomic analysis across four divergent ecotypes of an extremophile fish (*Poecilia mexicana*). Society of Integrative and Comparative Biologists Annual Meeting, West Palm Beach, FL, USA (talk).

2014

- Passow, C.N.*, J. L. Kelley & M. Tobler (10/31/2014): Comparative transcriptomic analysis across four divergent ecotypes of an extremophile fish (*Poecilia mexicana*). 12th Annual Ecological Genomics Symposium, Kansas City, MO (poster).
- Alba, D. M.*, L. Arias-Rodriguez, M. Tobler & P. D. Jeyasingh (8/12/2014): Ecological implications of geographic and temporal variation in excretion and somatic stoichiometry in extremophile *Poecilia mexicana*. Ecological Society of America Annual Meeting, Sacramento, CA (talk).

- Alba, D. M.*, L. Arias-Rodriguez, M. Tobler & P. D. Jeyasingh (4/18/2014): Variation in somatic stoichiometry in extremophile mollies (*Poecilia mexicana*): evolution or plasticity? 61st Annual Meeting of the Southwestern Association of Naturalists, Stillwater, OK (talk).
- Morehouse, R.* & M. Tobler (4/17/2014): Crayfish of Oklahoma: Distributions, Ecology, and Evolution. 61st Annual Meeting of the Southwestern Association of Naturalists, Stillwater, OK (talk).
- Palacios, M.*, L. Arias-Rodriguez, M. Mateos, G. Voelker & M. Tobler (3/22/2014): Diversity and evolutionary patterns of mollies (Poeciliidae: *Poecilia*). 15th Ecological Integration Symposium, College Station, TX (poster).
- Alba, D. M.*, P. D. Jeyasingh & M. Tobler (1/5/2014): Patterns and ecological implications of intraspecific stoichiometric variation in the livebearing fish, *Poecilia mexicana*. Society of Integrative and Comparative Biologists Annual Meeting, Austin, TX (talk).
- Passow, C.N.* & M. Tobler (1/4/2014): Reduction of energetic demands through modifications of body size and mass-specific metabolic rates in locally adapted extremophile fish. Society of Integrative and Comparative Biologists Annual Meeting, Austin, TX (talk).
- Greenway, R.** & M. Tobler (1/4/2014): *Xiphophorus hellerii* in toxic sulfide springs: patterns of adaptation like in other sulfide spring poeciliids? Society of Integrative and Comparative Biologists Annual Meeting, Austin, TX (poster).

2013

- Morehouse, R.* & M. Tobler (9/10/2013): Partitioning of food resources in syntopic crayfishes. Annual Meeting of the American Fisheries Society, Little Rock, AR (talk).
- Alba, D.*, P. Jeyasingh & M. Tobler (9/10/2013): Ecological implications of intraspecific stoichiometric variation. Annual Meeting of the American Fisheries Society, Little Rock, AR (talk).
- Kelley, J., C. Passow*, M.-C. Yee, L. Arias-Rodriguez, C. D. Bustamante & M. Tobler (7/10/2013): Genomic basis of adaptation in replicated extreme environments. Annual Meeting of the Society for Molecular Biology and Evolution, Chicago, IL, USA (talk).
- Keith, C.***, Z. Culumber & M. Tobler (6/23/2013): The maintenance of a genetic polymorphism in *Xiphophorus variatus*: connections between coloration patterns and physiology? Annual Meeting of the Society for the Study of Evolution, Snowbird, UT, USA (poster).
- Tobler, M., C. Passow*, L. Arias-Rodriguez, M.-C. Yee, C. Bustamante, M. Pfenninger, M. Plath & J. Kelley (6/23/2013): Elucidating the genomic underpinnings of replicated adaptation to extreme environments: signatures of selection in coding genes. Annual Meeting of the Society for the Study of Evolution, Snowbird, UT, USA (talk).
- Tobler, M., C. Passow*, L. Arias-Rodriguez, M.-C. Yee, C. Bustamante & J. Kelley (6/22/2013): Elucidating the genomic underpinnings of replicated adaptation to extreme environments: variation in gene expression patterns. Annual Meeting of the Society for the Study of Evolution, Snowbird, UT, USA (poster).
- Alba, D.*, P. Jeyasingh & M. Tobler (4/5/2013): Ecological implications of intraspecific stoichiometric variation. 60th Annual Meeting of the Southwestern Association of Naturalists, Lake Charles, LA (talk).
- Doumas, L.T.*, C. Keith**, and M. Tobler (4/5/2013): Heritability vs. flexibility, how plastic are the physiological mechanisms underlying behavior? 60th Annual Meeting of the Southwestern Association of Naturalists, Lake Charles, LA (poster).

- Morehouse, R.* & M. Tobler (4/5/2013): Do syntopic crayfish species partition food resources? Insights from stable isotopes and stomach contents. 60th Annual Meeting of the Southwestern Association of Naturalists, Lake Charles, LA (talk).
- Morehouse, R.* & M. Tobler (4/5/2013): Crayfishes of Oklahoma: Identification, distribution, and ecology. 60th Annual Meeting of the Southwestern Association of Naturalists, Lake Charles, LA (poster).
- Morehouse, R.* & M. Tobler (3/15/2013): Do syntopic crayfish species partition food resources? Insights from stable isotopes and stomach contents. Oklahoma State AFS Student Colloquium, Lake Texaoma, OK (talk).
- Passow, C.N.*, J. L. Kelley, M. Plath, L. Arias-Rodriguez, M.-C. Yee & M. Tobler (1/5/2013): Characterization of the *Poecilia mexicana* transcriptome: a model for adaptation and speciation research. Society for Integrative and Comparative Biology Annual Meeting, San Francisco, CA, USA (poster).

2012

- Palacios Mejia, M.*, M. Tobler, G. Voelker, A.A. Gonzalez-Diaz, R. Rodiles-Hernandez & M. Mateos (11/1/2012): Patrones filogeograficos de *Poecilia butleri* y *Poecilia sphenops* sobre su distribucion en la costa Pacifica de Mexico. XIII Congreso Nacional de Ictiologia y 1er Simposio Latinoamericano de Ictiologia, San Cristobal de las Casas, Chiapas, Mexico (talk).
- Passow, C.N.*, J. L. Kelley, M. Plath, L. Arias Rodriguez, M.C. Yee & M. Tobler (10/27/2012): Characterization of the *Poecilia mexicana* transcriptome: a model for adaptation and speciation research. Ecological Genomics Symposium, Kansas City, MO, USA (poster).
- Kelley, J., C. Passow*, M.C. Yee, C. Bustamante & M. Tobler (2012): Hydrogen sulfide drives gene expression patterns along replicated environmental gradients. Ecological Genomics Symposium, Kansas City, MO, USA (poster).
- Morehouse, R.L.* & M. Tobler (10/24/2012): Crayfishes of Oklahoma: Identification, distribution and ecology. Annual Meeting of the Oklahoma Chapter of the American Fisheries Society, Stillwater, OK, USA (talk).
- Husemann, M.*, C. McCauley, M. Tobler, B. Ding & P.D. Danley (9/23/2012): Population and species divergence in Lake Malawi rock-dwelling cichlids. DZG Conference, Konstanz, Germany (poster).
- Husemann, M.*, C. McCauley, M. Tobler, B. Ding & P.D. Danley (7/10/2012): Morphological diversification in closely related Lake Malawi cichlids. Joint Congress on Evolutionary Biology, Ottawa, Canada (talk).
- Palacios Mejia, M.*, M. Tobler & M. Mateos (7/8/2012): Multilocus phylogeny and phylogeographic patterns in the freshwater fishes from the subgenus *Mollienesia* (*Poecilia*: Poeciliidae: Cyprinodontiformes). Joint Congress on Evolutionary Biology, Ottawa, Canada (talk).
- Hamontree, S., J. L. Sanchez, J. L., B. Boutwell, G. P. Garrett, R. H. Lewis, A. N. Ragan, M. Tobler, & R. Deaton (2/10/2012): Reproductive investment of two congeners and their putative hybrids in west Texas. Annual Meeting of the Texas Chapter of the American Fisheries Society, Galveston, TX, USA (poster).
- Roach, K. A., M. Tobler & K. O. Winemiller (2/10/2012): Hydrogen sulfide, bacteria, and fish: a unique food chain supported by chemical-based energy. Annual Meeting of the Texas Chapter of the American Fisheries Society, Galveston, TX, USA (talk).

- Tobler, M. (2/8/2012): Poeciliid fishes as models in ecology and evolution. Annual Meeting of the Oklahoma Chapter of the American Fisheries Society, Stillwater, OK, USA (talk).

2011

- Tobler, M., C. Passow* & J. Kelley (11/5/2011): Elucidating the genomic changes underlying adaptation and speciation in extreme environments. Ecological Genomics Symposium, Kansas City, MO, USA (talk).
- Tobler, M. (10/29/2011): Elucidating the genetic basis of ecological speciation: a role for MHC genes? 38th Annual Great Plains Limnology Conference & 4th Triennial Oklahoma-Texas Aquatic Research Group Meeting, OU Biological Station, OK, USA (talk).
- Tobler, M. (6/18/2011): Adaptation and speciation in extreme environments: the case of sulfide spring fishes. Annual Meeting of the Society for the Study of Evolution, Norman, OK, USA (talk).
- Tobler, M. & E. Carson (4/22/2011): Hybridization and phenotypic diversification in Cuatro Ciénegas pupfishes. 58th Annual Meeting of the Southwestern Association of Naturalists, Tyler, TX, USA (talk).

2010

- Tobler, M. (1/22/2010): Ecology and evolution of the Amazon molly. Texas Chapter of the American Fisheries Society Annual Meeting, Athens, TX, USA (talk).

2009

- Tobler, M. (7/26/2009): Natural and sexual selection against migrants in sulfide spring and cave poeciliids. Joint Meeting of Ichthyologists and Herpetologists, Portland, OR, USA (talk).

2008

- Tobler, M. (10/26/2008): A fishy tale from a stinky cave: population differentiation in *Poecilia mexicana*. 35th Annual Great Plains Limnology Conference & 3rd Triennial Oklahoma-Texas Aquatic Research Group Meeting, OU Biological Station, OK, USA (talk).

2007

- Tobler, M. (7/16/2007): Ecological differentiation and reproductive isolation along environmental gradients in *Poecilia mexicana* (Poeciliidae, Teleostei)". Joint Meeting of Ichthyologists and Herpetologists, St. Louis, MO, USA (talk).
- Tobler, M. & I. Schlupp (7/15/2007): Ecological factors influencing the stability of a gynogenetic complex (*Poecilia formosa* and *P. latipinna*, Poeciliidae): the role of parasites. Joint Meeting of Ichthyologists and Herpetologists, St. Louis, MO, USA (poster).

2006

- Tobler, M. & I. Schlupp (4/15/2006): Drowning the Red Queen? Sex and parasites in a gynogenetic mating system. 53rd Annual Meeting of the Southwestern Association of Naturalists, Colima, Mexico (talk).
- Tobler, M. & I. Schlupp (3/4/2006): Drowning the Red Queen? Sex and parasites in a gynogenetic mating system. The Ecology & Evolution Meeting at Lake Texoma 2006, OU Biological Station, OK, USA (talk).

2005

- Tobler, M. & I. Schlupp (12/4/2005): Parasites in a gynogenetic complex of fish (*Poecilia formosa* & *P. latipinna*)". 2nd European Conference of Poeciliid Biologists, Trondheim, Norway (talk).

- Tobler, M. & I. Schlupp (11/19/2005): Parasites in a gynogenetic complex of fish (*Poecilia formosa* & *P. latipinna*). 37th Annual Meeting of the Desert Fishes Council, Cuatro Ciénegas, Mexico (talk).
- Tobler, M. (3/31/2005): Does living in an extreme habitat pay off? Comparative studies in the natural habitats of a poeciliid fish (*Poecilia mexicana*)". Graduate Student Poster Session, University of Oklahoma, OK, USA (poster).

2004

- Tobler, M. & I. Schlupp (7/15/2004): Asexual mollies, *Poecilia formosa* (Poeciliidae) reject parasitized males. 10th International Behavioral Ecology Congress, Jyväskylä, Finland (talk).
- Tobler, M. (6/11/2004): Was können Beobachtungen im Aquarium wirklich über das natürliche Verhalten aussagen? Freiland- und Aquarienbeobachtungen an Breitflossenkärpflingen (*Poecilia latipinna*) und ihren Sexualparasiten, den Amazonenkärpflingen (*P. formosa*)". Symposium Verhalten der Aquarienfische, Düsseldorf, Germany (talk).

SERVICE AND OUTREACH

Editorial Board Member

2017-present Associate Editor, Royal Society Open Science

Peer Reviewer

Granting Institutions: National Science Foundation (IOS: *ad hoc* and panel reviewer; DEB: *ad hoc* reviewer; CAREER: *ad hoc* reviewer), French National Research Agency, NERC Standard Grant (Natural Environment Research Council, UK), Netherlands Organization for Scientific Research, Texas Academy of Science, Southwestern Association of Naturalists, Sigma Delta Epsilon (Graduate Women in Science), American Livebearer Association

Journals: Acta Ethologica, American Midland Naturalist, Animal Behavior, Animal Conservation, Aquatic Ecology, Axios, Behavioral Ecology, Behavioral Ecology & Sociobiology, Behavioral Processes, Biological Journal of the Linnean Society, Biology Letters, BMC Genomics, BMC Evolutionary Biology, Canadian Journal of Zoology, Conservation Biology, Copeia, Current Zoology, Ecological Genetics and Genomics, Ecology, Ecology Letters, Environmental Biology of Fishes, Evolution, Fish & Fisheries, Florida Entomologist, Heredity, Journal of Biogeography, Journal of Evolutionary Biology, Journal of Fish Biology, Molecular Ecology, Molecular Phylogenetics and Evolution, Naturwissenschaften, Pan-American Journal of Aquatic Sciences, PLOS ONE, Proceedings of the Royal Society B, Science Advances, Science, Science Advances, Science of Nature, Southwestern Naturalist.

Agencies: U.S. Fish and Wildlife Service (Endangered Species Proposal)

Departmental Service

2015-2016 Member of EEB junior faculty group that drafted a new strategic plan for the section (KSU)

2015-2016 KSU Biology REU Selection Committee (KSU)

2015-2016 EEB seminar committee (KSU)

2013-2014 Director of the Non-centralized Animal Care Unit (OSU)

2012-2014 Personnel committee (OSU)

2012 "Evolutionary Ecology Faculty" search committee (OSU)

2011-2014 Advisor for ZoGSS (Zoology Graduate Student Society) (OSU)

2010-2014 Webmaster (OSU)

2006-2007 Elected officer for ZAGS (Graduate student association of the Department of Zoology, University of Oklahoma)

2000-2003 Undergraduate student representative for the Education Committee and the Departmental Committee (Department of Biology, ETH Zürich)

University Service

2013-2014 Alternate member of the Institutional Animal Care and Use Committee
 2013 “Assistant Provost for Innovative Education” search committee, Oklahoma State University
 2013 “Director for Scholar Development & Recognition” search committee, Oklahoma State University
 2011-2014 Academic Integrity Facilitator, Oklahoma State University

Public Service and Outreach

2016 On-site advisor for the BBC Natural History Unit (documentary series on the cultural and biological diversity of Mexico)
 2016 “Discover the diversity of fishes” activity in USD 383’s “Family STEM Night”, Bergman Elementary School, Manhattan, 3/8/2016
 2016-present Co-initiator and co-organizer of “Science on Tap”, a community outreach program held at the Tallgrass Taphouse, Manhattan, KS
 2015-present Co-organizer of the Science Communication Fellowship Workshop for graduate students, Sunset Zoo, Manhattan, KS
 2015 “Meet a scientist” participant in USD 383’s “Family STEM Night”, Lee Elementary School, Manhattan, KS; 2/26/2015
 2014 On-site advisor for GEO Magazine (Hamburg, Germany) for a feature article on extreme environments
 2014-present Project Curator for iNaturalist Global Freshwater BioBlitz
 2013 Judge, Sigma Xi 2013 Student Research Showcase
 2013 TV interview “Aquarium’s location causes concerns”, KOKH FOX 25, Oklahoma City
 2011-2014 Initiator and administrator of Fish Chum (<http://fishchum.okstate.edu/>), a public outreach platform linking the scientific community to today’s fish hobbyist
 2010-present C.A.R.E.S. Preservation Program Specialist (coordinator for livebearing fishes)
 2011-2012 Advisor for the BBC for the television documentary series “Wonders of Life”
 2011 Career Workshop for graduate students at the Oklahoma-Texas Aquatic Research Group Meeting, University of Oklahoma Biological Station
 2011 Judge for the Junior Science & Humanities Symposium (High School Science Fair)
 2011 OSU Grandparent University (a science oriented summer camp for kids and their grandparents)
 2011 Advisor for Enslow Publishers (Berkeley Heights, NJ) for the children’s book “Vampire Bats, Giant Insects, and Other Mysterious Animals of the Darkest Caves”
 2009-2011 On-site advisor for Mona Lisa Productions (Lyon, France) for the television documentary “Life in Hell” on extremophile animals
 2008 Instructor for infusing inquiry into elementary school science (professional development workshop for elementary school teachers), Sam Noble Oklahoma Museum of Natural History
 2003 Advisor in the revision of the animal welfare laws in Switzerland. Committee for animal welfare in fishes, Swiss Federal Veterinary Office, Berne, Switzerland