

Curriculum Vitae  
**L. Lacey Knowles**

Department of Ecology and Evolutionary Biology  
Museum of Zoology, University of Michigan  
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**POSITIONS**

2015-present, Robert B. Payne Collegiate Professor, Department of Ecology and Evolutionary Biology, Curator of Insects, Museum of Zoology, University of Michigan

2012-2015, Professor, Department of Ecology and Evolutionary Biology,  
Curator of Insects, Museum of Zoology, University of Michigan

2008-2012, Associate Professor, Department of Ecology and Evolutionary Biology,  
Curator of Insects, Museum of Zoology, University of Michigan

2003-2008, Assistant Professor, Department of Ecology and Evolutionary Biology,  
Curator of Insects, Museum of Zoology, University of Michigan

**ACADEMIC APPOINTMENTS:**

Science Communication Fellow, Museum of Natural History, University of Michigan  
Member, Center for statistical Genetics, University of Michigan  
NIH Training Program in Genome Sciences, University of Michigan

**EDUCATION**

2001-2002 NIH Postdoctoral Fellowship (PERT: Postdoctoral Excellence in Research and Teaching) awarded through the Center for Insect Science at the University of Arizona

1999-2001 Postdoctoral Fellowship from the National Science Foundation Research Training Group in the Analysis of Biological Diversification at the University of Arizona

1999 Ph.D., Ecology and Evolution, State University of New York at Stony Brook  
Dissertation title: Genealogical portraits of Pleistocene speciation and diversity patterns in montane grasshoppers

1993 M.S., Zoology, University of South Florida. Thesis title: Effects of habitat structure on community assemblages of epifaunal macroinvertebrates in seagrass systems.

1989 B.S., *cum laude* with honors in Marine Biology, University of North Carolina, Wilmington

**RESEARCH INTERESTS**

Speciation and processes that promote divergence

Phylogenomics and statistical phylogeography

Evolutionary consequences of climate change

**HONORS AND AWARDS**

\*Fulbright U.S. Scholar, J. William Fulbright Foreign Scholarship Program, D.C., 2018.

*\*declined because of lack of institutional support from University of Michigan*

Collegiate Professorship, College of literature, Science, and the Arts, University of Michigan, 2015-present

Glaser Distinguished Lectureship at Florida International University, Department of Biological Sciences, 2012.

Visiting Miller Research Professorship Award, University of California, Berkeley, 2009.

Visiting Scholar to the National Evolutionary Synthesis Center (NESCent) at Duke University, 2009

(declined)

## FUNDING

### *Funded Grants*

National Science Foundation, DEB 21-14070, PI: Knowles, Co-PIs: Hill, Sanabria-Urbán, Senior Personnel Mariño-Pére. Testing hypotheses about Rates of Diversification and Controls on Diversification Related to Opportunities for Speciation vs Fate of Incipient Divergences. 2021-2025; \$1,298,770 (\$811,495 to LLK).

National Science Foundation, DEB 21-01345, co-PI: Knowles. Collaborative Research: Digitization TCN: Extending Anthophila research through image and trait digitization (Big-Bee). 2021-2024; \$1,298,770 (\$160,392 to LLK).

National Science Foundation, DEB 16-55607, PI: Knowles, Co-PIs: Moritz, Sukumaran, A Bayesian statistical approach to determine whether genetic data delimits species versus populations. 2017-2023; \$695,044 (\$195,044 supplement added to original \$500,000 award).

Science without Borders Program, Ciências sem Fronteiras, CNPq, Brazil (PI: Teresa Avila Pires; R\$160,924.68). The grant will support my travel and work for 3 months in Brazil, as well as 2 Ph.D. students and 1 postdoc that will work in my lab for 1 year each, in addition to molecular expenses for a phylogeography project on Amazonian lizards, 2014-2017.

National Science Foundation, DEB 11-45989, PI: Economo, co-PI: Knowles, Evolving hyperdiversity in phenotypic, ecological, and geographic networks: testing the taxon cycle and alternatives in Indo-Pacific Pheidole, 2012-2014; \$378,622.

National Science Foundation, DEB 11-18815, PI: Knowles, Identifying the utility of species-tree approaches for deep radiations, 2011-2013; \$330,588.

National Science Foundation, DEB 09-18218, PI: Knowles, co-PI: Laura Kubatko, Estimating species trees with population genetic approaches: working towards a new paradigm for 21<sup>st</sup> century phylogenetics, \$544,458 (\$356,083 to Knowles)

National Science Foundation, DEB-09-01930, PI: Knowles, Workshop on Estimating Species Trees: Practical and Theoretical Aspects of a New Paradigm in Molecular Systematics, 2009; \$11,400.

National Science Foundation, DEB-07-15487, PI: Knowles, Population genetics of species delimitation: methodology and application of a unified approach to inferring species boundaries, 2007-2010; \$314,000.

National Science Foundation, DEB-04-47224, PI: Knowles, Testing speciation hypotheses with genomic analyses in montane grasshoppers, 2005-2008; \$514,950.

### *NSF Dissertation Improvement Grants*

National Science Foundation, DEB-16-01260, Dissertation Research: Can the degree of mimicry predict levels of genetic structure among populations? A test using mimetic ground beetles, 2016-2018; \$20,150

National Science Foundation, DEB-16-01389, Dissertation Research: Speciation, niche divergence, and character displacement at multiple scales in Laiopogon robber flies (Diptera: Asilidae), 2016-2018; \$20,040

National Science Foundation, DEB-15-01462, Dissertation Research: The species versus subspecies

conundrum: quantitative assessment from integrating multiple data types under a single Bayesian framework in Hercules beetles, 2015-2017; \$20,205

National Science Foundation, DEB-15-01301, Dissertation Research: Riverscape genetics: testing the role of river properties with population-genetic models in Neotropical freshwater fishes, 2015-2017; \$20,179

National Science Foundation, DEB-13-09072, Dissertation Research: Tests of parallel divergence processes in montane plants: links between population differentiation and species diversity patterns, 2013-2015; \$20,215

National Science Foundation, DEB-12-10359, Dissertation Research: Adaptive divergence in *Anopheles gambiae* (with gene flow): facilitation via chromosomal inversions, 2012-2014; \$15,000

National Science Foundation, DEB-07-09908, Dissertation Research: A unique approach for understanding the maintenance of genetic variation for fitness, 2007-2009; \$12,000

National Science Foundation, DEB-06-608147, Dissertation Research: An integrative approach to the conservation of Panamanian golden frogs, Panamanian golden frogs, 2006-2008; \$12,000

#### *NSF REU-Supplements*

National Science Foundation, REU- Supplement for DEB 11-45989, Evolving hyperdiversity in phenotypic, ecological, and geographic networks: testing the taxon cycle and alternatives in Indo-Pacific Pheidole, 2012-2013; \$6,000

National Science Foundation, REU- Supplement for DEB 11-18815, Identifying the utility of species-tree approaches for deep radiations, 2012-2013; \$6,000

National Science Foundation, REU- Supplement for DEB-09-23762, Population genetics of species delimitation: methodology and application of a unified approach to inferring species boundaries, 2010-2011; \$6,000

National Science Foundation, REU- Supplement for DEB-09-23762, Population genetics of species delimitation: methodology and application of a unified approach to inferring species boundaries, 2009-2010; \$12,000

National Science Foundation, REU- Supplement for DEB-08-22612, Population genetics of species delimitation: methodology and application of a unified approach to inferring species boundaries, 2008-2009; \$6,000

National Science Foundation, REU- Supplement for DEB-08-22608, Testing speciation hypotheses with genomic analyses in montane grasshoppers, 2008-2009; \$6,000

National Science Foundation, REU- Supplement for DEB-07-23799, Testing speciation hypotheses with genomic analyses in montane grasshoppers, 2007-2008; \$6,000

National Science Foundation, REU- Supplement for DEB-06-20058, Testing speciation hypotheses with genomic analyses in montane grasshoppers, 2006-2007; \$6,000

National Science Foundation, REU- Supplement for DEB-05-33746, Testing speciation hypotheses with genomic analyses in montane grasshoppers, 2005-2006; \$6,000

Office of the Vice President for Research Faculty Grant, University of Michigan, 2010, support for project entitled "Tapping the Power of Next-Generation Sequencing Technologies to Identify Community-Level Responses to Past Climate Change", \$15,000.

Office of the Vice President for Research, University of Michigan, 2008, support for workshop on Estimating Species Trees, \$4,600.

Elizabeth Caroline Crosby Fund, NSF ADVANCE Project, University of Michigan, 2004, support for project entitled ‘Tests of the role of sexual selection in the rapid diversification of montane grasshoppers’, \$16,815.

Funds for course improvements, University of Michigan, 2004, support for digital camera system with real-time imaging for in class demonstrations, Insect Biology, EEB 442, \$12,099.

Office of the Vice President for Research Faculty Grant, University of Michigan, 2003, support for project entitled “Linking patterns of genetic variation to mechanisms of speciation”, \$10,000.

Rackham Graduate School Spring/Summer Fellowships, University of Michigan, 2003, support for graduate student for project entitled “Insect genitalia: generators of diversity?”; \$4000.

Dean’s Discretionary Fund, University of Michigan, 2003, support for graduate student to work on insect teaching collection for the Insect Biology course, EEB 442; \$4000.

Ginzberg Community Learning and Service Center Grant, University of Michigan, 2003, develop service-learning component of new Insect Biology course, EEB 442; entitled ‘Community Partnerships in Biodiversity: Strengthening the Connection between People and the Natural World’ \$7000

NIH Postdoctoral Fellowship (PERT: Postdoctoral Excellence in Research and Teaching) awarded through the Center for Insect Science at the University of Arizona, 2001.

Postdoctoral Fellowship from the National Science Foundation Research Training Group in the Analysis of Biological Diversification at the University of Arizona, 1999.

Doctoral Dissertation Improvement Grant, National Science Foundation (DEB 9801284), 1998.

Sokal Travel Grant, for travel expenses to meeting to present graduate research, State University of New York at Stony Brook ,1996.

Orthopterist Society Research Award, research grant for graduate students, for pilot study on phylogenetic relationships of *Melanoplus* grasshoppers, 1996.

Sigma Xi Grant in Aid of Research, research grant for graduate students, for pilot study on association of speciation with Pleistocene glacial cycles in *Melanoplus* grasshoppers, 1995.

#### *Advisory Committee*

FONDECYT – WORLD BANK, 04-2019-FONDECYT-BM-INC.INV, PI: Nazareno AG, Co-PIs: Knowles L, Forzza R, Meireles L. Conservación del antiguo árbol “Shihuahuaco” *Dipteryx micrantha* Harms. (Fabaceae), una especie Neotropical amenazada. \$933,465. \*The research is on hold given COVID-19.

**PUBLICATIONS** (graduate and undergraduate co-authors are in italics; postdocs are underlined)

#### **2023**

Knowles LL, Kubatko LS (2022) Introduction to Species Tree Inference. In: *Species Tree Inference: a Guide to the Theoretical and Empirical Challenges of Today and Tomorrow* (LS Kubatko and LL Knowles, eds.), pp. 1-x. Princeton University Press.

#### **2022**

Becheler A, Knowles LL (2022) Computational resources for simulating under a spatial coalescent model across heterogeneous landscapes and testing hypotheses about the geography of genetic variation: QUETZAL-EGGS, -CRUMBS, -NEST and DECRYPT. *Mol. Ecol. Res.*, in review.

Auteri GG, Marchan-Rivadeneira MR, Olson DH, Knowles LL (2022) Landscape connectivity among coastal giant salamander (*Dicamptodon tenebrosus*) populations shows no association with land use, fire frequency, or river drainage but exhibits genetic signatures of potential conservation concern. *PLoS One*, in press.

Rubi TL, Prado JR, Knowles LL, Danzer B, (2022) Patterns of genetic and epigenetic diversity across a range expansion in the white-footed mouse (*Peromyscus leucopus*). *J. Mammalogy*, in review.

Hodel RGJ, Massatti R, Knowles LL (2022) Hybridization as a mechanism for adaptive diversification in montane sedges. *Mol. Ecol.*, in review.

Barreto SB, Knowles LL, Mascarenhas R, Affonso PRA, Batalha-Filho H (2022) Drainage rearrangements and in situ diversification of an endemic freshwater fish genus from northeastern Brazilian rivers. *Freshwater Biology*, in press.

Prado JR, Rubi TL, Baumgartner J, Hoffman S, Danzer B, Knowles LL (2021) Postglacial colonization in the Great Lakes Region by the white-footed mouse (*Peromyscus leucopus*): conflicts between genomic and field data. *J. Mammalogy*, in press.

Prado JR, Knowles LL, Percequillo AR (2022) A new species of South America marsh rat (*Holochilus*, Cricetidae) from northeastern Brazil. *J. Mammalogy*. in press.  
<https://doi.org/10.1093/jmammal/gyab104>.

Ortego J, Knowles LL (2022). Geographic isolation versus dispersal: Relictual alpine grasshoppers support a model of interglacial diversification with limited hybridization. *Mol. Ecol.* 31:296-312.  
<https://doi.org/10.1111/mec.16225>

## 2021

Miralles A, Ducasse J., Brouillet S, Flouri T, Fujisawa T, Kapli P, Knowles LL, Kumari S, Stamatakis A, Sukumaran J, Lutteropp S, Vences M, Puillandre N (2021) SPART, a versatile and standardized data exchange format for species partition information. *Mol. Ecol. Res.* 22: 430-438.

Dalapicolla J, Pardo JR, Percequillo AR, Knowles LL (2021) Functional connectivity in sympatric spiny rat species reflects different dimensions of Amazonian forest-association. *J. Biogeography* 48:3196-3209. <https://doi.org/10.1111/jbi.14281>

Amaral KB, Barragán-Barrera DC, Mesa-Gutiérrez RAA, Farías-Curtidor N, Caballero S, Méndez-Fernandez P, Santos MCO, Rinaldi C, Rinaldi R, Siciliano S, Martín V, Carrillo M, O. de Meirelles AC, Franco-Trecu V, Fagundes NJR, Moreno IB, Knowles LL, Amaral AR (2021) Seascape genetics of the Atlantic spotted dolphin (*Stenella frontalis*) based on mitochondrial DNA. *Journal of Heredity* 112:646-662.. <https://doi.org/10.1093/jhered/esab050>

Sukumaran J, Holder MT, Knowles LL (2021) Incorporating the speciation process into species delimitation. *PloS Comput. Biol.* 17(5):e1008924. <https://doi.org/10.1371/journal.pcbi.1008924>

Knowles LL (2021) Species delimitation. *Oxford Bibliographies*, in press.  
<https://www.oxfordbibliographies.com/page/evolutionary-biology>

Vanhove M, Pina-Martins F, Coelho AC, Costa CBA, Batista D, Príncipe A, Sousa P, Henriques A, Marques I, Belkadi B, Knowles LL, Paulo OS (2021) Using Gradient Forest to predict climate response and adaptation in Cork Oak. *Mol. Ecol.* 34:910-923. <http://dx.doi.org/10.1111/jeb.13765>

Tibbetts E, Ortiz CC, Auteri G, Simons M, Fearon M, Knowles LL (2021) Individual recognition and individual identity signals in *Polistes fuscatus* wasps vary geographically. *Animal Behavior.* 176:87-98.

Norambuena HV, van Els P, Victoriano PF, Knowles LL (2021) Genome-wide DNA and phenotypic information supports recent colonization of South American grasslands by *Correndera Pipit* (Aves, Motacillidae). *Zoologica Scripta* 50L397-410. <https://doi.org/10.1111/zsc.12485>

Wan T, Huang H, Oaks JR, Jiang X, Knowles LL (2021) Differences in Quaternary co-divergence reveals community-wide diversification in the mountains of southwest China varied among species. *Proc. Royal Soc. B* 288: 20202567. <https://doi.org/10.1098/rspb.2020.2567>

Hodel RGJ, Massatti R, Bishop S, Knowles LL (2021) Testing which axes of species differentiation underlie covariance of phylogeographic similarity among montane sedge species. *Evolution* 75:349-364. <https://doi.org/10.1111/evo.14159>

Numerals V, Cordero PJ, Knowles LL, Ortego J (2021). Genomic insights into the origin of trans-Mediterranean disjunct distributions: the case of the saltmarsh band-wing grasshopper (*Mioscirtus wagneri*). *J. Biogeog* 27:440-452. <http://dx.doi.org/10.1111/jbi.14011>

Pirani RM, Tonini JFR, Thomaz AT, Napoli MF, Encarnação LC, Knowles LL, Werneck FP (2021) Deep genomic divergence and phenotypic admixture of the treefrog *Dendropsophus elegans* (Hylidae: Amphibia) coincide with riverine boundaries at the Brazilian Atlantic Forest. *Frontiers in Ecology and Evolution*, press.

Prado JR, Knowles LL, Percequillo AR (2021) New species boundaries and the diversification history of marsh rat taxa clarifies historical connections among ecologically and geographically distinct wetland biomes of South America. *Mol. Phylog. Evol.*, 155: 106992.

Nazareno AG, Knowles LL, Dick CW, Lohmann LG (2021) By animal, wind, or wind: can dispersal mode predict genetic connectivity in riverine plant species? *Front. Plant Sci.* 12:626405. doi: 10.3389/fpls.2021.626405.

Nazareno AG, Knowles LL (2021) There is no “Rule of Thumb”: Genomic filter settings for a small plant population to obtain unbiased gene flow estimates. *Front. Plant Sci.* 12:626405. doi: 10.3389/fpls.2021.677009.

## 2020

Ortego J, Knowles LL (2020). Incorporating interspecific interactions into phylogeographic models: a case study with California oaks. *Mol. Ecol.* 29:4510-4524 <https://doi.org/10.1111/mec.15548> (\*cover article; see also feature by E Gracia in same issue: “Biotic interactions matter in phylogeography research: integrative analysis of demography, genetic, and distribution data to account for them”, *Mol. Ecol.* 29:4503-4505).

Barreto SB, Knowles LL, Affonso PRA, Batalha-Filho H (2020) Riverscape properties contribute to the origin and structure of a hybrid zone in a Neotropical freshwater fish. *J. Evol. Biol.* 33:1530-1542. <https://doi.org/10.1111/jeb.13689>

Friedman NR, Bennet BL, Fischer G, Sarnat EM, Huang J-P, Knowles LL, Economo EP (2020) Macroevolutionary integration of phenotypes within and across ant worker castes. *Ecol. and Evol.* 10:9371-9383. <https://doi.org/10.1002/ece3.6623>

Marske KA, Thomaz AT, Knowles LL (2020) Dispersal barriers and opportunities drive multiple levels of phylogeographic concordance in the Southern Alps of New Zealand. *Mol. Ecol.* 29:4665-4679. <https://doi.org/10.1111/mec.15655>

Fischer G, Friedman NR, Huang J-P, Narula N, Knowles LL, Fisher BL, Mikheyev AS, Economo EP (2020) Socially parasitic ants evolve a mosaic of host-matching and parasitic morphological traits. *Current Biol.* 30:3639-3646.

Pirani RM, Peloso PLV, Joyce R, Prado JR, Érico Polo E, Knowles LL, Ron SR, Rodrigues MT, Sturaro MJ, Werneck FP (2020) Diversification history of clown tree frogs in the Neotropical rainforests (Anura, Hylidae, *Dendropsophus leucophyllatus* group). *Mol. Phylog. Evol.* 150:106877. <https://doi.org/10.1016/j.ympev.2020.106877>

Auteri GG, Knowles LL (2020) Decimated little brown bat population show potential for adaptive change. *Scientific Reports.* 10:3023. [doi.org/10.1038/s41598-020-59797-4](https://doi.org/10.1038/s41598-020-59797-4)

Becheler A, Knowles LL (2020) Occupancy spectrum distribution: application for coalescence simulation with generic mergers. *Bioinformatics* 36:3279-3280. doi: 10.1093/bioinformatics/btaa090

Thomaz AT, Knowles LL (2020) Common barriers, but temporal dissonance: genomic tests suggest ecological and paleo-landscape sieves structure an Atlantic Rainforest riverine fish community. *Mol. Ecol.* 29:783-796. <https://doi.org/10.1111/mec.15357>

Rubi TL, Knowles LL, Dantzer B (2020) Museum epigenomics: characterizing cytosine methylation in historic museum specimens. *Mol. Ecol. Resour.* 20:1161-1170. <https://doi.org/10.1111/1755-0998.13115>

Massatti R, Knowles LL (2020) The historical context of contemporary climatic adaptation: a case study in the climatically dynamic and environmentally complex southwestern United States. *Ecography* 43:735-746. [doi.org/10.1111/ecog.04840](https://doi.org/10.1111/ecog.04840)

Huang JP, Hill JG, Ortego J, Knowles LL (2020) Paraphyletic species no more – genomic data resolve a Pleistocene radiation and validate morphological species of the *Melanoplus scudderii* complex (Insecta: Orthoptera). *Systematic Entomology* 45:594-605. [doi.org/10.1111/syen.12415](https://doi.org/10.1111/syen.12415)

## 2019

Pirani RM, Werneck FP, Thomaz AT, Kenney ML, Sturaro MJ, Avila-Pires TCS, Peloso PLV, Rodrigues MT, Knowles LL (2019) Testing main Amazonian rivers as barriers across time and space within widespread taxa. *J. Biogeography* 46:2444-2456. <https://doi.org/10.1111/jbi.13676>

Bemmels JB, Knowles LL, Dick CW (2019) Genomic evidence of survival near ice sheet margins for some, but not all, North American trees. *PNAS* 116:8431-8436.

Emel S, Olson D, Knowles LL, Storfer A (2019) Comparative landscape genetics of two torrent salamanders, *Rhyacotriton kezeri* and *R. variegatus*: implications for forest management and species conservation. *Conservation Genetics* 20:801-815.

Prado JR, Percequillo AR, Thomaz AT, Knowles LL (2019) Similar but different: revealing the relative roles of species-traits versus biome properties structuring genetic variation in South American marsh rats. *J. Biogeography* 46:770-783. <https://doi.org/10.1111/jbi.13529>

Resende-Moreira LC\*, Knowles LL\*, Thomas AT, Prado JR, Souto AP, Lemos-Filho JP, Lovato MB (2019) Evolving in isolation: genetic tests reject recent connections of Amazonian savannas with the central Cerrado. *J. Biogeography* 46:196-211. <https://doi.org/10.1111/jbi.13468>

\* Resende-Moreira and Knowles contributed equally to this work

Thomaz AT, Carvalho T, Malabarba L, Knowles LL (2019) Geographic distributions, phenotypes, and phylogenetic relationships of Phalloceros (Cyprinodontiformes: Poeciliidae): insights about diversification among sympatric species pools. *Mol. Phylog. Evol.* 132:265-274.

Economato EP, Huang J-P, Sarnat EM, Fischer G, Narula N, Longino JT, Janda M, Guenard B, Knowles LL (2019) Evolution of the latitudinal diversity gradient in the hyperdiverse ant genus *Pheidole*. *Global Ecology and Biogeography* 28:456-470. <https://doi.org/10.1111/geb.12867>

Bravo GA, Antonelli A, Bacon CD, Bartoszek K, Blom MPK, Huynh S, Jones G, Knowles LL, Lamichhaney S, Marcussen T, Morlon H, Nakhleh LK, Oxelman B, Pfeil B, Schliep A, Wahlberg N, Werneck FP, Wiedenhoeft J, Willows-Munro S, Edwards SV. 2019. Embracing heterogeneity: coalescing the Tree of Life and the future of phylogenomics. *PeerJ* 7:e6399  
DOI 10.7717/peerj.6399

## 2018

Thomaz AT, Knowles LL (2018) Flowing into the unknown: inferred paleodrainages for studying the ichthyofauna of Brazilian coastal rivers. *Neotropical Ichthyology* 16(3):e180019.

Huang H, Sukumaran J, Smith SA, Knowles LL (2018) Cause of gene tree discord? CLASSIPHY, a procedure for distinguishing incomplete lineage sorting and lateral gene transfer in phylogenetics *Peer J Preprint* 5:e3489v1. doi.org/10.7287/peerj.preprints.3489v1.

Hodel RGJ, Knowles LL, Dunaway JF, Payton AC, McDaniel SF, Soltis PS, Soltis DE (2018) Terrestrial species adapted to sea dispersal: differences in propagule dispersal of two Caribbean mangroves. *Mol. Ecol.* 27:4612-4626. <https://doi.org/10.1111/mec.14894>

Li J, Huang J-P, Sukumaran J, Knowles LL (2018) Microevolutionary Processes impact macroevolutionary patterns. *BMC Evolutionary Biology* 18:123.  
<https://doi.org/10.1186/s12862-018-1236-8>

Huang J-P, Knowles LL (2018) Testing the impact of oceanic barriers on population subdivision, speciation, and zoogeographic community assembly in Xylotrupes beetles across the Indo-Australian Archipelago. *Biol. J. Linnean Soc.* 125:152-154.

Sukumaran J, Knowles LL (2018) Trait-dependent biogeography: (Re-)integration of biology into probabilistic historical biogeographical models. *Trends Ecol. Evol.* 33:390-398.

Knowles LL, Huang H, Sukumaran J, Smith SA, (2018) A matter of phylogenetic scale: distinguishing incomplete lineage sorting from lateral gene transfer as the cause of gene tree discord in recent versus deep diversification histories. *Am. J. Botany* 105:376-384.

Sturaro, MJ, Rodrigues MT, Knowles LL, Colli GR, Avila-Pires TCS (2018) Integrative taxonomy of the lizards *Cercosaura ocellata* species complex (Reptilia: Gymnophthalmidae). *Zoologischer Anzeiger* 275:37-65.

## 2017

He Q, Prado JR, Knowles LL (2017) Inferring the geographic origin of a range expansion: latitudinal and longitudinal coordinates inferred from genomic data in an ABC framework with the program X-ORIGIN. *Mol. Ecol.* 26:6908-6920. DOI: 10.1111/mec.14380

Papadopoulou A, Knowles LL (2017) Linking micro- and macroevolutionary perspectives to evaluate the role of Quaternary sea-level oscillations in island diversification. *Evolution* 71:2901-2917.

Thomaz AT, Malabarba LR, Knowles LL (2017). Genomic signatures of paleodrainages in a freshwater fish along the southeastern coast Brazil: the effects of past riverine properties. *Heredity*, 119: 287-294.

He Q, Knowles LL (2017) Rapid adaptation with gene flow via a reservoir of chromosomal inversion variation? bioRxiv 150771; doi: <https://doi.org/10.1101/150771>.

Sukumaran J, Knowles LL (2017) Multispecies coalescent delimits structure, not species. *Proc. Natl. Academy Sci. USA* 114:1607-1612.

Knowles LL, Massatti R (2017) Distributional shifts – not geographic isolation – as a probable driver of montane species divergence. *Ecography* 40:1475-1485. DOI: 10.1111/ecog.02893

## 2016

Knowles LL, Chappell TM, Marquez EJ, Cohn TJ (2016) Tests of the role of sexual selection in genitalic divergence with multiple hybrid clines. *Journal of Orthoptera Research* 25:75-82.

Muñoz-Ramírez, CP, Bitton P-P, Doucet SM, Knowles LL (2016) Mimics here and there, but not everywhere: Müllerian mimicry in *Ceroglossus* ground beetles? *Biol. Letters* 12: 20160429.

Bemmels JB, Title PO, Ortego J, Knowles LL (2016) Tests of species-specific models reveal the importance of drought in postglacial range shifts of a Mediterranean-climate tree: insights from iDDC modelling and ABC model selection. *Mol. Ecol.* 25:4889-4906.

Massatti R, Knowles LL (2016) Contrasting support for alternative models of genomic variation based on microhabitat preference: species-specific effects of climate change in alpine sedges. *Mol. Ecol.* 25:3974-3986.

Papadopoulou A, Knowles LL (2016) Towards a paradigm shift in comparative phylogeography driven by trait-based hypotheses. *Proc. Natl. Academy Sci. USA* 113:8018-8024.

Wachter GA\*, Papadopoulou A\*, Muster C, Arthofer W, Knowles LL, Steiner FM, Schlick-Steiner BC (2016) Glacial refugia, recolonisation patterns, and diversification forces in Alpine-endemic *Megabunus* harvestmen. *Mol. Ecol.* 25:2904-2919.

\*contributed equally to the paper

He Q, Knowles LL (2016) Identifying targets of selection in mosaic genomes with machine learning: applications in *Anopheles gambiae* for detecting sites within locally adapted chromosomal inversions. *Mol. Ecol.*, 25: 2226-2243.

Thomaz AT, Christie MR, Knowles LL (2016) The architecture of river networks can drive the evolutionary dynamics of aquatic populations. *Evolution* 70:731-739.

Massatti R, Reznicek T, Knowles LL (2016) Utilizing RADseq data for phylogenetic analysis of challenging taxonomic groups: a case-study in *Carex* Sect. *Racemosae* (Cyperaceae). *Am. J. Botany* 103:337-347.

Knowles LL, *Massatti R, He Q, Olson LE, Lanier HC* (2016) Quantifying the similarity between genes and geography across Alaska's alpine small mammals. *J. Biogeogr.*43:1464-1476.

*Huang J-P, Knowles LL* (2016) The species versus subspecies conundrum: quantitative delimitation from integrating multiple data types within a single Bayesian approach in Hercules beetles. *Syst. Biol.*65: 685-699.

*Sukumaran J, Economo EP, Knowles LL* (2016) Machine learning biogeographic processes from biotic patterns: a new trait-dependent dispersal and diversification model, with model-choice by simulation-trained discriminant analysis. *Syst. Biol.* 65:525-545.

*Huang H, Knowles LL* (2016) Unforeseen Consequences of Excluding Missing Data from Next-Generation Sequences: Simulation Study of RAD Sequences. *Syst. Biol.* 65:357-365  
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## INVITED PRESENTATIONS

- 2022 Knowles, LL. Symposium: GeneOmicsRS 2022, Apr 4; Graduate Program in Genetics and Molecular Biology (PPGBM), Federal University of Rio Grande do Sul (UFRGS), in Brazil.
- 2021 Knowles, LL. **Plenary address** at the V Latin American Congress of Mastozoology and V Peruvian Congress of Mastozoology, Oct. 17-21, hosted by Peru (offered virtually).
- 2021 Knowles, LL. Seminar, Nov 4, Universidade Federal de Minas Gerais, Brazil
- Cancelled COVID 2021 Knowles, LL. **Capstone address**: Molecular Evolution Workshop, MBL, Woods Hole, MA.
- Cancelled COVID 2020 Knowles, LL. **Capstone address**: Molecular Evolution Workshop, MBL, Woods Hole, MA.
- Cancelled COVID 2020 Knowles, LL. Workshop on model-based genetic inference, Computational Biology and Population Genomics Group, Universidade de Lisboa, Lisbon, Portugal
- 2020 Knowles, LL. Workshop on Population and Speciation Genomics, Jan. 19-29, Cesky Krumlov, Czech Republic.
- 2019 Knowles, LL. Micro-Macroeolution Working Group, Oct. 21-24, University of British Columbia, Vancouver, BC.
- 2019 Knowles, LL. Kellogg Biological Station, MSU, MI.
- 2019 Knowles, LL. **Plenary address**: X Congresso Brasileiro de Mastozoologia, Sept 9, Aguas de Lindoia, São Paulo.
- 2019 Knowles, LL. **Capstone address**: Molecular Evolution Workshop, MBL, Woods Hole, MA.
- 2019 Knowles, LL. Workshop: Species delimitation concepts and computer demonstrations, June 12-14, Australian National University, Canberra, Australia.
- 2019 Knowles, LL. Workshop: Phylogeography and species delimitation. Instituto Nacional de Pesquisas da Amazônia, Manaus, Brazil.
- 2019 Knowles, LL. **Public Lecture**: Species Divergence Shaped by the Intersects of Ecology and Historical Climatic Change in Brazil. Instituto Nacional de Pesquisas da Amazônia, Manaus, Brazil.
- 2019 Knowles, LL. *\*Student invited speaker\**: American Museum of Natural History, NY.
- 2019 Knowles, LL. **Plenary symposium**: Geography and genes – insights and advances for biogeography, International Biogeography Meeting, Jan 8-12, Malaga, Spain.
- 2018 Knowles, LL. **Plenary address**: V Simpósio de Zoologia Sistemática, Dec 13, Universidade Federal de Minas Gerais, Brazil
- 2018 Knowles, LL. **Plenary address (\*student invited\*)**: Three Rivers Evolution Event (TREE), Sept. 22, University of Pittsburgh, PA
- 2018 Knowles, LL. **Plenary address**: TaxonOmics Symposium, DFG (Deutsche Forschungsgemeinschaft) program, Aug 20-21, Montpellier, France.
- 2018 Knowles, LL. Workshop: Molecular Evolution, July 19-29, MBL, Woods Hole, MA.
- 2018 Knowles, LL. Workshop: Comparative Phylogeography, Aug 23-24, Montpellier, France.

- 2018 Knowles, LL. **Symposium:** Comparative and mechanistic phylogeography in the big data era, Joint Congress on Evolutionary Biology, Aug 20-21, Montpellier, France.
- 2018 Knowles, LL. Workshop: Species Tree Inference, June 4, Ohio State University, OH.
- 2018 Knowles, LL. **Keynote address:** XXXII Congresso Brasileiro de Zoologia, Feb 25- Mar 2, Foz do Iguaçu, Brazil.
- 2018 Knowles, LL. Instituto Gulbenkian de Ciência, Portugal.
- 2018 Knowles, LL. *\*Student invited speaker:* Harvard University, MA.
- 2018 Knowles, LL. *\*Student invited speaker:* University of South Florida, FL.
- 2018 Knowles, LL. Futuyma honorary speaker: Stony Brook University, Stony Brook, NY.
- 2017 Knowles, LL. Workshop: Instituto Nacional de Pesquisas da Amazônia, Manaus, Brazil.
- 2017 Knowles, LL. University of Texas, Austin TX.
- 2017 Knowles, LL. Universidade do Acre, Acre, Brazil.
- 2017 Knowles, LL. Catalyst Meeting: Origin of Biodiversity: a cross-disciplinary thematic program on genome evolution and speciation, Gothenburg Centre of Advanced Studies and Technology, Sweden.
- 2017 Knowles, LL. **Keynote address:** 13th Brazilian Ecology Congress, and 3<sup>rd</sup> International Symposium of Ecology and Evolution, Universidade Federal de Viçosa, Viçosa, Brazil.
- 2017 Knowles, LL. Catalyst Meeting: Species' Range Shifts in a Warming World Investigative Workshop, National Institute for Mathematical and Biological Synthesis (NIMBioS) Knoxville TN.
- 2017 Knowles, LL., and Hillis, D. Symposium: Debate over genetic-based species delimitation, sponsored by Society of Systematic Biology, Evolution meeting, Portland OR.
- 2017 Knowles, LL. *\*Student invited speaker:* University of Central Florida, FL.
- 2017 Knowles, LL. **Capstone address:** Molecular Evolution Workshop, MBL, Woods Hole, MA.
- 2017 Knowles, LL. **Keynote address:** ForBio (the Scandinavian Research School in Biosystematics) Annual Meeting, Bergen, Norway.
- 2017 Knowles, LL. Symposium: Species in the Age of Discordance, University of Utah.
- 2016 Knowles, LL. **Plenary lecture:** IV Symposia of Systematic Zoology, Belo Horizonte, Brazil
- 2016 Knowles, LL. Workshop: Museu Paraense Emilio Goeldi, Belém, Brazil.
- 2016 Knowles, LL. Universidade de São Paulo, São Paulo, Brazil.
- 2016 Knowles, LL. Shaanxi Normal University, Xi'an, China.
- 2016 Knowles, LL. *\*Student invited speaker:* Auburn University, Auburn, AL.
- 2016 Knowles, LL. University of Miami, Coral Gables, FL.
- 2016 Knowles, LL. Symposium: Advances in the analysis of reticulate population networks, sponsored by Society of Systematic Biology, Evolution meeting, Austin TX.
- 2016 Knowles, LL. Colloquium: National Academy of Sciences: In the Light of Evolution X (organized by Francisco Ayala and John Avise); Irvine, CA.

- 2015 Knowles, LL. Workshop: Statistical Phylogeography, Universidad de Concepcion, Chile.
- 2015 Knowles, LL. **Symposium opening speaker**: Graduate Student symposium, Museu Paraense Emilio Goeldi/CZO, Belem, Brazil.
- 2015 Knowles, LL. Symposium: Species delimitation in the age of genomics, Centre for Biodiversity Analysis, Australian National University, Canberra (declined).
- 2015 Knowles, LL. \*Student invited speaker: University of Florida; Gainesville, FL.
- 2014 Knowles, LL. **Presidential address** for the Society of Systematic Biology; Raleigh, NC.
- 2014 Knowles, LL. Symposium: Genome-Scale Phylogenetics: Analysing the Data; The 2014 Frontiers in Phylogenetics Symposium, Smithsonian Institution and the Washington Area Phylogenetics Consortium
- 2014 Knowles, LL. **Banquet address** on the field of phylogenetics and its future directions. NSF/CBMS Mathematical Phylogeny Conference; Winthrop University, Rock Hill, SC.
- 2014 Knowles, LL. \*Student invited speaker: Instituto de Ecologia, Xalapa City, Veracruz, Mexico (declined)
- 2014 Knowles, LL. \*Student invited speaker: Penn State; College Station, PA
- 2014 Knowles, LL. Watson Armor III Research Seminar Series, Field Museum of Natural History; Chicago, IL.
- 2014 Knowles, L.L., Workshop/Catalysis meeting: Simbank, NESCent; Raleigh, NC
- 2014 Knowles, LL. Symposium: Integrative Research Center- Constraints on Big Data for biology, Field Museum; Chicago, IL.
- 2014 Knowles, LL. Symposium: Island Biogeography, From the Oceans to the Sky, Ecology Society of American; Sacramento CA.
- 2014 Knowles, LL. Symposium: Coevolution of the Earth and life: the role of the physical environment in species' evolution, International Palaeontological congress. Mendoza, Argentina
- 2013 Knowles, LL. Symposium: European Society of Evolutionary Biology, Phylogeny and Phylogeography; Lisbon, Portugal.
- 2013 Knowles, LL. Symposium: Society of Systematic Biology, Advances and challenges in practical phylogenomics; Snowbird, Utah.
- 2013 Knowles, LL. The German Centre for Integrative Biodiversity Research (iDIVER); symposium on Evolution and Adaptation; Leipzig, Germany.
- 2013 Knowles, LL. North Carolina State University, Raleigh, NC.
- 2012 Knowles, LL. Workshop: Quantitative Evolutionary and Comparative Genomics; Okinawa Institute of Science and Technology, Japan.
- 2012 Knowles, LL. Institute of Biodiversity and Ecosystem Dynamics, University of Amsterdam, Netherlands.
- 2012 Knowles, LL. Environmental Biology Department, Roma Tre, Italy.

- 2012 Knowles, LL. **Distinguished visiting professor (Glaser Lecturer)**, Florida International University, FL.
- 2012 Knowles, LL. *\*Student invited speaker\**: Cornell, NY.
- 2012 Knowles, LL. Mississippi State University, Starkville, MS.
- 2011 Knowles, LL. **Symposium**: Species-tree estimation, Ohio State University, OH.
- 2011 Knowles, LL. **Workshop**: NIMBios 2<sup>nd</sup> on species delimitation, Knoxville, TN.
- 2011 Knowles, LL., Louisiana State University, Baton Rouge, LA.
- 2011 Knowles, LL. University of Central Florida, Orlando, FL.
- 2011 Knowles, LL. **Plenary speaker**, Annual Meeting of Sociedad de Biología de Chile, Chile
- 2011 Knowles, LL. **Workshop**: Latin American School in Evolution, Universidad Austral de Chile, Chile
- 2011 Knowles, LL. **Plenary speaker** for symposium entitled “Comparative phylogeography of the Gulf-Atlantic coastal plain”, Joint Meeting of Ichthyologists and Herpetologists, University of Minnesota.
- 2011 Knowles, LL. *\*Student invited speaker\**: American Museum of Natural History, New York, NY (postponed until 2011-2012).
- 2010 Knowles, LL. **Plenary speaker**: symposium entitled “Frontiers in Biodiversity: a Phylogenetic Perspective”, University of Barcelona.
- 2010 Knowles, LL. **Plenary speaker**: Biota-FAPESP international Symposium on Phylogeography, on behalf of the São Paulo State Research Foundation (FAPESP, Brazil).
- 2010 Knowles, LL. **Network group**: Invited speaker at speciation network group on “Integrating ecology and evolution in biodiversity research”, University of Jyväskylä FINLAND.
- 2010 Knowles, LL. **Workshop**: NIMBios\_workshop on species delimitation, Knoxville, TN.
- 2010 Knowles, LL. *\*Student invited speaker\**: Stony Brook University, Stony Brook, NY.
- 2009 Knowles, LL. University of California, Berkeley, CA.
- 2009 Knowles, LL. **Symposium**: Brazil Darwinian Celebration invited speaker, Porto Alegre, Brazil
- 2009 Knowles, LL. **Plenary Address**, 10<sup>th</sup> International Congress of Orthopterology, Akdeniz University, Antalya, Turkey.
- 2009 Knowles, LL. *\*Student invited speaker\**: University of Alaska, Fairbanks, AK.
- 2009 Knowles, LL. *\*Student invited speaker\**: Duke University, Durham, NC.
- 2009 Knowles, LL. University of California, Berkeley, CA.
- 2008 Knowles, LL. **Symposium**: Brazilian Society of Genetics. Invited special lecture on phylogeography and population genetics, Bahia, Brazil
- 2008 Knowles, LL. **Symposium & workshop**: Phylogeography and population genetics; Saõ Paulo, Brazil.
- 2008 Knowles, LL. **Workshop**: Phylogeography and population genetics, Saõ Carlos, Brazil

- 2008 Knowles, LL. Symposium: Society for Molecular Biology and Evolution Molecular: phylogeography and population genetics; Barcelona, Spain
- 2008 Knowles, LL. Symposium: Systematic Biology, Species Trees and Gene Tree Heterogeneity: Concepts, Estimation and Empirical Applications; Minneapolis, MN.
- 2008 Knowles, LL. Michigan State University, Lansing, MI.
- 2008 Knowles, LL. University of Washington, Seattle, WA.
- 2008 Knowles, LL. Cornell University, Ithaca, NY.
- 2008 Knowles, LL. University of Tennessee, Knoxville, TN.
- 2007 Knowles, LL. Symposium: Banbury Center meeting, Cold Spring Harbor Laboratory, on “Using barcode data in studies of molecular and evolutionary dynamics”.
- 2007 Knowles, LL. Iowa State University, Ames, IA.
- 2007 Knowles, LL. \**Student invited speaker*: Institute of Biodiversity and Ecosystem Dynamics (IBED) of the University of Amsterdam, The Netherlands.
- 2006 Knowles, LL. Symposium: Systematic Biology: Statistics of Genealogical Species Concepts, Stony Brook University, Stony Brook, NY.
- 2006 Knowles, LL. University of Maryland, College Park, MD.
- 2006 Knowles, LL. University of Connecticut, Storrs, CT.
- 2005 Knowles, LL. University of Minnesota, Minneapolis-St. Paul, MN
- 2005 Knowles, LL. University of Colorado, Boulder, CO.
- 2005 Knowles, LL. Symposium & workshop: Phylogeography and Phylogenetics, organized by Craig Moritz, Michael Hickerson, & Dennis Pearl, Mathematical Biosciences Institute (MBI), Ohio State University, Columbus, OH.
- 2005 Knowles, LL. Symposium: Reconstructing complex species histories, Missouri Botanical Gardens Symposium, University of St. Louis, St. Louis, MO.
- 2005 Knowles, LL. Community genetics and phylogenetics symposia, Center for Community Genetics, University of Minnesota, St. Paul, MN.
- 2004 Knowles, LL. Brigham Young University, Provo, UT.
- 2004 Knowles, LL. University of Idaho, Moscow, ID.
- 2003 Knowles, LL. University of Montana, Missoula, MT.
- 2003 Knowles, LL. Symposium: Round-table discussion on “Coalescent theory and genomics”, Statistical Genomics Training Group. University of Michigan, Ann Arbor, MI.
- 2003 Knowles, LL. Symposium & workshop: Historical biogeography and phylogeography, Uppsala, Sweden.
- 2003 Knowles, LL. Ohio State University, Columbus, OH.
- 2002 Knowles, LL. Arizona State University, Tempe, AZ.
- 2002 Knowles, LL. Symposium: International Dipterology Congress, Brisbane, Australia.
- 2002 Knowles, LL. University of Michigan, Ann Arbor, MI.

- 2001 Knowles, LL. University of California, San Diego, CA.
- 2001 Knowles, LL. Speciation: new insights and directions. Univ. of California, San Diego, CA.
- 2001 Knowles, LL. University of California, Berkeley, CA.
- 2000 Knowles, LL. Yale University, New Haven, CT.
- 2000 Knowles, LL. Symposium: Phylogeography, Hybridization and Speciation in Aussois France.

#### **SELECT CONTRIBUTED PRESENTATIONS**

- 2019 Botany, Tucson, AZ: Massatti R, Knowles LL. The fate of neutral and adaptive variation: interdependencies across a topographically and environmentally complex, climatically dynamic region
- 2019 Joint annual meeting of the American Society of Naturalists, Society of Systematic Biologists, and Society for the Study of Evolution in Providence, RI  
 Resende-Moreira LC, Thomaz A, Prado J, Souto AP, Lemos-Filho JP, Lovato MB, Knowles LL. Severed connections and isolation of relictual Amazonian savannas inferred from genomic data  
 Marske K, Knowles LL. Eco-evolutionary communities in complex landscapes: support for recent assembly and co-evolutionary histories of ecologically similar beetle taxa  
 Pirani R, Werneck F, Thomaz A, Kenney M, Sturaro M, Avila-Pires T, Rodrigues M, Knowles LL. re main Amazonian rivers barriers across space, time and species?
- 2019 Biennial Conference of the International Biogeography Society, Malaga, Spain  
 Ortego J, Knowles LL Incorporating interspecific interactions into phylogeographic models: A case study with Californian oaks  
 Noguerales V, Cordero P, Knowles LL, Ortego J. Testing alternative bathymetric models to link the magnitude of Messinian sea-level fall and genomic differentiation in a Mediterranean-Turanian grasshopper
- 2018 Joint annual meeting of the American Society of Naturalists, Society of Systematic Biologists, and Society for the Study of Evolution in Montpellier, France  
 Pirani R, Werneck F, Thomaz A, Kenney M, Sturaro M, Avila-Pires T, Rodrigues M, Knowles LL. Rivers as barriers across space, time and species in Amazonia?
- 2018 Botany, Rochester, MN: Hodel R, Bishop S, Massatti R, Knowles LL. Assessing drivers of phylogeographic concordance in co-distributed sedge species pairs at two spatial scales.
- 2017 Joint annual meeting of the American Society of Naturalists, Society of Systematic Biologists, and Society for the Study of Evolution in Portland, OR  
 Resende-Moreira LC, Thomaz A, Prado J, Souto AP, Lemos-Filho JP, Lovato MB, Knowles LL. Severed connections and isolation of relictual Amazonian savannas inferred from genomic data  
 Thomaz A, Knowles LL. Spatial and temporal congruence in regional genomic structure of Brazilian coastal fish Communities  
 Sukumaran J, Knowles LL. Species Delimitation under the Multispecies Coalescent: Conflating Populations with Species in the Grey Zone  
 Pirani R, Werneck F, Thomaz A, Kenney M, Sturaro M, Avila-Pires T, Rodrigues M, Knowles LL. Rivers as barriers across space, time and species: dissecting the role of river barriers using tests of concordant divergence in Amazonian species  
 Knowles LL. Improving the predictive power of comparative phylogeographic tests using refined hypotheses  
 Amaral K, Franco-Trecu V, Barrera D, Curtidor N, Caballero S, Meirelles AC, Martin V,

- Carrillo M, Mendez-Fernandez P, Santos MO, Siciliano S, Knowles LL, Fagundes N, Moreno I, Ama AR. Genetic distinctiveness of Atlantic Spotted dolphin along coastal Brazil
- Prado J, Knowles LL, Percequillo AR. Combining genomic and morphological data in a model-based approach to ascertain species delimitation in the South America marsh rat (*Holochilus*)
- Zaidan F, Nogueira-Massarol C, Knowles LL, Fagundes V. Differential fitness reveals a speciation process in karyotypic variants of the Brazilian rodent *Akodon cursor* (Sigmodontinae)
- Auteri G, Knowles LL. Evolutionary rescue of bat populations devastated by white-nose syndrome?
- 2017 Ecology Society of American annual meeting Portland, OR
- Economo E, Guénard B, Narula, Sarnat, Friedman, Fischer, Janda, Huang, Weiser, Longino, Knowles LL. The macroecology of diversification in ants
- 2016 Joint annual meeting of the American Society of Naturalists, Society of Systematic Biologists, and Society for the Study of Evolution in Austin, TX
- McKnight T, Knowles LL. Multidimensional niche evolution as a driver of diversification: phylogenetic insights from codistributed predatory robber flies (*Asilidae*: *Lasiopogon*)
- Munoz C, Knowles LL. Mimics here and there, but not everywhere: Müllerian mimicry in *Ceroglossus* ground beetles?
- Padro J, Knowles LL. Genomic signatures of shared life history traits versus biome specific histories: comparison across 3 widespread marsh rat species (*Holochilus*)
- Kenney M, Qe H, Knowles LL. Identifying the number and geographic location of ancestral refugia with spatially explicit models and ABC in the Alaskan Ground Squirrel
- Olave M, Knowles LL. Evidence for shared refugia based on allele frequency gradients of genomic data among five alpine Alaskan small mammal species?
- Thomaz A, Christie MR, Knowles LL. Riverscape genetics: modeling genomic expectations to test hypotheses about river network architecture as drivers of evolutionary dynamics in aquatic populations
- Bemmel JB, Title PO, Ortego J, Knowles LL. Tests of species-specific models reveal the importance of drought in postglacial range shifts of a Mediterranean-climate tree: insights from iDDC modelling and ABC model selection
- 2016 Island Biology, Symposium on Invertebrate Evolution in Islands, University of Azores: Papadopoulou, A, Knowles LL. Linking macro- and microevolutionary perspectives to evaluate the role of Pleistocene sea-level oscillations in driving diversification patterns.
- 2016 International Congress of Entomology, Orlando, FL: McKnight, T, Knowles LL. Ecological and phylogenetic diversification of multidimensional niches in predatory *Lasiopogon* robber flies (*Diptera*: *Asilidae*)
- 2015 Joint annual meeting of the American Society of Naturalists, Society of Systematic Biologists, and Society for the Study of Evolution in Guarujá, Brazil:
- Sukumaran, J, Economo, E, Knowles LL. Machine Learning Biogeographic Processes from Biotic Patterns: A New Trait-Dependent Dispersal and Diversification Model with Model-Choice by Simulation-Trained Discriminant Analysis
- 2014 Joint annual meeting of the American Society of Naturalists, Society of Systematic Biologists, and Society for the Study of Evolution in Raleigh, North Carolina:
- Papadopoulou, A, Knowles LL. Genomic tests of Pleistocene aggregate island complexes as drivers of divergence: differentiation across local geographic scales in Caribbean crickets
- Huang, J-P, Knowles LL. Species versus subspecies designations in *Hercules* beetles: quantitative delimitation using multiple data types and an integrative Bayesian approach

- He, Q, Knowles LL. Locating a selection signature inside chromosomal rearrangements for tests of adaptive divergence in *Anopheles gambiae*
- Tran, L, Knowles LL. Toward a mechanistic understanding of trait-dependent diversification: The role of niche breadth in the diversification of foregut-fermenting mammals
- McKnight, T, Knowles LL. Multidimensional niches and the ecological and phylogenetic diversification of predatory *Lasiopogon* robber flies
- Thomaz, A, Christie, M, Knowles LL. River Networks and the Genetics of Aquatic Populations
- 2014 Joint Meeting of Ichthyologists and Herpetologists: Andréa Thomaz, Vinícius Bertaco, Luiz R. Malabarba, L. Lacey Knowles. Species delimitation integrating morphological and genetic data within a Bayesian framework using iBPP: application in the southeastern Brazilian species complex *Hollandichthys* (Teleostei: Characiformes)
- \* awarded best student presentation by Andréa Thomaz
- 2014 Botany Meeting, Boise, Idaho: Massatti R, Knowles LL. Microhabitat differences impact phylogeographic concordance of co-distributed species: genomic evidence in montane sedges (*Carex* L.) from the Rocky Mountains
- 2013 Joint annual meeting of the American Society of Naturalists, Society of Systematic Biologists, and Society for the Study of Evolution in Snowbird, Utah:
- Lanier, H, Knowles LL. Candidate loci versus next-generation genomic data for phylogenetic estimation
- Tran, L, Knowles LL. Monkey eat, monkey do: Folivory specialization and the diversification of colobine monkeys
- He, Q, Knowles LL. Intergrative testing of how environments from the past to the present shape genetic structure across landscapes
- Economo, E, Klimov P, Sarnat E, Knowles LL. The evolution of hyperdiversity in the ant genus *Pheidole*
- Klimov P, Economo, E, Knowles LL. Colonization history and speciation dynamics: understanding species diversity patterns in the hyperdiverse *Pheidole* ants from the South Pacific
- Massatti R, Knowles LL. Using Illumina data to test for phylogeographic concordance among montane plant species
- Sturaro MJ, Avila-Pires TCS, Rodrigues MT, Knowles LL. Phylogeographic tests of a widespread lizard (*Cercosaura ocellata*): geographic distance versus ecological adaptation across Amazonian, Cerrado, and Atlantic forest habitats
- 2012 Joint annual meeting of the American Society of Naturalists, Society of Systematic Biologists, and Society for the Study of Evolution in Ottawa, Canada:
- Alvarado-S, D, Knowles LL. Phylogenetic analysis of niche lability in a tropical generalist species: exploring the consequences of living in a heterogeneous environment
- Lanier, H, Knowles LL. Using species-tree methods to resolve deep phylogenies
- Tran, L, Knowles LL. Is foregut fermentation a trump in seasonal habitats? Testing how an evolutionary innovation shapes species richness in a primate radiation
- He, Q, Knowles LL. Species-tree estimation using SNP data from deep sequencing in non-model organisms
- Thomaz, A, Malabarba LR, Bonatto SL, Knowles LL. A palaeodrainage model for estimating dispersal capability and incipient speciation in freshwater fish
- 2011 Joint annual meeting of the American Society of Naturalists, Society of Systematic Biologists, and Society for the Study of Evolution in Norman, OK:
- Edwards, DL, Knowles LL. Integrative approaches to species delimitation: is DNA enough?
- He, Q, Knowles LL. Utility of next-generation sequencing for phylogenomic analysis of diverse

non-model taxa

Alvarado-S, D, Knowles LL. Assessing how environmental heterogeneity across the tropical Andes impact species diversity

Lanier, H, Knowles LL. How accurate are species trees when model assumptions are violated?

\*Ramirez, L, Economo E, Blanchard B, Knowles LL. The evolutionary history of Solomon Islands *Pheidole* (Hymenoptera: Formicidae) inferred with mtDNA

Huang, J-P, Knowles LL. Island Connectivity and Speciation across LGM: a study of rhinoceros beetles (genus *Xylotrupes*) across islands in the Asian-Australian region

Massatti, R., Knowles LL. Evolutionary lability of stigma number in *Carex* (Cyperaceae): Implications for sedge systematics and character evolution.

\*undergraduate from NSF supported program to increase the participation of underrepresented groups

2010 Joint annual meeting of the American Society of Naturalists, Society of Systematic Biologists, and Society for the Study of Evolution in Portland, OR:

Edwards, DL, Keogh JS, Knowles LL. Model-based comparative phylogeographic hypothesis testing of co-distributed Australian reptiles with coupled ENM and ABC analyses

Tran, LAP, Knowles LL. Ecological divergence as a driver of Asian colobine monkey diversification?

Huang, H, Tran LAP, Knowles LL. Evaluating the robustness of phylogenetic estimates of cichlid radiations from the view point of coalescent variance

He, Q, Knowles LL. An approach for coupling ecological, demographic, and genetic models to test spatially-explicit phylogeographic hypotheses

Pressler, KK, Heldt A, Semauru K, Knowles LL. The genetic consequences of habitat disturbance in the Pacific giant salamander

Alvarado-S, D, Knowles LL. Incorporating more realistic demographic histories in population expansion studies: insights from coupled ecological, demographic and genetic models

2009 Joint annual meeting of the American Society of Naturalists, Society of Systematic Biologists, and Society for the Study of Evolution in Moscow, ID:

Zellmer AJ, Knowles LL. Adaptive divergence of wood frog populations in the face of gene flow.

Tran LAP, Knowles LL. Resolving phylogenetic relationships among Asian colobine monkeys with a Bayesian estimate of the underlying species tree.

Huang H, He Q, Knowles LL. Why more loci does not necessarily add up to a more accurate species tree estimate.

Gibbons KK, Knowles LL. Using the untested to infer the unknown: why TCS should not be used to infer population structure.

Heldt A, Lambropoulos D, Gibbons KK, Knowles LL. Testing last male advantage theory using the polyandrous Caribbean cricket *Amphiacusta*.

Fedina TY, Knowles LL. Testing for sexually selected divergence among allopatric populations of *Amphiacusta sanctaerucis* (Gryllidae: Phalangopsine).

He Q, Knowles LL. Rapid evolution via standing variation: an adaptive seed bank in chromosomal inversions.

Alvarado-S D, Knowles LL. Impact of environmental heterogeneity on adaptive divergence through its effects on gene flow in montane habitats.

McCormack JE, Zellmer AJ, Knowles LL. Ecological divergence as a consequence of speciation in *Aphelocoma* jays: niche models, null models, and a new multivariate method.

- 2008 Joint annual meeting of the American Society of Naturalists, Society of Systematic Biologists, and Society for the Study of Evolution in Minneapolis, MN.  
 Knowles LL. Systematic Biology Symposium: Species Trees and Gene Tree Heterogeneity: Concepts, Estimation and Empirical Applications.  
 Zellmer AJ, LL Knowles, EE Werner. Temporal dynamics of population genetic divergence revealed by comparison of historic and contemporary landscape connectivity. 2008  
 McCormack JE, H Huang, LL Knowles. Breaking them down and building them up: reconstructing maximumlikelihood species trees from discordant gene trees.  
 Huang H, Y-H Chan, LL Knowles. The expansion of zones where the most likely gene trees discord with the species tree.  
 Fedina TY, and LL Knowles. Sexual selection in diverging populations of a Caribbean cricket.
- 2007 Zellmer AJ, LL Knowles, EE Werner. The effect of matrix structure on gene flow between *Rana sylvatica* populations. Annual meeting of the Ecological Society of America, San Jose, California.
- 2006 Joint annual meeting of the American Society of Naturalists, Society of Systematic Biologists, and Society for the Study of Evolution in Stony Brook, NY :  
 Marquez EJ, LL Knowles. Accelerated divergence of co-evolving sexual-selected traits during species diversification.  
 Richards CL, LL Knowles. The effects of landscape features on patterns of gene flow in Panamanian golden frogs.  
 Oneal E, D Otte, LL Knowles. Tests of selective divergence in male genitalia in Caribbean crickets.  
 Connallon T, LL Knowles. A test of the benefits of sexual recombination by analysis of protein evolution in yeast.  
 Carstens BC, LL Knowles. Gene trees and species phylogeny in *Melanoplus* grasshoppers.  
 Huang H, GA Gray, LL Knowles. Exploration of the processes underlying an unusual phylogeographic pattern.
- 2005 Joint annual meeting of the American Society of Naturalists, Society of Systematic Biologists, & Society for the Study of Evolution, Fairbanks, AK.  
 Carstens BC, LL Knowles. Species divergence parameters: exploration with a genomic library and different sampling schemes. Oneal E, D Otte, LL Knowles. Timing and patterns of colonization in a radiation of Caribbean crickets (genus *Amphiacusta*).  
 Oneal E, T Connallon, LL Knowles. Female choice for good genes vs. direct benefits in cactophilic *Drosophila*.  
 Marquez EJ, LL Knowles. Links between sexually selected genitalic divergence and rates of speciation in montane grasshoppers.  
 Connallon, T. and Knowles, L.L. X-linked fitness variation maintained by overdominant selection in *Drosophila*.  
 Richards, C.L. and Knowles, L.L. Tests of phylogeographic and morphological concordance among Panamanian golden frog (*Atelopus*) populations.
- 2004 Connallon, T. and Knowles, L.L. Testing a hypothesis of sexual antagonism with comparative *Drosophila* microarray data. Joint annual meeting of the American Society of Naturalists, Society of Systematic Biologists, & Society for the Study of Evolution, Ft. Collins, CO.
- 2004 Knowles, L.L. and W.P. Maddison. Inferring phylogeny despite incomplete lineage sorting. Joint annual meeting of the American Society of Naturalists, Society of Systematic Biologists, and

Society for the Study of Evolution in Ft. Collins, CO.

2002 Knowles, L.L. and T.A. Markow. Non-antagonistic reproductive interactions between the sexes: offsetting the load of sexual conflict. *Drosophila* Meetings, San Diego, CA.

**OUTREACH ACTIVITIES (SUBSET LISTED):**

Organized and taught a workshop on species delimitation, University of Michigan, March 13, 2020.  
Organized and taught a workshop on species delimitation, Australian National University, June 12-14, 2019.

Citizen Science: Prairie Restoration Project (Phase II-ground preparation). In collaboration with Dr. Erika Tucker and Dr. Tony Rezneik. Research Museum Complex, Ann Arbor, MI, March, 2019.

Scientist Spotlight: A Bugs World. Outreach on the highly partitioned world of bugs, highlighting all the different niches they occupy.

- Erickson Elementary, Ypsilanti, MI, October 23, 2018

- Traverwood branch of Ann Arbor District Library, MI, November 10, 2018.

Citizen Science: Prairie Restoration Project (Phase I-insect survey). In collaboration with Dr. Erika Tucker and Dr. Tony Rezneik. Research Museum Complex, Ann Arbor, MI, September 2018.

Butterflies! Amazing diversity and natural history. Presentation and showcased museum specimens. Discovery Center Preschool, Ann Arbor, MI, May 23, 2018

Next Prof Science Faculty Mentor, University of Michigan, Ann Arbor, MI, May 10-13, 2016.

<https://sites.lsa.umich.edu/nextprof-science/previous-workshops/schedule-2016-workshop/>

Hosted the first stand alone Society of Systematic Biology Meeting, University of Michigan, Ann Arbor, MI, May 20-22, 2015.

Organized a workshop of species tree estimation at UM, 2015: 100 attendees (L. Kubatko and D. Swofford instructors)

Developed an exhibit for the Exhibit Museum at the University of Michigan titled "DNA and the Tree of Life", 2012.

Organized and taught (with L. Kubatko) a workshop on species-tree estimation at Ohio State University, 2012.

Organized and taught (with L. Kubatko) a workshop on species-tree estimation at UM, 2009.

Project developed by Jennifer Zee, Ph.D. in the Art Department. 2006, Cartoon for depicting how the changing environment during the Pleistocene glacial cycles promoted divergence that led to the formation of new species.

2<sup>nd</sup> Annual Symposium on Community-based work project fair: Working together for change, March 11, 2004, sponsored by the Ginsburg Center. Presented our project entitled 'Community Partnerships in Biodiversity: Strengthening the Connection between People and the Natural World'.

Sponsor of undergraduate summer research to increase the participation of underrepresented minorities in the biological sciences. Rackham SROP program, University of Michigan, 2004; hosted Ruben Omar Lastra from Univ. of Puerto Rico.

Insect I.D.-Day, participated in this program organized by the Exhibit Museum, July, 2003.

Developed interactive-learning web-site on Insect Biology involving undergraduate and graduate student participation as part of community-based work project, 2003 to present.

Presenter at Science Safari to promote the sciences to young girls (approximately 500 girls between 5-10 years of age) at the Ann Arbor Hands on Museum, 2006.

Mentor to high-school junior student Julia Baritz, 2008, in program to promote careers for women.

Delivered the "Futures"-talk to minority undergraduates participating in the National Science

Foundation funded program for preparing students for graduate studies, Diversity Committee of

the Society for the Study of Evolution, 2006, Stony Brook, NY.  
Mentor of four incoming women freshman (one of which is Hispanic) at the UM as part of the Mentorship Program, 2006.  
Speaker at a tour of the Museum of Zoology for students participating in the UM Mentorship program in coordination with the Exhibit Museum, September 2006.  
Sponsor of Lizette Ramirez at participant in the minority undergraduates for the National Science Foundation, Diversity Committee of the Society for the Study of Evolution, 2011.  
Mentor of minority undergraduates for the National Science Foundation, Diversity Committee of the Society for the Study of Evolution, 2001 and 2004, 2005, 2006.  
Panel for the minority undergraduate “Futures” session, preparing students for graduate studies in Evolution, the National Science Foundation sponsored Diversity Committee event of the Society for the Study of Evolution, Fairbanks, Alaska, 2005.  
Speaker for the minority undergraduate “Undergraduate Futures talk”, preparing students for graduate studies in Evolution, the National Science Foundation sponsored Diversity Committee event of the Society for the Study of Evolution, Norman, OK, 2011.  
Mentor of minority undergraduates for SROP and Genomics Training Grant (NIH), at the University of Michigan, 2004, and the UBRP program at University of Arizona, 2000-2003.

#### **EDITORIAL AND SOCIETAL SERVICES**

Elected to serve as President-Elect in 2012, President in 2013, Past-President in 2014, for the Society of Systematic Biology  
Orthopterist Society, Committee member of Grants and Awards for Orthopteran Research, 2019-present.  
Associate Editor of *Heredity*, 2011-2017.  
Editorial Board, *International Journal of Entomology* (a new joint publication of the Società Entomologica Italiana and the Accademia Nazionale Italiana di Entomologia), 2013 – present.  
Associate Editor of *Systematic Biology*, 2006-2012.  
Associate Editor of the *Journal of Heredity*, 2003-2012.  
Special topics editor for *Molecular Ecology*, 2008-2010.  
Associate Editor of *Evolution*, 2007-2010.  
Elected member of the council for the Society for the Study of Evolution, 2008-2011.  
Elected member of the council for the Society of Systematic Biology, 2005-2009; editorial board member 2002-2005.

#### **OTHER SERVICES**

Advisory Board Member, EU funded project “Horizon 2020 Twinning project iBioGen”, PI: Anna Papadopoulou, University of Cyprus  
General Exchange Researcher and Visitor, Federal University of Minas Gerais  
Outside reviewer for International PhDs:  
2018 Arnaud Becheler, Laboratoire d'Ecologie, Génomes, Comportement et Ecologie, Gif-sur-Yvette CEDEX, France  
2018 Marc Maneau, Ecole Normale Supérieure, Muséum National d'Histoire Naturelle, 75005 Paris, France

External Review Committee Member for the Department of Evolution, Ecology and Organismal Biology (EEOB) at The Ohio State University, 2014.

Executive Committee for NIH Genome Training Grant, University of Michigan, Ann Arbor.

NSF Evolutionary Genetics panel for the Population and Evolutionary Processes cluster, 2007

NSF Systematic Biology panel, 2010

NSF Dimensions of Biodiversity panel, 2011

NSF Phylogenetic Systematics Pre-Proposal panel, 2014

Discussant for the NEScent workshop on the future directions of the NSF program Dimensions of Biodiversity, 2010.

Reviewer for National Science Foundation: DEB Division of Population Biology: Population and Evolutionary Process Cluster, DEB Division of Systematic Biology, Animal Behavior, Frontiers in Integrative Biological Research (FIBR) program in the Directorate for Biological Sciences (BIO), International Research Fellowship Program (IRFP), OISE Collaborative research (DEB).

Reviewer for the BBSRC UK (Biotechnology and Biological Sciences Research Council, UK) and the NERC UK (Natural Environment Research Council, UK), the Wellcome Trust (UK)

Reviewer for the European Science Foundation - Call for Junior and Senior Research Projects of the Research Foundation Flanders (FWO).

Reviewer for the Royal Society of New Zealand, Marsden Research Fund, Ecology, Evolution and Behavior Panel.

Reviewer for the Deutsche Forschungsgemeinschaft (German Research Foundation)

Reviewer for the NRS (French National Science Research Centre) and Inserm (its medically oriented equivalent).

Reviewer for proposals to the M.J. Murdock Charitable Trust, Research and Science Grants Programs

Reviewer for the Canon National Parks Science Scholars Program for the Americas, graduate research in evolutionary ecology; a collaboration of the National Park Service, Canon U.S.A. and the American Association for the Advancement of Science.

External Reviewer for thesis, Department of Botany, University of Cape Town, South Africa.

Reviewer for the journals:

Evolution

Proceedings of the National Academy of Sciences of the USA

Systematic Biology

Proceedings of the Royal Society of London Series B,

Biological Journal of the Linnean Society

Journal of Biogeography

Marine and Freshwater Research

Current Biology

Nature Review Genetics

BMC Biology

Science

Trends in Ecology & Evolution

Genetics

Molecular Biology & Evolution

Molecular Phylogenetics & Evolution

Molecular Ecology

Annals of the Entomological Society

Organisms Diversity & Evolution

Journal of Heredity

PLoS Biology

Philosophical Transactions of the Royal Society of London

Journal of Evolutionary Biology  
Journal of Theoretical Biology  
American Journal of Botany  
American Naturalist

Trends in Genetics  
Bioinformatics  
Heredity

Invited commentary columnist for the online review of articles, Biomed Net, *Trends in Ecology and Evolution*, section Journal Club, August 2002 -2005, and the journal *Trends in Ecology and Evolution*, section Journal Club, August 2000 -2002.

Judge for the Society of Systematic Biology best graduate student presentation, 2008.

Contributor to the Tree of Life Project.

#### **MEMBERSHIP IN ACADEMIC SOCIETIES**

International Biogeography Society  
The Society for the Study of Evolution  
Society of Systematic Biologists  
Orthopterists' Society

#### **COURSES TAUGHT**

Biology of Sex (undergraduate non-majors)  
Insect biology  
Principles of Evolution (graduate and honors undergraduates)  
Evolution (undergraduates)  
Speciation and Sexual Selection Seminar

#### **ADVISEES**

##### *Postdoctoral Fellows*

Dr. Ricardo Marino Perez; current postdoc; 2019-present  
Dr. Arnaud Becheler; current postdoc; 2018-present  
Dr. Perry Wood; current postdoc; 2021-present  
Dr. Jessica Fender; postdoc; 2020-2021; now at CSIRO Australia  
Dr. Luciana Resende: now an Assist. Professor, Departamento de Botânica, Universidade Federal de Minas Gerais, Belo Horizonte, Brazil  
Dr. Jeet Sukumaran: now an Assist. Prof., Dept. Ecology and Evolution, San Diego State University  
Dr. Joyce Prado: now an Assistant Professor and Curator of Mammals, Universidade de São Paulo, São Paulo, Brazil  
Dr. Melisa Olave: now a postdoc at Universität Konstanz, Germany  
Dr. Katharine Marske: now an Assist. Prof. at University of Oklahoma  
Dr. Anna Papadopoulou: now an Assist. Prof. at University of Cyprus  
Dr. Marcelo Sturaro: 2015-2017; now an Assist. Prof. Universidade Federal de São Paulo  
Dr. Hayley Lanier: now an Assist. Prof. at University of Oklahoma  
Dr. Mark Christie: now an Assist. Prof. at Purdue University  
Dr. Dan Edwards: now an Assist. Prof. at University of California, Merced  
Dr. Jason Brown: now an Assist. Prof. at Southern Illinois University  
Dr. Pavel Klimov: now an Assoc. Research Scientist, University of Michigan  
Dr. Bryan Carstens: now a Prof. at The Ohio State University  
Dr. John McCormack: now an Assoc. Prof. at Occidental College, CA

Dr. Tatyana Fedina: now a Postdoctoral Fellow, Molecular and Integrative Physiology, Medical School at the University of Michigan

*International Ph.D. Students (as Co-supervisor)*

Mariana Viegas: current student, 2021-present; Computational Biology and Population Genomics Group, cE3c - Centre for Ecology Evolution and Environmental Changes, Departamento de Biologia Animal, Faculdade de Ciências, Universidade de Lisboa, Portugal

*Ph.D. Students*

Rachel Wadleigh: current student, 2017-present

Giorgianna Auteri: student, 2016-2022; now an Assistant Professor at Missouri State University

Andrea Thomaz: now a Postdoctoral Fellow, Biodiversity Center, University of British Columbia

Carlos Munoz: now an Associate Professor, Instituto de Entomología, Universidad Metropolitana de Ciencias de la Educación, Santiago, Chile

Tristan McKnight: now an Assist. Prof. of Practice, Entomology Dept, University of Arizona

Jen-Pan Huang: now a tenure-track Assistant Professor, Biodiversity Research Center, Academia Sinica, Taipei, Taiwan

Lucy Tran: now a Postdoctoral Fellow, UC Berkeley

Qixin He: Postdoctoral Fellow, the University of Chicago; now a Assist. Prof. Purdue Univ, IN

Rob Massatti: now an Evolutionary Geneticists Research Scientist with USGS, Flagstaff AZ

Diego Alvarado-Serrano: now an Assist. Professor at Ohio University

Huateng Huang: now a tenure-track Assistant Professor, College of life Science, Shaanxi Normal University

Tim Connallon: now an Assoc. Prof. at Monash University, Melbourne Australia

Corrine Richards-Zawacki: now an Assoc. Professor at University of Pittsburgh; Director of the Pymatuning Lab of Ecology

Elen Oneal: now Assist. Research Scientist at Duke University

Amanda Zellmer: now a Research Scientist at Occidental College, CA

*Committee member to:* Zachary Quirk (Dept Earth and Environmental Sciences); Daohan (Rex) Jiang, Teresa Pegan, Thomas Morgan, Anat Belasen, Jingchun Li (finished), Jordan Bemmels (finished), Wei-Chin Ho (finished), Thomas Jenkinson (finished), Celia Churchill (finished), Wenfeng Qian (finished), Mike Sheehan (finished), Heather Lerner (finished), Akane Uesugi (finished), Jess Peirson (finished), Joseph Brown (finished), Lucia Luna Wong (finished), Megan Shilts (finished), Mandy Izzo (finished), Holly Petrillo (finished: School of Natural Resources)

*External Ph.D. committee member:*

Mariana Viaga (2021-present), Centre for Ecology, Evolution and Environmental Changes, Departamento de Biologia Animal Faculdade de Ciências, Universidade de Lisboa;

Trevor Williams, Brigham Young University (2017-present); Cecilia Fiorini, Universidade Federal de Minas Gerais (2017-2020);

Renata M. Pirani, Instituto Nacional de Pesquisas da Amazônia (2017-2019; now a postdoctoral fellow, Instituto Nacional de Pesquisas da Amazônia)

*External PhD Referee:*

Trevor Williams, 2017-present, external committee member, BYU

Marc Manceau, 2018 (Stochastics & Biology Group Laboratoire de Probabilités & Modèles Aléatoires, UPMC Univ Paris, France)

Arnaud Becheler, 2018 (Laboratoire Evolution, Génomes, Comportement, Ecologie Pôle Evolution et Ecologie, Université Paris-Saclay, France)

*M.S. Students*

Mariah Kenney: finished 2018; now a laboratory technician U. Connecticut, Dr. Dan Bolnick lab

Kelsey Gibbons: finished 2011; now technician at UM Dental School

Sabrina Hepburn: finished 2006

*Undergraduate students*

Wonwoong Kim, undergraduate researcher, 2022-present

Adam Kuplicki, undergraduate researcher, 2020-present

Georgia Mies, undergraduate researcher, 2019-2022; now a PhD student at Univ. Pennsylvania

Olivia Ngo, undergraduate researcher, 2019-2022; now in Vet School at MSU

Sean Ooi, undergraduate researcher, 2017

Alyssa Meller, REU undergraduate research, 2016-2017

Lang DeLancey, undergraduate researcher, 2016

Natalie Greenhalgh, REU undergraduate researcher, 2015-2016.

Morgan Rondinelli, undergraduate research 2014-2015.

Benjamin Blanchard, undergraduate research 2010-2013 (now Ph.D. student University of Chicago).

Dan Swanson, undergraduate researcher and research assistant, 2008-2013 (now in Ph.D. program University of Illinois)

Lizette Ramirez, undergraduate research 2010-2012 (completed Masters Frontiers program at UM, Department of Ecology and Evolutionary Biology)

Levi Moris, undergraduate research 2011-2012 (joined research team coordinating research on gelatas in Ethiopia with UM researchers, Dr. Bergmann and Dr. Beehner).

Kandice Karll (Andrian College), undergraduate research 2010-2011

Kevin Gabelman, undergraduate research 2010-2011(consultant working for environmental company).

Priscilla Hernandez (University of Puerto Rico) undergraduate research 2009 NSF REU.

Kassandra Semrau, undergraduate research 2009 NSF REU (completed MS at University of Michigan, now a Outreach Coordinator for Parks and Rec)

James Rivard, undergraduate research 2009 NSF REU.

Ariel Heldt, undergraduate research 2007, 2008 NSF REU.

Daphne Lambropoulos, undergraduate research 2008 NSF REU (University of Michigan medical school)

Christina Sillaman, undergraduate and postbaccalarate research, 2008-10 (Ph.D. program at the University of Illinois)

E.J. Hortsman, Katie Behrmann, and Riley O'Hara, undergraduate research 2008.

Lisa Marten, undergraduate research 2007 NSF REU (MPA and MSES at Indiana University in the School of Public and Environmental Affairs).

Kathleen Bachynski, undergraduate research 2006 NSF REU (School of Public Health graduate program University of Michigan)

Yat Hei (Bernard) Chan, undergraduate research 2005-2006.

Marcía Keat, Undergraduate research, 2005-06, 2005 NSF REU.

Honors advisor to: Thomas Chappel, 2004 (Ph.D. graduate program of Duke University)

Ruben Omar Lastra (U. of Puerto Rico) SROP (sponsored by Rackham Graduate School and the Genome Training Grant, Human Genetics Program), 2004 (now graduate student at Northwestern)

*Visiting researchers and students:*

- Dr. Alison Gonvales Naraveno, 2019-2021, Departamento de Genetica, Universidade Federal de Minas Gerais, Belo Horizonte, Brazil
- Leiton Luna, 2019-2020, Federal University of Para, Emilio Goeldi Museum, Belem, Brazil
- Edgardo Rengifo, 2019-2010, Mestra em Ciências- Universidade de São Paulo, São Paulo, Brazil
- Silvia Britto Barreto, 2017-2018, Institute of Biology, Federal University of Bahia (UFBA), Brazil
- Dr. Tao Wan, 2017-2019, Mammal Ecology and Evolution Group, State Key Lab of Genetic Resources and Evolution, Kunming Institute of Zoology, Chinese Academy of Sciences
- Jeronymo Dalapicolla, 2017-2018, Mestra em Ciências- Universidade de São Paulo, São Paulo, Brazil
- Cecilia Fiorini, 2018-2019, Departamento de Botanica, Universidade Federal de Minas Gerais, Belo Horizonte, Brazil
- Dr. Sarp Kaya, 2016-2018, Akdeniz University Faculty of Science, Turkey
- Heraldo Norambuena, 2016, Santiago, Chile
- Renata Pirani, 2016-2017, Instituto Nacional de Pesquisas da Amazônia (INPA), Manaus, Brazil
- Joyce Rodrigues do Prado, 2015, Mestra em Ciências- Universidade de São Paulo, São Paulo, Brazil
- Karina Amaral, 2015, Universidade Federal do Rio Grande do Sul, Campus do Vale, Instituto de Biociências, Departamento de Zoologia e PPG em Biologia Animal, Porto Alegre, RS, Brasil
- Luciana Resende, 2015, Departamento de Biologia Geral, Universidade Federal de Minas Gerais, , Belo Horizonte, Brazil
- Juliana Mariani Wingert, 2014, Universidade Federal do Rio Grande do Sul, Campus do Vale, Instituto de Biociências, Departamento de Zoologia e PPG em Biologia Animal, Porto Alegre, RS, Brasil
- Dr. Ma Libin, 2014-2016, School of Life Sciences, Northeast Normal University, China
- Dr. Marcelo Sturaro, 2013-2014, Museu Paraense Emílio Goeldi/CZO, Belém, Brazil
- Victor Noguerales Rodriguez, 2014, Instituto de Investigación en Recursos Cinegéticos - IREC (CSIC-UCLM-JCCM), Madrid, Spain
- Dr. Joaquín Ortego, 2014, Instituto de Investigación en Recursos Cinegéticos (CSIC-UCLM-JCCM), Ciudad Real, Spain
- Melisa Olave, 2013, Centro Nacional Patagónico – Consejo Nacional de Investigaciones Científicas y Técnicas (CENPAT-CONICET), Puerto Madryn, Argentina
- Eduard Solá, 2013, Department de Genètica, Facultat de Biologia and Institut de Recerca de la Biodiversitat (IRBio), Universitat de Barcelona, Barcelona, Catalonia, Spain
- Dr. Guo-Fang Jiang, 2012-2014, College of Life Sciences, Nanjing Normal University, China
- Dr. Riashna Sithaldeen, 2012, Cape Town, South Africa
- Dr. Shengquan Xu, 2007-2008, Institute of Zoology, Life Science College, Shaanxi Normal University, China

**PROFESSIONAL REFERENCES**

- Dr. Douglas Futuyma, Distinguished Professor, Department of Ecology and Evolution, Stony Brook University, Stony Brook, NY 11794-5245, phone: (631) 632-1411, e-mail: [futuyma@life.bio.sunysb.edu](mailto:futuyma@life.bio.sunysb.edu)
- Dr. Wayne Maddison, Professor & Canada Research Chair, Department of Zoology & Botany, University of British Columbia, Vancouver, B.C., Canada, V6T 1Z4, phone: (604) 822-1545, e-mail: [wmaddisn@interchange.ubc.ca](mailto:wmaddisn@interchange.ubc.ca)

Dr. Craig Moritz, Professor and ARC Laureate Fellow, Research School of biology, Building 116,  
The Australian National University, Acton, ACT 0200, phone: 61255651, e-mail:  
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Dr. Daniel Otte, Curator, Department of Entomology, Academy of Natural Sciences, Philadelphia,  
PA 9193, phone: (215) 299-1188, e-mail: [otte@say.acnatsci.org](mailto:otte@say.acnatsci.org)