Last Updated September 30, 2022

Contact Information
School of Life Sciences
University of Hawai'i at Mānoa
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Professional Appointments

Professor August 2022—Present
School of Life Sciences, College of Natural Sciences
University of Hawai'i at Mānoa

Associate Director for Research January 2021—Present
School of Life Sciences, College of Natural Sciences
University of Hawai'i at Mānoa

Graduate Program Chair September 2020—Present
Ecology, Evolution, and Conservation Biology
University of Hawai'i at Mānoa

Associate Chair for Curriculum (interim) August 2019—December 2019
Department of Biology, College of Natural Sciences
University of Hawai'i at Mānoa

Associate Professor August 2017—July 2022
Department of Biology, College of Natural Sciences
University of Hawai'i at Mānoa

Graduate Faculty May 2012—Present
Ecology, Evolution and Conservation Biology Graduate Program
University of Hawai'i at Mānoa

Graduate Faculty January 2012—Present
Zoology Graduate Program
University of Hawai'i at Mānoa

Assistant Professor January 2012—July 2017
Department of Biology, College of Natural Sciences
University of Hawai'i at Mānoa

Postdoctoral Researcher October 2010—December 2011
Department of Evolution and Ecology
University of California, Davis

Education

Ph.D., Population Biology — September 2010
University of California, Davis

B.S. with High Honors, Biology — May 2004
Rochester Institute of Technology

Publications Submitted or In Press

58. Wishingrad, V, **RC Thomson**. *in review*. Biogeographic inferences across spatial and evolutionary scales. *Molecular Ecology*

57. Fabreti LG, LM Coghill, **RC Thomson**, S Höhna, JM Brown. *accepted*. The Expected Behavior of Posterior Predictive Tests and its Unexpected Interpretation. *Molecular Biology and Evolution*

56. Wishingrad V, **RC Thomson**. *in revision*. Testing concordance and conflict in spatial replication of landscape genetics inferences. *Molecular Ecology*

55. Wishingrad V, **RC Thomson**. *in press*. Temperate zone climate and population genetic structure: an extension of Janzen's 1967 hypothesis. *The American Naturalist*.

Publications

54. Barley AJ, A Nieto-Montes de Oca, NL Manriquez-Moran, **RC Thomson**. 2022. The evolutionary network of whiptail lizards reveals predictable outcomes of hybridization. *Science*. 377: 773-777

53. Parks R, SM Harrington, **RC Thomson**. *in press*. Divergence dating and biogeography of Xenosauridae including fossils as terminal taxa. *Journal of Herpetology*. 56:349-354

52. **Thomson RC**, JM Brown. 2022. On the Need for New Measures of Phylogenomic Support. *Systematic Biology*. 71:917-920

51. Barley AJ, JE Cordes, JM Walker, **RC Thomson**. 2022. Genetic diversity and the origins of parthenogenesis in the teiid lizard *Aspidoscelis laredoensis*. *Molecular Ecology*. 31: 266-278

50. Barley A, TW Reeder, A Nieto-Montes de Oca, CJ Cole, **RC Thomson**. 2021. A new diploid parthenogenetic whiptail lizard from Sonora, Mexico is the 'missing link' in the evolutionary transition to polyploidy. *The American Naturalist*. 198:295-309

49. Ennen, J, M Agha, S Hazzard, W Matamoros, J Lovich, A Rhodin, J Iverson, **RC Thomson**, B Shaffer, C Hoagstrom. 2021. A watershed moment: focusing in on sub-basins to focus the geography of turtle conservation across the globe. *Biological Conservation*. 253: 108925

48. **RC Thomson**, PQ Spinks, HB Shaffer. 2021. A global phylogeny of turtles reveals a burst of climate-associated diversification on continental margins. *Proceedings of the National Academy of Sciences, USA*. 118(7): e2012215118

47. Harrington SM, V Wishingrad, **RC Thomson**. 2021. Properties of Markov Chain Monte Carlo performance across many empirical alignments. *Molecular Biology and Evolution*. 38: 1627-1640

46. Wishingrad V, **RC Thomson**. 2020. Ecological variability is associated with functional trait diversity in the western fence lizard (*Sceloporus occidentalis*). *Biological Journal of the Linnean Society*. 129: 414-424

45. Hime PM, AR Lemmon, EC Moriarty Lemmon, E Prendini, JM Brown, **RC Thomson**, JD Kratovil, BP Noonan, RA Pyron, PLV Peloso, ML Kortyna, JS Keogh, SC Donnellan, RL Mueller, CJ Raxworthy, K Kunte, SR Ron, S Das, N Gaitonde, DM Green, J Labisko, J Che, and DW Weisrock. 2021. Phylogenomics Reveals Ancient Gene Tree Discordance in the Amphibian Tree of Life. *Systematic Biology*. 70: 49-66

44. Campillo LC, Barley AJ, **Thomson RC**. 2019. Model-based species delimitation: are coalescent species reproductively isolated? *Systematic Biology*. 69: 708-721.

43. Pauly GB, Shaulsky MC, Barley AJ, Kennedy-Gold S, Stewart S, Keeney S, **Thomson RC**. 2020. Morphological Change during Rapid Population Expansion Confounds Leopard Frog Identifications in the Southwestern United States. *Copeia*. 108: 299-308.

42. Campillo LC, JD Manthey, **RC Thomson**, PA Hosner, RG Moyle. 2020. Genomic differentiation in an endemic Philippine genus (Aves: *Sarcophanops*) due to geographic isolation on recently disassociated islands. *Biological Journal of the Linnean Society*. 131: 814-821.

41. Barley AJ, A Nieto-Montes de Oca, TW Reeder, NW Manríquez-Morán, JC Arenas Monroy, O Gallegos Hernández, **RC Thomson**. 2019. Complex patterns of hybridization and introgression across evolutionary timescales in Mexican whiptail lizards. *Molecular Phylogenetics and Evolution*. 132: 284-295.

40. Gray, LN, AJ Barley, S Poe, **RC Thomson**, A Nieto-Montes de Oca, IJ Wang. 2019. Phylogeography of a widespread lizard complex reflects patterns of both geographic and ecological isolation. *Molecular Ecology*. 28: 644-657.

39. Riggs RA, AD Taylor, **RC Thomson**, RH Cowie. 2019. Sexual Dimorphism and Seasonal Variability of Shield Size in the Endangered Hawaiian Coot, *Fulica alai*. *Waterbirds*. 42: 70-77.

38. Brown JM, **RC Thomson**. 2018. Evaluating Model Performance in Evolutionary Biology. *Annual Review of Ecology, Evolution, and Systematics*. 49: 95-114

37. Vinnikov KA, **RC Thomson**, TA Munroe. 2018. Revised classification of the Righteye Flounders (Teleostei: Pleuronectidae) based on multilocus phylogeny with complete taxon sampling. *Molecular Phylogenetics and Evolution*. 125: 147-162

36. Richards, EM, JM Brown, AJ Barley, RA Chong, **RC Thomson**. 2018. Unexpected variation across mitochondrial gene trees and evidence for systematic error: How much gene tree variation is biological? *Systematic Biology*. 67: 847-860

35. Höhna S, LM Coghill, GG Mount, **RC Thomson**, JM Brown. 2018. P^3: Phylogenetic posterior prediction in RevBayes. *Molecular Biology and Evolution*. 35: 1028-1034

34. Brown JM, **RC Thomson**. 2018. The behavior of Metropolis-coupled Markov chains when sampling rugged (phylogenetic) distributions. *Systematic Biology*. 67: 729-734

33. Barley AJ, JM Brown, **RC Thomson**. 2018. Impact of model violations on the inference of species boundaries under the multispecies coalescent. *Systematic Biology*. 67: 269-284

32. **RC Thomson**, PQ Spinks, HB Shaffer. 2018. Molecular phylogeny and divergence of the Map Turtles (Emydidae: *Graptemys*). *Molecular Phylogenetics and Evolution*. 121: 61-70.

31. Brown JM, **RC Thomson**. 2017. Bayes factors unmask highly variable information content, bias, and extreme influence in phylogenomic analyses. *Systematic Biology*. 66: 517-530.

30. Nieto-Montes de Oca A, AJ Barley, RN Meza-Lázaro, UO García-Vázquez, JG Zamora-Abrego, **RC Thomson**, AD Leaché. 2017. Phylogenomics and species delimitation in the knob-scaled lizards of the genus *Xenosaurus* (Squamata: Xenosauridae) using ddRADseq data reveal a substantial under-estimation of diversity. *Molecular Phylogenetics and Evolution*. 106: 241-253

29. Barley AJ, **RC Thomson**. 2016. Assessing the performance of DNA barcoding using posterior predictive simulations. *Molecular Ecology*. 25:1930-1943

28. Spinks PQ, **RC Thomson**, E McCartney-Melstad, HB Shaffer. 2016. Phylogeny and temporal diversification of the New World pond turtles (Emydidae). *Molecular Phylogenetics and Evolution*. 103:85-97

27. Dong CM, TN Engstrom, **RC Thomson**. 2016. Origins of softshell turtles in Hawaii with considerations for conservation. *Conservation Genetics*. 17:207-220

26. Barley AJ, PJ Monnahan, **RC Thomson**, LL Grismer, RM Brown. 2015. Sun skink landscape genomics: assessing how microevolutionary processes shape genetic and morphological diversity across a heterogeneous and fragmented landscape. *Molecular Ecology*. 24:1696-1712

25. **Thomson RC**, DC Plachetzki, DL Mahler, BR Moore. 2014. A critical appraisal of the use of microRNA data in phylogenetics. *Proceedings of the National Academy of Sciences, USA*. 111:E3659-E3668

24. Long EC, **RC Thomson**, AM Shapiro. 2014. A time-calibrated phylogeny of the butterfly tribe Melitaeini. *Molecular Phylogenetics and Evolution.* 79:69-81

23. Spinks PQ, **RC Thomson**, M Gidis, HB Shaffer. 2014. Multilocus phylogeny of the new-world mud turtles (Kinosternidae) supports the traditional classification of the group. *Molecular Phylogenetics and Evolution.* 76:254-260

22. Spinks PQ, **RC Thomson**, HB Shaffer. 2014. The advantages of going large: genome-wide SNPs clarify the complex population history and systematics of the threatened western pond turtle. *Molecular Ecology.* 23:2228-2241

21. Shaffer HB, P Minx, DE Warren, AM Shedlock, **RC Thomson**, N Valenzuela, J Abramyan, D Badenhorst, KK Biggar, GM Borchert, CW Botka, RM Bowden, EL Braun, AM Bronikowski, BG Bruneau, LT Buck, B Capel, TA Castoe, M Czerwinski, KD Delehaunty, SV Edwards, CC Fronick, MK Fujita, L Fulton, TA Graves, RE Green, W Haerty, R Hariharan, LW Hillier, AK Holloway, D Janes, FJ Janzen, C Kandoth, L Kong, APJ de Koning, Y Li, R Literman, SE McGaugh, L Mork, M O'Laughlin, RT Paitz, DD Pollock, CP Ponting, S Radhakrishnan, BJ Raney, JM Richman, J St. John, T Schwartz, A Sethuraman, PQ Spinks, KB Storey, N Thane, T Vinar, LM Zimmerman, WC Warren, ER Mardis, and RK Wilson. 2013. The western painted turtle genome, a model for the evolution of extreme physiological adaptations in a slowly evolving lineage. *Genome Biology.* 14: R28

20. Spinks PQ, **RC Thomson**, GB Pauly, CE Newman, G. Mount, HB Shaffer. 2013. Misleading phylogenetic inferences based on single-exemplar sampling in the turtle genus *Pseudemys*. *Molecular Phylogenetics and Evolution.* 68:269-281

19. Lambert MR, SN Nielsen, AN Wright, **RC Thomson**, HB Shaffer. 2013. Microhabitat characteristics favor introduced red-eared sliders over threatened western pond turtles in a human-dominated landscape. *Chelonian Conservation and Biology.* 12: 192-199

18. Spinks PQ, **RC Thomson**, Y Zhang, J Che, Y Wu, HB Shaffer. 2012. Species boundaries and phylogenetic relationships in the critically endangered Asian box turtle genus *Cuora*. *Molecular Phylogenetics and Evolution.* 63: 656-667

17. Spinks PQ, **RC Thomson**, B Hughes, B Moxley, RM Brown, A Deismos, HB Shaffer. 2012. Cryptic variation and the tragedy of unrecognized taxa: the case of international trade in the spiny turtle *Heosemys spinosa* (Testudines: Geoemydidae). *Zoological journal of the Linnean Society.* 164: 811-824

16. Holzman R, DC Collar, SA Price, CD Hulsey, **RC Thomson**, PC Wainwright. 2012. Biomechanical trade-offs bias rates of evolution in the feeding apparatus of fishes. *Proceedings of the Royal Society – Series B.* 279: 1287-1292

15. Johnson JR, **RC Thomson**, SJ Micheletti, HB Shaffer. 2011. The origin of tiger salamander populations in California: Introductions or relicts? *Conservation Genetics*. 12: 355-370

14. **Thomson RC**, PQ Spinks HB Shaffer. 2010. Distribution and abundance of exotic red-eared sliders (*Trachemys scripta elegans*) in California's Sacramento River basin and possible impacts on native western pond turtles (*Emys marmorata*). *Chelonian Conservation and Biology*. 9: 297-302

13. **Thomson RC**, HB Shaffer. 2010. Rapid progress on the vertebrate tree of life. *BMC Biology*. 8: 19

12. **Thomson RC**, IJ Wang, JR Johnson. 2010. *Invited Review:* Genome-enabled development of molecular markers for ecology, evolution, and conservation. *Molecular Ecology*. 19: 2184-2195

11. Spinks PQ, **RC Thomson**, AJ Barley, HB Shaffer. 2010. Testing avian, squamate, and mammalian nuclear markers for cross amplification in turtles. *Conservation Genetics Resources*. 2:127–129

10. Barley AJ, PQ Spinks, **RC Thomson**, HB Shaffer. 2010. Fourteen nuclear genes provide phylogenetic resolution for difficult nodes in the turtle tree of life. *Molecular Phylogenetics and Evolution*. 55: 1189-1194

9. **Thomson RC**, HB Shaffer. 2010. Sparse Supermatrices for Phylogenetic Inference: Taxonomy, Alignment, Rogue Taxa, and the Phylogeny of Living Turtles. *Systematic Biology*. 59: 42-58

8. Spinks PQ, **RC Thomson**, HB Shaffer. 2010. Nuclear gene phylogeography reveals the historical legacy of an ancient inland sea on lineages of the western pond turtle, *Emys marmorata* in California. *Molecular Ecology*. 19: 542-556

7. **Thomson RC**. 2009. PhyLIS: a simple Gnu/Linux distribution for phylogenetics and phyloinformatics. *Evolutionary Bioinformatics*. 5: 91-95

6. Spinks PQ, **RC Thomson**, GA Lovely and HB Shaffer. 2009. Assessing what is needed to resolve a molecular phylogeny: simulations and empirical data from emydid turtles. *BMC Evolutionary Biology*. 9: 56

5. Spinks PQ, **RC Thomson**, HB Shaffer. 2009. A reassessment of *Cuora cyclornata* Blanck, McCord and Le, 2006 (Testudines, Geoemydidae) and a plea for taxonomic stability. *Zootaxa*. 2018: 58-68

4. **Thomson RC**, AM Shedlock, SV Edwards, HB Shaffer. 2008. Developing markers for multilocus phylogenetics in non-model organisms: a test case with turtles. *Molecular Phylogenetics and Evolution*. 49: 514-525

3. Iverson JB, RM Brown, TS Akre, TJ Near, M Le, **RC Thomson**, DE Starkey. 2007. In search of the tree of life for turtles. in Defining Turtle Diversity: Proceedings of a workshop on genetics, ethics, and taxonomy for tortoises and freshwater turtles. HB Shaffer, NN Fitzsimmons, A Georges, AGJ Rhodin , Eds. *Chelonian Research Monographs* 4: 85-106

2. Shaffer HB and **RC Thomson**. 2007. Delimiting species in recent radiations. *Systematic Biology* 56: 896-906

BOOKS

1. **Thomson RC**, AN Wright, HB Shaffer. 2016. California amphibian and reptile species of special concern. *University of California Press.* Oakland, CA. 390 p.

OTHER PUBLICATIONS

Thomson RC. Here be (Gila) monsters. Desert Oracle. Spring 2016: 17-19

GRANTS

2022 University of Hawaii Undergraduate Research Opportunities Program: Faculty Mentoring Grant: Determining the provenance and conservation needs of extralimital six-lined racerunner lizards using genetics. $5,000.

2021-2023 Ocean Park Conservation Foundation, Hong Kong: Assessing the genetic diversity and ecological role of the endangered wattle-necked softshell turtle (*Palea steindachneri*) through the study of remnant populations. (PI: Jonathan Fong, Co-PIs: Yik-Hei Sung, Duc Minh Le, Robert Thomson). HK$297,700 (approx. $38,234 US)

2020-2022 NSF OPUS: CRS: Collaborative Research: A Synthetic View of Evolutionary Heterogeneity and the Tree of Life (PI: Robert Thomson, PI: Jeremy Brown). $215,223

2020-2021 Extreme Science and Engineering Discovery Environment (XSEDE) DEB190017: Computational tools for understanding systematics, hybridization, incomplete coalescence, and sex system reversal in whiptail lizards. (PI: Robert Thomson, Co-PI: Anthony Barley). 7,639,010 Service Units, 1.12 TB storage (XSEDE-calculated value $398,910)

2018-2021 NSF DEB Collaborative Research: Species delimitation, hybridization and the origin of parthenogenesis in Whiptail lizards (Aspidoscelis) (PI: Robert Thomson, Co-PI: Tod Reeder). $752,179

2015-2018 Arnold and Mabel Beckman Foundation Postdoctoral Fellowship (Postdoctoral Fellow: Anthony Barley, Mentor: Robert Thomson) $184,172

2014-2017 NSF DBI Collaborative Research: ABI Innovation: A Bayesian Evolutionary Tree Analysis Database (PI: Brian Moore, PI: Robert Thomson). $549,728

2014-2017 NSF DEB Collaborative Research: Bayesian model checking for phylogenetics in the post-genomic era (PI: Jeremy Brown, Co-PI: Robert Thomson). $600,208

2008 California Department of Fish and Game "Determining Management Units for the Western Pond Turtle (*Emys marmorata*)" $118,575
(Senior Investigator with HB Shaffer and PQ Spinks)

2008 California Department of Fish and Game "Amphibian and Reptile Species of Special Concern in California" $96,297
(Senior Investigator with HB Shaffer)

2008 UC Davis graduate student award in engineering and computer science $8,106

2008 UC Davis Biological invasions NSF IGERT research award "The impact of exotic turtles on an endangered native: Melding research and education" $500

2007 Society of Systematic Biologists Graduate Student Award "Genomic perspective on systematics of the map turtles (*Graptemys*)" $1,650

2007 NSF DEB Doctoral Dissertation Improvement Grant: Systematics of rapid radiations: New approaches in the post-genomic age. $12,000

2005-2007 UC Davis competitive grants in support of research and travel, 6 awards $5,025 total

2003 Rochester Academy of Science undergraduate research grant $500

Awards & Honors

2015 University of Hawaii Regent's Medal For Excellence in Research

2010 UC Davis Merton Love Award for Outstanding Dissertation in Evolution and Ecology

2004 Rochester Institute of Technology Baldwin Award for Outstanding Undergraduate in the Life Sciences

Invited Seminars & Symposia

Times Higher Education Teaching Excellence Summit November 2021

Panel Discussion "Innovation in STEM Education: Lessons from the past year"

Association of Pacific Rim Universities October 2020

Panel Discussion "STEM Education across the APRU Network: Shaping Learning Experiences for Students"

Evolution Conference June 2019

Society of Systematic Biology Spotlight "The Bright Side of Phylogenetics"

Evolution Conference June 2017

Society of Systematic Biology Spotlight "Uncertainty in the face of strong support: new approaches and examples in the identification of signal, noise, and conflict in phylogenetic datasets"

Hawaii Institute of Marine Biology February 2017

Symposium on Conservation Genetics

Louisiana State University Museum of Natural Science September 2016

Society for Study of Amphibians and Reptiles July 2015

Symposium "Frontiers in Integrative Organismal Biology: Herpetological Horizons"

Hawaii Institute of Marine Biology — October 2012

University of Hawaii. Department of Biology — March 2011

University of New Mexico. Department of Biology — October 2010

Merton Love Award Seminar. UC Davis — June 2010

Evolution Conference — June 2009

Symposium "Ernst Mayr Student Research Symposium"

CSU, Chico. Department of Biological Sciences — October 2008

Society for Integrative and Comparative Biology — January 2008

Symposium: "Reptile genomics and evolutionary genetics"

Powdermill freshwater turtle conference — August 2006

Evolution Conference — June 2006

Symposium: "Species delimitation: new approaches for discovering diversity"

Museum of Comparative Zoology, Harvard University — August 2005

Symposium: "Defining Turtle Diversity"

Contributed Presentations & Posters (last 10 years only)

Alvarez V, **RC Thomson**. Lizards in paradise: How the brown anole made its way to Hawai'i and Southern California. 2022 Joint Meeting of Icthyologists and Herpetologists.

Barley AJ, A Nieto-Montes de Oca, NL Manriquez-Moran, **RC Thomson**. Species boundaries and pervasive gene flow in the spotted whiptail lizards (*Aspidoscelis gularis* complex). 2022 Joint Meeting of Icthyologists and Herpetologists - Biology of Whiptails Symposium.

Barley AJ, A Nieto-Montes de Oca, NL Manriquez-Moran, **RC Thomson**. The evolutionary network of whiptail lizards reveals predictable outcomes of hybridization. 2022 Joint Meeting of Icthyologists and Herpetologists - Biology of Whiptails Symposium.

Alvarez V, S Fisher, Aj Barley, RN Fisher, **RC Thomson**. Hawaii's only native land reptile may be in need of conservation. 2022 Hawaii Conservation Conference.

Fabreti LG, LM Coghill, **RC Thomson**, S Höhna, JM Brown. Posterior predictive tests have surprising behavior, but reveal important idiosyncratic patterns of molecular evolution. 2022 Evolution.

RC Thomson. Reptiles and Amphibians of O'ahu. 2022 City Nature Challenge at the Bishop Museum.

RC Thomson. A Global Phylogeny of Turtles Reveals a Burst of Climate-associated Diversification on Continental Margins. 2020 Turtle Survival Alliance.

LC Campillo, E VanderWerf, **RC Thomson**. Population genomics of an endemic Hawaiian bird and the effect of habitat fragmentation on 'elepaio demography. Poster. 2019 Evolution.

V Wishingrad, **RC Thomson**. Spatial scale and gene flow in landscape genetics processes. 2019 Evolution.

RC Thomson, JM Brown, R Lanfear. How should we assess support in phylogenomic studies? Panel Discussion. 2019 Evolution.

S Harrington, **RC Thomson**. Patterns of phylogenetic MCMC convergence across empirical datasets. 2019 Evolution.

AJ Barley, **RC Thomson**, A Nieto Montes de Oca, N Manríquez Morán. Reconstructing patterns of hybridization and the origins of parthenogenesis in whiptail lizards (Aspidoscelis). 2019 Evolution.

JM Brown, **RC Thomson**, L Coghill, A Schoonmaker, L Rodriguez. The role of model testing and evaluation in phylogenomics. 2019 Evolution.

S Harrington, R Parks, **RC Thomson**. Tip-dated phylogenetics and biogeography of Xenosaurus. 2019 JMIH.

V Wishingrad, **RC Thomson**. Sceloporus occidentalis lizard landscape genetics in the Sierra Nevada mountain range. 2019 JMIH.

RC Thomson. Detecting causes of conflict in phylogenomic datasets. Phylogenetics and Math Symposium, University of Hawaii

Shaffer HB, **RC Thomson**, J Vu. A global phylogeny of turtles and how it informs conservation planning. 2017 Evolution

Campillo LC, AJ Barley, **RC Thomson**. Using a classic speciation data set to test coalescent methods for species delimitation. 2017 Evolution

Coghill L, A Schoonmaker, L Rodriguez, **RC Thomson**, JM Brown. The effect of heterotachy on phylogenomics. 2017 Evolution

Barley AJ, A Nieto-Montes de Oca, **RC Thomson**. Elucidating the evolutionary history of Mexican whiptail lizards. 2017 Evolution

Kliman RM, LS Maroja, SA Price, JJ Smith, **RC Thomson**. EvoED Digital Library: SSE's education resource. Poster. 2016 Evolution

Brown JM, **RC Thomson**. Climbing peaks and crossing valleys: Metropolis coupling and rugged phylogenetic distributions. 2016 Evolution

Hime P, +21 co-authors. Phylogenomics of Amphibia and the Nature of Support and Signal in Big Data Sets. 2016 Evolution

Coghill LM, Brown JM, **RC Thomson**. Big data and outlier loci: A cautionary tale with genome-scale phylogenetic data. 2016 Evolution

Barley AJ, **RC Thomson**. Species delimitation's new conceptual roots. 2016 Evolution

Richards EJ, AJ Barley, JM Brown, RA Chong, **RC Thomson**. An empirical assessment of model performance tests in phylogenetics. 2016 Evolution

Thomson RC, PQ Spinks, HB Shaffer, AJ Barley. Phylogeny of the Map Turtles (*Graptemys*). 2016 Joint Meeting of Icthyologists and Herpetologists

Wishingrad V, AJ Barley, **RC Thomson**, AN Wright. Evidence-based threat assessment: lessons from California herpetofauna. Poster. 2016 Joint Meeting of Icthyologists and Herpetologists

Nieto-Montes de Oca, A, AJ Barley, RN Meza-Lázaro, UO García-Vázquez, JG Zamora-Abrego, **RC Thomson**, AD Leaché. Phylogenomics of the knob-scaled lizards (*Xenosaurus*). 2016 Joint Meeting of Icthyologists and Herpetologists

AN Wright, GB Pauly, AJ Barley, **RC Thomson**. Historical Resurveys of Lizard Communities in the Mojave Desert. 2016 Joint Meeting of Icthyologists and Herpetologists

Dong CM, T Engstrom, **RC Thomson**. Origins of softshell turtles in Hawaii with considerations for conservation. 2015 Society for Study of Amphibians and Reptiles

Brown JM, **RC Thomson**. Comparing the amount and quality of information from different phylogenomic sequencing strategies: a case study with amniotes. 2015 Evolution

Barley AJ, **RC Thomson**. Substitution models and genetic distances: posterior predictive assessments of model adequacy in DNA barcoding. 2015 Evolution

Spinks PQ, **RC Thomson**, HB Shaffer. Turtles of the World: Global Systematics for an Imperiled Clade. 2013 Turtle Survival Alliance

Thomson RC, DC Plachetzki, DL Mahler, BR Moore. Estimating phylogeny from microRNA data: a critical appraisal. 2013 Evolution

Shaffer HB, J Abramyan, P Minx, **RC Thomson**. The first turtle genome. 2013 JMIH

Brown JM, **RC Thomson**. Genomic data reveal widespread uncertainty and variation in the phylogenetic placement of turtles. Poster. 2013 Society for Molecular Biology and Evolution

Teaching

Instructor

ZOOL780 & ZOOL781 alternate years, Spring 2015—Present
Foundations of Evolution and Ecology I & II

BOT/ZOOL670 alternate years, Spring 2014—Present; Fall 2020
Scientific Teaching Tools for Active Learning

ZOOL690 Fall 2021
Conservation Biology

ZOOL750 Fall 2019
Models and Inference in Conservation

ZOOL480 every Spring, 2012—2019
Evolutionary Biology

ZOOL171 Fall 2018
Introductory Biology

ZOOL691B (seminar) Fall 2017, Fall 2018, Spring 2021, Spring 2022, Fall 2022
Phylogenetics and Speciation

ZOOL691B (seminar) Fall 2015
Bioinformatics Data Skills

ZOOL691B (seminar) Spring 2013
Statistical Phylogenetics: Problems, Prospects and Practice

Workshop Instruction

Workshop in Phylogenomics (instructor and organizer) 2020
Transmitting Science Course (Online)

Workshop in Phylogenomics (instructor and organizer) 2019
Transmitting Science Course in Valencia, Spain

Workshop in Applied Phylogenetics 2007—2015, 2017, 2019
Held at Bodega Marine Lab, Bodega Bay, CA

Phylogenomics workshop for Edwin W. Pauley Program 2013
Held at Hawaii Institute for Marine Biology, Kaneohe, HI

Workshop in High Performance Computing for Phylogenetics 2010
Held at NIMBioS, Knoxville, TN

Service

Editing and reviews

Associate Editor, Systematic Biology 2017—Present
Editorial Board, Horizons (UH undergrad research journal) 2020—Present
Editorial Board, Frontiers in Ecology and Evolution 2021—2022

Editorial Board, SSE EvoEd Digital Library 2016—2019

Reviewer for Journals
Aquatic Invasions, Asian Herpetological Research, Biological Conservation, Biology Letters, BMC Bioinformatics, Briefings in Bioinformatics, Chelonian Conservation & Biology, Conservation Biology, Conservation Genetics, Conservation Genetics Resources, Diversity and Distributions, Ecology, Ecology and Evolution, Endangered Species Research, Frontiers in Ecology and Evolution, Herpetologica, Herpetological Review, Journal of Evolutionary Biology, Journal of Herpetology, Journal of Molecular Evolution, Methods in Ecology and Evolution, Molecular Ecology, Molecular Ecology Resources, Molecular Phylogenetics & Evolution, Northwestern Naturalist, Organisms: Diversity & Evolution, Phyllomedusa, PLoS One, Proceedings of the Royal Society B, Systematic Biology, Zoology

Reviewer for agencies, funders, and other organizations
Austrian Science Fund, California Department of Fish & Wildlife, Marsden Fund (Royal Society of New Zealand), Research Committee of Lingnan University (Hong Kong), Swiss National Science Foundation, US National Science Foundation, University of California Press, US Fish & Wildlife Service

Symposia and Event Organization

*The Biology of Whiptail Lizards (*Aspidoscelis*)* 2022
Joint Meeting of Icthyologists and Herpetologists in Spokane, WA

City Nature Challenge at the Bishop Museum 2022
Public presentations and Bioblitz, Honolulu, HI

New Measures of Phylogenetic Support for the Genomic Era 2019
Society of Systematic Biologists symposium at Evolution Conference in Providence, RI

Phylogenetics and Math 2019
UH Special Symposium ahead of American Mathematical Society regional meeting in Honolulu

Comparing phylogenetic trees: Why and How? 2018
Symposium at Evolution Conference in Montpellier, France

Tester Symposium Planning, UHM Biology 2013—2015

Community and Outreach

Society of Systematic Biologists Council (elected) 2023—2025
UH DEI Search Advocate Program 2021
UH SoLS Faculty Mentoring (two junior faculty mentees) 2020
Lead Organizer, City Nature Challenge Oahu 2020—present

Interview, The Guardian Science Weekly Podcast	2021
Expert Advice for news outlets and writers	2014, 2015, 2017, 2020
Editor, TreeThinkers blog	2013—2018
Scientist Participant, Honolulu Museum of Art School, ARTSCI	2016
Event Coordinator, California State Science Olympiad	2009
Web Admin, Bodega Bay Phylogenetics Wiki	2008—2013
Protocol Author, RIT Center for Bioscience Edu. and Tech.	2004
Team Leader, Great Lakes Basin Marsh Monitoring Program	2001—2004

Professional Societies

- Society of Systematic Biologists (SSB)
- Society for the Study of Evolution (SSE)
- Society for the Study of Amphibians and Reptiles (SSAR)
- IUCN Species Survival Commission—Tortoise and Freshwater Turtle Specialist Group (IUCN—TFTSG)

Advising

Postdoctoral

Dr. Anthony Barley (2014-2021), Dr. Sean Harrington (2017-2019)

Graduate Students

Valentina Alvarez (PhD current); Luke Campillo (PhD 2022); Caroline Dong (MS 2015); Natalie Myers (MS current); Emilie Richards (MS 2016); Van Wishingrad (PhD 2021)

Graduate Student Committees

Jacob Buehler (MS 2016); Jared Bernard (MS current); Sean Canfield (PhD 2021), Richard Coleman (PhD 2019); Emily Conklin (PhD current); Mike Henley (PhD 2021); Derek Kraft (PhD 2021); Aki Laruson (PhD 2018); Claire Lewis (PhD current); Jessica Maxfield (PhD 2019); Brad Reil (PhD current); Randi Riggs (MS 2016); Julio Rivera (PhD 2017); Michael San Jose (PhD 2018); Robyn Screen (PhD current); Helen Sung (PhD current); Kaho Tisthammer (PhD 2017); Kirill Vinnikov (PhD 2019); Ellen Waldrop (MS 2013); Christie Wilcox (PhD 2014); Melissa Van Kleek (PhD 2015)

Undergraduate Students

Hana Blatter (UH 2014); Sam Fisher (UH 2015); Max Lambert (UCD 2010); Ashlee Lum (UH current); Ann Marsolais (UH 2015); Quinn Moon (UH current); Sharell Nielsen (UCD 2010); Evan Padro (UH 2015); Riley Parks (UH 2021); Melissa Seymour (UH 2018); Maya Shaulsky (UH 2018); Preston Varley (UH 2017); Dominique Wenzler-Steves (UH current); Ian Wright (UCD 2007)