# CV

# Brian C. O’Meara

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Dept. of Ecology and Evolutionary Biology

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## Research

I address questions in evolutionary biology through development, implementation, and application of new phylogenetic methods. These include approaches for examining the process of continuous trait evolution (rate, optimal values, and other factors), species delimitation, phylogeography, diversification analyses, biogeography, and more. I also collaborate extensively with empiricists, including some of my own students.

## Summary

|  |  |
| --- | --- |
| **Publications** | 34 journal articles, including *Science, Nature, Ann. Rev Ecology, Evolution & Systematics, Systematic Biology, Evolution*, etc. |
| **Teaching** | Approximately 2 courses per year on average, ranging from large introductory biology courses to small graduate seminars |
| **Mentoring** | 4 PhD students, 16 postdocs, 3 faculty, and served on 29 graduate student committees |
| **Service/Outreach** | Darwin Day TN advisor, curator of R phylogenetics task view, instructor at workshops in Sweden, Switzerland, Brazil, and various US locations (Ohio, TN, NC) |
| **Leadership** | Associate Head for Dept. of Ecology & Evolutionary Biology, 2016-present; Associate Director for the National Institute for Mathematical and Biological Synthesis, 2016-2018; Code of Conduct Committee for SSE/SSB/ASN, 2018-present; Communications Director for the Society of Systematic Biologists, 2016-2017; Society of Systematic Biologists Council, 2012-2014; iEvoBio co-organizer, 2014-2016. |
| **Funding** | $2.89M in external support, including 4 NSF grants (including a CAREER grant) plus funding from iPlant and Encyclopedia of Life |

## Education

University of California Davis: PhD (2008) in Population Biology

Harvard University: Bachelor (magna cum laude), with highest honors in Biology (2001)

## Employment

2019-Present: Professor, Dept. of Ecology & Evolutionary Biology, University of Tennessee, Knoxville, TN

2016-Present: Associate Head, Dept. of Ecology and Evolutionary Biology, University of Tennessee, Knoxville, TN

2016-2017: Associate Director, Dept. of National Institute for Mathematical and Biological Synthesis (NIMBioS), University of Tennessee, Knoxville, TN

2015-2019: Associate Professor, Dept. of Ecology & Evolutionary Biology, University of Tennessee, Knoxville, TN

2009-2015: Assistant Professor, Dept. of Ecology and Evolutionary Biology, University of Tennessee, Knoxville, TN

2007-2009: Postdoc, National Evolutionary Synthesis Center, Durham, NC

## Publications

According to Google Scholar, my work has been cited 4206 times, and my h-index is 25. (Google Scholar tends to overestimate citations, however). Also note that I work under a very stringent criterion for when I get authorship – I have to actively make a significant contribution to the research and writing to merit authorship. For example, in 2015-6, three lab members had papers in *Science* ([grad student Sam Borstein](http://science.sciencemag.org/content/350/6264/1077.long), [postdoc Nick Matzke](http://science.sciencemag.org/content/351/6268/28), and [postdoc Sandy Kawano](http://science.sciencemag.org/content/353/6295/154.full)) but I am, appropriately to my mind, not an author on any of these.

### Papers

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Authors | Year | Title, Journal | DOI | Citations |
| JM Beaulieu, BC O’Meara | 2019 | “Diversity and skepticism are vital for comparative biology: a response to Donoghue and Edwards (2019)” NA 106 (5), 613-617 | [10.1002/ajb2.1278](https://doi.org/10.1002/ajb2.1278) | 0 |
| JM Beaulieu, BC O’Meara, R Zaretzki, C Landerer, J Chai, MA Gilchrist | 2019 | “Population genetics based phylogenetics under stabilizing selection for an optimal amino acid sequence: A nested modeling approach” NA 36 (4), 834-851 | [10.1093/molbev/msy222](https://doi.org/10.1093/molbev/msy222) | 2 |
| SR Borstein, BC O’Meara | 2018 | “AnnotationBustR: An R package to extract subsequences from GenBank annotations” NA 6, e5179 | [10.7717/peerj.5179](https://doi.org/10.7717/peerj.5179) | 1 |
| JM Beaulieu, BC O’Meara | 2018 | “Can we build it? Yes we can, but should we use it? Assessing the quality and value of a very large phylogeny of campanulid angiosperms” NA 105 (3), 417-432 | [10.1002/ajb2.1020](https://doi.org/10.1002/ajb2.1020) | 12 |
| JM Beaulieu, BC O’Meara | 2018 | “Can we build it? Yes we can, but should we use it? Assessing the quality and value of a very large phylogeny of campanulid angiosperms” NA 105 (3), 417-432 | [10.1002/ajb2.1020](https://doi.org/10.1002/ajb2.1020) | 12 |
| DS Caetano, BC O’Meara, JM Beaulieu | 2018 | “Hidden state models improve state-dependent diversification approaches, including biogeographical models” NA 72 (11), 2308-2324 | [10.1111/evo.13602](https://doi.org/10.1111/evo.13602) | 16 |
| ND Jackson, AE Morales, BC Carstens, BC O’Meara | 2017 | “PHRAPL: Phylogeographic Inference Using Approximate Likelihoods” NA 66 (6), 1045-1053 | [10.1093/sysbio/syx001](https://doi.org/10.1093/sysbio/syx001) | 22 |
| BC Carstens, AE Morales, ND Jackson, BC O’Meara | 2017 | “Objective choice of phylogeographic models” NA 116, 136-140 | [10.1016/j.ympev.2017.08.018](https://doi.org/10.1016/j.ympev.2017.08.018) | 3 |
| AE Morales, ND Jackson, TA Dewey, BC O’Meara, BC Carstens | 2017 | “Speciation with gene flow in North American Myotis bats” NA 66 (3), 440-452 | [10.1093/sysbio/syw100](https://doi.org/10.1093/sysbio/syw100) | 30 |
| ND Jackson, BC Carstens, AE Morales, BC O’Meara | 2017 | “Species delimitation with gene flow” NA 66 (5), 799-812 | [10.1093/sysbio/syw117](https://doi.org/10.1093/sysbio/syw117) | 48 |
| JM Bosco, SE Riechert, BC O’Meara | 2017 | “The ontogeny of personality traits in the desert funnel-web spider, Agelenopsis lisa (Araneae: Agelenidae)” NA 123 (9), 648-658 | [10.1111/eth.12639](https://doi.org/10.1111/eth.12639) | 1 |
| O Schwery, BC O’Meara | 2016 | “MonoPhy : a simple R package to find and visualize monophyly issues” NA 2, e56 | [10.7717/peerj-cs.56](https://doi.org/10.7717/peerj-cs.56) | 8 |
| O Schwery, BC O’Meara | 2016 | “MonoPhy: A simple R package to find and visualize monophyly issues” NA 2, e56 | [10.7717/peerj-cs.56](https://doi.org/10.7717/peerj-cs.56) | 8 |
| JM Beaulieu, BC O’Meara | 2016 | “Detecting hidden diversification shifts in models of trait-dependent speciation and extinction” NA 65 (4), 583-601 | [10.1093/sysbio/syw022](https://doi.org/10.1093/sysbio/syw022) | 150 |
| BC O’Meara, SD Smith, WS Armbruster, LD Harder, CR Hardy, … | 2016 | “Non-equilibrium dynamics and floral trait interactions shape extant angiosperm diversity” NA 283 (1830), 20152304 | [10.1098/rspb.2015.2304](https://doi.org/10.1098/rspb.2015.2304) | 31 |
| BC O’Meara, JM Beaulieu | 2016 | “Past, future, and present of state-dependent models of diversification” NA 103 (5), 792-795 | [10.3732/ajb.1600012](https://doi.org/10.3732/ajb.1600012) | 18 |
|  | 2015 | “Erratum: Three keys to the radiation of angiosperms into freezing environments (Nature (2014) 506 (89-92) (<Doi:10.1038/nature12872>))” NA | [10.1038/nature14371](https://doi.org/10.1038/nature14371) | NA |
| BC O’Meara, KL Graham, SM Pellis, GM Burghardt | 2015 | “Evolutionary models for the retention of adult–adult social play in primates: The roles of diet and other factors associated with resource acquisition” NA 23 (6), 381-391 | [10.1177/1059712315611733](https://doi.org/10.1177/1059712315611733) | 8 |
| JM Beaulieu, BC O’Meara | 2015 | “Extinction can be estimated from moderately sized molecular phylogenies” NA 69 (4), 1036-1043 | [10.1111/evo.12614](https://doi.org/10.1111/evo.12614) | 68 |
| JM Beaulieu, BC O’Meara, P Crane, MJ Donoghue | 2015 | “Heterogeneous rates of molecular evolution and diversification could explain the triassic age estimate for angiosperms” NA 64 (5), 869-878 | [10.1093/sysbio/syv027](https://doi.org/10.1093/sysbio/syv027) | 59 |
| MSP Aldrovandi, JE Johnson, B O’Meara, RH Petersen, KW Hughes | 2015 | “The Xeromphalina campanella/kauffmanii complex: Species delineation and biogeographical patterns of speciation” NA 107 (6), 1270-1284 | [10.3852/15-087](https://doi.org/10.3852/15-087) | 5 |
| AE Zanne, DC Tank, WK Cornwell, JM Eastman, SA Smith, RG FitzJohn, … | 2015 | “Zanne et al. reply” NA 521 (7552), E6 | [10.1038/nature14394](https://doi.org/10.1038/nature14394) | 1 |
|  | 2014 | “Erratum: Three keys to the radiation of angiosperms into freezing environments (Nature (2014) 506 (89-92) <DOI:10.1038/nature12872>)” NA | [10.1038/nature13842](https://doi.org/10.1038/nature13842) | NA |
| WK Cornwell, M Westoby, DS Falster, RG FitzJohn, BC O’Meara, … | 2014 | “Functional distinctiveness of major plant lineages” NA 102 (2), 345-356 | [10.1111/1365-2745.12208](https://doi.org/10.1111/1365-2745.12208) | 81 |
| DC Jhwueng, S Huzurbazar, BC O’Meara, L Liu | 2014 | “Investigating the performance of AIC in selecting phylogenetic models” NA 13 (4), 459-475 | [10.1515/sagmb-2013-0048](https://doi.org/10.1515/sagmb-2013-0048) | 5 |
| BL Banbury, BC O’Meara | 2014 | “Reol: R interface to the encyclopedia of life” NA 4 (12), 2577-2583 | [10.1002/ece3.1109](https://doi.org/10.1002/ece3.1109) | 3 |
| JH Williams, ML Taylor, BC O’Meara | 2014 | “Repeated evolution of tricellular (and bicellular) pollen” NA 101 (4), 559-571 | [10.3732/ajb.1300423](https://doi.org/10.3732/ajb.1300423) | 27 |
| AE Zanne, DC Tank, WK Cornwell, JM Eastman, SA Smith, RG FitzJohn, … | 2014 | “Three keys to the radiation of angiosperms into freezing environments” NA 506 (7486), 89 | [10.1038/nature12872](https://doi.org/10.1038/nature12872) | 566 |
| JM Beaulieu, BC O’Meara, MJ Donoghue | 2013 | “Identifying hidden rate changes in the evolution of a binary morphological character: The evolution of plant habit in campanulid angiosperms” NA 62 (5), 725-737 | [10.1093/sysbio/syt034](https://doi.org/10.1093/sysbio/syt034) | 144 |
| C Darrin Hulsey, BP Keck, H Alamillo, BC O’Meara | 2013 | “Mitochondrial genome primers for Lake Malawi cichlids” NA 13 (3), 347-353 | [10.1111/1755-0998.12066](https://doi.org/10.1111/1755-0998.12066) | 12 |
| DE Soltis, ME Mort, M Latvis, EV Mavrodiev, BC O’Meara, PS Soltis, … | 2013 | “Phylogenetic relationships and character evolution analysis of Saxifragales using a supermatrix approach” NA 100 (5), 916-929 | [10.3732/ajb.1300044](https://doi.org/10.3732/ajb.1300044) | 51 |
| A Stoltzfus, H Lapp, N Matasci, H Deus, B Sidlauskas, CM Zmasek, … | 2013 | “Phylotastic! Making tree-of-life knowledge accessible, reusable and convenient” NA 14 (1), 158 | [10.1186/1471-2105-14-158](https://doi.org/10.1186/1471-2105-14-158) | 26 |
| BC O’Meara | 2012 | “Evolutionary inferences from phylogenies: a review of methods” NA 43, 267-285 | [10.1146/annurev-ecolsys-110411-160331](https://doi.org/10.1146/annurev-ecolsys-110411-160331) | 151 |
| JM Beaulieu, DC Jhwueng, C Boettiger, BC O’Meara | 2012 | “Modeling stabilizing selection: Expanding the Ornstein-Uhlenbeck model of adaptive evolution” NA 66 (8), 2369-2383 | [10.1111/j.1558-5646.2012.01619.x](https://doi.org/10.1111/j.1558-5646.2012.01619.x) | 326 |
| A Stoltzfus, B O’meara, J Whitacre, R Mounce, EL Gillespie, S Kumar, … | 2012 | “Sharing and re-use of phylogenetic trees (and associated data) to facilitate synthesis” NA 5 (1), 574 | [10.1186/1756-0500-5-574](https://doi.org/10.1186/1756-0500-5-574) | 40 |
| SA Smith, BC O’Meara | 2012 | “TreePL: Divergence time estimation using penalized likelihood for large phylogenies” NA 28 (20), 2689-2690 | [10.1093/bioinformatics/bts492](https://doi.org/10.1093/bioinformatics/bts492) | 154 |
| JC Stack, LJ Harmon, B O’Meara | 2011 | “RBrownie: an R package for testing hypotheses about rates of evolutionary change” NA 2 (6), 660-662 | [10.1111/j.2041-210x.2011.00112.x](https://doi.org/10.1111/j.2041-210x.2011.00112.x) | 11 |
| JM Abercrombie, BC O’Meara, AR Moffatt, JH Williams | 2011 | “Developmental evolution of flowering plant pollen tube cell walls: Callose synthase (CalS) gene expression patterns” NA 2 (1), 14 | [10.1186/2041-9139-2-14](https://doi.org/10.1186/2041-9139-2-14) | 30 |
| SA Goff, M Vaughn, S McKay, E Lyons, AE Stapleton, D Gessler, … | 2011 | “The iPlant collaborative: Cyberinfrastructure for plant biology” NA 2, 34 | [10.3389/fpls.2011.00034](https://doi.org/10.3389/fpls.2011.00034) | 368 |
| DC Collar, JA Schulte, BC O’meara, JB Losos | 2010 | “Habitat use affects morphological diversification in dragon lizards” NA 23 (5), 1033-1049 | [10.1111/j.1420-9101.2010.01971.x](https://doi.org/10.1111/j.1420-9101.2010.01971.x) | 60 |
| BC O’Meara | 2010 | “New heuristic methods for joint species delimitation and species tree inference” NA 59 (1), 59-73 | [10.1093/sysbio/syp077](https://doi.org/10.1093/sysbio/syp077) | 247 |
| SA Smith, BC O’Meara | 2009 | “Morphogenera, monophyly, and macroevolution” NA 106 (36), E97-E98 | [10.1073/pnas.0906918106](https://doi.org/10.1073/pnas.0906918106) | 4 |
| DC Collar, BC O’Meara, PC Wainwright, TJ Near | 2009 | “Piscivory limits diversification of feeding morphology in centrarchid fishes” NA 63 (6), 1557-1573 | [10.1111/j.1558-5646.2009.00626.x](https://doi.org/10.1111/j.1558-5646.2009.00626.x) | 122 |
| BC O’Meara, C Ané, MJ Sanderson, PC Wainwright | 2006 | “Testing for different rates of continuous trait evolution using likelihood” NA 60 (5), 922-933 | [10.1554/05-130.1](https://doi.org/10.1554/05-130.1) | 524 |
| AC Driskell, C Ané, JG Burleigh, MM McMahon, BC O’Meara, … | 2004 | “Prospects for building the tree of life from large sequence databases” NA 306 (5699), 1172-1174 | [10.1126/science.1102036](https://doi.org/10.1126/science.1102036) | 248 |
| BD Farrell, AS Sequeira, BC O’Meara, BB Normark, JH Chung, BH Jordal | 2001 | “The evolution of agriculture in beetles (Curculionidae: Scolytinae and Platypodinae)” NA 55 (10), 2011-2027 |  | 356 |

## Publications: Books or Book Chapters

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| --- | --- | --- | --- |
| Authors | Year | Title | Book |
| B O’Meara | 2016 | “Phylogenetic Comparative Method” | NA |
| JM Beaulieu, BC O’Meara | 2014 | “Hidden Markov Models for Studying the Evolution of Binary Morphological Characters” | NA |
| BC O’Meara, JM Beaulieu | 2014 | “Modelling Stabilizing Selection: The Attraction of Ornstein–Uhlenbeck Models” | NA |
|  | 2012 | “Encyclopedia of theoretical ecology” | NA |

## Teaching

### University Courses

I created a course on macroevolution targeted at upper level undergraduate and graduate students: we cover diversification, symbiosis, game theory, and more. I have also taught large introductory courses and small discussion seminars. Note that the “HOFF joint lab group discussion” was a collaborative lab group meeting of the Hulsey-O’Meara-Fordyce-Fitzpatrick labs.

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| --- | --- | --- | --- | --- | --- | --- |
| Year | Semester | Course Number | Topic | Enrollment | Percent Effort |  |
| 2018 | Fall | EEB464 | Macroevolution | 14 | 100 |  |
| 2018 | Spring | EEB603 | PhyloMeth | 2 | 100 |  |
| 2018 | Spring | EEB504 | PhyloMeth | 5 | 100 |  |
| 2017 | Fall | EEB464 | Macroevolution | 23 | 100 |  |
| 2017 | Spring | EEB603 | PhyloMeth | 6 | 100 |  |
| 2017 | Spring | EEB504 | PhyloMeth | 2 | 100 |  |
| 2016 | Fall | EEB464 | Macroevolution | 28 | 100 |  |
| 2016 | Spring | Biology150 | Introductory biology | 235 | 100 |  |
| 2016 | Spring | EEB603 | PhyloMeth | 9 enrolled, plus dozens online | 100 |  |
| 2015 | Fall | EEB464 | Macroevolution | 27 | 100 |  |
| 2015 | Fall | EEB607 | Phyloseminar discussion | 10 | 100 |  |
| 2015 | Spring | EEB602 | Phyloseminar discussion | 13 | 100 |  |
| 2015 | Spring | EEB607 | HOFF joint lab group discussion | 8 | 100 |  |
| 2014 | Fall | EEB464 | Macroevolution | 28 | 100 |  |
| 2014 | Fall | EEB504 | HOFF joint lab group discussion | 9 | 33 |  |
| 2014 | Fall | EEB511 | Graduate student core | 12 | 50 |  |
| 2014 | Fall | EEB607 | Phyloseminar discussion | 15 | 100 |  |
| 2014 | Spring | Biology130 | Introductory biology | 94 | 100 |  |
| 2014 | Spring | EEB602 | Phyloseminar discussion | 24 | 100 |  |
| 2014 | Spring | EEB607 | HOFF joint lab group discussion | 6 | 25 |  |
| 2013 | Fall | EEB464 | Macroevolution | 30 | 100 |  |
| 2013 | Fall | EEB504 | HOFF joint lab group discussion | 11 | 25 |  |
| 2013 | Fall | EEB511 | Graduate student core | 19 | 33 |  |
| 2013 | Spring | EEB607 | HOFF joint lab group discussion | 8 | 25 |  |
| 2012 | Fall | EEB464 | Macroevolution | 22 | 100 |  |
| 2012 | Fall | EEB504 | HOFF joint lab group discussion | 5 | 25 |  |
| 2012 | Fall | EEB511 | Graduate student core | 14 | 13 |  |
| 2012 | Spring | Biology130 | Introductory biology | 206 | 100 |  |
| 2011 | Fall | EEB464 | Macroevolution | 24 | 100 |  |
| 2011 | Fall | EEB504 | HOFF joint lab group discussion | 7 | 25 |  |
| 2011 | Fall | EEB503 | EEB departmental seminar | 44 | 100 |  |
| 2011 | Fall | EEB511 | Graduate student core | 12 | 13 |  |
| 2011 | Spring | EEB503 | EEB departmental seminar | 35 | 100 |  |
| 2011 | Spring | EEB607 | Speciation discussion | 9 | 100 |  |
| 2010 | Fall | EEB511 | Graduate student core | 8 | 13 |  |
| 2010 | Spring | EEB607 | Speciation discussion | 13 | 100 |  |
| 2010 | Spring | EEB409 | Macroevolution | 13 | 100 |  |

### Workshops

I organize and/or participate in numerous workshops or tutorials.

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| --- | --- | --- | --- | --- |
| Year | Location | Topic | Role |  |
| 2018 | Friday Harbor, WA | Evolutionary Quantitative Genetics workshop | Instructor |  |
| 2017 | Friday Harbor, WA | Evolutionary Quantitative Genetics workshop | Instructor |  |
| 2017 | Baton Rouge, LA | PHRAPL | Organizer/instructor |  |
| 2016 | Knoxville, TN | Evolutionary Quantitative Genetics workshop at NIMBioS | Instructor |  |
| 2015 | Ann Arbor, MI | Comparative methods in R, SSB satellite meeting | Organizer/instructor |  |
| 2015 | Knoxville, TN | Evolutionary Quantitative Genetics workshop at NIMBioS | Instructor |  |
| 2015 | Guaruja, Brazil | SSB-sponsored phylogeography workshop at Evolution meetings | Instructor |  |
| 2014 | Knoxville, TN | Evolutionary Quantitative Genetics workshop at NIMBioS | Instructor |  |
| 2014 | Knoxville, TN | Computing in the Cloud NIMBioS Tutorial | Co-organizer/instructor |  |
| 2014 | Columbus, OH | PHRAPL workshop | Co-organizer/Instructor |  |
| 2013 | Lausanne, Switzerland | Markov processes in phylogenetics | Instructor |  |
| 2013 | Vienna, Austria | eFlower Summer School | Remote instructor |  |
| 2013 | Knoxville, TN | Evolutionary Quantitative Genetics workshop at NESCent | Instructor |  |
| 2010 | Knoxville, TN | Fast, Free Phylogenies: HPC for Phylogenetics NIMBioS Tutorial | Organizer/instructor |  |
| 2010 | Gothenberg, Sweden | Species delimitation | Remote instructor |  |
| 2008 | Durham, NC | Computational phyloinformatics at NESCent | Instructor |  |
| 2008 | Bodega Bay, CA | Bodega Bay Workshop in Applied Phylogenetics | Instructor |  |
| 2007 | Bodega Bay, CA | Bodega Bay Workshop in Applied Phylogenetics | Instructor |  |
| 2007 | Davis, CA | Paleontology and its relevance to neontologists | Instructor |  |
| 2006 | Bodega Bay, CA | Bodega Bay Workshop in Applied Phylogenetics | Instructor |  |
| 2006 | Davis, CA | Model selection workshop | Organizer |  |
| 2005 | Bodega Bay, CA | Bodega Bay Workshop in Applied Phylogenetics | Instructor |  |

## Funding

This is all in addition to other **funding my students have gotten** (NSF EAPSI grant, fellowships from NIMBioS and PEER (an NIH-funded program at UTK), Google Summer of Code funding), **funding for workshops or working groups** (from NIMBioS and the Society for Systematic Biologists), and **funding I got before my faculty position** (NESCent postdoctoral fellowship, NSF DDIG, NSF GRF, and various internal grants at UC Davis). Total external funding, so far, as a faculty member is $2,887,182.

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| --- | --- | --- | --- |
| Year | Title | Funder | Amount |
| 2019 | Collaborative Research: Novel framework for estimating continuously-varying diversification rates | Directorate for Biological Sciences | $193,401 |
| 2018 | Phylotastic subaward | University of Maryland | $165,492 |
| 2017 | DISSERTATION RESEARCH: Morphological consequences of trophic evolution | Directorate for Biological Sciences | $19,630 |
| 2015 | CAREER: Reducing barriers for comparative methods | Directorate for Biological Sciences | $738,297 |
| 2015 | Collaborative Research: ABI Development: An open infrastructure to disseminate phylogenetic knowledge | NSF | $148,101 |
| 2014 | Population genetics-based codon models | NSF | $470,000 |
| 2013 | R interface to Encyclopedia of Life (Rubenstein Fellowship) | Encyclopedia of Life | $50,000 |
| 2013 | Collaborative Research: Phylogeographic Inference Using Approximated Likelihoods | NSF | $340,000 |
| 2012 | rPlant | iPlant | $98,252 |
| 2012 | Historical naming traditions and cryptic speciation bias biodiversity estimates in transatlantic agaric fungi | NSF | $393,074 |
| 2011 | iPlant: Trait evolution group, year 2 | iPlant | $138,590 |
| 2010 | iPlant: Trait evolution group, year 1 | iPlant | $132,345 |

## Presentations

**Bold** indicates presentation was delivered by me; otherwise, I was a coauthor. Also see various workshops under teaching.

June 2018: Talk on DateLife project for getting chronograms for the tree of life. Presented at the Society of Systematic Biologists meeting in Columbus, OH. Luna Sanchez Garcia & Brian O’Meara.

June 2017: Poster on inference of amino acid functionality from DNA sequences using a novel phylogenetic approach at the Society for Molecular Biology and Evolution meeting in Austin, TX. Cedric Landerer, Jeremy Beaulieu, Brian O’Meara, Mike Gilchrist.

**June 2017**: Symposium talk on phylogenetic networks at Evolution 2017 meeting: co-lead author was Tony Jhwueng.

**March 2017**: Invited talk on three projects at U. of Idaho, Moscow.

**September 2016**: Symposium talk on Approximate Bayesian computation for trait evolution on phylogenies at Geological Society of America annual meeting.

August 2016: Talk on linking leaf spectra to phylogenies at Ecological Society of America 2016 annual meeting. Jose Eduardo Meireles, Brian O’Meara, Anna Schweiger, Aditya Singh, Phil Townsend, Susan Ustin, Michael Schaepman, Franziska Schrodt, John Gamon, and Jeannine Cavender-Bares.

July 2016: Talk on Moving beyond black box, GTR models in phyogenetic analyses through the use of mechanistic models of sequence evolution at the Genetics Society of America: The Allied Genetics Conference in Orlando, FL. Mike Gilchrist, Russ Zaretzki, Cedric Landerer, Jeremy Beaulieu, and Brian O’Meara

November 2015: Talk on Improving Phylogenetics via Population Genetics at the Society for the Study of Molecular Evolution Satellite Meeting on Mechanisms of Protein Evolution in Denver, CO. Mike Gilchrist, Jeremy Beaulieu, JJ Chai, and Brian O’Meara.

**September 2015**: Talk on heterogeneity at Texas A&M

July 2015: Talk on Moving beyond black box, GTR models in phyogenetic analyses through the use of mechanistic models of sequence evolution at the Annual Meeting of the Society for Molecular Biology & Evolution in Vienna, Austria. Mike Gilchrist, Jeremy Beaulieu, and Brian O’Meara

**June 2014**: Talk on floral evolution at Evolution 2014 meeting; co-lead author was Stacey Smith, coauthors were W SArmbruster, L Harder, C Hardy, L Hileman, L Hufford, A Litt, S Magallon, S Smith, P Stevens, C Fenster, P Diggle.

June 2014: Talk on phylogeography at Evolution 2014 meeting; lead author and speaker was Nathan Jackson, other authors were A. Garcia, B. Carstens, and B. O’Meara.

June 2014: Talk on biogeography at Evolution 2014; lead author and speaker was Katie Massana (grad student), coauthors were J. Beaulieu, B. O’Meara, and N. Matzke.

June 2014: Talk on Hawaiian island plant immigration at Evolution 2014; lead author and speaker was Jeremy Beaulieu, coauthor was Brian O’Meara.

**May 2014**: Smithsonian Phylopizza

**June, 2013**: Symposium talk on species delimitation, Evolution meetings

**Aug. 2012**: Invited talk on comparative methods, Institute of Bioinformatics, U. of Georgia

**June, 2012**: Symposium talk on ABC and comparative methods, Evolution meetings

**March, 2011**: Phyloseminar talk on ABC and comparative methods. Apple Keynote and PDF.

**May, 2010**: Talk on phylogenetics and iPToL at iPlant meeting in Las Vegas

**April, 2010**: Invited talk on species delimitation at Louisiana State University

**Nov., 2009**: Talk at NIMBios about species delimitation and species tree inference

**Mar., 2009**: Talk to UT Knoxville EEB

**June, 2008**: Talk at Evolution 2008 in Minnesota

**June, 2008**: Poster at Evolution 2008 in Minnesota

**June, 2008**: Invited Joel Keizer Prize in Theoretical Biology lecture at University of California, Davis

**May, 2008**: Invited symposium talk at Interface 2008 [statistics conference] in NC

**April, 2008**: Invited talk to the Organismic and Evolutionary Biology department at Harvard U.

**Jan., 2008**: Invited symposium talk at Society for Integrative and Comparative Biology meeting in TX

**Oct., 2007**: Invited talk at Duke Systematics Discussion Group

**Oct., 2007**: Talk at NESCent brown bag lunch series

**June, 2007**: Exit seminar

**June, 2006**: Talk at Evolution 2006 in NY

**Feb., 2006**: Poster at CIPRES all hands meeting in TX

**July, 2005**: Talk at CIPRES-funded graduate student meeting in NM

**June, 2005**: Talk on Brownie at Evolution meetings in Alaska.

**Dec, 2004**: Presentation at the Bay Area Biosystematists meeting

**Dec., 2001**: Talk at Entomology Society of America national meeting in CA

**June, 2001**: Poster at Evolution 2001 in TN

**Dec., 2000**: Poster at the Entomology Society of America national meeting in Canada

## Mentoring, Postdocs

I have mentored numerous postdocs off of my own grants and/or as one of their chosen NIMBioS mentors. Note that NIMBioS postdocs pursue independent research projects but choose one faculty member to mentor them in math and another to mentor them in biology (I have served in both roles).

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Duration | NIMBioS | Current Position |
| [Hugo Alamillo](https://people.northseattle.edu/users/halamillo) | 2011-2012 | N | Assistant Professor North Seattle College |
| [Barb Banbury](https://www.linkedin.com/in/bbanbury) | 2010-2012 | N | Statistical Analyst at Fred Hutch |
| David Bapst | 2017-present | N |  |
| [Jeremy Beaulieu](http://www.jeremybeaulieu.org/) | 2012-2016 | Both | Assistant Professor at U. of Arkansas |
| [Juanjuan (JJ) Crosskey (formerly Chai)](https://www.linkedin.com/in/jjcrosskey) | 2011-2013 | Y | Quantitative Analyst at Quantamental Technologies LLC |
| [Dominic Evangelista](https://www.roachbrain.com) | 2018-2018 | Y |  |
| [Nathan Jackson](http://nathandjackson.com/) | 2013-2016 | N | Researcher at National Jewish Health |
| [Tony Jhwueng](http://www.tonyjhwueng.info/) | 2009-2011 | Y | Assistant Professor Feng-Chia U., Taiwan |
| [Sandy Kawano](http://sandykawano.weebly.com/) | 2014-2016 | Y | Assistant Professor George Washington U |
| [Michelle Lawing](http://people.tamu.edu/~alawing/) | 2012-2014 | Y | Assistant Professor Texas A&M |
| [Ryan Martin](http://www.martinevolutionaryecologylab.com) | 2012-2013 | Y | Assistant Professor Case Western U |
| [Nick Matzke](http://nickmatzke.weebly.com) | 2013-2015 | Y | DECRA Fellow at The Australian National University in Canberra |
| [Megan Rua](https://meganrua.wordpress.com) | 2015-2016 | Y | Assistant Professor Wright State U |
| Luna Sanchez Reyes | 2017-2019 | N |  |
| [Sergei Tarasov](https://sites.google.com/site/starasovresearch/) | 2016-2018 | Y |  |
| [Jodie Wiggins](http://jodiewiggins.wixsite.com/mysite) | 2018-2019 | N |  |

## Mentoring, Grad students in my lab

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Stage | Time in Lab | Note |
| [Sam Borstein](https://fish4thought.wordpress.com/) | PhD student | 2014-2019 |  |
| [Jenn Bosco](https://sites.google.com/site/jenniferboscoinfo/home) | PhD student | 2012-2017 | Co-advised with Susan Riechert |
| [Katie Massana](https://sites.google.com/site/kathrynamassana/home) | PhD student | 2012-2017 |  |
| [Orlando Schwery](https://sites.google.com/site/orlandoschwery/home) | PhD student | 2014-present |  |

## Mentoring, Undergrad students in my lab

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Stage | Time in Lab | Note |
| Zach Tharpe | Undergrad | 2019-present |  |
| [Christian Yarber](https://www.researchgate.net/profile/Christian_Yarber) | Undergrad | 2015-2016 |  |

## Mentoring, Grad student committees

In addition to my own students, of course.

|  |  |
| --- | --- |
| Name | Department |
| Liz Agosto |  |
| Will Atwood | Geology |
| Jen Bauer | Geology |
| Sharon Clemmensen | EEB |
| Troy Fadiga | Geology |
| Aaron Floden | EEB |
| Nicholas Gladstone | Geology |
| Mauricio Gonzalez-Forero | EEB |
| Alannie-Grace Grant | EEB |
| Phillip Hollingsworth | EEB |
| Whitaker Hoskins | EEB |
| Will Howell | EEB |
| Ivan Juric | EEB |
| Cedric Landerer | EEB |
| Jasper Lee | Microbiology |
| Sara Lipshutz | EEB |
| Bryan Looney | EEB |
| Liam Mueller | EEB |
| Tyson Paulson | EEB |
| Todd Pierson | EEB |
| Ryan Rooney | Geology |
| Max Rupp | EEB |
| Geetha Saarunya S | GST |
| Leonidas Salichos | Vanderbilt |
| Marisol Sanchez-Garcia | EEB |
| Sarah Sheffield | Geology |
| Jordan Utley | GST |
| Jess Welch | EEB |
| Rachel Wooliver | EEB |

## Mentoring, Faculty

Our department now has faculty mentored by a committee of later career faculty. I have served on committees for folks hired after me.

|  |  |
| --- | --- |
| Name | Department |
| Liz Derryberry | EEB |
| Stephanie Kivlin | EEB |
| Kimberly Sheldon | EEB |

## Service

* Joint Code of Conduct committee for Society for the Study of Evolution, Society of Systematic Biologists, and American Society of Naturalists, 2018-present
* Communications Director for the Society of Systematic Biologists (SSB), 2016-2017
* Co-organizer of iEvoBio meeting, 2016
* Co-organizer of SSB symposium on Breaking Barriers: Empirical, Theoretical, and Gender Issues in Phylogenetics for Evolution meetings in Brazil, 2015
* Co-organizer of SSB satellite meeting in May, 2015
* Co-organizer of iEvoBio meeting (met with SSB) May 2015
* Co-organizer of Evolution meetings, 2014, including sole organizer for lightning talks
* Co-organizer of iEvoBio meeting, 2014
* Member of Phylotastic leadership team (group arranging hackathons for making trees more reusable), 2012-present
* Organizer of lighting talks for Evolution meetings, 2013
* UTK Faculty advisor for Darwin Day Tennessee, 2012-present
* UTK Department representative on Dean’s advisory council, 2012-2014
* UTK EEB Undergraduate affairs committee, 2012-2013
* UTK EEB Graduate admissions committee, 2013-present
* Chair, UTK EEB Web committee, 2011-present
* Co-organizer of Comparative Methods in R hackathon, 2007
* Bay Area Biosystematists Steering Committee: 2004-2007
* Secretary Cambridge Entomological Club, 2001-2002
* Reviewer for *Science, Heredity, Molecular Phylogenetics and Evolution, Systematic Biology, Evolution, Systematic Entomology, Proceedings of the Royal Society: Biological Sciences*, US National Science Foundation, and others.