

Groves Dixon, *curriculum vitae*

PROFESSIONAL PREPARATION

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|-----------------------------|---------------|----------------------------|------------------|
| University of the South | Sewanee, TN | Biology | BS, 2010 |
| Western Carolina University | Cullowhee, NC | Biology | MS, 2012 |
| University of Texas | Austin, TX | Cell and Molecular Biology | PhD, 2012 - 2017 |

APPOINTMENTS

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| 2020-Present | Health Data Fellow, Insight Data Science, Boston MA |
| 2018-2020 | Postdoc in Matz Laboratory, University of Texas, Austin TX |
| 2017-2018 | Postdoc in Kirkpatrick laboratory, University of Texas, Austin TX |
| 2016-2017 | Research Fellow in Matz Laboratory, University of Texas, Austin TX |
| 2012-2016 | Teaching Assistant, University of Texas, Austin TX |

PUBLICATIONS

1. Balogh A, Ngo L, Zigler KS, **Dixon G** (2020) Testing the 'caves as islands' model in two cave-obligate invertebrates with a genomic approach. *BioRxiv*.
2. **Dixon G**, Matz MV (2020) Benchmarking DNA methylation assays for marine invertebrates. *BioRxiv*.
3. Sidik A, **Dixon GB**, Kirby HG, Eberhart JK. (2020) Gene-environment interactions characterized by single embryo transcriptomics. *BioRxiv*.
4. **Dixon GB**, Abbot E, Matz MV. (2020) Meta-analysis of the Coral Environmental Stress Response: *Acropora* corals show opposing responses depending on stress intensity. *Molecular Ecology*.
5. **Dixon GB**, Kenkel CD. (2019) Molecular convergence and positive selection associated with the evolution of symbiont transmission mode in stony corals. *Proceedings of the Royal Society B* 286:20190111.
6. Bernal M, Chaib **Dixon GB**, Matz MV, Rocha L (2019) Comparative transcriptomics of sympatric species of coral reef fishes (genus: *Haemulon*). *PeerJ* 10.7717/peerj.6541.
7. **Dixon GB**, Bay LK, Matz MV (2018) Role of gene body methylation in acclimatization and adaptation in a basal metazoan. *PNAS* 115 (52):13342-13346.
8. **Dixon GB**, Kitano J, Kirkpatrick M. (2018) The origin of a new sex chromosome by introgression between two stickleback fishes. *Molecular Biology and Evolution* 6(1):28-38.
9. Van de Water J, Chaib De Mares M, Matz MV, **Dixon GB**, Raina J-B, Willis B, Bourne D, van Oppen M. (2018) Antimicrobial and stress responses to increased temperature and bacterial pathogen challenge in the holobiont of a reef-building coral. *Molecular Ecology* 27(4):1065-1080.
10. **Dixon GB**, Bay LK, Matz MV (2016) Evolutionary Consequences of DNA methylation in a basal metazoan. *Molecular Biology and Evolution* 33:2285-2293.
11. **Dixon GB**, Davies SW, Aglyamova GV, Meyer E, Bay LK, Matz MV (2015) Genomic determinants of coral heat tolerance across latitudes. *Science* 348:1460-1462.

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12. **Dixon GB**, DeWald LE (2015) Microsatellite survey reveals possible link between triploidy and mortality of quaking aspen in Kaibab National Forest, Arizona. *Canadian Journal of Forest Research* 45:1-7.
13. **Dixon GB**, Bay LK, Matz MV (2014) Bimodal signatures of germline methylation are linked with gene expression plasticity in the coral *Acropora millepora*. *BMC Genomics* 15:1109.
14. Bintz BJ, **Dixon GB**, Wilson MR (2014) Simultaneous detection of human mitochondrial DNA and nuclear-inserted mitochondrial-origin sequences (NumtS) using forensic mtDNA amplification strategies and pyrosequencing technology. *Journal of Forensic Sciences* 59:1064-73.
15. **Dixon GB**, Zigler KS (2011) Cave-obligate biodiversity on the campus of Sewanee: The University of the South, Franklin County, Tennessee. *Southeastern Naturalist* 10:251-266.

PRESENTATIONS

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| Gordon Conference on Ecological and Evolutionary Genomics | Manchester, NH |
| The origin of a new sex chromosome by introgression between sticklebacks | July, 2019 |
| SICB 2019 | Tampa, FL |
| Role of gene body methylation in coral acclimatization | January, 2019 |
| SMBE 2017 | Austin, TX |
| Role of gene body methylation in coral acclimatization | July, 2017 |
| SICB 2017 | New Orleans, LA |
| Implasticity of gene body methylation in a reef-building coral | January 2017 |
| Evolution 2016 | Austin, TX |
| Mechanisms of adaptation in reef-building corals | June, 2016 |
| Genomic Sequencing Workshop Sponsored by Illumina | Austin, TX |
| 2bRAD: A flexible method for genome-wide genotyping | May, 2016 |
| Integrative Biology Graduate Research Symposium | Austin, TX |
| Evolutionary consequences of DNA methylation in a basal metazoan | April, 2016 |
| National DNA Day Lecture at Science Under the Stars | Austin, TX |
| A brief talk on deoxyribonucleic acid: DN-Yay! | March 2016 |
| Cell and Molecular Biology Graduate Student Seminar | Austin, TX |
| Mechanisms of adaptation in reef- building corals | February 2016 |
| SICB 2016 | Portland, OR |
| DNA methylation is a signature of transcriptional and evolutionary stability | January 2016 |
| Big Data RNA sequencing short course | Austin, TX |
| Summarizing differential expression using Mann-Whitney U-tests | May 2015 |
| SICB 2015 | West Palm Beach, FL |
| Mapping heat tolerance loci in the coral genome | January 2015 |
| UNC Charlotte's Workshop in Next Generation Sequencing | Charlotte, NC |
| Pyrosequencing for detection of minor variants in mitochondrial DNA | May 2012 |
| Western Carolina Biology Seminar | Cullowhee, NC |
| Heterozygosity and aspen decline in Kaibab National Forest, AZ | April 2012 |

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| Molecules in the Mountains Workshop Series Deep sequencing detects minor variants in forensic mitochondrial DNA | Cullowhee, NC April 2012 |
| Association of Southeastern Biologists Aspen: Genetic diversity and decline in Kaibab National Forest, AZ | Athens, GA April 2012 |
| American Academy of Forensic Science A single library preparation method for both Sanger sequencing and quantification of minor variants by pyrosequencing | Atlanta, GA February 2012 |

POSTERS

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| Gordon Research Seminar on Ecological and Evolutionary Genomics Invertebrate gene body methylation and gene regulation | Manchester, NH July, 2019 |
| SICB 2019 Origin of a new sex chromosome by introgression between sticklebacks | Tampa, FL January, 2019 |
| Evolution 2018 Origin of a new sex chromosome by introgression between sticklebacks | Montpellier, France August, 2018 |
| SMBE 2017 A key to coral success: Molecular evolution of the genus <i>Acropora</i> | Austin, TX July, 2017 |
| SICB 2017 Estimating strength of spatially varying selection in a reef-building coral | New Orleans, LA January 2017 |
| Evolution 2016 Evolutionary consequences of genic DNA methylation in stony corals | Austin, TX June, 2016 |
| Center for Computational Biology and Bioinformatics Detecting spatially varying selection in broadcast spawning corals | Austin, TX May, 2016 |
| SICB 2016 Small-scale spatially varying selection in broadcast spawning corals | Portland, OR January 2016 |
| SICB 2015 Gene body methylation is linked with transcriptional and evolutionary stability in reef-building corals | West Palm Beach, FL January 2015 |
| SICB 2014 DNA methylation and gene expression plasticity in <i>Acropora millepora</i> | Austin, TX January 2014 |
| 22nd International Symposium on Human Identification Single preparation for Sanger and pyrosequencing forensic DNA | National Harbor, MD October 2011 |

LEADERSHIP ACTIVITIES

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| RAD-seq Short Course Instructor Developed and instructed introductory courses on RAD-seq Course site | November 2015 – November 2018 University of Texas, Austin |
| Peer Reviewer Peer-reviewed 20 scientific articles. Publons Page | October 2017 - Present Austin, TX |

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Science Under the Stars Volunteer

Monthly outreach lecture series held outdoors
at Brackenridge Field Laboratory, University of Texas
[SUTS website](#)

September 2015 - present
University of Texas, Austin

MEGA Lab Coordinator and Teaching Assistant

Assisted with two workshops in Ecological Genomics
covering bioinformatics and wet lab techniques.
[Workshop website](#)

June 2015
Summerland Key, FL

RNA-seq Short Course Teaching Assistant

Assistant instructor for biannual short courses in processing and
analysis of RNA-seq data (Assisted with four courses in total)
[Course Site](#)

May 2014 – November 2016
University of Texas, Austin

GRANTS AND FELLOWSHIPS

Contributed to NSF proposal Award no. 1755277

Conducted research basis and assisted with composition
of NSF proposal “Role of gene body methylation in acclimatization
and adaptation of a reef-building coral.”

August 2018
\$1,117,574

Contributed to NSF proposal Award no. 1737312

Conducted research basis for NSF proposal “Barriers to
cross-shelf coral connectivity in the Florida Keys”

August 2018
\$745,820

Graduate Student Professional Development Awards

Award to defray costs of professional development activities
awarded four times each worth \$500.

December 2014 - January 2017
\$2000

University of Texas Graduate Continuing Fellowship

Nominated fellowship covering tuition, insurance, and one year’s
stipend for continuation of dissertation research.

February 2016
\$40,000

Texas Ecolabs Research Grant

Grant funded in partnership with Texas land owners

November 2015
\$13,797

Western Carolina Graduate Study Grant

Award for continuing dissertation work

April 2011
\$750

Fellowship for Graduate Research in Forensic Science

Two-year graduate research fellowship awarded by the
Forensic Science Program at Western Carolina University

January 2011
\$15,000 annual stipend

Yeatman Fellowship for Biological Research

Fellowship awarded through the University of the South
for undergraduate research

May 2009
\$2,000 summer stipend

Presidential Scholarship, University of the South

Four-year financial scholarship for academic merit

August 2006
\$4,000 annual scholarship