

T. Heath Ogden

Utah Valley University

Biology Department Orem, UT 84058

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Appointments

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| 2015-present | Associate Professor; Utah Valley University, Orem, UT. |
| 2009-2015 | Assistant Professor; Utah Valley University, Orem, UT. |
| 2017 | Adjunct Professor; Brigham Young University, Provo, UT. |
| 2006-2015 | Affiliate Faculty; Idaho State University, Pocatello ID. |
| 2006-2009 | Visiting Assistant Professor; Idaho State University, Pocatello ID. |
| 2005-2006 | Adjunct Faculty; Riosalado Community College, Tempe, AZ. |

Professional Preparation

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| 01/05-06/06 | Postdoctoral research in computational genomics and bioinformatics, with Michael Rosenberg; Arizona State University, Tempe, Arizona. |
| 2000-2004 | PhD in Integrative Biology with emphasis in molecular systematics; Brigham Young University, Provo, Utah. Michael F. Whiting advisor. |
| 1997-2000 | MS with mention in Zoology; Universidad de Concepción, Concepción, Chile. Luis E. Parra advisor. |
| 1992-1996 | BS in Zoology; Brigham Young University, Provo, Utah |

Teaching

Courses (at UVU):

BIOL 1010 – General Biology (Non-majors biology course)

- Face to Face design – including large classroom design (400 students)
- Online design
- Technology Intensive Concurrent Enrollment (TICE) design
- Flipped Classroom design
- Gateway Class design
- Live Interactive (Extended Education) design

BIOL 1610 – College Biology I (Majors biology course)

ZOOL 3430 – Entomology (with lab Zoology 3435)

BIOL 4300 – Bioinformatics and Genome Analysis

BIOL 4500 – Principles of Evolution (Biology majors)

- Designed Writing Enriched (WE) course

BIOL 4550 – Molecular Evolution and Bioinformatics (Biotech majors)

- Designed Writing Enriched (WE) course

BIOL 490R – Special Topics Biology Desert Natural History

BIOL 494R – Senior Seminar

BIOL 489R – Student Research

BIOL 499R – Senior Thesis

HONR 2100 – Modern Legacies

PWS 468 – Genomics – taught at BYU (2017)

Scholarship

Publications:

(21 peer reviewed; 1 book chapter; 3 non-peer reviewed, *=UVU undergraduate)

Published

- *Talbot C., George, Z., and **Ogden, T. H.** 2020. A Journey to Acceptance: A Study of Biology Majors' Attitudes Toward Evolution Throughout their University Coursework. *Journal of College Science Teaching*. 50(1): 43-51.
- Ogden, T. H.**, J. W. Breinholt, S. M. Bybee, D. Miller*, M. Sartori, D. Shiozawa, and M. F. Whiting. 2019. Mayfly Phylogenomics: Initial Evaluation of Anchored Hybrid Enrichment Data for the order Ephemeroptera. *Zoosymposia*. 16: 167-181.
- Holt E. A., **T. H. Ogden**, S. L. Durham. 2018. The positive effect of role models in evolution instruction. *Evolution: Education and Outreach*. Article number 11.
- Jensen J. L., E. A. Holt, J. B. Sowards, **T. H. Ogden**, and R. E. West. 2018. Investigating Strategies for Pre-Class Content Learning in a Flipped Classroom. *Journal of Science Education and Technology*. <https://doi.org/10.1007/s10956-018-9740-6>
- *Miller D. B., *S. Bartlett, M. Sartori, J. W. Breinholt, and **T. H. Ogden**. 2018. Anchored phylogenomics of Burrowing Mayflies (Ephemeroptera) and the evolution of tusks. *Systematic Entomology*. March. <https://doi.org/10.1111/syen.12298>
- Suvorov, A., N. O. Jensen, C. R. Sharkey, M. S. Fujimoto, P. Bodily, H. M. C. Wightman, **T. H. Ogden**, M. J. Clement, and S. M. Bybee. 2017. Opsins have evolved under the permanent heterozygote model: insights from phylotranscriptomics of Odonata. *Mol Ecol*. doi:10.1111/mec.13884
- Ogden, T. H.**, *et al. Common Insects of Capitol Reef National Park. UVU Printing Services. 2013
- Fairbanks, D. J., *A. D. Fairbanks, **T. H. Ogden**, G. J. Parker, and P. J. Maughan. 2012. NANOGP8: Evolution of a human-specific retro-oncogene. *Genes, Genomes, Genetics*: November, Volume 2, number 11.
- Parra, L. E. and **T. H. Ogden**. 2011. A new case constructing adelid moth from Chile (Lepidoptera). *Revista Brasileira de Entomologia*. 55(4): 560-564.

- Houston, D. D, **T. H. Ogden**, M. F. Whiting, D. K. Shiazowa. 2010. Polyphyly of the Pikeminnows (Teleostei: Cyprinidae) Inferred Using Mitochondrial DNA Sequences. *Transactions of the American Fisheries Society*. 139: 303-315.
- Rosenberg, M. S., and **T. H. Ogden**. 2009. Simulation approaches to evaluating alignment error and methods for comparing alternate alignments. Pp. 179-207 in *Sequence Alignment: Methods, Models, Concepts, and Strategies*, M.S. Rosenberg, ed. University of California Press: Berkeley, CA.
- Ogden, T. H.**, M. Sartori, J. L. Gattolliat, A. Staniczek, T. Soldan, and M. F. Whiting. 2009. Towards a new paradigm in mayfly phylogeny (Ephemeroptera): combined analysis of morphological and molecular data. *Systematic Entomology*. 34(4): 616-634.
- Ogden, T. H.**, J. Osborne, L. Jacobus, and M. F. Whiting. 2009. Combined morphological and molecular phylogeny of Ephemerellidae (Ephemeroptera). *Zootaxa* 1991:28-42.
- Bybee, S., **T. H. Ogden**, M. Braham, and M. F. Whiting. 2008. Molecules, Morphology and Fossils: A Comprehensive Approach to Odonate phylogeny and the evolution of the Odonate Wing. *Cladistics*. 24(4): 477-514.
- Ogden, T. H.**, M. Sartori, M. F. Whiting. 2008. Pisciforma, Setisura, and Furcatergalia (Order: Ephemeroptera) are not monophyletic based on 18S rDNA sequences: A Reply to Sun et al. (2006). *Annals of the Entomological Society of America*. 101(1):1-6
- Ogden, T. H.**, and M. S. Rosenberg. 2007. Alignment and Topological Accuracy of the Direct Optimization approach via POY and Traditional Phylogenetics via ClustalW + PAUP*. *Systematic Biology*. 56(2): 182-193.
- Ogden, T. H.**, and M. S. Rosenberg. 2007. How should gaps be treated in parsimony? A comparison of approaches using simulation. *Molecular Phylogenetics and Evolution*. 42: 817-826.
- Ogden, T. H.**, and M. S. Rosenberg. 2006. Multiple sequence alignment accuracy and phylogenetic inference. *Systematic Biology*. 55(2): 314-328.
- Ogden, T. H.** and M. F. Whiting. 2005. Phylogeny of Ephemeroptera (mayflies) based on molecular evidence. *Molecular Phylogenetics and Evolution*. 37(3): 625-643.
- Ogden, T. H.**, M. F. Whiting, and W. C. Wheeler. 2005. Poor taxon sampling, poor character sampling, and non-repeatable analyses of a contrived dataset do not provide a more credible estimate of insect phylogeny: a reply to Kjer. *Cladistics*. 21(3): 295-302.
- Ogden, T. H.** and M. F. Whiting. 2003. The problem with the Paleoptera problem: sense and sensitivity. *Cladistics* 19(5): 432-442.
- Ogden, T. H.** and M. F. Whiting. 2003. Phylogeny of Ephemeroptera: Molecular Evidence. *Entomologische Abhandlungen*. 61(2): 126-127.
- Ogden, T. H.** and M. F. Whiting. 2003. Genomic tissue library of Odonata: a call for specimens. *Argia*.

- Ogden, T. H.**, W. P. McCafferty and M. F. Whiting. 2002. Phylogeny of the Ephemeroptera of the world: a call for specimens. *Mayfly Newsletter*. pp. 5-6.
- Ogden, T. H.** and L. E. Parra. 2001. Taxonomy and biology of a new Oecophoridae (Lepidoptera) from central Chile. *Revista Chilena de Historia Natural*. 74: 533-538.

Accepted

- Ogden, T. H.** 2020. Accepting Evolution with Joy is Possible. *BYU Studies Quarterly*.

Submitted

- *Ferguson D., **T. H. Ogden**. Student Acceptance of Evolution: Factors that lead to change. *Journal of Biological Education*. *In Review*.
- Jensen J., C. Smith, R. Bowers, E. Holt, M. Kaloi, **T. H. Ogden**, K. Parry, and J. Payne. Asynchronous Online Instruction Leads to Learning Gaps When Compared to a Flipped Classroom. *International Journal of Science Education*. *In Review*.

In Preparation

- **Ogden, T. H.**, J. W. Breinholt, S. M. Bybee, *D. Miller, M. Sartori, D. Shiozawa, and M. F. Whiting.. Phylogenomic analysis of Ephemeroptera.
- *Montano C., **T. H. Ogden**, Phylogeny of the Carnivorous Mayflies (Ephemeroptera).
- **Ogden, T. H.**, *et al. Phylogeny of Baetidae (Ephemeroptera).
- **Ogden, T. H.**, *N. Backman. Phylogeny of Siphonuridae (Ephemeroptera).
- **Ogden, T. H.**, *et al. Phylogeny of Heptageniidae (Ephemeroptera)
- **Ogden, T. H.**, *et al. Phylogeny of Pannota (Ephemeroptera).
- Fairbanks, D.J., et al. Fusion of chromosome 2 in humans.

Scholarships, Fellowships & Awards:

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| UVU SAC: Mayfly Phylogenomics | 2021 | \$2800 |
| UVU URSCA grants: Jake Reed and Jed Whetten | 2020 | \$2994 |
| UVU SAC (Scholarly Activities Committee): Jeremy Jensen | 2020 | \$1500 |
| UVU SAC (Scholarly Activities Committee): Jarod Meecham | 2020 | \$1494 |
| UVU URSCA grants: Taylor Murphy | 2020 | \$2000 |
| UVU Faculty Excellence Award | 2020 | |

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| UVU SAC: Funds for UCUR 2020 | 2020 | \$260 |
| NSF EAGER: SG: RUI: Phylogeny of Mayflies (Ephemeroptera) – Supplemental funding | 2019 | \$6250 |
| UVU SAC (Scholarly Activities Committee): Talia Backman | 2019 | \$3,216 |
| UVU URSCA grant: Ernie Vilela | 2019 | \$2,000 |
| UVU GEL: BioBlitz in Captitol Reef; Co-PI | 2019 | \$10,000 |
| UVU SAC (Scholarly Activities Committee); ESA travel for CaBri and Nick | 2018 | \$2,518 |
| UVU URSCA grants: Nick, Chad, Joseph | 2018 | \$6,000 |
| Presidential Fellowship: Mayfly Transcriptomes to Study Evolution and Development of Wings | 2017 | \$8,000 |
| Gateway initiative to redesign Biol 1010, 1610, and 1615. Office of Teaching and Learning, UVU. | 2017 | \$25,000 |
| UVU SAC (Scholarly Activities Committee) | 2017 | \$3,975 |
| UVU URSCA grants | 2017 | \$4,700 |
| NSF EAGER: SG: RUI: Phylogeny of Mayflies (Ephemeroptera) – Supplemental funding | 2017 | \$39,500 |
| NSF EAGER: SG: RUI: Phylogeny of Mayflies (Ephemeroptera) – Supplemental funding | 2016 | \$12,500 |
| UVU URSCA grants | 2016 | \$4,926 |
| Sabbatical awarded for Fall 2016 – carried out at BYU and in Ogden Lab at UVU | 2015 | |
| UVU Trustee Award of Excellence | 2014-2015 | |
| UVU HIELG: Assessing the mechanisms that improve student performance and completion in General Biology | 2015 | \$102,950 |
| NSF EAGER: SG: RUI: Phylogeny of Mayflies (Ephemeroptera) | 2015 | \$150,000 |
| UVU URSCA grants | 2015 | \$1,576 |
| UVU Summer Faculty Seminar Micro-grant; Center for Study of Ethics | 2015 | \$500 |
| USHE TICE Biology 1010 Curriculum Development Proposal | 2013 | \$275,843.12 |
| UVU Presidential Fellowship | 2012 | \$8,000 |
| UVU SURF (Summer Undergraduate Research | 2012-2015 | \$6,000 |
| UVU SAC (Scholarly Activities Committee) | 2009-20120 | \$39,000 12 hours reassigned time |
| UVU GEL (Grants for Engaged Learning) | 2011-2015 | \$31,500 |
| UVU Capitol Reef Field Station grant | 2010-2015 | \$8,008 |
| UVU CEL (Center for Engaged Learning) | 2009 | \$5,000 |
| UVU SCOP (Student Scholarly and Creative | 2010-2011 | \$7,000 |
| UVU Grant Writing Stipend | 2009, 2014 | \$6,500 |
| UVU Senate Faculty Travel Grant | 2009 | \$400 |
| BYU mentoring undergraduates grant | 2004 | \$6,000 |
| BYU Booth Scholarship of Entomology | 2004 | \$1,000 |
| BYU Graduate Fellowship | 2003-2004 | \$6,000 |
| Marie Stopes travel award from the Hennig Society | 2003 | |

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| BYU mentoring undergraduates grant | 2003 | \$6,000 |
| BYU Booth Scholarship of Entomology | 2003 | \$1,000 |
| NSF DDIG (Doctoral Dissertation Improvement Grant) | 2002 | \$10,000 |
| BYU Graduate Studies Travel Grant | 2002 | \$400 |
| President's Prize for the student Competition, | 2002 | |
| BYU Booth Scholarship of Entomology | 2000 | \$1,000 |
| Zoology department scholarship for outstanding | 1997-2000 | \$3,000 |
| Total Career | | \$813,510 |

Oral Presentations:

(*undergraduate co-author)

1. **Ogden TH. Invited Speaker.** Insects and Climate Change: From Ice Bugs to Mayflies. WNAN 2021. UVU. April 2021.
2. **Ogden TH. Invited Speaker.** Unexpected Graduate Studies in Chile: From Moths to Mayflies. UVU Latin American Studies Symposium. November 2019.
3. **Ogden TH. Invited Speaker.** Earth Week: Biodiversity and Extinction. Lakeridge Junior High School. Orem, UT. April 2019
4. **Ogden TH. Invited Speaker.** Lessons from Darwin: for Scholarship and Life. Snow College Convocation. Ephraim, UT. 2019
5. Clawson JM* and **Ogden TH.** Molecular Phylogeny of the Mayfly Family Heptageniidae (Ephemeroptera). UCUR. Weber State University. 2018
6. **Ogden TH. Invited Speaker.** Evolution of Flight in Insects: Insights from Phylogenomics of Mayflies. UtSTA. Provo Convention Center. 2019
7. **Ogden TH.,** Breinholt J, Bybee S, Miller D, Sartori M, Shiozawa D, and Whiting M. The Evolution and Phylogeny of Mayflies: Insights Derived from Phylogenomic Data. Entomological Society of America. Vancouver, Canada. 2018
8. **Ogden TH. Invited Speaker.** Reconciling Science and Religion. UVU Mormon Studies Conference: Heaven & Earth. UVU. 2018
9. **Ogden TH.,** Breinholt J, Bybee S, Miller D, Sartori M, Shiozawa D, and Whiting M **Invited Speaker.** Phylogenomics and Evolution of Mayflies. XV International Conference on Ephemeroptera. Vittoria, Brazil. 2018
10. Miller D, Breinholt J, and **Ogden TH.** Anchored Phylogenomics of Burrowing Mayflies. XV International Conference on Ephemeroptera. Vittoria, Brazil. 2018
11. **Ogden TH. Invited Speaker.** Roots of Knowledge and the Tree of Life. Roots of Knowledge Speaker Series. UVU. 2017
12. **Ogden TH. Keynote Speaker.** Let Life Bug You! Empower yourself. UVU Empowering your Tomorrow conference. UVU. 2017
13. Miller D* and **Ogden TH.** Tusk evolution in the burrowing mayflies: traditional genes vs. phylogenomics. Evolution. Portland, OR. 2017
14. **Ogden TH,** Miller D, and J Breinholt. The Evolution of Mayflies: Ephemeroptera

- Phylogenomics. Evolution. Portland, OR. 2017
15. Ferguson D* and **Ogden TH**. Accepting Evolution: Factors that lead to change in students' acceptance of evolution. Evolution. Portland, OR. 2017
 16. **Ogden TH. Keynote Speaker**. Lessons from Darwin: for research and life. UCUR. UVU. 2017
 17. Ferguson D* and **Ogden TH**. To accept or not accept: A study of evolution and worldview reconciliation in an Introductory Biology course. UCUR. UVU. 2017
 18. **Ogden TH**. Simulation studies in bioinformatic research. ACS Northwest Regional Meeting (NORM). June 2015
 19. **Ogden TH**. Molecular Phylogenetics of Mayflies: status and future directions. XIV International Conference on Ephemeroptera and XVIII International Symposia on Plecoptera. Aberdeen, Scotland. June 2015.
 20. **Ogden TH**. Evolution, Education, and Entomology: Evolution's importance in the classroom. UVU Prep. June 2015.
 21. **Ogden TH** and Jeffery DE. Natural Law in LDS Theology: Prospects for The 21st Century. Sunstone. Salt Lake City. 2014
 22. **Ogden TH** and Holt E. Flipped Face-to-Face versus Online: A Case Study in Introductory Biology. SoTE. Utah Valley University. 2014
 23. Holt E and **Ogden TH**. Content, Delivery of Content or the Messenger of Content: What Makes Evolution 'Acceptable'? SoTE. Utah Valley University. 2014
 24. Mortimer T*, Holt E, and **Ogden TH**. Perceptions of Evolution: Insights from interviews. UCUR. Brigham Young University. 2014.
 25. **Ogden TH**. Biology Buffet: Bugs, Evolution, and Teaching. UVU Department of Biology Seminar. Fall 2013.
 26. **Ogden TH**. The Common Insects of Capitol Reef. Entrada Institute, Torrey UT. August 2013.
 27. Holt E and **Ogden TH**. Teaching Evolution to Undergraduates: Can We Change Their Minds? SABER Meeting. University of Minnesota. 2013.
 28. Schow J* and **Ogden TH**. Snapshot: An interactive taxonomy-driven tool for phylogenetic dataset construction. Evolution Meeting. Snowbird, UT. 2013.
 29. **Ogden TH**, Mortimer T*, Vance J*, and Holt E. Teaching Evolution: Can We Change Their Minds? Evolution Meeting. Snowbird, UT. 2013.
 30. Tingey M* and **Ogden TH**. Basal pterygote relationships and its implications for the evolution of flight in insects. UCUR. Utah State University. 2013.
 31. Schow J* and **Ogden TH**. An interactive, taxonomy-driven tool for genetic sequence database mining. UCUR. Utah State University. 2013.
 32. Mortimer T*, Holt E, and **Ogden TH**. Student Perceptions and Knowledge of Evolution. UCUR. Utah State University. 2013.
 33. Eubank L*, Talarroja S*, and **Ogden TH**. Combined Morphological and Molecular Phylogeny of Pannota (Mayflies). NCUR. Weber State University. 2012.
 34. Ethington M* and **Ogden TH**. Insects of Capitol Reef National Park. NCUR. Weber

- State University. 2012.
35. **Ogden TH.** Evolution, Education, Entomology: Evolution's importance in the classroom and research. UVU Biology Department Seminar. Utah Valley University. September 2011.
 36. **Ogden TH,** Cookson M*, and Zobell T*. The Paleoptera Problem: Revisited. Entomological Society of America. Reno, NV. 2011.
 37. **Ogden TH.** Angels and Demons (and Mayflies): The Evolution of Flight in Insects. UVU Thinks Big. Utah Valley University. September 2011.
 38. **Ogden TH.** Using clickers to enhance student learning. Concurrent Enrollment Meeting. Utah Valley University, Department of Biology. Jan 2011
 39. **Ogden TH.** Using clickers to enhance student learning. Pearson Technology Event. Salt Lake Community College. 2011.
 40. Cookson M* and **Ogden TH.** Snapshot phylogenetics: Workflow from genbank to trees. UCUR, Weber State University, Ogden, UT. 2011.
 41. Simmons A* and **Ogden TH.** Phylogeny of Caenoidea (Ephemeroptera). UCUR, Weber State University, Ogden, UT. 2011.
 42. **Ogden TH.** Alignment and Topological Accuracy: Clustal+PAUP* vs POY revisited. Evolution Meeting. Portland, OR. 2010.
 43. **Ogden TH** The Evolution of Flight in Insects: Insights from Mayflies and DNA. Utah Valley University, Department of Biology Seminar. Jan 2010
 44. **Ogden TH** The Evolution of Flight in Insects: Insights from Mayflies and DNA. Idaho State University Practical Bioinformatics Workshop. Lava Hot Springs, ID. 2009
 45. **Ogden TH** The Evolution of Flight in Insects: Insights from Mayflies and DNA. Brigham Young University Idaho. Rexburg, ID. 2009.
 46. **Ogden TH** The Importance of Accurate DNA Sequence Alignment. Idaho State University Bioinformatics Workshop. Lava Hot Springs, ID. 2007.
 47. **Ogden TH** Work-flow via simulation to test accuracy. Idaho State University Bioinformatics Workshop. Lava Hot Springs, ID. 2007.
 48. **Ogden TH** Phylogenomics and Bioinformatics: Mayflies and Molecules: Evolution and Phylogeny of Basal Winged Insects. Invited Seminar Speaker. University of Arkansas, 2007.
 49. **Ogden TH** Phylogenomics and Bioinformatics: From Insect Evolution to Computational Biology. Invited Seminar Speaker. Idaho State University, 2006.
 50. **Ogden TH** and Rosenberg MS. Direct Optimization vs. Traditional Phylogenetics: Alignment and Topological Accuracy. SBE 2006.
 51. **Ogden TH** and Rosenberg MS. The use of simulation to study the role of alignment accuracy in phylogenetic inference. *Evolution*, 2005, finalist in Ernst Mayr Award competition.
 52. **Ogden TH** and Whiting MF. Phylogeny of Ephemeroptera based on molecular evidence. XI International Conference on Ephemeroptera and XV International Symposium on Plecoptera, 2004 Joint Meeting - August 22-29, 2004.

53. **Ogden TH** and Whiting MF. Phylogeny and evolution of mayflies (Ephemeroptera). Evolution, 2004, finalist in Ernst Mayr Award competition.
54. **Ogden TH** and Whiting MF. Phylogeny and evolution of mayflies (Ephemeroptera). International Meeting of the Entomological Society of America, 2004.
55. Osborne JT, **Ogden TH**, Jacobus LM, McCafferty WP, Whiting MF. Phylogeny of Ephemerellidae (Ephemeroptera): Combined Approach Based on Morphological and Molecular Data. International Meeting of the Entomological Society of America, 2004.
56. **Ogden TH** and Whiting MF. The Paleoptera Problem: Sense and Sensitivity. Willi Hennig Society Meeting, 2003.
57. **Ogden TH** and Whiting MF. Phylogeny of Ephemeroptera: molecular evidence. The Phylogenetic Relationships within the Insect Orders, Dresden, Germany, 2003 (Invited symposium speaker).
58. **Ogden TH** and Whiting MF. Evolution of the delicate ones: phylogeny of Ephemeroptera based on molecular evidence. International Meeting of the Entomological Society of America, 2003.
59. **Ogden TH** and Whiting MF. The Paleoptera Problem: Sense and Sensitivity. Pacific Branch of the Entomological Society of America, 2003 (Invited symposium speaker).
60. **Ogden TH** and Whiting MF. Odonata Genomics. DSA, 2003 (invited speaker).
61. **Ogden TH** and Whiting MF. The Paleoptera Problem: Sense and Sensitivity. Evolution, 2002
62. **Ogden TH** and Whiting MF. You gotta know when to fold `em: Is Paleoptera Monophyletic? International Meeting of the Entomological Society of America, 2002.
63. **Ogden TH** and Whiting MF. Higher-Level Phylogeny of Ephemeroptera: Molecular Evidence. International Meeting of the Entomological Society of America, 2001.
64. **Ogden TH** and Whiting MF. Higher-Level Phylogeny of Ephemeroptera: Preliminary Molecular Evidence. Willi Hennig Society Meeting, 2001.

Poster Presentations:

1. Larsen A* and **Ogden TH**. Ephemeroptera Identification using Mitochondrial DNA Sequence. Spring Showcase UVU. 2021.
2. Meecham J* and **Ogden TH**. Is Coloburiscidae Monophyletic: A Test of the Gondwanan Hypothesis. Spring Showcase UVU. 2021.
3. Weir T* and **Ogden TH**. The Mayflies of Utah. Spring Showcase UVU. 2021.
4. Murphy T* and **Ogden TH**. Molecular Phylogeny of the Mayfly Family Heptageniidae (Ephemeroptera). Spring Showcase UVU. 2021.
5. Vilela E* and **Ogden TH**. Insect Biodiversity Sampling of Capitol Reef National Park, Utah. Spring Showcase UVU. 2021.
6. Reed J*, Whetten J, and **Ogden TH**. DNA Barcoding of Vietnamese Mayflies. Spring Showcase UVU. 2021.
7. Jensen J*, Harison M, **Ogden TH**. Replicating Climate Conditions from Southern Arizona Induces Ecdysial Behaviors in Vinegaroons. Spring

- Showcase UVU. 2021.
8. Larsen A* and **Ogden TH**. Ephemeroptera Identification using Mitochondrial DNA Sequence. UCUR. Brigham Young University. 2021.
 9. Meecham J* and **Ogden TH**. Is Coloburiscidae Monophyletic: A Test of the Gondwanan Hypothesis. UCUR. Brigham Young University. 2021.
 10. Vilela E* and **Ogden TH**. Contributions to an Insect Survey of Capitol Reef National Park, Utah. UCUR. Brigham Young University. 2021.
 11. Weir T* and **Ogden TH**. The Mayflies of Utah. UCUR. Brigham Young University. 2021.
 12. Jensen J*, Jones J, and **Ogden TH**. DNA comparisons within the owlfly genus *Ululodes* (Ascalaphidae: Ululodinae) reveals a new species. UCUR. Brigham Young University. 2021.
 13. Reed J*, Whetten J, and **Ogden TH**. DNA Barcoding of Vietnamese Mayflies. UCUR. Brigham Young University. 2021.
 14. Murphy T* and **Ogden TH**. Molecular Phylogeny of the Mayfly Family Heptageniidae (Ephemeroptera). UCUR. Brigham Young University. 2021.
 15. Hyer E*, Backman N*, and **Ogden TH**. A Worldwide Phylogenetic Study of the Family Baetidae. UCUR. Utah State University. 2020.
 16. Meecham J* and **Ogden TH**. Is Coloburiscidae Monophyletic: A test of the Gondwanan Hypothesis. UCUR. Utah State University. 2020.
 17. Backman N* and **Ogden TH**. Is Siphonuridae Monophyletic: Phylogenetic Relationships of Minnow Mayflies. UCUR. Utah State University. 2020.
 18. Vilela E*, Seal I* and **Ogden TH**. Transcriptomics of Ephemeroptera (Mayflies): Generation of New Data and Bioinformatics Workflow. UCUR. Utah State University. 2020.
 19. Murphy T* and **Ogden TH**. Molecular Phylogeny of the Mayfly Family Heptageniidae (Ephemeroptera). UCUR. Utah State University. 2020.
 20. Meecham J* and **Ogden TH**. Molecular Phylogeny of Coloburiscidae (Ephemeroptera). UVU Showcase. Oct 2019.
 21. Vilela E* and **Ogden TH**. Transcriptomics of Ephemeroptera (Mayflies): Generation of New Data and Bioinformatics Workflow. UVU Showcase. Oct 2019.
 22. Backman N*, Vilela E*, and **Ogden TH**. Is Siphonuridae Monophyletic: Phylogenetic Relationships of Minnow Mayflies. UVU Showcase. Oct 2019.
 23. Montano C* and **Ogden TH**. The Use of Transcriptome Data Analysis: What it can reveal about opsin evolution in mayflies. UCUR. Weber State University. 2018
 24. Newell N*, Knight, J. and **Ogden TH**. What Hides in Darkness? A Survey of Cave Arthropods. UCUR. Weber State University. 2018
 25. Newell N*, Knight, J. and **Ogden TH**. What Hides in Darkness? A Survey of Cave Arthropods. Entomological Society of America. Vancouver, Canada. 2018

26. Montano C* and **Ogden TH**. Phylogenomics and Evolution of Carnivorous Mayflies. Entomological Society of America. Vancouver, Canada. 2018
27. Talbot C* and **Ogden TH**. Are Humans Just Animals? A Study of the Acceptance of Evolution. UCUR. SUU. 2018
28. Guerra A*, Hoffmann C*, and **Ogden TH**. Molecular Phylogeny of Mayflies (Ephemeroptera). UCUR. SUU. 2018
29. Montano C* and **Ogden TH**. Traditional Genes May be Misleading: A Phylogenetic Analysis of Ameletopsidae (Ephemeroptera). UCUR. SUU. 2018
30. Delano J* and **Ogden TH**. Transcriptomes show us the way: Opsin evolution in Mayflies (Ephemeroptera). UCUR. SUU. 2018
31. Brian N*, Delano J*, and **Ogden TH**. Rearing Ephemeroptera in the Lab: Parthenogenesis and Transcriptome Data In the Mayflies. UCUR. SUU. 2018
32. Talker I* and **Ogden TH**. Phylogeny of Mayfly Subfamily Ecdyonurinae (Heptageniidae: Ephemeroptera). Evolution. Portland, OR. 2017
33. Talbot C* and **Ogden TH**. Biology Majors Acceptance of Evolution. Evolution. Portland, OR. 2017
34. Carrier B*, Ferguson D*, and **Ogden TH**. Molecular Analysis of Mayfly Family Baetidae (Ephemeroptera). Evolution. Portland, OR. 2017
35. Kallis H* and **Ogden TH**. A Phylogenetic Analysis of the Pannota. Evolution. Portland, OR. 2017
36. Talker I* and **Ogden TH**. Phylogeny of Mayfly Subfamily Ecdyonurinae (Heptageniidae: Ephemeroptera). UCUR. UVU. 2017
37. Carrier B*, Ferguson D*, and **Ogden TH**. Molecular Phylogeny of Baetidae (Ephemeroptera). UCUR. UVU. 2017
38. Brady D* and **Ogden TH**. Evolution of Protective Square Gills in Caenoidea Mayflies. UCUR. UVU. 2017
39. Kallis H*, Jimenez R* and **Ogden TH**. A Phylogenetic Analysis of the Superfamily Ephemerelloidea (Ephemeroptera). UCUR. UVU. 2017
40. Talker I* and **Ogden TH**. Phylogeny of Mayfly Subfamily Ecdyonurinae (Heptageniidae: Ephemeroptera). UCUR. University of Utah. 2016
41. Carrier B* and **Ogden TH**. Phylogenetic Relationships of Mayfly Family Baetidae (Ephemeroptera). UCUR. University of Utah. 2016
42. Brady D* and **Ogden TH**. Evolution of Protective Square Gills in Caenoidea Mayflies. UCUR. University of Utah. 2016
43. Erickson R*, Hatch B*, and **Ogden TH**. Species List of Insects in Capitol Reef National Park. UCUR. Dixie State University. 2015.
44. Ferguson D* and **Ogden TH**. To accept or not accept: A study of evolution and worldview reconciliation in an Introductory Biology course. UCUR. Dixie State University. 2015.
45. Loveless J* and **Ogden TH**. Comparison of Macroinvertebrate assemblages of two

- perennial streams in Capitol Reef National Park. 2015.
46. Bartlett S*, Layton, B*, and **Ogden TH**. Gone Again: A story of evolution, mandibular tusks, and burrowing mayflies. UCUR. Dixie State University. 2015.
 47. Barker C*, Gatenby T*, and **Ogden TH**. Evolution and Molecular Phylogenetics of Baetidae (Ephemeroptera). UCUR. Dixie State University. 2015.
 48. Barker C*, Gatenby T*, and **Ogden TH**. Insights into the evolution of wings in Insects: Molecular Phylogenetics of Baetidae (Ephemeroptera). UCUR. Brigham Young University. 2014.
 49. Bartlett S* and **Ogden TH**. Evolution of Burrowing Mayflies: Tusks be gone. UCUR. Brigham Young University. 2014.
 50. Erickson R* and **Ogden TH**. Pamphlet and Survey of Common Insects of Capitol Reef National Park. UCUR. Brigham Young University. 2014.
 51. Fairbanks A*, **Ogden TH**, Parker G, Maughan, PJ, Fairbanks DJ. *NANOGP8*: The evolution of a human-specific retro-oncogene. UCUR. Utah State University. 2013.
 52. Bartlett S* and **Ogden TH**. Evolution of the mandibular tusks in burrowing mayflies (Ephemeroptera). UCUR. Utah State University. 2013.
 53. Barker C*, Gatenby T*, and **Ogden TH**. Molecular Phylogeny of the Mayfly Family Baetidae (Ephemeroptera). UCUR. Utah State University. 2013.
 54. Ethington M* and **Ogden TH**. Insects of Capitol Reef National Park. UCUR. Utah State University. 2013.
 55. Leavitt J* and **Ogden TH**. Phylogeny of Ephemerellidae (Ephemeroptera). UCUR. Utah State University. 2013.
 56. Putnam R* and **Ogden TH**. Molecular Phylogeny of the Fused-back Mayflies (Pannota: Mayflies). UCUR. Utah State University. 2013.
 57. Fairbanks A*, **Ogden TH**, Parrker G, Maughan J, and Fairbanks D. *NANOGP8*: The evolution of a human-specific retro-oncogene. NCUR. Weber State University. 2012.
 58. Tello-roja S*, Eubank L*, and **Ogden TH**. Spiny crawlers on trees: phylogeny of Ephemerellidae (Ephemeroptera). Smith T*, Barker C*, and **Ogden TH**. To Baetidae or not to Baetidae: comprehensive phylogeny of baetid mayflies (Ephemeroptera). NCUR. Weber State University. 2012.
 59. Barger C*, Holmes J*, and **Ogden TH**. Burrowing Mayflies (Ephemeroptera). NCUR. Weber State University. 2012.
 60. Smith T*, Zylstra A*, and **Ogden TH**. To Baetidae or not to Baetidae: comprehensive phylogeny of baetid mayflies. Entomological Society of America. Reno, NV. 2011.
 61. Ethington M* and **Ogden TH**. Insects of Capitol Reef National Park. Entomological Society of America. Reno, NV. 2011.
 62. Eubank L*, Tello-roja S*, and **Ogden TH**. Spiny crawlers on trees: phylogeny of Ephemerellidae (Ephemeroptera). Entomological Society of America. Reno, NV. 2011.
 63. Barber J *, Smith T *, Simmons A*, Larsen K*, Johnson D*, Ethington M*, Burdett J*, Olsen K*, Bobo N*, Brown S*, Monk M, and **Ogden TH**. Diversity of insects in

- Capitol Reef National Park. UCUR, Weber State University, Ogden, UT 2010.
64. Barber* M, Barber J*, and **Ogden TH**. Southern Utah insect collecting: What varieties of insects reside in the Moab and Colorado River areas? UCUR, Weber State University, Ogden, UT 2010.
 65. Burdett J* and **Ogden TH**. Pannota: Who's who in the family? UCUR, Weber State University, Ogden, UT 2010.
 66. Ethington M* and **Ogden TH**. Phylogeny of Ameletopsidae: Some of the carnivores of the mayfly world. UCUR, Weber State University, Ogden, UT 2010.
 67. Fairbanks A* and **Ogden TH**. NANOG retropseudogene evolution in primate genomes. UCUR, Weber State University, Ogden, UT 2010.
 68. Johnson D*, Smith T*, and **Ogden TH**. Phylogeny and evolution of Baetidae. UCUR, Weber State University, Ogden, UT 2010.
 69. Larsen K*, Larsen J*, and **Ogden TH**. Western United States insect specimens for UVU's new entomology course. UCUR, Weber State University, Ogden, UT 2010.
 70. Nelson-Hadley J* and **Ogden TH**. Movement patterns and activity budgets of a marine foraging troop of Chacma baboons (*Papio hamadryas ursinus*) on the Cape Peninsula, South Africa. UCUR, Weber State University, Ogden, UT 2010.

Undergraduate Research Students

(*undergraduates who have completed senior thesis or presented results at a scientific meeting)

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|-------------------------|----------------------------------|---------------------------------------|
| 1. Jacob Burnett* | 26. Trevor Gatenby* | 50. Ruben Jimenez* |
| 2. James Barber* | 27. Tanner Mortimer* | 51. Austin Carter |
| 3. Melanie Barber* | 28. Jarom Schow* | 52. Katie Peatross |
| 4. Nikk Bobo* | 29. Mark Tingey* | 53. Xavier Leiva |
| 5. Karina Kirk Larsen* | 30. Jeffrey Leavitt* | 54. CaBri Montero* |
| 6. Dave Fisher* | 31. Stephanie Bartlett* | 55. Chad Talbot* |
| 7. Adam Simmons* | 32. Baden Morrill | 56. Nicholas Brian* |
| 8. Mike Simons | 33. Robert Erickson* | 57. Angel Guerra* (UCAS HS student) |
| 9. Michael Cookston* | 34. Daniel Oler | 58. Curtis Hoffman* (UCAS HS student) |
| 10. Derek Johnson* | 35. Danny Ferguson* | 59. Jacob Delano* |
| 11. Aaron Fairbanks* | 36. Brian Armstrong | 60. Charles Pullen |
| 12. Mathew Ethington* | 37. Brain Hatch* | 61. Joseph Summerhays |
| 13. Tyler Smith* | 38. Dustin Miller* | 62. Nick Newell* |
| 14. Shannon Deurden* | 39. Jake Loveless* | 63. Ernie Vilela* |
| 15. Louis Eubank* | 40. Austin Bettridge | 64. Jordan Clawson* |
| 16. Samantha Telarroja* | 41. Jesse Earl (UCAS HS student) | 65. Ammy Nielsen |
| 17. Albert Zylstra* | 42. Gary Hatch | 66. Natalia Backman* |
| 18. Chase Barker* | 43. Trevor Chamberlain | 67. Taylor Murphy* |
| 19. Corey Barger* | 44. Jacob Robinson* | 68. Jeremy Jensen* |
| 20. Trevor Zobell* | 45. Dalton Brady* | 69. Tabitha Weir |
| 21. Josh Holmes* | 46. Mary Vallecillo* | 70. Jake Reed |
| 22. Ashton Godfrey | 47. Bryson Carrier* | 71. Aaron Fairbourn |
| 23. Julie Nance | 48. Ishaah Talker* | 72. Jed Whetten |
| 24. David Tregaskis | 49. Hayden Kallis* | |
| 25. Robert Putnam* | | |

73. Isaac Seal*

74. Avery Larsen

*undergraduates who have completed senior thesis or presented results at a scientific meeting

Membership in Professional Societies:

- Society for Molecular Biology and Evolution (SMBE) (2005-present)
 - Entomological Society of America (ESA) (2000 - present)
 - Society of Systematic Biologists (2002 - present)
 - Willi Hennig Society (2003 - 2008)
 - Dragonfly Society of America (DSA) (2003-2006; 2015-present)
 - Chilean Entomological Society (CES) (1997 - 2000)
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Service

To the University:

- Committee member, search committee for Bioinformatics/Genomics position (2020-present)
- UVU Showcase Planning Committee Chair. (2020-present)
- Re-envisioning the Undergraduate Experience Committee (RUEC) committee member working specifically in the High Impact Practices Subcommittee (HIPs) (2019-present)
- Latin American Studies Committee (2019-present)
- COS High Performance Computing Committee Chair (2019-present)
- Darwin Day Planning Committee. (2009-present)
- Committee Chair, search committee for Bioinformatics/Genomics position (2019-2020)
- UVU Showcase Planning Committee. (2019)
- Biology Department Scheduler (2018-present)
- Intellectual Property and Technology Commercialization Committee. (2018-present)
- University General Education (GE) Committee. (2018-present)
- Committee member, search committee for molecular biology position (2018-2019)
- Curriculum Committee, Department of Biology: Member (2014-2018)
- Strategic Planning Committee, Department of Biology: Member (2014-2018); Chair (2015-2018)
- Lecture Capture Sub-Committee. (2016-2018)
- Committee Chair, search committee for Ecology/Invertebrate Zoology position (2017)
- Committee member, search committee for plant/environmental biology position

(2017)

- Research Misconduct Committee. (2017)
- UCUR 2016 Steering Committee. (2015-2016)
- Member Advisory Board for Capitol Reef Field Station (CRFS) (2011-2014)
- UVU IRB committee member (2010-2015)
- Member of Tenure Policy writing Committee (2014)
- Speaker and Mentor at UVU PREP (2013 & 2014)
- Learning Community Participation – Biology & Math (2013 & 2014)
- Designer Gold course Biology 1010 for Distance Education (2013)
- Committee member, search committee for College of Science and Health Computer Technician (2012)
- Chair, search committee for CRFS manager (2011)
- Chair, Core Courses for Curriculum Committee (2009 – 2011)
- Committee member, committee for Biol 1615 lab reconstruction (2011)
- Committee member, committee for Biol 1010 textbook selection (2011)
- Committee member, search committee for STEP grant technician (2010)
- Committee member, search committee for plant biologist position (2010)
- Biotechnology Club: I participated in the meetings and interacted and mentored the students that belong to the Biotech Club (2009)

To the Community (scientific and local):

- Reviewer for the journals: BMC Bioinformatics, BMC Evolutionary Biology, Systematic Biology, Molecular Phylogenetics and Evolution, Cladistics, Bioinformatics, Systematic Entomology, Zoological Science, Zootaxa, Western North American Naturalist, Morphology, Trends in Evolutionary Biology, Freshwater Science, Insect Systematics and Evolution, Zoologica Scripta, Molecular Biology and Evolution, BYU Quarterly Review, Guyana.
- Reviewer for National Science Foundation
- Designer Technology Intensive Concurrent Enrollment (TICE) Course for USHE (2013-2014)

Thesis and Postgraduate-Scholar Students:

- Ferguson, Danny. PhD Candidate. Brigham Young University. 2019-present.
- Laidlaw, Clint. PhD Candidate. Brigham Young University. 2015-2019.
- Montano, CaBri. UVU Senior Thesis. 2017.
- Ferguson, Danny. UVU Senior Thesis. 2017.
- Carrier, Bryson. UVU Senior Thesis. 2017.
- Hatch, Brian. UVU Senior Thesis. 2015.

- Erickson, Robert. UVU Senior Thesis. 2015.
 - Bartlett, Stephanie. UVU Senior Thesis. 2015.
 - Loveless, Jake. UVU Senior Thesis. 2014.
 - Vuataz, Laurent. PhD Candidate. Université de Lausanne. Switzerland. 2011.
 - Burdett, Jacob. UVU Senior Thesis. 2010.
 - Johnson, Derek. UVU Senior Thesis. 2011.
 - Simmons, Adam. UVU Senior Thesis. 2011.
 - Cookson, Michael. UVU Integrative Studies Senior Thesis. 2011.
 - Deurden, Shannon. UVU Senior Thesis. 2011.
 - Smith, Tyler. UVU Senior Thesis. 2012.
 - Barker, Chase. UVU Senior Thesis. 2012.
-

Other

- Science Fair Judge – Cherry Hills Elementary. 2009.
 - Assisted in Science Fair Projects – Cherry Hills Elementary. 2009, 2012.
 - Guest Lecture on Entomology at Cherry Hills Elementary. 2010, 2011.
 - Guest Lecture at Payson Junior High School. 2013.
 - Merit Badge Counselor for Biology related areas for the Boy Scouts of America. 2009-2012.
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