

Texas State University Vita

I. ACADEMIC/PROFESSIONAL BACKGROUND**A. Carrie Jo Bucklin (née Boyce), Ph.D.**

214 Supple Science Building
601 University Dr.
San Marcos, TX 78666

Assistant Professor

carriebucklin@txstate.edu
512-245-3361

B. Educational Background

<i>Degree</i>	<i>Year</i>	<i>University</i>	<i>Major</i>
Ph.D.	2015	University of Southern Mississippi Dissertation: <i>Investigating How Students Communicate Tree-Thinking</i> (Chair: Dr. Kristy Lynn Daniel née Halverson)	Biological Sciences
M.S.	2010	University of Southern Mississippi	Science & Mathematics Education
B.A.	2008	University of Missouri	Biological Sciences; Minor: Natural Resources

C. University Experience

**Institutions Abbreviated: Texas State University (TXST), Southern Utah University (SUU), University of the Virgin Islands Experimental Program to Stimulate Competitive Research (UVI-EPSCoR), University of Southern Mississippi (USM), Pearl River Community College (PRCC), University of Missouri (MU)*

<i>Position</i>	<i>University</i>	<i>Dates</i>
Assistant Professor-Biology	TXST	2023-Present
Associate Professor-Biology Educator	SUU	2022-2023
Director UT State Science Olympiad	SUU	2020-2023
Director Southern Utah Sci. & Engin. Fair	SUU	2018-2023
Assistant Professor-Biology Educator	SUU	2016-2022
Outreach and Education Coordinator	UVI-EPSCoR	2015-2016
Research Investigator	USM	2013-2015
<i>Understanding How Students Communicate Their Tree-Thinking Ability. Supervisor: Kristy L. Daniel (née Halverson)</i>		
Graduate Teaching Assistant	USM	2010-2012, & 2014
Graduate Research Assistant	USM	2010-2015
2013-15:	<i>Understanding Students Tree-Thinking Ability. Supervisor: Kristy L. Daniel</i>	
2013-15:	<i>HHMI Phage Hunters. Supervisors: Dr. Kristy L. Daniel & Dr. Kari L. Clase</i>	
2013-15:	<i>Tree-thinking Assessment Development. Supervisors: Dr. Kristy L. Daniel working with PI Dr. Kristen Jenkins</i>	
2011-14:	<i>Over Under and Through, Students Informally Discover the Environment. Supervisors: Dr. Kristy L. Daniel & Dr. Aimee K. Thomas</i>	
2010-12:	<i>Using Manipulative Models, Students' Acceptance of Evolution, and Assessment Question Order</i> <i>Supervisor: Kristy L. Daniel</i>	
MS Region 1 Sci. & Engin. Fair Co-Director	USM	2012-2015
Adjunct Instructor	PRCC	2012-2014
Adjunct Instructor	MU	2009
Undergraduate Teaching Assistant	MU	2008

D. Relevant Professional Experience

<i>Position</i>	<i>Entity</i>	<i>Dates</i>
Zoo Intern, Aves, Penguin Exhibit	St. Louis Zoo	2008
Research Assistant	MO Dept. of Conservation	2006-2007
Undergraduate Peer Advisor	MU	2004-2008

E. Other Professional Credentials

2021-2022 Provost Fellow, SUU
 2011 National Science Foundation, Science: Becoming the Messenger
 2010-Present CITI Certificate (exp 09/2025)

II. TEACHING**A. Teaching Honors & Awards**

Outstanding Faculty. (2022). College of Sciences, Biology. This award is student nominated and given to one faculty member per department each year. SUU.

Distinguished Educator. (2021). University. This award is to recognize three (3) individual, full-time faculty for distinguished teaching effectiveness; professional commitment; demonstrated interest in students; and service to others and the University overall. A Faculty Senate subcommittee votes on nominations and selects the recipients of this award. SUU.

B. Courses Taught

SUU - BIOL 1010/15: Introduction to Biology/Introduction to Biology Lab; BIOL 1020/25: Human Biology/ Human Biology Lab; BIOL 1610/15: General Biology/General Biology Lab I; BIOL 1620/25: General Biology II/General Biology Lab II; BIOL 2500: Environmental Biology; BIOL 3050: Biomedical Ethics; BIOL 3390/3395: Mammalogy/Mammalogy Lab; BIOL 3990: Life Finds a Way: Exploring Biology through Cinema (FS 2021); BIOL 4900: Biology Teaching Methods (MS/HS); BIOL 4980: Student Teaching (MS/HS Science); SUU 2250: Western Women in Medicine (Integrated Biology & History); GOSC 6303: Methods & Materials for Teaching Secondary Science (Graduate)

USM - BSC 111L: Principles of Biological Sciences II Laboratory; BSC 110L: Principles of Biological Sciences I Laboratory; BSC 251L: Human Anatomy & Physiology II Laboratory; BSC 110L: Principles of Biological Sciences I Laboratory

PRCC - Bio 1131: General Biology I Laboratory; Bio 1133: General Biology I Lecture; Bio 1521: Principles of Anatomy and Physiology II Laboratory; Bio 1523: Principles of Anatomy and Physiology II Lecture

MU - Bio 1010: Introductory Biology Laboratory for Non-Science Majors; Bio 1010: Introductory Biology for Non-Science Majors

C. Graduate Theses/Dissertations, Honors Theses, or Exit Committees

**Indicates C.J. Bucklin – major professor*

<i>Student Name, School</i>	<i>Year</i>	<i>Degree</i>
*Daniell Gay, TXST	In Progress (start Jan 2023)	Ph.D. Aquatic Resources and Integrated Biology
*Deedee Carlton, TXST	In Progress (start Jan 2023)	M.S. Biology
Fahadul Alam, TXST	In Progress	Ph.D. Aquatic Resources and Integrated Biology
Hannah Baratang, TXST <i>Title Drawing as a generative learning activity: A case study on a nature journaling seminar course</i>	In Progress	M.S. Biology
Zach Nolen, TXST <i>A Consideration into Ways Biology-Based Student Organizations Facilitate Participation in STEM</i>	2019, Aug	Ph.D. Aquatic Resources and Integrated Biology

Postdoctoral Researchers

N/A

Masters – Non-thesis

N/A

Other Students

Supervisor, Undergraduate Student Research (Non-Thesis Research)

Euan Andrew, SUU; John Albrecht, SUU; Luke Alder, SUU; Sierra Ball, SUU; Zuleyca Benitez, TXST; Judy Flamenco, SUU; Johanna Garavito, SUU; Kaitlyn Howard, SUU; Sheridan Lloyd, SUU; Sierra Marines, SUU; Elizabeth Obray, SUU; Julie Price, TXST Kaitlin Veylupek, SUU; Diana Villicana, SUU; Zihe Wan, SUU.

Mentor, Graduate Student (Non-Thesis Research)

E. Austin Leone, TXST

D. Courses Prepared & Curriculum Developed

TXST

BIO 4332/5332: Biology in Film & Television

SUU

INDS 4900: The History, Culture, and Legacy of the American Civil War Era with Dr. Laura June Davis (History Dept) & Dr. Lisa Arter (English Department). SUU 2250: Women in Medicine; Integrated Life Sciences-Humanities course with Dr. Laura June Davis (History Dept). BIOL 3990: Life Finds a Way: Exploring Biology through Cinema

E. Funded - External Teaching Grants and Contracts

N/A

F. Submitted, Not Funded - External Teaching Grants & Contracts

N/A

G. Funded - Internal Teaching Grants & Contracts (Total \$2000)

Center for Excellence in Teaching and Learning Curriculum Innovation Grant – Team-taught Integrated GE Courses. (2018, May). *Development of Western Women in Medicine Course*. **Bucklin, C.J.** & Davis, L.J. (\$1000).

Center for Excellence in Teaching and Learning Curriculum Innovation Grant – Diversity and Global Learning. (2017, May). *Implementing a CURE to expand student's global learning and increase diversity in science research*. PI: **Bucklin, C.J.** (\$1000).

H. Submitted, Not Funded - Internal Teaching Grants & Contracts

N/A

III. SCHOLARLY/CREATIVE

Note: All works authored by "Boyce" are credited to USM, works by "Bucklin" are credited to other institutions.

**Denotes undergraduate student author*

+Denotes graduate student author

A. Works in Print

1. Books

a. Scholarly Monographs

N/A

b. Textbooks

N/A

c. Edited Books

N/A

d. Chapters in Books

2. Daniel, K.L., **Bucklin, C.J.**, Leone, E.A.⁺, & Idema, J.L.⁺ (2018). Towards a definition of representational competence. In K.L. Daniel (Ed.) *Towards a Framework for Representational Competence in Science Education* (Chapter 1). Dordrecht, The Netherlands: Springer (pp. 3-11).
1. Mishra, C., Clase, K.L., **Bucklin, C.J.**, & Daniel, K.L. (2018). Improving students' representational competence through a course-based undergraduate research experience. In K.L. Daniel (Ed.) *Towards a Framework for Representational Competence in Science Education* (Chapter 9). Dordrecht, The Netherlands: Springer (pp. 177-201).

2. Articles

a. Refereed Journal Articles

16. Bolus, R., Ogburn, M., & **Bucklin, C.J.** (Accepted – July 2023). Ecology in Action: A Niche Modeling CURE. *American Biology Teacher*
15. Ferguson, D.G., Leone, E.A., **Bucklin, C.J.**, & Daniel, K.L. (Accepted – Feb 2023). A comparison of Measured Outcomes Across Tree-Thinking Interventions. *American Biology Teacher*.
14. Gold, R., **Bucklin, C.J.**, Forshee, L., Weeks, C., & Hardin, L.* (2023). Exploring the Leech Gut Microbiome as a Course-based Undergraduate Research Experience. *Journal of College Science Teaching*, 52(5), 70-79.
13. Johnson, S.L., & **Bucklin, C.J.** (2023). Using Pipe Cleaners to Bring Proteins to Life. *American Biology Teacher*, 85(3), 168-170. <https://doi.org/10.1525/abt.2023.85.3.166>.
12. **Bucklin, C.J.** & Mauger, L. (2022). CUREs: How to create & incorporate a collaborative ant-based project to teach science practices. *American Biology Teacher*, 84(6), 353-357. <https://doi.org/10.1525/abt.2022.84.6.353>.
11. Jenkins, K., Mead, L., Baum, D., Daniel, K.L., **Bucklin, C.J.**, Leone, E.A.⁺, Gibson, J.P. & Naegle, E. (2022). Developing the BETTSI: A Tree-Thinking Diagnostic Tool to Assess Individual Elements of Representational Competence. *Evolution*, 76(4), 708-721. <https://doi.org/10.1111/evo.14458>
10. **Bucklin, C.J.**, Roper, L., & Belk, J. (2021). The Goggle Lab: Using Impairment Goggles to Teach Science Practices. *American Biology Teacher*, 83(8), 521-525. <https://doi.org/10.1525/abt.2021.83.8.521>
9. Jenkins, K., Mead, L., Baum, D., Daniel, K.L., **Bucklin, C.J.**, Leone, E.A.⁺, Gibson, J.P. & Naegle, E. (2021). BETTSI - Basic Evolutionary Tree-Thinking Skills Instrument. *QUBES Educational Resources*. [doi:10.25334/ZQY1-W289](https://doi.org/10.25334/ZQY1-W289)
8. Garavito, J.*, **Bucklin, C.J.**, & Mauger, L. (2020). Urbanization Effects on Genetic and Species Diversity in Southern Utah Ant Populations. *Utah Academy of Science, Arts, and Letters*, 97, 97-116.
7. Nolen, Z.L.⁺, Daniel, K.L., & **Bucklin, C.J.** (2020). Perceived benefits from participating in content-based student organizations. *Journal of Student Affairs Research and Practice*, 58(4), 1-13. <https://doi.org/10.1080/19496591.2020.1796689>
6. Mraz, J.A., Daniel, K.L., **Bucklin, C.J.**, Mishra, C., Ali, L., & Clase, K.L. (2018). Student identities in authentic course-based undergraduate research experience. *Journal of College Science Teaching*, 48(1), 68-75.
5. **Bucklin, C.J.** & Daniel, K.L. (2017). Using word associations as a formative assessment for understanding phylogenetics. *American Biology Teacher*, 79(8), 668-670. <https://doi.org/10.1525/abt.2017.79.8.668>
4. **Boyce, C.J.**, Mishra, C.⁺, Halverson, K.L. & Thomas, A.K. (2014). Getting students OUTSIDE: Using technology as a way to stimulate engagement. *Journal of Science Education and Technology*, 23, 815-826. DOI: [10.1007/s10956-014-9514-8](https://doi.org/10.1007/s10956-014-9514-8)
3. McLaurin, D.*, Halverson, K.L., & **Boyce, C.J.** (2013). Using Manipulative Models to Develop Tree-Thinking. *Biology International – The International Union of Biological Sciences (IUBS) I*, 54, 108-121. http://www.iubs.org/fileadmin/user_upload/Biology-International/BI/BI_Numero_54.pdf

2. Walter, E.M., Halverson, K.L., & **Boyce, C.J.** (2013). Investigating the relationship between college students' acceptance of evolution and tree thinking understanding. *Evolution: Education, and Outreach*, 6, 26. DOI:10.1186/1936-6434-6-26

1. Halverson, K.L., **Boyce, C.J.**, & Maroo, J.D. (2013). Order matters: Pre-assessments and student generated representations. *Evolution: Education and Outreach*, 6, 24. DOI:10.1186/1936-6434-6-24.

b. Non-refereed Articles

- Boyce, C.J.** & Halverson, K.L. (2011). Understanding evolution and evidentiary support. *Synergy: Different Entities Cooperating for a Final Outcome*, 2(2), 101-107.

3. Conference Proceedings

a. Refereed Conference Proceedings

9. **Bucklin, C.J.**, Daniel, K.L., & Nolen, Z.L.⁺ (2019, April). Introductory biology majors understanding of phylogenies after variable intervention types. *Proceeding of the annual meeting of the American Educational Research Association*, Toronto, Canada.
8. Daniel, K.L., Leone, E.A.⁺, & **Bucklin, C.J.** (2019, April). Developing a tree-thinking diagnostic test to assess individual elements of representational competence. *Proceeding of the annual meeting of the American Educational Research Association*, Toronto, Canada.
7. **Bucklin, C.J.** & Daniel, K.L. (2017, April). Changes in students' phylogenetic tree-reading: A quasi-experimental design study. *Proceeding of the NARST Annual International Conference*, San Antonio, TX.
6. St. Clair, A., Halverson, K.L., Thomas, A.K., & **Boyce, C.J.** (2015, April). Dividing attention participation to support informal learning. *Proceeding of the NARST Annual International Conference*, Chicago, IL.
5. **Boyce, C.J.**, Mishra, C., Halverson, K.L., & Thomas, A.K. (2014, April). Getting students OUTSIDE: Using technology as a way to stimulate engagement. *Proceeding of the NARST Annual International Conference*, Pittsburg, PA.
4. McLaurin, D.C.^{*}, Halverson, K.L., **Boyce, C.J.** (2013, April). Using manipulative models to develop tree-thinking. *Proceeding of the NARST Annual International Conference*, Rio Grande, Puerto Rico.
3. Halverson, K.L., Walter, E., & **Boyce, C.J.** (2012, March). Investigating the relationship between college students' acceptance of evolution and tree thinking understanding. *Proceedings of the Annual Meeting of the National Association for Research in Science Teaching*, Indianapolis, IN.
2. **Boyce, C.J.**, Maroo, J., & Halverson, K.L. (2011, April). The influence of task order on student responses on a tree thinking pretest. *Proceedings of the annual meeting of the American Educational Research Association*, New Orleans, LA.
1. **Boyce, C.J.**, & Halverson, K.L. (2011, April). Understanding evolution and evidentiary support. *Proceedings of the Annual Meeting of the National Association for Research in Science Teaching*, Orlando, FL.

4. Abstracts

N/A

5. Reports (Non-refereed)

- Bucklin, C.J.** (2019). Supporting Emerging Aquatic Scientists (SEAS) Your Tomorrow: Bridge to Ph.D. Program and Marine Science Opportunities – *NSF Outcomes and Final Project Report*. Cedar City, UT: Department of Biology, SUU
- Bucklin, C.J.** (2018). Supporting Emerging Aquatic Scientists (SEAS) Your Tomorrow: Bridge to Ph.D. Program and Marine Science Opportunities – *NSF Second Annual Project Report*. Cedar City, UT: Department of Biology, SUU
- Bucklin, C.J.** (2017). Supporting Emerging Aquatic Scientists (SEAS) Your Tomorrow: Bridge to Ph.D. Program and Marine Science Opportunities – *NSF First Annual Project Report*. Cedar City, UT: Department of Biology, SUU

6. Book Reviews

N/A

7. Other Works in Print

N/A

B. Works not in Print

1. Presentations at Professional Meetings

a. *National*

61. Bucklin, C.J. & Daniel, K.L. (2023, November). *ISEA Presents: Draw to Learn*. Presentation at the Conference for the Advancement of Science Teaching, Houston, TX.
60. Daniel, K.L. & **Bucklin, C.J.** (2023, November). *Dealing with a zombie epidemic: Applying knowledge of microbiology, immunology, and potential treatments*. Presentation at the annual meeting of the National Association of Biology Teachers, Baltimore, MD.
59. **Bucklin, C.J.** & Johnson, S.L. (2023, October). *Pipe Cleaner Protein Folding*. Presentation at the SW Region – Association for Science Teacher Education, Houston, TX.
58. Andrew, E.*, Alder, L.*, **Bucklin, C.J.** (2023, March). *Lithobates catesbeianus: A Study of Diet, Disease, and Water Chemistry in Washington County, Utah*. Presentation at the SUU Festival of Excellence, Cedar City, UT.
57. Andrew, E.*, Alder, L.*, **Bucklin, C.J.** (2023, Feb). *Lithobates catesbeianus: A Study of Diet, Disease, and Water Chemistry in Washington County, Utah*. Presentation at the Utah Conference on Undergraduate Research, Salt Lake City, UT.
56. Andrew, E.*, Alder, L.*, **Bucklin, C.J.** (2022, December). *Lithobates catesbeianus: A Study of Diets in Washington County, Utah*. Poster Presentation at the Utah Health Scholars Conference, St. George, UT.
55. **Bucklin, C.J.**, Mraz-Craig, J.A., & Marines, S.* (2022, November). *Student Attitudes & Perceptions of Biology Labs Across Modalities*. Poster presented at the annual meeting of the National Association of Biology Teachers, Indianapolis, IN.
54. **Bucklin, C.J.** & Roper, L. K. (2021, November). *Laughing in Lab Equals Learning: Utilizing Impairment Goggles to Teach Science Practices and Science Literacy*. Workshop presentation at the annual meeting of the National Association of Biology Teachers, Atlanta, GA.
53. Lloyd, S.*, **Bucklin, C.J.**, Bolus, R., & Ogburn, M. (2021, March). *Burn Scar: An Assessment of a Course-Based Undergraduate Research Experience on the Effects of the Brian Head Wildfire*. Presentation at the Utah Academy of Sciences, Virtual.
52. Schlender, K.⁺, Grimes, K., Brandt, M., Medina, **Bucklin, C.J.**, & Jones, N. (2019, November). *Supporting Emerging Aquatic Scientists (SEAS) Your Tomorrow: Bridge to Ph.D. Program and Marine Science Opportunities*. Poster presentation, 25th Biennial Conference of the Coastal & Estuarine Research Federation, Mobile, AL.
51. Grimes, K., Brandt, M., Medina, **Bucklin, C.J.**, Jones, N., Forbes, Jr., H., & Guannel, M. (2019, November). *A Pathway and Partnership Program to Engage U.S. Virgin Islanders in the Marine Sciences*. Oral presentation, 25th Biennial Conference of the Coastal & Estuarine Research Federation, Mobile, AL.
50. Forbes, Jr., H., Stout, J.*, Wilson Grimes, K., Brandt, M., Jones, N., **Bucklin, C.J.** & Medina, M. (2019, November). *Youth Ocean Explorers: A pathway to diversifying the field of marine science*. Oral presentation, 25th Biennial Conference of the Coastal & Estuarine Research Federation, Mobile, AL.
49. **Bucklin, C.J.**, Daniel, K.L., Nolen, Z.⁺, Mead, L., Jenkins, K., & Baum, D. (2019, November). *Developing a Tree-Thinking Diagnostic Test to Assess Individual Elements of Representational Competence*. Paper presented at the WMG COSE Annual Symposium, Cedar City, UT.

48. **Bucklin, C.J.** & Mauger, L. (2019, November). *CUREs: How to create & incorporate a collaborative ant-based project to teach science practices*. Workshop presented at the annual meeting of the National Association of Biology Teachers, Chicago, IL.
47. Wan, Z*. & **Bucklin, C.J.** (2019, April). *Investigation of Preferences in Ants*. Presentation at the SUU Festival of Excellence, Cedar City, UT.
46. Ball, S.* & **Bucklin, C.J.** (2019, April). *A Biodiversity Survey of Southern Utah Reptiles*. Presentation at the SUU Festival of Excellence, Cedar City, UT.
45. Blom, S.*, Crowell, J.*, & **Bucklin, C.J.** (2019, April). *The Art of Specimen Preservation*. Presentation at the SUU Festival of Excellence, Cedar City, UT.
44. **Bucklin, C.J.**, Forshee, L., Gold, R., Jarvis, K., Mraz-Craig, J., & Roper, L. (2019, April). *How Biology Department Faculty Utilized Campus Funding Opportunities to Promote Personal and Professional Growth*. Presentation at the SUU Festival of Excellence, Cedar City, UT.
43. Forbes, Jr., H., Stout, J.*, Wilson Grimes, K., Guannel, M., Jones, N., Brandt, M., **Bucklin, C.J.**, & Medina, M. (2019, March). *Youth Ocean Explorers: A Pathway to Diversifying the Field of Aquatic Science in the U.S. Virgin Islands*. Oral presentation, Aquatic Sciences Meeting of the Association for the Sciences of Limnology & Oceanography, San Juan, PR.
42. Grimes, K., Brandt, M., **Bucklin, C.J.**, Jones, N., Medina, M., Forbes, Jr., H., & Guannel, M. (2019, March). *Supporting Emerging Aquatic Scientists (SEAS) Your Tomorrow: Increasing Diversity & Inclusion in the Marine Sciences in the U.S. Virgin Islands*. Oral presentation, Aquatic Sciences Meeting of the Association for the Sciences of Limnology & Oceanography, San Juan, PR.
41. **Bucklin, C.J.**, Grimes, K., Brandt, M., Medina, M., Jones, N., Albrecht, J.M.* (2018, November). *A Case Study Investigating the Impact of a Summer MS to PhD Bridge Program on the Science Identities of Underrepresented Minority Students*. Poster presented at the annual meeting of the National Association of Biology Teachers, San Diego, CA.
40. **Bucklin, C.J.** & Mauger, L. (2018, November). *Implementing a CURE to Investigate the Impacts on Science Attitudes Towards Nature and Science*. Poster presented at the annual meeting of the National Association of Biology Teachers, San Diego, CA.
39. Villicana, D.*, Veylupek, K.*, & **Bucklin, C.J.** (2018, November). *Brian Head Fire Aftermath: Investigating Plant Re-Growth and Area Use by Wildfire*. Poster presented at the annual meeting of the National Association of Biology Teachers, San Diego, CA.
38. Obray, E.*, **Bucklin, C.J.**, Grimes, K., Habtes, S., Forbes, H., Taylor, M., * Gunnel, M. (2018, November). *Investigating the Impact of Community Engagement Projects on Project Leaders*. Poster presented at the annual meeting of the National Association of Biology Teachers, San Diego, CA.
37. Ball, S.*, Mauger, L., & **Bucklin, C.J.** (2018, November). *A Biodiversity Survey of Southern Utah Reptiles*. Poster presented at the annual meeting of the National Association of Biology Teachers, San Diego, CA.
36. Berryhill, S.*, Glauser, K.*, Kennerley, K.*, Mickelson, J.*, Navin, S.*, Reed, A.*, Skidmore, D.*, **Bucklin, C.J.**, & Mauger, L. (2018, April). *Ant Genera Distribution at Three Peaks between Sunny and Shady Locations with Ant Foraging Terrain Preferences*. Poster Presented at the Utah Academy of Sciences, Arts, & Letters, Cedar City, UT.
35. Tuttle, L.*, Mauger, L., **Bucklin, C.J.**, & Wells, S. (2018, April). *Wolbachia Infection Rates in Southern Utah Ants*. Poster Presented at the Utah Academy of Sciences, Arts, & Letters, Cedar City, UT.
34. Thacker, B.*, Tyler, M.*, Oborn, M.*, Olsen, E.*, Allen, R.*, **Bucklin, C.J.**, & Wells, S. (2018, April). *A Preliminary Study of Genetic Diversity in Ant Populations at the Southern Utah University Mountain Center*. Poster Presented at the Utah Academy of Sciences, Arts, & Letters, Cedar City, UT.

33. Rhein, N.*, Govedich, F., **Bucklin, C.J.**, & Bain, B. (2018, April). *Brain Head Fire: Effects of Fire on Aquatic Ecosystems*. Poster Presented at the Utah Academy of Sciences, Arts, & Letters, Cedar City, UT.
32. **Bucklin, C.J.** & Mauger, L. (2018, April). *Implementing a CURE to Investigate the Impacts on Student Attitudes Towards Nature and Science*. Presentation at the SUU Festival of Excellence, Cedar City, UT.
31. **Bucklin, C.J.** & Wilson-Grimes, K. (2018, April). *Teaching Teachers How to Modify Curricula*. Presentation at the SUU Festival of Excellence, Cedar City, UT.
30. Ogburn, M., Bolus, R. & **Bucklin, C.J.** (2018, April). *Classroom-based experiential education at the site of the 2017 Brian Head Fire*. Presentation at the SUU Festival of Excellence, Cedar City, UT.
29. **Bucklin, C.J.**, & Mauger, L. (2018, March). Using CUREs to Increase Engagement and Learning. Roundtable presentation at the Teaching for Learning Conference, Las Vegas, NV.
28. Obray, L*. **Bucklin, C.J.**, Habtes, S., & Wilson-Grimes, K. (2018, February). *Investigating the Impact of Community Engagement Projects on Project Leaders*. Poster presented at the Utah Conference on Undergraduate Research, Cedar City, UT.
27. Villicana, D.*, Veylupek, K.*, & **Bucklin, C.J.** (2018, February). *Measuring Regrowth & Animal Movement After a Fire Disturbance*. Poster presented at the Utah Conference on Undergraduate Research, Cedar City, UT.
26. Albrecht, J.M.*, **Bucklin, C.J.**, & Wilson-Grimes, K. (2018, February). *A Case Study Investigating the Impact of a Summer MS to PhD Bridge Program on the Science Identities of Underrepresented Minority Students*. Poster presented at the Utah Conference on Undergraduate Research, Cedar City, UT.
25. **Bucklin, C.J.** & Wilson-Grimes, K. (2017, November). *Modifying Existing Curriculum to Mirror Local Environments to Benefit Students*. Workshop presented at the annual meeting of the National Association of Biology Teachers, St. Louis, MO.
24. Nickell, L.*, Rhein, N.*, **Bucklin, C.J.**, Govedich, F. (2017, November). *Brian Head Fire: Affects of Fire on Aquatic Ecosystems*. Poster presented at the WMG COSE Annual Symposium, Cedar City, UT.
23. Tuttle, L.*, Mauger, L., **Bucklin, C.J.**, Wells, S. (2017, November). *Wolbachia Infection Rates in Southern Utah Ants*. Poster presented at the WMG COSE Annual Symposium, Cedar City, UT.
22. Villicana, D.*, Veylupek, K.*, & **Bucklin, C.J.** (2017, November). *Measuring Regrowth & Animal Movement After a Fire Disturbance*. Poster presented at the WMG COSE Annual Symposium, Cedar City, UT.
21. **Bucklin, C.J.** & Wilson-Grimes, K. (2017, June). *Pride in Our Seas, Pride in Ourselves: Increasing Outdoor Experiences to Change Content Knowledge and Attitudes Toward Land-Based Sources of Marine Debris*. Workshop presented at the annual meeting of the Experiential Learning Leadership Institute, Park City, UT.
20. **Bucklin, C.J.** & Daniel, K.L. (2016, November). *To use or not to use a virtual lab*. Poster presented at the Walter WMG COSE Annual Undergraduate Research Symposium. Cedar City, UT.
19. **Boyce, C.J.**, & Daniel, K.L. (2015, November). *Phylogenetic word association*. Poster presented at the annual meeting of the National Association of Biology Teachers, Providence, RI.
18. **Boyce, C.J.**, Halverson, K.L., & Thomas, A.K. (2015, May). *Engaging students in outside science learning*. Oral presentation at VI-EPSCoR Conference, St. Thomas, VI.
17. Mraz, J.A., Mishra, C., Halverson, K.L., **Boyce, C.J.**, & Ali, L. (2014, November). *An authentic undergraduate research experience: Development and maintenance of student identities*. Poster presented at the annual meeting of the National Association of Biology Teachers, Cleveland, OH.
16. Jenkins, K., Mead, L., Halverson, K.L., Baum, D., & **Boyce, C.J.** (2014, November). *Seeing the forest by interpreting the trees: An assessment instrument for evaluating undergraduate student understanding of evolutionary trees*. Poster presented at the annual meeting of the National Association of Biology Teachers, Cleveland, OH.

15. Mraz, J., **Boyce, C.J.**, Halverson, K.L., & Clase, K.L. (2013, November). *Student reflections on using the virtual learning environment second life in combination with classroom instruction*. Poster presented at the annual meeting of the National Association of Biology Teachers, Atlanta, GA.
 14. **Boyce, C.J.**, Mishra, C., Halverson, K.L., & Thomas, A.K. (2013, November). *Investigating students' use of technology to explore nature*. Poster presented at the annual meeting of the National Association of Biology Teachers, Atlanta, GA.
 13. Clase, K., Halverson, K.L., **Boyce, C.J.**, Heyden, R., Rickus, J., Klyczek, K., Mogen, K., Bonilla, J. (2013, July). *Building faculty and student collaborations with virtual learning environments*. Poster presented at the biennial meeting of the Gordon Research Conference –Visualizations in Science and Education, Smithfield, RI.
 12. Clase, K., Halverson, K.L., **Boyce, C.J.**, Heyden, R., Rickus, J., Klyczek, K., Mogen, K., & Bonilla, J. (2013, July). *Developing a research community to enhance student learning and engagement through the use of emerging technologies*. Poster presented at the annual meeting of the Society for the Advancement of Biology Education Research, Minneapolis, MN.
 11. McLaurin, D.C.*, Halverson, K.L., & **Boyce, C.J.** (2013, March). *Using Manipulative Models to Develop Tree Thinking*. Poster presented at Statewide Inaugural Collaborative Honors College Conference, Starkville, MS.
****Won Visual Display Award for the Social Sciences Division.**
 10. **Boyce, C.J.** & Halverson, K.L. (2013, March). Word association and mental recall: An evolution formative assessment. Poster presentation at the Graduate Student Research Symposium, Hattiesburg, MS. ****Won Department Award, Graduate Student Research Symposium Student Poster competition.**
 9. **Boyce, C.J.** & Halverson, K.L. (2013, March). *Word association and mental recall: An evolution formative assessment*. Presentation at the Graduate Student Research Symposium, Hattiesburg, MS
 8. McLaurin, D.C, Halverson, K.L., & **Boyce, C.J.** (2013, February). *Using Manipulative Models to Develop Tree Thinking*. Paper presented at Louis Stokes Mississippi Alliance for Minority Participation Research Symposium, Jackson, MS.
 7. McLaurin, D.C, Halverson, K. L., & **Boyce, C.J.** (2012, November). *Using Manipulative Models to Develop Tree Thinking*. Poster presentation at 21st Annual Ronald E. McNair Research Conference and Graduate Fair, Lake Geneva, WI.
 6. McLaurin, D.C, Halverson, K.L., & **Boyce, C.J.** (2012, November). *Using Manipulative Models to Develop Tree Thinking*. Poster presentation at 13th Annual McNair Scholars Research Symposium, Hattiesburg, MS.
 5. Halverson, K.L. & **Boyce, C.J.** (2011, October). *Citizen science and society*. Oral presentation at the annual meeting of the National Association of Biology Teachers, Anaheim, CA.
 4. Maroo, J.D., **Boyce, C.J.**, & Halverson, K.L. (2011, March). *Student responses influenced by task order on a tree thinking pretest*. Poster presented at the Graduate Student Research Symposium, Hattiesburg, MS. ****Won Department Award, Graduate Student Research Symposium Student Poster competition.**
 3. **Boyce, C.J.**, & Halverson, K.L. (2011, February). *Examining the impact of task order on a tree thinking pretest*. Poster presented at the annual meeting of the Mississippi Academy of Sciences, Hattiesburg, MS.
 2. **Boyce, C.J.** & Halverson, K.L. (2010, November). *Examining the impact of task order on a tree thinking pretest*. Poster presented at the annual meeting of the National Association of Biology Teachers, Minneapolis, MN.
 1. **Boyce, C.J.**, Burnham, E., Wright, J., & Conguista, S. (2010, April). *Directorial attitudes on assistive technology*. Poster presented at the Student Research Colloquium, University of Southern Mississippi, Hattiesburg, MS.
- 2. Invited Talks, Lectures, and Presentations**
5. **Bucklin, C.J.** (2017, November). *Pride in Our Seas, Pride in Our Selves: Lessons Learned from A Sub-Awardee*. Presented at the SUU SPARC Project Recognition Luncheon, Cedar City, UT.

4. Grimes, K., M. Brandt, C., Jones, M. Medina, H., & **Bucklin, C.J.** (2017, March). NSF INCLUDES Video Showcase: Envisioning Impact. "Changing the Face of STEM in the U.S. Virgin Islands." Retrieved from: <http://includes2017.videohall.com/presentations/826>
3. Grimes, K., M. Brandt, C., Jones, M. Medina, H., & **Bucklin, C.J.** (2017, March). NSF 2017 STEM for ALL Video Showcase. "Changing the Face of STEM in the U.S. Virgin Islands." Retrieved from: <http://stemforall2017.videohall.com/presentations/1047>
2. **Boyce, C.J.**, Mishra, C., Halverson, K.L., & Thomas, A.K. (2013, November). *Exploring students' connections with nature & technology*. Oral presentation at the E3 Seminar, USM, Hattiesburg, MS.
1. Clase, K.L., **Boyce, C.J.**, Ha, S.J., Halverson, K.L., Heyden, R., & Rickus, J. (2012, June). *Promoting systems thinking through an authentic research environment*. Oral presentation at Introductory Biology Project (IBP) Summer Conference: Implementing Vision and Change at the Introductory Biology Level, Washington D.C.

3. Consultancies

- 2023-Present Pedagogy & Biology Content Consultant. *STEM Teaching and School Strengthening Activity (STESSA)*. 21st Century Partnership for STEM Education
- 2022-Present Evaluator. National Science Foundation - SSTEM. (2019). *Creating STEM Opportunities for High-Achieving Rural Alabama Students*. (Award No. 1929409). PI: Johnson, S.L. Co-PIs Cochran, K. & Paulk, A. (**Total \$647,613**)
- 2020-2021 Research Consultant, *Supporting Emerging Aquatic Scientists (Seas) Your Tomorrow Program*. University of the Virgin Islands

4. Workshops

- Angle, J. & **Bucklin, C.J.** (2022, November). *Teaching the Next Generation: Finding Success, Sustainability, and Sanity in Teaching*. Workshop presentation at the National Association of Biology Teachers, Indianapolis, IN.

5. Other Works not in Print

a. Works "submitted" or "under-review"

N/A

b. Works "in progress"

- Marines, S.*, Mraz-Craig, J.A., & **Bucklin, C.J.** (In Preparation). Student Perceptions of Virtual vs. In-Person Introductory Laboratory Activities.
- Lloyd, S.*, **Bucklin, C.J.**, Bolus, R., & Ogburn, M. (In Preparation). Investigating Changes in Student's Understanding of Wildfires After Working in a Burn Scar.
- Mauger, L. & **Bucklin, C.J.** (In Preparation). Investigating Changes in Student's Attitudes toward Science and Nature after an Ant CURE.
- Benitez, Z.*, Gold, R., **Bucklin, C.J.**, & Forshee, L. (In Preparation). Leeching the CURE: How a Course-based Undergraduate Research Experience Influences Student's Attitudes Toward Science Research.

C. Grants & Contracts

1. Funded - External Grants & Contracts (Total \$400,211)

5. National Science Foundation - INCLUDES. (2016). *Collaborative Research: Changing the Face of STEM in the U.S. Virgin Islands through Targeted Interventions to Expand Opportunities and Broaden Participation*. (Award No. 1649300; 1649184; 1649183). (**Total \$300,000**).
PI: Wilson-Grimes, K.R.; Co-PIs: Brandt, M., Jones, N., Medina, M., **Bucklin, C.J.**
4. National Oceanic and Atmospheric Administration: Marine Debris Prevention Through Education. (2016). *Pride in Our Seas, Pride in Ourselves: Preventing Land-Based Sources of Marine Debris in the US Virgin Islands through Educational Transformation and Community Engagement*. (**Total \$99,411**).
PI: Wilson Grimes, K.R.; Co-PIs: **Bucklin, C.J.**, Habtes, S., Taylor, M., Forbes, H.

3. Wal-Mart Community Grant. (2011). *Haunted Science Trail Supply Grant*. (**Total \$300**).

PI: Maroo, J.D.; **Co-PI: Boyce, C.J.**

2. Wal-Mart Community Grant. (2011). *Local Waterway and Coastal Clean-up Grant*. (**Total \$500**).

PI: Boyce, C.J.; Co-PI: Maroo, J.D.

1. Vernier Student Travel Award. (2010). *National Association of Biology Teachers Conference*. (**Total \$500**).

2. Pending, External Grants & Contracts (Total \$414,521.92)

3. Spencer Foundation - Research-Practice Partnership Grant. (2023). *Emerging STEM Program (ESP): Enriching STEM Identity in Young Hispanic Students Through Informal Learning*. PI: **Bucklin, C.J.**, Mauger, L., Payne, K. (**Total \$399,994.92**)

2. American Association of University Women – Community Action Grant. (2023). *Seasons of Science: Changing the Narrative of Science Spaces for Women*. PI: **Bucklin, C.J.** & Daniel, K.L. (**Total \$8253**)

1. Biochemical Society – Scientific Outreach Grant. (2023). *Seasons of Science*. PI: **Bucklin, C.J.**, Daniel, K.L., & Johnson, S.L. (**Total \$5000 GBP [\$6274]**).

3. Submitted, Not Funded - External Grants & Contracts (Total \$

7. National Science Foundation - SSTEM. (2023). *Reinforced Pathways within STEM Programs by Increasing Interdependence of Technical and Community Colleges and 4-Year Institutions*. PI: Askar, M. Co-PIs: Roberts, M., Caldwell, C., Sorensen, K., Baker, S., SP: Malekzadeh, M., **Bucklin, C.J.** (**Total \$100,000**).

6. National Science Foundation - SSTEM. (2022). *Becoming a Scientist: Utilizing Scholarships and the Cohort Experience to Decrease Attainment and Equity Gaps in the Sciences*. PI: **Bucklin, C.J.** Co-PIs: Roper, L., Pierce, E., & Rocabato, G. (**Total \$1,500,000**).

5. National Science Foundation - SSTEM. (2021). *Becoming a Scientist: Utilizing Scholarships and the Cohort Experience to Decrease Attainment and Equity Gaps in the Sciences*. PI: **Bucklin, C.J.** Co-PIs: Roper, L. & Pierce, E., (**Total \$1,500,000**).

4. National Science Foundation - Vision and Change in Undergraduate Biology Education. (2021). *Collaborative Research: Vision and Change Professional Development across the Faculty Spectrum (V&C ProSpect)*. PI: **Bucklin, C.J.** (**\$67K**). Collaborative PIs: Daniel, K.L. (TXST - \$680K), Hiatt, A.C. (Univ. Nebraska - \$103K), & Witzig, S. (UMass-Dartmouth - \$500K). (**Total \$1,377,000**).

3. National Science Foundation - SSTEM. (2019). *UR^2: Undergraduate Research Experiences to Increase Underrepresented Students' Science Identity*. PI: Lunt, J. Co-PIs: **Bucklin, C.J.**, MacLean, J., Weeg, M.S., & Werner, N.S., (**Total \$1,000,000**).

2. National Science Foundation - SSTEM. (2018). *UR^2: Undergraduate Research Experiences to Increase Underrepresented Students' Science Identity*. PI: Lunt, J. Co-PIs: **Bucklin, C.J.**, Weeg, M.S., & Werner, N.S., (**Total \$1,000,000**).

1. National Collegiate Athletic Association Graduate Student Grant. (2012). *Exploring effective student- athlete time management strategies to maximize academic success*. **PI: Boyce, C.J.** Co-PIs: Halverson, K.L. and Gearity, B.T. (**Total \$7500**).

4. Funded - Internal Grants & Contracts

* Indicates Undergraduate Student Researchers

a. Research Grants (Total \$ 10,020)

4. Gibson Scholarship Funding. (2022, November). *Student Attitudes and Perceptions of Biology Labs Across Modalities*. PI: Andrew, E., & Alder, L.*, Co-PI: **Bucklin, C.J.** (**Total \$3000**).

3. Gibson Scholarship Funding. (2021, November). *Student Attitudes and Perceptions of Biology Labs Across Modalities*. PI: Marines, S.*, Co-PI: **Bucklin, C.J.** & Mraz-Craig, J. (**Total \$3000**).

2. Gibson Scholarship Funding. (2020, November). *Burn Scar: An Assessment of a Course-Based Undergraduate Research Experience on the Effects of the Brian Head Wildfire*. PI: Lloyd, S.*, Co-PI: **Bucklin, C.J.** (Total \$3000).

1. Gibson Scholarship Funding. (2018, November). *Investigating how a Bridge to PhD Program influences the Science Identity of Graduate Students: A Case Study*. PI: Obray, E.*, Co-PI: **Bucklin, C.J.** (Total \$1020).

b. Professional Development Grants (Total \$ 11,361)

9. Faculty Scholarship Support Fund. (2022, September). *Presentation Travel to NABT*. (Total \$1948).

8. Faculty Scholarship Support Fund. (2021, September). *Presentation Travel to NABT*. (Total \$1768).

7. Faculty Scholarship Support Fund. (2019, September). *Presentation Travel to NABT*. (Total \$935).

6. Faculty Development Support Fund. (2019, February). *Conference Travel to NABT*. (Total \$1200).

5. Faculty Scholarship Support Fund. (2019, January). *Presentation Travel to AERA*. (Total \$1400).

4. Faculty Scholarship Support Fund. (2017, May). *Presentation Travel to NABT*. (Total \$1570).

3. Faculty Development Support Fund. (2016, October). *Conference Travel to HAPS*. (Total \$1200).

2. Faculty Scholarship Support Fund. (2016, September). *Presentation Travel to NABT*. (Total \$740).

1. USM Biological Sciences Travel Award. (2015, 2014). *Biology Graduate Student Travel*. (Total \$600).

5. Pending - Internal Grants & Contracts

N/A

6. Submitted, Not Funded - Internal Grants & Contracts

Research Enhancement Program. (2023, October). *Importance of Place in Research-based Learning Experiences*. PI: **Bucklin, C.J.** (Total \$8000).

D. Fellowships, Awards, & Honors

2. *Research Paper and Presentation Departmental Award*. (2011 & 2013). This award is given as part of the Graduate Student Research Symposium for outstanding research papers and associated presentation, each department selects an award winner. USM.

1. *Outstanding Master's Student*. (2011). This award is to recognize the Master's student at the university who shows outstanding accomplishment and potential during their master's program. Individuals are nominated by their department and considered by an independent committee. USM

IV. SERVICE

A. Institutional

1. University

SUU

2020 – 2023	Director, UT State Science Olympiad
2020 – 2023	Member, Academic Affairs Committee
2018 – 2023	Director, Southern Utah Science and Engineering Fair
2019	Facilitator, Center for Excellence in Teaching and Learning Curriculum Innovation Grant
2017 – 2021	Member, Faculty Development Support Fund Review Committee
2016 – 2019	Member, Faculty Development/Evaluation Committee

2. College

SUU – College of Sciences

2018	Member, Search Committee – TT Hydrogeologist
2017 – 2022	Walter Maxwell Gibson Grant Review Committee
2016 – 2020	Faculty Advisor – Teach STEM! SUU Student Chapter of NSTA
2016 – 2018	Regional Science Fair Judge

2016 – 2018 Utah Science Olympiad Event Supervisor

USM – College of Science and Technology

2015 Volunteer, Haunted Science Trail

2010 – 2015 Mississippi State Science Olympiad (Advisory Board Member, 2013 – 2015; Event Supervisor, 2011-2012; Volunteer, 2010)

2010 – 2015 Volunteer, Lake Thoreau Environmental Education Outreach

2010 – 2012 President, Roots & Shoots, Southern Miss Chapter

3. Department

SUU – Department of Biological Sciences

2021 – 2022 Chair, Search Committee – NTT Biology, General (3 Positions)

2020 – 2021 Chair, Search Committee – TT Genetics

2018 Member, Search Committee – Bio Dept Admin

2018 – 2023 Concurrent Enrollment Liaison

2017 Member, Search Committee – NTT General

2016 – 2023 Member, Vision & Change Committee

B. Professional

1. Review Work

2022 – Present Grant Reviewer, National Geographic Society

2020 – 2022 Article Reviewer, Journal of Microbiology & Biology Education

2017 Article Reviewer, Journal of Geoscience Education

2015 – Present Article Reviewer, American Biology Teacher

2015 – 2022 Presentation Proposal Reviewer, National Association of Biology Teachers

2012 – 2019 Presentation Proposal Reviewer, National Association for Research in Science Teaching

2015 – 2016 Grant Reviewer, Water Resources Research Institute, UVI

2014 Article Reviewer, Science Education

2. International & National

2023 Four-Year Section Chair, *National Association of Biology Teachers*

2022 Four-Year Section Vice-Chair, *National Association of Biology Teachers*

2021 Four-Year Section Secretary, *National Association of Biology Teachers*

2022 – 2024 Region VIII Coordinator, *National Association of Biology Teachers*

2019 – Present Poster Session Judge, *National Association of Biology Teachers*

2018 – 2020 Four-Year Section Faculty Development Committee (Co-Chair), *National Association of Biology Teachers*

2010 – 2018 Member, Archival Committee (Co-Chair: 2014-2018), *National Association of Biology Teachers*

2012 – 2017 Presider, Annual Meeting: *National Association for Research in Science Teaching*.

2010 – 2015 Member, Graduate Student Group (Chair 2012-2013; Vice Chair 2011-2012), *National Association of Biology Teachers*

3. Regional & Local

N/A

4. Memberships

2023 – Present Science Teacher Association of Texas (STAT)

2018 – 2022 Ecological Society of America (ESA)

2017 – 2022 American Association for the Advancement of Science (AAAS)

2011 – 2012, 2019 American Education Research Association (AERA)

2010 – Present National Association for Research in Science Teaching (NARST)

2010 – Present National Association of Biology Teachers (NABT)

C. Community

2021 – 2023	Daughters of the American Revolution, Bald Eagle Chapter
2017	Fiber Arts Guild – “How to Make Plarn”
2016 – 2021	Science Booth/Talent Coordinator, Orchestra of Southern Utah Children’s Jubilee
2005 – 2008	Tau Beta Sigma (Service Chair, 2007 – 2008)
2005 – 2008	Tau Beta Sigma – Kappa Kappa Psi, combined (Joint Service Chair, 2007 – 2008)
2003 – 2006	Circle K International (Secretary, 2005 – 2006)

D. Service Honors & Awards

N/A

E. Service Grants & Contracts

1. Funded, External

N/A

2. Submitted, Not Funded, External

1. Student Leadership: Mississippi Service Learning Program, Service Learning Higher Education STEM Project. (2011). *Cleaning up Southern Mississippi*. Student Leaders: **Boyce, C.J.**, Maroo, J., McElyea, K., Bohn, S., Wheat, J. Faculty Liaisons: Herron, S, Halverson, K.L., & Hendry, S. (**Total \$2250**).

3. Funded, Internal

N/A

4. Submitted, Not Funded, Internal

N/A