

JOSEPH DETEMPLE

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EDUCATION

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| Iowa State University Ph.D., Interdepartmental Genetics and Genomics. | <i>August 2022 - now</i> GPA: 4.0 |
| Brigham Young University Bachelor of Science, Biology. | <i>August 2018 - April 2022</i> GPA: 3.85 |

RESEARCH EXPERIENCE

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| Iowa State University Advisor: Jianming Yu Currently forming a Ph.D. project that focuses on Crop Growth Models and how they can be combined meaningfully with genomic selection and genomic prediction for applications to plant breeding. | <i>August 2022 - now</i> |
| Brigham Young University Advisor: Clinton J. Whipple Grew and maintained an interspecies F2 population between <i>G. capitata</i> and <i>G. yorkii</i> . Collected tissue samples, developmental timepoints, and floral trait measurements from F2 population. Performed QTL analysis of floral traits. Conducted PCA and LDA analyses from landmark data to quantify differences in overall floral shape between <i>G. capitata</i> and <i>G. yorkii</i> . | <i>March 2019 - April 2022</i> |
| Michigan State University Advisor: Dan Chitwood Worked on project to identify domatia growing on leaves of various Vitis species. Contributed to training dataset for a machine-learning algorithm to automatically identify domatia from leaf images. | <i>Summer 2021</i> |

PUBLICATIONS

DE Jarvis, PJ Maughan, J DeTemple, V Mosquera, Z Li, MS Barker, LA Johnson, CJ Whipple, Chromosome-Scale Genome Assembly of *Gilia yorkii* Enables Genetic Mapping of Floral Traits in an Interspecies Cross, *Genome Biology and Evolution*, Volume 14, Issue 3, March 2022, evac017, <https://doi.org/10.1093/gbe/evac017>

TECHNICAL SKILLS

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| Computational | R, Python, SQL, HPC systems |
| Laboratory | DNA extraction, Bacterial transformation, Floral dissection |

AWARDS/GRANTS

Undergraduate Research Fellowship **May 2020**

\$1500 grant towards optimizing a novel EMS mutagenesis screen in *Gilia yorkii*.

College Undergraduate Research Award **Dec 2019**

\$1500 scholarship + \$1500 grant for running and interpreting a QTL analysis on an interspecies F2 population from *Gilia yorkii* and *G. capitata*.

PRESENTATIONS

CERIS-JGRA analysis of flowering time in CML277 and Tzi8. Maize Meeting 2023. J DeTemple, L Tibbs-Cortes, Jialu Wei, Xianran Li, and J Yu. (Poster)

QTL Analysis of Floral Traits in a Novel Interspecies Cross in Gilia. Utah Conference of Undergraduate Research 2022. J DeTemple and CJ Whipple. (Poster)

Floral Trait Differences between *Gilia yorkii* and *G. capitata*. Botany 2020 Virtual Conference. J DeTemple, V Mosquera, CJ Whipple (Poster)

Floral Traits Underlying Evolution in *Gilia yorkii*. Life Sciences Undergraduate Poster Competition 2020. J DeTemple, V Mosquera, CJ Whipple. (Poster)

SERVICE

2019—2021 Volunteer clerk for religious organization. Prepared meeting agendas, kept notes, and managed financial transactions.

2018—2019 Elementary school tutor for 1st grade students.

REFERENCES

Jianming Yu—jmyu@iastate.edu

Clinton Whipple—whipple@byu.edu

Leigh Johnson—leigh_johnson@byu.edu

Dan Chitwood—dhchitwood@gmail.com