

Dana Lynn Carper, Ph.D

Postdoctoral Research Associate, Plant Systems Biology Group, Oak Ridge TN

dcarper@ucmerced.edu | carperdl@ornl.gov

CURRENT POSITION

Postdoctoral Research Associate, Plant Systems Biology Group, Nov 2018-Present
Oak Ridge National Laboratory, Oak Ridge, TN

EDUCATION

Doctor of Philosophy in Quantitative and Systems Biology, 2013-2018
University of California, Merced
Dissertation: “Abiotic and biotic factors structuring the microbiomes of conifers in the family Pinaceae”

Master of Science, Biology, 2011-2013
California State University, Sacramento
Thesis: “A Comparative study of the bacterial communities in California vernal pools”

Bachelors of Science, Biology, 2009-2011
California State University, Sacramento
Concentration: Molecular Biology

POSITIONS HELD

Freelance Data Consultant, Nov. 2017-Jan 2018
Beta Hatch Inc., Seattle, WA

RESEARCH INTERESTS

Symbiosis, bacterial communities, plant-microbe interactions, nutrient cycling, community assemblage, genomics, metagenomics, R, python

PUBLICATIONS

Carper, D.L., Carrell, A.A., Keuppers, L.M. and A. C. Frank, 2018. Bacterial endophyte communities in *Pinus flexilis* are structured by host age, tissue type and environmental factors. Plant and Soil. doi: 10.1007/s11104-018-3682-x

Carrell A.A., **Carper, D.L.**, and A.C. Frank, 2016. Subalpine conifers in different geographic locations host similar foliar bacterial endophyte communities. FEMS Microbiology Ecology, 92(8):fiw124. doi: 10.1093/femsec/fiw124

Moyes, A.B., Kueppers, L.M., Pett-Ridge, P., **Carper, D.L.**, Vandehey, N., O'Neil, J., and A.C. Frank, 2016. Evidence for foliar endophytic nitrogen-fixation in a widely distributed subalpine conifer. *New Phytologist*. 210:657-668. doi:10.1111/nph.13850

Lawrence, T.J., Kauffman, K.T., Amrine, K.C.H., **Carper, D.L.**, Lee, R.S., Becich, P.J., Canales, C.J., and D.H. Ardell, 2015. FAST: FAST Analysis of Sequences Toolbox. *Frontiers in Genetics*. 6:172. doi: 10.3389/fgene.2015.00172

MANUSCRIPTS

Quiroz, D., **Carper, D.L.**, Pett-Ridge, J., Guzman, P.S., Kupihea, J., Frank, A.C. and L.M. Kueppers, 2019. *In Prep*. Variation in nitrogen fixation and foliar microbial communities driven by conifer host species and site fertility.

Carper, D.L. and A.C. Frank, 2019. *In Prep*. Examination of the phyllosphere and endosphere bacterial communities of *Pinus flexilis* and co-occurring conifers across the native range of *Pinus flexilis*

Carper, D.L. and A.C. Frank, 2019. *In Prep*. Needle age structures microbial communities in *Pinus* species with greater effect in long lived *Pinus longaeva* (bristlecone pine)

Carper, D.L. and A.C. Frank, 2019. *In Prep*. Effect of sample processing time on the endophytic and phyllosphere communities of *Pinus flexilis*.

WORKSHOPS

Introduction to Scientific Computing: A Crash Course
<https://tlawrence3.github.io/Introduction-to-Scientific-Computing/>
Presented by Travis J. Lawrence and **Dana L. Carper**
Sponsored by UC Merced Women in STEM,
University of California Merced, Merced CA, Feb 2018

Introduction to Scientific Computing: A Crash Course
<https://tlawrence3.github.io/Introduction-to-Scientific-Computing/>
Presented by Travis J. Lawrence and **Dana L. Carper**
BOTANY 2017, Fort Worth TX, Jun 2017

PRESENTATIONS

Invited Talk, *Variations in the foliar microbial communities in Pinus flexilis (limber pine) across its native range*, Ecological Society of America Annual Meeting, New Orleans LA, Aug 2018

Invited Talk, *Bacterial endophyte communities in Pinus flexilis are structured by host age, tissue type and environmental factors*, QSB Annual Retreat, Host-Microbe Interaction Session, University of California, Merced, Merced CA, Apr 2018

Invited Talk, *Bacterial endophyte communities in Pinus flexilis are structured by host age, tissue type and environmental factors*, Ecological and Environmental Issues Undergraduate Seminar, California State University Sacramento, Sacramento CA, Nov 2017

Contributed Talk, *The effect of climate change and site on the above- and belowground bacterial communities in subalpine conifer seedlings*, BOTANY 2017, Fort Worth TX, Jun 2017

Invited Talk, *Community Genomic: Applications in Endophytic Bacteria*, Topics in Environmental Systems: Ecological Genetics Graduate Course, University of California, Merced, Merced CA, Dec 2016

Poster Presentation, *The effect of climate change and site on the above- and belowground bacterial communities in subalpine conifer seedlings*, Botany, Savannah GA, Aug 2016

Poster Presentation, *The effect of climate change and site on the above- and belowground bacterial communities in subalpine conifer seedlings*, XVII Congress of the International Society for Molecular Plant-Microbe Interactions, Portland OR, Jul 2016

Contributed Talk, *The effect of climate change and site on the above- and belowground bacterial communities in subalpine conifer seedlings*, 6th Annual Symbiosis Workshop, Yosemite CA, May 2016

Poster Presentation, *The effect of climate change and site on the above- and belowground bacterial communities in subalpine conifer seedlings*, Joint Genome Institute Plant Microbe Interaction Symposium, Walnut Creek, CA, Apr 2016

Poster Presentation, *The effect of climate change and site on the above- and belowground bacterial communities in subalpine conifer seedlings*, Northern California Botanists Symposium, Chico CA, Jan 2016

Contributed Talk, *The bacterial endophytic communities associated with seedlings of high elevation pines*, 5th Annual Symbiosis Workshop, Yosemite CA, May 2015

Poster Presentation, *Bacterial endophytes within the needle and bud tissues of lodgepole pine (*Pinus contorta* ssp. *Muryanna*)*, 5th ASM Conference on Beneficial Microbes, Washington D.C, Sep 2014

Poster Presentation, *Endophytic bacterial communities in the aboveground tissue of subalpine conifers are conserved across host species and sites*, Ecological Society of America Annual Meeting, Sacramento CA, Aug 2014

Poster Presentation, *Endophytic bacterial communities in the aboveground tissue of limber and lodgepole Pine (*Pinus flexilis* and *Pinus contorta*)*, 1st annual UC Merced QSB Beautiful Systems Retreat, Midpines CA, May 2014

Poster Presentation, *Endophytic bacterial communities in the aboveground tissue of limber and lodgepole Pine (*Pinus flexilis* and *Pinus contorta*)*, 4th Annual Symbiosis Workshop, Yosemite CA, May 2014

Poster Presentation, *A comparative study of the bacterial communities in California vernal pool* California State University Program for Education and Research in Biotechnology Symposium, Anaheim CA, Jan 2013

Poster Presentation, *Bacterial diversity in California vernal pools*, California State University Program for Education and Research in Biotechnology Symposium, Orange County CA, Jan 2011

AWARDS AND GRANTS

UC Merced QSB Graduate Student Travel Grant, \$800, Spring 2017

UC Merced QSB Summer Fellowship, \$6000, Summer 2017

UC Merced QSB Summer Fellowship, \$6000, Summer 2016

Northern California Botanists Symposium Student Travel Grant, \$100, Fall 2016

UC Merced QSB Graduate Student Travel Grant, \$800, Spring 2014

Valentine Eastern Sierra Reserve Graduate Research Grant, \$300, Fall 2014

CSUS, Delisile Funding for Graduate Research, \$200, Fall 2012
CSUS, Delisile Funding for Undergraduate Research, \$200, Fall 2010

TEACHING EXPERIENCE

Graduate Teaching Assistant, 2013-2018
University of California, Merced
Courses Taught: Genetics and Genome Biology

Graduate Teaching Assistant, 2012-2013
California State University, Sacramento
Courses Taught: Introduction to Molecular Biology Laboratory and Biology Laboratory for Non-Majors

Undergraduate Teaching Assistant, 2010
California State University, Sacramento
Courses Assisted: Microbiology Laboratory

SERVICE

Contributed Oral Session Co-organizer, 2017-2018
Ecological Society of America 2018 General Meeting
Session: Plant microbiomes in a changing world

Student Representative, Quantitative and Systems Biology Admissions Committee, 2017
University of California, Merced

Mentor to Undergraduates, Women in STEM Club, 2017-2018
University of California, Merced

COMMUNITY OUTREACH

Scientist Participant, 21st Annual San Joaquin County Office of Education Dinner with a Scientist, Stockton CA, Nov 2017

Scientist Participant, 11th Annual Dinner with a Scientist, Merced CA, Apr 2017

Lab Tour Guide, University of California Merced Center for Educational Partnerships 8th Grade Lab Tours, Merced, CA, Mar 2017

Judge, 59th Annual San Joaquin County Office of Education Science and Engineering Fair, Stockton CA, Feb 2017

Scientist Participant, 20st Annual San Joaquin County Office of Education Dinner with a Scientist, Stockton CA, Nov 2016

Scientist Participant, 10th Annual Dinner with a Scientist, Merced CA, Mar 2016

Judge, 58th Annual San Joaquin County Office of Education Science and Engineering Fair, Stockton CA, Feb 2016

SCIENTIFIC SOCIETY MEMBERSHIP

American Society of Microbiology

Botanical Society of America
Ecological Society of America
International Society for Molecular Plant-Microbe Interactions