Sarah Stevens

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Education

University of Wisconsin - Madison

PhD Candidate - Microbiology Doctoral Training Program - 2012-Present
SciMed GRS Fellow

MDTP Recruiting Committee - 2014-2015

MDTP Steering Committee - 2015-2016

University of Illinois Urbana - Champaign
Bachelor of Science - Molecular and Cellular Biology - 2007-2011
Minor in Informatics
James Scholar Honors

Research

University of Wisconsin - Madison, McMahon Lab

Graduate Research Assistant - 2012-Present

Determining the forces that shape population structure and how wild bacterial populations change through time in lakes as a model system using reference genomes (composite genomes from metagenomes and single-cell genomes) for uncultivated but common freshwater bacteria and metagenomic time series from several lakes.

University of Illinois Urbana - Champaign, Metcalf Lab

 $Visiting\ Researcher$ - **2011-2012**

Assembled genomes from isolates belonging to the archaeal genus *Methanosarcina* and analyzed shared genomic content of members of this genus.

University of Illinois Urbana - Champaign, Whitaker Lab

 $Undergraduate\ Research\ Assistant\ \textbf{-}\ \textbf{2010-2011}$

Studied insertion sequences in *Sulfolobus* islandicus in an independent project, cultured archaea, organized sample/culture database, cleaned-up and prepped lab equipment.

Publications

Garcia, S. L.*, **Stevens, S. L. R.***, Crary, B., Martinez-Garcia, M., Stepanauskas, R., Woyke, T., Tringe, S. G., Andersson, S., Bertilsson, Malmstrom, R. R., McMahon, K. D. (*accepted at ISME Journal*). Contrasting patterns of genome-level diversity across distinct co-occurring freshwater bacterial populations. *Equal contributors

He, S., **Stevens, S. L. R.**, Chan, L.-K., Bertilsson, S., Glavina del Rio, T., Tringe, S. G., Malmstrom, R. R., McMahon, K. D. (2017). Ecophysiology of Freshwater Verrucomicrobia Inferred from Metagenome-Assembled Genomes. mSphere. doi:10.1128/mSphere.00277-17

Bendall, M. L.*, **Stevens, S. L. R.***, Chan, L.-K., Malfatti, S., Schwientek, P., Tremblay, J., Schackwitz, W., Martin, J., Pati, A., Bushnell, B., Froula, J., Kang, D., Tringe, S. G., Bertilsson, S., Moran, M. A., Shade, A., Newton, R. J., McMahon, K. D., Malmstrom, R. R. (2016). Genome-wide selective sweeps and gene-specific sweeps in natural bacterial populations. ISMEJ. doi:10.1038/ismej.2015.241 featured article *Equal contributors

Organizations

Software Carpentry and Data Carpentry

Instructor - 2015-Present

Computational Biology, Ecology, and Evolution (ComBEE) group

Founder/Co-Chair - 2014-2017

- ComBEE provides an opportunity for researchers to discuss new computational tools and learn bioinformatics skills together.
- ComBEE Python Study Group 2014-2017
- ComBEE R Study Group 2015-2017

Data Carpentry Genomics Hack-a-thon

Contributor - Mar. 23-25, 2015

DOE Joint Genome Institute

Intern/Affiliate - Jan. 2015-Mar. 2015

Teaching Assistant/Instructor - Fall 2013

Teaching

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Software Carpentry Workshop - University of Wisconsin - Madison
Instructor - Jan. 14-15, 2016, Jun. 08-09, 2016, Jan. 12-13, 2017
Helper - Jan. 13-16, 2015, Jun. 3-4, 2015, Aug. 29-30, 2016, Jun. 28-29, 2017, Aug. 30-31, 2017
Data Carpentry Workshop - University of Wisconsin - Madison
Instructor - Jan. 10-11, 2017, Aug. 22-23, 2017
Helper - Jan. 11-12, 2016, Jun. 01-02, 2016, Jun. 19-20, 2017
Software Carpentry Workshop - Federal Reserve Bank, Chicago
Instructor - Aug. 2-3, 2017
ComBEE Anvio Workshop 2017 - University of Wisconsin - Madison
Instructor - May. 24, 2017
ComBEE Git/Github Workshop - University of Wisconsin - Madison
Instructor - Mar. 2-3, 2017
Software Carpentry Instructor Training - University of Wisconsin - Madison
Helper - Oct. 24-25, 2016
Software Carpentry Workshop - University of Wisconsin - Milwaukee
Instructor - Apr. 25-26, 2016
Software Carpentry Workshop - Northwestern University
Instructor - Nov. 10-11, 2015
McMahon Lab Git Workshop
Instructor - July 2015
Bioinformatics Basics: Microbial Ecology and Evolution - Illinois Mathematics and Science Academy Intersession
Instructor/Course Designer - Jan. 2015
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Microbiology 304: Biology of Microorganisms Laboratory - University of Wisconsin - Madison

Oral Presentations

- Stevens, S. L. R. Starting Your Own Study Group. Rebecca J. Holz series in Research Data Management. October 2016. Madison, WI. Link to Webpage/Slides
- Stevens, S. L. R., Bendall, M. L., Chan, L.-K., Malfatti, S., Schwientek, P., Tremblay, J., . . . McMahon, K. D. Malmstrom, R. R. Tracking Microbial Populations Through Time Using Single-cell Genomes and Metagenomics. UW Center for Limnology Seminar. December 2015. Madison, WI. Link to Slides
- Stevens, S. L. R., Bendall, M. L., Chan, L.-K., Malfatti, S., Schwientek, P., Tremblay, J., ... McMahon, K. D. Malmstrom, R. R. Genome-wide and Gene-specific Selective Sweeps in Freshwater Bacterial Populations Revealed Using Metagenomics. JF Crow Institute for the Study of Evolution Seminar Series. October 2015. Madison, WI. Link to Slides
- Stevens, S. L. R., Bendall, M. L., Chan, L.-K., Malfatti, S., Schwientek, P., Tremblay, J., ... McMahon, K. D. Malmstrom, R. R. Genome-wide and Gene-specific Selective Sweeps in Freshwater Bacterial Populations Revealed Using Metagenomics. 14 Symposium Society for Aquatic Microbial Ecology. August 2015. Uppsala, Sweden Link to Slides
- Stevens, S. L. R., Bendall, M. L., Chan, L.-K., Malfatti, S., Schwientek, P., Tremblay, J., . . . McMahon, K. D. Malmstrom, R. R. Genome-wide Selective Sweeps in Natural Bacterial Populations Revealed by Time-series Metagenomics. 15th International Symposium on Microbial Ecology. August 2014. Seoul, South Korea. Link to Slides

Poster Presentations

- Stevens, S. L. R., Egan, R., Malmstrom, R.R., McMahon, K. D. Comparative Genomics of Selected Bacterial Populations from Several Freshwater Bog Lakes. 2017 Microbial Population Biology Gordon Research Conference. July 2017. Andover, NH. Link to Poster
- Stevens, S. L. R., Egan, R., Malmstrom, R.R., McMahon, K. D. Comparative Genomics of Selected Bacterial Populations from Several Freshwater Bog Lakes. 2017 Microbial Population Biology Gordon Research Seminar. July 2017. Andover, NH. Link to Poster
- Stevens, S. L. R., Garcia, S. L., ... McMahon, K. D. Contrasting Patterns fo Genome-level Diversity across Distinct Co-occurring Populations. 16th International Symposium on Microbial Ecology. August 2016. Montreal, Canada. Link to Poster
- Stevens, S. L. R., Garcia, S. L., ... McMahon, K. D. Tracking Distinct Freshwater Populations Through Time by Mapping Metagenomes to Single-cell Genomes. DOE Joint Genome Institute User Meeting 2016. Walnut Creek, CA. Link to Poster
- Stevens, S. L. R., Bendall, M. L., ... McMahon, K. D. Malmstrom, R. R. Genome-wide and Gene-specific Selective Sweeps in Freshwater Bacterial Populations Revealed Using Metagenomics. 2015 Microbial Population Biology Gordon Research Conference. July 2015. Andover, NH. Link to Poster
- Stevens, S. L. R., Bendall, M. L., ... McMahon, K. D. Malmstrom, R. R. Dynamics of Sequence-Discrete Bacterial Populations Inferred Using Metagenomes. 15th International Symposium on Microbial Ecology. August 2014. Seoul, South Korea. Link to Poster
- Stevens, S. L. R., Bendall, M. L., ... McMahon, K. D. Malmstrom, R. R. Dynamics of Sequence-Discrete Bacterial Populations Inferred Using Metagenomes. SciMed GRS Poster Session 2014. September 2014. Madison, WI.
- **Stevens, S. L. R.**, Bendall, M. L., ... McMahon, K. D. Malmstrom, R. R. Dynamics of Sequence-Discrete Bacterial Populations Inferred Using Metagenomes. DOE Joint Genome Institute User Meeting 2014. Walnut Creek, CA. Link to Poster

Awards

UW-Madison Dept. of Bacteriology Travel Award - Spring 2017
UW-Madison Dept. of Bacteriology Betley-Allen Fellowship - 2016-2017
UW-Madison Graduate School Travel Award - Fall 2015
UW-Madison Dept. of Bacteriology Travel Award - Spring 2014

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