

# Sarah Stevens

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## Education

- 2012-2018 (expected)    PhD, Microbiology Doctoral Training Program;**  
University of Wisconsin - Madison  
SciMed GRS Fellow  
MDTP Recruiting Committee - **2014-2015**  
MDTP Steering Committee - **2015-2016**
- 2007-2011                Bachelor of Science - Molecular and Cellular Biology;**  
University of Illinois Urbana - Champaign  
*Minor in Informatics*  
James Scholar Honors

## Research Experience

### University of Wisconsin - Madison, [McMahon Lab](#)

Graduate Research Assistant - **2012-Present**  
Server Administrator - *2014-2017*

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 - **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](https://doi.org/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](https://doi.org/10.1038/ismej.2015.241) **featured article**

\*Equal contributors

## Organizations

### Software Carpentry and Data Carpentry

*Instructor* - **2015-Present**

- **DC Genomics Hack-a-thon Contributor** - **Mar. 23-25, 2015**

### 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**

### DOE Joint Genome Institute

*Intern/Affiliate* - **Jan. 2015-Mar. 2015**

## Teaching

### Software Carpentry Workshops

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, Oct. 24-25, 2016, Jun. 28-29, 2017, Aug. 30-31, 2017**

Federal Reserve Bank, Chicago - *Instructor* - **Aug. 2-3, 2017**

University of Wisconsin - Milwaukee - *Instructor* - **Apr. 25-26, 2016**

Northwestern University - *Instructor* - **Nov. 10-11, 2015**

### Data Carpentry Workshops

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**

### ComBEE Anvio Workshop

University of Wisconsin - Madison

- *Instructor* - **May. 24, 2017**

### ComBEE Git/Github Workshop

University of Wisconsin - Madison

- *Instructor* - **Mar. 2-3, 2017**

### McMahon Lab Git Workshop

University of Wisconsin - Madison

- *Instructor* - **July 2015**

### Bioinformatics Basics Intersession

Illinois Mathematics and Science Academy

- *Instructor/Course Designer* - **Jan. 2015**

### Microbiology 304

University of Wisconsin - Madison

- *Teaching Assistant/Instructor* - **Fall 2013**

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## 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](#)

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## 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**

## Proficiencies

### **Bioinformatics**

Blast, BBtools, Metabat, Anvi'o, MCL, Phylosift, CheckM

### **Other Computational**

Bash, Python, R, Git, Markdown, Docker, HTCondor, UGE, Slurm, Microsoft Office Suite, Adobe Illustrator, SQL, openRefine

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