

# Benjamin Robert Roller



**Graduate Institution:** Michigan State University

**Graduate Discipline:** Microbial Ecology

**Hometown:** Moorhead, MN

**Relevant SC Research:** Biological and Environmental Research

## Research Interest:

Despite their small size, microorganisms have an immense impact on the environment. From the oxygenation of our atmosphere to the characteristic smell of ocean water, microbial metabolism has left a profound impact on our planet. As we face an unprecedented rate of global change over the coming century, the microbial response to this change can play a crucial role in determining the final outcome of this large scale experiment. I am interested in studying the interactions between a microbe's physiology and its environment. My current research focuses on variation in the efficiency of growth for heterotrophic bacteria, some of the most important players in the global carbon cycle. These organisms decompose organic matter and are responsible for much of the flux of carbon dioxide back into the atmosphere every year. An improved understanding of how growth efficiency varies between different types of bacteria is needed to better predict carbon flux at the landscape and ecosystem scales.

## About Me:

I am pursuing a dual degree PhD in Microbiology & Molecular Genetics and Ecology, Evolutionary Biology & Behavior at Michigan State University. I am a student member of the American Society of Microbiology and the International Society of Microbial Ecology. I hope to graduate in August 2013 and move into a postdoctoral research position, with the hope of gaining more experience

in the fields of ecology and evolution.

Ultimately, I hope to become a professor of microbiology where I can both teach and pursue my research interests. I am excited to travel to Copenhagen and present my research at the 14th International Symposium on Microbial Ecology at the end of August. In my free time I enjoy playing basketball and soccer.



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