

Carley Kratz



Graduate Institution: Michigan Technological University

Location: Houghton, Michigan

Graduate Discipline: Forest Science

Hometown: Manchester, Michigan

Research Interests:

My research involves evaluating the impacts of climate change on soil microbial communities. I am interested in connecting the structural dynamics of the microbial community to functional changes in carbon and nutrient cycling. I am currently involved in two warming studies in deciduous temperate forests in North America. The soil warming sites at Harvard Forest in Massachusetts allow me to evaluate the impact of increased temperature on soil microorganisms in the long term. Another soil warming experiment at Michigan Technological University's Ford Forestry Center in northern Michigan gives me the opportunity to examine the short term impacts of soil warming. This site also has moisture additions which reflect the predicted increase in precipitation for northern Michigan. The warming and moisture addition treatments will allow me to determine the relative importance of increased temperature or decreased moisture on the structure and function of the soil microbial community. I am also interested in partitioning the respiratory contributions of autotrophic and heterotrophic organisms to total soil respiration. I use laboratory culture and greenhouse studies to examine changes in fungal metabolism with fungi living both in and out of symbiosis with plants. These studies also allow me to understand the biotic and abiotic limitations on fungal respiration.

About me:

I am currently pursuing a Ph.D. at Michigan Technological University. I teach at the Global Change Teachers Institute, an intensive course in global change science for K-12 teachers. I am a member of the Mycological Society of America and the Ecological Society of America. During my undergraduate career at the University of Michigan I was involved in research on climate change and mycorrhizal fungi, interactions between scale insects and ants in a coffee agroecosystem, and desert grassland plant community dynamics. In my free time I enjoy hiking and identifying plants and fungi. I aspire to become a professor in microbial ecology or soil science.



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