

**Jan 17<sup>th</sup>**

**STC 0020**

**14:30-15:30**

# Biology Seminars



**PACIFICA SOMMERS**

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## Processes of microbial community assembly: Lessons from Antarctic glaciers

Cryoconite holes are shallow mud puddles on the surface of glaciers. In Antarctica, they can be covered by a lid of solid ice, even while microbial activity takes place in the liquid water below. These isolated ecosystems in nearly identical environmental conditions provide a tractable system for studying processes in microbial community assembly.

I will introduce the biological diversity across domains of life, and even viruses, found within cryoconite holes. I will then present the biogeography of cryoconite holes, and the hypotheses generated by biogeographic patterns about how these unique microbial communities assemble. Finally, I will share preliminary results from in-situ experimental cryoconite holes constructed to test processes of microbial community assembly. The degree to which stochasticity affects microbial community assembly in the cryoconite hole system may be useful for understanding broader-scale patterns of microbial diversity.