

Life in an Antarctic lake

February 4 2011

(PhysOrg.com) -- UC Davis geologists have been using laser scanning and underwater video to capture images of life in an ice-covered Antarctic lake.

Dawn Sumner, professor of geology, and graduate student Tyler Mackey have been studying [bacterial communities](#) called microbialites in the lake. These microbialites, which can grow into rocklike structures, are similar to the earliest known fossils of [life](#) on Earth from billions of years ago.

Sumner, Mackey and an international research team arrived at Lake Joyce, in the dry valleys of Antarctica, in October and camped there for about six weeks. They carried out dives in the 120-foot deep lake, which is permanently covered with 20 feet of ice. During the dives, they used a laser-scanning device to record three-dimensional data about structures in the lake; they also collected sediment and water samples.

The geologists now plan to visualize that data using the virtual reality facility at UC Davis' Keck Center for Active Visualization in Earth Sciences. Their goal is to better understand how microbialites form and grow, and gain insight into the beginnings of life on Earth.

The other expedition members were: Ian Hawes, Canterbury University New Zealand; Anne Jungblutt, Natural History Museum, London; Asim Bej, University of Alabama, Birmingham; Dale Andersen and Alfonso Davila, SETI Institute, Mountain View; Wayne Pollard, McGill University, Toronto; and Stephen Emmons, Norwich University, N.H.

This is the second season that Sumner and colleagues have worked at [Lake](#) Joyce. The project is supported by NASA and the National Science Foundation.

Provided by UC Davis

Citation: Life in an Antarctic lake (2011, February 4) retrieved 12 September 2024 from <https://phys.org/news/2011-02-life-antarctic-lake.html>

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