

SUBS TO PROBE BC LAKE

UC Davis graduate student Bekah Shepard will be piloting a mini-submersible into the depths of Pavilion Lake, British Columbia this month as part of an expedition to map strange life forms that could give clues to the history of life on Earth and other planets.

Lead by Darlene Lim from NASA's Ames Research Center and researchers from McMaster University and the University of British Columbia, the team will use one-person "Deepworker" submersibles supplied by Nuytco Inc. to map and sample microbialites in the lake. These formations of living microbes and minerals are thought to be similar to some of the earliest forms of life on Earth.

"What's unique about Pavilion Lake is that there is such a diverse set of microbialite morphologies," Shepard said. Also part of the team is Natalie Stork, another UC Davis graduate student.

Shepard and Stork have been studying for their doctorates with UC Davis geology professor Dawn Sumner, who studies ancient forms of life on Earth and how their billion-year-old fossils can be distinguished from purely mineral traces. The same knowledge could be applied to look for evidence of life on other planets, notably Mars.

The researchers have previously explored the lake by scuba diving and with remote-operated vehicles. The manned submersibles will allow them to reach the deepest parts of the lake -- about 180 feet -- collect samples, and map microbialite colonies.

Joining the expedition will be Canadian astronaut Dave Williams, now a professor of surgery at McMaster University. He is interested in the similarities between the submersible and using a lunar rover for future missions to the Moon.

The submersible dives will run from June 23 to July 3, followed by another week of scuba diving.