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Earth 10

11.11.19

Reading Assignment 2

On January 28, 2013, group of scientists sent a cylinder down 800 meters of ice to Lake Whillans, one of the most isolated bodies of water on Earth. This water was the first sample ever directly obtained from a subglacial lake in the hopes of finding any resident life, a feat so largely sought after yet almost impossible to attain due to the threat of contamination, which would deem any results as inaccurate and possibly introduce invasive species into the lake. The researchers, led by John Priscu, a microbial ecologist from Montana State University, spent 6 years working on methods to ensure safe handling and sampling. However, their efforts had not gone unrewarded as the samples from the lake show that life had survived under the ice without any energy from the sun for at least 120,000 years. Almost 4,000 species of bacteria and archaea were present, with 130,000 cells in each milliliter of water, a density mirroring that of the world’s deep oceans. DNA sequencing had revealed that many of the species captured were related to known microbes that feed on minerals for energy. These results are a preview on what could be the largest unexplored ecosystem on Earth – about 9% of Earth’s land area.

<http://web.a.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=1&sid=1c67b71f-d5da-43c6-8b43-b3a5b0323cdc%40sdc-v-sessmgr02>