

Russia finds 'new bacteria' in Antarctic lake

March 7 2013



Russian researchers pose for a picture after reaching the subglacial Lake Vostok in Antarctica on February 5, 2012. Russian scientists believe they have found a wholly new type of bacteria in the mysterious subglacial Lake Vostok in Antarctica.

Russian scientists believe they have found a wholly new type of bacteria in the mysterious subglacial Lake Vostok in Antarctica, the RIA Novosti news agency reported on Thursday.

The samples obtained from the underground lake in May 2012 contained

a bacteria which bore no resemblance to existing types, said Sergei Bulat of the genetics laboratory at the Saint Petersburg Institute of [Nuclear Physics](#).

"After putting aside all possible elements of contamination, DNA was found that did not coincide with any of the well-known types in the [global database](#)," he said.

"We are calling this life form unclassified and unidentified," he added.

The discovery comes from samples collected in an expedition in 2012 where a Russian team drilled down to the surface of Lake Vostok, which is believed to have been covered by ice for more than a million years but has kept its [liquid state](#).

Lake Vostok is the largest subglacial lake in Antarctica and scientists have long wanted to study its eco-system. The Russian team last year drilled almost four kilometres (2.34 miles) to reach the lake and take the samples.

Bulat said that the interest surrounded one particular form of bacteria whose DNA was less than 86 percent similar to previously existing forms.

"In terms of work with DNA this is basically zero. A level of 90 percent usually means that the organism is unknown."

He said it was not even possible to find the genetic [descendants](#) of the bacteria.

"If this had been found on Mars everyone would have undoubtedly said there is life on Mars. But this is bacteria from Earth."

Bulat said that new samples of water would be taken from Lake Vostok during a new expedition in May.

"If we manage to find the same group of [organisms](#) in this water we can say for sure that we have found new [life on Earth](#) that exists in no database," Bulat said.

Exploring environments such as Lake Vostok allows scientists to discover what life forms can exist in the most [extreme conditions](#) and thus whether life could exist on some other bodies in the solar system.

There has long been excitement among some scientists that life theoretically could exist on Saturn's moon Enceladus and the Jupiter moon Europa as they are believed to have oceans, or large lakes, beneath their icy shells.

The possibility that the lake existed had first been suggested by a Soviet scientist in 1957. Scientific research drilling in the area started in 1989 and the lake's existence was confirmed only in 1996.

The drilling project is of major importance for the prestige of science in Russia and Russian leader Vladimir Putin was given a sample of water from [Lake Vostok](#) last year when the expedition began.

(c) 2013 AFP

Citation: Russia finds 'new bacteria' in Antarctic lake (2013, March 7) retrieved 18 April 2024 from <https://phys.org/news/2013-03-russia-bacteria-antarctic-lake.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.