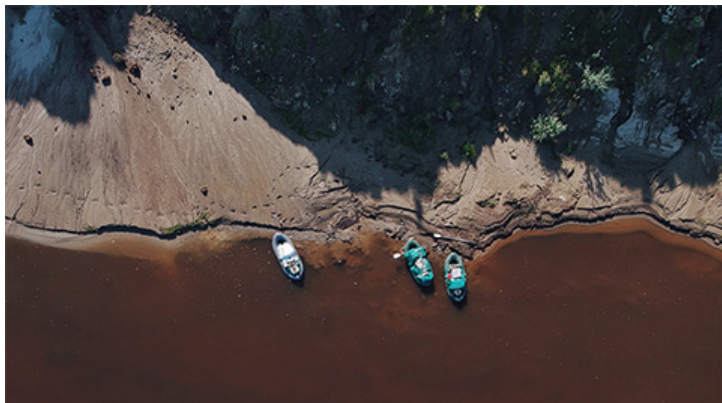


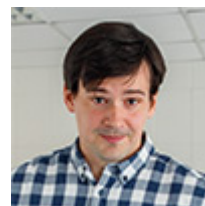
Findings of 7000 year-long paleo-wood will help to predict the climate on the planet

Alberto Arzac, the head of the laboratory of biogeochemistry of ecosystems at the School of Ecology and Geography, Siberian Federal University, came back from an international expedition to the Yamal Peninsula, organized by his colleagues from the Institute of Plant and Animal Ecology, the Ural Branch of the Russian Academy of Sciences. In total, scientists brought along saw cuts of 500 trees over 7000 years old. The analysis of the annual rings of these saw cuts will help reconstruct the temperature changes of the past millennia and predict future climate changes.



The scientist spent 23 days with an international team of dendrochronologists in search of wood material, which for thousands of years has been enclosed in a “sand trap” on the banks of the Tanlova River (Yamalo-Nenets Autonomous Okrug). The purpose of the expedition was to obtain samples of subfossil wood. According to Alberto Arzac, the wood was perfectly preserved in the conditions of Yamal. Now the found samples will undergo cameral processing and thorough dendrochronological studies.

“The thickness of the rings directly depends on the weather in which the tree grew. The study of tree rings helps us draw conclusions about the dates and chronological order of events of the past related to climate change, for example, when storms raged in the region, when there was cold weather or whether the summer was dry. These trees were alive 7,000 to 10,000 years ago when the forest taiga was farther north than it is today. After analyzing the found subfossil wood, we can understand what climatic conditions were in the past, which is very important for understanding the dynamics of the climate in general and for predicting future changes in particular. We are investigating how the temperature changed 7-10 thousand years ago, it can be useful for understanding the current climate changes,” — said **Alberto Arzac**, the senior researcher at Siberian Federal University.



The expedition took place from August 9 to September 2, 2019. In addition to Alberto Arzac, Dr. Patrick Fonti from the Swiss Federal Institute for Forest, Snow and Landscape Research, Vladimir Kukarskih, the senior researcher of the Laboratory of Dendrochronology of the Institute of Plant and Animal Ecology, the Ural Branch of the Russian Academy of Sciences and his colleague Alexander Surkov took part in it. The studies were carried out in the framework of the grant of Russian Science Foundation.

30 september 2019

© Siberian federal university. Website editorial staff: +7 (391) 246-98-60, info@sfu-kras.ru.

Web page address: <https://news.sfu-kras.ru/node/22214>