

キルギスタン・グレゴリア氷河のアイスコア試料における遺伝子解析

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Reconstructions of past flora using DNA analysis from ice core samples on Gregoriev Glacier, Kyrgyz

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Analyses of ice cores have often been used as a means to reconstruct past environments. The species composition of the organism such as microorganism and plant in the ice cores could reflect the environmental condition at that time. Thus, organisms in ice cores could be useful to reconstruct past environments. However, analysis of the biological contents in ice cores is still very limited. It is difficult to get ancient molecular DNA, so knowledge of the paleoenvironments of DNA information still has limited. In this study, we examined DNA from ice core sample (about 5,000 and 10,000 years old) collected on the Gregoriev Glacier, Kyrgyz Tianshan. Genes of plant and microorganism were subjected to PCR amplification and nucleotide sequencing. And meta-genome analysis also analyzed. Our results implied that DNA from preserved organisms could be recovered from the ice core samples, leading reconstructions of past flora. Biological information could be used as an environmental marker for past environmental studies.

References

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