A Big Earth Data Platform for Three Poles

**Prokaryotic distribution over the Arctic, Antarctic and Tibetan glaciers V1.0 (2010-2018)**

1、Description

The data set of prokaryotic microorganism distribution in the snow and ice of the Arctic Antarctic and the Tibetan Plateau provides the bacterial 16S ribosomal RNA gene sequence collected by the experimental group led by Yongqin Liu from the NCBI database during 2010 to 2018.
The keywords for NCBI database search are Antarctic, Arctic Tibetan, and Glacier. The collected sequences were calculated using the DOTOUR software to obtain the similarities between sequences, the sequences with similarities above 97% were clustered into one OTU, and the OTU representative sequence was defined. The OTU representative sequence was compared with the RDP database by the "Classifier" software and was identified as level one when the reliability exceeded 80%. After acquiring the sequence, the GPS coordinates of the sample were obtained by reading the sample information in the sequence file. These data contain the sequence of 16S ribosomal RNA gene fragments for each sequence, evolutionary classification, and sample GPS coordinates. Compared with sequences based on high-throughput sequencing, these data have a longer sequence and more accurate classification. It is significant for comparing the evolutionary information of three-pole microorganisms and understanding the evolution of psychrophilic microorganisms.

2、Keywords

Theme：Biological Resources,Bacterial species,Glacier(Ice Sheet)
Discipline：Human-nature Relationship,Cryosphere
Places：Antarctic, Tibetan Plateau , Arctic
Time：2010-2018

3、Data details

1.Scale：None

2.Projection：

3.Filesize：1.0MB

4.Data format：txt

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：28.21666667 | - |
| west：69.16666667 | - | east：162.0 |
| - | south：77.61666667 | - |

5、Time frame:2010-01-12 08:00:00+00:00--2018-04-11 08:00:00+00:00

6、Reference method

References to data:

Prokaryotic distribution over the Arctic, Antarctic and Tibetan glaciers V1.0 (2010-2018). A Big Earth Data Platform for Three Poles, 2018

References to articles:

7、Supporting project information

CASEarth:Big Earth Data for Three Poles（grant No. XDA19070000）

8、Data resource provider