A Big Earth Data Platform for Three Poles

**Snapshot of the Pliocene environment of West Kunlun region, Northwest China**

1、Description

The West Kunlun region forms the northern margin of the Tibetan Plateau, and sedimentation in this region contributed to plateau formation and its northwards expansion, as well as the development of central Asian aridification. However, the stratigraphic dating framework in this region has been ambiguous, hampering the understanding of both tectonic and environmental evolution. Here, palynological analysis was performed on the Xialafudie Formation in the West Kunlun region. Together with the palynological assemblage and megafossils found in the study section, as well as regional stratigraphic comparison, we conclude that the Xialafudie Formation was deposited during the Pliocene, and not Early Cretaceous as previously reported. The palynological assemblage of the section is mainly composed of drought-tolerant herbs and shrubs, and the percentage of conifers and broadleaved trees is very low, indicating that a dry and cold environment prevailed in the West Kunlun region during the Pliocene. Comprehensively analysed palynological data from the Tarim Basin and its surroundings show that aridification intensified in this part of central Asia during the Pliocene, as a result of long-term global cooling and regional tectonism.

2、Keywords

Theme：Macrofossils,Paleoclimate Reconstruction  
Discipline：Palaeoenvironment  
Places：West Kunlun  
Time：Pliocene

3、Data details

1.Scale：None

2.Projection：

3.Filesize：100.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：40.0 | - |
| west：80.0 | - | east：100.0 |
| - | south：30.0 | - |

5、Time frame:2021-02-28 16:00:00+00:00--2022-03-03 03:59:59+00:00

6、Reference method

References to data:

SU Tao. Snapshot of the Pliocene environment of West Kunlun region, Northwest China. A Big Earth Data Platform for Three Poles, doi:10.11888/Paleoenv.tpdc.2720792022

References to articles:

Liu, J., Wang, T.X., & Zhang, X.W., et al. (2021). Snapshot of the Pliocene environment of West Kunlun region, Northwest China. Palaeobiodiversity and Palaeoenvironments, 101. 1-14. 10.1007/s12549-020-00458-9.

7、Supporting project information

Second Tibetan Plateau Scientific Expedition Program

8、Data resource provider

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