A Big Earth Data Platform for Three Poles

**Atlas of pollen and spores for common plants from the east Tibetan Plateau**

1、Description

Pollen and spores extracted from sediment are considered as the important proxy in reconstructing past vegetation and climate, and which plays essential role in investigating environmental evolution during the Quaternary. Accurate identification of pollen and spore is the base for palynological research, which determines it is quite necessary to establish modern atlas for pollen and spore. Supported by the projects the Strategic Priority Research Program of Chinese Academy of Sciences “Pan-Third Pole Environment Study for a Green Silk Road (Pan-TPE)” and The Second Tibetan Plateau Scientific Expedition and Research, authors completed the vegetation and soil surveys in 2018 for the alpine meadow in the east Tibetan Plateau (including Yushu Prefecture, Changdu City, Ganzi prefecture, Naqu City) and alpine forest in the southeast Tibetan Plateau (Linzhi City) , and collected 401 specimens for anther of flowering plants and sporangium of ferns. Pollen and spores were extracted and from these specimens using the standard acid-alkali approach and acetolysis (9:1 mixture of acetic anhydride and sulphuric acid) treatment, and further were refrigerated in glycerin. More than two photographs were took for each pollen and spore type, using the LEICA-dm-2500 optical microscope and its imaging system with scale. The atlas of pollen and spore morphology will be a valuable reference for palynology research and teaching.

2、Keywords

Theme：Paleoclimate Reconstruction  
Discipline：Palaeoenvironment  
Places：pollen and spore, Apline meadow, Tibetan Plateau  
Time：2020-2025, Modern

3、Data details

1.Scale：None

2.Projection：

3.Filesize：1239.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：36.0 | - |
| west：91.0 | - | east：100.5 |
| - | south：29.0 | - |

5、Time frame:2020-07-13 16:00:00+00:00--2025-07-13 03:59:59+00:00

6、Reference method

References to data:

LI Kai, TIAN Fang, NI Jian, CAO Xianyong. Atlas of pollen and spores for common plants from the east Tibetan Plateau. A Big Earth Data Platform for Three Poles, doi:10.11888/Paleoenv.tpdc.2707352020

References to articles:

7、Supporting project information

Pan-Third Pole Environment Study for a Green Silk Road-A CAS Strategic Priority A Program  
Chinese Academy of Sciences Pioneer Hundred Talents Program  
National Natural Science Foundation of China

8、Data resource provider

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