A Big Earth Data Platform for Three Poles

**Major turnover of biotas across the Oligocene/Miocene boundary on the Tibetan Plateau**

1、Description

In this paper, we review evidence for a major biotic turnover across the Oligocene/Miocene in the Tibetan
Plateau region. Based on the recent study of six well-preserved fossil sites from the Cenozoic Lunpola and Nima
basins in the central Tibetan Plateau, we report a regional changeover from tropical/subtropical ecosystems in
the Late Oligocene ecosystem (26–24 Ma) to a cooler, alpine biota of the Early Miocene (23–18 Ma). The Late
Oligocene fossil biota, comprising of fish (climbing perch), insects and plants (palms), shows that the hinterland
of the Tibetan Plateau was a warm lowland influenced by tropical humidity from the Indian Ocean. In the Early
Miocene, the regional biota became transformed, with the evolution and diversification of the endemic primitive snow carp. Early Miocene vegetation was dominated by temperate broad-leaved forest with abundant conifers and herbs under a cool climate, and mammals included the hornless rhinoceros, Plesiaceratherium, a warm temperate taxon. This dramatic ecosystem change is due to a cooling linked to the uplift of Tibetan region, from a Late Oligocene paleo-elevation of no greater than 2300 m a.s.l. in the sedimentary basin to a paleo-elevation of about 3000 m a.s.l. Another factor was the Cenozoic global climatic deterioration toward to an ice-house world.

2、Keywords

Theme：Desert,Vegetation,Forest,Paleoclimate Reconstruction
Discipline：Terrestrial Surface,Palaeoenvironment
Places：Qinghai Tibet Plateau
Time：99.8±0.9Ma

3、Data details

1.Scale：None

2.Projection：

3.Filesize：10.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：90.0 | - |
| west：20.0 | - | east：40.0 |
| - | south：90.0 | - |

5、Time frame:2020-04-30 16:00:00+00:00--2021-05-31 16:00:00+00:00

6、Reference method

References to data:

DENG Tao . Major turnover of biotas across the Oligocene/Miocene boundary on the Tibetan Plateau. A Big Earth Data Platform for Three Poles, doi:10.11888/Paleoenv.tpdc.2714822021

References to articles:

Tao, D., Wu, F.X., Wang, S. Q. et al. (2021), Major turnover of biotas across the Oligocene/Miocene boundary on the Tibetan Plateau - ScienceDirect. Palaeogeography, Palaeoclimatology, Palaeoecology.

7、Supporting project information

Second Tibetan Plateau Scientific Expedition Program

8、Data resource provider

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