A Big Earth Data Platform for Three Poles

**The first Asian skeleton of Diaceratherium from the early Miocene Shanwang Basin (Shandong, China), and implications for its migration route**

1、Description

Owing to the scarcity of records, the Asian evolution and migration of Diaceratherium, a large extinct genus of rhinoceros of the Teleoceratini, remain unclear. The skeleton described herein, from the early Miocene Shanwang Basin in China, is identified as Diaceratherium shanwangense, a species originally defined based on upper cheek teeth. This skeleton features a large body, short horn-bearing nasal bones, moderately retracted nasal notch at the P3 level, and the metapodials that are less massive than those in other previously identified species of Diaceratherium. Mammalian fossils reported from the Oligocene–Miocene transition of the Old World, such as Dorcatherium and Amphicyon, have indicated a migration route between Europe and Eastern Asia via Southern and South-eastern Asia, namely along the southern margins of the Tibetan Plateau. However, the fossil remains of Diaceratherium reported in this study were discovered in eastern China, which represents the second accurate record of the genus in Asia (together with its presence in Kazakhstan). Consequently, given the temporal range and geological distribution of Diaceratherium, we propose that the expansion of this genus to the eastern part of the continent occurred via a route following the northern margins of the Tibetan Plateau, which if verified,  
represents an alternative expansion route differing from the established routes of other mammals.

2、Keywords

Theme：Others,Macrofossils,Paleoclimate Reconstruction  
Discipline：Others,Palaeoenvironment  
Places：Shanwang  
Time：Miocene

3、Data details

1.Scale：None

2.Projection：

3.Filesize：10.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：45.0 | - |
| west：90.0 | - | east：110.0 |
| - | south：30.0 | - |

5、Time frame:2020-11-30 16:00:00+00:00--2021-12-27 16:00:00+00:00

6、Reference method

References to data:

DENG Tao . The first Asian skeleton of Diaceratherium from the early Miocene Shanwang Basin (Shandong, China), and implications for its migration route. A Big Earth Data Platform for Three Poles, doi:10.1016/j.jaesx.2021.1000742021

References to articles:

Lu, X.K., Cerde, E., Zheng, X.T., Wang, S.Q., Deng, T. (2021). The first Asian skeleton of Diaceratherium from the early Miocene Shanwang Basin (Shandong, China), and implications for its migration route. Journal of Asian Earth Sciences: X

7、Supporting project information

Second Tibetan Plateau Scientific Expedition Program

8、Data resource provider

name: DENG Tao   
unit: Institute Of Vertebrate Paleontology And Paleoanthropology, Chinese Academy Of Sciences  
email: dengtao@ivpp.ac.cn