A Big Earth Data Platform for Three Poles

**Revisit of Hsianwenia wui (Cyprinidae: Schizothoracinae) from the Pliocene of Qaidam Basin**

1、Description

The Qaidam Basin is a key area for understanding the paleoenvironmental and faunal history of the Tibetan Plateau. The fossil schizothoracine fish, Hsianwenia wui, evolved extraordinarily thickened bones to adapt to the aridification of the Qaidam Basin during the Pliocene. However, the nature of the bone thickening itself remains elusive. To promote the further investigation of the physiological mechanism of the pachyostosis and the phylogenetic interrelationships of Hsianwenia and all relevant cyprinids, here we present a comprehensive morphological study of Hsianwenia. We have new information on the anterior part of the cranial cavity, a large supraneural 3 in the Weberian apparatus, numerous procurrent caudal fin rays supported by the preural centrum (Pu) 5, and a neural arch on Pu2. We also find the differentiated pattern of the bone-thickening: the pachyostosis exists in the endoskeleton but not in the dermal skeleton; it is more obvious in ventral bones than in dorsal ones, when the thickening is present in the dorsally and ventrally grouped endoskeletal bones (e.g., the epineural and epipleural intermuscular bones). Considering the integrity of musculoskeletal system manipulating the chewing activities, we suspect that the thickened pharyngeal jaws and the hard food processing might be associated with the unique hind protrusion (cleithral “humeral” process) of the dermal pectoral girdle of Hsianwenia.

2、Keywords

Theme：fossils,Paleontology,Others  
Discipline：Others,Solid earth  
Places：Qaidam Basin, Qinghai  
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：140.0 |
| - | south：30.0 | - |

5、Time frame:2020-10-31 16:00:00+00:00--2021-12-30 16:00:00+00:00

6、Reference method

References to data:

WU Feixiang . Revisit of Hsianwenia wui (Cyprinidae: Schizothoracinae) from the Pliocene of Qaidam Basin. A Big Earth Data Platform for Three Poles, doi:10.19615/j.cnki.2096-9899.2110262021

References to articles:

7、Supporting project information

Second Tibetan Plateau Scientific Expedition Program

8、Data resource provider

name: WU Feixiang   
unit: Institute Of Vertebrate Paleontology And Paleoanthropology, Chinese Academy Of Sciences  
email: wufeixiang@ivpp.ac.cn