Palynological records from the Sikouzi Section in the Liupanshan Basin, central China: Evidence for the terrestrial response to the Aptian-Albian cold snap

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The amount of calcareous marine organisms assemblages and also paleotemperature proxies have indicated a global cooling at the Aptian-Albian transition which interrupted the equably warm climate conditions of the mid-Cretaceous period (McAnena et al., 2013; Mutterlose et al., 2009). So far this environmental event is largely based on palaeoclimatic information from marine sedimentary archives with little evidence from the continental record. This study presents a spore-pollen record from the Sikouzi Section exposed in the Liupanshan Basin of northwestern China, central Asia. This sectioncovers the Upper Liwaxia to Naijiahe Formations, which were dated as late Aptian to Albian by high resolution magnetostratigraphy (Dai et al., 2009). The palynological results showed a significant increase of conifer bisaccate pollen at the Aptian-Albian lower Madongshan Formation, indicating a change to cooler climate. After that the content of *Classopollis* affinities with thermophilous Cheirolepidiaceae rapidly increases to a continuous high level, reflecting a long-term dry and warm climate within the region of Liupanshan. This harsh environment just slightly improved from the latest Albian. It suggests that global climatic changes were the main driver controlling the regional environmental changes during the middle Cretaceous. In conclusion, the whole climatic change trends in the late Aptian to Albian sediments in the Liupanshan Basin correspond to the global record of climatic changes.

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