

The charophyte flora from the Lower Cretaceous Chijinbao Formation (Jiuquan Basin, Northwest China) and its application to biostratigraphy and palaeoecology were investigated. The species *Mesochara stipitata* and *Aclistochara huihuibaoensis* were found in the Chijinbao Formation. The intra-specific variability of *M. stipitata* and *A. huihuibaoensis* was examined based on biometric analyses. The flora suggests a Barremian age for the Chijinbao Formation, in agreement with the data obtained from conchostracan and fish assemblages. Sedimentological, taphonomic and palaeoecological data indicate that a permanent lake occurred in the area, and that the climate was warm at the time of deposition of the Chijinbao Formation. The Early Cretaceous charophyte flora of the Jiuquan Basin was poorly diverse, especially in comparison with Europe where abundant clavatoraceans dominated the lakes and ponds of the tropical to subtropical Lower Cretaceous Central Tethyan Archipelago. Instead, the Barremian Chinese flora was dominated by a few early characeans. Differences in climate may account for such contrasting diversity.

