

## Late Cretaceous - Early Paleogene ostracod biostratigraphy in the Songliao Basin, NE China

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The Songliao Basin was one of the largest non-marine rift basins in Asia during the Cretaceous. Widespread non-marine deposits in the basin are mainly composed of clastic sediments which contain abundant ostracods and other fossils, such as gastropod, bivalves, and vertebrates (YE et al., 2002). These well-preserved ostracod fossils provide us valuable information about Cretaceous climate changes and biotic responses in a greenhouse environment. The Cretaceous International Continental Scientific Drilling Project core SK1 from the Songliao Basin (SK1) offers a rare opportunity to study Late Cretaceous non-marine ostracods over a long, continuously documented time interval. The SK1 was drilled separately in two boreholes: the lower 959.55-meter-thick long south core (SK1(s)), and the upper 1636.72-meter-thick long north core (SK1 (n)), containing, in ascending order, the upper Quantou Formation, the Qingshankou, Yaojia, Nenjiang, Sifangtai, and Mingshui formations, and the lower Taikang Formation (WANG et al., 2013). A high-resolution non-marine ostracod biostratigraphy based on SK1 has been established (XI et al., 2012; QU et al., 2014). A total of 80 species belonging to 12 genera have been recovered from SK1(s), and 45 species assigned to 20 genera from SK1(n). However, their taxonomy has to be revised. Nineteen ostracod assemblage zones have been recognized from the upper Quantou to Mingshui formations (XI et al., 2012; QU et al., 2014). This series of zones can be correlated regionally and supraregionally. The preliminary correlation indicates that Assemblage Zones 1 to 18 span the Late Cretaceous, while Assemblage Zone 19 might span the latest Maastrichtian to earliest Danian, which is supported by an astronomical time scale of the SK1 (WU et al., 2014). Although the preliminary biostratigraphy of SK1 has been established, the further detailed taxonomy, supraregional correlation and paleoecology are still needed.

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