

A Stepped Karst Unconformity as an Early Silurian Rocky Shoreline in Guizhou Province (South China)

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Where succeeded by marine strata, karst unconformities signify a former rocky coastline. Such relationships may help sort out relative sea-level changes and aspects of local geography controlling facies distribution. An exceptional example of an early Silurian karst shore is well exposed near the village of Wudang in central Guizhou Province, not far from the capital city of Guiyang in South China. Here the Lower Silurian Kaochaitien Formation oversteps 63 m of paleotopographic relief over a distance of 0.8 km on limestones belonging to the Llanvirn Kuniutan Formation and Caradoc to early Ashgill Huanghuachong Formation (Ordovician). The corresponding rise in sea level took place coeval with tectonic uplift, as confirmed by a regionally diachronous relationship in the Ordovician-Silurian boundary across a 250 km track from central to northern Guizhou Province. In the north, there is no discernable time gap at the Ordovician-Silurian boundary but younger and younger Silurian strata rest on older and older Ordovician strata in the south. The change in sea level also fits with a global rise of sea level in late Aeronian (later Llandovery, early Silurian) time. Borings of the ichnofossil, *Trypanites*, are reported from the karst surface of the Huanghuachong Formation and Silurian fill defines sink holes in this unit over 5 m deep. The Silurian karst shoreline near Wudang is integrated with other regional data to construct a paleogeographic map covering the northern half of Guizhou Province.

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