Silurian conodonts from western Yunnan and southern Xizang (Tibet), China

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Abstract

The Wenlock to Pridoli conodont biozonation has been well established in many areas of the world, but has not yet been studied in China. The Silurian succession in western Yunnan and southern Xizang (Tibet) is relatively continuous and complete, but conodont biostratigraphy in these regions has not been extensively researched.

In this study, conodont samples were collected from the Laojianshan section in Baoshan of western Yunnan and the Yalai West II section in Nyalam of southern Xizang. In the Laojianshan section, seven conodont zonal units were recognized in the "Lichaiba" and Niushiping formations, including the *Pterospathodus amorphognathoides amorphognathoides* Zonal Group, the *Pterospathodus pennatus procerus* Superzone (probably only the Lower *Pterospathodus pennatus procerus* Zone), the *Ozarkodina sagitta sagitta* Zone, the *Kockelella ortus absidata* Zone, the *Kockelella crassa* Zone, the *Polygnathoides siluricus* Zone and the "*Ozarkodina*" *eosteinhornensis* s.l. interval Zone. Similarly, the Yalai West II section had five recognized conodont zonal units in the "Pulu Formation": the *Ozarkodina sagitta sagitta* Zone, the *Kockelella crassa* Zone, the *Kockelella variabilis variabilis–Ancoradella ploeckensis* Zonal Group, the *Polygnathoides siluricus* Zone and the "*Ozarkodina*" *eosteinhornensis* s.l. interval Zone. Based on these conodonts as well as the graptolites from the underlying strata, the "Lichaiba Formation" was assigned to the upper Llandovery (upper Telychian)-upper Wenlock (upper Homerian), the Niushiping Formation to the Ludlow-Pridoli, and the "Pulu Formation" to the upper Llandovery (upper Telychian)-Pridoli.

The late Telychian conodont fauna from the Laojianshan section indicates a distal, open-shelf depositional environment. The widespread distribution of Wenlock to Pridoli conodont species in the Baoshan and Nyalam regions suggests that the cosmopolitan characteristics of the conodont fauna from this period were due to the circulation of ocean currents.

Keywords: conodont, Silurian, Sibumasu, Tethyan Himalaya

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