

$\delta^{13}\text{C}$ stratigraphy of the middle and upper units of the Visingsö Group, Sweden

*Katherine D Paukert, Carol M Dehler
Utah State University*

Summary

Understanding and contextualizing Neoproterozoic successions requires a shift of focus from that of Phanerozoic successions. Relative faunal scarcity requires a heavier reliance on isotopic data and detrital zircon geochronology. Analysis of microfossils is widely used, but in conjunction with such methods. This study uses these approaches in analyzing the Visingsö Group, and in making correlations with the Chuar Group (Arizona).

The significance of the Visingsö Group for understanding earth systems at Neoproterozoic time can be understood in context of its location on a different paleocontinent from most other successions of the same age. The Visingsö Group lies on Baltica, in what is now south-central Sweden. Similarly aged, but spatially disparate units include the Chuar Group, the Uinta Mountain Group, and the Pahrump Group of the American West (Laurentia), as well as other successions within Africa and Australia. Found within these successions are a) a large negative carbon isotope excursion of $>6\%$ and b) a biotic turnover from diverse ornamented acritarchs to VSMS (vase shaped microfossils) and unornamented acritarchs. Therefore, these characteristics are expected within the Visingsö Group as well.