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Stable isotope data ($\delta^{18}\text{O}$, $\delta^{13}\text{C}$) of the ammonite genus *Simbirskites* – implications for habitat reconstructions of extinct cephalopods

Kevin Stevens, Jörg Mutterlose, Kurt Wiedenroth

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Running header: Stable isotope data ($\delta^{18}\text{O}$, $\delta^{13}\text{C}$) of *Simbirskites* ammonites

Authors: Kevin Stevens^{*1}, Jörg Mutterlose¹ and Kurt Wiedenroth²

**¹Institut für Geologie, Mineralogie und Geophysik, Ruhr-Universität Bochum, Universitätsstr.
150, 44801 Bochum, Germany**

²Am Hohen Holze 19, 30823 Garbsen, Germany

***corresponding author: kevin.stevens@rub.de**

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Abstract

The accurate habitats of the extinct ammonites and belemnites are largely unknown. Most ammonites are thought to have had a pelagic lifestyle, while belemnites are often considered to have dwelled in deeper, colder waters. Stable isotope analysis ($\delta^{18}\text{O}$, $\delta^{13}\text{C}$) provides a useful method to reconstruct the habitats of these two groups of extinct cephalopods, but is at the same time limited by various unknowns, including the isotopic composition of the past seawater, ‘vital’-effects and diagenesis.

In this paper, stable isotope data from 12 ammonite shells (*Simbirskites* spp.) from the upper Hauterivian of the Lower Saxony Basin (northwest Germany) are presented. Ontogenetic isotope

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