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# Ostracod diversity and environmental conditions of the Aras Valley section (NW-Iran) during the end-Permian mass extinction

Jana Gliwa \*†<sup>1</sup>, Marie-Béatrice Forel<sup>2</sup>, Sylvie Crasquin<sup>2</sup>, Martin Schobben<sup>3</sup>,  
Abbas Ghaderi<sup>4</sup>, Dieter Korn<sup>1</sup>

<sup>1</sup>Museum für Naturkunde Berlin (MfN Berlin) – Invalidenstr. 43, 10115 Berlin, Germany

<sup>2</sup>CR2P (MNHN-SU-CNRS), Paris - France

<sup>3</sup>School of Earth and Environment, University of Leeds – Woodhouse Lane, Leeds LS2 9JT, United Kingdom

<sup>4</sup>Department of Geology, Faculty of Science, Ferdowsi University of Mashhad – Mashhad, Iran

The end-Permian mass extinction, one of the most severe biotic crises in Earth history, is still a matter of debate regarding the responsible environmental and climatic conditions. In our study, we investigate the ostracod diversity of the north-western Iranian Aras Valley section in combination with geochemical proxies, such as d13C and d18O, to examine environmental changes during and after the extinction. The Late Changhsingian *Paratirorites* Limestone and the subsequent "Boundary Clay" (= Aras Member) are assumed to display continuous successions without major gaps in the sedimentary record. The diversity patterns right before and after the extinction show a restructuration of the ostracod community from a normal diverse assemblage with occurrences of possibly predatory planktonic forms in the upper *Paratirorites* Limestone to an abundant and diverse benthic assemblage up to the middle part of the Aras Member. This transition furthermore indicates the onset of different trophic conditions after the extinction with the disappearance of possibly predatory ostracods and occurrences of Platycopida in the Boundary Clay. The generally high species richness and high abundance of ostracods in the Aras Member, which is, in contrast to other Permian-Triassic sections, not linked to an onset of possibly protective microbial mats, leads to the assumption that significant anoxic conditions were not affecting the Aras Valley section right after the extinction horizon. A decreasing diversity in the upper part of the Aras Member, together with mass occurrences of *Bairdiacypris ottomanensis* and pustular representatives of this species are correlated with a persistent temperature rise (data from conodonts); these suggest changing environmental conditions.

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\* Speaker

† Corresponding author: jana.suchocka@mfn-berlin.de