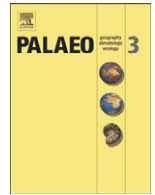




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An enigmatic ‘conchostracan’ fauna in the eastern Dead Sea region of Jordan: First records of *Rossolimnadiopsis* Novozhilov from the Early Triassic Ma'in Formation



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ABSTRACT

The Late Permian–Early Triassic sedimentary succession in the eastern Dead Sea Region of Jordan was surveyed for conchostracans (Crustacea: Branchiopoda). Whereas their occurrence in the Middle–Late Permian Umm Irna Formation could not be confirmed, the overlying Ma'in Formation contained a fauna comprising *Rossolimnadiopsis* Novozhilov and other, thus far, taxonomically undetermined conchostracans. Here, a new species, *Rossolimnadiopsis hanskerpi* nov. sp., is described and figured. It shows a very distinctive concavely curved dorsal margin and an elevated, outwardly curved semi-circular flange. *Rossolimnadiopsis hanskerpi* nov. sp. occurs in dark gray, laminated, lacustrine, siltstones of the Ma'in Formation (Nimra Member), which is considered to be of Early Triassic age. Based on literature data, *Rossolimnadiopsis* was previously recorded only from two localities in the Moscow syncline in Central Russia. In addition to Jordan, the genus has been identified in India and possibly in Germany. All these occurrences seem to be restricted to a narrow stratigraphic interval ranging from the Late Permian to the Early Triassic.

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1. Introduction

During recent decades, the Near East became a key region for Late Permian palaeobiogeographic studies mainly because interesting mixed floras of Gondwanan, Euramerican, and Cathaysian elements have been reported from Oman, Iraq, Turkey, and Saudi Arabia (e.g., Broutin et al., 1995; Berthelin et al., 2006). An intriguing flora was recently discovered in Jordan (Mustafa, 2003; Kerp et al., 2006; Abu Hamad et al., 2008). Remarkably, this Dead Sea Permian mixed flora contain the earliest occurrence of “typical Mesozoic” taxa in Gondwana (Kerp et al., 2015). The faunal content of this crucial stratigraphic interval in Jordan has been less thoroughly investigated than the continental Permian–Triassic boundary sections in other regions of the world such

as the classical key sections in the Karoo basin of South Africa (e.g., Smith and Botha-Brink, 2014; Gastaldo et al., 2015), in the Moscow syncline on the East European Platform (e.g., Benton et al., 2004; Golubev et al., 2012a, 2012b), or in the Germanic basin of Central Europe (e.g., Bachmann and Kozur, 2004). As known from continental deposits and their respective fossil records, conchostracans can be very common faunal elements and may be useful for biostratigraphy, if their taxonomy follows an objective and reproducible classification (e.g., Scholze and Schneider, 2015). Their value for interregional biostratigraphic correlation is highlighted by several recently published conchostracan occurrences of Permian to Early Triassic age, such as in Argentina (e.g., Tassi et al., 2013), Brazil (e.g., Ferreira-Oliveira and Rohn, 2010), Kenya (Shen, 2006), India (e.g., Ghosh, 2012), China (e.g., Zhang et al., 2012; Chu et al., 2013), Russia (Chunikhin, 2009; Scholze et al., 2015), Germany (e.g., Scholze et al., 2016), and Central Europe and North America (e.g., Schneider and Scholze, in press).

Before the present study, conchostracans from the Dead Sea region of Jordan were only mentioned as “*Estheria*” by Bandel and Salameh (2013: p. 59) from the Himara Member of the Early Triassic Ma'in Formation. Both the mixed Late Permian flora and the report of Early

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