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华北克拉通东部新元古代宏体化石生物地层序列 [点此下载全文](#)

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摘要:

华北克拉通东部是中国晚前寒武纪地层出露最为完整、连续的地区,特别是华北克拉通东缘连续出露了新元古代自老至新的全部地层,是对比和衔接中国南、北方晚前寒武纪地层的关键地区。在该地区所发现和建立的宏体化石群——“龙凤山生物群”、“辽南生物群”和“淮南生物群”可能是新元古代“南华大冰期”前后较为独特的生物群落,其中相当部分可能归属于多细胞后动物和多细胞藻类,是地球早期生命景观的重要代表。因此,对这些新元古代早期生物群的研究将可能揭示比陡山沱期更早的多细胞后动植物的演化面貌,在演化生物学上意义重大。近年来,在地调项目的资助下,开展了华北克拉通东部地区的新元古代年代地层及生物地层的研究。本文综合现有资料,详细记述了华北克拉通东部(燕山地区和辽南、徐淮地区)含宏体化石的新元古代地层及其宏体化石特征、组合面貌和生物地层序列。同时,依据宏体化石记录,探讨了中新元古代地层的对比问题。

关键词: [华北克拉通东部](#) [新元古代](#) [宏体化石](#) [生物地层序列](#) [地层对比](#)

Macrofossil Records of the Neoproterozoic in the Eastern of North China Craton: An Implement of Neoproterozoic Biostratigraphy [Download Fulltext](#)

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Abstract:

The most complete and continuous strata of Late Precambrian in China are known to occur in the east area of North China Craton, especially in the east margin of North China craton yield the whole Neoproterozoic sedimentary sequences from bottom to top, which are the crucial strata for stratigraphic correlation and linking the Neoproterozoic between North and South China. The macrofossil assemblage (i.e. Longfengshan Biota, Liaonan Biota and Huainan Biota) discovered and established in this area might have been recognized as several distinctive and diverse communities preceded or followed "the Nanhuan Glaciation" during the Neoproterozoic era. Large quantities of these Neoproterozoic macrofossils have generally been interpreted as multicellular metaphytes and metazoans which are the important representatives of the ancient life in the surface of the 1000~542 Ma earth. Therefore, the researches of Neoproterozoic organisms that are very important in the evolutionary biology will reveal the trends of multicellular organism evolution that is earlier than the Doushantuo Period. In recent years, a lot of significant advancements in the study of Neoproterozoic paleontology and stratigraphy upon which are focused international attentions include the discoveries of animal embryo fossils in the lower Doushantuo Formation, and accurate zircon U/Pb ages at the bottom and the top of Doushantuo Formation as well. In contrast, lack of support of the large projects delays the progress of the Neoproterozoic studies in the eastern of North China Craton. Under the recent financial aids of Geological Survey Project, in this study we have concluded the previous works and documented in detail the Neoproterozoic layers bearing the macrofossils in Yanshan area (including Jixian section), South Liaoning area and Xuzhou—Huainan area, as well as recorded the morphological features, the assemblages and the stratigraphic sequences of these complex macroscopic organisms that flourished on the eve of the Cambrian radiation of animals. On the basis of macrofossil records, writers have also discussed the Neoproterozoic, especially Nanhuan and Ediacaran stratigraphic correlation and division between North and South China, and thereout put forward the preliminary scheme of contrast.

Keywords: [the eastern of North China Craton](#) [Neoproterozoic](#) [macrofossil records and assemblages](#) [biostratigraphic successions and correlation](#)

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