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辽西下白垩统义县组湖相碳酸盐岩及其沉积环境研究 [点此下载全文](#)

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摘要:

辽西地区下白垩统义县组是热河生物群产出的主要地层, 其中产出大量精美的生物化石, 但是由于受到后期构造破坏和风化作用影响, 难以开展野外工作, 热河生物群产出的古地理环境及盆地沉积环境的研究程度仍然较低。该组地层中湖相碳酸盐岩比较发育, 本次工作主要对辽西义县组老公沟—金刚山剖面4个沉积层中产出的多层湖相碳酸盐岩沉积层进行了深入研究。通过野外工作结合室内镜下鉴定, 分析了义县组湖相碳酸盐岩的产出状态和岩石类型, 划分出5个岩相类型和两个相组合。结合野外实测剖面中碳酸盐岩与其它沉积岩层的组合关系对义县组湖相碳酸盐沉积环境进行了探讨, 发现义县组湖相碳酸盐岩主要为洪水—漫湖沉积体系中较浅的储水洼地和滨浅湖半咸水沉积环境, 并建立了义县组湖相碳酸盐岩沉积相模式。

关键词: [湖相碳酸盐岩](#) [沉积环境](#) [下白垩统](#) [义县组](#)

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Abstract:

The Lower Cretaceous Yixian Formation is the basal formation of the Jehol biota where the abundant and exceptionally well preserved fossils were discovered. However, deuterian late stage tectonic destructive disturbances and weathering effects have hampered field investigations on the Jehol biota's palaeogeographic and basin sedimentary characteristics, making it difficult to do detailed research. Our recent systematic field study of the depositional environment indicates that there were several lacustrine carbonate intervals in the four sedimentary beds of the Yixian Formation. We have systematically studied the distribution and the lithotypes of lacustrine carbonates both in the field and with laboratory analysis. Five main carbonate lithofacies have been differentiated in the lacustrine limestones, and they are further grouped into two main facies associations. Combining the relationship between the carbonates and other sedimentary beds, we find that the lacustrine carbonate sedimentary environment in the Yixian basin represents short lived isolated ponds developed in very shallow depressions on the floodplain as well as brackish water in offshore lakes. Finally, we propose a lacustrine carbonate sedimentary facies model for the Yixian Formation.

Keywords: [lacustrine carbonates](#) [sedimentary environment](#) [Lower Cretaceous](#) [Yixian Formation](#)

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