# Article information:

The interplay of environmental constraints and bioturbation on matground development along the marine depositional profile during the Ordovician Radiation - Bayet‐Goll - 2022 - Geobiology - Wiley Online Library  
<https://onlinelibrary.wiley.com/doi/abs/10.1111/gbi.12473>

# Article summary:

1. This study documents the distribution of matgrounds in a variety of environments recorded in the Ordovician Lashkerak and Ghelli Formations in northern Iran.

2. Detailed facies analysis allowed differentiating three groups of facies associations in the Lower to Upper Ordovician deposits of the Lashkerak formation, and two groups of facies associations in the Middle to Upper Ordovician deposits of the Ghelli formation.

3. The spatial distribution of microbial mats was controlled by an interplay of environmental factors and innovations in animal-substrate interactions, mostly expressed by secular changes in bioturbation.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article “The interplay of environmental constraints and bioturbation on matground development along the marine depositional profile during the Ordovician Radiation” is a well-researched piece that provides a comprehensive overview of how environmental constraints and bioturbation have impacted matground development along marine depositional profiles during the Ordovician Radiation period. The authors provide detailed descriptions and analyses of various environments, including estuarine systems, wave-dominated shoreface-offshore complexes, mixed river- and wave-influenced deltaic systems, tide-influenced deltaic successions, and deep-water fan systems. They also discuss how microbially induced sedimentary structures (MISS) are present or absent depending on these environments.

The article is reliable as it is based on thorough research conducted by experienced scientists from reputable institutions such as Institute for Advanced Studies in Basic Sciences (IASBS) and University of Saskatchewan. Furthermore, all authors have declared that there is no conflict of interest with regards to this article.

However, there are some potential biases that should be noted when considering this article’s trustworthiness. For example, while the authors do mention possible risks associated with their findings, they do not explore counterarguments or present both sides equally when discussing their conclusions. Additionally, some claims made throughout the article may be unsupported or missing evidence for their validity. Finally, there may be promotional content included within this article which could lead to partiality or one-sided reporting on certain topics discussed within it.

# Topics for further research:

* Bioturbation effects on marine depositional profiles
* Environmental constraints on matground development
* Microbially induced sedimentary structures
* Estuarine systems and Ordovician Radiation
* Wave-dominated shoreface-offshore complexes
* Deltaic systems and tide-influenced successions

# Report location:

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