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► **To cite this version:**

Wenhui Wang, Bertrand Lefebvre, Yves Candela, Khadija El Hariri, Mansoureh Ghobadi Pour, et al.. IGCP 735 project: Rocks and the Rise of Ordovician Life. 37th International Geological Congress 2024, IUGS, Aug 2024, Busan (Corée), South Korea. hal-04776035

HAL Id: hal-04776035

<https://hal.science/hal-04776035v1>

Submitted on 10 Nov 2024

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IGCP 735 project: Rocks and the Rise of Ordovician Life

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Abstract

Deciphering the complex interactions between climate change, biodiversity and ecosystem structuration is a major societal issue for future generations. The geological record offers the unique opportunity to document the impact of environmental changes in the biosphere in the past, and thus to provide some clues for the future. Early Palaeozoic interval embraces major evolutionary events such as the Cambrian Explosion and the Great Ordovician Biodiversification Event, but also major shifts in climate with a dramatic impact on the biosphere. Recently, the development of large-scale collaborative palaeontological databases promoted high-resolution analyses of biodiversity patterns, which could be compared using different environmental proxies. However, most available data are so far strongly biased towards some geographic areas (Europe, North America) and time intervals (lower-middle Cambrian, Middle-Upper Ordovician). Through a multidisciplinary approach, and in close collaboration with the International Subcommittee on Ordovician Stratigraphy, our IGCP 735 project aims at filling the numerous knowledge gaps in most regions of the world (e.g. Africa, Asia and South America), with a special focus on less-documented time intervals (e.g. late Cambrian to early Ordovician). The IGCP 735 was approved and started in 2021. Until now, more than 220 scientists from 42 countries have participated to the project. Three annual meetings including an online meeting have been held since 2021. Three thematic volumes in the international journals *Palaeogeography Palaeoclimatology Palaeoecology*, *Frontiers in Earth Sciences* and *Geobios* about the scientific topic have been published in 2023. The IGCP 735 project has been very enthusiastically welcomed by the scientific community and has been acknowledged in almost two hundred publications in international journals. More details about the project can be found on our website: <https://rocksnrol.wordpress.com/>.

Keyword

Ordovician radiation, geological history, fossil records