

Jurassica XVI conference (8–10.10.2025, Betliar, Slovakia)

Hubert WIERZBOWSKI¹, Marína MOLČAN MATEJOVÁ², Tomáš POTOČNÝ²

The XVI Jurassica conference took place in Betliar (Slovakia) on 8–10 October 2025. This cyclic conference is organized every 2–3 years by the Polish & Slovak Working Group of the Jurassic System affiliated to the Polish Geological Society and the Slovak Geological Society. This year it was organized by the Slovak geologists – members of the Faculty of Natural Sciences of Comenius University in Bratislava and the Slovak Geological Society, in partnership with the State Geological Institute of Dionýz Štúr and the organization of young Slovak geologists called the Meliata Pirates.

The Jurassica conference is open to all geologists and young geology students involved in the studies of the Jurassic system and Triassic/Jurassic and Jurassic/Cretaceous boundary strata. Its aim is to exchange new data, discoveries and novel ideas among various people interested in the stratigraphy, sedimentology, geochemistry, tectonics, and palaeontology of the Jurassic System and Jurassic geotourism.



The Meliata type-locality consisting of the Triassic–Jurassic olistostrome radiolarite complexes

Around 30 participants took part in the Jurassica XVI conference, coming from Slovakia, Poland, Hungary, Austria, Italy and Montenegro. 19 talks and 12 posters were presented (their abstracts published in the abstract book are available at <https://www.geologickaspolocnost.sk/files/MEM032025-special.pdf>). The keynote lectures by D. Plašienka, A. Festa and H.-J. Gawlick, which were held during the first and second day of the conference, were devoted, respectively, to the Jurassic tectonics and structural units of the Western Carpathians, definition of tectonic mélanges and

¹ Polish Geological Institute – National Research Institute, Rakowiecka 4, 00-975 Warsaw, Poland; hubert.wierzbowski@pgi.gov.pl.

² Comenius University, Faculty of Natural Sciences, Mlynská dolina, Ilkovičova 6, 842 15 Bratislava, Slovakia; marina.matejova@uniba.sk, potocny9@uniba.sk.

their significance in the evolution of convergent plate margins as well as to the major turnovers in the Mesozoic history of the western Tethyan realm. The visited outcrops of the Jurassic of the Meliata and Silica units, their stratigraphy and geological sections have been described in detail in the field trip guidebook edited by T. Potočný, M. Molčan Matejová, H.-J. Gawlick and D. Plašienka. The membership of the organizing committee of the Jurassica XVI conference consisted of: M. Molčan Matejová, T. Potočný, S. Antolíková, M. Kováčiková, A. Heteš and R. Hupka from the Faculty of Natural Sciences of the Comenius University in Bratislava and the Slovak Geological Society.

The Jurassica XVI conference was devoted the complicated geological history and settings of the Western Carpathians in southern Slovakia. This region represents the intersection between the Central and Internal Western Carpathians (see Plašienka, 2018). It is characterised by the occurrence of the structurally lowermost Internal Western Carpathians cover nappe – the Meliata Unit, generally considered to represent a vestige of the closure of the Neotethys-related Meliata Ocean. The Meliata Unit is divided into three distinct parts: (1) the Permian-to-Jurassic high-pressure-low-temperature (HP-LT) Bôrka nappe (Mello *et al.*, 1998); (2) ophiolite-bearing/serpentine mélanges (Plašienka *et al.*, 2019); and (3) a Jurassic sedimentary complex consisting of olistostrome bodies (the Meliata Unit *sensu stricto*, *e.g.*, Mello *et al.*, 1997). However, the development of the Meliata Unit is also connected to the overlying Turna and Silica units.

The most significant occurrences of Jurassic rocks from the internal parts of the Western Carpathians were presented to the Jurassica XVI participants during the third day of the conference. They included the Drnava section showing the drowning succession

Meliatsky oceán? Áno! Mellétei-óceán? IGEN! Meliata Ocean? - YES!

Meliatsky oceán - Meliatsky profil **Mellétei-óceán - Mellétei-szelvény** **Meliata Ocean - Meliata section**

Na našom území sa rozšírením zemskej kôry rozsiahleho, ale plytkého mora Tethys pred 237 miliónmi rokmi vytvoril tzv. Meliatsky oceán. Existoval 84 mil. rokov. A földkéreg térségünkben a sekélyvízű Tethys-tenger fenekén széthasadt és 237 millió évvel ezelőtt létrejött az ún. Mellétei-óceán. The Meliata Ocean was formed by rifting of shallow marine crust of the Tethys Sea 237 million years ago.

Meliatsky oceán dosiahol šírku takmer 600 km, hĺbku 4 km a siahla až do územia dnešného Grécka. Zankai pri tektonických pohyboch Zeme pred 153 miliónmi rokmi ťlakom afrického kontinentu. Pôvodné hĺbkové oceánu sa nachádzajú v hĺbkach, na povrchu sa zachovali len ojedinelé. Ich najplnejší vrstvy sú dnes reprezentujú Meliatsky profil, ktorý je od roku 1989 prírodnou pamiatkou.

Az új óceán szélessége elérte a csaknem 600 kilométert mélysége a 4 ezer méterét és egészen a mai Görögországig húzódt. Megszűnését 84 mil. év után a földkéreg tektonikai lemezének mozgása, elsősorban az afrikai kontinens nyomása okozta mintegy 153 millió évvel ezelőtt. A Mellétei-óceán közeléi má a mélyben találhatók, a felszínen csupán elvétve maradtak meg. Legteljesebb rétegsorok a Mellétei-szelvényben láthatók, amely 1989-től védett természeti emlék.

The width of the new ocean reaches almost 600 meters, 4 km deep and its length extends to today's Greece. The ocean disappeared 153 million years ago due to the movement of tectonic plates, mainly the pressure of the African continent. The main part of the oceanic rocks occurs in depth, they have been preserved only sporadically on the surface. The most complete sequence is the Meliata section, which has been preserved as a natural monument since 1989.

Existenciou Meliatskeho oceánu dokázali geológovia Rudolf Mock a Heinz Kozur v 70-tych rokoch minulého storočia na základe mikroskamenín - konodontov a mrežoviek (radiolárií).

A Mellétei-óceán létezését Rudolf Mock és Heinz Kozur geológusok bizonyították be a múlt század hetvenes éveiben mikroszkopikus ősmaradványok - konodonták és sugárállatok (radioláriák) segítségével.

The existence of the Meliata Ocean was proven in 70s by geologists Rudolf Mock and Heinz Kozur based on microfossils - conodonts and radiolrites.

Projekt podporili Horáky od Sedity a Nadácia Ekopolis v roku 2024. Projekt z dielne Slovenského cyklistického Slovenský kras, Gemerská Hôrka, rok 2024. Odborný text a foto: Gaál Lúdvig. Autor projektu: Zuzana Tomášová.

An information board devoted to the formation of the Tethyan Meliata Ocean during the Jurassic



Participants of the Jurassica XVI conference at the Betliar manor house



End of the field trip and conference, view at the Honce locality

of the Triassic carbonate platform and condensed siliceous Jurassic deposits of the Silica Unit; a klippe near Meliata village, being a type-locality of the Meliata Unit, which consists of the Triassic–Jurassic olistostrome complexes; a chaotic *mélange* complex of the Meliata Unit exposed near Čoltovo (Molčan Matejová *et al.*, 2025); and, the final viewpoint stop at the Honce locality showing the complicated nappe structure of the aforementioned units of the Western Carpathians in general (Potočný *et al.*, 2025). In connection to the Jurassica conference and the field trip an initiative was organised by T. Potočný and M. Molčan Matejová, to clean the Meliata type section and create a secure path to enable visitors to pass around it. Finances for this activity were raised via generous donations through a crowdfunding campaign. The new path around the Meliata type section is secured with metal chains. Basic and easy to understand explanations will be installed on new boards at several locations along the section soon. Renovation of this important geological site that represents the remnant of the ancient Meliata Ocean will serve not only for geologists, but also for the general public with the aim of igniting interest in geology and the evolution of this area.

The members of the Polish & Slovak Working Group of the Jurassic System, during its meeting, which was held on the second day of the conference, have decided that the following Jurassica XVII conference will take place in the Wieluń Up-land (Poland) in 2028. The present scientific board of the Working Group (*i.e.*, J. Kowal-Kasprzyk, M. Molčan Matejová, B. Błażejowski and T. Potočný) will continue its term until the next Jurassica conference.

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