

**14th Symposium
of the International Fossil Coral and Reef Society
“Going deeper”**

SECOND CIRCULAR (updated May 14th, 2023)

We are pleased to invite you to the

14th Symposium of the International Fossil Coral and Reef Society (IFCRS)

that will be held in

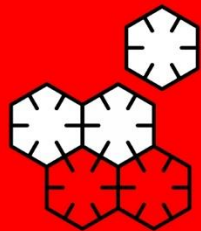
Poland on 10–16 September 2023



The aim of the conference is to **promote the latest results of coral and reef research conducted from a unique paleontological perspective.**

The IFCRS conferences (13 editions to date) are the most important **global forum for scientists studying fossil corals, reefs and reef organisms in the contexts of climate change and the evolution of coral reef biodiversity.**





14th Symposium of the International Fossil Coral and Reef Society Poland 2023

Introduction

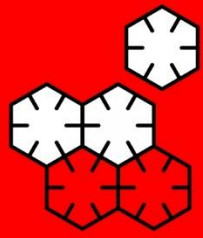
Today's **reef environments** are some of the most vulnerable marine ecosystems to **changing climatic conditions**. Climate change models assuming an increase in atmospheric CO₂ concentrations to 560 ppm by the end of the 21st century predict the **extinction** of most of today's known shallow-water reef environments due to **acidification** and **increased surface water temperatures** that cause a disruption of the symbiotic relationship between coral and algae (known as **coral bleaching**). However, recent research suggests that not all corals have the same potential to survive change, and the key to understanding these differences lies in their **geological and evolutionary past**. These organisms, representing three major phylogenetic lineages, evolved over at least 400 million years in seas with drastically changing pH, geochemical composition, temperature, and oxygenation of seawater resulting in a multitude of adaptations. Information on conditions of ancient seas can be read with extreme precision by measuring biogeochemical and isotopic signals from fossil coral skeletons as well as modern corals grown experimentally under simulations of past geological conditions.

Raman microspectroscopy of coral skeleton

aragonite

calcite

aragonite

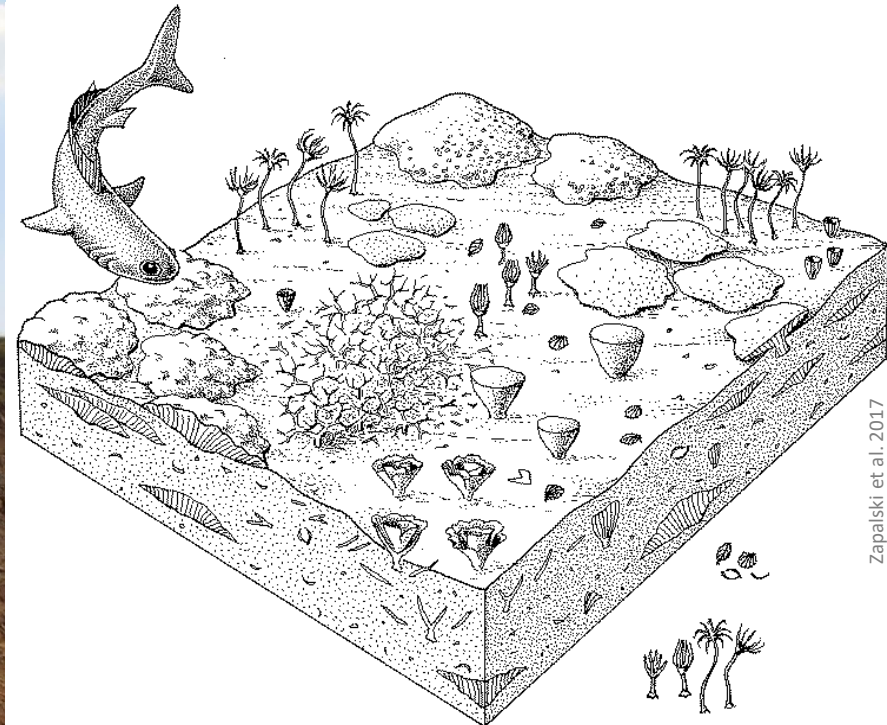


14th Symposium of the International Fossil Coral and Reef Society Poland 2023

The leading theme of the conference will be the study of **corals from mesophotic and deep-water environments** (motto: "**Going deeper**"), as these environments are now potential coral refugia in the event of extinction of shallow-water reefs. The fossil mesophotic reef environments in Poland are well understood and represent the first preserved reefs of modern type in the world.



Laskowa quarry (Devonian, Givetian)



Zapalski et al. 2017

Reconstruction of the mesophotic corals habitat



14th Symposium of the International Fossil Coral and Reef Society Poland 2023

Provisional topics/sessions:

Corals and climate change

- Mesophotic reefs
- Ocean acidification

Structural and biogeochemical studies of fossil skeletons: achievements and applications

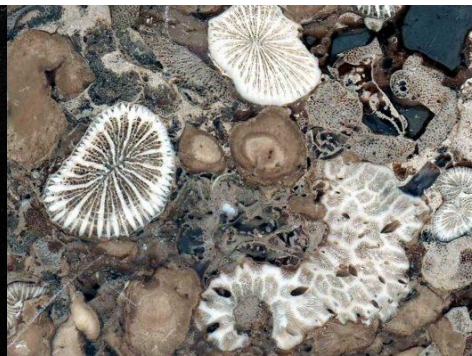
- Skeletons as paleoenvironmental proxies
- Biomineralization and diagenesis

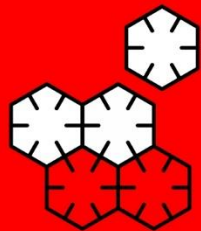
Paleobiology, Taxonomy and Evolution:

- Advances in the taxonomy of fossil Cnidaria and other reef organisms
- Functional morphology and photosymbiosis
- Biodiversity and evolutionary patterns through time: crises, radiations and the role of biogeography
- The fossil calibration of molecular trees

Bio-Geosphere interactions

- Deep, cold-water corals and ecosystems
- Reefs in space and time: a complex interplay between evolutionary and paleoenvironmental dynamics





14th Symposium of the International Fossil Coral and Reef Society Poland 2023

Provisional program:

			Morning	Noon/Early Afternoon	Afternoon (social program)
05.09.2023	Tuesday	Gotland	PRE-CONFERENCE TRIP: The Silurian mesophotic coral ecosystems of Gotland		
06.09.2023	Wednesday				
07.09.2023	Thursday				
08.09.2023	Friday				
09.09.2023	Saturday	Warsaw			Welcome Party: Museum of Evolution
10.09.2023	Sunday		Meeting in Warsaw, MC TRIP: Owadów-Brzezinki + lunch with "rural housewives"		arrival to Chęciny/Jewish Culture Festival
11.09.2023	Monday	Chęciny	Scientific Session	Scientific Session	"A brief history of Holy Cross Mountains" TRIP
12.09.2023	Tuesday		Scientific Session	Scientific Session	dinner
13.09.2023	Wednesday		Scientific Session	Poster Session	Chęciny castle/bonfire
14.09.2023	Thursday		MC TRIP: Mesophotic reefs part 1: MCE	Scientific Session	Pierogi making workshop
15.09.2023	Friday	Cracow	MC TRIP: Mesophotic reefs part 2: Julianka	arrival to Kraków/Wieliczka	Conference Dinner at Wieliczka Salt Mine
16.09.2023	Saturday		Open pop-science Session, sponsors	POST-CONFERENCE TRIP: Mesophotic reefs part 3: Opole Triassic [carbonate platform]	Kraków sightseeing
17.09.2023	Sunday	Czechia	POST-CONFERENCE TRIP: Corals from the lost Štramberg Carbonate Platform (Jurassic/Cretaceous boundary, Czechia)		
18.09.2023	Monday				

MC TRIP - mid-conference trip



14th Symposium of the International Fossil Coral and Reef Society Poland 2023

Organiser:

Institute of Paleobiology, Polish Academy of Sciences (PAS)

Co-organisers:

University of Warsaw, Faculty of Geology

Jagiellonian University, Kraków, Faculty of Geography and Geology

Adam Mickiewicz University, Poznań, Faculty of Geographical and Geological Sciences

Scientific Committee:

Prof. Jarosław Stolarski, Poland (Chair)

Prof. Francesca Bosellini (Italy)

Prof. Anne Gothmann (USA)

Prof. Marcelo Kitahara (Brasil)

Prof. Bernard Lathuiliere (France)

Prof. Tali Mass (Israel)

Dr Paolo Montagna (Italy)

Dr Nadia Santodomingo (UK)

Prof. Gregory Webb (Australia)



Organising Committee:

Prof. Jarosław Stolarski, Institute of Paleobiology, PAS (Chair)

Prof. Błażej Berkowski, Adam Mickiewicz University Poznań

dr hab. Błażej Błażejowski, Institute of Paleobiology, PAS

dr hab. Bogusław Kołodziej, Jagiellonian University in Kraków

dr Katarzyna Janiszewska, Institute of Paleobiology, PAS

dr Dorota Kołbuk, Institute of Paleobiology, PAS

dr hab. Mikołaj Zapalski, University of Warsaw

dr Jan Król, Adam Mickiewicz University Poznań

dr Michał Matysik, Jagiellonian University in Kraków



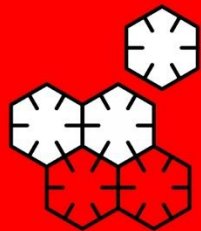
14th Symposium of the International Fossil Coral and Reef Society Poland 2023

Congress venue:

European Centre for Geological Education, Chęciny (ECEG): The ECEG is a multi-functional research and development center within the structures of the University of Warsaw, a meeting place for geologists from around the world. ECEG is located in an old, exploited quarry, about 500 m from the ruins of a medieval royal castle. The ECEG offers a spacious layout, fully equipped auditoriums and didactic rooms, and includes a contemporary hotel with modern amenities.

The ECEG is located in the Holy Cross Mountains (HCM) which are of great geologic interest as their rocks illustrate 560 million years of Earth's history and are exposed over a relatively small area. Briefly, the central part of HCM is composed of Palaeozoic rocks, usually referred to as the Palaeozoic core. The presence of a Mesozoic margin reflects the post-Laramide erosion that removed the Mesozoic strata from the central part.





14th Symposium of the International Fossil Coral and Reef Society Poland 2023

Travel and Accommodation

The gathering of all participants and the icebreaker will take place on September 9th in Warsaw at the Museum of Evolution [\[link\]](#) of the Institute of Paleobiology PAS. On September 10th, transport to the main venue will be provided by the organizers. **Accommodation and meals** during the symposium (**September 10th-15th**) will be organized at the Centre for Geological Education [the cost **included with the registration fee**]. There will be conference tours from there [transport provided]. The workshops will be organized on site. We are also planning a non-science social networking program. The congress will end in Krakow, from where you can fly away or conveniently return to Warsaw.

The conference will be held in ECEG in a region of exceptional natural/geological value and therefore without extensively developed hotel infrastructure. The organizers have booked all accommodation places in ECEG: rooms of similar standards will be available (all equipped with a bathroom); the order in which rooms are allocated to participants will be linked to the order in which the conference fee is paid. Participants will be accommodated individually in double standard rooms, however, participants with accompanying persons will be accommodated together in one room (we will consider specific requests re: accommodation).



Participants are responsible for making their **own accommodation arrangements** in Warsaw (**September 9th/10th**) and Kraków (**September 15th/16th**). As in September Warsaw and Kraków attracts many tourists, we warmly suggest that you book/reserve your accommodation well in advance of the congress dates.



14th Symposium of the International Fossil Coral and Reef Society Poland 2023

Language of the Congress

English will be the official language of the Congress. No translation facilities will be provided.

Presentations

Oral presentations are scheduled for 20 minutes including 5 minutes for discussion. Presentations should be created in MS Power Point (.ppt, .pptx).

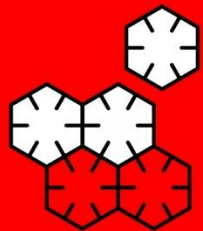
Posters

Participants are also encouraged to display posters. Poster format will be portrait layout DIN A0 format (width 841 mm, height 1189 mm).

Congress proceedings

Conference Proceedings are planned for publication in one issue of the regular series (2024) of the international peer reviewed journal *Acta Palaeontologica Polonica* (IF 2020: 2.062) which is housed at the Institute of Paleobiology, Polish Academy of Sciences [\[link\]](#) .





14th Symposium of the International Fossil Coral and Reef Society Poland 2023

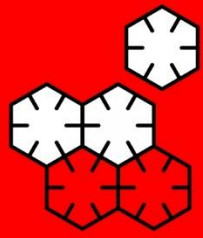
Registration:

Registration fees **will include**: (i) welcome party in Warsaw, (ii) transport from Warsaw and during the conference tours (ending in Krakow), (iii) accommodation charges and meals at main conference venue at the European Centre for Geological Education (ECGE), (iv) admission to scientific sessions, (v) coffee breaks, (vi) congress kit, (vii) abstract book, and (viii) 3 mid-conference trips. Proceedings volume will be published in open access journal *Acta Palaeontologica Polonica*.

	Deadline: May 31st 2023
REGISTRATION FEE:	
Professional	500 €
Student	350 €
Accompanying person	300 €
CONFERENCE DINNER AND GUIDED TOUR to Wieliczka Salt Mine	70 €

Registration fees will **not** include: **accommodation charges in Warsaw (September 9th/10th) and Kraków (September 15th/16th).**

Conference registration, payment, and abstract submission templates are available at fossilcoralreefs.com website.



14th Symposium of the International Fossil Coral and Reef Society Poland 2023

Deadlines:

Registration: **May 31st 2023**

Abstract submission: **May 31st 2023**

Payment of registration fees **and the field trips**: **May 31st 2023**

Third Circular: **June 30th 2023**

Please save the date, spread the information among colleagues, and link the website.

The website fossilcoralreefs.com will be supplemented step-by-step with relevant information on the symposium.

Visa application: Participants who require a support letter for visa application please directly contact: fossilcoralreefs@gmail.com

Insurance: The Organizing Committee cannot accept liability for personal accidents or loss of, or damage to private property of participants, either during or indirectly arising from the symposium. Participants are advised to take out their own personal health and travel insurance for their journey and for their participation at field trips.

Cancellation and refunds: The registration fee for the Symposium will not be refunded except for cancellation and if the notice of cancellation is received before **30 June 2023**. The fee will be refunded in part (50%) and will be sent after the Symposium. After 30 June 2023, no refund will be possible even if the participant does not attend the congress.



14th Symposium of the International Fossil Coral and Reef Society Poland 2023

PRE-CONFERENCE TRIP: **Silurian mesophotic environments of Gotland**

Presentation:

The Silurian and Devonian are periods with the largest reef development in the Phanerozoic. One of the classical areas with well preserved and accessible Silurian reef ecosystems is the Swedish island of Gotland, and corals from Gotland are known since Linnaeus. These ecosystems encompass a wide array of environments, from the shallowest to the deep mesophotic, the latter discovered very recently. We propose a trip showing these diverse coral and stromatoporoid communities.

The aim of the trip is to show the oldest **Mesophotic Coral Ecosystems** (MCEs) known so far. The trip will focus on "blue mesophotic" (deep water) Wenlock coral communities, but we will also visit younger, potentially "brown mesophotic" ecosystems. Besides MCEs the participants will have the possibility to visit some classical outcrops of shallow water coral-stromatoporoid ecosystems.

Leaders: Mikołaj K. Zapalski (University of Warsaw), Błażej Berkowski, Jan J. Król (Adam Mickiewicz University, Poznań).





14th Symposium of the International Fossil Coral and Reef Society Poland 2023

PRE-CONFERENCE TRIP: **Silurian mesophotic environments of Gotland**

Programme (5 days fieldtrip):

September 5th – Meeting in Stockholm/Nynashamn, ferry to Gotland. Arrival late in the evening

September 6th – Mesophotic ecosystems in Visby Beds in Ygne/Hogklint, Hogklint reefs, lookout in Hogklint, afternoon: Holmhallar stromatoporoid-coral reefs.

September 7th – Mesophotic ecosystems in Visby Beds and Hogklint Fm. in Ireviken, afternoon : Raukars of the Hangvar Fm. on Faro Island.

September 8th – Lau Kaldu ("brown" mesophotic ecosystems), afternoon: stromatoporoid reefs in Kuppen

September 9th – ferry to Nynashamn, flight back to Warsaw.

Excursion fee: 1200€

Excursion fee includes:

- Transfer from Stockholm to Nynashamn, ferry to/from Gotland, car transportation in Gotland
- Accommodation in twin rooms with en suite bathrooms at First Hotel Kokoloko Visby (15 min walk from the picturesque, medieval Visby old town (UNESCO World Heritage Site).
- Breakfasts, take away lunches and dinners.

What is not included:

- Transport to Stockholm, transport from Stockholm to Warsaw.
- Participants should book a flight (recommended) from Stockholm to Warsaw on their own.
- Swedish visa if needed. Polish Schengen Visa allows visiting Sweden.
- Insurance. Every participant should have medical insurance valid in Sweden. In case of health problems medical care can be very expensive in Sweden, therefore healthcare insurance is essential on the trip.

N° of participants: min 10/max 15

Contact: jan.jozef.krol@amu.edu.pl



14th Symposium

of the International Fossil Coral and Reef Society

Poland 2023

MID-CONFERENCE TRIP: Exceptionally preserved Late Jurassic ecosystem of Owadów-Brzezinki, Central Poland

A stop on the way to the Congress venue [September 10th]: The trip is for all conference participants. The cost of trip is included with the registration fee.

Presentation: The Owadów-Brzezinki palaeontological site located near Sławno in the NW margin of the Holy Cross Mts is one of the most important recent palaeontological discoveries in Poland. The palaeontological sites of Owadów-Brzezinki is referred to as a new “taphonomic window” of the Late Jurassic, providing insights about the evolution of life on Earth in the palaeogeographical and palaeoenvironmental context. Unusually well preserved fossils of marine and terrestrial organisms of Late Jurassic (Tithonian) age, many of them new to science, provide a good opportunity for studying the taphonomy of the ecosystem, evolution and migration of taxa, and palaeoenvironmental changes.

The aim of this trip is to show the Owadów-Brzezinki palaeontological site, exhibition pavilion, educational routes and panoramic viewing platform, which is located along the edge of the quarry.

Leaders: Błażej Błażejowski (Institute of Paleobiology, Polish Academy of Sciences) and Andrzej Wierzbowski (University of Warsaw)





14th Symposium of the International Fossil Coral and Reef Society Poland 2023

MID-CONFERENCE TRIP: Devonian mesophotic environments of the Holy Cross Mountains

The trip is for all conference participants.

The cost of mid-conference trip is included with the registration fee.

Presentation: The aim of the trip is to show **Devonian Mesophotic Coral Ecosystems** (MCEs) described as the first Palaeozoic MCEs. They are dominated by platy and frondescent tabulates, with very high biodiversity comprising rugose corals, brachiopods, crinoids and others.

While nowadays these beds are poorly accessible, we will try to visit both (Eifelian and Givetian) sites.

Programme (1 day fieltrip, September 14th) :

- Skały MCE (Eifelian Skały Fm)
- Kostomłoty/Laskowa MCE (Givetian Laskowa Góra Beds)
- Visean reefal olistostrome at Ostrówka.

Leaders: Mikołaj K. Zapalski (University of Warsaw), Błażej Berkowski, Jan J. Król (Adam Mickiewicz University, Poznań).



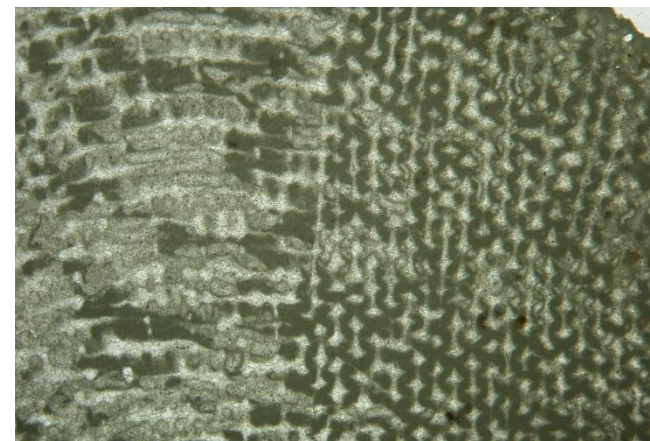


14th Symposium of the International Fossil Coral and Reef Society Poland 2023

MID-CONFERENCE TRIP: Coral colonization of the cyanobacteria-sponge bioherms, Late Jurassic, Julianka quarry, Poland

The cost of mid-conference trip is included with the registration fee. The trip is for all conference participants during the transfer from ECEG to the salt mine in Wieliczka/Kraków (September 15th).

Presentation: The abandoned quarry at Julianka is located in the Fore-Sudetic monocline, in the Kraków-Częstochowa Upland. It shows the youngest Late Jurassic (Early Kimmeridgian) deposits of the area preserved below the overlaying transgressive Late Cretaceous (Early Cenomanian) glauconitic sands. The late Jurassic deposits are limestones: in their lower part represented by diversified lithologies of the cyanobacteria-siliceous sponge bioherm complex, in the upper part – by the coral limestones interpreted as formed in mesophotic zone – rich in platy microsolenid corals.



Leaders: Andrzej Wierzbowski (University of Warsaw) and Jarosław Stolarski (Institute of Paleobiology, Polish Academy of Sciences).



14th Symposium of the International Fossil Coral and Reef Society Poland 2023

POST-CONFERENCE TRIP: The oldest sponge-scleractinian reef mounds in the World, Middle Triassic (Anisian) of Upper Silesia, Poland

Presentation: The Permian/Triassic mass extinction was the most severe biota crisis in the Earth's history, which wiped out around 80% of marine species and completely devastated reef systems. The subsequent Triassic recovery was generally a stepwise, long-term and globally asynchronous process, with different organism groups recovering at different times. Metazoan reefs and corals re-appeared in the geological record only 8 My after the extinction (middle Anisian). Such oldest buildups occur in Upper Silesia of southern Poland. The proposed fieldtrip aims to present these bioherms in terms of their composition, morphology, adjacent facies, platform evolution, and later diagenesis. The bioherms are predominantly formed by siliceous sponges, but some of them contain scleractinian corals which are interpreted as having inhabited a shallow-water mesophotic environment and their platy morphology suggests that at least some first scleractinians had photosymbionts like modern zooxanthellae.

Programme (1 day fieldtrip, September 16th):

Morning – Tarnów Opolski (mound with corals)

Afternoon – Kamień Śląski (spatial distribution of mounds).

Leaders: Michał Matysik, Bogusław Kołodziej, Iga Ryczkowska (Jagiellonian University, Kraków).

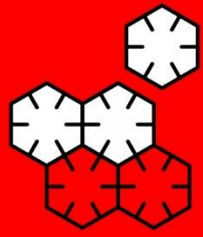
Excursion fee: 75€

Excursion fee includes: guidebook, travel from Kraków to localities in Upper Silesia and return, lunch, dinner.

N° of participants: min 15/max 40

Contact: michal.matysik@uj.edu.pl





14th Symposium of the International Fossil Coral and Reef Society Poland 2023

POST-CONFERENCE TRIP: Corals from a lost Štramberk Carbonate Platform, Jurassic/Cretaceous transition, Czech Republic

Presentation: Štramberk is one of the most renowned paleontological sites. Tithonian–lower Berriasian Štramberk Limestone exposed in a huge Kotouč quarry in Štramberk (Carpathians, Czech Republic) occur as olistoliths and large blocks embedded in the Cretaceous flysch. Corals were already described in the 19th century by Marie Ogilvie. Starting in the 1970s they were studied by Helena Eliášová. Approximately 120 species of 50 genera are known from these limestones, which makes it the richest coral assemblage from coral reefs grown around the time of the Jurassic/Cretaceous boundary. In ca. 10 cm-size samples of reef breccia, corals of even 3–5 genera can occur.

Particularly rich at this locality are corals of the suborder Pachythecaliina (=Amphiastreina) whose higher taxonomic position is one of the most debated among the the post-Paleozoic corals. Similar coral assemblages occur in the Štramberk-type limestones as pebbles-blocks (exotics) in flysch deposits of the Polish Carpathians. Coral-microbial patch-reefs were formed mostly in an inner carbonate platform. The Štramberk Limestone also contains boundstones with the microencruster-microbial-cement framework with rare corals. This type of reef was developed only on the slopes of intra-Tethyan carbonate platforms.



Leaders:

Bogusław Kołodziej (Jagiellonian Univ., Kraków), Zuzana Geistová (Charles Univ., Prague), Justyna Kowal-Kasprzyk (AGH, Kraków), Petr Skupien (Technical Univ., Ostrava)



14th Symposium of the International Fossil Coral and Reef Society Poland 2023

POST-CONFERENCE TRIP: Corals from a lost Štramberk Carbonate Platform (Jurassic/Cretaceous boundary, Czech Republic)

Programme (2 days fieldtrip):

- September 17th (Sunday): meeting point in Kraków. On the way to Štramberk we will stop in Polish Carpathians to see flysch with pebbles of Štramberk-type limestones and Lower Cretaceous corals.
- September 18th (Monday): Visit in the Kotouč quarry in Štramberk, transfer to Kraków.

Excursion fee: 215 €

Excursion fee includes:

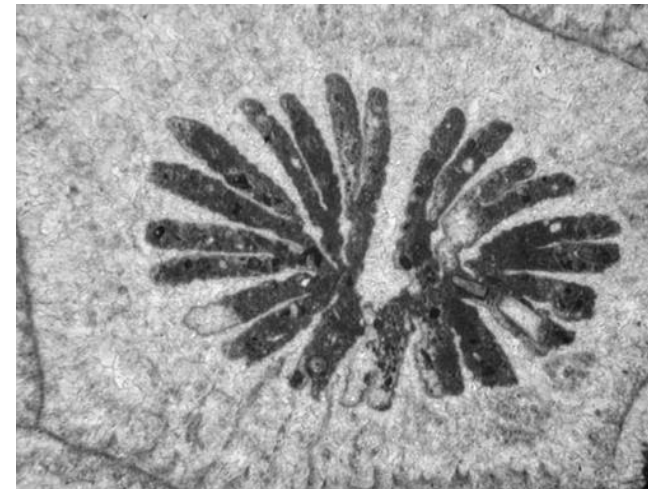
- Transfer to/from Štramberk
- Accommodation in rooms with en suite bathrooms (September 17th/18th)
- Take away lunch, dinner (September 17th)
- Breakfast, take away lunch and dinner (September 18th)

What is not included:

- Insurance. Every participant should have medical insurance valid in Czech Republic.

N° of participants: min 15/max 45

Contact: boguslaw.kolodziej@uj.edu.pl, kowalj@agh.edu.pl





14th Symposium of the International Fossil Coral and Reef Society Poland 2023

CONFERENCE DINNER and fieldtrip: **Return to the sea (Miocene). Wieliczka salt mine**

Presentation: The Wieliczka Salt Mine is a historic underground salt mine located in the town of Wieliczka, about 10 kilometers southeast of the city of Krakow. It was in operation for over 700 years, from the 13th century until 2007, making it one of the world's oldest salt mines still in use. The mine has a labyrinth of tunnels, chambers, and underground lakes, many of which are decorated with intricate sculptures, carvings, and chandeliers made entirely out of salt. There are also several underground chapels, including the stunning Chapel of St. Kinga, which is considered one of the most beautiful underground churches in the world. An interesting tidbit for the conference participants will be the occurrence of scleractinian corals in the salt deposits of the Wieliczka mine! It has been designated as a UNESCO World Heritage Site, and attracts over 1 million visitors each year.

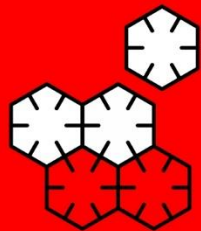
The tour which is accessible also to families with children will cover the most important parts of the mine. It will take about 2.5 hours and will cover a distance of 3.5 kilometers (including ca. 800 stairs). The temperature underground falls within the range of 17–18°C. Comfortable shoes and clothing according to the conditions on the route are advised. There will be possibility to change the clothing before the dinner.



Fee: 70€

**Included: Dinner + ticket to entrance
and guided tour to Wieliczka Salt Mine**





**14th Symposium
of the International Fossil Coral and Reef Society
Poland 2023**

Summary:

	Deadline May 31st 2023
REGISTRATION FEE:	
Professional	500 €
Student	350 €
Accompanying person	300 €
CONFERENCE DINNER AND GUIDED TOUR to Wieliczka Salt Mine	70 €
PRE-CONFERENCE TRIP: Silurian mesophotic environments of Gotland	1200 €
POST-CONFERENCE TRIP: The oldest sponge-scleractinian reef mounds in the World, Middle Triassic (Anisian) of Upper Silesia, Poland.	75 €
POST-CONFERENCE TRIP: Corals from a lost Štramberk Carbonate Platform (Jurassic/Cretaceous boundary, Czech Republic)	215 €

The website <https://fossilcoralreefs.com/> will be supplemented step-by-step with relevant information on the congress, including all banking details.