

## ***FossilRRS – Impressions***

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From the point of view of a participant in the international scientific conference '*Fossil Record in Resins and Sediments, 25<sup>th</sup> Anniversary of the Museum of Amber Inclusions University of Gdańsk*' (FossilRRS), held from 23 to 26 May 2023, on the occasion of the 25<sup>th</sup> anniversary of the Museum of Amber Inclusions University of Gdańsk, it was extremely important to listen to very interesting lectures. The plenary lectures on the Cambrian Explosion, fossil resins of the World, and the richness of the amber trap generated significant interest. Furthermore, the individual lectures – on organisms preserved as inclusions in fossil resins of various ages (*e.g.*, Miocene Ethiopian and recently available Eocene Lublin amber), fossil resins from all over the world and of different ages (Cretaceous to Miocene, from Myanmar, Rovno, New Zealand, etc.) were well-received. The presentations also covered topics such as the taphonomy of amber and resin-entombed remains, the diversity of fossil ecosystems, evolution, probable causes of great extinctions, collections of amber specimens, and fossils preserved in sediments of the Danish Paleocene Fur Formation. Participation in those lectures and presentations led to engaging panel discussions.

The poster session had several benefits. It provided an opportunity for authors to showcase their work and engage in discussions with conference attendees who share an interest in the topic. The session featured visualisations of rare organic inclusions preserved in fossil resins of various ages, presented in high-quality photographs captured using specially designed research equipment. Furthermore, the session enabled a discussion of previously unknown aspects of the science of their origin, as well as new discoveries presented in the field.

It is undeniable that the ability for a scientist to share research results, often obtained over many years, is crucial, desirable and necessary for various reasons.

Fossils, whether preserved in sediment or resin, provide valuable insights into ancient fauna and their environments. Fossils are crucial evidence for the existence of ancient living organisms. They are crucial evidence for the existence of ancient living organisms, offering insight into the evolutionary direction of many groups of animals and plants, the ecosystems of past epochs in Earth's history, the ecological niches occupied by many groups of organisms, and the trophic relationships.

Therefore, it is important to emphasise the scientific value of organic fossils, which was also achieved during the FossilRRS conference programme.

As part of the FossilRRS international conference, a palaeobiology workshop was held. The workshop focused on the technical processing of amber and the selection of specimens preserved in it. Preparing amber for scientific research is a challenging process that demands patience and a deep understanding of the taxonomic diversity of specimens that were entombed in resin millions of years ago. To work with amber effectively, it is essential to learn its techniques, methods, origin, and physico-chemical properties using modern research techniques.

At the conference, attendees had the opportunity to visit the 'Life in the Amber Forest' palaeobiological exhibition at the Museum of Inclusions of the University of Gdańsk. The exhibition is professionally curated and provides insights into the study of the formation of amber inclusions in the Eocene forest, as well as extinct species, mainly insects. The exhibition showcases a limited assortment of items from the MAIG collection, which includes 7,700 amber nuggets of varying sizes, containing 14,000 animal inclusions. Additionally, it displays natural and colourful varieties of Baltic amber, as well as various types of fossil resins from around the world. The collection has a scientific focus and is the second largest of its kind in Poland, bringing together unique and valuable specimens for research. The University of Gdańsk's Museum of Amber Inclusions houses fossils and fossil resins for study purposes. It was established in 1998 as a result of cooperation between members of the International Amber Association and scientists from the University of Gdańsk. After 25 years of activity, the collection containing 168 type specimens ranks first in Poland. Other amber collections in Poland include those of the Museum of the Earth, Polish Academy of Sciences in Warsaw, the Natural History Museum, the Institute of Systematics and Evolution of Animals, PAS in Kraków, and the University of Silesia in Katowice.

Gdańsk is recognised as the World Amber Capital, hosting the International Amber and Jewellery Fair 'AMBERIF Spring' every spring and the International Amber Fair 'AMBERIF Autumn' every autumn. The city is an attractive destination, and the organised visit to the Amber Museum allowed conference participants to view interesting specimens preserved in the form of inclusions in Baltic amber, as well as some of the largest lumps of this fossil resin extracted in Poland. As part of the conference programme, participants were offered the chance to visit the beaches of the Vistula Spit, renowned for the collection of Eocene Baltic amber since ancient times. Additionally, participants had the opportunity to collect small pieces of amber themselves.

The conference brought together over 100 participants from various parts of the world, representing 15 countries. Attendees included experienced scientists, as well as many young researchers starting their scientific careers and enthusiasts who do not work in the scientific field on a daily basis.

The conference guests included Christel and Hans Werner Hoffeins, who are internationally renowned amber collectors and researchers from Hamburg. They have amassed a vast collection of well-preserved organic inclusions in amber. Additionally, Doug Lundberg, a collector from the USA and a friend of the Gdańsk collection, brought an inclusion of an extinct fossil barnacle preserved in Mexican amber. We observed the first and only fossil of a Balanomorpha crustacean preserved in fossil resin.

The conference organisers demonstrated a remarkable level of commitment and preparation, which was evident at every stage of the event.

FossilRRS successfully brought together different aspects of palaeontological research and focused on the fossil resin record, providing an opportunity to share and disseminate knowledge about amber.

*“FossilRRS is a chance to link different aspects of palaeontological studies and focus them on a fossil resins record – spread amber knowledge, and share amber know-how.”*

