

## “The Beauty in Detail, Transformation and Structure – Adriatic Coccolithophores”

The exhibition “The Beauty in Detail, Transformation and Structure – Adriatic Coccolithophores”, organized by the Academy of Fine Arts, University of Zagreb and the Croatian Botanical Society is a synergy between science and art that brings together scientists and artists, professors and students, modern technology and various artistic techniques.

The potential of the exhibition was first recognized by the Croatian Academy of Science and Art whose financial support enabled the initial project at the Academy of Fine Arts, University of Zagreb. The exhibition was opened on the 13<sup>th</sup> of April 2018 during a unique Science-Meets-the-Arts Symposium organized by the Academy of Fine Arts and the Department of Biology, Faculty of Science, University of Zagreb (Pl. 1.). The participants were welcomed with opening remarks by Vice Dean Tomislav Buntak (Academy of Fine Arts, University of Zagreb), Dean Aleksandra Čižmešija (Faculty of Science, University of Zagreb) and Ivan Gušić (F.C.A., Croatian Academy of Science and Arts). The opening ceremony was moderated by Irena Brezović (Academy of Fine Arts, University of Zagreb) and was followed by four invited talks by the authors of the exhibition: Tomislav Buntak (Academy of Fine Arts, University of Zagreb), Luka Šupraha (Department of Biosciences, University of Oslo), Jorijntje Henderiks (Department of Earth Sciences, Uppsala University) and Zrinka Ljubešić (Faculty of Science, University of Zagreb). Total of 30 coccolithophore microphotographs and more than 50 art works in various techniques were exhibited.

After an exceptionally successful exhibition in Zagreb, the art students and their professors have continued to explore the coccolithophore shapes in various artistic techniques. In November 2018 the exhibition was moved to the Natural History Museum in Dubrovnik and the Aquarium of the Institute of Marine and Coastal Research (University of Dubrovnik). The opening was held on November 9<sup>th</sup> during the international “Ocean Optics XXIV” conference. On this day alone, more than 350 conference participants and their guests visited the exhibition (Pl. 2.).

The scanning electron micrographs of the coccolithophores (calcifying marine microalgae) that are exhibited

were taken from the scientific samples collected during the winter and summer of 2013 in the Šibenik aquatorium and the River Krka Estuary, eastern Adriatic Sea. This research study was a collaboration between Uppsala University, University of Oslo, Faculty of Science (University of Zagreb) and the Rudjer Bošković Institute. Coccolithophore cells were collected by a filtration method and recorded using a scanning electron microscope at the magnification of up to 10,000 times. These microphotographs, along with satellite images of phytoplankton blooms, inspired students in the art techniques of painting, sculpturing, graphic and glass art at the Academy of Fine Arts (University of Zagreb). With this synergy of art and science, scientists are given the possibility to reveal the beauty in details invisible to the human eye, while the artists get the opportunity to see the dimension of life manifested in the perfection of natural forms and structures. It was observation of the natural environment that gave rise to the first impulse for the development of arts and creativity. The coccolithophores presented in this exhibition have once again shown some of the magnificent natural structures that fundamentally influenced the development of artistic expression.

The exhibition will be displayed in Dubrovnik until August 2019, when it will return to Zagreb. In the late August 2019, Zagreb will be hosting the 7<sup>th</sup> European Phycological Congress (<http://epcseven.biol.pmf.hr/>) and the exhibition opening is going to be one of the main social events of the congress. The exhibition will be set in three different locations in Zagreb, all within the walking distance from each other. The coccolithophore-inspired exhibition will be merged with another project, a collaboration between the Academy of Fine Arts and the “Krka” National Park that focuses on diatoms, microalgae covered with silica cell walls.

It is important to emphasize that the exhibition is a work in progress that is constantly including more microscopic life forms and artistic techniques as well as involving more professors and students, both from the science and from the arts. After the exhibition in Zagreb in the summer of 2019, the exhibition will be on its way to new locations that are currently being planned.

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**Pl. 1.** Opening of the exhibition “The Beauty in Detail, Transformation and Structure – Adriatic Coccolithophores” during Science meets-the-Arts symposium at the Academy of Fine Arts, University of Zagreb (Photo: Renata Horvat).



Pl. 2. Opening of the exhibition “The Beauty in Detail, Transformation and Structure – Adriatic Coccolithophores” in Natural History Museum in Dubrovnik and the Aquarium of the Institute of Marine and Coastal Research (University of Dubrovnik), October, 2018. (Photos: Nenad Jasprica, Danko Friščić, Anamarija Lesica).