The Croatian National Diatom Collection

The Croatian National Diatom Collection was established on 1st March 2018 at the University of Zagreb, Faculty of Science (Department of Biology, Division of Botany) and registered in the Index Herbariorum of the New York Botanical Garden (http://sweetgum.nybg.org/science/ih/herbarium-details/?irn=252706). It was officially presented to the scientific and general public on 9th December 2019 in the Croatian Academy of Sciences and Arts. It is the first institutional collection of permanent microscopic specimens of diatoms in Croatia, currently containing 1000 microscopic specimens and 200 wet samples and 16 type specimens (Fig. 1). Most importantly, the collection contains 16 type specimens of newly discovered species in Croatia, which are no longer sent to other European collections, but kept in Croatia as a treasure of national biodiversity.

Diatoms are an exceptionally diverse group of mostly photosynthetic microorganisms and have a significant role in primary production and the fixation of atmospheric carbon. They are present in both plankton and benthos, often as dominant organisms in both marine and freshwater ecosystems. As an integral part of the planktonic and benthic water communities, they serve as a biological indicator and an essential factor in assessing the ecological status of water. Biodiversity is the total variety of living organisms in a certain ecosystem, and Croatia is considered to be one of the most biodiverse countries in Europe. This variety stems from the specific geographic location of Croatia, which entails exceptional ecological, climactic and geomorphological conditions. All scientific knowledge about its organisms – from the biggest and publicly most accessible plants and animals to the smallest microorganisms – is extremely important for Croatia. The diversity of diatoms in Croatia has occupied the interest of many world-famous scientists in history (Adolf Steuer, Friedrich Hudstedt, Anto Jurilj), which has resulted in world-famous publications (Viličić and Ljubešić 2017, and references therein). Croatian algologist, Professor Anto Jurilj (1910-1981), although he actively researched diatoms in Croatia, is remembered in science for a description of 44 new diatom taxa from Lake Ohrid in N. Macedonia.

Equal interest in the study of diatoms in Croatia has been shown by scientists today, who have recently described a significant number of new species (Gligora et al. 2009, Mejdandžić et al. 2017, 2018, Gligora Udovič et al. 2018, Caput Mihalić et al. 2019, Majewska et al. 2019, 2020, Al-Handal et al. 2020, Mucko et al. 2020, Van de Vijver et al. 2020). A systematic inventory of the diatoms of the Krka River from source to mouth has been conducted, resulting in an impressive diatom collection. Newly described diatom species in Croatia, the diatom collection of the Krka River together with the historical diatom collection of the Professor Anto Jurilj, provided the impetus for the Croatian National Diatom Collection in 2018.

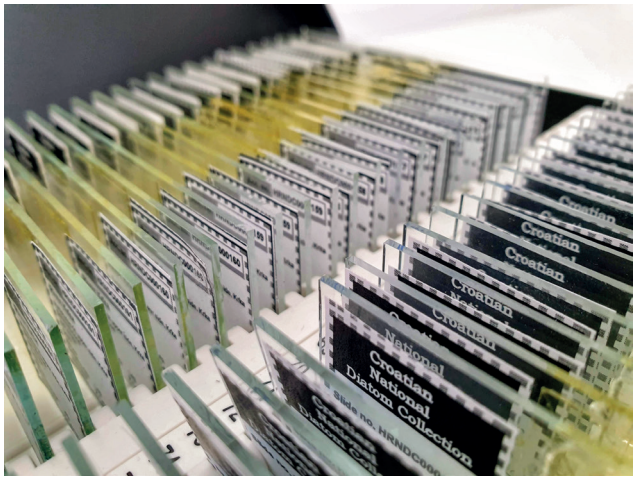

Fig. 1. Permanent slides hosted in the Croatian National Diatom Collection.

Fig. 2. Croatian National Diatom Collection logo by Nikola Koletić.

Today, the Croatian National Diatom Collection is, in both professional and scientific terms, a testimony to the high diatom diversity in Croatia and is an invaluable database as well as a testament of our time for the future generations. Collections like these offer an invaluable abundance of information on biological research and offer insights into the diversity of diatom taxonomy, biodiversity of a certain area, variety distribution and changes in time and space, which all together enable effective protection of the water ecosystems in Croatia.

Supported by the Faculty of Science, it is now open to both experts and the public. It is recognizable by its official Herbarium Code – HRNDC and the official logo, which shows a combination of centric diatoms in the middle, three black semicircles representing C for *Croatian*, C for *Collection* and D for *Diatom*, and stylized Croatian interlacing which represents the word *National* (Fig. 2). The Croatian National Diatom Collection acquires materials for the permanent collection and all the information can be accessed on the website www. diatoms.biol.pmf.hr.

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