Project Update: June 2021

The second season of the project is underway, starting in April 2021. Field research on Lake Markovačko is going according to plan, although without the expected and agreed help from the Fisheries Guard Service. The entire fieldwork is being realised with great effort and enthusiasm of the research team of the Institute for Multidisciplinary Research (Department of Inland Water Biology and Protection) of the University of Belgrade. Every month, black bullhead selective removal is performed, while the measurement and dissection of removed specimens, due to the current epidemiological situation, is performed on the shores of the lake. A significantly smaller number of black bullhead specimens is noticeable. In 3 months (April, May, and June), a total of 890 individuals were caught. The reasons can be the following: either the number of this species has decreased as a result of continuous removal during the previous season, or the activity of individuals has decreased due to colder weather. We will see during the summer period whether the number of caught individuals will increase, and only then will we know the answer to this question.

Colleagues from the Faculty of Biology, University of Belgrade (Department of Algology, Mycology, and Lichenology) continue to collect samples for qualitative and quantitative analysis of phytoplankton, while a colleague from the Institute for Multidisciplinary Research collects data on physicochemical parameters of water with the help of a multiparameter probe. Student Natalija Pajović from the Faculty of Biology also joined the research team. She will work on her master's thesis on the topic of spring dynamics of phytoplankton in Lake Markovačko.

Given that Lake Markovačko suffers from high anthropogenic pressure (numerous recreational fishermen, farms near the shore, and a large apple plantation that is regularly treated with pesticides and insecticides), we decided to expand fish population research to assess surface water quality based on microbiological parameters and eco-genotoxicological and histopathological tissue analysis of native and non-native fish species. The genotoxic potential is assessed by using an alkaline comet and a micronucleus test to quantify DNA damage in blood cells. Additionally, concentrations of metals and metalloids in the liver, gills, and muscle is monitored, using the ICP-OES method. Colleagues from the Institute are doing these analyses.

During June 2021, experimental rearing of black bullhead in the Centre for Fisheries and Applied Hydrobiology (CEFAH) of the University of Belgrade – Faculty of Agriculture continued. The experiment aims to consider the efficiency of using different systems (cage, pond, and RAS) on the production results with the use of two types of food (carp - 25/7 and trout 44/22) to reach the consumable size. Current activities are reduced to the adaptation of fish to new environmental conditions with a slight adaptation to the food that will be used during the experiment. Fish will be fed daily (with the amount of food of 2.5%) in all three systems with visual monitoring and records of possible fish deaths. The fish will be measured monthly in the experiment and the physical and chemical parameters of the water will be measured, along with the laboratory analysis of water chemistry for parameters that are not measured on the spot.


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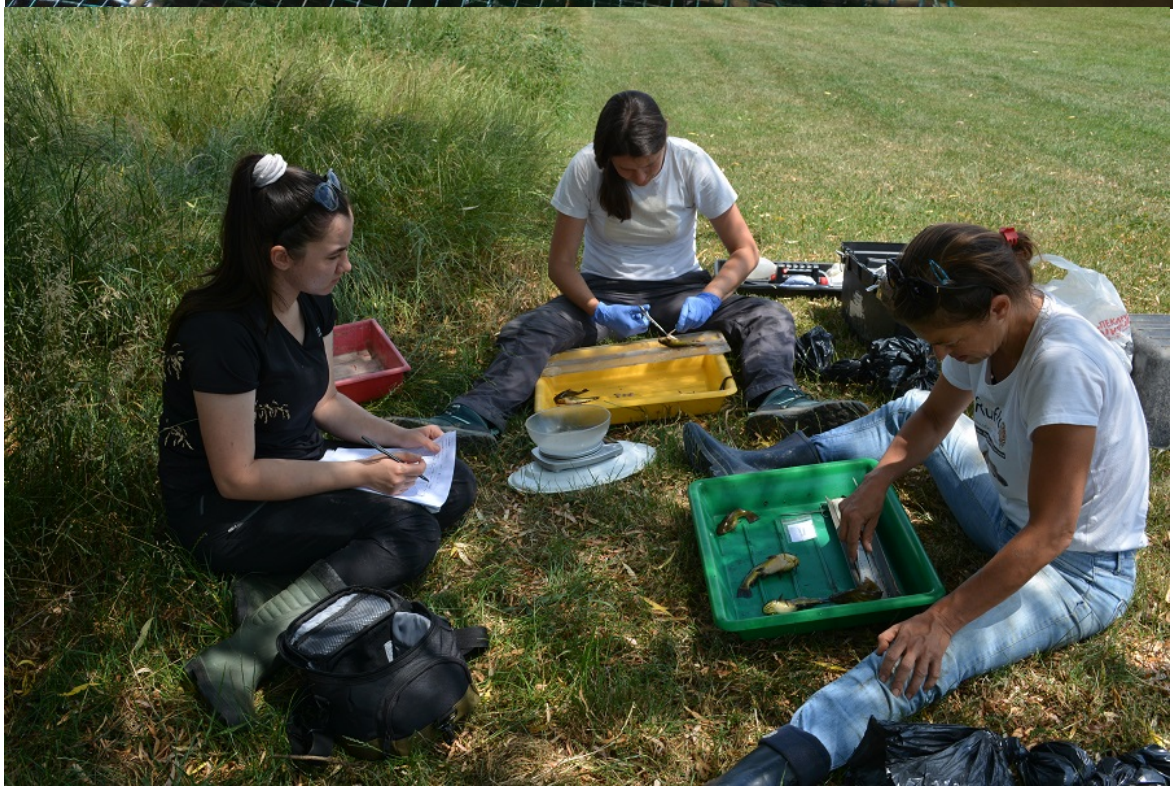


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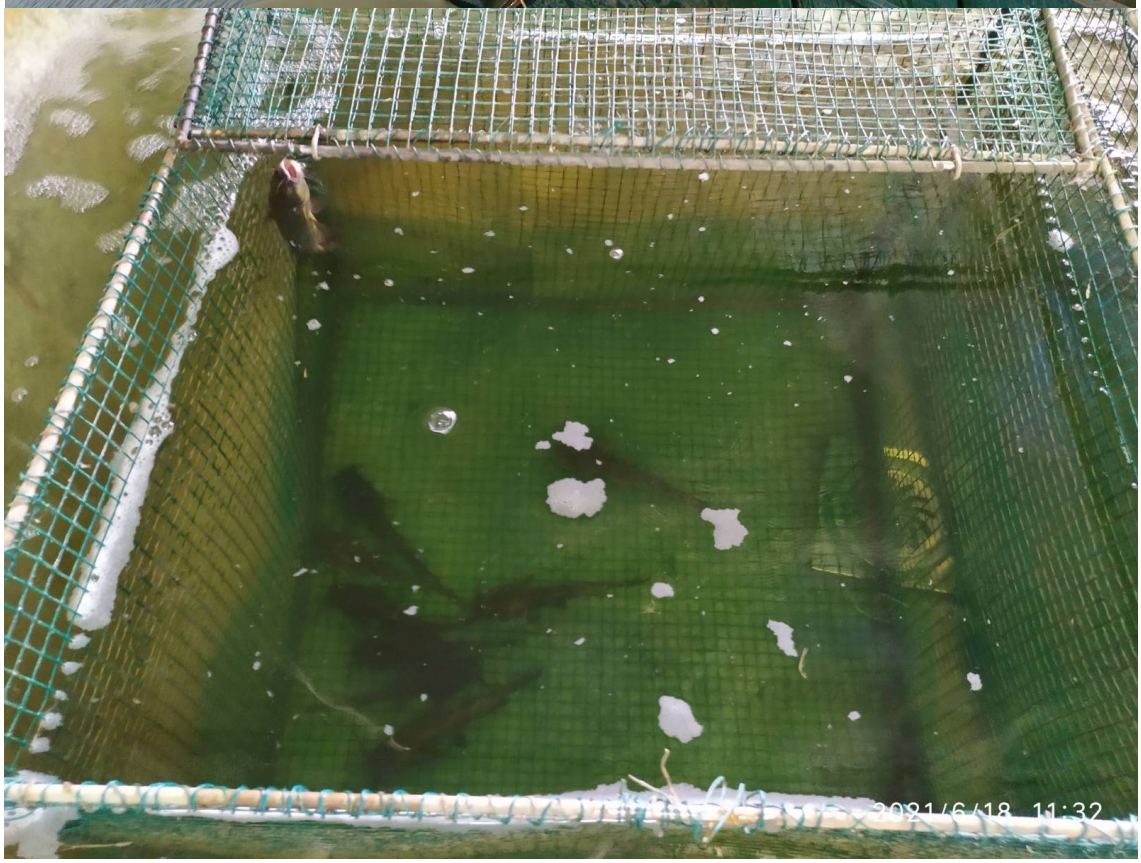
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