

Project Update: October 2018

At the beginning of May I held two lectures at the Faculty of Biology of the University of Belgrade, within the Science Fair. On that occasion, I presented the project to all students, as well as to those who would directly join the project. After a while, three students applied to participate in the project. The result of their involvement in field and laboratory work is one master work (Anđela Đorđević) and two scientific-research works (Đorđe Gajić and Vojislav Sokolović).



In June 2018, we started with the field research. As foreseen by the project, during June and July, we determined the zero state of the fish found in the Ponjavica Nature Park using a multimesh nets and electrofishing. From August to October 2018, we carried out a recovery removal of the black bullhead specimens. Indigenous fish species were only measured and returned unharmed into water. Allochthonous species (which were not black bullhead: mostly Prussian carp (*Carassius gibelio*) and stone moroko (*Pseudorasbora parva*)) were weighed and placed in specially marked bags. The black bullhead specimens were taken to the laboratory for further analysis. Laboratory work was carried out according to plan. We obtained data on specimen length and weight, on food, age, gonadosomatic (GSI) and hepatostomatic (HSI) indices, condition factor (K), specimen size at sexual maturity and fecundity.

We have also expanded this ichthyological research by including colleagues from the Institute of Botany and Botanical Garden "Jevremovac" (Faculty of Biology, University of Belgrade) Dr. Ivana Trbojević and Dr. Dragana Predojević, who sampled water to obtain qualitative and quantitative data on phytoplankton.

At the same time, using the multiparameter sond we got the following data: water temperature, pH value, conductivity, TDS, DO (luminescence time based optical sensor), DO saturation, Chlorophyll a.

In June 2018, about 300 black bullhead specimens was transferred from Ponjavica to Radmilovac. Colleagues from the Faculty of Agriculture performed an experiment in three systems: fish mesocosm systems, cage and tank systems, with different food combinations in order to achieve the most optimal increase. Apart from rearing, laboratory analyses of this specimens were conducted, basically the same one that we did in our lab, and only expanded with the analysis of the fatty acid composition of muscle tissue.



Last but not least, our activities (field work in Ponjavica Nature Park, laboratory work at the Institute, experimental rearing in Radmilovac) were followed and filmed by a team of Radio Television of Serbia. The plan is to broadcast a story about our project soon. As soon as they finished and upload it on the YouTube, I'll send you a link. During the next year, they will monitor and record our activities in order to make a documentary at the end of the project, which will be shown on television and festivals.

During the winter I have to sort out the numerous data that we have collected over all these months and to prepare the otoliths for reading (in order to get results about the age of the black bullhead specimens). Also, I expect that during the next few weeks I will get results from Radmilovac i.e. what were the results obtained during the four months of rearing. The plan is to continue breeding throughout the next season. During the last field work in Ponjavica, we took several hundreds of individuals (from 50g and above) to be overwinter under strictly controlled conditions at Radmilovac. Their intensive farming is planned from March 2019.

Except this official report, I need to share with you my personal impressions. I am very happy and satisfied that I have the opportunity to bring together colleagues from my institute, Biological and Agricultural faculty. Also, I think it's a great thing to have three students of the Biological Faculty working in Ponjavica and two students from the Faculty of Agriculture working in Radmilovac. We all worked very nicely and we had great logistical support from the Nature Protection Guards of the Public Utility Company Zelenilo Pančevo.



Marija takes data from multiparameter sond in September & October 2018.



Andjela learns how to sample phytoplankton.



Left: Dragan fixes a phytoplankton sample in August. Right: Dragana takes sample of zooplankton.



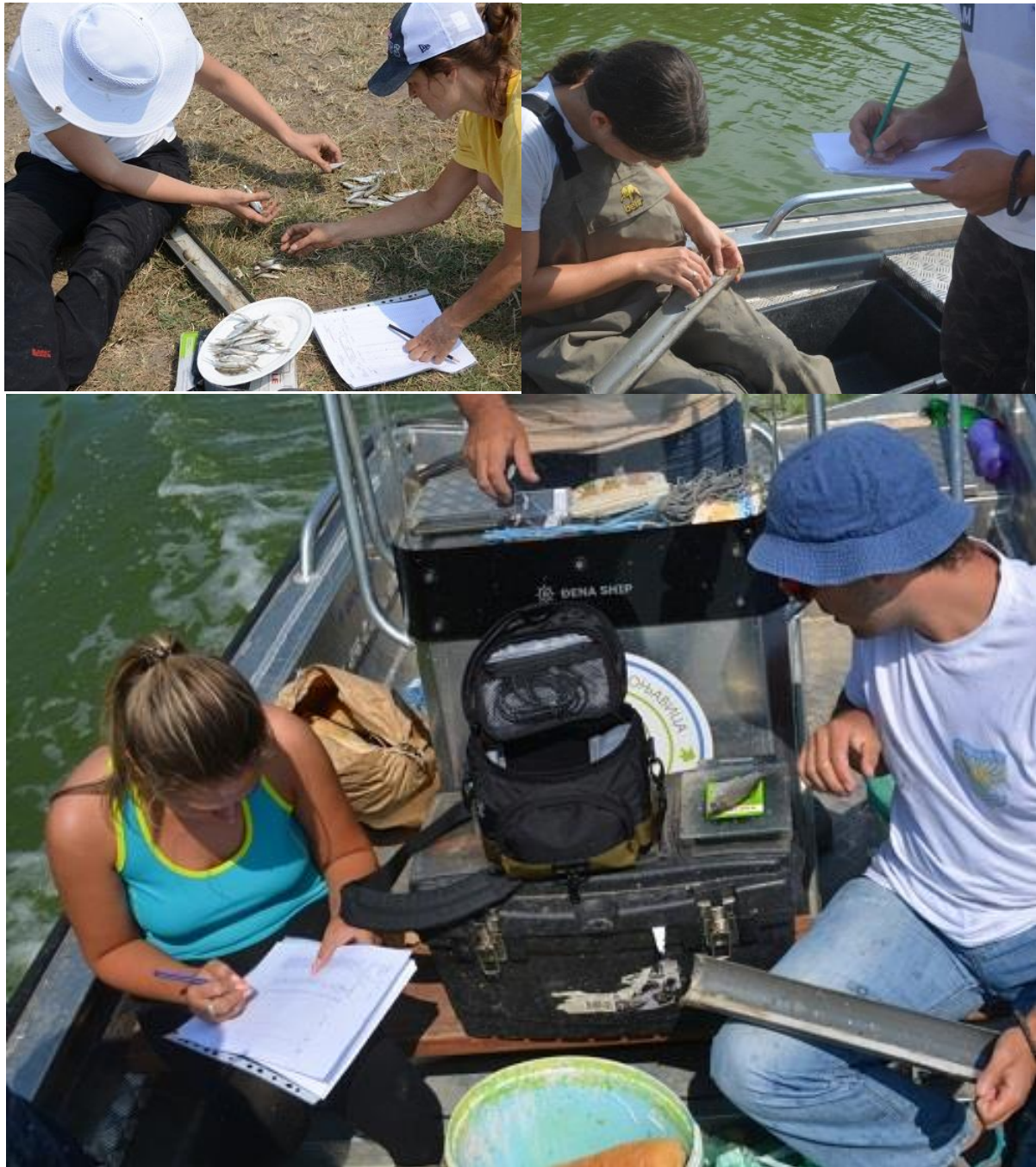
Electrofishing in July.





Using multimesh and fyke nets to catch fish and the Mesocosm and cage systems.





Measurement of fish.



Nature protection guard and colleagues.



Field work.



Left: Last day of field work. Right: Dragana uses secchi disk in September.



The RTS team records fieldwork.



Dissection of specimens in the lab in September & October 2018.



Black bullhead.