Final Evaluation Report

Your Details	
Full Name	Ermin Mašić
Project Title	Conservation and Restoration of Freshwater Oligotrophic Habitat Types in the Area of the Dinaric Alps (Bosnia and Herzegovina)
Application ID	34941-2
Date of this Report	23 September 2022

1. Indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

Objective	Not achieved	Partially achieved	Fully achieved	Comments
Literature analysis and establishment of a references database.			■	To understand the structure and dynamics of the selected habitat types, a large number of original scientific papers were collected and analysed. These works will serve as the basis for the establishment of a large database of references, which will be expanded and analysed in the upcoming period of realisation of our project. Scientific papers are downloaded from the official pages of the journal, via the ResearchGate platform and the Google search engine. Our database of thematic scientific papers has more than 500 references so far. The mentioned scientific works were used for the production of promotional materials, but also for future congress and original scientific works. Mendeley reference software was chosen to manage the collected original scientific papers (http://www.mendeley.com/download-desktop).
Field research			■	During the field research, the multi-year monitoring of the types of freshwater habitats on the Vranica mountain continued, but new localities were also selected for the research. The new localities included peatland ecosystems on Zvijezda mountain and two glacial lakes (Boračko lake and Kukavičko lake). Prokoško lake is also included in the research for this project. In the field phase of the project, the main physical and chemical properties of the researched area were processed. Water samples were collected for chemical analysis, as well as phytoplankton and phytobenthos samples.

Laboratory research				Water analysis and samples of phytoplankton and phytobenthos were analysed in laboratory conditions. A database on cyanobacteria and algae of the researched localities was created.
Organizing workshop and training				To transfer the experiences and knowledge from this project to young researchers in the field of restoration and conservation ecology, workshops and trainings were organised. Workshops were organised in the field and in the laboratory.
Organizing a series of webinars.				Due to the COVID-19 pandemic, work in larger groups was not possible. Therefore, a series of online webinars related to our project was organised.
Writing original research papers				After the completion of all phases of our project, original scientific papers and conference presentations will be prepared.
Writing reports on the realization of project activities.				Short reports were prepared during the realisation of certain phases of our project. We used social networks such as Facebook, Instagram and YouTube to disseminate important information to a wide scientific and non-scientific public.
Preparation and design of promotional materials				To promote our work and present the achieved results, rich promotional material has been prepared. All promotional material is available to download from The Rufford Foundation site and also from my ResearchGate profile.
Organizing a photo exhibition.				After the completion of all phases of our project, a photo exhibition was organised at PMF. It is planned that the exhibition will be presented during the beginning of the winter semester as well as a presentation of the obtained results of the project to students at the Department of Biology, University of Sarajevo.
Promotion of final project results				The promotion of the results of our project was held at the Faculty of Science, University of Sarajevo.

2. Describe the three most important outcomes of your project.

Three of the most important outcomes of this project are:

a) *Restoration of peatland ecosystems (Practical Approach)*

Peatland ecosystems are extremely rare and endangered habitat types in Bosnia and Herzegovina. Unfortunately, today they are under pronounced anthropogenic pressures. The peatland ecosystems in the area of the Vranica and Zvijezda mountains are in an extremely critical state and in this sense they need help through ecological restoration processes. The restoration of the peatland ecosystem with this project in selected locations is achieved in situ. Namely, in the place where there is a degraded peatland, germinative niches are established. The germinative niches are made of biodegradable material and will not further damage the structure and function of the peatland ecosystem. The germinative niches are made of fir boards with dimensions of 50 x 50 cm. In the area of Mt. Vranica and Mt. Zvijezde, two sprouting niches were placed. In the coming period, germinative niches will be monitored and abiotic and biotic parameters within the experimental plot will be analysed. This is a new method that is being used for the first time to restore the peatland ecosystem in Bosnia and Herzegovina.

b) *Establishment of the first Ecological station for monitoring freshwater oligotrophic habitat types in the area of Vranica mountain.*

Thanks to the Rufford Foundation grant, the first ecological station for biomonitoring of freshwater ecosystems was established in the Vranica mountain area. The goal of the ecological station is to monitor the state of freshwater ecosystems and establish permanent monitoring in the area of the Vranica mountain. The ecological station is located above the Prokoško lake in the original part of the Razvalinski creek, which continuously supplies the Prokoško Lake with water throughout the year. The stream springs at the foot of Krstac, which is 2000 m asl. The practical significance of the ecological station for biomonitoring is reflected in the fact that it will be possible to monitor the state of freshwater ecosystems in this unique area for a long time, primarily mountain springs and peatlands, but also other types of rare and endangered habitats identified in this area. It is important to note that for long-term monitoring, along with a detailed analysis and monitoring of the Razvalinski stream, 20 previously selected locations will be taken into account. In addition to these water bodies, special attention will be paid to intermittent water bodies. This area is in the form of smaller swamp complexes and is distributed at altitudes above 1650 m asl. The theoretical significance is reflected in the fact that this is the first control station in the area of the Vranica mountain, and probably also in the area of Bosnia and Herzegovina. In the future, it is planned to establish an ecological station in some other selected localities in order to form an ecological network that would serve to collect a large amount of information on rare and endangered types of habitats and to create original scientific papers. as graduation and master's theses.

c) *Assessment of the ecological state of three mountain lakes (Prokoško lake, Boračko lake and Kukavičko lake) using phytoplankton algae as bioindicators.*

Research into the diversity of cyanobacteria and algae in Bosnia and Herzegovina has an extremely long tradition. Until now, research has mainly focused on

phytobenthos and their application, while phytoplankton has been neglected for a long time. During this project, phytoplankton communities in three mountain lakes were analysed and their ecological status was assessed. The stated task was realised thanks to the equipment acquired through this project, a Van Dorn bottle (2 l), Utermöhl sedimentation chambers and an inverted microscope. Preliminary research shows that these are lakes with a medium load of organic matter, but also lakes that are a habitat for numerous rare and endangered species of cyanobacteria and algae. In the future, it is necessary to deepen the research, in terms of increasing the number of localities, but also sampling throughout the seasons to determine the actual ecological state and create conditions for their permanent and long-term monitoring.

3. Explain any unforeseen difficulties that arose during the project and how these were tackled.

Due to unfavourable weather conditions which prevailed during July, fieldwork began in August. Unfortunately, the roads leading to the Vranica mountain, as well as to the other explored sites are not at a satisfactory level, and in this respect fieldwork itself was difficult. In addition, no other difficulties have been identified.

4. Describe the involvement of local communities and how they have benefitted from the project.

The inhabitants of the Municipality of Fojnica live around Vranica mountain during the summer months. During my fieldwork in this area, I have been actively discussing the problems with the local community, since tourism activities have been expanding in recent years. Through the conversation, I have introduced my project which is about the need for better protection of freshwater oligotrophic habitat types in the wider area of Vranica Mountain. I have also discussed with them the importance of biodiversity and ecosystem services which these habitat types offer. In this way, I have indirectly affected them in terms of increasing environmental awareness and better care of the mentioned habitats. During my stay on Vranica mountain, I had an opportunity to collect the waste that was left behind by the tourists, giving an example to the others on how they could protect this unique area and biodiversity within the oligotrophic habitat types. It is important to note that all prepared promotional materials were printed in Fojnica Municipality. In this way, we involved the local community in our project, and they benefitted from this activity. Also, one of the members who are involved in the training of young researchers in the field of restoration and conservation ecology lived near the area where the studied sites were located. In this way, the acquired knowledge can be greatly used in the future, in a way to educate or to realise their own research project. In the future, we will actively cooperate with representatives of the authorities in the Municipality of Fojnica and together plan the protection of the studied habitats. In the foreground, there will be ecosystems of mountain peatlands, as well as other freshwater oligotrophic habitats.

5. Are there any plans to continue this work?

Yes. We plan to continue the research. The focus of our future planned work would also be freshwater oligotrophic habitat types, especially mountain springs, peatlands and mountain lakes. In addition to phytobenthos algae that were used as bioindicators to determine the ecological state, in future work we plan to include algae from phytoplankton communities as powerful bioindicators of the ecological state and specific phenomena in stagnant waters. In addition to the Vranica mountain, we plan to expand our research to other mountains in Bosnia and Herzegovina. In addition to cyanobacteria and algae, we are also planning to conduct research on flora, i.e., vegetation in mountain lakes.

More attention would be paid to the education of students and the dissemination of knowledge. The results of our future work will also serve as a good basis for the preparation of high quality graduate and master's theses in the institution where I work.

6. How do you plan to share the results of your work with others?

It is important to note that during the entire duration of our project, continuous promotion of project activities was carried out. For this purpose, we used social networks and other platforms to exchange and share the obtained results. To raise ecological awareness about the importance of freshwater oligotrophic habitat types, continuous promotion of our project is being carried out during the current phases. To promote the results and current activities, we relied on social networks: Facebook (Cyanobacteria and algae of Bosnia and Herzegovina), Instagram (AlgBiH) and YouTube (Ermin Mašić). We have also prepared two types of cards (Dissemination of information on freshwater oligotrophic habitats): 1. Did you know the card and 2. Interesting facts about phytoplankton.

7. Looking ahead, what do you feel are the important next steps?

The story of freshwater oligotrophic habitats and their conservation around the Vranica mountain, but also in the whole of Bosnia and Herzegovina, is only the beginning. Through our research, we have created a good basis for the establishment of long-term monitoring of these specific habitat types in this area. All studied habitats deserve a special place in protection, but a very urgent measure of protection should be devoted to mountain springs, peat and lakes. These habitat types are the most sensitive. Many rare and endangered species inhabit these habitats. They also offer a very wide range of ecosystem services. From this point of view, as the next step in our work, it is very important to continue with the mapping and identification of freshwater oligotrophic habitat types in Bosnia and Herzegovina, and the focus of future studies should be on the most sensitive and rarest types. In addition to diatoms as very good bioindicators, all other groups of algal and macrophyte vegetation should be considered in the future. In addition to phytobenthos algae, phytoplankton algae and macrophyte communities should be taken to assess the ecological state of mountain lakes. It is also very important to continue with the education and training of young researchers in the field of restoration and conservation ecology, but also to connect their work and the

obtained results with decision makers, non-governmental organisations and the local community.

8. Did you use The Rufford Foundation logo in any materials produced in relation to this project? Did the Foundation receive any publicity during the course of your work?

We used the logo of The Rufford Foundation in all promotional material which we have produced. In our professional publications (abstract and papers) we also thank the Rufford Foundation for providing financial support. The Rufford Foundation will be acknowledged in all forthcoming publications involving this project.

9. Provide a full list of all the members of your team and their role in the project.

Macanović Armin, MA - Associate member on the project. Senior Researcher (Research area: Ethnobotany, Biodiversity Conservation; Landscape Ecology; Biology Conservation; Ecology; Field Ecology Vegetation; Ecology Ecosystem Functioning) at Faculty of Science (Department of Biology), University of Sarajevo, Bosnia and Herzegovina; Centre for ecology and Natural Resources - Academician Sulejman Redžić.
Email: armin.macanovic@pmf.unsa.ba
www.scholar.google.hr/citations?user=jXPZHbYAAAAJ&hl=hr
www.researchgate.net/profile/Armin_Macanovic3
Colleague Macanović Armin, MA as an associate member of the project has made a major contribution in preparing Project Updates and in realizing fieldwork. Since he has great knowledge in the field of plant ecology, he helped in the identification of certain critical plan taxa, especially mosses and some aquatic macrophytes. Colleague Macanović contributed to the creation of original scientific work and helped in organizing the field workshop.

Fejzić Senaid, MA - Associate member on the project and English-proofreading expert.
Professor at the Secondary Technical school "Kemal Kapetanovic" Kakanj, Bosnia and Herzegovina.
Email: senaidfejzic@yahoo.com
Colleague Fejzić Senaid, MA, as an associate member of the project, he has made a really huge contribution during this project. The colleague was directly involved in the preparation of all materials related to the project. Colleague Fejzić did proofread of all prepared materials, both printed and electronic. The colleague made a significant contribution to the organization of a field workshop.

Duraković Bakir, MA - Associate member on the project (Research area: Geography Teacher, Geography Specialist, GIS (Geographic Information Systems) Specialist, GIS Analyst, Data analysis, Cartography, Spatial datasets, Digitization, Georeferencing, Geodata analysis.
Email: bakir_dur@outlook.com
Colleague Duraković Bakir, MA, as an associate member of the project, he has made a major contribution in the mapping of studied oligotrophic habitat types in

the area of Dinaric Alps, as well as in preparing the general map of the researched area.

10. Any other comments?

I would like to sincerely thank The Rufford Foundation, without whose support and the grant this project would never be realised. Since the greater part of the grant was used for the purchase of the equipment for fieldwork, it will also be possible to use it in our future projects, but also during the realisation of long-term monitoring. Thanks to the active promotion of our project through social networks, many young researchers and students from the University of Sarajevo (Faculty of Science, Department of biology and Faculty of Pharmacy) have heard about The Rufford Foundation and currently, they are greatly thinking about generating their own projects, especially in the field of restoration and conservation ecology. Since this project has created a good basis for studying freshwater habitat types which are distributed on Vranica mountain, I sincerely hope that The Rufford Foundation will support our future research. Finally, I would like to thank all my friends, colleagues, and my dear students from the University of Sarajevo who supported me during the realisation of all phases of this project. During work on this very interesting project, several colleagues from another institution are included. This collaboration resulted in the publication of several papers with high-impact factors. In addition to the planned activities, some additional ones were realised that imposed themselves and resulted from the dedicated and creative work, not only of the project leader but also of all colleagues and students, whom I would like to thank on this occasion. Firstly, I would like to thank the professors for their previous knowledge and useful advice, namely: Prof. Dr. Helmut Mayrhofer, Prof. Dr. Zlatko Levkov, Prof. Dr. Senka Barudanović, Prof. Dr. Marko Sabljojević, Prof. Dr. Michal Hájek, Prof. Dr. Martin Magnes and Prof. Dr. Jürgen Dengler. Furthermore, I sincerely thank my colleagues and collaborators on the second Rufford project, namely: Dr Adi Vesnić, Dr Armin Macanović, Dr Sabina Žero, Dr Narcisa Smiječanin, Dr Mubina Čutura-Mašić, Dr Nadja Ognjanova-Rumenova, Dr Sanja Šovran, Dr Slađana Popović, Dr Marija Gligora-Udović, Mr Dušica Zaova, Mr Danijela Mitić-Kopanja, Mr Amela Sarajlić, Mr Nadira Likić, Mr Selma Pašić, Mr Ilma Kahriman, Mr Amila Nešust, Mr Adnan Zimić and my students Koštrebić Sara, Ena Rizvanović, Žana Rosić, Amina Pašić, Alma Zilđić and Nora Markanović.

Additional activities are reflected in the following:

1. Establishment of a collection of permanent slides within the Laboratory for the Systematics of algae and fungi at the Faculty of Science.
2. Establishment of a collection of micro- and macro- cyanobacteria and algae within the Laboratory for the Systematics of algae and fungi at the Faculty of Science.
3. Preparation of rich educational material for students (brochures, colour book of cyanobacteria and algae, models of diatoms, etc).
4. The establishment of a digital database of cyanobacteria and algae of Bosnia and Herzegovina, which resulted from active work both during the first and second Rufford projects.

5. Thanks to The Rufford Foundation, which financed this project, a book on the diatoms of the Vranica mountain was also prepared, entitled: „VRANICA MOUNTAIN - *Source of diatom diversity*".
6. After the synthesis of all obtained results, original scientific papers were prepared. In our papers, we indicated the presence of rare and endangered species of cyanobacteria and algae, and also highlight the state of freshwater oligotrophic habitat types in the Dinaric Alps. A bibliographic review of all published papers is also prepared and presented in our fifth project report.

IMPORTANT:
External financing for this project was not secured. However, as the project leader, I am provided external funds for fuel, a car for field work and space for work and maintenance of the workshop. I also provided all the necessary material for the analysis of the collected samples. This especially applies to the chemical processing of diatom samples, identification according to the latest keys, a microscope equipped with a digital camera, a stereo microscope and a place to store permanent slides. I also provided all the necessary material for the analysis of the collected samples. The equipment acquired through the first Rufford project is actively used during the realisation of the second Rufford project (GPS device GARMIN eTrex 10, Portable turbidimeter AQ3010 and Portable multimeter - Orion Star A329). In the future, I plan to work with students at the University of Sarajevo. My research topic is the taxonomy and ecology of cyanobacteria, algae and vascular plants. In addition to basic research, applied research will also be conducted on this group of organisms. Also, I want to encourage young researchers to start their own research and collect data on the biodiversity of this very important and interesting group of organisms. Also, I want to increase my knowledge in all aspects of restoration and conservation ecology and applied ecology.

ACKNOWLEDGEMENT
I sincerely thank The Rufford Foundation for supporting my second project.

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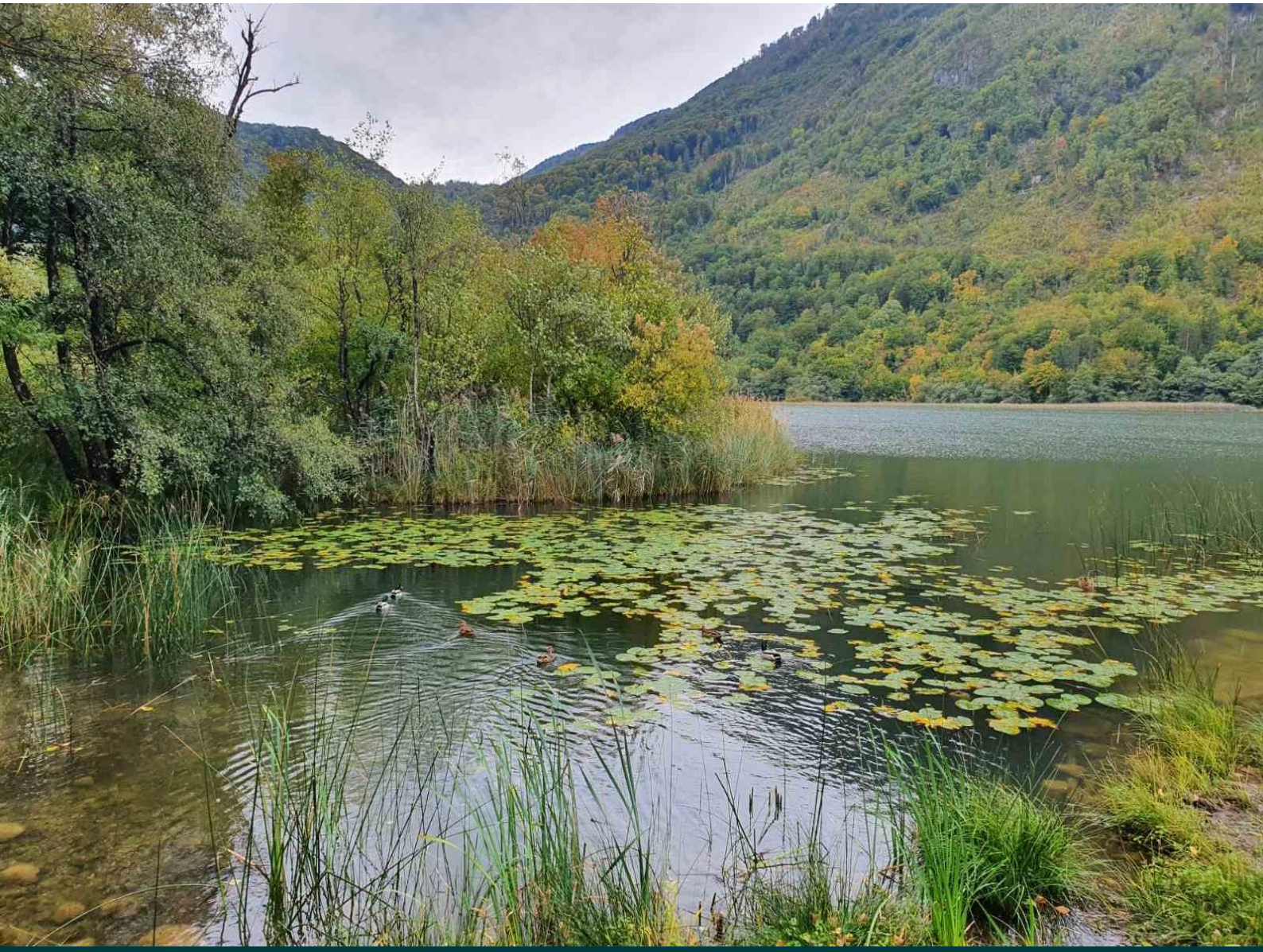

BORAČKO LAKE

DIVERSITY OF PHYTOPLANKTON

Mašić Ermin, PhD

Diversity of phytoplankton in Boračko lake

1. *Dolichospermum flosaquae* (Brébisson ex Bornet & Flahault) P.Wacklin, L.Hoffmann & J.Komárek 2009
2. *Asterionella formosa* var. *gracillima* (Hanztsch) Grunow 1881
3. *Botryococcus braunii* Kützing 1849
4. *Ceratium hirundinella* (O.F.Müller) Dujardin 1841
5. *Limnococcus limneticus* (Lemmermann) Komárková, Jezberová, O.Komárek & Zapomelová 2010
6. *Coelosphaerium kuetzingianum* Nägeli 1849
7. *Cyclotella meneghiniana* Kützing 1844
8. *Diatoma tenuis* C.Agardh 1812
9. *Fragilaria crotonensis* Kitton 1869
10. *Fragilariforma virescens* (Ralfs) D.M.Williams & Round 1988
11. *Mallomonas producta* (Zacharias) Iwanoff 1899
12. *Merismopedia glauca* (Ehrenberg) Kützing 1845
13. *Oocystis naegelii* A.Braun 1855
14. *Pediastrum boryanum* (Turpin) Meneghini 1840
15. *Peridinium cinctum* (O.F.Müller) Ehrenberg 1832
16. *Peridinium gatunense* Nygaard 1925
17. *Tetradesmus obliquus* (Turpin) M.J.Wynne 2016
18. *Scenedesmus quadricauda* (Turpin) Brébisson 1835
19. *Sphaerocystis schroeteri* Chodat 1897
20. *Staurastrum gracile* Ralfs ex Ralfs 1848
21. *Ulnaria delicatissima* (W.Smith) Aboal & P.C.Silva 2004
22. *Ulnaria ulna* (Nitzsch) Compère :: AlgaeBase
23. *Tabellaria fenestrata* (Lyngbye) Kützing 1844
24. *Dolichospermum macrosporum* (Klebhan) Wacklin, L.Hoffmann & Komárek 2009
25. *Lindavia comta* (Kützing) T.Nakov & al. 2015
26. *Epithemia operculata* (C.Agardh) Ruck & Nakov 2016
27. *Dinobryon cylindricum* O.E.Imhof 1887
28. *Dinobryon divergens* O.E.Imhof 1887
29. *Dinobryon sertularia* Ehrenberg 1834
30. *Melosira varians* C.Agardh 1827
31. *Bulbochaete setigera* C.Agardh ex Hirn 1900
32. *Lagerheimia ciliata* (Lagerheim) Chodat 1895
33. *Chromulina ovalis* Klebs 1893
34. *Chroococcus turgidus* (Kützing) Nägeli 1849
35. *Closterium acerosum* Ehrenberg ex Ralfs 1848
36. *Closterium juncidum* Ralfs 1848
37. *Colacium vesiculosum* Ehrenberg 1834

38. *Cosmarium margaritiferum* Meneghini ex Ralfs 1848
39. *Cosmarium quadratum* Ralfs ex Ralfs 1848
40. *Cryptomonas ovata* Ehrenberg 1832
41. *Cymatopleura elliptica* (Brébisson) W.Smith 1851
42. *Dinobryon stipitatum* Stein 1878
43. *Docidium baculum* Brébisson ex Ralfs 1848
44. *Euglena viridis* (O.F.Müller) Ehrenberg 1830
45. *Gloeotrichia echinulata* P.G.Richter 1894
46. *Gomphosphaeria lacustris* Chodat 1898
47. *Mallomonas caudata* Iwanoff [Ivanov] 1899
48. Microcystis aeruginosa (Kützing) Kützing 1846
49. *Navicula microcephala* Grunow 1868
50. *Navicula rhynchocephala* Kützing 1844
51. *Planktothrix agardhii* (Gomont) Anagnostidis & Komárek 1988
52. *Planktothrix rubescens* (De Candolle ex Gomont) Anagnostidis & Komárek 1988
53. *Pediastrum simplex* Meyen 1829
54. *Penium minutum* (Ralfs) Cleve 1864
55. *Phacus longicauda* (Ehrenberg) Dujardin 1841
56. *Phacus pleuronectes* (O.F.Müller) Nitzsch ex Dujardin 1841
57. *Gyrosigma attenuatum* (Kützing) Rabenhorst 1853
58. *Spirogyra tenuissima* (Hassall) Kützing 1849
59. *Spirogyra weberi* Kützing 1843
60. *Iconella biseriata* (Brébisson) Ruck & Nakov 2016
61. *Iconella helvetica* (Brun) Ruck & Nakov 2016
62. *Surirella minima* R.Ross & Abdin 1949
63. *Ulothrix zonata* (F.Weber & Mohr) Kützing 1833

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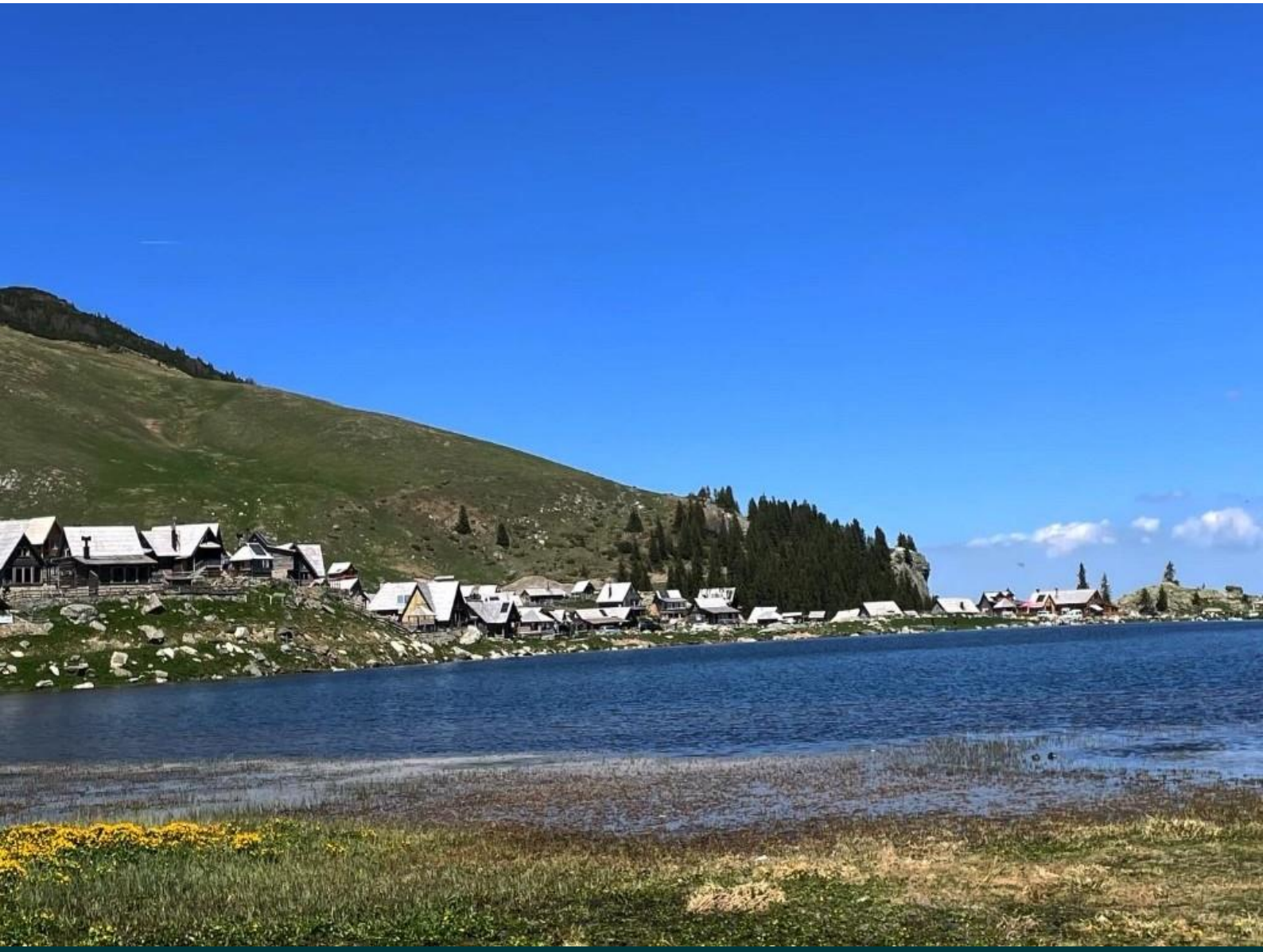

PROKOŠKO LAKE

DIVERSITY OF PHYTOPLANKTON

Mašić Ermin, PhD

Diversity of phytoplankton in Prokoško lake

1. *Anabaena oscillarioides* Bory ex Bornet & Flahault 1886
2. *Ankistrodesmus falcatus* (Corda) Ralfs 1848
3. *Aphanizomenon flosaquae* Ralfs ex Bornet & Flahault 1886
4. *Asterionella formosa* var. *gracillima* (Hanztsch) Grunow 1881
5. *Aulacoseira distans* (Ehrenberg) Simonsen 1979
6. *Botryococcus braunii* Kützing 1849
7. *Ceratium cornutum* (Ehrenberg) Claparède & J.Lachmann 1859
8. *Ceratium hirundinella* (O.F.Müller) Dujardin 1841
9. *Chroococcus minutus* (Kützing) Nägeli 1849
10. *Closterium aciculare* T.West 1860
11. *Closterium lunula* Ehrenberg & Hemprich ex Ralfs 1848
12. *Coelosphaerium kuetzingianum* Nägeli 1849
13. *Cosmarium botrytis* Meneghini ex Ralfs 1848
14. *Crucigenia quadrata* Morren 1830
15. *Cyclotella meneghiniana* Kützing 1844
16. *Cymbella affinis* Kützing 1844
17. *Cymbella tumida* (Brébisson) Van Heurck 1880
18. *Diatoma tenuis* C.Agardh 1812
19. *Dolichospermum flosaquae* (Brébisson ex Bornet & Flahault) P.Wacklin, L.Hoffmann & J.Komárek 2009
20. *Dolichospermum macrosporum* (Klebhan) Wacklin, L.Hoffmann & Komárek 2009
21. *Encyonema alpinum* (Grunow) D.G.Mann 1990
22. *Encyonema elginense* (Krammer) D.G.Mann 1990
23. *Euglena spirogyra* Ehrenberg 1832
24. *Fragilaria crotonensis* Kitton 1869
25. *Fragilariforma virescens* (Ralfs) D.M.Williams & Round 1988
26. *Gomphonema constrictum* Ehrenberg 1844
27. *Gomphonema gracile* Ehrenberg 1838
28. *Gomphonema lanceolatum* C.Agardh 1831
29. *Gomphonema subtile* Ehrenberg 1843
30. *Lepocinclis acus* (O.F.Müller) B.Marin & Melkonian 2003
31. *Limnococcus limneticus* (Lemmermann) Komárková, Jezberová, O.Komárek & Zapomelová 2010
32. *Lindavia comta* (Kützing) T.Nakov & al. 2015
33. *Mallomonas producta* (Zacharias) Iwanoff 1899
34. *Melosira varians* C.Agardh 1827
35. *Merismopedia glauca* (Ehrenberg) Kützing 1845
36. *Mougeotia genuflexa* (Roth) C.Agardh 1824
37. *Oocystis naegelii* A.Braun 1855

38. *Pediastrum boryanum* (Turpin) Meneghini 1840
39. *Peridinium cinctum* (O.F.Müller) Ehrenberg 1832
40. *Peridinium gatunense* Nygaard 1925
41. *Pseudanabaena limnetica* (Lemmermann) Komárek 1974
42. *Scenedesmus quadricauda* (Turpin) Brébisson 1835
43. *Sphaerocystis schroeteri* Chodat 1897
44. *Staurastrum furcigerum* (Brébisson) W.Archer 1861
45. *Staurastrum gracile* Ralfs ex Ralfs 1848
46. *Synura uvella* Ehrenberg 1834
47. *Tabellaria fenestrata* (Lyngbye) Kützing 1844
48. *Tetradesmus obliquus* (Turpin) M.J.Wynne 2016
49. *Tetraspora gelatinosa* (Vaucher) Desvaux 1818
50. *Ulnaria ulna* (Nitzsch) Compère
51. *Ulnaria delicatissima* (W.Smith) Aboal & P.C.Silva 2004
52. *Zygnema stellinum* (O.F.Müller) C.Agardh 1824

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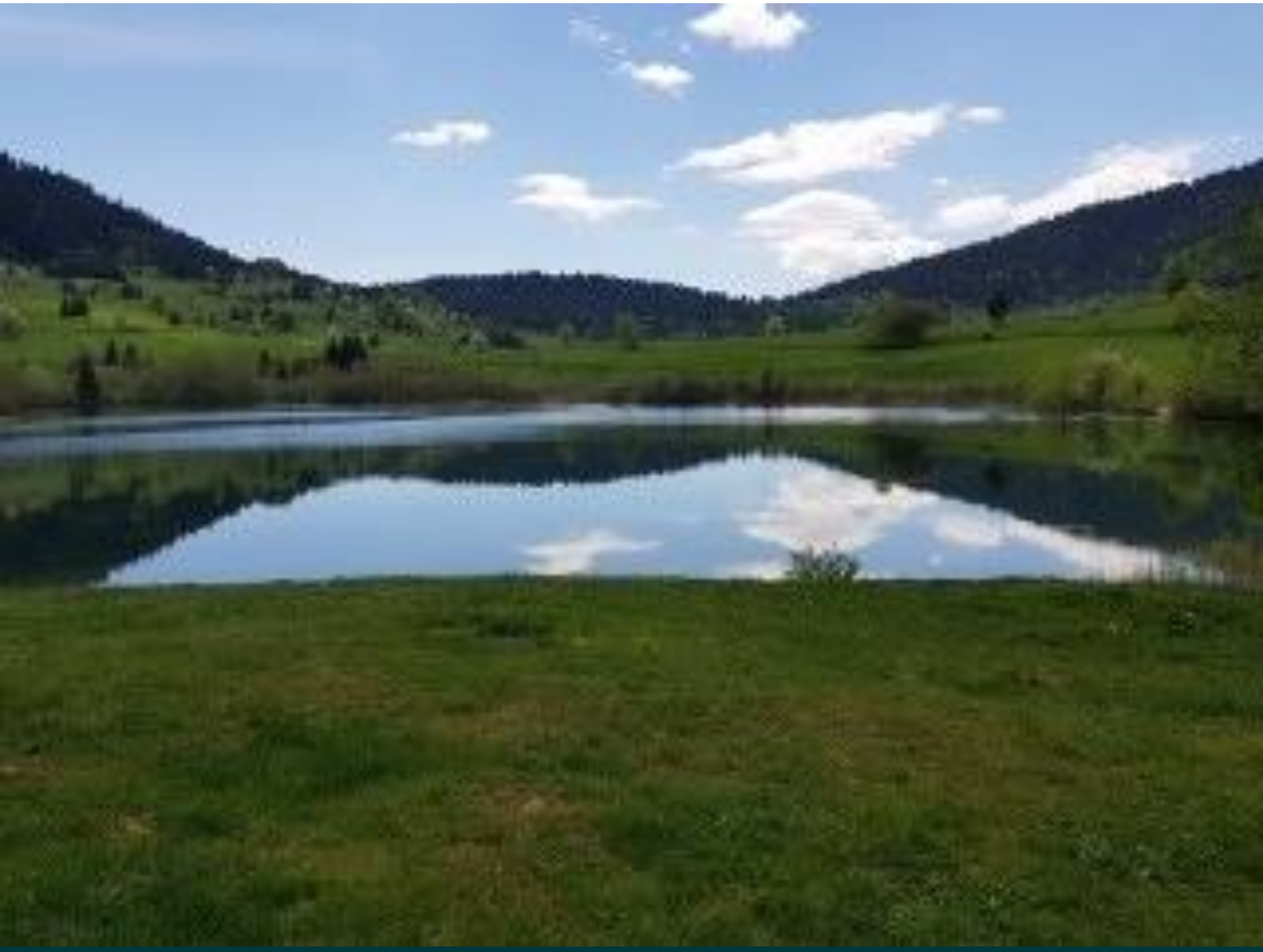


KUKAVIČKO LAKE

DIVERSITY OF PHYTOPLANKTON

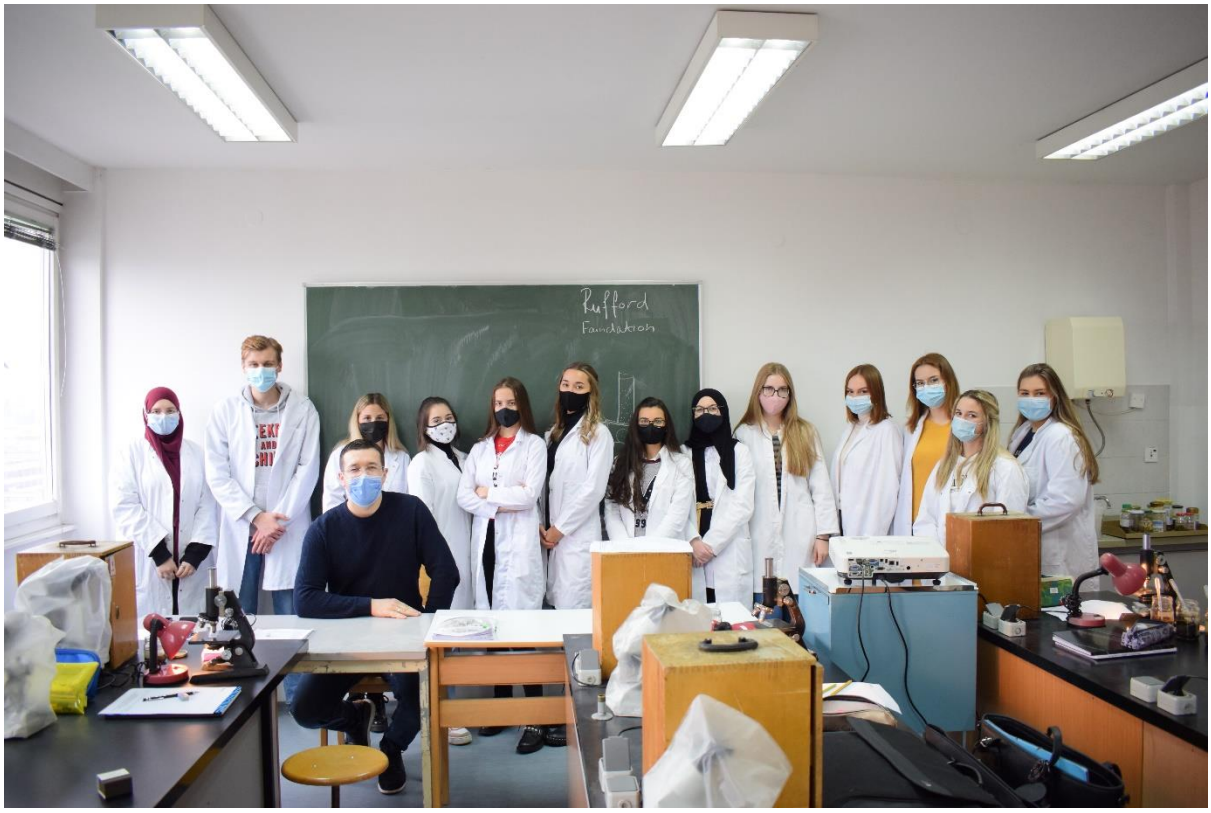
Mašić Ermin, PhD

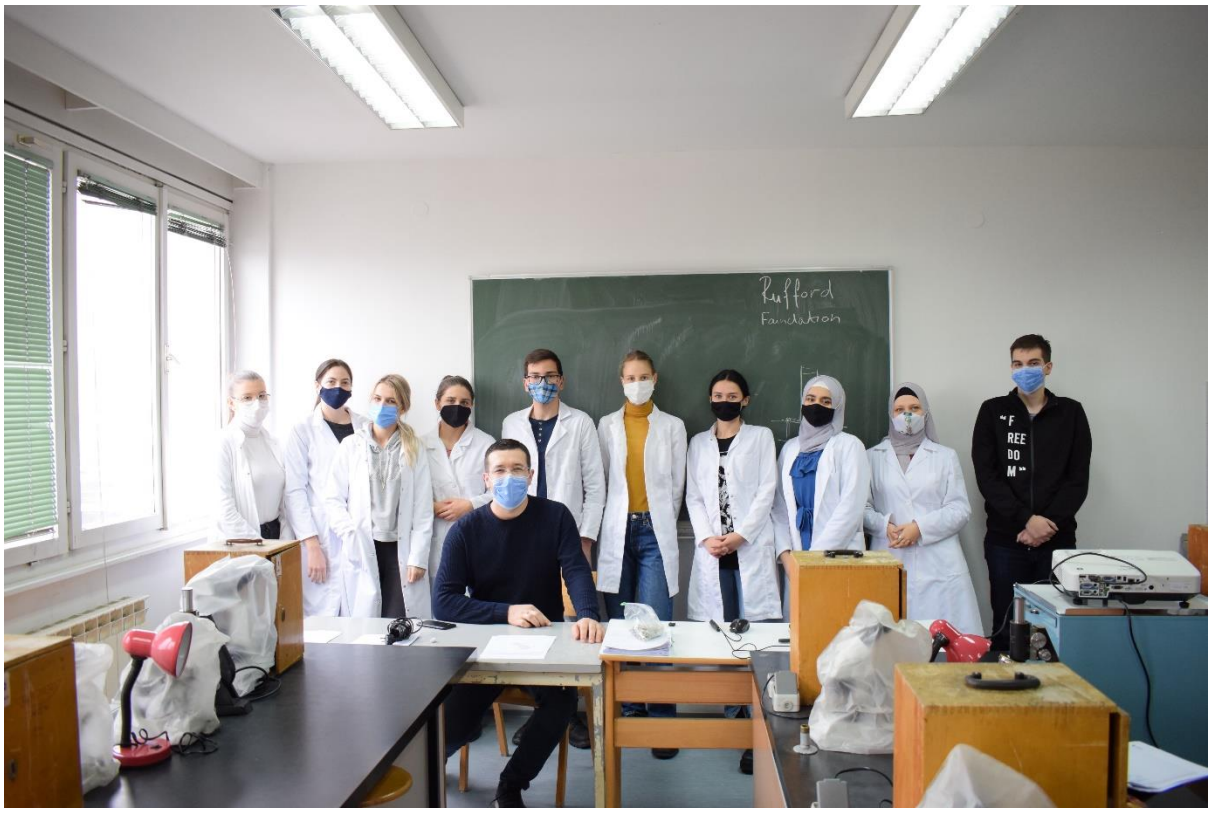
Diversity of phytoplankton in Kukavičko lake

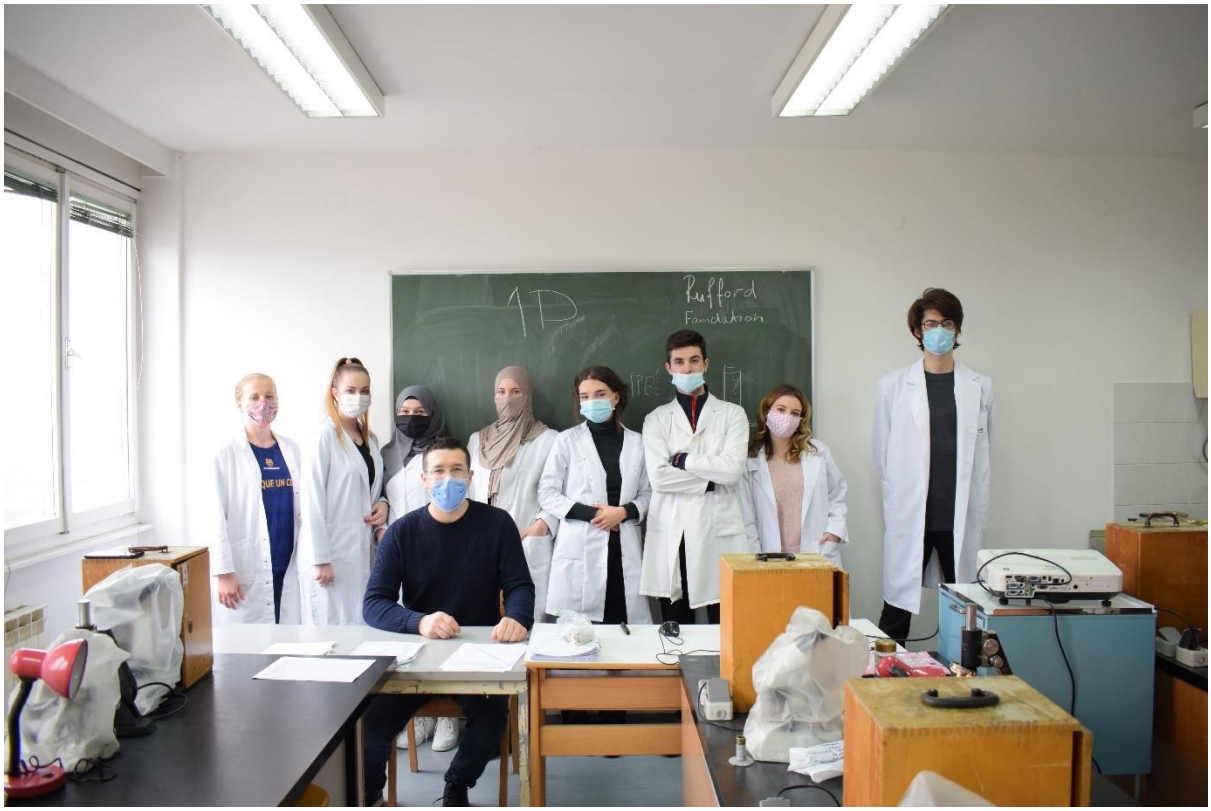
1. *Ankistrodesmus falcatus* (Corda) Ralfs 1848
2. *Aphanizomenon flosaquae* Ralfs ex Bornet & Flahault 1886
3. *Aphanothece stagnina* (Sprengel) A.Braun 1863
4. *Ceratium cornutum* (Ehrenberg) Claparède & J.Lachmann 1859
5. *Chlorococcum infusionum* (Schrank) Meneghini 1842
6. *Chroococcus minutus* (Kützing) Nägeli 1849
7. *Closterium aciculare* T.West 1860
8. *Coelastrum sphaericum* Nägeli 1849
9. *Colacium calvum* F.Stein 1878
10. *Crucigenia quadrata* Morren 1830
11. *Crucigenia quadrata* var. *octogona* W.Schmidle 1896
12. *Dinobryon cylindricum* O.E.Imhof 1887
13. *Dinobryon divergens* O.E.Imhof 1887
14. *Dinobryon sertularia* Ehrenberg 1834
15. *Epithemia operculata* (C.Agardh) Ruck & Nakov 2016
16. *Eudorina elegans* Ehrenberg 1832
17. *Gloeotaenium loitlesbergereanum* Hansgirg 1890
18. *Gomphonema constrictum* Ehrenberg 1844
19. *Gonatozygon asperum* (Ralfs) Rabenhorst 1863
20. *Lepocinclis acus* (O.F.Müller) B.Marin & Melkonian 2003
21. *Microcystis flosaquae* (Wittrock) Kirchner
22. *Nephrocytium agardhianum* Nägeli 1849
23. *Pandorina morum* (O.F.Müller) Bory 1826
24. *Peridinium cinctum* (O.F.Müller) Ehrenberg 1832
25. *Peridinium gatunense* Nygaard 1925
26. *Pseudanabaena limnetica* (Lemmermann) Komárek 1974
27. *Scenedesmus quadricauda* (Turpin) Brébisson 1835
28. *Sphaerocystis schroeteri* Chodat 1897
29. *Spondylosium depressum* Brebisson 1849
30. *Staurastrum furcigerum* (Brébisson) W.Archer 1861
31. *Staurastrum gracile* Ralfs ex Ralfs 1848
32. *Synura uvella* Ehrenberg 1834
33. *Tabellaria fenestrata* (Lyngbye) Kützing 1844
34. *Tetradesmus obliquus* (Turpin) M.J.Wynne 2016
35. *Tetraëdron minimum* (A.Braun) Hansgirg 1889
36. *Tetraspora gelatinosa* (Vaucher) Desvaux 1818
37. *Ulnaria ulna* (Nitzsch) Compère

38. *Ulnaria acus* (Kützing) Aboal 2003
39. *Ulnaria delicatissima* (W.Smith) Aboal & P.C.Silva 2004

THE MOST INTERESTING MOMENTS DURING THE REALIZATION OF THE PROJECT AND THE PRESENTATON OF FINAL RESULTS



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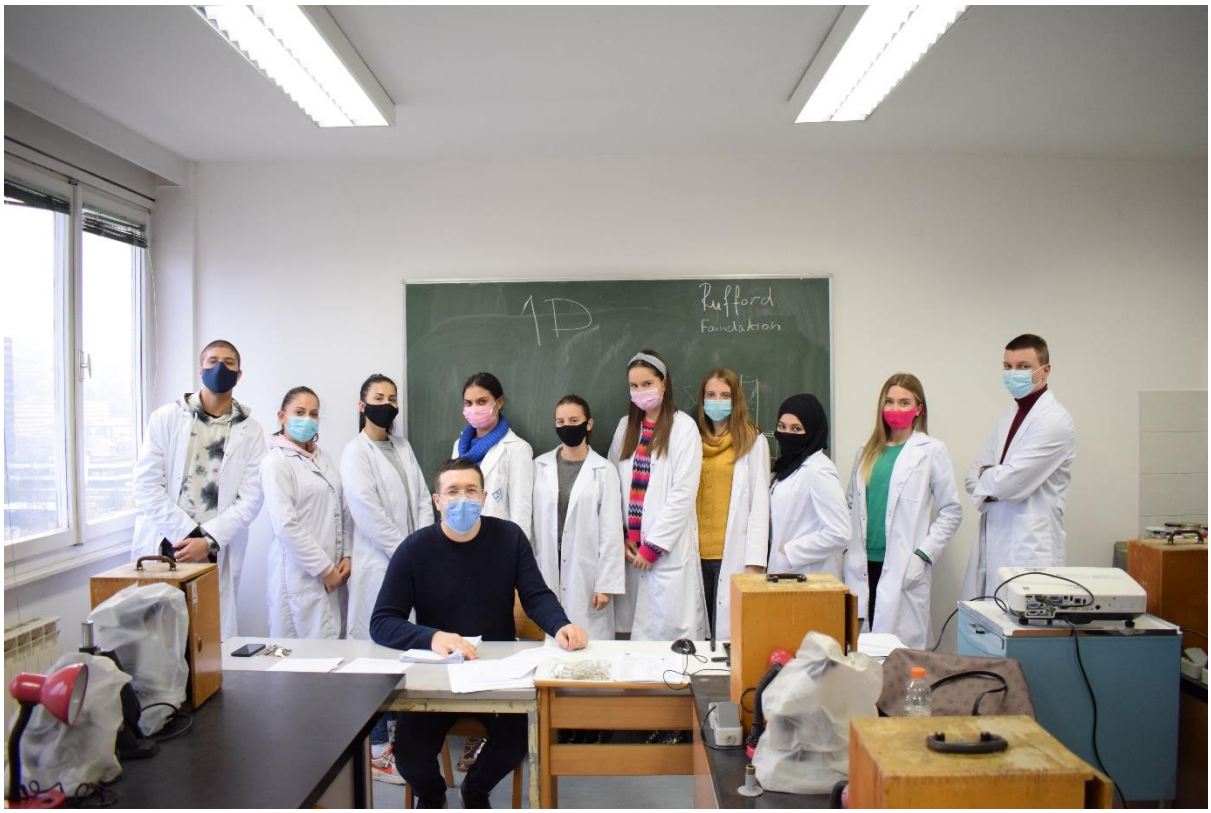
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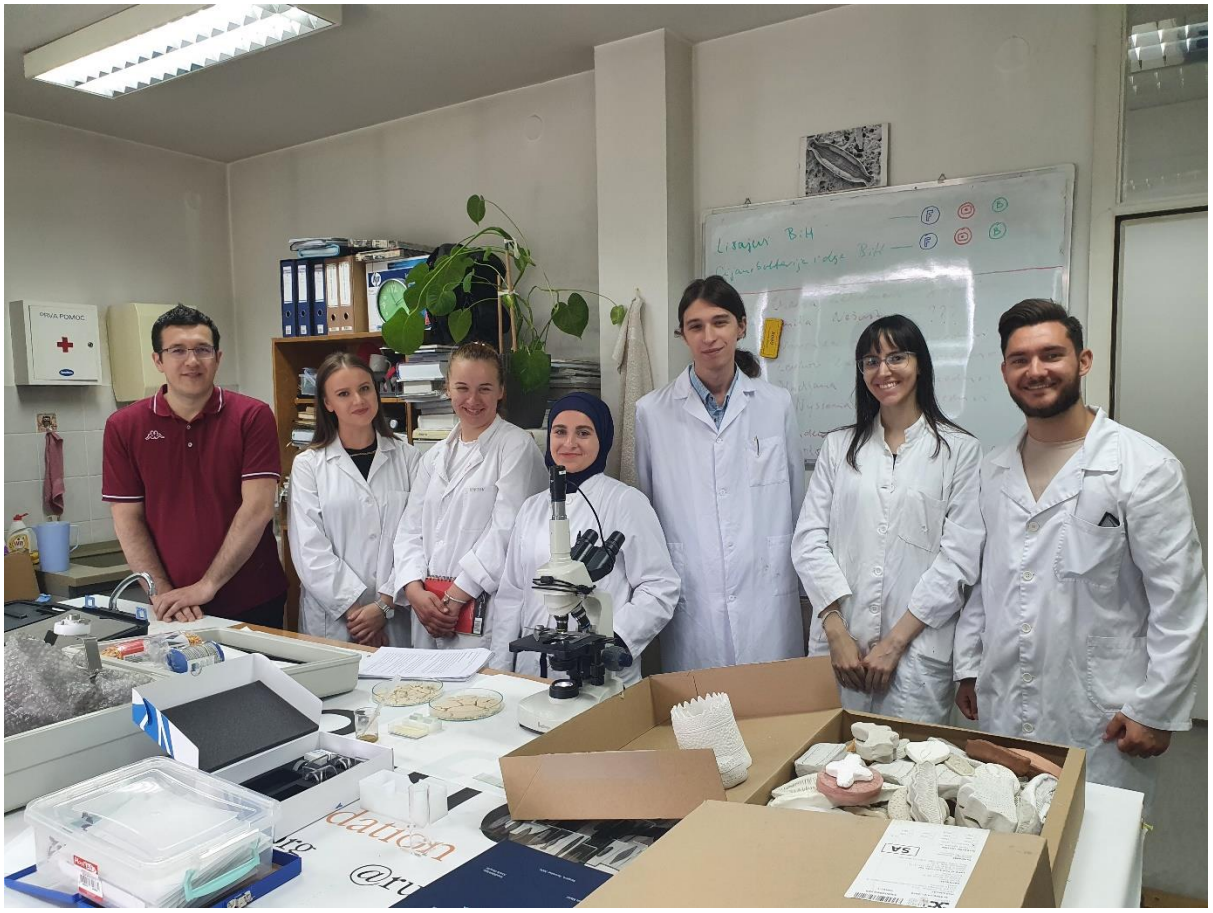
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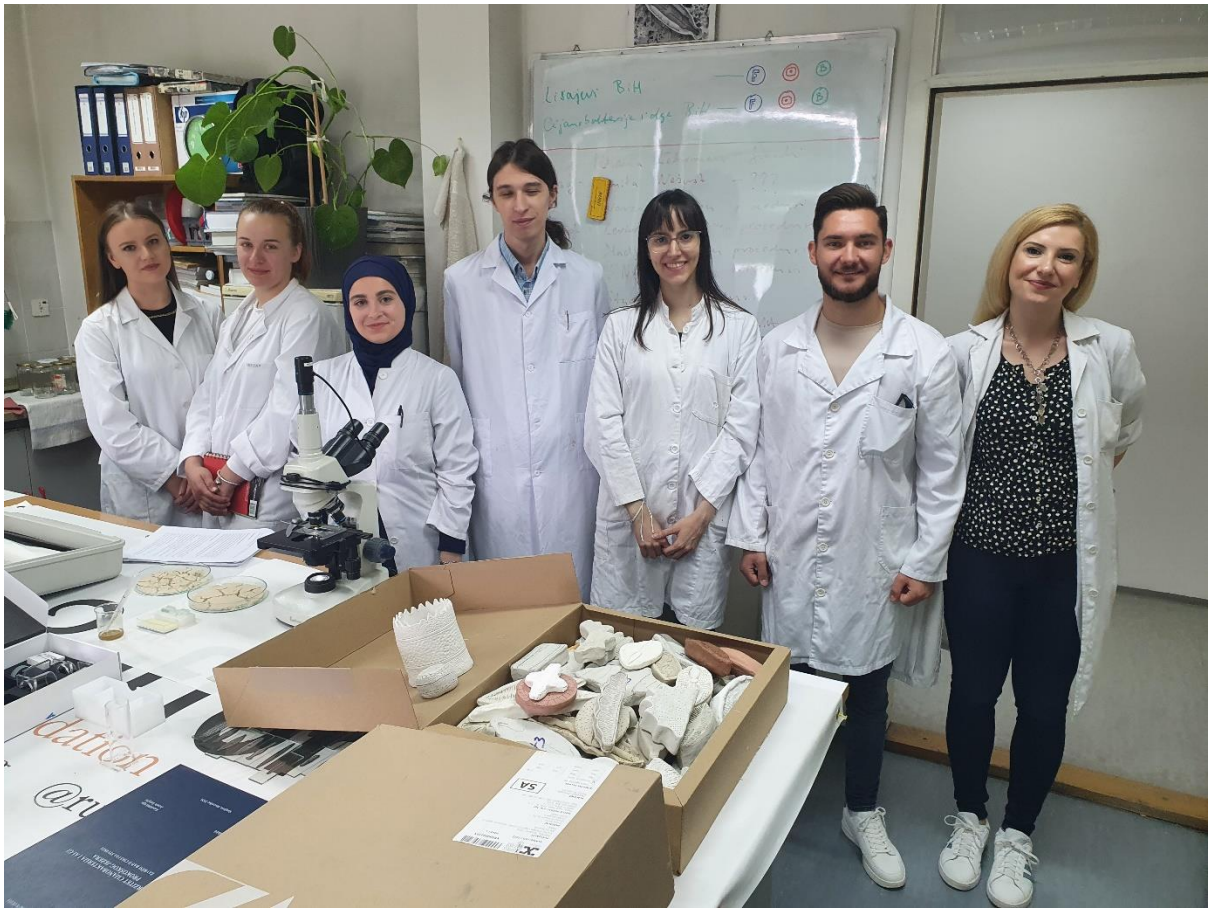

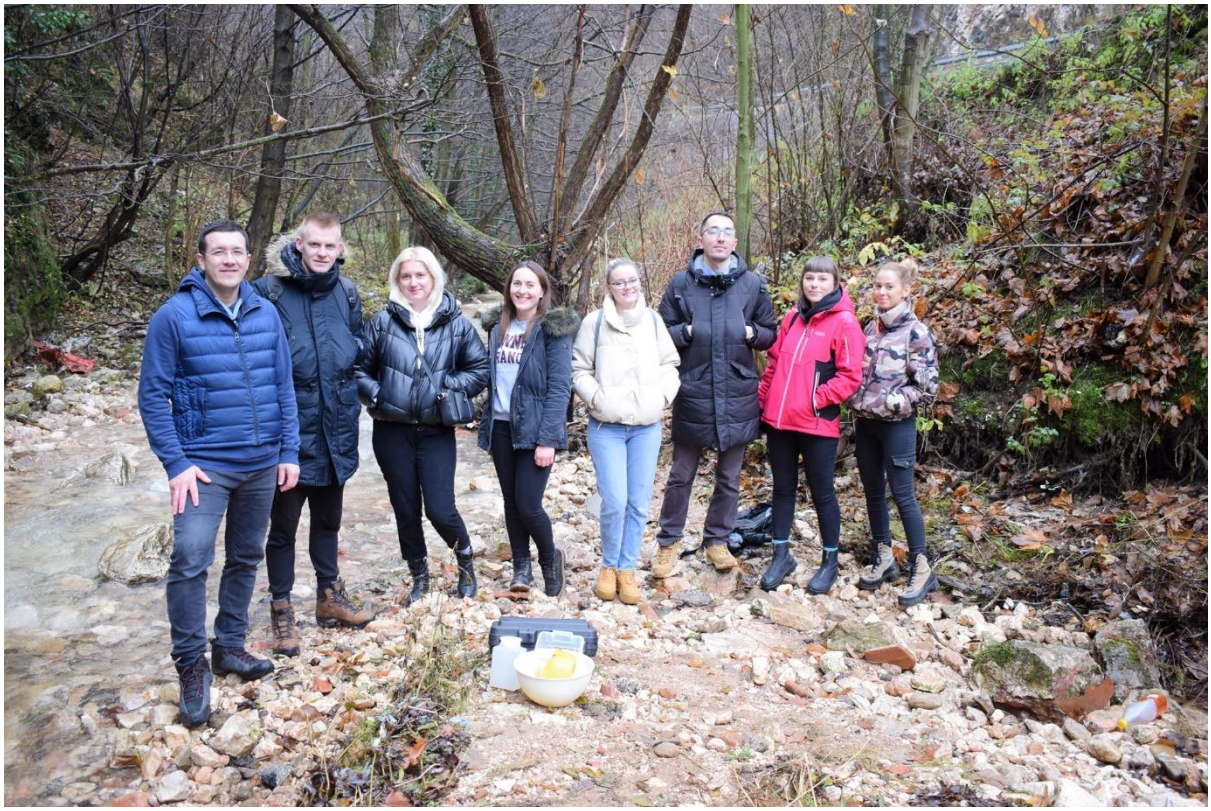

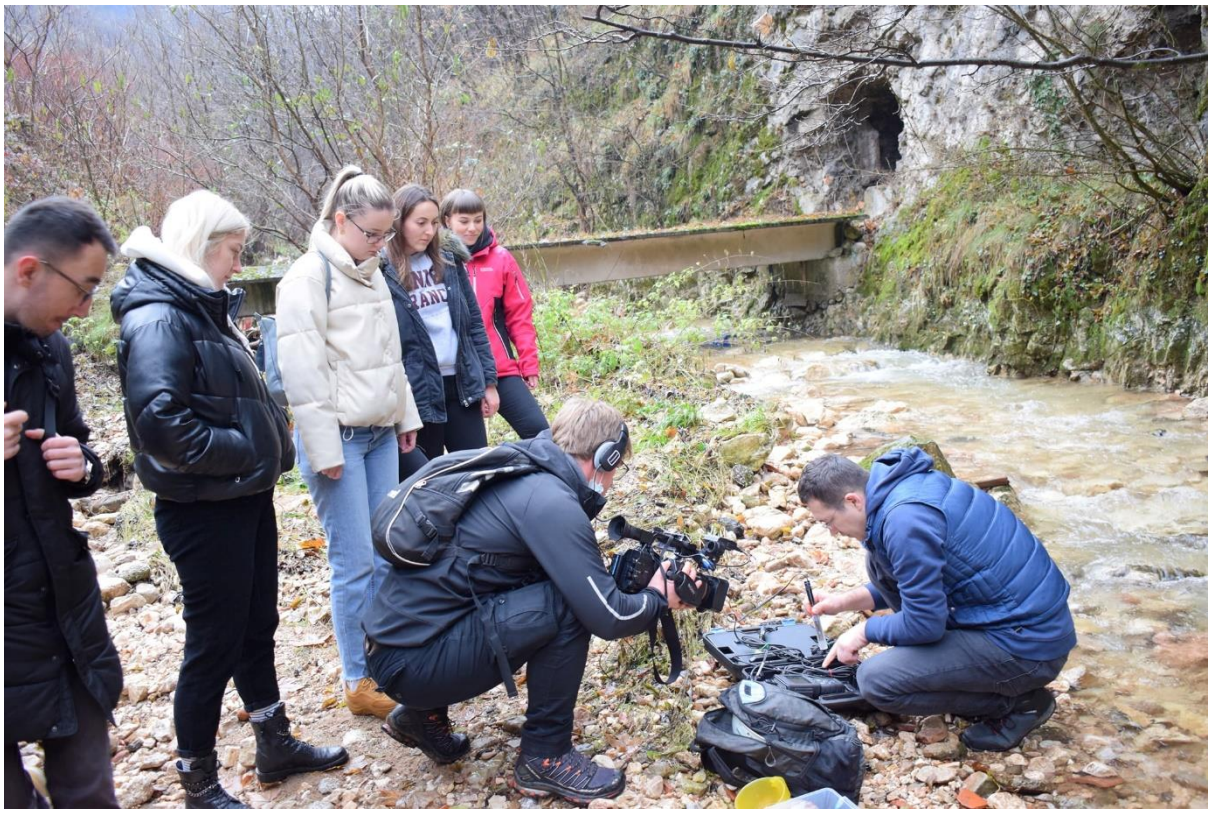

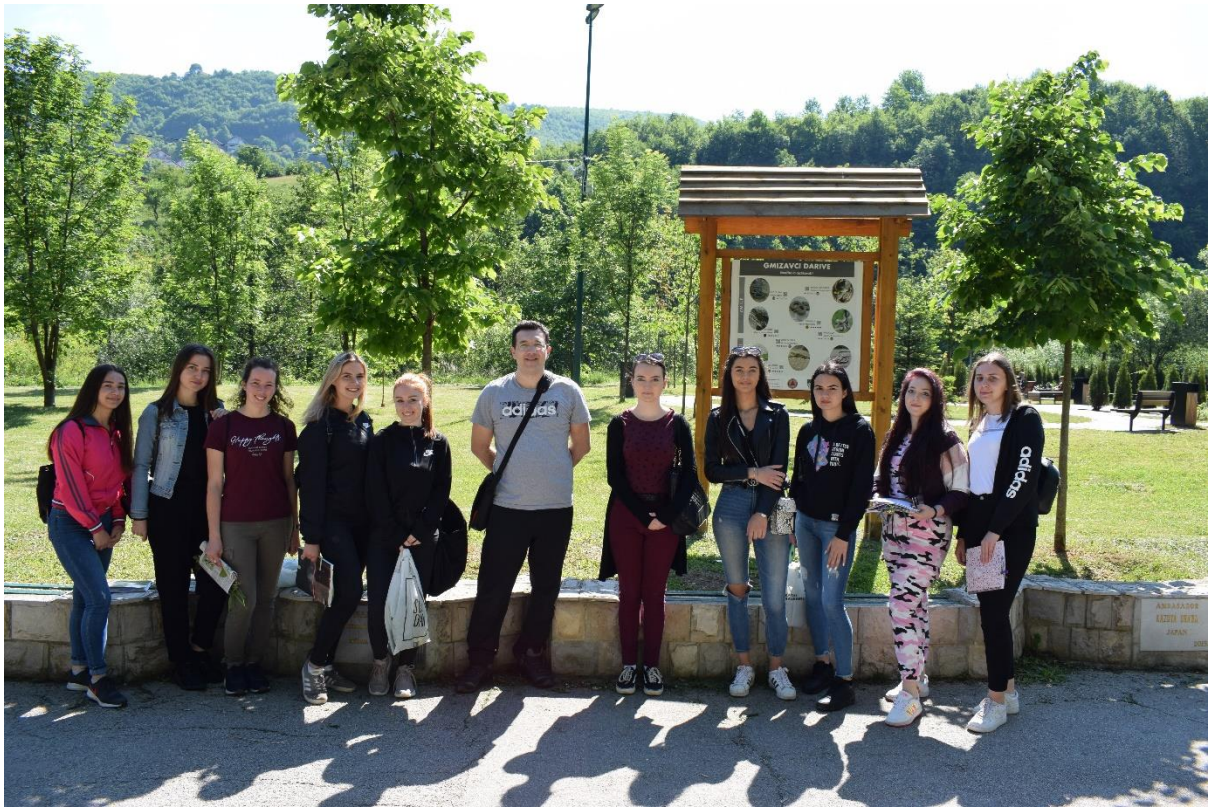
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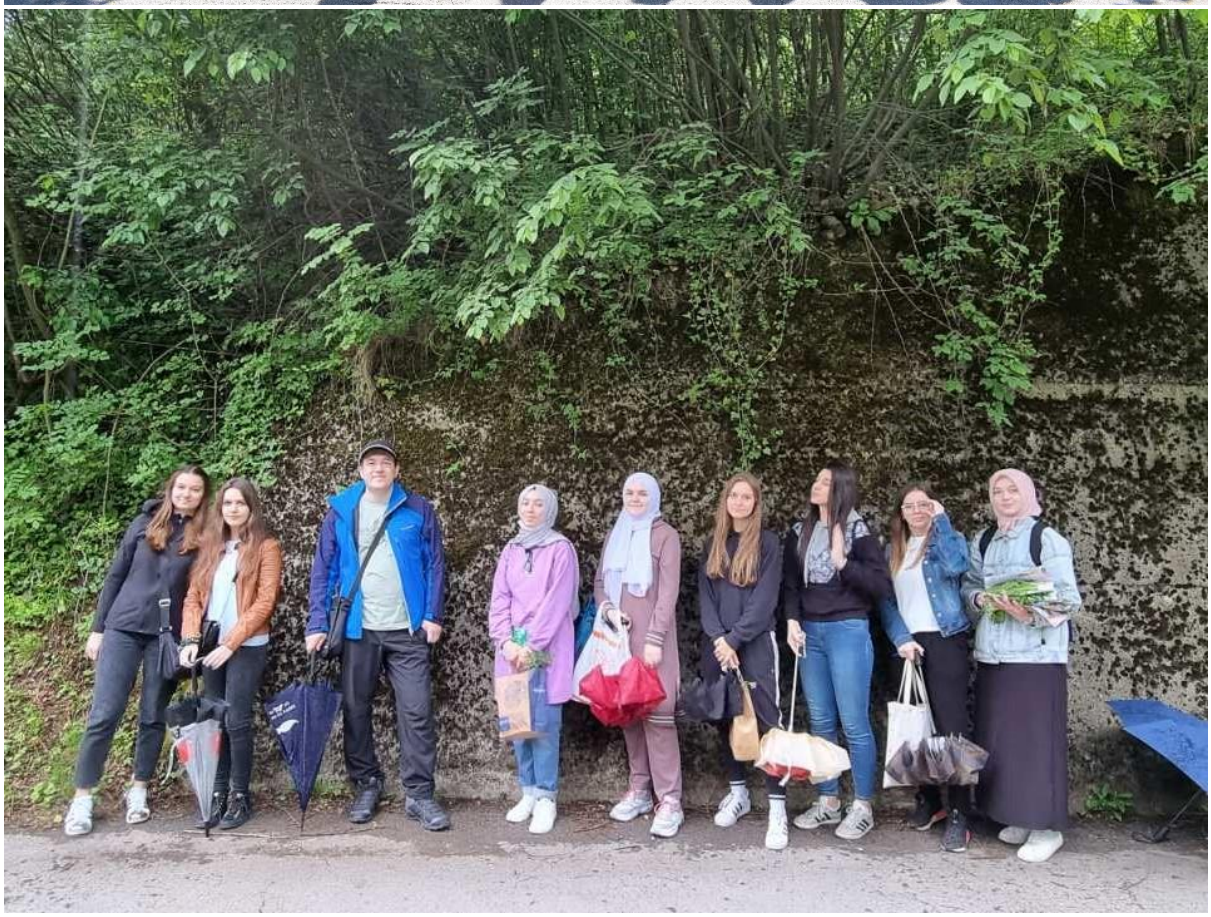

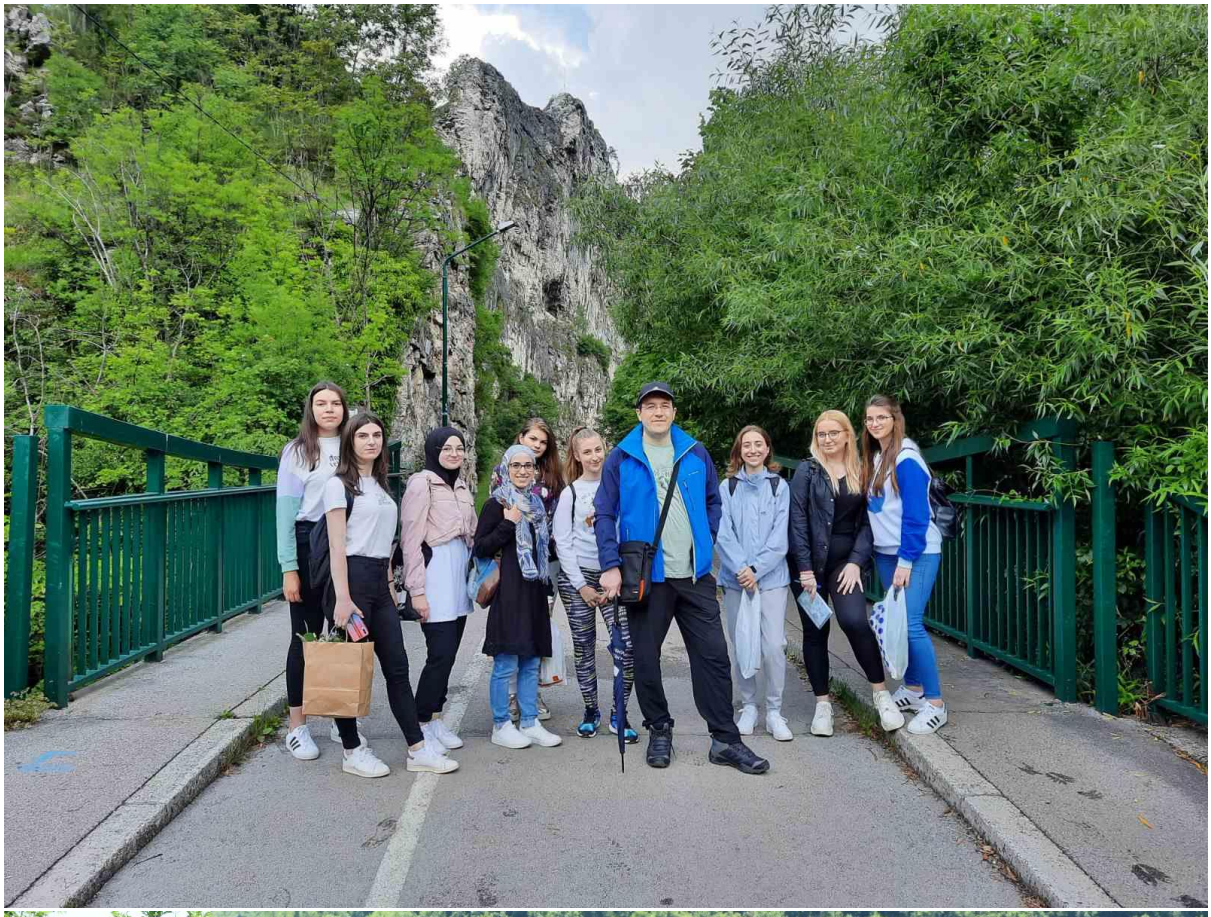

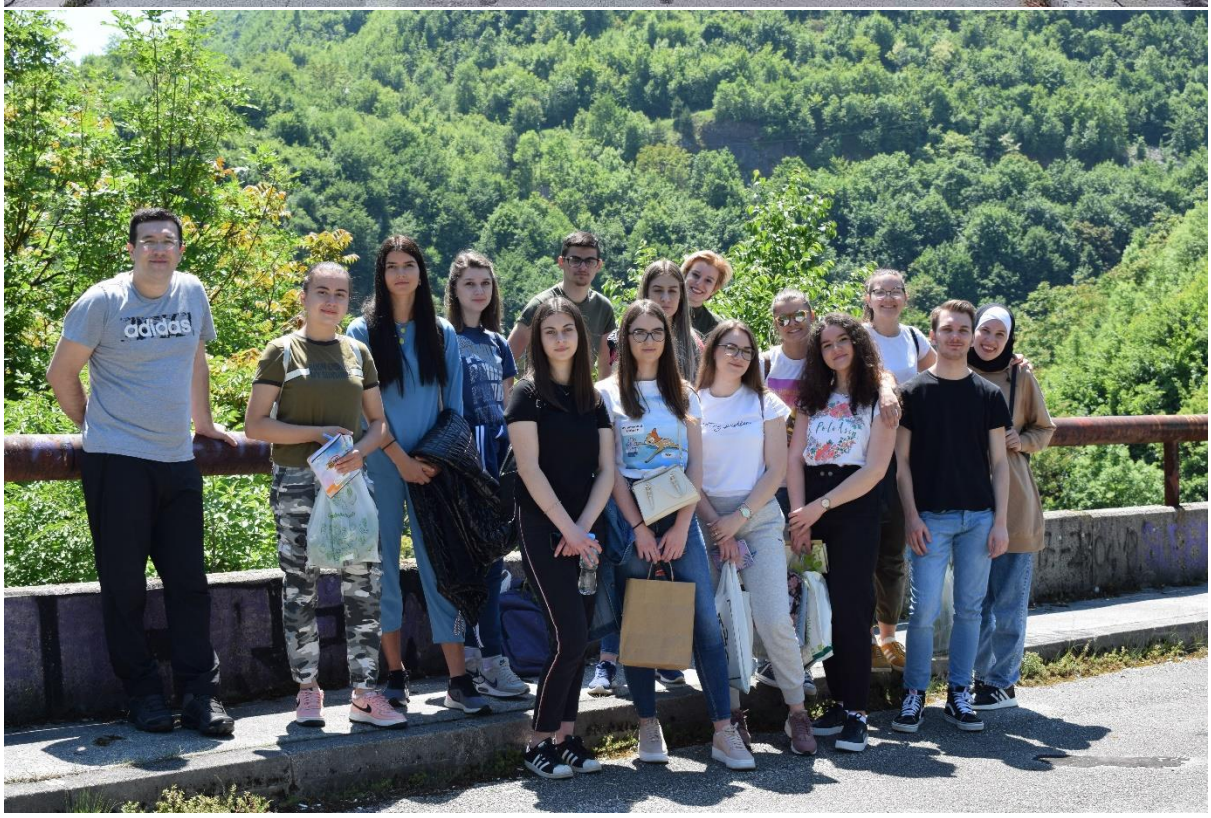
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