Opinion of the bachelor's thesis of Max HÖLLER

☐ supervisor's opinion ☑ opponent's opinion
☑ bachelor's thesis ☐ master's thesis

Author:	**Max HÖLLER**
Name of work:	**Bioinformatic determination of the contamination in environmental DNA from water**
Study program, specialization:	Applied Informatics (Bioinformatics)
Issue year:	2023

Name of opponent:	Ing. Marta Vohnoutová
Institution:	Institution of Applied Informatics
Contact e-mail:	mvohnoutova@prf.jcu.cz

Professional level of work:
☐ excellent ☐ very good ☑ average ☐ below average ☐ unsatisfactory

Formal mistakes:
☐ almost none ☑ acceptable number ☐ numerous, non-essential ☐ essential

Results:
☐ original ☑ original and taken ☐ nontrivial compilation ☐ taken from literature ☐ copied

Scope of work:
☐ large ☐ standard ☑ acceptable ☐ unsatisfactory

Graphic, linguistic, and formal level:
☑ excellent ☐ very good ☐ average ☑ below average ☐ unsatisfactory

Typographical errors:
☐ almost none ☑ acceptable number ☐ numerous

Complex level of work:
☐ excellent ☐ very good ☑ average ☐ below average ☐ unsatisfactory

Verbal statements, comments and remarks of the opponent:

According to the thesis text: “The aim of the thesis was to determine the bycatch in the samples collected and processed at
10 different sampling sites in the summer and autumn/winter seasons.”
According to this I would agree, even if not in all cases the data was taken in all seasons.
The thesis text continues: “The results were analysed.” Here I do not fully agree.

The data were captured and put into graphs. In graphs, it was impossible to distinguish species because of probably not appropriate colour palette. At least, it was possible to frame the stacked bars. But, at first, I have different opinion about data analysis. I found text gathered “in one heap” without tables, numbering, marking important information. I was difficult to find some information, even if, in some cases, it was there.
I could name the text rather comments or notes than analysis.

I expected, the author would divide localities into groups (e.g. oligotrophic vs. eutrophic or others.) and compare them. I expected many tables with analysed data acc.to various point of views.

I also miss the exact goals of the work, so it was also difficult to decide if the goals were achieved or not.

Conclusion:
The author gathered a lot of valuable data, what I appreciate. But the work seems to me “unfinished” or “unmature”. I miss real analysis taken from the gathered data. Maybe the author missed more time.

Questions, discussion topics:

1. It is not clear, how and why the author chose the used-bioinformatic tools – e.g. Tapirs. How do you select the bioinformatic tools? Did you consider to take also other ones? What was your selecting criteria?
2. Is it possible to discover in your water samples the creature who in not in your reference database (you did not simply expect it to be there in samples)?
3. What was the most surprise, you found in the gathered data, if any?
4. I criticized mostly the unmature analysis. If you have several additional months, what you will change or complete in your thesis?

Work
☑ recommend
☐ do not recommend
To accept as bachelor’s thesis

With the suggested mark:
☐ excellent ☑ very good ☐ good ☐ unsatisfactory

Ing. Marta Vohnoutová

Digitally signed by Ing. Marta Vohnoutová
Date: 2023.01.02 11:04:46 +01'00'

Place, date and signature of the opponent:

In České Budějovice 2. January 2023