

Dear prof. Middelburg, dear Referee,

we are submitting a revised manuscript. Thank you very much for all additional comments and revisions which helped to improve the quality of our manuscript again. We corrected the English as suggested and made some minor changes in the text accordingly to the comments to make its clarity better.

Here, we present the information about substantive changes made in the manuscript.

Yours sincerely,

Tereza Novotná Jaroměřská

### **Regarding the two highlighted comments from the Referee:**

*Line125: need to explain WHY this comparison is important in the context of the rest of the intro.*

Based on the current knowledge, we assume that cryoconite consumers are an important component of the nutrient recycling on the glacier surface with the possible impact to ecological processes in downstream areas.

We added this information to the introduction and modified the end of the introduction accordingly to the comments of the Referee.

*Sec 4.1: This paper finds some interesting patterns, but is not able to clearly delineate causes. The authors need to be very clear about the speculative nature of the discussion. I think it's ok, but a statement saying this might be helpful.*

The discussion was modified in parts where our speculations were not clearly separated.

### **List of all relevant changes made in the manuscript**

#### *Introduction*

We modified the end of the discussion accordingly to the comments and improved the consistency of carbon and nitrogen stable isotopes description.

#### *Results*

We removed the regression line from Fig. 2b because there is no correlation. We also specified the nomenclature of tardigrades according to the newly published study of Zawierucha et al. (2020).

#### *Discussion*

We modified the text to clearly distinguish our speculations.

### **References**

Zawierucha, K., Buda, J., Novotna Jaromerska, T., Janko, K., and Gąsiorek, P.: Integrative approach reveals new species of water bears (*Pilatobius*, *Grevenius*, and *Acutuncus*) from Arctic cryoconite holes, with the discovery of hidden lineages of *Hypsibius*, *Zoologischer Anzeiger*, 289, 141–165, doi: 10.1016/j.jcz.2020.09.004, 2020.