

Biogeosciences Discuss., referee comment RC1  
<https://doi.org/10.5194/bg-2022-198-RC1>, 2022  
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## **Comment on bg-2022-198**

Anonymous Referee #1

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Referee comment on "Insights into cryoconite community dynamics on the Forni Glacier (Italian Alps) throughout the ablation season" by Tereza Novotná Jaroměřská et al., Biogeosciences Discuss., <https://doi.org/10.5194/bg-2022-198-RC1>, 2022

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### **General comments:**

An interesting and generally well written study on invertebrates (particularly tardigrades) and their relationship to photoautotrophic species in cryoconite on the glacier surface.

### **Specific comments:**

#### **Abstract**

Line 23: "the" terrestrial cryosphere

Line 24: how many cryoconites were sampled?

Line 33: can be reduced to "Some phototrophic taxa"

Line 36: give statistic

#### **Introduction**

Line 47-52: I would actually begin with a topic sentence on glaciers, and then how quickly they are changing, to what diversity glacier host on their surfaces, and then why this matters.

Line 84-85: a little unclear, suggest rewording to: "together with how tardigrades interact with the food web".

### **Materials and Methods:**

Line 126: define ablation zone where it is first mentioned in the intro

Line 132: "stainless steel" spoon

Line 130: how many cryoconites were sampled?

### **Results:**

Line 286: Is there a percentage or number of rotifers you can include here for reference?

Line 287-289: Would be useful to denote which species in the table belong to which family

Line 309: change to "however, no seasonal trend in the lower part was observed" for clarity

### **Discussion:**

Line 249: term "wash up" is a little vague- do you mean that ice marginal melt and other melt dynamics result in washing away of DOM?

Line 472: due to less stability

## Figures/Tables:

Figure 1: Would be nice to see where each sample lies within the upper and lower part- would it be possible to add their locations on the map?

Table 1: to clarify, this table is showing in which samples there is at least one of the species shown?

Table 2: Unsure if the repeated line "upper sampling area" is meant to be there, and why is log (Chlorophyta biomass) present twice? Suggest showing results from modelling season as well.

Figure 5: would it be possible to include a legend with the figure denoting upper and lower zone samples?

Figure 7: Like Figure 5, I think a legend underneath each RDA would be nice, just to cut down on text in the caption

Please also note the supplement to this comment:

<https://bg.copernicus.org/preprints/bg-2022-198/bg-2022-198-RC1-supplement.pdf>