

Interactive comment on “Stable carbon isotope as a proxy for the change of phytoplankton community structure in cascade reservoirs from Wujiang River, China” by B. Wang et al.

Anonymous Referee #1

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General comments The paper "Stable carbon isotope as a proxy for the change of phytoplankton community structure in cascade reservoirs from Wujiang River, China" by Wang et al., analyzed stable carbon isotope of DIC, POC and phytoplankton and some environmental factors in reservoirs of Wujiang River, China. Particularly, the authors correlated phytoplankton composition to its stable carbon isotope $\delta^{13}\text{C}$ and concluded that the latter can be used as a proxy to reveal phytoplankton community structure although the authors also stated that further studies are needed to confirm above relationship. The topic is interesting, however, the major flaw is the data about phytoplankton which was only identified to phylum, not even to the genus, and relationship between phytoplankton composition and the $\delta^{13}\text{C}$ or ϵ_p is too weak to reveal

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phytoplankton community structure. From Fig. 5 one can see that the percentage of Bacillariophyta to the total phytoplankton reflected by the same $\delta^{13}\text{C}$ of PPC can range up to more than 90% which says nothing to phytoplankton community structure, in my opinion. However, the paper does content some good data and I suggest the authors to focus on the variation of $\delta^{13}\text{C}$ of POC and its relation to DIC, phytoplankton and other factors.

Specific comments p833, line 23, limnological . . . should be ..lentic p835, line 21, when using 64 μm mesh net to collect phytoplankton, some species may be lost as they are smaller than the mesh size. p837, line 6, Cyanophyta (names for all phyla) has no need to be italic. 0837, line 19, aquatic phytoplankton. . . phytoplankton. Fig. 4 is repeated from Table 2, you can just add the percentage in table 2

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