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Interactive comment on “The role of mixotrophic protists in the biological carbon pump” by A. Mitra et al.

A. Mitra et al.

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Thank you for your comments.

We have now included the following paragraph (page 3, line 5) addressing this issue (this issue has also been discussed in detail in Flynn et al., 2013).

"Consistent with our previous arguments (Flynn et al., 2013), osmotrophy has not been included here as a discriminatory characteristic for mixotrophy in protists. The primary reason is that osmotrophy appears to be ubiquitous in these organisms, be they protists traditionally identified as phytoplankton or microzooplankton (Sanders 1991, Burkholder et al. 2008). For example, non-phagotrophic protists, such as diatoms, typically require organics such as vitamins (i.e., they are auxotrophic; Croft et al. 2006).

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Furthermore, osmotrophy alone does not have a direct powerful impact on trophic dynamics, as does the act of killing and engulfing a prey item through phagocytosis (Thingstad et al. 1996)."

Interactive comment on Biogeosciences Discuss., 10, 13535, 2013.

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