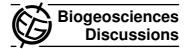
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Interactive Comment

Interactive comment on "Methanotrophic activity and diversity in different <i>Sphagnum magellanicum</i> dominated habitats in the southernmost peat bogs of Patagonia" by N. Kip et al.

Anonymous Referee #1

Received and published: 3 November 2011

This is a nice paper that describes methanotroph diversity in Sphagnum dominated peatbogs in Patagonia. This has been achieved by studying 16S rRNA gene sequences and particulate methane monooxygenase sequences using a comprehensive pmoA microarray plus complementary pmoA clone library analysis. The work has been carefully done and the manuscript is clear and concise. The only problem I have with the work is that the authors perhaps play down the potential importance of facultative methanotrophs in this environment. There are now primer sets specific for the facultative methanotroph Methylocella and if these have not been used, the possibility of their

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use in the future could be mentioned. Also, the fact that mmoX was not detected is surprising (again there are other mmoX primer sets that could be tried, including for Methylocella) given the abundance of Methylosinus and Methylocystis, many of which have a soluble methane monooxygenase. So do some Methylococcus and Methylomonas species. This is at least worth a comment.

Interactive comment on Biogeosciences Discuss., 8, 9357, 2011.

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