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Comment

## ***Interactive comment on “Microbial food web dynamics along a soil chronosequence of a glacier forefield” by J. Esperschütz et al.***

**Anonymous Referee #2**

Received and published: 29 April 2011

The paper describes nicely the incorporation of carbon from  $^{13}\text{C}$  labeled litter in the microbial PLFA and PLEL. The study was performed at a chronosequence of sites with retreating ice giving a time series of soil formation. In general I like the paper very much; it is well written and conclusive. However, there is one major point that does not allow publishing the paper in its present form.

The grouping of the lipids is mainly base on chemical characteristics of the components, which is not likely to be a common basis for grouping. I can only see two options to overcome this problem. Either the authors prove by statistical methods that this grouping is based on the common behavior of the individual lipids or they adjust their grouping to the commonly agreed groupings (Gram+(actinomycetes), gram-, general microbial markers AMF, Fungi, Protozoa). The literature holds large set of data that

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support a grouping base on the appearance of the lipids in reference material (e.g. Frostegard, Baath, Zelles,..). As this involves major changes I suggest rejecting the paper and encouraging resubmission.

Additional minor points

General

Give the measured raw data (amount and  $^{13}\text{C}$ ) as supplementary material.

Please state more clearly at all figure and table Headings which samples were investigated

Specific.

P1282I20-24 What happened to the root material and to small remains of litter that passed through the net

P1284I16 Give a short description of the method by Gattinger and demonstrate that this method can be used to measure isotopes

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Interactive comment on Biogeosciences Discuss., 8, 1275, 2011.

**BGD**

8, C765–C766, 2011

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