

Interactive comment on “Contribution of understorey vegetation and soil processes to boreal forest isoprenoid exchange” by Mari Mäki et al.

Anonymous Referee #3

Received and published: 29 November 2016

The manuscript presents an interesting study of the influence of understory on boreal forest isoprenoid fluxes, including an approach enabling investigation of separate factors such as vegetation vs. bare soil and in-growth of microbes and fungi. Generally, the manuscript, including figures and tables, presents the results in a clear and straightforward way. I have listed my specific comments below.

Specific comments:

Abstract. Most sentences start with "we" or "our". Please try to vary this. In line 17 "Our results show that" can be removed.

Page 2 lines 27-32: This is a very long sentence with a lot of information. Please

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rephrase.

Page 3 Line 9: "Photosynthesized carbon through the roots was shown to currently contribute 54% of soil respiration". Please clarify what you mean here.

P3 L12: "The main monoterpene sources are suggested to degrade litter" Do you mean "to be degraded litter"?

P3L21-22: rephrase to "from primary metabolism and energy generation of decomposers".

P4 L15-16: Do you mean fluxes from soil?

P6 L24: Remove "&". Please state details of the GC-MS method including at least column and temperature program.

P8 L19: Information about where the measurements were situated should be moved to experimental section. How far away were these measurements from the study area?

P8 L27: I suggest to explain the abbreviations for the study areas the first time they appear in the text.

P8 section 3.1: It would be useful for the reader if you spend some time in the first section to give an overview of the data set such as ranges of fluxes, before discussing correlations. This could include moving some text from 3.2 to 3.1.

P9 L6: discovered -> observed.

P9 L13: "Instead" does not seem like the right word here.

P9 L13-19: Please try to keep sentences about the same group of compounds together, to improve readability.

P11 L5-10: This can be removed since this is clear from the previous sections.

P11 L35: significant -> considerable (unless the authors did a statistical test of this).

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P12 L7: Remove "references".

P13 L8: "absorbed" should be changed to "adsorbed".

P14L19: "disappear" is not the right word here. Use "be removed" or similar instead.

P15 L1-2: Could the fan affect the removal rate/deposition of VOC in your chamber?

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