

## ***Interactive comment on “Climate impacts on deglaciation and vegetation dynamics since the Last Glacial Maximum at Moossee (Switzerland)” by Fabian Rey et al.***

**Fabian Rey et al.**

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We thank the reviewer for the very positive feedback and the minor suggestions. We considered all comments and suggestions carefully. Below, we reply to all comments of the reviewer.

“Line 31: I prefer not splitting infinitives, so suggest ‘to modify irreversibly’.”

We changed this as suggested in the text.

“Line 74: Change “with predominantly sandstones between” to ‘with predominantly sandstone in between’. Change “north” to ‘north’ and “South” to ‘south’”

C1

We accepted all corrections and changed them accordingly.

“Line 76: Change “West” to ‘west’ and “East” to ‘east’”

We corrected this two points as suggested.

“Line 90: Hyphenate “lake shore villages” (‘lake-shore villages’)”

We changed this as suggested.

“Line 94: ‘centre’ rather than “center””

We changed ‘center’ (American English) to ‘centre’ (British English) as the reviewer prefers BE.

“Line 96: Change “in town” to ‘in the town’”

We added ‘the’ as suggested.

“Line 97: ‘centre’ rather than “center””

Again AE vs. BE. We changed it to ‘centre’ as suggested (see above).

“Line 103: Change “an UWITEC” to ‘a UWITEC’”

We corrected this accordingly.

“Line 127: Change “assess” to ‘estimate’”

We exchanged this in the text.

“Line 146: Change “data was” to ‘data were’”

We corrected this mistake.

“Line 150: Also Birks et al. (2015) Rev Pal Pal for a review.”

We added this additional reference in the text.

“Lines 154-159: I have reservations about PRI/PIE and using the residuals + PRI. See

C2

Birks et al. (2016).”

We thank the reviewer for this critical remark. We are aware that the use of the different biodiversity estimates in palaeoecology is intensely debated. The procedure we followed has been regularly implemented (see Colombaroli and Tinner, 2013; Schwörer et al., 2015; Rey et al., 2019a). We also show that PRI and DE-PRI generally show similar trends when PIE is high and we give explanations why PRI and DE-PRI in some cases may differ (see lines 297-303). Parts of the presented biodiversity estimations have been previously published (see Rey et al., 2019a) and to be able to compare the complete data set, we would like to keep the estimates as they are.

“Line 165: Personally, I would have used DCCA with depth as the constraining variable (Birks 2007, VHA) as pollen data are time-ordered. DCA does not take account of the depth. It does not make much difference but DCCA is for the purist.”

We thank the reviewer for this remark. We indeed calculated several options through and decided to show the results for the DCA which is more widespread and generally better known than DCCA.

“Line 224: Change “releasing” to ‘leading to’”

We exchanged this as suggested.

“Line 228: Change “released” to ‘resulted in’”

We changed this accordingly.

“Line 241: Change “reestablishment” to ‘re-establishment’”

We changed this in the text.

“Line 273: Change “land use phases” to ‘land-use phases’”

We hyphenated this in the text.

“Line 284: Change “favoring” to ‘favouring’”

C3

Once more AE vs. BE. We changed it to ‘favouring’ as suggested.

“Line 286: Change “land use phases” to ‘land-use phases’”

We changed this accordingly (see above).

“Line 332: Prefer ‘to form quickly’ rather than “to quickly form’”

We changed this to the reviewer’s preference.

“Line 333: Add a comma after “First” (‘First, arboreal . . .)’”

We added a comma in the text.

“Line 349: Delete “first’”

We deleted the word “first” as suggested.

“Line 350: Change “dwarf birch thickets” to ‘dwarf-birch thickets’”

We hyphenated this in the text.

“Line 357: Change “North” to ‘north’”

We corrected this in the text.

“Line 359: Change “wide-spread” to ‘widespread’”

We changed this accordingly.

“Line 370: Add ‘and’ before “Rangifer’”

We added the word “and” in the text.

“Line 376: Change “Betula pendula” to ‘B. pendula’”

We changed this as suggested by the reviewer.

“Line 378: Add ‘the’ before “tree’”

We inserted the word “the” in the text.

C4

“Line 416: Change “favored” to ‘favoured””

We changed this as suggested.

“Line 429: Change “land use history” to ‘land-use history””

We changed this accordingly.

“Line 431: Add ‘the’ before “first””

We inserted the word “the” in the sentence.

“Line 432: Change “falls” to ‘fall””

We corrected this in the text.

“Line 438: Change “land use” to ‘land-use””

We changed this as suggested.

“Line 443: Change “land use phases” to ‘land-use phases””

As above: we changed this in the text.

“Line 445: Change “land use phases” to ‘land-use phases””

Again: we changed this in the text.

“Line 453: Change “favorable” to ‘favourable””

Again AE vs. BE. We used “favourable” as suggested by the reviewer.

“Line 459: Add ‘the’ before “driving””

We added the word “the” in the text.

“Line 466: Change “reestablish” to ‘re-establish””

We changed this in the text.

“Line 469: Change “drought resistant” to ‘drought-resistant””

C5

We changed this as suggested.

“Line 480: Do you have *Betula humilis*?”

We thank the reviewer for this question. In fact, *Betula humilis* regularly occurred in Switzerland in the past (like *Betula nana*). However, since we do not have the plant macrofossils from the species and the pollen cannot be distinguished from *Betula nana* (unlike tree *Betula* such as *Betula pubescens* and *Betula pendula*), we deleted “*Betula humilis*” in the text.

“Line 515: Change “identification” to ‘identifications””

We changed this accordingly.

“Line 910: Change “neolithic” to ‘Neolithic””

We corrected this mistake.

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Interactive comment on *Clim. Past Discuss.*, <https://doi.org/10.5194/cp-2019-121>, 2019.

C6