

Thank you for accepting our manuscript to *Esurf*. In response to the editor's technical corrections, we have made the following changes, with all line numbers corresponding to the final uploaded manuscript.

*Line 180 (tracked changes version) - add a note after Equation 2 to spell out  $f_{bio}$  and  $f_{petro}$  (i.e. "where  $f_{bio}$  and  $f_{petro}$  are the fraction of organic carbon from biospheric and petrogenic sources", or similar)*

We added the editor's suggested definition for  $f_{bio}$  and  $f_{petro}$  in L120 after Eq. 2.

*Line 560 - the sentence implies that woody material in has been specifically sampled and targetted. Please rephrase. Also, could this be plant debris, not necessarily wood? (also see elsewhere where the term wood is used).*

We realize that the previous phrasing implied that we specifically targeted and sampled wood at a broader range of locations than where we sampled floodplain sediment. To address this confusion, we changed L369-370 to read: "This observation matched the range of aged wood and plant debris found at sediment sampling locations." We also changed "woody debris" to "wood and plant debris" throughout the manuscript and in Fig. 4.