

'The import and export of organic nitrogen species at a Scottish ombrotrophic peatland' R.M. McKenzie et al, bg -214-565

Address to the comments submitted by Referee 2 on the 2nd of March 2016:

REVIEWER's COMMENT: Perhaps the authors could state in their introduction and objectives that they explicitly wanted to address less polar DON compounds that may be formed as aerosol in the atmosphere and determine its dissolution in precipitation water and its retention during the passage through the peat?

AUTHOR REPLY: We weren't explicitly looking at the fate of aerosol derived compounds in precipitation and or the retention in peat. It is mentioned elsewhere that the sources of DON in precipitation are different to DON found in the stream. We did compare possible sources of the only identifiable (by name) compounds found in the precipitation and stream samples. We have changed the last sentence of the introduction to reflect this:

"In addition to this, an attempt was made to identify some of the less polar individual DON compounds present in a selection of precipitation and stream samples. A comparison between possible sources of compounds detected in both the precipitation and stream water was also discussed". (line 74 – 77)

REVIEWER's COMMENT: The authors refer to the review of Schulten and Schnitzer (1998) when discussing the nature of DON and the occurrence of pyrrole in soil water. In 2013 Leinweber et al. published a more recent review of organic N compounds in soil, which the authors might want to consider for their manuscript (Leinweber et al., 2013. *Advances in Understanding Organic Nitrogen Chemistry in Soils Using State-of-the-art Analytical Techniques*. *Advances in Agronomy* 119: 83-151, DOI: 10.1016/B978-0-12-407247-3.00002-0).

AUTHOR'S REPLY: Thank you for suggesting to add this reference, which we have done (line 456).

ADDITIONAL EDITS: Please note that the correspondence details for the lead author have been changed.