

Correction of our answer to the comments of Anonymous Referee #2

In an internal revision process we discovered a unit conversion error in the spreadsheet used to calculate CH₄ saturation concentrations in the sediment. To correct this mistake, we updated the table that was shown earlier in the answer to Referee #2:

Profil	T	Water depth (m)	Atmospheric pressure on sampling day (kPa)	Saturation conc. at the sediment-water interface (μmol/l)	Saturation conc. in 30 cm sediment depth (μmol/l)
A	7.5	0.7	102.2	2408	2473
B	12	1.1	101.7	2319	2380
C	16.6	0.6	101.1	2066	2122
D	17.1	1.2	95.4	2055	2111
E	15.8	0.7	101.8	2243	2304

The respective paragraph in the paper was changed to:

“Pore-water CH₄ concentrations did not exceed CH₄ saturation concentrations of more than 2 mmol L⁻¹ (calculated using PhreeqC (Parkhurst & Appelo, 2013) for the mean surface water temperature during the sampling periods and respective water depths at each site) with only one exception. In profile C, a CH₄ concentration of 19.8 mmol L⁻¹ was measured in 27 cm depth (not displayed in Fig. 3 since it is far out of the axes’ range) which exceeds the saturation concentration by far and implies direct contact with a gas bubble. In addition, it must be mentioned that bubble formation is also possible at lower CH₄ partial pressures if microstructures are present or if CH₄ production occurs in small-scale local hotspots.“