



Supplement of

Diatom responses and geochemical feedbacks to environmental changes at Lake Raichuagytygn (Far East Russian Arctic)

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Supplementary figures

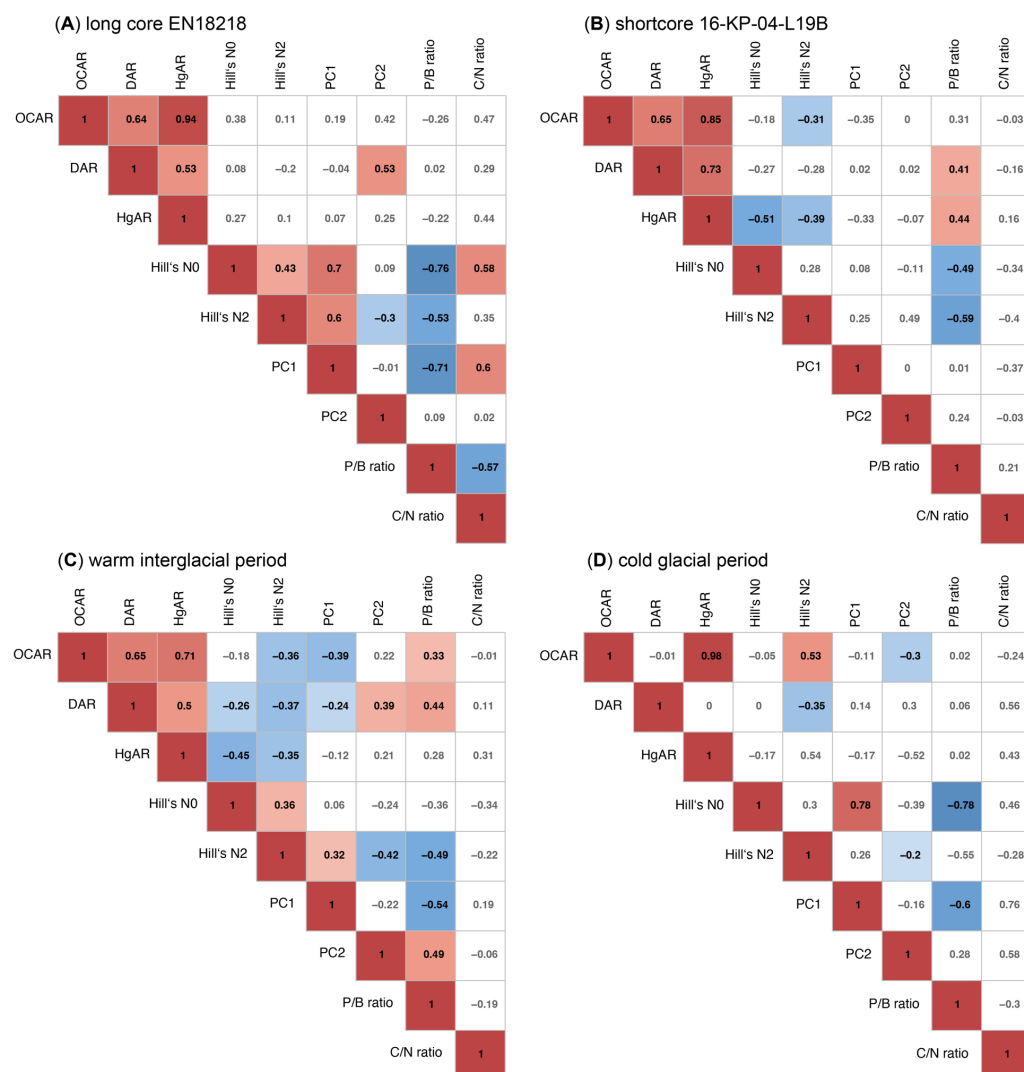


Figure S1: Pearson correlation matrix between organic matter, diatom indices, and mercury variables. Red, positive correlations; blue, negative correlations. p values correction of <0.05 was applied to assign colors only to significant correlations. Insignificant correlations shown as grey numbers within white cells. Panels A and B represent correlations within the individual core records. Panels B and C represent correlations in the warm period including the short core and the Holocene part of core EN18218 (C), and the cold period restricted to the pre-Holocene part of core EN18218 (D).

Supplementary tables

Table S2: Hydrochemical parameters of Lake Rauchuagytgyn, measured from water retrieved 19th July 2018. Averages values from three lake surface locations adopted from Vyse et al. (2021).

Parameter	Value
Secchi depth (m below water surface)	3.9
Dissolved organic carbon (DOC) (mg L ⁻¹)	0.89
Conductivity (μS cm ⁻¹)	85.5
pH	7.81
Water temperature (°C)	7.9
Fluoride (mg L ⁻¹)	< 0.05
Chloride (mg L ⁻¹)	0.81
Sulphate (mg L ⁻¹)	29.69
Bromide (mg L ⁻¹)	< 0.05
Nitrate (mg L ⁻¹)	0.51
Phosphate (mg L ⁻¹)	< 0.10
Al (ug L ⁻¹)	< 100
Ba (ug L ⁻¹)	< 20
Ca (mg L ⁻¹)	12.0
Fe (ug L ⁻¹)	< 100
K (mg L ⁻¹)	0.31
Mg (mg L ⁻¹)	1.98
Mn (ug L ⁻¹)	< 20
Na (mg L ⁻¹)	0.88
P (mg L ⁻¹)	< 0.1
Si (mg L ⁻¹)	1.35
Sr (ug L ⁻¹)	61

References

Vyse, S. A., Herzsuh, U., Pfalz, G., Pestryakova, L. A., Diekmann, B., Nowaczyk, N., and Biskaborn, B. K.: Sediment and carbon accumulation in a glacial lake in Chukotka (Arctic Siberia) during the Late Pleistocene and Holocene: combining hydroacoustic profiling and down-core analyses, *Biogeosciences*, 18, 4791-4816, 10.5194/bg-18-4791-2021, 2021.