



*Supplement of*

**Seafloor chemosynthetic habitats and AOM-influenced sediment microbiome at a cold-water coral site off the Vesterålen coast, northern Norway**

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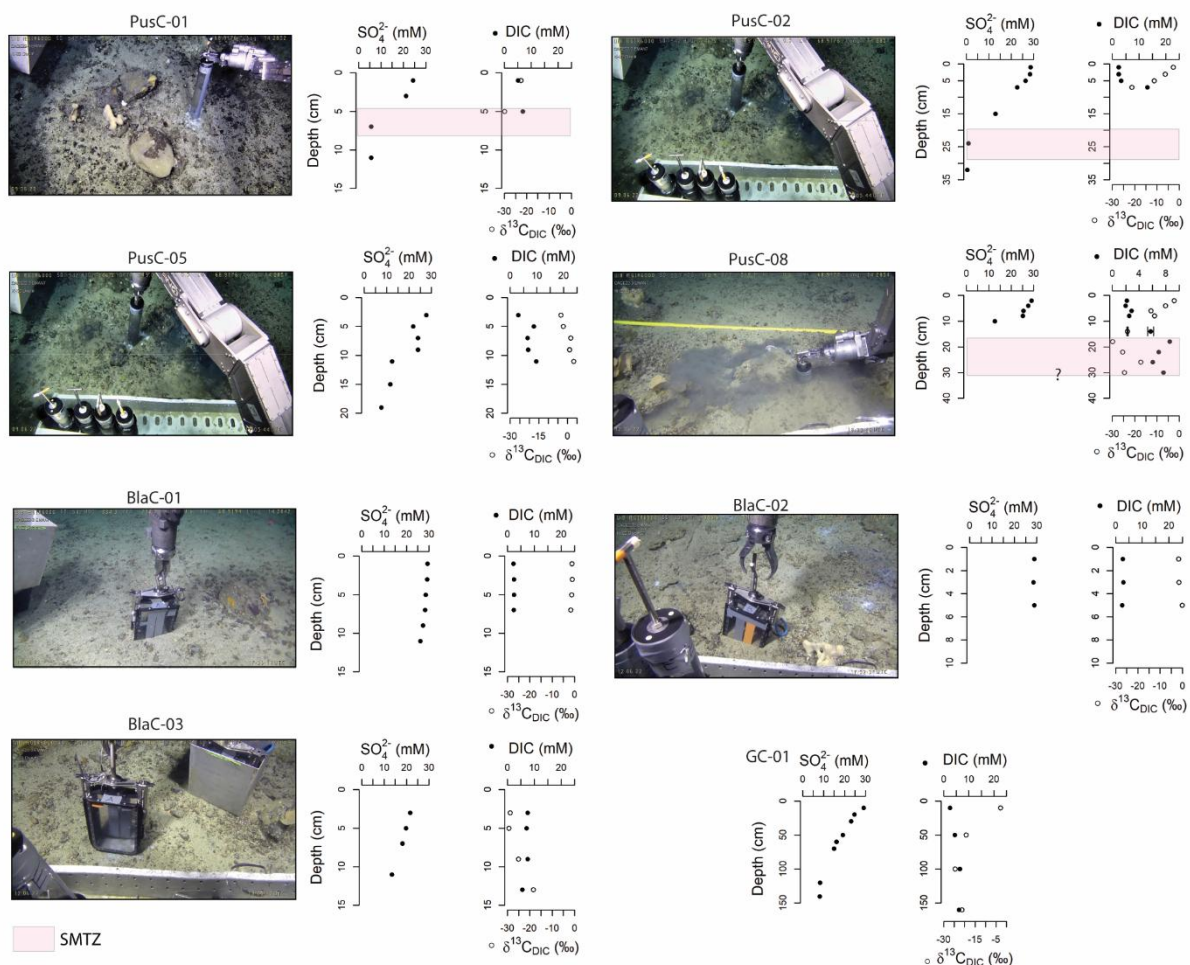


Fig. S1. Seafloor images and pore water geochemical profiles of all the sediment cores investigated in this study (PusC-04 and PusC-07 are shown in Fig. 3 of the main text). Locations are shown on the microbathymetry of Fig. 1C and on the mosaics and habitat maps of Fig. 2 (see main text). The sulfate-methane transition zone (SMTZ) is marked with pink color and identified in correspondence of a drop in sulfate concentrations and/or a decrease in  $\delta^{13}\text{C}_{\text{DIC}}$  coupled with an increase in DIC concentrations. Question mark at the base of the SMTZ in PusC-08 indicates uncertainty on the interpretation of its thickness due to missing pore water data. Error bars refer to standard uncertainty and correspond to one standard deviation.

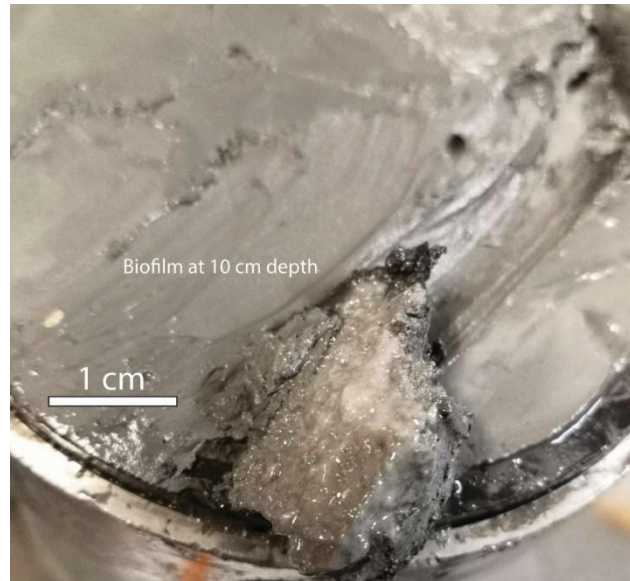


Fig. S2 Photograph of a white biofilm discovered onboard during slicing of PusC-08.

Core	Depth in the core (cm)	CH <sub>4</sub> (mM)
PusC-01	26	2.4
PusC-02	57	3.7
PusC-04	54	1.3
PusC-05	35	2.7
PusC-07	45	2.8
PusC-08	47	2.0
BlaC-01	10	0.005
BlaC-01 replicate	10	0.002
BlaC-02	5	0.011
BlaC-03	15	1.2

Table S1 Methane concentration in headspace gas samples from sediment cores.