

Supplementary Material

1 Supplementary Figures

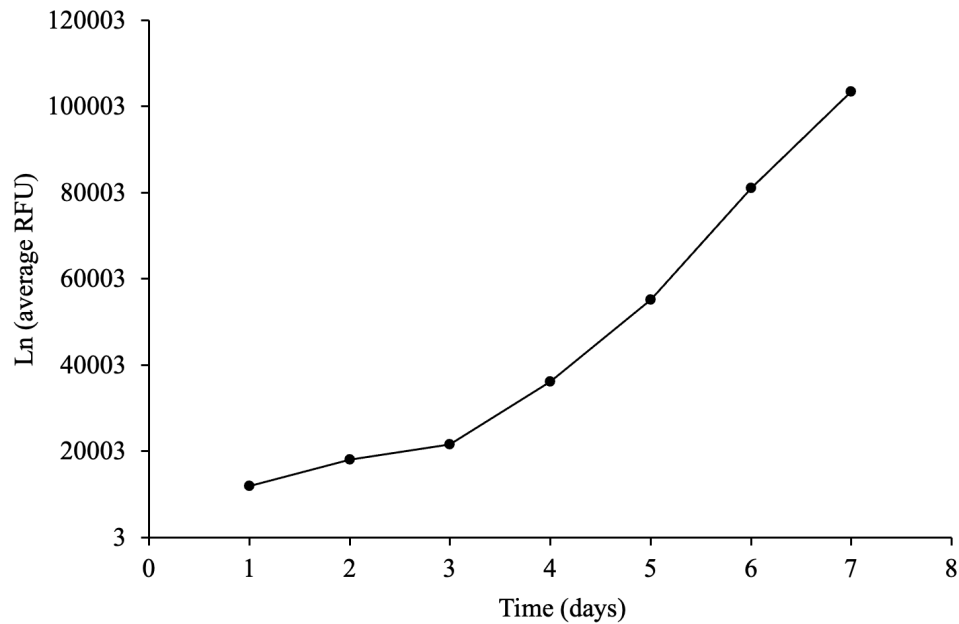


Figure 1: Growth curve of a VM2 cultured ice algal community (**Definition Sections 1, 2.1.1 and 2.2.1**). Average ($n = 5$) measurements. RFU stands for raw fluorescence unit. The specific growth rate (μ_t) was 0.36 d^{-1} and was calculated using the following equation applied by Zhang et al. (1999): $\mu_t = \ln(Nt2/Nt1)/(t2 - t1)$, where N_{t1} and N_{t2} represent algal Chl a determined by the average raw fluorescence of the samples at time $t1$ and $t2$, respectively.



Figure 2: Picture from UHI (**Definitions Section 2.1.2**) taken by Janina Osanen, showing the lack of clearly defined skeletal layer at TF1.

2 Supplementary Tables

Table 1: Average ($n = 3$) relative abundance of dead pennate diatoms (i.e., empty frustules) to the community composition with respective standard deviation for the VM2 cultured ice algal community (**Definitions Sections 1, 2.1.1 and 2.2.1**) after growing for 4 h, 24 h and 168 h in two salinity treatments, 33 (control) and 10 (lowered salinity).

		33	10
Dead pennate diatoms (%)	4 h	1 ± 1	8 ± 5
	24 h	3 ± 1	10 ± 5
	168 h	1 ± 1	9 ± 4