

## Supplementary material

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Table SI. List of PPCPs studied and their properties

Name	Abbreviation	Molecular weight (g·mol <sup>-1</sup> )	Octanol / water partition coefficient
Benzophenone <sup>1</sup>	BP	182.222	3.18
Benzophenone-3 <sup>2</sup>	BP-3	228.247	3.79
Carbamazepine <sup>3</sup>	CBZ	236.274	2.45
Caffeine <sup>4</sup>	CF	194.194	-0.07

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19 Table SII. List of target ions (m / z) of compounds used for analysis

Analyte	Target Ion, m / z
BP	105
BP-3	151
CBZ	193
CF	194

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21 Table SIII. Parameters for river water during phase of biofilm development

Parameters	I cycle		II cycle		III cycle		IV cycle	
	I day	VII day	I day	VII day	I day	VII day	I day	VII day
pH	8.1	8.2	8.3	7.5	8.02	8.1	8.1	8.02
Conductivity, $\mu\text{S}\cdot\text{cm}^{-1}$	390	396	394	392	377	393	351	342
Temperature, $^{\circ}\text{C}$	17	23	26.3	24.2	23.5	26	19	26
KMnO <sub>4</sub> consumption, $\text{mg}\cdot\text{L}^{-1}$	5.8	2.5	9	6.3	14	12.6	11.4	10

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24 Table SIV. Results of weathering tests in glass beakers

Phase of experiment	BP		BP-3		CF		CBZ	
	Night- day circle	Dark	Night- day circle	Dark	Night- day circle	Dark	Night-day circle	Dark
B1	83	25	15	54	54	47	Not calculated	Not calculated
B2	90	29	7	53	54	51	0	0

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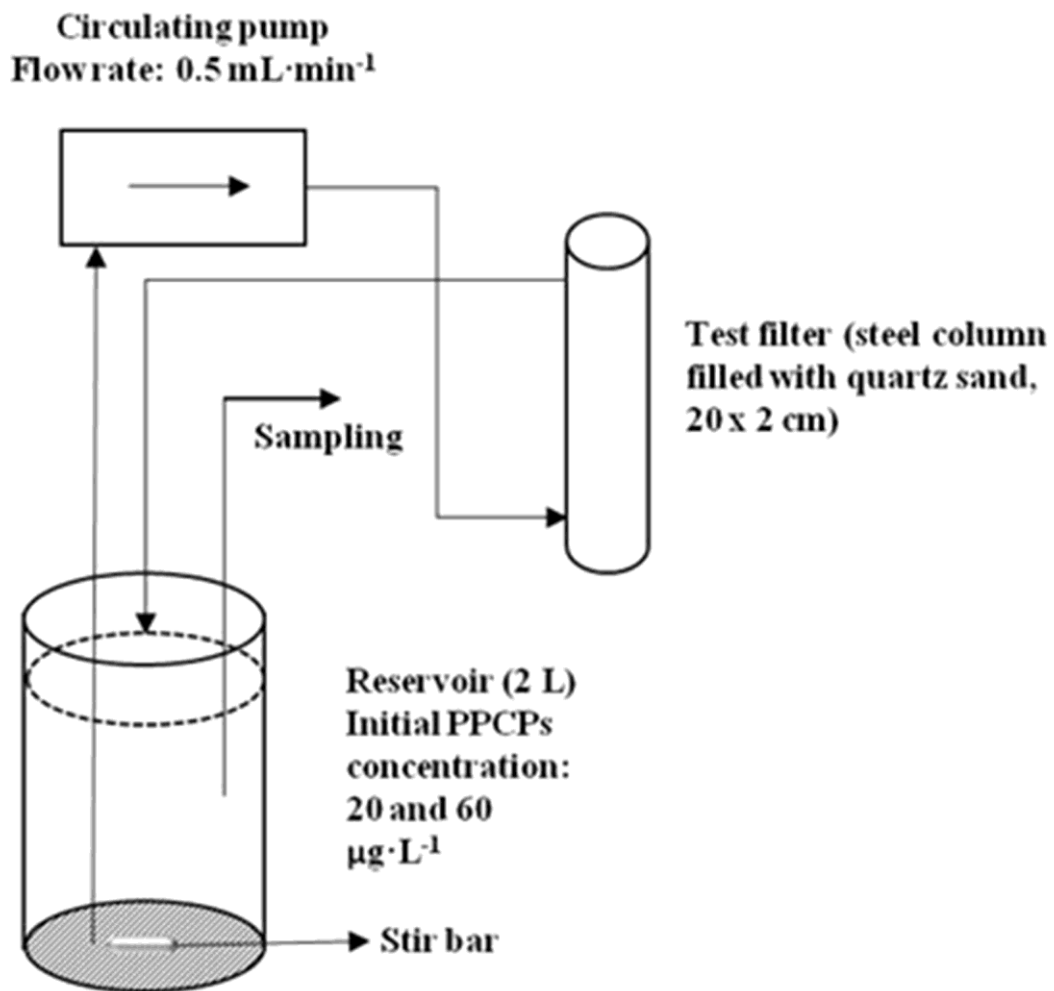
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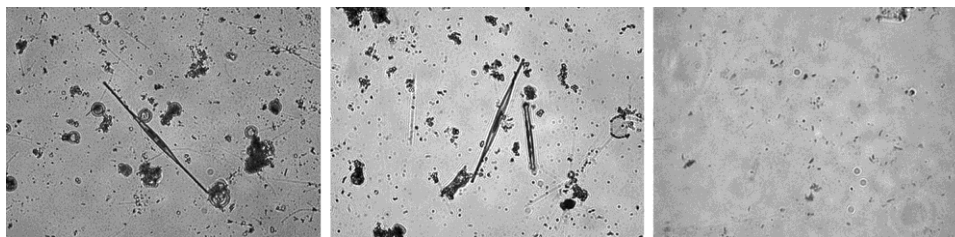
33 Figure S1. Biologically test filter set-up



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49 Figure S2. Images of stained samples showing bacteria (coccal and rod forms) and diatoms

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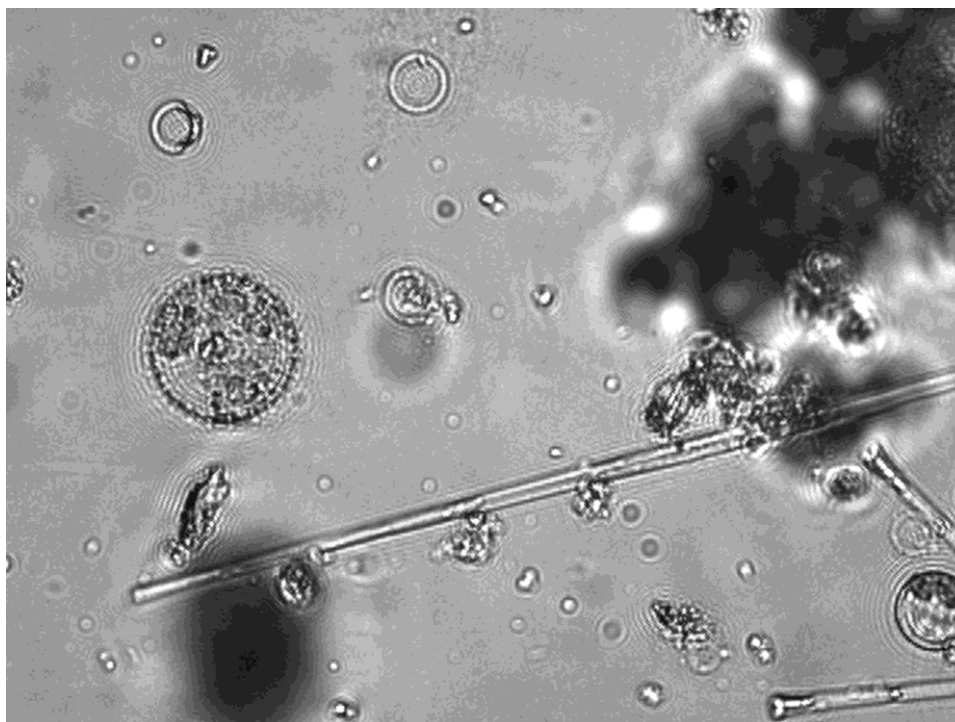


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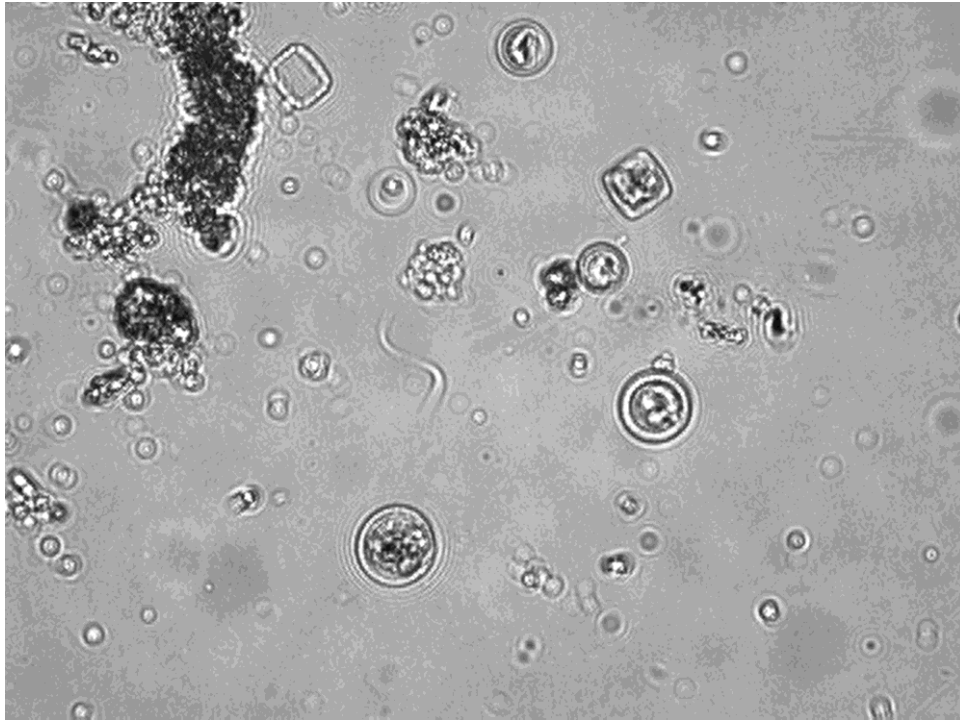
54 Figure S3. Images of native samples showing diatoms present in the biofilm



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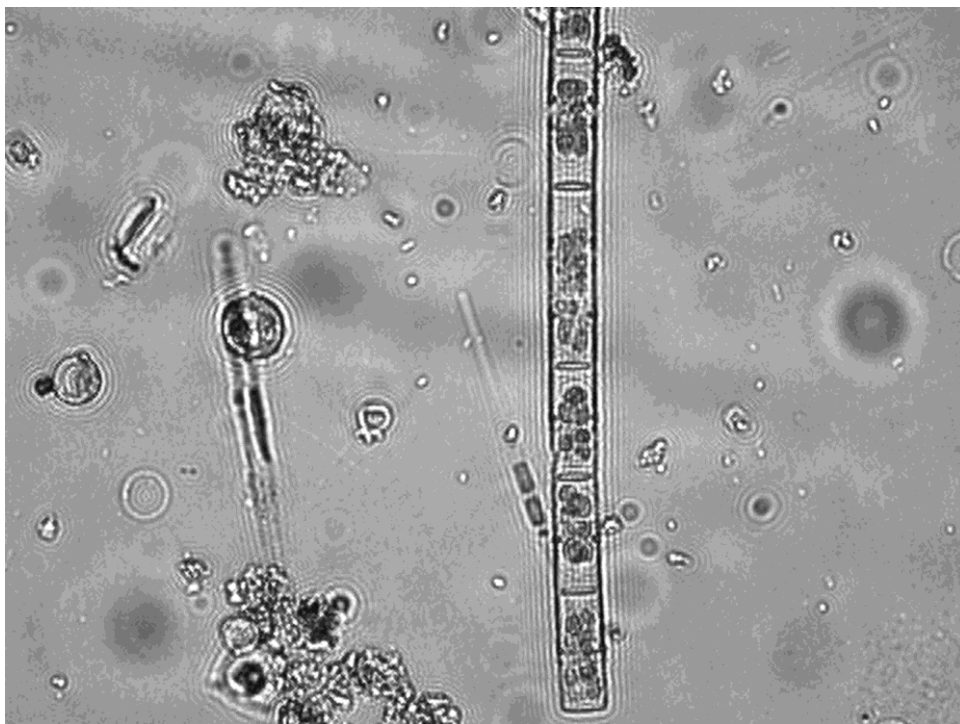
a) *Synedra sp.*



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*b) Cyclotella sp.*

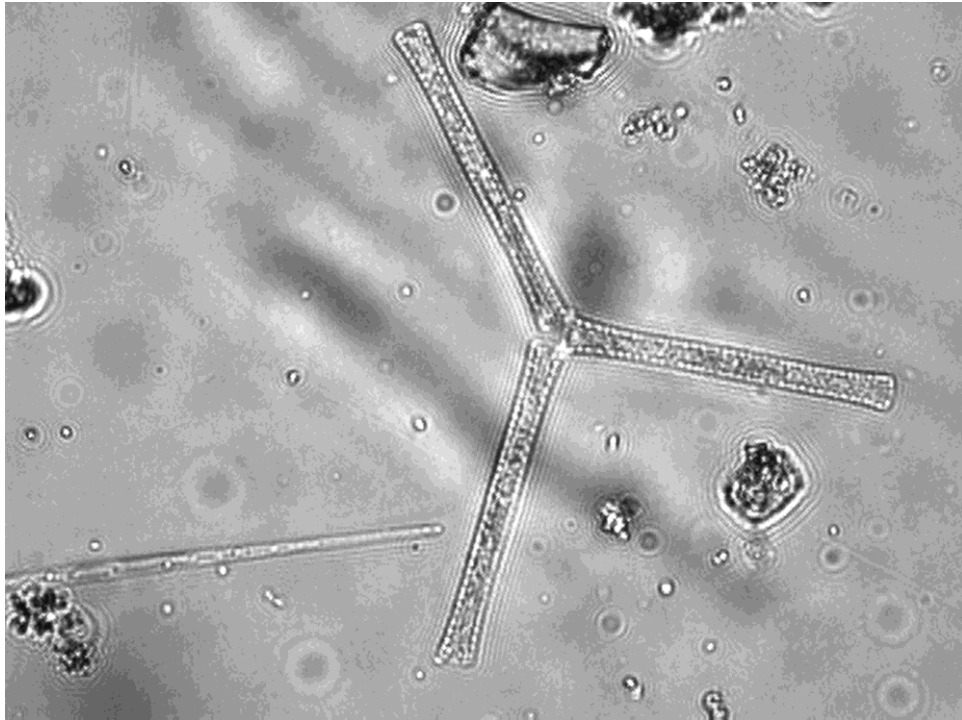


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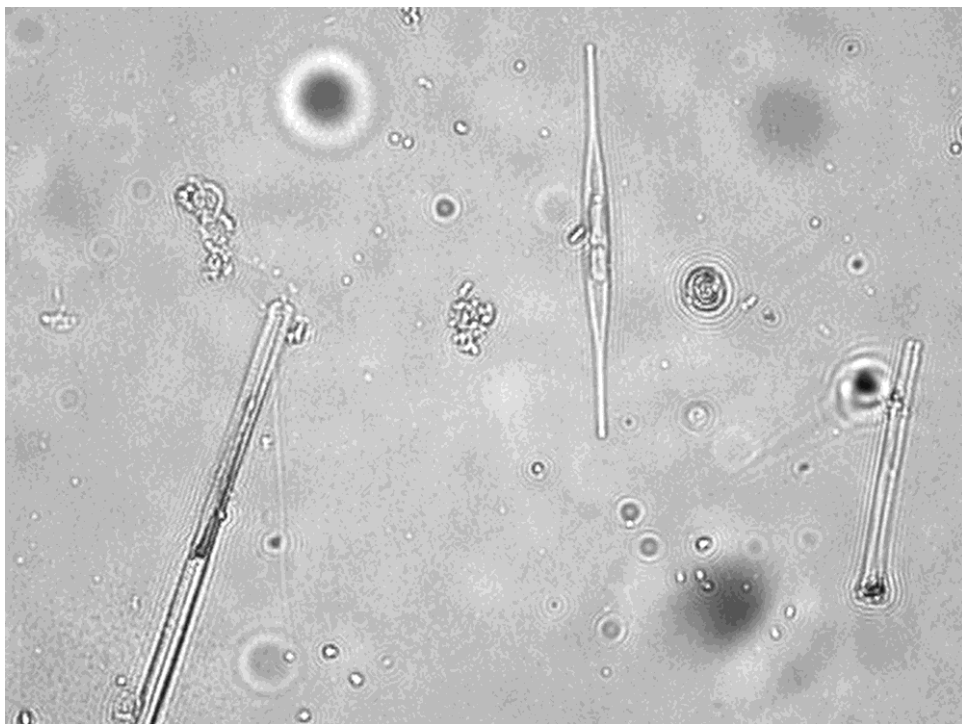
*c) Melosira sp.*



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*d) Asterionella sp.*



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*e) Nitzschia sp.*