

Table S1: Equations used to calculate stage specific growth rates of sac spawning and broadcast spawning copepods. Model A: Hirst & Bunker (2003), model B: Hirst & Lampitt (1998), model C: Huntley & Lopez (1992).

		Copepod growth rate model		
		Hirst & Bunker (2003) (A)	Hirst & Lampitt (1998) (B)	Huntley & Lopez (1992) (C)
Sac spawners	Nauplii + copepodites	$\log_{10}g = 0.0182[T] - 0.163[\log_{10}BW] - 1.528$	$\log_{10}g = -1.4647 + 0.0358[T]$	$g = 0.045e^{0.111[T]}$
	Adults	$\log_{10}g = 0.0182[T] + 0.193[\log_{10}BW] + 0.195[\log_{10}Chla] - 1.591$	$\log_{10}g = -1.7726 + 0.0358[T]$	$g = 0.045e^{0.111[T]}$
Broadcast spawners	Nauplii + copepodites	$\log_{10}g = -0.0143[T] - 0.363[\log_{10}BW] + 0.135[\log_{10}Chla] - 0.105$	$\log_{10}g = 0.0111[T] - 0.2917[\log_{10}BW] - 0.6447$	$g = 0.045e^{0.111[T]}$
	Adults	$\log_{10}g = 0.0125[T] - 0.230[\log_{10}BW] + 0.729[\log_{10}Chla] - 1.348$	$\log_{10}g = -0.6516 - 0.5244[\log_{10}BW]$	$0.045e^{0.111[T]}$

Table S2: Station coordinates (longitude and latitude in decimal degrees), station depth (m), temperature (temp, °C), salinity (sal), integrated total chlorophyll a and chlorophyll a >10 µm concentrations (chl a, mg m<sup>-3</sup>) averaged for the upper 50 m.

Station	Lon. (°E)	Lat. (°N)	Depth (m)	Temp. (°C)	Sal.	Total chl a (mg m <sup>-3</sup> )	Chl a >10 µm (mg m <sup>-3</sup> )
M1	28.132	78.107	278	-1.42	33.67	1.96	1.55
M2	29.719	76.960	235	-0.63	33.58	0.55	0.10
M3	29.872	76.496	282	1.01	34.15	0.90	0.14
M4	30.006	74.918	371	4.62	35.09	0.82	0.22

Table S3: Phytoplankton bloom stage and microbial parameters collected at the same stations M1-M4 during simultaneous studies by Wiedmann et al. (2014) and Franzè & Lavrentyev (2017). Stations 18, 19, 20 and 21 in Franzè & Lavrentyev (2017) are representative of M1, M2, M3 and M4, respectively. Bac: bacteria; HNF: heterotrophic nanoflagellates; Mz: microzooplankton; Dino: Dinoflagellates; M. rubrum: *Mesodinium rubrum*; MzP: microzooplankton secondary production; B: microzooplankton biomass. Biomass was converted from  $\mu\text{g C l}^{-1}$  to  $\text{mg C m}^{-3}$ . Microzooplankton secondary production was calculated from Franzè & Lavrentyev 2017 MzP:B ratio.

Station	Water type	Bloom stage	Abundance ( $\text{cell l}^{-1}$ )					Biomass ( $\text{mg C m}^{-3}$ )			MzP ( $\text{mg C m}^{-3} \text{d}^{-1}$ )	MzP:B
			Bac $\times 10^9$	HNF $\times 10^6$	Din $\times 10^3$	Ciliate $\times 10^3$	<i>M. rubrum</i> $\times 10^3$	Bac	HNF	Mz		
M1	Arctic	Late peak bloom	1.48	0.07	3.66	9.68	1.02	36.2	0.56	18.3	2.38	0.13
M2	Front	Late bloom	0.64	0.29	3.80	3.22	0.04	16.7	0.87	11.3	1.70	0.15
M3	Front	–	1.48	0.29	5.04	6.44	0.16	31.4	1.19	32.9	2.30	0.07
M4	Atlantic	Post bloom	0.52	0.31	3.08	13.62	8.66	15.9	1.90	93.3	17.73	0.19

Literature cited

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