

1 **Supplementary information:**

2 ***In situ* estimation of phytoplankton community growth rate inside dialysis membrane**

3 **bags: A microcosm experiment at a fish farm in the eastern Aegean Sea**

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5 Betül Bardakçı Şener¹, Eyüp Mümtaz Tıraşın²

6 ¹ Graduate School of Natural and Applied Sciences, Dokuz Eylül University, Tinaztepe

7 Campus 35160, Izmir, Turkey

8 ² Institute of Marine Sciences and Technology, Dokuz Eylül University, Inciralti-Balçova

9 35340, Izmir, Turkey

10 Corresponding author: Eyüp Mümtaz Tıraşın

11 e-mail: mumtaz.tirasin@deu.edu.tr

12 Betül Bardakçı Şener, ORCID ID: 0000-0002-7270-4213

13 Eyüp Mümtaz Tıraşın, ORCID ID: 0000-0003-2597-9609

14 **Table S1** List of phytoplankton species observed daily in the unfiltered (UF) and filtered (F) ambient seawater samples during the experiment
15 period. The percentage contributions of each species to the phytoplankton community for each day and filtered/unfiltered water, in terms of total
16 number of cells L⁻¹, are indicated with varying number of + signs: 0% < + < 5%, 5% < ++ < 10%, 10% < +++ < 15% and 15% < +++++, respectively

Class	Family	Taxa	Days													
			0		1		2		3		4		5		6	
			UF	F	UF	F	UF	F	UF	F	UF	F	UF	F	UF	F
Bacillariophyceae	Bacillariaceae	<i>Cylindrotheca closterium</i>	+++	++++	++++	++++	++++	+++	++++	++++	+++	++++	+++	+++	++++	+++
		<i>Pseudo-nitzschia</i> sp.	++	++	+	++	+	+	++	++	++	++	++	++	+	++
		<i>Nitzschia longissima</i>	+	+	+	+	+	+	+	++	++	++	++	++	+	++
	Bacteriastrium	<i>Bacteriastrium</i> sp.	+	+	++	+	+	++	+	+	+	+	+	+	+	+
	Chaetoceros	<i>Chaetoceros affine</i>	++	++	+	+	+	+	+	+	+	+	+	+	+	+
		<i>Chaetoceros decipiens</i>	++	++	+	++	+	++	+	++	+	+	+	+	+	++
	Climacospheniaceae	<i>Climacosphenia elongata</i>	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		<i>Climacosphenia moniligera</i>	+	+	+	+	+		+	+	+	+	+	+	+	
	Coscinodiscus	<i>Coscinodiscus</i> sp.	+		+	+	+	+	+	+	+	+	+	+	+	
	Hemiaulaceae	<i>Hemiaulus hauckii</i>	++	++	++	++	++	++	+	++	+	+	++	++	+	++
	Leptocylindraceae	<i>Leptocylindrus danicus</i>	+++	+++	++++	++++	++++	+++	+++	+++	+++	+++	+++	+++	+++	+++
	Licmophoraceae	<i>Licmophora</i> sp.	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	Pinnulariaceae	<i>Pinnularia</i> sp.	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	Rhizosoleniaceae	<i>Dactyliosolen phuketensis</i>	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		<i>Guinardia flaccida</i>	+	+	+	+	+	+	+	+	+	+	+		+	+
		<i>Guinardia striata</i>	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		<i>Rhizosolenia</i> sp.	+	+	+	+	+	++	+	+	+	+	+	+	+	+
	Striatellaceae	<i>Striatella unipunctata</i>	+	+	+	+	+	++	+	+	+	+	+	+	+	+
	Thalassionemataceae	<i>Thalassionema nitzschioides</i>	+	+	+	+	+	+	+	+	+	++	+	+	+	++
Dinophyceae	Ceratiaceae	<i>Neoceratium fusus</i>	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		<i>Neoceratium lineatum</i>	+	+	+	+	+	+	+	+	+	+	+	+	+	++
		<i>Neoceratium macroceros</i>	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	Dinophysaceae	<i>Dinophysis acuminata</i>	+	+	+	+	+		+	+	+	+	+	+	+	+
	Oxytoxaceae	<i>Corythodinium tessellatum</i>	+	+			+	+			+	+			+	+
		<i>Oxytoxum scolopax</i>	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	Podolampadaceae	<i>Podolampas elegans</i>	+	+	+	+		+	+				+	+	+	+

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		<i>Podolampas palmipes</i>	+	+			+	+	+	+	+				+	+
	Prorocentraceae	<i>Prorocentrum micans</i>	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	Protoperidiniaceae	<i>Protoperidinium depressum</i>	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	Pyrophacaceae	<i>Pyrophacus</i> sp.	+	+												

18 **Table S2** List of phytoplankton species observed daily inside the unfiltered (UF) and filtered (F) dialysis membrane bags during the experiment
19 period. The percentage contributions of each species to the phytoplankton community for each day and filtered/unfiltered bag, in terms of total
20 number of cells L⁻¹, are indicated with varying number of + signs: 0% < + < 5%, 5% < ++ < 10%, 10% < +++ < 15% and 15% < +++++, respectively

Class	Family	Taxa	Days									
			0		3		4		5		6	
			UF	F	UF	F	UF	F	UF	F	UF	F
Bacillariophyceae	Bacillariaceae	<i>Cylindrotheca closterium</i>	+++	++++	+++	+++	++++	++++	+++	+++	++++	+++
		<i>Pseudo-nitzschia</i> sp.	+	++	++	++	+	+	++	++	+++	++
		<i>Nitzschia longissima</i>	+	+	+++	++++	++++	++++	++++	++++	++++	++++
	Bacteriastrium	<i>Bacteriastrium</i> sp.	+	+	+	+						
	Chaetoceros	<i>Chaetoceros affine</i>	++	++	+	+	+	+				
		<i>Chaetoceros decipiens</i>	++	++	+	+	+	+				
	Climacospheniaceae	<i>Climacosphenia elongata</i>	+	+	+	+						
		<i>Climacosphenia moniligera</i>	+	+								
	Coscinodiscus	<i>Coscinodiscus</i> sp.	+									
	Hemiaulaceae	<i>Hemiaulus hauckii</i>	++	++	+	+	+	+	+	+	++	+
	Leptocylindraceae	<i>Leptocylindrus danicus</i>	+++	+++	++++	++++	++++	++++	++++	++++	++++	++++
	Licmophoraceae	<i>Licmophora</i> sp.	+	+	+	+			++	+	++	+
	Pinnulariaceae	<i>Pinnularia</i> sp.	+	+		+						
	Rhizosoleniaceae	<i>Dactyliosolen phuketensis</i>	+	+								
		<i>Guinardia flaccida</i>	+	+								
		<i>Guinardia striata</i>	+	+								
		<i>Rhizosolenia</i> sp.	+	+		+	+	+				
	Striatellaceae	<i>Striatella unipunctata</i>	+	+			+		+		+	
	Thalassionemataceae	<i>Thalassionema nitzschioides</i>	+	+	+	+						
Dinophyceae	Ceratiaceae	<i>Neoceratium fusus</i>	+	+	+	+	+	+		+		+
		<i>Neoceratium lineatum</i>	+	+		+	+	+	+	+	+	+
		<i>Neoceratium macroceros</i>	+	+	+	+						

	Dinophysaceae	<i>Dinophysis acuminata</i>	+	+								
	Oxytoxaceae	<i>Corythodinium tessellatum</i>	+	+								
		<i>Oxytoxum scolopax</i>	+	+	+	+	+	+				
	Podolampadaceae	<i>Podolampas elegans</i>	+	+								
		<i>Podolampas palmipes</i>	+	+								
	Prorocentraceae	<i>Prorocentrum micans</i>	+	+	+	+	+	+				
	Protoperidiniaceae	<i>Protoperidinium depressum</i>	+	+								
	Pyrophacaceae	<i>Pyrophacus</i> sp.	+	+	+							

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22 **Table S3** List of zooplankton species observed each day in the unfiltered (UF) and filtered (F) ambient seawater samples during the experiment
 23 period

Class	Family	Taxa	Days													
			0		1		2		3		4		5		6	
			UF	F	UF	F	UF	F	UF	F	UF	F	UF	F	UF	F
Litostomatea	Mesodiniidae	<i>Mesodinium rubrum</i>	+	+		+										
Oligotrichea	Ptychocyliidae	<i>Favella campanula</i>		+	+		+	+	+							
	Rhabdonellidae	<i>Protorhabdonella simplex</i>									+	+				+
	Strobilidiidae	<i>Strobilidium</i> sp.	+	+	+	+										
	Tintinnidae	<i>Dadayiella ganymedes</i>	+							+		+		+	+	
		<i>Eutintinnus fraknoi</i>	+	+	+		+	+			+					
		<i>Salpingella acuminata</i>							+				+			
	Undellidae	<i>Undella hyalina</i>		+		+										
Subclass																
Calanoid Copepods (adult)		<i>Acartia tonsa</i>	+				+		+		+		+		+	
		<i>Calanus</i> sp.	+		+											
Cyclopoid Copepods (adult)			+		+		+		+		+		+		+	
Copepoda (Calanoid and Cyclopoid) (nauplii)			+	+	+	+	+	+	+	+	+	+	+	+	+	+

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25 **Table S4** List of zooplankton species observed each day inside the unfiltered (UF) and filtered (F) dialysis membrane bags during the experiment
 26 period

Class	Family	Taxa	Days									
			0		3		4		5		6	
			UF	F	UF	F	UF	F	UF	F	UF	F
Litostomatea	Mesodiniidae	<i>Mesodinium rubrum</i>	+	+	+		+	+		+		
Oligotrichea	Ptychocylididae	<i>Favella campanula</i>		+	+							
	Rhabdonellidae	<i>Protorhabdonella simplex</i>					+					
	Strobilidiidae	<i>Strobilidium</i> sp.	+	+		+	+					
	Tintinnidae	<i>Dadayiella ganymedes</i>	+									
		<i>Eutintinnus fraknoii</i>	+	+			+					
		<i>Salpingella acuminata</i>			+			+				
	Undellidae	<i>Undella hyalina</i>		+								
Copepoda (adult)												
Copepoda (nauplii)			+	+	+			+	+		+	

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