

Supplement of Biogeosciences Discuss., 12, 4365–4403, 2015  
<http://www.biogeosciences-discuss.net/12/4365/2015/>  
doi:10.5194/bgd-12-4365-2015-supplement  
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*Supplement of*

## **Major constrains of the pelagic food web efficiency in the Mediterranean Sea**

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Table 1: Chlorophyll a and biomasses values among all the dilution experiments carried out grouped per trophic conditions.

Trophic conditions:		Oligotrophic														
Station:	VIERA	Dec-99	Mar-04	V3	MS_03A	Apr-04	V4	V1	V2	VA	V10	O_37B	V6	O_36	CF_16	V7
<i>mg L<sup>-1</sup></i>																
Chl a	0.04	0.46	0.60	0.08	0.04	1.37	0.11	0.22	0.10	0.07	0.06	0.08	0.06	0.08	0.06	0.05
<i>Biomass - µg C L<sup>-1</sup></i>																
MZP	0.59	3.47	1.21	0.38	0.51	8.80	0.34	0.22	0.18	0.78	0.43	1.02	0.47	2.22	0.52	0.49
MPP	0.04	0.13	0.12	1.68	0.23	1.01	2.53	2.73	2.75	3.24	3.30	0.13	3.76	0.34	0.28	5.89
NP	1.41	1.59	13.35	5.00	8.04	9.81	5.72	8.70	2.47	4.59	1.05	5.19	1.28	4.39	4.45	2.05
HP	4.87	21.02	5.84	10.85	4.71	5.13	11.70	13.15	9.84	11.70	6.14	5.80	7.49	6.32	4.49	5.89
AP	0.42	0.57	0.94	0.44	2.60	1.86	0.82	0.70	0.88	0.62	0.64	3.91	0.49	4.43	4.71	0.45

Trophic conditions:		Mesotrophic									
Station:	Sep-03	Nov-00	Nov-01	Aug-05	Mar-03	May-01	Aug-02	Aug-99	Feb-02	May-02	Aug-01
<i>mg L<sup>-1</sup></i>											
Chl a	0.67	0.80	0.74	0.19	0.70	0.36	0.29	0.35	0.87	1.15	0.45
<i>Biomass - µg C L<sup>-1</sup></i>											
MZP	7.21	3.48	5.40	1.85	12.04	2.35	6.05	5.62	14.04	7.48	5.86
MPP	0.41	15.00	11.51	3.27	18.42	10.17	5.99	23.05	49.38	53.35	21.37
NP	6.24	2.86	2.63	6.53	3.64	4.13	2.91	3.25	3.55	10.11	3.81
HP	32.07	23.93	19.71	24.41	3.66	24.69	25.41	23.86	25.29	15.81	28.67
AP	14.91	0.69	5.76	15.37	3.93	15.97	28.85	23.34	2.78	2.79	40.56

Trophic conditions:		Eutrophic						
Station:	Nov-98	May-99	Feb-01	May-00	Aug-00	Feb-00	Feb-99	
<i>mg L<sup>-1</sup></i>								
Chl a	1.64	1.15	3.39	0.61	-	2.90	5.94	
<i>Biomass - µg C L<sup>-1</sup></i>								
MZP	6.43	7.84	4.38	4.69	4.08	8.49	9.62	
MPP	124.95	145.25	157.17	201.17	255.09	300.68	1104.25	
NP	0.86	3.33	2.83	10.71	3.79	4.20	2.75	
HP	45.34	10.18	23.98	10.23	23.51	4.21	6.99	
AP	5.79	2.79	7.70	2.47	6.66	0.02	0.15	

Table 2a: Ingestion and potential production rates estimated among the considered dilution experiments carried out for the MZP and the HNF in oligotrophic conditions.

Trophic conditions:		Oligotrophic															
Station:		VIERA	Dec-99	Mar-04	V3	MS_03A	Apr-04	V4	V1	V2	VA	V10	O_37B	V6	O_36	CF_16	V7
<i>MZP dilution experiments</i>	<u>Ingestion rates</u> $\mu\text{g C L}^{-1}\text{d}^{-1}$																
	MPP	-	-	-	1.04	0.09	0.71	0.03	0.05	0.06	0.75	-	0.02	-	0.04	0.01	-
	NP	-	-	5.13	-	23.25	12.36	8.12	23.45	-	3.23	1.61	3.53	3.25	-	-	8.10
	HP	10.18	7.81	2.72	3.36	-	1.80	23.84	-	23.73	4.41	13.19	5.70	8.64	-	1.97	9.42
	AP	-	0.30	0.94	0.33	1.10	0.61	-	-	0.33	0.43	-	3.83	-	7.46	3.50	-
	<u>Potential production rates</u> $\mu\text{g C L}^{-1}\text{d}^{-1}$																
	MPP	-	-	-	0.87	0.02	0.70	0.02	0.04	0.04	0.26	-	0.01	-	0.05	0.01	-
	NP	-	-	3.15	-	7.47	7.37	4.65	15.26	-	0.62	1.15	1.59	3.60	-	-	8.89
HP	11.62	1.01	4.28	0.47	-	2.44	20.72	-	22.28	1.20	16.58	1.02	13.75	-	-	11.16	
AP	-	0.29	0.85	0.26	0.08	0.68	-	-	0.14	0.07	-	4.07	-	7.86	2.95	-	
<i>HNF dilution experiments</i>	<u>Ingestion rates</u> $\mu\text{g C L}^{-1}\text{d}^{-1}$																
	HP	2.88	15.13	5.41	0.07	-	2.31	4.24	4.79	2.01	8.33	3.97	14.71	6.20	3.62	2.78	3.08
	AP	-	-	0.81	0.09	-	2.03	1.06	-	-	-	-	7.55	0.14	4.39	0.42	0.36
	<u>Potential production rates</u> $\mu\text{g C L}^{-1}\text{d}^{-1}$																
	HP	3.95	6.32	4.01	4.30	-	3.43	4.68	4.34	2.39	4.64	3.99	11.85	4.31	1.45	1.07	2.96
AP	-	-	0.72	0.03	-	2.13	0.53	-	-	-	-	6.95	-	2.57	-	0.36	

Table 2b: Ingestion and potential production rates estimated among the considered dilution experiments carried out for the MZP and the HNF in mesotrophic and eutrophic conditions.

Trophic conditions:		Mesotrophic											Eutrophic								
		Station:	Sep-03	Nov-00	Nov-01	Aug-05	Mar-03	May-01	Aug-02	Aug-99	Feb-02	May-02	Aug-01	Nov-98	May-99	Feb-01	May-00	Aug-00	Feb-00	Feb-99	
MZP dilution experiments	<u>Ingestion rates</u> $\mu\text{g C L}^{-1}\text{d}^{-1}$	MPP	-	9.95	-	2.30	10.34	3.27	4.53	1.46	-	23.49	19.54	50.97	70.02	84.23	155.19	176.21	113.90	-	
		NP	2.74	-	-	8.23	4.59	1.86	3.67	-	-	2.91	1.50	1.08	1.74	3.57	13.50	-	4.11	1.25	
		HP	44.04	40.12	11.34	29.82	4.59	32.16	37.77	39.43	35.47	27.64	53.53	9.38	10.47	9.83	23.71	66.90	2.25	5.16	
		AP	10.48	0.22	-	12.87	-	7.21	18.01	2.97	1.55	1.59	28.18	0.66	0.24	3.02	1.43	5.58	0.01	0.08	
		<u>Potential production rates</u> $\mu\text{g C L}^{-1}\text{d}^{-1}$	MPP	-	3.43	-	4.28	4.08	3.37	5.93	4.14	-	48.93	37.89	49.73	98.66	61.00	324.24	71.28	207.09	-
			NP	1.13	-	-	4.91	2.74	0.67	2.19	-	-	2.14	5.44	0.65	0.66	2.13	8.05	-	1.94	-
			HP	28.60	49.57	4.11	16.10	4.70	35.59	24.22	46.13	23.38	30.28	47.14	9.83	24.06	2.99	42.32	64.52	1.55	9.79
			AP	6.71	0.23	-	8.38	-	2.27	7.06	2.75	0.85	0.83	13.13	0.83	0.36	2.86	0.93	1.12	0.02	0.04
HNF dilution experiments	<u>Ingestion rates</u> $\mu\text{g C L}^{-1}\text{d}^{-1}$	HP	28.67	33.49	9.95	21.98	3.42	-	31.88	18.63	28.06	21.19	36.80	19.50	11.01	-	8.65	23.38	-	11.46	
		AP	8.30	-	1.45	6.69	-	-	10.75	-	1.78	1.19	37.66	0.38	0.61	0.38	-	0.42	0.01	-	
		<u>Potential production rates</u> $\mu\text{g C L}^{-1}\text{d}^{-1}$	HP	13.48	41.45	1.76	11.03	2.29	-	22.46	26.42	18.27	23.48	23.46	13.87	21.72	-	17.74	27.58	-	13.55
			AP	3.81	-	0.20	9.30	-	-	29.04	-	1.51	0.52	62.24	-	0.07	1.29	-	1.18	0.02	-