

**From microbes to macrofauna: an integrated study  
of deep benthic communities and their response  
to environmental variables along the  
Malta Escarpment (Ionian Sea)**

ELISA BALDRIGHI, STEFANO ALIANI, ALESSANDRA CONVERSI,  
MARC LAVALEYE, MIRENO BORGHINI and ELENA MANINI

Supplementary material

TABLE S1. – Replicates, depth, prokaryote abundance (cell g<sup>-1</sup>) and biomass (µgC g<sup>-1</sup>); meiofaunal abundance (ind 10 cm<sup>-2</sup>) and biomass (µgC 10 cm<sup>-2</sup>).

Replicate	Depth (m)	Prokaryote abundance (cells g <sup>-1</sup> )	Prokaryote biomass (µgC g <sup>-1</sup> )	Meiofaunal abundance (ind 10 cm <sup>-2</sup> )	Meiofaunal biomass (µgC 10 cm <sup>-2</sup> )
R1	1206	1.64E+08	5.33	143.51	9.95
R2	1246	1.89E+08	5.78	379.41	46.17
R3	1264	1.40E+08	4.88	24.6	1.48
R1	1780	1.59E+08	7.61	235.90	11.66
R2	1779	1.97E+08	7.83	438.39	16.38
R3	1768	1.92E+08	7.39	230.01	17.39
R1	2071	3.81E+08	12.09	271.29	15.40
R2	2087	2.62E+08	10.51	110.09	4.58
R3	2120	2.59E+08	9.15	268.34	8.78

TABLE S2. – List of all nematoda species identified; mean abundance values (ind 10 cm<sup>-2</sup>) for each depth are reported.

Species	Depth (m)			Species	Depth (m)		
	1200	1800	2100		1200	1800	2100
<i>Aegialolaimus</i>	1	2	3	<i>Molgolaimus</i>	0	0	0
<i>Ammotheristus</i> sp1	0	1	1	<i>Nannolaimoides</i>	0	0	0
<i>Ammotheristus</i> sp2	0	0	1	<i>Nemanema</i>	1	0	2
<i>Amphimonhystrella</i> sp1	3	3	4	<i>Oxystomina</i> sp1	0	1	3
<i>Amphimonhystrella</i> sp2	0	0	0	<i>Oxystomina</i> sp2	1	0	1
<i>Aponema</i>	0	0	0	<i>Paracomesoma</i>	0	1	0
<i>Calligyus</i>	1	4	2	<i>Paracyatholaimus</i>	0	0	1
<i>Choanolaimus</i>	0	0	0	<i>Paradesmodora</i>	0	1	0
<i>Chromadorina</i>	0	0	1	<i>Paralinhomoeus</i>	0	0	0
<i>Cycolaimus</i>	0	0	0	<i>Paralongicyatholaimus</i> sp1	1	1	1
<i>Daptonema</i>	0	0	0	<i>Paralongicyatholaimus</i> sp2	0	0	0
<i>Desmoscolex</i> sp1	1	6	1	<i>Pareudesmoscolex</i>	0	1	0
<i>Desmoscolex</i> sp2	0	3	0	<i>Paroxystomina</i>	0	0	0
<i>Desmoscolex</i> sp3	0	2	0	<i>Pierrickia</i>	1	2	1
<i>Diplopetoides</i>	0	0	0	<i>Polygastrophora</i> sp1	2	3	2
<i>Disconema</i> sp1	0	1	1	<i>Polygastrophora</i> sp2	0	0	0
<i>Disconema</i> sp2	0	0	1	<i>Polysigma</i> sp1	0	1	1
<i>Elzalia</i> sp1	0	1	1	<i>Polysigma</i> sp2	0	1	0
<i>Elzalia</i> sp2	1	4	1	<i>Procamacolaimus</i>	0	0	1
<i>Euchromadora</i>	0	0	0	<i>Prochromadorella</i>	1	0	0
<i>Graphonema</i>	0	0	1	<i>Psammonema</i>	0	1	0
<i>Halalaimus</i> sp1	2	6	11	<i>Pselionema</i>	1	2	0
<i>Halalaimus</i> sp2	1	0	0	<i>Quadricoma</i>	1	1	2
<i>Halichoanolaimus</i>	0	0	0	<i>Rhabditis</i>	0	0	0
<i>Haliplectus</i>	0	0	0	<i>Sabatiera</i> sp1	9	4	9
<i>Hopperia</i>	0	1	0	<i>Sabatiera</i> sp2	10	3	2
<i>Laimella</i>	0	0	0	<i>Sigmaphoranema</i>	0	1	0
<i>Leptolaimoides</i>	0	0	1	<i>Sphaerolaimus</i> sp1	1	1	1
<i>Leptolaimus</i> sp1	1	6	5	<i>Sphaerolaimus</i> sp2	12	1	1
<i>Leptolaimus</i> sp2	0	6	4	<i>Sphaerolaimus</i> sp3	0	0	2
<i>Linhystera</i> sp1	2	5	8	<i>Spirinia</i>	0	0	0
<i>Linhystera</i> sp2	1	0	1	<i>Syringolaimus</i> sp1	1	4	1
<i>Linhomoeus</i>	0	0	0	<i>Syringolaimus</i> sp2	2	0	3
<i>Longicyatholaimus</i>	0	3	0	<i>Thalassomonhystera</i>	0	0	0
<i>Metacomesoma</i>	1	0	0	<i>Terschellingia</i> sp1	3	3	3
<i>Metacyatholaimus</i>	0	1	0	<i>Terschellingia</i> sp2	0	0	0
<i>Metacycolaimus</i>	0	0	0	<i>Terschellingia</i> sp3	0	0	0
<i>Metasphaerolaimus</i> sp1	4	1	5	<i>Tricoma</i>	1	1	1
<i>Metasphaerolaimus</i> sp2	1	0	0	<i>Trochamus</i>	0	0	0
<i>Metepsilonema</i>	0	1	0	<i>Wieseria</i>	0	0	2
<i>Minolaimus</i>	0	1	0				

TABLE S3. – List of macrofauna organisms identified; mean abundance values (ind m<sup>-2</sup>) for each depth are reported. n.i., not identified.

Organism	Depth (m)		
	1200	1800	2100
Ampharetidae sp1	4	4	0
Ampharetidae sp2	4	0	4
Lysianassidae sp1	8	0	4
Phoxocephalidae sp1	0	4	4
Amphipoda	0	4	8
<i>Aplacophora</i> _ <i>Solenogasters</i>	4	0	4
Arenicolidae sp1	4	0	0
Arabellidae sp1	12	0	0
Capitellidae sp1	4	0	0
Chetopteridae sp1	0	12	8
Cirratulidae sp1	8	0	4
Cirratulidae sp2	4	8	4
Copepoda harpacticoida sp1	12	8	4
Copepoda harpacticoida sp2	8	29	17
Copepoda harpacticoida sp3	0	4	12
Coscuridae sp1	8	12	0
Echiurida sp1	4	0	4
<i>Glycera</i> sp1	8	0	0
<i>Glycera</i> sp2	0	0	0
Heterospionidae sp1	46	12	0
Heterospionidae sp2	0	66	21
Hydrozoa sp1	0	4	0
Hydrozoa sp2	0	17	4
Macrostylidae sp1	21	46	4
Macrostylidae sp2	4	0	0
<i>Leptanthura cf. tenuis</i>	4	0	0
Ilyarachnidae sp1	4	0	0
Anthuroidea sp1	4	0	0
<i>Hyssura cf. producta</i>	4	0	0
Ischnomesidae sp1	0	12	17
Desmosomidae sp1	0	8	0
<i>Calathura</i> sp1	0	4	0
Isopoda	4	0	0
<i>Kellia</i> sp1	8	4	12
Lumbrineris sp1	0	4	0
Magelonidae sp1	4	12	0
Nematoda	41	41	79
Nemertina sp1	12	8	0
Nemertina sp2	8	8	0
<i>Nucula</i> sp1	25	37	54
Oligochaeta sp1	12	8	0
Oligochaeta sp2	12	4	0
Oligochaeta sp3	4	4	0
Oligochaeta sp4	0	4	0
Orbinidae sp1	4	0	0
Ostracoda sp1	12	4	8
Ostracoda sp2	12	0	0
Owenidae sp1	0	0	4
Paraonidae sp1	21	21	17
Paraonidae sp2	4	4	0
Pilargidae sp1	0	8	0
Sipuncula sp1	17	4	0
Sipuncula sp2	8	0	0
<i>Skenea</i> sp1	0	0	4
Spionidae sp1	46	12	17
Spionidae sp2	37	12	4
Spionidae sp3	8	4	0
Spionidae sp4	0	4	0
Spongia sp1	0	8	4
Syllidae sp1	12	4	8
Syllidae sp2	4	0	0
<i>Leptognathia filiformis</i>	12	8	0
<i>Leptognathia unguicillata</i>	4	0	0
<i>Typhlotanais</i> sp1	0	0	8
Terebellidae sp1	4	8	0
Terebellidae sp2	12	0	0
Terebellidae sp3	4	0	0
<i>Yoldia</i> sp1	4	0	0
<i>Xyluphaga</i> sp1	0	0	21

TABLE S4. – List of macrobenthic nematodes identified; mean abundance values (ind m<sup>-2</sup>) for each depth are reported.

Species	Depth (m)
	1200
<i>Linhystra</i> sp1	12
<i>Monhystra</i> sp1	4
<i>Oxystomina</i> sp1	4
<i>Polygastrophora</i> sp1	0
<i>Pareurystomina</i> sp1	4
<i>Trissonchulus</i> sp1	21
<hr/>	
1800	
<i>Anoplostoma</i> sp1	17
<i>Belbolla</i>	4
<i>Linhystra</i> sp1	0
<i>Oncholaimellus</i> sp1	0
<i>Polygastrophora</i> sp1	12
<i>Pareurystomina</i> sp1	0
<i>Promonohystra</i> sp1	8
<i>Trissonchulus</i> sp1	17
<i>Thalassoalaimus</i> sp1	0
<i>Wieseria</i> sp1	4
<hr/>	
2100	
<i>Daptonema</i> sp1	8
<i>Monhystra</i> sp1	12
<i>Oxystomina</i> sp1	8
<i>Polygastrophora</i> sp1	17
<i>Pheronus</i> sp2	29
<i>Wieseria</i> sp1	4