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Benthic macro-faunal abundance and diversity and sediment distribution in Akhziv submarine canyon and the adjacent slope (eastern Levant Basin, Mediterranean Sea)

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Supplementary Data

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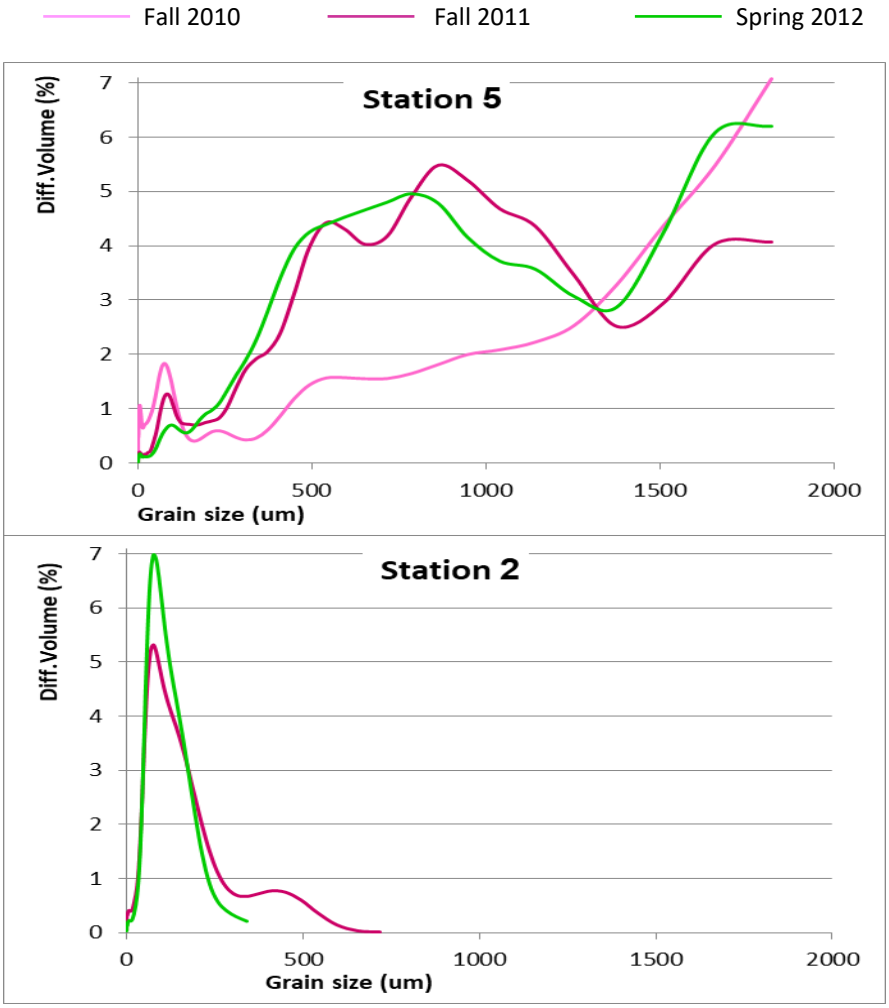

Fig. 1S*:* Grain size relative volumes in ASC entrance stations (St. 2, 5) by seasons. Representations of %volume along the X axis are not equally spaced (the counter issues a value after counting a given number of particles) such that the area under the curve gets exaggerated at larger (and less frequent) grain sizes and the contribution of sand is over-portrayed. Therefore, one cannot visually compare areas under different curves in a panel, even though they all sum up to 100%.

Table S1. Benthic samples (500 ml of wet sediment) list with bottom depth, season, number of taxa and specimens and Shannon's diversity index (*H'*). ASC east channel in green, ASC west channel in blue, and AS in red.

Station	Depth (m)	Season	# Taxa	# Specimens	*H'*
3	174	Fall 2010	3	4	1.04
3	203	Summer 2011	6	14	1.04
3	160	Fall 2011	3	3	1.10
3	163	Winter 2012	7	17	1.61
3	177	Spring 2012	4	8	0.80
3	178	Summer 2012	4	14	0.93
3	160	Spring 2013	6	17	1.08
4	420	Fall 2010	3	11	0.33
4	420	Fall 2011	1	1	0
4	338	Spring 2012	3	8	0.97
4	400	Summer 2012	13	96	1.35
4	364	Spring 2013	3	7	1.00
6	155	Fall 2010	1	1	0
6	145	Fall 2011	5	8	1.49
6	144	Winter 2012	0	0	0
6	157	Spring 2012	4	12	0.84
6	152	Summer 2012	10	26	1.62
6	135	Spring 2013	5	12	1.10
7	220	Winter 2012	1	1	0
7	376	Spring 2012	1	1	0
7	440	Summer 2012	12	23	2.17
7	458	Spring 2013	4	5	1.04
8	167	Fall 2011	2	4	0
8	134	Winter 2012	0	0	0
8	140	Spring 2012	5	10	1.42
8	150	Summer 2012	3	5	1.06
8	135	Spring 2013	1	1	0
9	350	Winter 2012	1	1	0
9	300	Spring 2012	1	1	0
9	360	Summer 2012	4	4	1.39
9	285	Spring 2013	0	0	0

Table S2. Results (p values) of the Generalized Linear Modelling tests on granulometry, TOC and BMF Significant and highly significant effects are lightly and darkly shaded, respectively.

	TOC	**Mode grain size**	**Sand content (%)**	**Abundance (specimens /500ml)**	**Richness (# taxa)**	**Diversity Phylum (*H'*)**	**Polychaete abundance (specimens /500ml)**
Intercept	<0.001	<0.001	<0.001	<0.001	<0.001	0.019	<0.001
Depth	0.071	0.001	0.018	0.376	0.808	0.620	0.011
Site	0.002	<0.001	0.160	0.004	0.040	0.146	<0.001
Season	0.086	0.102	0.166	0.011	0.001	0.034	0.013

Table S3. Correlation matrix. Correlation coefficient values and *p* values above and below the diagonal, respectively. Significant and highly significant correlations are lightly and darkly shaded, respectively.

	Abund	**Abund P**	**Richness**	**DiversT**	**ModeGS**	**% sand**	**Bfrac**	**TOC**	**Depth**
Abund		0.945	0.935	0.779	0.169	0.524	0.457	-0.071	0.082
Abund P	<0.001		0.886	0.736	0.138	0.428	0.512	-0.142	-0.046
Richness	<0.001	<0.001		0.890	0.094	0.573	0.417	-0.052	0.007
DiversT	<0.001	<0.001	<0.001		0.037	0.097	0.389	-0.037	-0.051
ModeGS	0.419	0.510	0.655	0.861		0.468	0.390	0.029	0.596
% sand	0.007	0.033	0.003	0.645	0.018		0.304	-0.205	0.478
Bfrac	0.025	0.010	0.042	0.060	0.049	0.134		-0.206	0.254
TOC	0.736	0.499	0.804	0.860	0.889	0.326	0.313		0.182
Depth	0.664	0.808	0.971	0.761	0.002	0.016	0.210	0.385	

Abund – abundance; P – polychaete; DiversT – taxon diversity; GS – grain size, Bfrac – biogenic fraction of sand/

Table S4. Sediment granulometry (clay = < 2µm, silt = > 2 to < 63µm, sand = > 63µm) and TOC. ASC east channel in green, ASC west channel in blue, and AS in red. *For technical reasons, sampling of St. 7 in winter 2012 was at half the intended depth.

Canyon

Station No.	Season	Depth (m)	Clay (%)	Silt (%)	Sand (%)	Mode grain size (µm)	TOC (%)
3	Fall 2010	174	27.6	69.7	2.7	7.1	0.82
3	Summer 2011	203	10.2	70.7	19.1	7.1	0.83
3	Fall 2011	160	29.8	69.5	0.7	6.5	1.08
3	Winter 2012	163	11.3	84.2	4.5	7.8	0.87
3	Spring 2012	177	20.5	68.2	11.3	60.5	0.69
3	Summer 2012	178	13.9	79.7	6.3	55.1	0.88
4	Fall 2010	420	20.4	69.3	10.3	60.5	0.77
4	Fall 2011	420	18.1	64.2	17.7	66.5	0.95
4	Spring 2012	338	26.9	68.4	4.8	60.5	1.10
4	Summer 2012	400	12.3	52.0	35.8	80.1	0.88
6	Fall 2010	155	27.0	70.9	2.1	5.9	0.81
6	Fall 2011	145	26.9	70.6	2.4	6.5	0.84
6	Winter 2012	144	26.9	70.2	3.0	7.8	1.05
6	Spring 2012	157	15.3	78.5	6.3	5.4	1.07
6	Summer 2012	152	26.7	70.2	3.0	6.5	1.18
7	Winter 2012	220*	17.3	78.6	4.1	7.8	0.88
7	Spring 2012	376	11.8	83.6	4.6	9.4	1.15
7	Summer 2012	440	19.8	64.6	15.6	8.5	1.15

Slope

StationNo.	Season	Depth (m)	Clay (%)	Silt (%)	Sand (%)	Mode grain size (µm)	TOC (%)
8	Fall 2011	167	25.8	66.2	8.0	6.5	0.80
8	Winter 2012	134	16.0	83.8	0.2	7.8	0.94
8	Spring 2012	140	17.5	75.2	7.3	6.5	1.04
8	Summer 2012	150	24.0	67.8	8.2	7.1	0.78
9	Summer 2011	483	12.1	74.1	13.8	6.5	0.89
9	Winter 2012	350	11.9	84.1	4.1	6.5	1.07
9	Spring 2012	300	15.9	81.1	3.1	6,5	0.64
9	Summer 2012	360	28.6	70.5	0.9	8.5	1.00

Canyon entrance

Station No.	Season	Depth (m)	Clay (%)	Silt (%)	Sand (%)	Mode grain size (µm)	TOC (%)
2	Fall 2011	46	4.1	35.5	60.4	72.9	0.44
2	Spring 2012	46	2.3	31.9	65.9	72.9	0.58
5	Fall 2010	45	7.3	34.2	58.6	5.35	0.48
5	Fall 2011	47	2.1	8.9	89.0	80.1	0.80
5	Spring 2012	46	1.1	5.5	93.7	9.37	0.50