



Supplement of

Eukaryotic community composition in the sea surface microlayer across an east–west transect in the Mediterranean Sea

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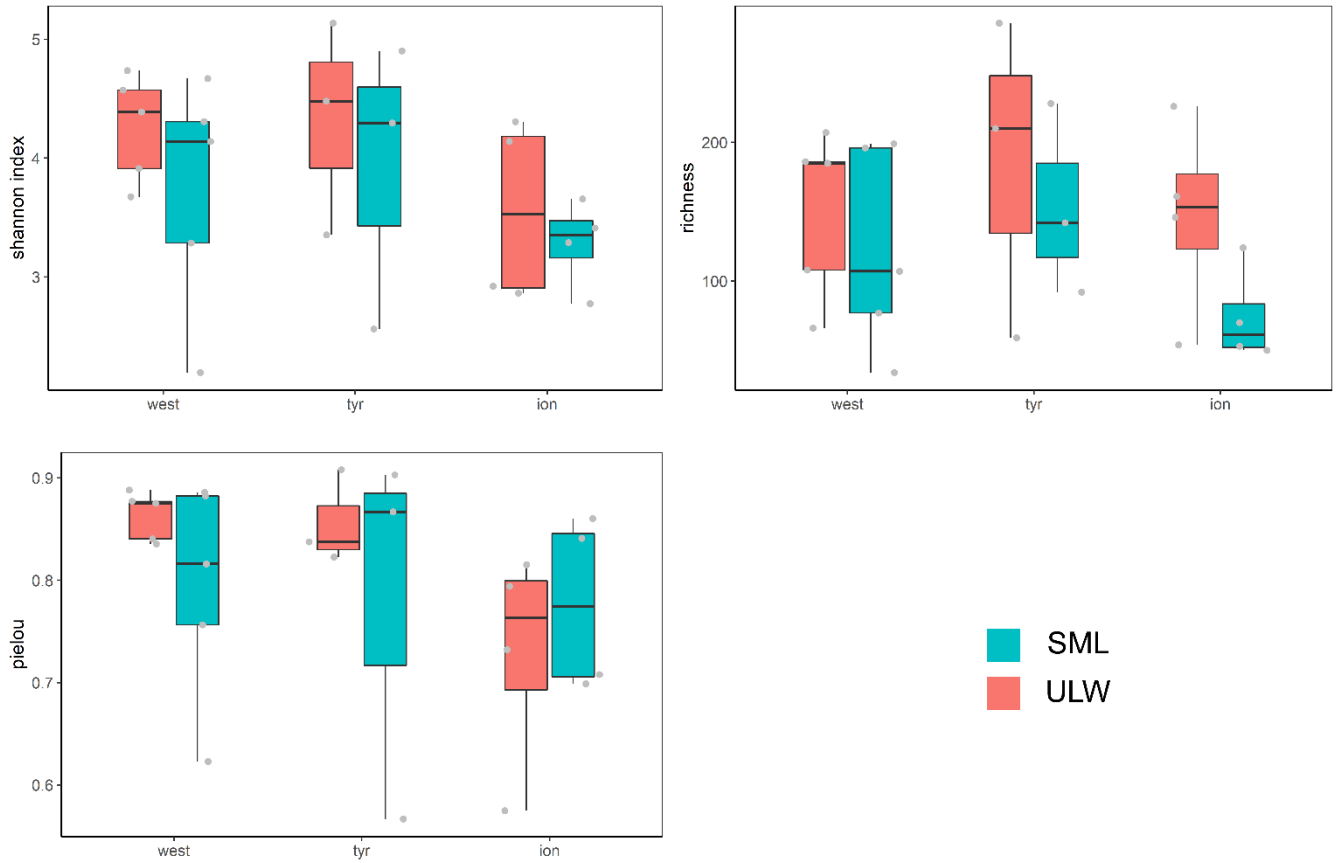
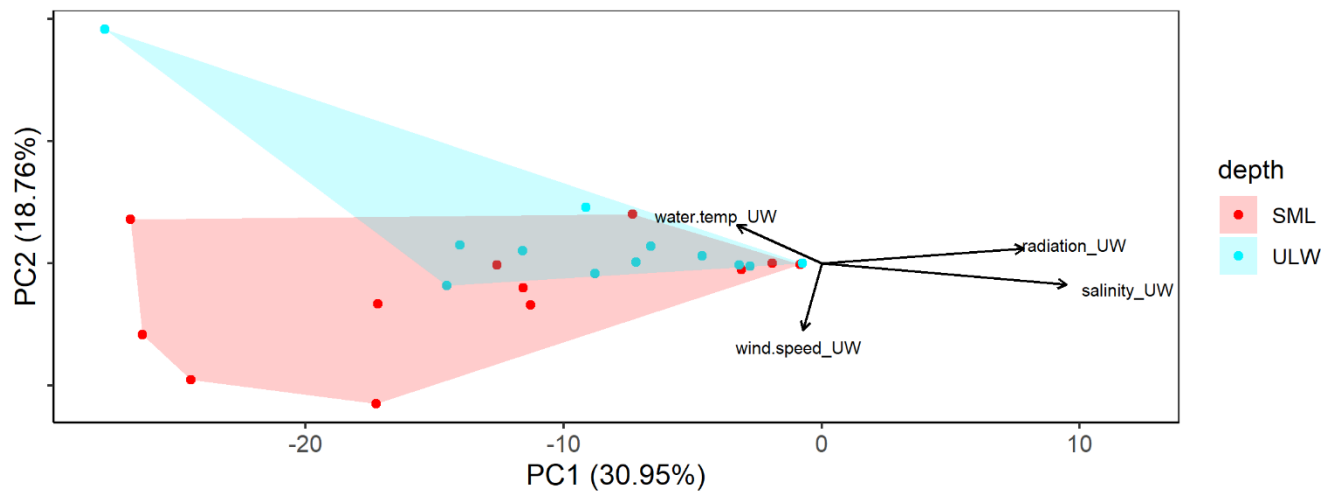
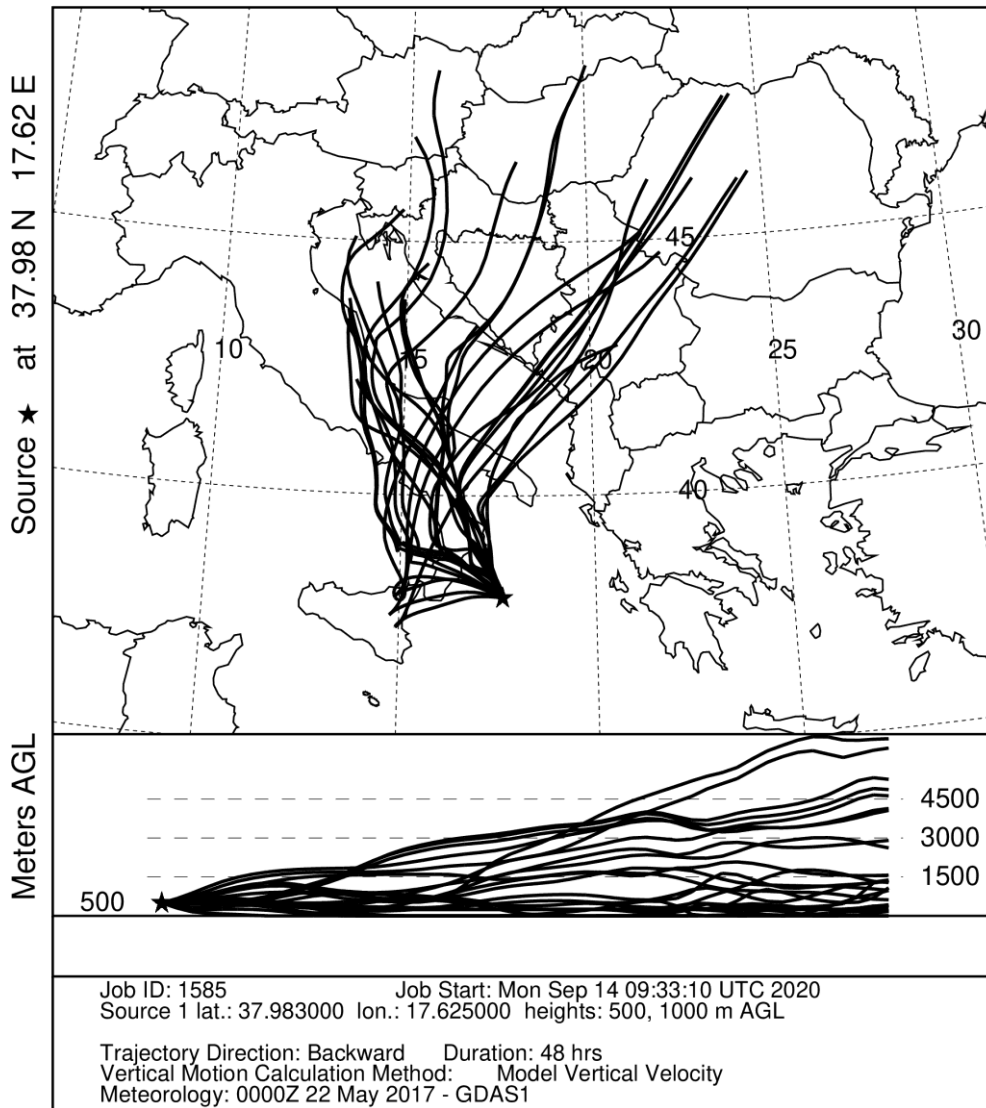


Figure S1: Diversity indices of SML (green) and ULW (red) based on shannon index, richness and pielou's evenness.



10 **Figure S2: Principal Component Analysis (PCA) using the eukaryotic community composition on ASV level with environmental factors plotted. PCA distinguished by SML (red) and ULW (blue).**

NOAA HYSPLIT MODEL
Backward trajectories ending at 0900 UTC 23 May 17
GDAS Meteorological Data



15 **Figure S3: HYSPLIT trajectory model (https://ready.arl.noaa.gov/HYSPLIT_traj.php) showing the air mass trajectories 48 hours prior to sampling the first station (SAV) in the Ionian Sea showing the aerosols introducing new organisms and particles into the ocean being of terrestrial origin.**

Table S1: Enrichment factors (EF) of OM components throughout the stations

station	lat	lon	TEP abundance	TEP area	TCHO	bacteria	phytoplankton
S1	41.8918	6.3333	1.6	1.7	1.0	1.2	1.2
S3	39.1333	7.6835	5.5	4.7	1.1	0.9	1.4
S4	37.9832	7.9768	2.2	2.1	1.0	1.0	1.3
TYRR_1	39.34	12.5928	5.2	5.0	1.1	1.0	1.3
TYRR_2	39.3398	12.5928	8.2	7.7	1.0	1.1	2.0
S6	38.8077	14.4997	1.1	1.0	1.2	1.0	1.6
SAV	37.8401	18.1658	5.7	5.1	1.0	1.0	1.1
S7	36.6035	18.1658	2.8	1.7	1.0	1.0	1.3
ION_2	35.4892	19.7765	1.9	2.1	1.2	0.9	2.0
S8	36.2103	16.631	5.6	5.6	1.6	1.1	2.6
FAST_2	37.946	2.9102	17.3	12.7	3.2	1.6	2.4
FAST_6	37.0466	2.9168			1.5	1.3	1.0