Supporting information

S1 Table. **List of studies and species considered in the present study for the seven Mediterranean oceanographic discontinuities showing significant genetic distances and gene flow reduction by oceanographic front.** Species considered in the present study identified according to taxonomic group, LIFE strategy (LIFE: BS= Benthic sessile or low motility, BM= benthic vagile, PEL= pelagic), Planktonic Larval Duration (PLD: L≥31 days, M=16-30 days, S=1-15 days), their combination (LIFE_PLD) and Marker used (MT= COI, 16S, cyt b, NUC=allozymes, microsatellites, SNPs). Genetic significance indicates the existence of genetic differentiation (1) or no genetic differentiation (0) for each population pairwise comparison as stated in each study. We considered connectivity reduction mediated by the front (1) when the standardized F_{ST} by geographic distance between localities separated by a front was larger than between control localities with no-front (NF), otherwise genetic differences could not be associated to the front effect (0). The fronts analysed are: Gibraltar Strait (GS), Almeria-Oran Front (AOF), Ibiza Channel (IC), Balearic Front (BF), Sicily Channel (SC), Otranto Channel (ADR), and the southern margin of the Aegean Sea (AEG).

Taxonomic group	**Species**	**References**	**LIFE**	**PLD**	**LIFE_PLD**	**Marker**	**Genetic significance / Connectivity reduction**							
							NF	**GS**	**AOF**	**IC**	**BF**	**SC**	**ADR**	**AEG**
Angiosperm	*Cymodocea nodosa*	[1]	BS	S	BSS	NUC	1	1/0	1/0	1/0	1/0		1/0	1/0
Porifera	*Crambe crambe*	[2]	BS	S	BSS	MT	1			0/0	0/0			
Porifera	*Ircinia fasciculata*	[3]	BS	S	BSS	NUC	0		0/1	0/0	0/1			
Porifera	*Paraleucilla magna*	[4]	BS	S	BSS	NUC	0	1/0	1/1	1/0				
Porifera	*Scopalina lophyropoda*	[5]	BS	S	BSS	NUC	1			1/1				
Porifera	*Spongia lamella*	[6]	BS	S	BSS	NUC	1				1/1			

Group	Species	References	LIFE	PLD	LIFE_PLD	Marker	NF	GS	AOF	IC	BF	SC	ADR	AEG
Porifera	*Spongia officinalis*	[7]	BS	S	BSS	NUC	1							1/1
Cnidaria	*Astroides calycularis*	[8]	BS	S	BSS	NUC	1		1/1					
Cnidaria	*Aurelia aurita*	[9]	PEL	L	PELL	NUC	0					1/1		
Cnidaria	*Cladocora caespitosa*	[10]	BS	S	BSS	NUC	1			1/0	1/0			
Cnidaria	*Corallium rubrum*	[11]	BS	S	BSS	NUC	1				1/0			
Cnidaria	*Paramuricea clavata*	[12]	BS	S	BSS	NUC	1		1/0	1/1				
Mollusca	*Donax trunculus*	[13]	BS	M	BSM	NUC	0	1/1						
Mollusca	*Haliotis tuberculata*	[14]	BS	S	BSS	NUC	0			0/0	0/1			
Mollusca	*Mytilus galloprovincialis*	[15]	BS	M	BSM	NUC	1	1/0	1/0	0/0				
Mollusca	*Octopus vulgaris*	[16]	BM	S	BMS	MT	1						0/0	
Mollusca	*Octopus vulgaris*	[17]	BM	S	BMS	MT	1					1/0		
Mollusca	*Patella rustica*	[18]	BS	M	BSM	NUC	0	1/1						
Mollusca	*Patella rustica*	[18]	BS	M	BSM	MT	0						1/0	
Mollusca	*Patella ulyssiponensis*	[19]	BS	M	BSM	MT	0	1/1				0/0		
Mollusca	*Pinna nobilis*	[20]	BS	S	BSS	MT	0					0/1	0/1	1/1
Mollusca	*Ruditapes decussatus*	[21]	BS	M	BSM	MT	0					0/0		
Mollusca	*Sepia officinalis*	[22]	BM	S	BMS	NUC	0	1/1	1/1	1/1				
Mollusca	*Sepia officinalis*	[23]	BM	S	BMS	MT	0				1/1	0/1	0/1	1/1
Mollusca	*Solen marginatus*	[24]	BS	M	BSM	NUC	0					1/0		
Crustacea	*Aristeomorpha foliacea*	[25]	BM	L	BML	NUC	0							0/0
Crustacea	*Carcinus aestuarii*	[26]	BM	M	BMM	NUC	0					1/1	1/1	
Crustacea	*Liocarcinus depurator*	[27]	BM	M	BMM	MT	0	1/1	0/0	1/1				
Crustacea	*Macropipus tuberculatus*	[27]	BM	M	BMM	MT	0	0/1	0/1	0/1				
Crustacea	*Munida intermedia*	[27]	BM	M	BMM	MT	0	0/1	0/0	0/0				
Crustacea	*Pachygrapsus marmoratus*	[28]	BM	L	BML	MT	0	0/0				0/0	0/0	0/0

Group	Species	References	LIFE	PLD	LIFE_PLD	Marker	NF	GS	AOF	IC	BF	SC	ADR	AEG
Crustacea	*Pagurus alatus*	[27]	BM	M	BMM	MT	0	0/1	0/1	0/1				
Crustacea	*Pagurus excavatus*	[27]	BM	M	BMM	MT	0	0/1	0/0	0/1				
Crustacea	*Palaemon elegans*	[29]	BM	L	BML	MT	0	0/1				0/0		
Crustacea	*Palinurus elephas*	[30]	BM	L	BML	NUC	0				1/1			
Crustacea	*Parapenaeus longirostris*	[27]	BM	L	BML	MT	0	0/1	0/0	0/1				
Crustacea	*Parapenaeus longirostris*	[31]	BM	L	BML	MT	0					0/0	0/0	1/1
Crustacea	*Penaeus kerathurus*	[32]	BM	M	BMM	MT	0					1/1		
Crustacea	*Plesionika heterocarpus*	[27]	BM	L	BML	MT	0	0/1	0/1	0/1				
Crustacea	*Stenosoma nadejda*	[33]	BM	S	BMS	MT	1	1/0	1/0					
Echinodermata	*Arbacia lixula*	[34]	BS	M	BSM	MT	0		0/1	0/1	0/0			
Echinodermata	*Astropecten aranciacus*	[35]	BS	L	BSL	NUC	0	0/1						
Echinodermata	*Echinaster sepisotus*	[36]	BM	L	BML	NUC	0			0/1	0/1	0/1	0/1	
Echinodermata	*Holothuria mammata*	[37]	BS	L	BSL	MT	0			0/1				
Echinodermata	*Holothuria polii*	[38]	BS	L	BSL	NUC	1					1/0		
Echinodermata	*Holothuria polii*	[39]	BS	L	BSL	MT	0			0/0	0/1			
Echinodermata	*Paracentrotus lividus*	[40]	BS	M	BSM	MT	0				0/1			
Echinodermata	*Paracentrotus lividus*	[41]	BS	M	BSM	MT	0	0/0	0/1	0/1				
Echinodermata	*Parastichopus regalis*	[42]	BS	L	BSL	MT	0		1/1	0/1				
Tunicata	*Pseudodistoma crucigaster*	[43]	BS	S	BSS	MT	1				1/0			
Pisces	*Anguilla anguilla*	[44]	BM	L	BML	NUC	0	0/0						
Pisces	*Apogon imberbis*	[45]	BM	M	BMM	NUC	0		1/0	0/0	1/1			
Pisces	*Atherina boyeri*	[46]	BM	S	BMS	NUC	1						1/0	
Pisces	*Chromis chromis*	[47]	BM	M	BMM	MT	0					0/1		1/1
Pisces	*Coris julis*	[48]	BM	L	BML	MT	0				0/0	0/1	0/1	0/1
Pisces	*Coryphoblennius galerita*	[49]	BM	M	BMM	MT	1			0/0				

Group	Species	References	LIFE	PLD	LIFE_PLD	Marker	NF	GS	AOF	IC	BF	SC	ADR	AEG
Pisces	*Dicentrarchus labrax*	[50]	PEL	L	PELL	NUC	0					0/1	0/1	1/1
Pisces	*Dicentrarchus labrax*	[51]	PEL	L	PELL	NUC	0	1/1	1/1	1/1				
Pisces	*Diplodus sargus*	[52]	BM	M	BMM	NUC	1					1/0		
Pisces	*Diplodus vulgaris*	[45]	BM	L	BML	NUC	1		1/1	1/1	0/1			
Pisces	*Engraulis encrasicolus*	[53]	PEL	L	PELL	NUC	0	0/1				0/0	0/1	0/1
Pisces	*Epinephelus marginatus*	[54]	BM	M	BMM	NUC	0			0/0	0/0	1/0		0/0
Pisces	*Merluccius merluccius*	[55]	BM	L	BML	NUC	0	1/1				0/1	0/1	0/1
Pisces	*Mugil cephalus*	[56]	PEL	L	PELL	NUC	0			0/1		0/0		0/1
Pisces	*Mullus barbatus*	[57]	BM	L	BML	NUC	1			1/0				
Pisces	*Mullus barbatus*	[58]	BM	L	BML	NUC	0							0/0
Pisces	*Mullus barbatus*	[59]	BM	L	BML	NUC	0					1/0		
Pisces	*Mullus barbatus*	[60]	BM	L	BML	NUC	0		0/0					
Pisces	*Mullus surmuletus*	[45]	BM	L	BML	NUC	1		1/0	0/0	1/1			
Pisces	*Oblada melanura*	[45]	PEL	M	PELM	NUC	1		0/0	1/0	1/1			
Pisces	*Sardina pilchardus*	[61]	PEL	L	PELL	NUC	0	1/1						
Pisces	*Sardina pilchardus*	[62]	PEL	L	PELL	NUC	1		1/1	1/1				
Pisces	*Sardina pilchardus*	[63]	PEL	L	PELL	NUC	0						0/1	
Pisces	*Scorpaena porcus*	[64]	BM	M	BMM	NUC	0						0/1	
Pisces	*Scyliorhinus canicula*	[65]	BM	S	BMS	NUC	0							1/1
Pisces	*Seriola dumerilli*	[66]	PEL	L	PELL	MT	0					0/1		
Pisces	*Serranus cabrilla*	[67]	BM	M	BMM	NUC	0		1/1	1/1	0/1	0/1		0/1
Pisces	*Solea vulgaris*	[68]	BM	M	BMM	MT	0					1/1	0/1	
Pisces	*Solea vulgaris*	[69]	BM	M	BMM	NUC	0							0/0
Pisces	*Squalus blainville*	[70]	BM	S	BMS	MT	0					0/1		0/1
Pisces	*Symphodus tinca*	[45]	BM	S	BMS	NUC	1		1/1	0/0	0/1			

Group	Species	References	LIFE	PLD	LIFE_PLD	Marker	NF	GS	AOF	IC	BF	SC	ADR	AEG
Pisces	*Thalassoma pavo*	[71]	BM	L	BML	MT	0					0/0		0/1
Pisces	*Tripterigion delaisi*	[72]	BM	M	BMM	NUC	1		1/1	1/0	1/0			

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