

The following supplements accompany the article

Population genetics, larval dispersal, and connectivity in marine systems

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Supplement 1. Available at www.int-res.com/articles/suppl/m393p001_app.xls

Supplement 2. Frequency statistics for surveyed species

		N
Phylum	Porifera	1
	Arthropoda	11
	Echinodermata	14
	Cnidaria	19
	Mollusca	24
	Chordata (Urochordata)	4
	Chordata (Vertebrata)	76
Class	Demospongiae	1
	Holothuroidea	3
	Asteroidea	3
	Crustacea	11
	Echinoidea	8
	Bivalvia	11
	Gastropoda	13
	Anthozoa	19
	Ascidacean	4
	Osteichthyes	76
Habitat	Estuary	7
	Intertidal	24
	Coastal	46
	Reef	72
Marker	Microsatellite	31
	mtDNA	38
	Allozyme	80
Larval swimming ability		
	≤6.0 cm s ⁻¹	Weak
>20 cm s ⁻¹	Strong	84

Supplement 3. Full general linear model output

(A) Full general linear model output of biological and physical effects on reported population genetic structure including sums of squares and all interaction terms. (n = 129, $r^2 = 0.549$)

Source	Type IV SS	df	Mean square	F	p
Corrected model	0.296	26	0.011	4.770	0.000
Intercept	0.060	1	0.060	25.091	0.000
LogPLD	0.031	1	0.031	12.816	0.001
Marker	0.047	2	0.023	9.738	0.000
Habitat	0.001	2	0.001	0.213	0.809
Swim	0.001	2	0.000	0.172	0.842
Marker × Habitat	0.005	4	0.001	0.489	0.744
Marker × Swim	0.008	3	0.003	1.186	0.319
Habitat × Swim	0.002	4	0.001	0.228	0.922
Marker × LogPLD	0.029	2	0.014	6.056	0.003
Swim × LogPLD	0.001	2	0.001	0.264	0.768
Habitat × LogPLD	0.000	2	0.000	0.087	0.917
Marker × Habitat × Swim	0.002	2	0.001	0.341	0.712
Error	0.244	102	0.003		
Total	0.778	129			
Corrected total	0.540	128			

(B) Example of study binning to examine the effect of geographic scale on observed pattern

Geographic scale	Number of studies (n)	Correlation (r^2)	p
Short range (≤ 500 km)	29	0.0004	0.92
Medium range (501 to 3000 km)	87	0.0066	0.46
Large range (3001 to 23000 km)	33	0.1224	0.05

Supplement 4. Full ANCOVA output

(A) Full ANCOVA output of biological and physical effects on reported population genetic structure including sums of squares and all interaction terms. (n = 129, $r^2 = 0.470$)

Source	Type IV SS	df	Mean square	F	p
Corrected model	0.254	17	0.015	5.781	0.000
Intercept	0.060	1	0.060	23.347	0.000
LogPLD	0.024	1	0.024	9.464	0.003
Marker	0.037	2	0.018	7.113	0.001
Habitat	0.005	2	0.003	0.996	0.372
Swim	2.77×10^{-6}	1	2.77×10^{-6}	0.001	0.974
Marker × Habitat	0.012	4	0.003	1.186	0.321
Marker × Swim	0.000	2	0.000	0.091	0.913
Habitat × Swim	0.015	2	0.007	2.844	0.062
Marker × Habitat × Swim	0.013	3	0.004	1.688	0.174
Error	0.286	111	0.003		
Total	0.778	129			
Corrected total	0.540	128			

(B) Full ANCOVA output of biological and physical effects on reported population genetic structure including sums of squares and all interaction terms. PLD term refers to all available data (including zero-value PLD). (n = 142; $r^2 = 0.484$)

Source	Type IV SS	df	Mean square	F	p
Corrected model	0.340	17	0.020	6.847	0.000
Intercept	0.180	1	0.180	61.529	0.000
LogPLD	0.097	1	0.097	33.108	0.000
Marker	0.043	2	0.021	7.299	0.001
Habitat	0.005	2	0.002	0.782	0.460
Swim	0.001	1	0.001	0.330	0.567
Marker × Habitat	0.014	4	0.003	1.177	0.324
Marker × Swim	0.001	2	0.000	0.130	0.878
Habitat × Swim	0.014	2	0.007	2.332	0.101
Marker × Habitat × Swim	0.017	3	0.006	1.932	0.128
Error	0.362	124	0.003		
Total	1.057	142			
Corrected total	0.702	141			

Supplement 5. Database sources (column 2 of Supplement 1)

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Supplement 5 (continued)

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Supplement 6. Pelagic larval duration sources (superscript numbers in 'Average PLD' column of Supplement 1)

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