Frontiers in Marine Sciences

SUPPLEMENTARY MATERIAL

Genetic footprints of Quaternary glacial cycles over the patterns of population diversity and structure in three *Nacella* (Patellogastropoda: Nacellidae) species across the Magellan province in southern South America.

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Figure S1: Parsimony mtDNA (COI) haplotype networks in A) *Nacella magellanica*, B) *Nacella mytilina*, and C) *Nacella deaurata* including populations across their distributions in the Magellan province. Each haplotype is represented by a colored circle indicating the locality where it was collected. Circles sizes are proportional to the frequency of the haplotype in the whole sampling effort.

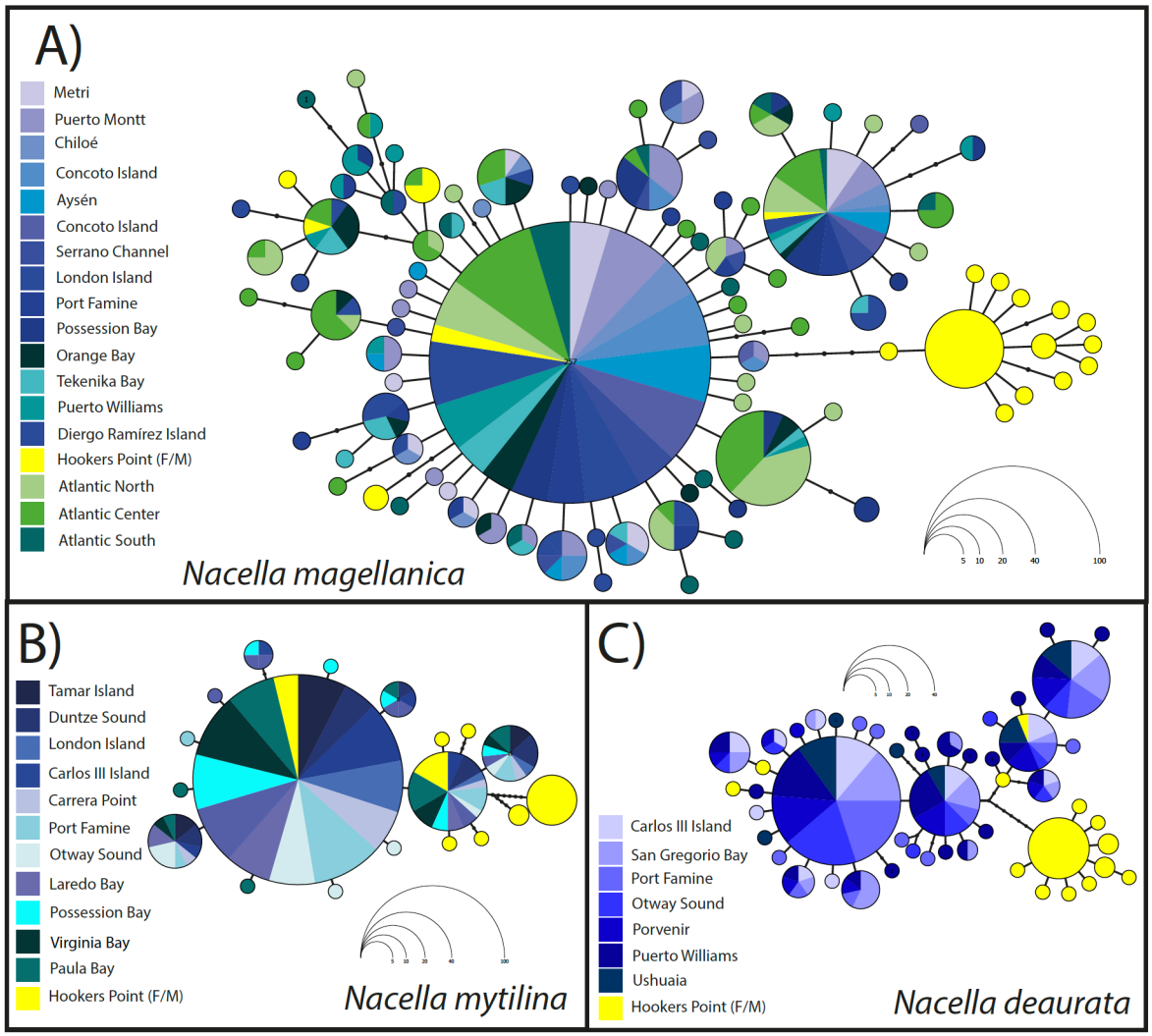

Table S1. Diversity indices and neutrality tests in *Nacella magellanica* along its distribution in the Magellan province.

Locality	*N*	*k*	*H*	*S*	Π	π	Tajima's D	Fu's F_S
Metri	25	9	0.743	10	1.380	0.00219	-1.58	-4.27**
Puerto Montt	43	14	0.788	13	1.305	0.00207	-1.74	-10.07***
Chiloe	20	7	0.637	7	1.121	0.00178	-1.69	-3.12*
Concoto Island	23	6	0.518	6	0.680	0.00108	-1.78	-3.27*
Aysen	24	6	0.496	6	0.790	0.00125	-1.53	-2.70*
Costa Channel	24	4	0.370	5	0.830	0.00132	-1.10	-0.25
Serrano Channel	24	9	0.736	8	1.417	0.00225	-1.08	-4.27**
London Island	28	9	0.630	11	1.365	0.00217	-1.68	-3.99*
Port Famine	24	10	0.775	11	1.652	0.00262	-1.48	-4.84**
Possession Bay	29	10	0.820	16	2.276	0.00361	-1.50	-2.67*
Orange Bay	24	11	0.819	14	1.906	0.00303	-1.72	-5.43**
Tekenika Bay	24	11	0.822	13	1.822	0.00289	-1.65	-5.70**
Navarino	25	11	0.693	16	2.247	0.00357	-1.65	-4.34**
Diego Ramírez Islannd	30	10	0.602	15	1.434	0.00228	-2.09*	-4.81**
Falkland/Malvinas	46	19	0.802	26	3.779	0.00600	-1.20	-6.93***
Atlantic North	51	17	0.863	17	2.125	0.00337	-1.36	-9.19***
Atlantic Center	75	23	0.840	27	2.220	0.00352	-1.86*	-15.20***
Atlantic South	26	15	0.797	19	2.015	0.00320	-2.12*	-11.35***
***N. magellanica* total**	565	97	0.779	79	2.331	0.00307	-2.31**	-146.19***

n: number of sampled specimens; *k*: number of haplotypes detected; *S*: polymorphic sites; *H*: haplotype diversity; Π: average number of nucleotide difference; π: nucleotide diversity *p<0.05, **p<0.01, ***p<0.001

Table S2. Diversity indices and neutrality tests in *Nacella mytilina* along its distribution in the Magellan province.

Locality	*n*	*k*	*H*	*S*	Π	π	Tajima´s D	Fu´s FS
Tamar Island	16	3	0242	2	0.250	0.0003	-1.49	-1.61
Duntze Sound	16	4	0.600	3	0.867	0.0012	-0.12	-0.57
London Island	24	3	0.301	3	0.540	0.0007	-0.82	0.06
Carlos III Island	20	4	0.284	4	0.489	0.0007	-1.63	-1.61
Carrera Bay	17	4	0.331	4	0.574	0.0008	-1.57	-1.42
Santa Ana	30	4	0.409	4	0.549	0.0008	-1.17	-2.24
Chabunco	20	4	0.537	3	0.684	0.0009	-0.50	-0.86
Laredo Bay	20	6	0.380	6	0.576	0.0008	-1.93*	-3.77*
Possession Bay	22	5	0.407	5	0.610	0.0008	-1.64	-2.30
Virginia Bay	26	4	0.345	3	0.425	0.0006	-1.12	-1.70
Falkland/Malvinas	24	8	0.822	19	4.18	0.0060	-0.64	0.68
***N. mytilina* total**	**240**	**15**	**0.446**	**23**	**1.019**	**0.0010**	**-2.04***	**-7.92*****

n = number of analyzed individuals; k = number of haplotypes; S = polymorphic sites; H = haplotype diversity; Π = average number of pairwise differences; π = nucleotide diversity. *p<0.05, **p<0.01, *** p<0.001.

Table S3. Genetic diversity indices and neutrality test in *Nacella deaurata* along its distribution in the Magellan province.

Locality	*n*	*k*	*H*	*S*	Π	π	Tajima´s D	Fu´s FS
Carlos III Island	27	11	0.860	11	3.174	0.0046	-0.43	-2.39*
San Gregorio Bay	33	11	0.843	14	3.049	0.0044	-0.37	-1.93
Port Famine	33	12	0.750	13	2.761	0.0040	-0.44	-3.23*
Otway Sound	27	9	0.735	12	2.632	0.0038	-0.51	-1.39*
Porvenir	27	10	0.829	13	3.020	0.0044	-0.35	-1.72
Puerto Williams	41	21	0.907	22	3.211	0.0046	-1.36	-12.52***
Ushuaia	20	7	0.800	10	3.205	0.0046	-0.47	0.20
Falkland/Malvinas	33	14	0.706	19	2.500	0.0036	-1.93*	-6.15**
***N. deaurata* total**	**241**	**50**	**0.855**	**46**	**4.179**	**0.0060**	**-1.88***	**-30.54*****

n: number of sampled specimens; *k*: number of haplotypes detected; *S*: polymorphic sites; *H*: haplotype diversity; Π: average number of nucleotide difference; π: nucleotide diversity *p<0.05, **p<0.01, ***p<0.001

Table S4. Population size estimations based on BSP demographic reconstructions in the analyzed *Nacella* species and groups.

Species	Group	Mean	Upper	Lower
Nacella magellanica	Atlantic	1025279	1463060	235703
Nacella magellanica	Pacific	618328	1018960	111272
Nacella magellanica	Falkland/Malvinas	107526	146249	28217
Nacella deaurata	Pacific	460733	635511	60760
Nacella deaurata	Falkland/Malvinas	81066	137450	20850
Nacella mytilina	Pacific	203652	389641	10185