

Electronic Supplementary Materials

Conservation genetics of Mediterranean brown trout in central Italy (Latium): a multi-marker approach

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Table S1

CR haplotypes and *LDH-C1* genotypes distribution across seven Mediterranean brown trout sampling sites, along with the frequency of the Atlantic and Mediterranean components are provided

CR haplotypes	CAR	MEL	RAP	SCR	SIM1	SIM2	TRO	Total
AD-1					12	9		21
AD-2			13				3	16
AD-3			2				2	4
ADPFB-1	30							30
MA-1			15				2	17
MA-2						1		1
MA-3							8	8
ME-1				23				23
ME-2							9	9
AT-1		27		7	1	4	1	40
AT-2		3			3			6
Total	30	30	30	30	16	14	25	175
Atlantic haplotypes (%)	0.0	100.0	0.0	23.3	25.0	28.6	4.0	26.3
Mediterranean haplotypes (%)	100.0	0.0	100.0	77.7	75.0	71.4	96.0	73.7
LDH-C1 genotypes	CAR	MEL	RAP	SCR	SIM1	SIM2	TRO	Total
*90/*90		24	9		1	6	6	46
*90/*100	8	6	13	3	7	5	10	52
*100/*100	22		8	27	8	3	9	77
Total	30	30	30	30	16	14	25	175
Atlantic *90 allele (%)	13.3	90.0	51.7	5.0	28.1	60.7	44.0	13.3
Mediterranean *100 allele (%)	86.7	10.0	48.3	95.0	71.9	39.3	56.0	86.7

Table S2

Microsatellites genotypes (11 loci) of additional 19 individuals examined in this study for the first time, and thus not reported in Talarico et al. (2021).

	STR60		STR73		SSOSL417		SSA408UOS		OMM_1064		SSAD190		SSSP2213		SSA85		ONE_mu2		SSA410UOS		SSA413NVH	
<i>CARP_006</i>	94	94	140	140	166	166	259	303	184	252	136	136	196	196	101	101	223	245	247	287	88	88
<i>CARP_018</i>	94	98	140	146	170	172	233	279	190	260	124	124	164	164	101	101	221	227	247	291	88	88
<i>MEL_001</i>	94	94	140	146	172	174	219	259	190	228	114	114	168	184	111	111	245	245	239	251	104	106
<i>MEL_011</i>	94	94	140	140	180	192	247	259	178	188	144	152	168	188	111	113	245	249	195	195	118	122
<i>MEL_030</i>	94	94	140	144	172	192	219	259	178	218	114	152	168	208	111	111	245	249	195	211	104	118
<i>RAP_001</i>	94	94	142	146	166	166	259	265	200	244	114	144	180	184	105	115	245	261	195	239	110	120
<i>RAP_007</i>	94	94	142	146	166	188	265	279	190	200	124	132	176	192	109	113	217	245	179	231	106	150
<i>RAP_019</i>	94	94	140	142	178	180	259	279	200	200	114	124	180	184	105	115	245	261	195	195	120	128
<i>RAP_020</i>	94	94	146	146	166	166	259	279	200	236	114	124	180	180	113	115	245	261	195	239	120	150
<i>RAP_021</i>	94	94	140	146	166	182	203	279	200	256	124	124	180	220	105	105	245	261	239	271	110	114
<i>SCR_012</i>	94	94	142	142	166	166	265	267	220	220	136	136	192	212	103	103	221	221	369	369	0	0
<i>SCR_024</i>	94	94	142	142	166	172	247	287	220	220	114	136	192	192	103	103	0	0	267	369	150	150
<i>SCR_026</i>	94	94	142	142	166	166	247	267	220	220	136	160	192	192	103	103	221	221	267	369	150	150
<i>SCR_029</i>	94	94	140	142	166	180	265	299	220	220	114	136	192	212	103	103	245	245	373	373	150	150
<i>SIM1_006</i>	94	96	140	144	174	180	231	251	164	196	132	144	172	176	113	113	213	245	219	247	106	132
<i>SIM2_010</i>	94	94	140	140	166	176	271	275	174	278	124	136	164	168	105	107	245	245	159	187	88	88
<i>SIM2_013</i>	94	94	140	146	174	174	233	233	200	200	114	114	164	176	105	115	213	245	291	291	142	142
<i>TRO_004</i>	94	98	140	140	178	180	223	255	244	252	132	136	180	192	105	115	227	245	179	199	88	134
<i>TRO_013</i>	94	94	140	144	178	188	235	259	180	208	124	186	176	192	105	105	227	227	179	179	118	118

Table S3

Results of exact tests for Hardy-Weinberg equilibrium in seven Mediterranean brown trout sampling sites. Bonferroni adjusted p-values are provided for the *LDH-C1* gene, 11 microsatellite loci and the MHC-*DAB*. Statistically significant values ($p < 0.05$) are in bold.

[illegible]

Table S4

Frequency of null alleles at the *LDH-C1* gene, 11 microsatellite loci and the MHC-*DAB* across seven sampling sites. Frequencies > 10% are given in bold.

<i>LDH-C1</i>		Microsatellite loci										MHC- <i>DAB</i>	
		STR60	STR73	SSOSL417	SSA408UOS	OMM_1064	SSAD190	SSSP2213	SSA85	ONE_μ2	SSA410UOS	SSA413NVH	
CAR	0.00	0.00	0.00	0.00	0.03	0.00	0.01	0.05	0.00	0.08	0.01	0.00	0.00
MEL	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.03	0.02	0.13	0.02	0.00	0.00
RAP	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00
SCR	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.16	0.00	0.00	0.03
SIM1	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03	0.00	0.00	0.11
SIM2	0.08	0.00	0.05	0.11	0.00	0.00	0.05	0.00	0.00	0.00	0.02	0.01	0.06
TRO	0.06	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.04	0.03	0.02	0.02	0.00

Table S5

Tests of linkage disequilibrium between pairs of nuclear markers (11 STRs, *LDH-C1* gene, *MHC-DAB*) across seven sampling sites. Results are sorted by site (alphabetically) and increasing p-value (after Bonferroni correction).

Site	locus1	locus2	p	CAR	SSAD190	<i>LDH-C1</i>	1	CAR	STR60	SSA85	1
CAR	<i>LDH-C1</i>	<i>MHC-DAB</i>	1	CAR	SSAD190	<i>MHC-DAB</i>	1	CAR	STR60	SSAD190	1
CAR	OMM_1064	<i>LDH-C1</i>	1	CAR	SSAD190	ONE_phi2	1	CAR	STR60	SSOSL417	1
CAR	OMM_1064	<i>MHC-DAB</i>	1	CAR	SSAD190	SSA410UO	1	CAR	STR60	SSSP2213	1
CAR	OMM_1064	ONE_phi2	1	CAR	SSAD190	SSA85	1	CAR	STR60	STR73	1
CAR	OMM_1064	SSA410UO	1	CAR	SSAD190	SSSP2213	1	CAR	STR73	<i>LDH-C1</i>	1
CAR	OMM_1064	SSA85	1	CAR	SSOSL417	<i>LDH-C1</i>	1	CAR	STR73	<i>MHC-DAB</i>	1
CAR	OMM_1064	SSAD190	1	CAR	SSOSL417	<i>MHC-DAB</i>	1	CAR	STR73	OMM_1064	1
CAR	OMM_1064	SSSP2213	1	CAR	SSOSL417	OMM_1064	1	CAR	STR73	ONE_phi2	1
CAR	ONE_phi2	<i>LDH-C1</i>	1	CAR	SSOSL417	ONE_phi2	1	CAR	STR73	SSA408UO	1
CAR	ONE_phi2	<i>MHC-DAB</i>	1	CAR	SSOSL417	SSA408UO	1	CAR	STR73	SSA410UO	1
CAR	ONE_phi2	SSA410UO	1	CAR	SSOSL417	SSA410UO	1	CAR	STR73	SSA85	1
CAR	SSA408UO	<i>LDH-C1</i>	1	CAR	SSOSL417	SSA85	1	CAR	STR73	SSAD190	1
CAR	SSA408UO	<i>MHC-DAB</i>	1	CAR	SSOSL417	SSAD190	1	CAR	STR73	SSOSL417	1
CAR	SSA408UO	OMM_1064	1	CAR	SSOSL417	SSSP2213	1	CAR	STR73	SSSP2213	1
CAR	SSA408UO	ONE_phi2	1	CAR	SSSP2213	<i>LDH-C1</i>	1	CAR	OMM_1064	SSA413NV	na
CAR	SSA408UO	SSA410UO	1	CAR	SSSP2213	<i>MHC-DAB</i>	1	CAR	ONE_phi2	SSA413NV	na
CAR	SSA408UO	SSA85	1	CAR	SSSP2213	ONE_phi2	1	CAR	SSA408UO	SSA413NV	na
CAR	SSA408UO	SSAD190	1	CAR	SSSP2213	SSA410UO	1	CAR	SSA410UO	SSA413NV	na
CAR	SSA408UO	SSSP2213	1	CAR	SSSP2213	SSA85	1	CAR	SSA413NV	<i>LDH-C1</i>	na
CAR	SSA410UO	<i>LDH-C1</i>	1	CAR	STR60	<i>LDH-C1</i>	1	CAR	SSA413NV	<i>MHC-DAB</i>	na
CAR	SSA410UO	<i>MHC-DAB</i>	1	CAR	STR60	<i>MHC-DAB</i>	1	CAR	SSA85	SSA413NV	na
CAR	SSA85	<i>LDH-C1</i>	1	CAR	STR60	OMM_1064	1	CAR	SSAD190	SSA413NV	na
CAR	SSA85	<i>MHC-DAB</i>	1	CAR	STR60	ONE_phi2	1	CAR	SSOSL417	SSA413NV	na
CAR	SSA85	ONE_phi2	1	CAR	STR60	SSA408UO	1	CAR	SSSP2213	SSA413NV	na
CAR	SSA85	SSA410UO	1	CAR	STR60	SSA410UO	1	CAR	STR60	SSA413NV	na

CAR	STR73	SSA413NV	na
MEL	<i>LDH-C1</i>	MHC-DAB	1
MEL	OMM_1064	<i>LDH-C1</i>	1
MEL	OMM_1064	MHC-DAB	1
MEL	OMM_1064	ONE_phi2	1
MEL	OMM_1064	SSA410UO	1
MEL	OMM_1064	SSA413NV	1
MEL	OMM_1064	SSA85	1
MEL	OMM_1064	SSAD190	1
MEL	OMM_1064	SSSP2213	1
MEL	ONE_phi2	<i>LDH-C1</i>	1
MEL	ONE_phi2	MHC-DAB	1
MEL	ONE_phi2	SSA410UO	1
MEL	ONE_phi2	SSA413NV	1
MEL	SSA408UO	<i>LDH-C1</i>	1
MEL	SSA408UO	MHC-DAB	1
MEL	SSA408UO	OMM_1064	1
MEL	SSA408UO	ONE_phi2	1
MEL	SSA408UO	SSA410UO	1
MEL	SSA408UO	SSA413NV	1
MEL	SSA408UO	SSA85	1
MEL	SSA408UO	SSAD190	1
MEL	SSA408UO	SSSP2213	1
MEL	SSA410UO	<i>LDH-C1</i>	1
MEL	SSA410UO	MHC-DAB	1
MEL	SSA410UO	SSA413NV	1
MEL	SSA413NV	<i>LDH-C1</i>	1
MEL	SSA413NV	MHC-DAB	1
MEL	SSA85	<i>LDH-C1</i>	1
MEL	SSA85	MHC-DAB	1
MEL	SSA85	ONE_phi2	1
MEL	SSA85	SSA410UO	1

MEL	SSA85	SSA413NV	1
MEL	SSAD190	<i>LDH-C1</i>	1
MEL	SSAD190	MHC-DAB	1
MEL	SSAD190	ONE_phi2	1
MEL	SSAD190	SSA410UO	1
MEL	SSAD190	SSA413NV	1
MEL	SSAD190	SSA85	1
MEL	SSAD190	SSSP2213	1
MEL	SSOSL417	<i>LDH-C1</i>	1
MEL	SSOSL417	MHC-DAB	1
MEL	SSOSL417	OMM_1064	1
MEL	SSOSL417	ONE_phi2	1
MEL	SSOSL417	SSA408UO	1
MEL	SSOSL417	SSA410UO	1
MEL	SSOSL417	SSA413NV	1
MEL	SSOSL417	SSA85	1
MEL	SSOSL417	SSAD190	1
MEL	SSOSL417	SSSP2213	1
MEL	SSSP2213	<i>LDH-C1</i>	1
MEL	SSSP2213	MHC-DAB	1
MEL	SSSP2213	ONE_phi2	1
MEL	SSSP2213	SSA410UO	1
MEL	SSSP2213	SSA413NV	1
MEL	SSSP2213	SSA85	1
MEL	STR60	<i>LDH-C1</i>	1
MEL	STR60	MHC-DAB	1
MEL	STR60	OMM_1064	1
MEL	STR60	ONE_phi2	1
MEL	STR60	SSA408UO	1
MEL	STR60	SSA410UO	1
MEL	STR60	SSA413NV	1
MEL	STR60	SSA85	1

MEL	STR60	SSAD190	1
MEL	STR60	SSOSL417	1
MEL	STR60	SSSP2213	1
MEL	STR60	STR73	1
MEL	STR73	<i>LDH-C1</i>	1
MEL	STR73	MHC-DAB	1
MEL	STR73	OMM_1064	1
MEL	STR73	ONE_phi2	1
MEL	STR73	SSA408UO	1
MEL	STR73	SSA410UO	1
MEL	STR73	SSA413NV	1
MEL	STR73	SSA85	1
MEL	STR73	SSAD190	1
MEL	STR73	SSOSL417	1
MEL	STR73	SSSP2213	1
RAP	OMM_1064	SSA410UO	0
RAP	SSA408UO	SSA85	0
RAP	SSOSL417	SSA408UO	0
RAP	SSA408UO	SSSP2213	0.18962
RAP	SSA408UO	ONE_phi2	0.23952
RAP	SSOSL417	SSAD190	0.50399
RAP	<i>LDH-C1</i>	MHC-DAB	1
RAP	OMM_1064	<i>LDH-C1</i>	1
RAP	OMM_1064	MHC-DAB	1
RAP	OMM_1064	ONE_phi2	1
RAP	OMM_1064	SSA413NV	1
RAP	OMM_1064	SSA85	1
RAP	OMM_1064	SSAD190	1
RAP	OMM_1064	SSSP2213	1
RAP	ONE_phi2	<i>LDH-C1</i>	1
RAP	ONE_phi2	MHC-DAB	1
RAP	ONE_phi2	SSA410UO	1

RAP	ONE_phi2	SSA413NV	1
RAP	SSA408UO	LDH-C1	1
RAP	SSA408UO	MHC-DAB	1
RAP	SSA408UO	OMM_1064	1
RAP	SSA408UO	SSA410UO	1
RAP	SSA408UO	SSA413NV	1
RAP	SSA408UO	SSAD190	1
RAP	SSA410UO	LDH-C1	1
RAP	SSA410UO	MHC-DAB	1
RAP	SSA410UO	SSA413NV	1
RAP	SSA413NV	LDH-C1	1
RAP	SSA413NV	MHC-DAB	1
RAP	SSA85	LDH-C1	1
RAP	SSA85	MHC-DAB	1
RAP	SSA85	ONE_phi2	1
RAP	SSA85	SSA410UO	1
RAP	SSA85	SSA413NV	1
RAP	SSAD190	LDH-C1	1
RAP	SSAD190	MHC-DAB	1
RAP	SSAD190	ONE_phi2	1
RAP	SSAD190	SSA410UO	1
RAP	SSAD190	SSA413NV	1
RAP	SSAD190	SSA85	1
RAP	SSAD190	SSSP2213	1
RAP	SSOSL417	LDH-C1	1
RAP	SSOSL417	MHC-DAB	1
RAP	SSOSL417	OMM_1064	1
RAP	SSOSL417	ONE_phi2	1
RAP	SSOSL417	SSA410UO	1
RAP	SSOSL417	SSA413NV	1
RAP	SSOSL417	SSA85	1
RAP	SSOSL417	SSSP2213	1

RAP	SSSP2213	LDH-C1	1
RAP	SSSP2213	MHC-DAB	1
RAP	SSSP2213	ONE_phi2	1
RAP	SSSP2213	SSA410UO	1
RAP	SSSP2213	SSA413NV	1
RAP	SSSP2213	SSA85	1
RAP	STR73	LDH-C1	1
RAP	STR73	MHC-DAB	1
RAP	STR73	OMM_1064	1
RAP	STR73	ONE_phi2	1
RAP	STR73	SSA408UO	1
RAP	STR73	SSA410UO	1
RAP	STR73	SSA413NV	1
RAP	STR73	SSA85	1
RAP	STR73	SSAD190	1
RAP	STR73	SSOSL417	1
RAP	STR73	SSSP2213	1
RAP	STR60	LDH-C1	na
RAP	STR60	MHC-DAB	na
RAP	STR60	OMM_1064	na
RAP	STR60	ONE_phi2	na
RAP	STR60	SSA408UO	na
RAP	STR60	SSA410UO	na
RAP	STR60	SSA413NV	na
RAP	STR60	SSA85	na
RAP	STR60	SSAD190	na
RAP	STR60	SSOSL417	na
RAP	STR60	SSSP2213	na
RAP	STR60	STR73	na
SCR	LDH-C1	MHC-DAB	1
SCR	OMM_1064	LDH-C1	1
SCR	OMM_1064	MHC-DAB	1

SCR	OMM_1064	ONE_phi2	1
SCR	OMM_1064	SSA410UO	1
SCR	OMM_1064	SSA413NV	1
SCR	OMM_1064	SSA85	1
SCR	OMM_1064	SSAD190	1
SCR	OMM_1064	SSSP2213	1
SCR	ONE_phi2	LDH-C1	1
SCR	ONE_phi2	MHC-DAB	1
SCR	ONE_phi2	SSA410UO	1
SCR	ONE_phi2	SSA413NV	1
SCR	SSA408UO	LDH-C1	1
SCR	SSA408UO	MHC-DAB	1
SCR	SSA408UO	OMM_1064	1
SCR	SSA408UO	ONE_phi2	1
SCR	SSA408UO	SSA410UO	1
SCR	SSA408UO	SSA413NV	1
SCR	SSA408UO	SSA85	1
SCR	SSA408UO	SSAD190	1
SCR	SSA408UO	SSSP2213	1
SCR	SSA410UO	LDH-C1	1
SCR	SSA410UO	MHC-DAB	1
SCR	SSA410UO	SSA413NV	1
SCR	SSA413NV	LDH-C1	1
SCR	SSA413NV	MHC-DAB	1
SCR	SSA85	LDH-C1	1
SCR	SSA85	MHC-DAB	1
SCR	SSA85	ONE_phi2	1
SCR	SSA85	SSA410UO	1
SCR	SSA85	SSA413NV	1
SCR	SSAD190	LDH-C1	1
SCR	SSAD190	MHC-DAB	1
SCR	SSAD190	ONE_phi2	1

SCR	SSAD190	SSA410UO	1
SCR	SSAD190	SSA413NV	1
SCR	SSAD190	SSA85	1
SCR	SSAD190	SSSP2213	1
SCR	SSOSL417	LDH-C1	1
SCR	SSOSL417	MHC-DAB	1
SCR	SSOSL417	OMM_1064	1
SCR	SSOSL417	ONE_phi2	1
SCR	SSOSL417	SSA408UO	1
SCR	SSOSL417	SSA410UO	1
SCR	SSOSL417	SSA413NV	1
SCR	SSOSL417	SSA85	1
SCR	SSOSL417	SSAD190	1
SCR	SSOSL417	SSSP2213	1
SCR	SSSP2213	LDH-C1	1
SCR	SSSP2213	MHC-DAB	1
SCR	SSSP2213	ONE_phi2	1
SCR	SSSP2213	SSA410UO	1
SCR	SSSP2213	SSA413NV	1
SCR	SSSP2213	SSA85	1
SCR	STR60	LDH-C1	1
SCR	STR60	MHC-DAB	1
SCR	STR60	OMM_1064	1
SCR	STR60	ONE_phi2	1
SCR	STR60	SSA408UO	1
SCR	STR60	SSA410UO	1
SCR	STR60	SSA413NV	1
SCR	STR60	SSA85	1
SCR	STR60	SSAD190	1
SCR	STR60	SSOSL417	1
SCR	STR60	SSSP2213	1
SCR	STR60	STR73	1

SCR	STR73	LDH-C1	1
SCR	STR73	MHC-DAB	1
SCR	STR73	OMM_1064	1
SCR	STR73	ONE_phi2	1
SCR	STR73	SSA408UO	1
SCR	STR73	SSA410UO	1
SCR	STR73	SSA413NV	1
SCR	STR73	SSA85	1
SCR	STR73	SSAD190	1
SCR	STR73	SSOSL417	1
SCR	STR73	SSSP2213	1
SIM1	SSAD190	SSA410UO	0.28443
SIM1	LDH-C1	MHC-DAB	1
SIM1	OMM_1064	LDH-C1	1
SIM1	OMM_1064	MHC-DAB	1
SIM1	OMM_1064	ONE_phi2	1
SIM1	OMM_1064	SSA410UO	1
SIM1	OMM_1064	SSA413NV	1
SIM1	OMM_1064	SSA85	1
SIM1	OMM_1064	SSAD190	1
SIM1	OMM_1064	SSSP2213	1
SIM1	ONE_phi2	LDH-C1	1
SIM1	ONE_phi2	MHC-DAB	1
SIM1	ONE_phi2	SSA410UO	1
SIM1	ONE_phi2	SSA413NV	1
SIM1	SSA408UO	LDH-C1	1
SIM1	SSA408UO	MHC-DAB	1
SIM1	SSA408UO	OMM_1064	1
SIM1	SSA408UO	ONE_phi2	1
SIM1	SSA408UO	SSA410UO	1
SIM1	SSA408UO	SSA413NV	1
SIM1	SSA408UO	SSA85	1

SIM1	SSA408UO	SSAD190	1
SIM1	SSA408UO	SSSP2213	1
SIM1	SSA410UO	LDH-C1	1
SIM1	SSA410UO	MHC-DAB	1
SIM1	SSA410UO	SSA413NV	1
SIM1	SSA413NV	LDH-C1	1
SIM1	SSA413NV	MHC-DAB	1
SIM1	SSA85	LDH-C1	1
SIM1	SSA85	MHC-DAB	1
SIM1	SSA85	ONE_phi2	1
SIM1	SSA85	SSA410UO	1
SIM1	SSA85	SSA413NV	1
SIM1	SSAD190	LDH-C1	1
SIM1	SSAD190	MHC-DAB	1
SIM1	SSAD190	ONE_phi2	1
SIM1	SSAD190	SSA413NV	1
SIM1	SSAD190	SSA85	1
SIM1	SSAD190	SSSP2213	1
SIM1	SSOSL417	LDH-C1	1
SIM1	SSOSL417	MHC-DAB	1
SIM1	SSOSL417	OMM_1064	1
SIM1	SSOSL417	ONE_phi2	1
SIM1	SSOSL417	SSA408UO	1
SIM1	SSOSL417	SSA410UO	1
SIM1	SSOSL417	SSA413NV	1
SIM1	SSOSL417	SSA85	1
SIM1	SSOSL417	SSAD190	1
SIM1	SSOSL417	SSSP2213	1
SIM1	SSSP2213	LDH-C1	1
SIM1	SSSP2213	MHC-DAB	1
SIM1	SSSP2213	ONE_phi2	1
SIM1	SSSP2213	SSA410UO	1

SIM1	SSSP2213	SSA413NV	1
SIM1	SSSP2213	SSA85	1
SIM1	STR60	<i>LDH-C1</i>	1
SIM1	STR60	<i>MHC-DAB</i>	1
SIM1	STR60	OMM_1064	1
SIM1	STR60	ONE_phi2	1
SIM1	STR60	SSA408UO	1
SIM1	STR60	SSA410UO	1
SIM1	STR60	SSA413NV	1
SIM1	STR60	SSA85	1
SIM1	STR60	SSAD190	1
SIM1	STR60	SSOSL417	1
SIM1	STR60	SSSP2213	1
SIM1	STR60	STR73	1
SIM1	STR73	<i>LDH-C1</i>	1
SIM1	STR73	<i>MHC-DAB</i>	1
SIM1	STR73	OMM_1064	1
SIM1	STR73	ONE_phi2	1
SIM1	STR73	SSA408UO	1
SIM1	STR73	SSA410UO	1
SIM1	STR73	SSA413NV	1
SIM1	STR73	SSA85	1
SIM1	STR73	SSAD190	1
SIM1	STR73	SSOSL417	1
SIM1	STR73	SSSP2213	1
SIM2	ONE_phi2	<i>LDH-C1</i>	1
SIM2	ONE_phi2	SSA410UO	1
SIM2	ONE_phi2	SSA413NV	1
SIM2	SSA408UO	<i>LDH-C1</i>	1
SIM2	SSA408UO	ONE_phi2	1
SIM2	SSA408UO	SSA410UO	1
SIM2	SSA408UO	SSA413NV	1

SIM2	SSA408UO	SSA85	1
SIM2	SSA408UO	SSAD190	1
SIM2	SSA408UO	SSSP2213	1
SIM2	SSA410UO	<i>LDH-C1</i>	1
SIM2	SSA410UO	SSA413NV	1
SIM2	SSA413NV	<i>LDH-C1</i>	1
SIM2	SSA85	<i>LDH-C1</i>	1
SIM2	SSA85	ONE_phi2	1
SIM2	SSA85	SSA410UO	1
SIM2	SSA85	SSA413NV	1
SIM2	SSAD190	<i>LDH-C1</i>	1
SIM2	SSAD190	ONE_phi2	1
SIM2	SSAD190	SSA410UO	1
SIM2	SSAD190	SSA413NV	1
SIM2	SSAD190	SSA85	1
SIM2	SSAD190	SSSP2213	1
SIM2	SSOSL417	<i>LDH-C1</i>	1
SIM2	SSOSL417	ONE_phi2	1
SIM2	SSOSL417	SSA408UO	1
SIM2	SSOSL417	SSA410UO	1
SIM2	SSOSL417	SSA413NV	1
SIM2	SSOSL417	SSA85	1
SIM2	SSOSL417	SSAD190	1
SIM2	SSOSL417	SSSP2213	1
SIM2	SSSP2213	<i>LDH-C1</i>	1
SIM2	SSSP2213	ONE_phi2	1
SIM2	SSSP2213	SSA410UO	1
SIM2	SSSP2213	SSA413NV	1
SIM2	SSSP2213	SSA85	1
SIM2	STR60	<i>LDH-C1</i>	1
SIM2	STR60	ONE_phi2	1
SIM2	STR60	SSA408UO	1

SIM2	STR60	SSA410UO	1
SIM2	STR60	SSA413NV	1
SIM2	STR60	SSA85	1
SIM2	STR60	SSAD190	1
SIM2	STR60	SSOSL417	1
SIM2	STR60	SSSP2213	1
SIM2	STR60	STR73	1
SIM2	STR73	<i>LDH-C1</i>	1
SIM2	STR73	ONE_phi2	1
SIM2	STR73	SSA408UO	1
SIM2	STR73	SSA410UO	1
SIM2	STR73	SSA413NV	1
SIM2	STR73	SSA85	1
SIM2	STR73	SSAD190	1
SIM2	STR73	SSOSL417	1
SIM2	STR73	SSSP2213	1
SIM2	<i>LDH-C1</i>	<i>MHC-DAB</i>	na
SIM2	OMM_1064	<i>LDH-C1</i>	na
SIM2	OMM_1064	<i>MHC-DAB</i>	na
SIM2	OMM_1064	ONE_phi2	na
SIM2	OMM_1064	SSA410UO	na
SIM2	OMM_1064	SSA413NV	na
SIM2	OMM_1064	SSA85	na
SIM2	OMM_1064	SSAD190	na
SIM2	OMM_1064	SSSP2213	na
SIM2	ONE_phi2	<i>MHC-DAB</i>	na
SIM2	SSA408UO	<i>MHC-DAB</i>	na
SIM2	SSA408UO	OMM_1064	na
SIM2	SSA410UO	<i>MHC-DAB</i>	na
SIM2	SSA413NV	<i>MHC-DAB</i>	na
SIM2	SSA85	<i>MHC-DAB</i>	na
SIM2	SSAD190	<i>MHC-DAB</i>	na

SIM2	SSOSL417	MHC-DAB	na
SIM2	SSOSL417	OMM_1064	na
SIM2	SSSP2213	MHC-DAB	na
SIM2	STR60	MHC-DAB	na
SIM2	STR60	OMM_1064	na
SIM2	STR73	MHC-DAB	na
SIM2	STR73	OMM_1064	na
TRO	SSOSL417	SSAD190	0
TRO	STR73	SSOSL417	0
TRO	<i>LDH-C1</i>	MHC-DAB	1
TRO	OMM_1064	<i>LDH-C1</i>	1
TRO	OMM_1064	MHC-DAB	1
TRO	OMM_1064	ONE_phi2	1
TRO	OMM_1064	SSA410UO	1
TRO	OMM_1064	SSA413NV	1
TRO	OMM_1064	SSA85	1
TRO	OMM_1064	SSAD190	1
TRO	OMM_1064	SSSP2213	1
TRO	ONE_phi2	<i>LDH-C1</i>	1
TRO	ONE_phi2	MHC-DAB	1
TRO	ONE_phi2	SSA410UO	1
TRO	ONE_phi2	SSA413NV	1
TRO	SSA408UO	<i>LDH-C1</i>	1
TRO	SSA408UO	MHC-DAB	1
TRO	SSA408UO	OMM_1064	1
TRO	SSA408UO	ONE_phi2	1
TRO	SSA408UO	SSA410UO	1
TRO	SSA408UO	SSA413NV	1
TRO	SSA408UO	SSA85	1

TRO	SSA408UO	SSAD190	1
TRO	SSA408UO	SSSP2213	1
TRO	SSA410UO	<i>LDH-C1</i>	1
TRO	SSA410UO	MHC-DAB	1
TRO	SSA410UO	SSA413NV	1
TRO	SSA413NV	<i>LDH-C1</i>	1
TRO	SSA413NV	MHC-DAB	1
TRO	SSA85	<i>LDH-C1</i>	1
TRO	SSA85	MHC-DAB	1
TRO	SSA85	ONE_phi2	1
TRO	SSA85	SSA410UO	1
TRO	SSA85	SSA413NV	1
TRO	SSAD190	<i>LDH-C1</i>	1
TRO	SSAD190	MHC-DAB	1
TRO	SSAD190	ONE_phi2	1
TRO	SSAD190	SSA410UO	1
TRO	SSAD190	SSA413NV	1
TRO	SSAD190	SSA85	1
TRO	SSAD190	SSSP2213	1
TRO	SSOSL417	<i>LDH-C1</i>	1
TRO	SSOSL417	MHC-DAB	1
TRO	SSOSL417	OMM_1064	1
TRO	SSOSL417	ONE_phi2	1
TRO	SSOSL417	SSA408UO	1
TRO	SSOSL417	SSA410UO	1
TRO	SSOSL417	SSA413NV	1
TRO	SSOSL417	SSA85	1
TRO	SSOSL417	SSSP2213	1
TRO	SSSP2213	<i>LDH-C1</i>	1

TRO	SSSP2213	MHC-DAB	1
TRO	SSSP2213	ONE_phi2	1
TRO	SSSP2213	SSA410UO	1
TRO	SSSP2213	SSA413NV	1
TRO	SSSP2213	SSA85	1
TRO	STR60	<i>LDH-C1</i>	1
TRO	STR60	MHC-DAB	1
TRO	STR60	OMM_1064	1
TRO	STR60	ONE_phi2	1
TRO	STR60	SSA408UO	1
TRO	STR60	SSA410UO	1
TRO	STR60	SSA413NV	1
TRO	STR60	SSA85	1
TRO	STR60	SSAD190	1
TRO	STR60	SSOSL417	1
TRO	STR60	SSSP2213	1
TRO	STR60	STR73	1
TRO	STR73	<i>LDH-C1</i>	1
TRO	STR73	MHC-DAB	1
TRO	STR73	OMM_1064	1
TRO	STR73	ONE_phi2	1
TRO	STR73	SSA408UO	1
TRO	STR73	SSA410UO	1
TRO	STR73	SSA413NV	1
TRO	STR73	SSA85	1
TRO	STR73	SSAD190	1
TRO	STR73	SSSP2213	1

Table S6

Population-pairwise genetic distances (below the diagonal): (a) Φ_{ST} based on mitochondrial control region (CR); (b) F_{ST} based on MHC, and (c) MHC and 11 STR loci. The respective significance thresholds (* = $p < 0.05$; *** = $p < 0.001$; ns = not significant) after Bonferroni correction are given above the diagonal.

a

CR Φ_{ST}	CAR	MEL	RAP	SCR	SIM1	SIM2	TRO
CAR	-	***	***	***	***	***	***
MEL	0.987	-	***	***	***	***	***
RAP	0.744	0.802	-	***	***	***	ns
SCR	0.717	0.744	0.552	-	***	***	***
SIM1	0.755	0.760	0.180	0.480	-	ns	***
SIM2	0.746	0.727	0.189	0.438	-0.055	-	***
TRO	0.661	0.751	0.193	0.430	0.300	0.286	-

b

MHC- F_{ST}	CAR	MEL	RAP	SCR	SIM1	SIM2	TRO
CAR	-	***	***	***	***	***	***
MEL	0.177	-	***	***	***	***	***
RAP	0.178	0.158	-	***	***	***	*
SCR	0.214	0.205	0.205	-	***	***	***
SIM1	0.136	0.148	0.145	0.207	-	ns	***
SIM2	0.119	0.106	0.118	0.161	0.022	-	***
TRO	0.135	0.113	0.048	0.162	0.109	0.068	-

c

STR- F_{ST}	CAR	MEL	RAP	SCR	SIM1	SIM2	TRO
CAR	-	***	***	***	***	***	***
MEL	0.288	-	***	***	***	***	***
RAP	0.267	0.102	-	***	***	***	***
SCR	0.392	0.354	0.313	-	***	***	***
SIM1	0.209	0.136	0.114	0.327	-	ns	***
SIM2	0.215	0.111	0.104	0.319	0.001	-	***
TRO	0.224	0.113	0.088	0.334	0.087	0.080	-

Table S7

F-statistics across all populations for 11 microsatellite loci.

Locus	Fis	Fit	Fst
STR60	-0.010	0.065	0.074
STR73	-0.042	0.206	0.237
SSOSL417	-0.007	0.163	0.169
SSA408UOS	-0.036	0.070	0.102
OMM_1064	-0.031	0.162	0.187
SSAD190	0.010	0.152	0.144
SSSP2213	0.014	0.169	0.158
SSA85	-0.021	0.305	0.319
ONE_mu2	0.127	0.347	0.252
SSA410UOS	0.028	0.166	0.142
SSA413NVH	-0.009	0.258	0.265
Mean	0.002	0.188	0.186
SE	0.014	0.026	0.022

Table S8

Results of the GENECLASS assignment test. The number of individuals correctly assigned to their sampling site (bold), to other sites, or not assigned ($p < 0.05$), along with the percentage of per-site correctly assigned individuals are provided.

Site (sample size)	Assigned							Unassigned	Correctly assigned individuals (%)
	CAR	MEL	RAP	SCR	SIM1	SIM2	TRO		
CAR (30)	28	-	-	-	-	-	-	2	93.3
MEL (30)	-	29	-	-	-	-	-	1	96.7
RAP (30)	-	-	26	-	-	-	-	4	86.6
SCR (30)	-	-	-	27	-	-	-	3	90.0
SIM1 (16)	-	-	-	-	9	5	-	2	56.3
SIM2 (14)	-	-	-	-	5	7	-	2	50.0
TRO (25)	-	-	-	-	-	-	25	0	100.0
<i>Total</i>	<i>28</i>	<i>29</i>	<i>26</i>	<i>27</i>	<i>14</i>	<i>12</i>	<i>25</i>	<i>14</i>	<i>86.3</i>

Figure S1

Relative abundance of alleles of the microsatellite locus SSA85 in seven examined Mediterranean brown trout sites.

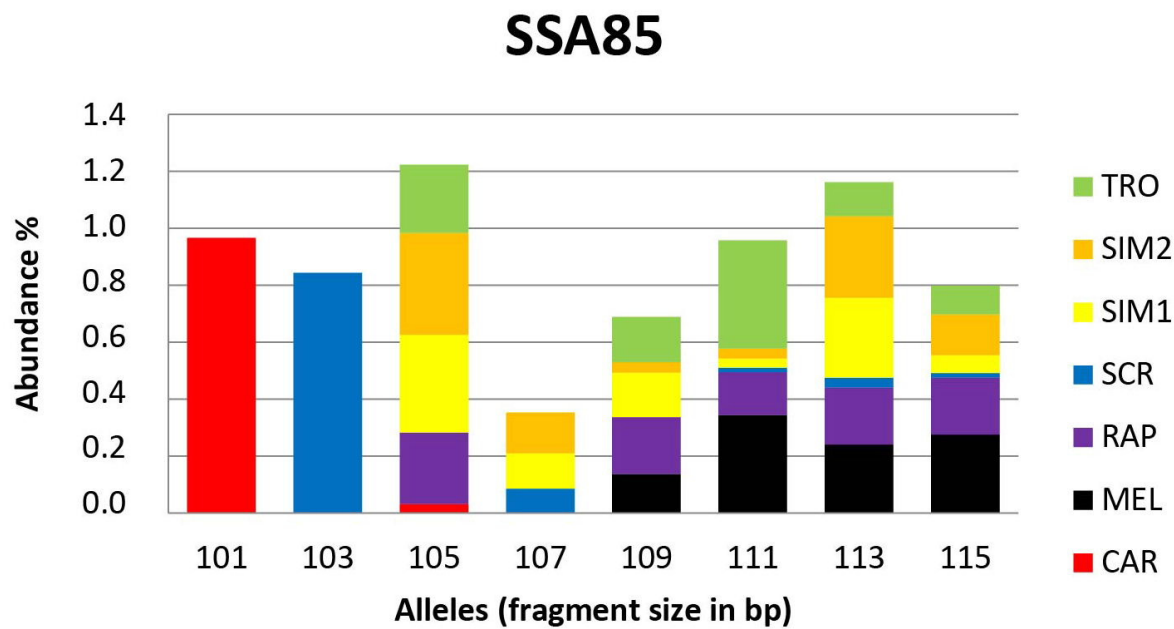


Figure S2

Inference of the optimal number of STRUCTURE clusters inferred by Evanno (above) and Pritchard (below) methods. The red line shows the best K for each method.

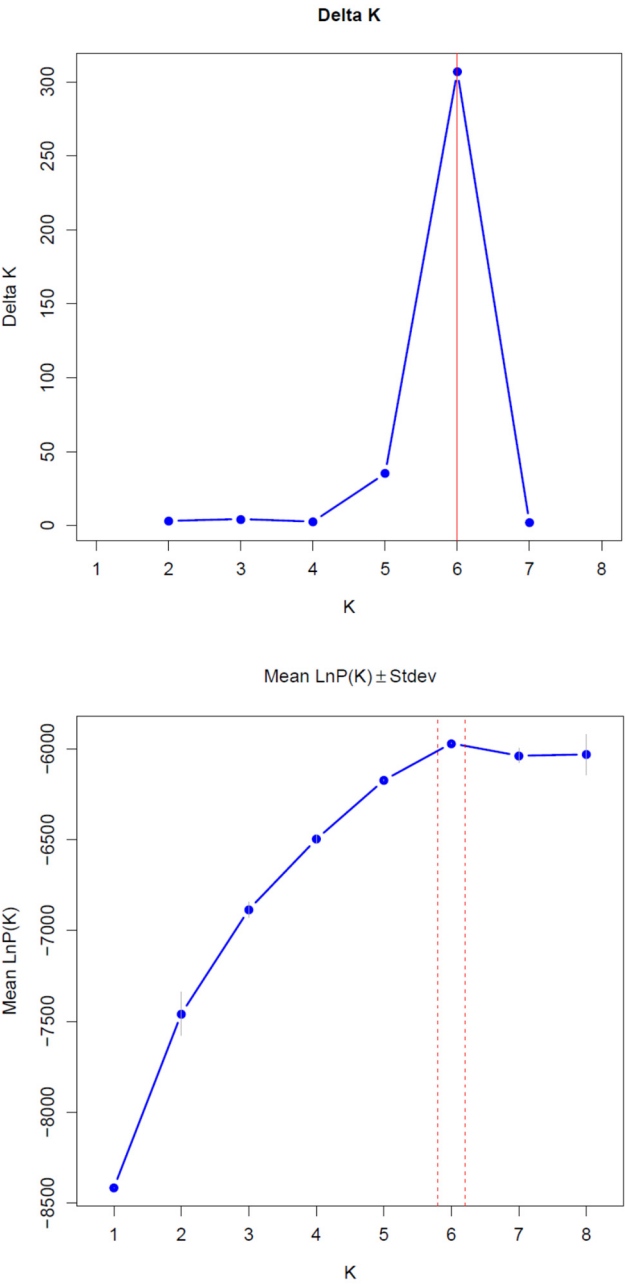


Figure S3

Results of the Bayesian clustering analysis in STRUCTURE for each K in the range 2 - 8.

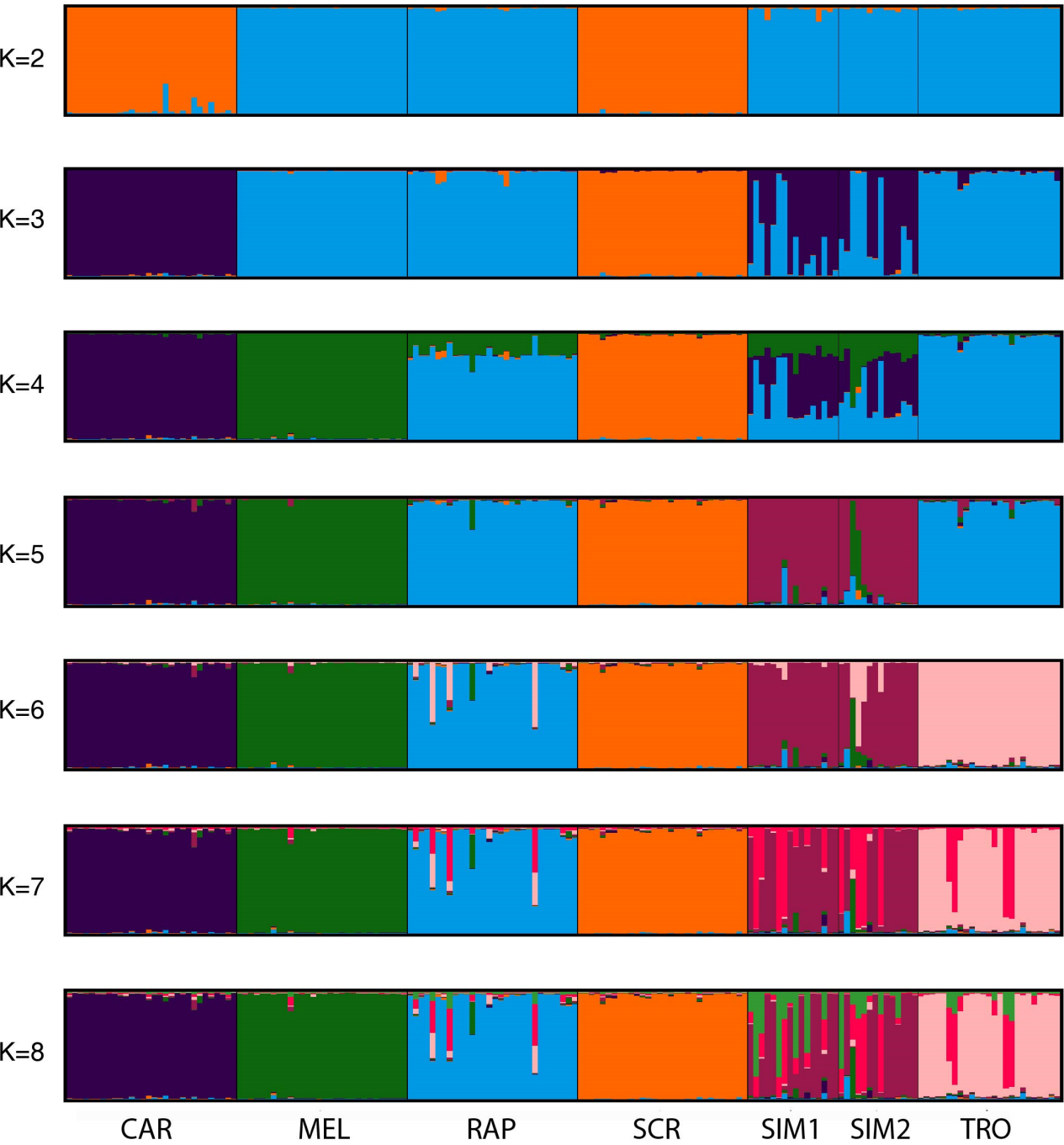


Figure S4

Bayesian Information Criterion (BIC) values for the increasing number of clusters (K). Red dots indicate the most supported K values according to the visual inspection of the BIC pattern.

