

Supplementary Table 5. Major allele frequency for biallelic SNPs surveyed across Lake Malawi cichlid populations and species. The first ten loci represent positive controls as explained in the text. Two SNPs were predicted and genotyped in *sws2b*; genotypes were in perfect linkage so only one is shown here.

snp/pop	<i>aim1</i>	<i>mitf</i>	<i>ednrb</i>	<i>rhodopsin</i>	<i>sws1</i>	<i>sws2a</i>	<i>lws</i>	<i>dec1_1</i>	<i>dec1_3</i>	<i>ip3r</i> (EXON12)
Species	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
All MZ	0.73	0.989	0.8	0.48	0.95	0.82	0.65	1	0.094	0.771
All LF	0.83	0.984	0.37	0.82	1	0.99	1	0.658	0.784	0.906
F_{ST} (within MZ)	0.17	0.05	-0.004	0.733	0.572	0.114	0.514	NA	0.02	0.336
F_{ST} (within LF)	0.172	0.023	0.736	0.853	NA	-0.006	NA	0.599	0.667	0.066
F_{ST} (MZ v LF)	0.028	-0.004	0.303	0.2	0.0444	0.153	0.358	0.337	0.65	0.059
All mbuna (25 sp.)	0.7	1	0.63	0.49	0.86	0.73	0.92	0.854	0.383	0.778
All others (52 sp.)	0.992	0.73	0.042	0.08	0.71	0.044	0.792	1	0.960	0.967
F_{ST} (Mbuna v nonMbuna)	0.179	0.358	0.485	0.424	0.227	0.811	0.005	0.106	0.502	0.144

snp/pop	<i>sws2b</i>	snp14 (<i>csrp1</i>)	<i>sema 3c</i> (Exon 12)	<i>sema 3f</i> (snp32)	snp10	snp13	snp19	snp21	snp22	snp24
Species	NA	LF/MZ	LF/MZ	MA/MZ	CC/RE	MZ/RE	LF/RE	CC/MZ	LF/RE	CC/LF
All MZ	0.989	0.946	0.94	0.62	1	0.978	0.76	0.55	0.91	0.82
All LF	0.96	0.04	0.9	0.26	1	0.962	0.27	0.96	0.22	0.85
F_{ST} (within MZ)	-0.01	0.033	0.135	0.195	NA	0.009	0.115	0.218	0.23	-0.002
F_{ST} (within LF)	0.233	0.076	0.179	0.557	NA	0.059	0.474	0.175	0.286	0.216
F_{ST} (MZ v LF)	0.009	0.893	-0.004	0.348	NA	-0.005	0.366	0.356	0.643	-0.002
All mbuna (25 sp.)	0.85	0.69	0.86	0.54	1	0.9	0.62	0.91	0.92	0.43
All others (52 sp.)	0.812	0.988	0.87	0.02	0.836	1	0.55	0.992	1	0.21
F_{ST} (Mbuna v nonMbuna)	0.097	0.382	0.009	0.363	0.249	0.034	-0.004	0.15	0.277	0.443

snp/pop	snp25	snp27	snp30	snp33	snp44	Aln100099_882	Aln100200_1799	Aln100260_1099	Aln100281_1741	Aln100340_830
Species	LF/RE	CC/LF	MZ/RE	LF/MA/MZ	MZ/RE	CC/LF	LF/MA	CC/MZ	CC/LF	MA/MZ
All MZ	0.97	1	0.66	0.83	0.9	0.995	1	0.844	0.021	1
All LF	0.88	0.93	0.89	0.15	0.97	0.411	0.642	0.927	0.891	1
F _{ST} (within MZ)	0.052	NA	0.218	0.174	0.112	-0.003	NA	0.114	0.023	NA
F _{ST} (within LF)	0.337	0.443	0.439	0.21	0.066	0.35	0.354	0.197	0.19	NA
F _{ST} (MZ v LF)	0.051	0.068	0.141	0.613	0.031	0.574	0.352	0.028	0.863	NA
All mbuna (25 sp.)	0.94	0.992	0.86	0.62	0.92	0.772	0.861	0.896	0.383	0.984
All others (52 sp.)	0.98	1	0.05	0.984	0.992	1	1	0.996	0.887	1
F _{ST} (Mbuna v nonMbuna)	0.031	0.017	0.73	0.392	0.048	0.171	0.1	0.074	0.446	0.005

snp/pop	Aln100348_1026	Aln100388_766	Aln100532_2174	Aln100617_726	Aln100645_802	Aln100674_885	Aln100815_1005	Aln100949_327	Aln100993_1029	Aln101062_501
Species	CC/LF	LF/MA	LF/RE	MA/RE	MA/RE	LF/RE	MA/RE	CC/MZ/RE	LF/RE	CC/MA/MZ
All MZ	0.408	0.78	1	0.770	0.941	1	0.989	1	0.957	1
All LF	0.037	0.7	1	1	1	1	0.626	1	0.777	1
F _{ST} (within MZ)	0.25	0.14	NA	0.247	0.178	NA	0.001	NA	0.118	NA
F _{ST} (within LF)	0.212	0.309	NA	NA	NA	NA	0.455	NA	0.179	NA
F _{ST} (MZ v LF)	0.328	0.008	NA	0.231	0.052	NA	0.344	NA	0.126	NA
All mbuna (25 sp.)	0.285	0.62	0.998	0.891	0.948	1	0.803	1	0.853	1
All others (52 sp.)	0.951	0.984	0.972	1	0.966	0.960	0.627	0.826	0.996	0.614
F _{ST} (Mbuna v nonMbuna)	0.591	0.227	0.03	0.078	-0.002	0.059	0.083	0.245	0.105	0.518

snp/pop	Aln101106 _1089	Aln10117 8_1198	Aln101315 _386	Aln101457 _685	Aln101889 _931	Aln102022 _261	Aln10232 1_608	Aln10250 4_1609	Aln103534 _280	Aln104280 _597
Species	LF/MZ	MZ/RE	LF/MZ	CC/MA	CC/MZ	LF/MZ	CC/MA/RE	MA/RE	MA/RE	CC/MZ
All MZ	0.903	0.677	0.75	1	0.891	0.777	1	1	0.99	0.963
All LF	0	0.810	1	1	0.973	0.552	1	1	1	1
F _{ST} (within MZ)	0.171	0.132	0.019	NA	0.065	0.034	NA	NA	0.004	0.14
F _{ST} (within LF)	NA	0.139	NA	NA	0.271	0.5	NA	NA	NA	NA
F _{ST} (MZ v LF)	0.904	0.037	0.253	NA	0.047	0.097	NA	NA	0	0.033
All mbuna (25 sp.)	0.534	0.701	0.9	1	0.925	0.704	1	1	0.79	0.979
All others (52 sp.)	0.988	0.980	0.992	0.963	0.976	0.740	0.967	0.066	0.03	0.996
F _{ST} (Mbuna v nonMbuna)	0.388	0.222	0.085	0.057	0.018	-0.002	0.048	0.984	0.919	0.006

snp/pop	Aln105886 _636	Aln10748 4_583	Aln108541 _1573	Aln110805 _783	Aln110861 _250	Aln111543 _577	Aln11283 2_520	Aln11449 8_746	Aln115071 _1230	Aln115522 _691
Species	CC/MA	CC/RE	CC/MA	CC/MA	CC/RE	LF/RE	LF/MA	CC/RE	MA/RE	LF/MA
All MZ	0.99	1	1	0.43	1	0.647	0.995	1	1	1
All LF	0.99	0.989	1	0.51	1	0.286	1	1	1	0.49
F _{ST} (within MZ)	-0.005	NA	NA	0.249	NA	0.088	-0.003	NA	NA	NA
F _{ST} (within LF)	0.057	-0.012	NA	0.238	NA	0.49	NA	NA	NA	0.266
F _{ST} (MZ v LF)	-0.005	0.005	NA	0.007	NA	0.225	0	NA	NA	0.525
All mbuna (25 sp.)	0.97	1	1	0.55	1	0.490	0.996	1	0.998	0.99
All others (52 sp.)	0.75	0.95	0.832	0.912	0.832	0.984	0.956	0.960	0.617	1
F _{ST} (Mbuna v nonMbuna)	0.408	0.054	0.252	0.333	0.248	0.406	0.043	0.06	0.503	0.145

snp/pop	Aln116023 _698	Aln11612 0_573	Aln117472 _1109	Aln118796 _231	Aln119531 _730	Aln119718 _628	Aln12159 3_508
Species	CC/MZ	LF/MA	MA/MZ	MA/RE	MZ/RE	CC/MA	CC/RE
All MZ	0.590	1	0.947	1	0.936	0.989	0.819
All LF	0.865	1	0.958	1	1	0.77	0.964
F_{ST} (within MZ)	0.139	NA	0.058	NA	0.473	-0.005	0.327
F_{ST} (within LF)	0.491	NA	0.045	NA	NA	0.36	0.264
F_{ST} (MZ v LF)	0.168	NA	-0.004	NA	0.057	0.201	0.097
All mbuna (25 sp.)	0.727	0.992	0.906	1	0.977	0.94	0.871
All others (52 sp.)	0.992	0.984	0.989	0.989	1	1	0.520
F_{ST} (Mbuna v nonMbuna)	0.21	-0.002	0.061	0.02	0.013	0.074	0.293