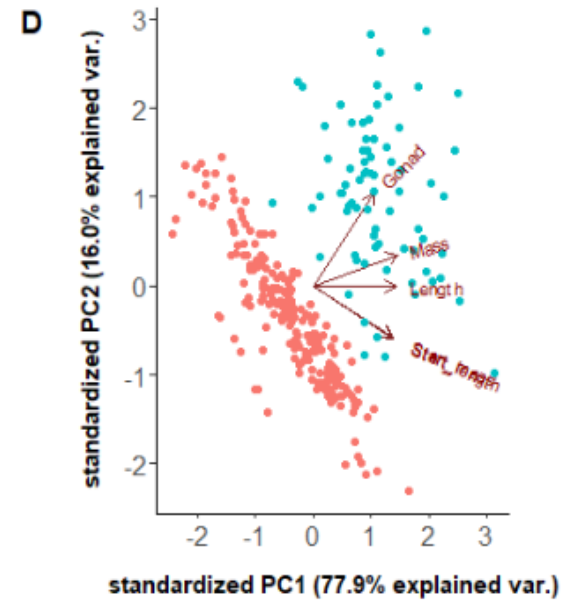
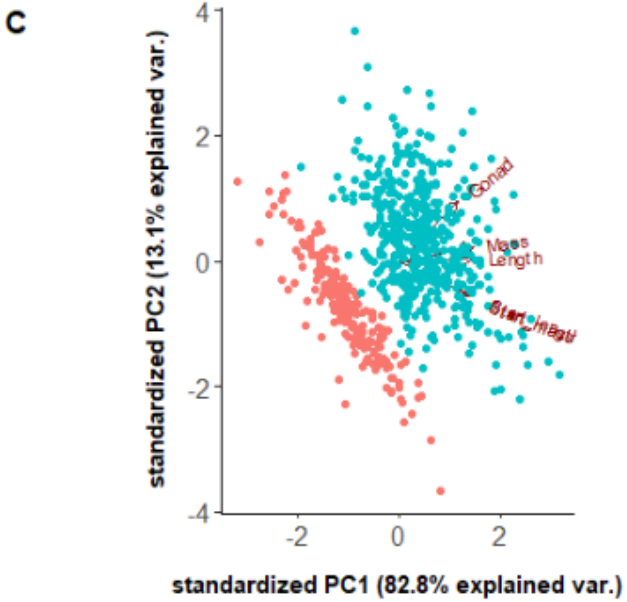
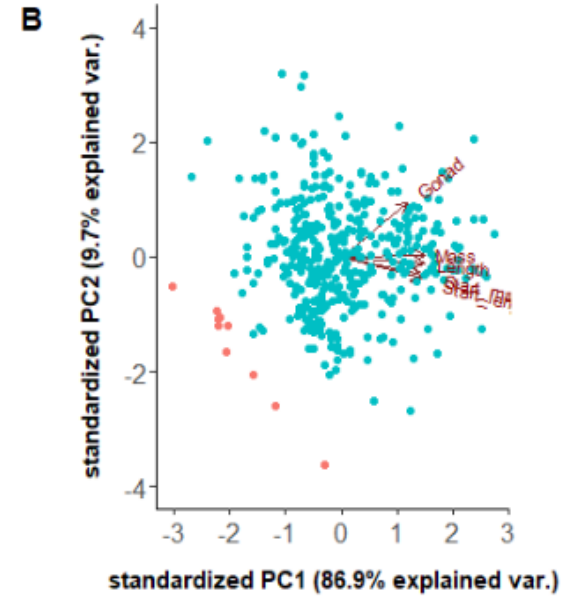
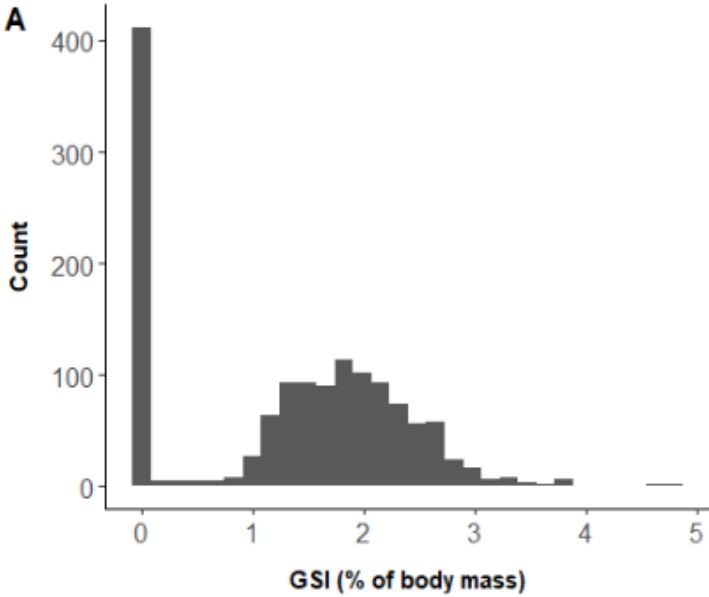


Supplementary Table 1. Blank cell = no marker amplification. VgII3 genotypes are indicated in brackets

Genetic marker	Golden Fish (EL)	sire 1 self-YY (EL)	sire 2 self-YY (EL)	sire 3 dh-YY (EE)	dam 1 dh-XX (EE)	dam 2 dh-XX (EE)	dam 3 dh-XX (LL)	dam 4 dh-XX (LL)	dam 5 dh-XX (EE)
SSsp2201-a	275	283	275	275	299	275	299	299	299
SSsp2201-b	283	283	283	275	299	275	299	299	299
SSsp2210-a	124	124	124	136	148	128	128	148	148
SSsp2210-b	136	136	136	136	148	128	128	148	148
SSspG7-a	127	127	127	127	179	179	147	179	147
SSspG7-b	143	127	143	127	179	179	147	179	147
Ssa202-a	258	258	258	258	242	242	242	242	242
Ssa202-b	258	258	258	258	242	242	242	242	242
SsaD144-a	166	166	198	166	154	186	154	154	154
SsaD144-b	198	198	198	166	154	186	154	154	154
SsaD157-a	343	343	343	343	375	375	343	375	343
SsaD157-b	343	343	343	343	375	375	343	375	343
Sp1605-a	232	232	244	244	224	224	224	216	216
Sp1605-b	244	244	244	244	224	224	224	216	216
Sp2216-a	226	226	226	226	242	258	258	242	258
Sp2216-b	226	226	226	226	242	258	258	242	258
Ssa14-a	140	140	140	140	140	140	144	144	144
Ssa14-b	144	140	144	140	140	140	144	144	144
Ssa171-a	213	241	213	213	233	233	233	217	233
Ssa171-b	241	241	241	213	233	233	233	217	233
Ssa289-a	116				118	118	118	118	118
Ssa289-b	122				118	118	118	118	118
MHC1-a	142	146	142	146	142	136	136	136	142
MHC1-b	146	146	142	146	142	136	136	136	142
MHC2-a	260	260	260	260	370	370	280	280	370
MHC2-b	260	260	260	260	370	370	280	280	370
SSsp3016-a	90	90	90	90	94	130	94	130	94
SSsp3016-b	94	94	94	90	94	130	94	130	94
SsOsl85-a	195	195	195	195	187	193	187	193	193
SsOsl85-b	199	199	199	195	187	193	187	193	193
Ssa197-a	184	184	184	216	188	188	188	184	184
Ssa197-b	216	184	216	216	188	188	188	184	184
SsaD486-a	172	172	172	172	172	172	172	172	172
SsaD486-b	172	172	172	172	172	172	172	172	172
SsaF43-a	115	115	115	121	115	115	115	115	115
SsaF43-b	121	121	115	121	115	115	115	115	115

Supplementary Table 2. Raw data (mean values) within each family.

Parameter	Sire 1 (EL)																Sire 3 (EE)	
	Dam 1 (EE)				Dam 2 (EE)				Dam 3 (LL)				Dam 4 (LL)				Dam 5 (EE)	
	Immature		Jack		Immature		Jack		Immature		Jack		Immature		Jack		Immature	Jack
	EE	EL	EE	EL	EE	EL	EE	EL	EL	LL	EL	LL	EL	LL	EL	LL	EE	EE
n	7	11	92	68	2	21	79	73	51	47	14	8	53	51	44	24	2	85
% (for genotype within family)	7	14	93	86	2	22	98	78	78	85	22	15	55	68	45	32	2	98
GSI	0.05	0.04	1.64	1.50	0.05	0.04	1.29	1.30	0.04	0.04	1.62	1.41	0.05	0.05	1.83	1.80	0.06	2.34
Mass (g) - day 0	85	100	122	127	116	109	122	118	101	102	114	125	99	101	130	124	157	169
Mass (g) - day 58	150	176	333	337	198	194	298	283	173	177	281	302	180	187	341	323	333	434
SGR (% day ⁻¹) - day 58	0.96	1.02	1.79	1.73	0.95	1.02	1.57	1.56	0.93	0.94	1.58	1.56	1.07	1.06	1.72	1.69	1.31	1.69
Condition - day 0	1.29	1.28	1.28	1.27	1.23	1.23	1.22	1.22	1.25	1.25	1.26	1.28	1.24	1.22	1.22	1.23	1.17	1.25
Condition - day 58	1.07	1.08	1.32	1.30	1.07	1.07	1.27	1.26	1.07	1.06	1.27	1.29	1.04	1.05	1.31	1.30	1.14	1.36
Sire 2 (EL)																		
n	0	0	80	89	0	4	78	89	34	53	25	17	21	59	56	26		
%	0	0	100	100	0	4	100	96	58	76	42	24	27	69	73	31		
GSI	-	-	2.26	1.93	-	0.06	2.19	2.12	0.04	0.04	1.98	1.93	0.06	0.05	2.54	2.01		
Mass day 0	-	-	130	139	-	91	117	121	104	106	118	122	106	110	118	124		
Mass day 58	-	-	362	377	-	185	313	312	203	207	309	315	224	225	336	339		
SGR day 58	-	-	1.82	1.77	-	1.25	1.75	1.68	1.17	1.18	1.71	1.67	1.32	1.25	1.86	1.78		
Condition day 0	-	-	1.26	1.26	-	1.23	1.22	1.22	1.23	1.22	1.23	1.24	1.23	1.22	1.23	1.20		
Condition day 58	-	-	1.35	1.33	-	1.09	1.30	1.29	1.06	1.06	1.26	1.27	1.07	1.06	1.33	1.29		



Supplementary Figure 1. Histogram of testis size (A). PCA plots for EE fish (A), EL fish (B), and LL fish (C) showing that the GSI cut-off of 0.2 leads to the same clustering as when accounting for growth.