

**Table S1** Number of individuals for all factor levels of the experimental design.

Cross	Maturity	fresh	salt	clear	sediments	fresh:clear	fresh:sediments	salt:clear	salt:sediments	Overall
WW	immature	17	16	15	18	6	11	9	7	33
WW	female	37	37	40	34	19	18	21	16	74
WW	male	40	35	37	38	22	18	15	20	75
WW	all	94	88	92	90	47	47	45	44	183
BC	immature	49	43	45	47	27	22	18	25	92
BC	female	23	23	20	26	8	15	12	11	46
BC	male	23	21	25	19	13	10	12	9	44
BC	all	95	87	90	92	48	47	42	45	182
F1	immature	49	51	53	47	24	25	29	22	100
F1	female	17	23	16	24	8	9	8	15	40
F1	male	29	26	28	27	15	14	13	13	55
F1	all	95	100	97	98	47	48	50	50	195
F2	immature	54	52	59	47	30	24	29	23	106
F2	female	18	14	16	16	9	9	7	7	32
F2	male	24	27	20	31	9	15	11	16	51
F2	all	96	93	95	94	48	48	47	46	189
DD	immature	38	47	45	40	19	19	26	21	85
DD	female	14	10	11	13	4	10	7	3	24
DD	male	40	37	39	38	24	16	15	22	77
DD	all	92	94	95	91	47	45	48	46	186
Overall	all	472	462	469	465	237	235	232	230	934

Comments: Numbers are given for the three maturity groups (*Maturity*) between the crosses of wild (WW) and domesticated (DD) Atlantic salmon, reciprocal first- (F1) and second-generation hybrids (F2), and the reciprocal wild backcross (BC, WW x F1). Combinations of environmental factor levels for *Salinity* (levels: fresh, salt) and *Sediment* (levels: clear, sediments) are indicated by a colon. Results from an analysis of these occurrences, additionally accounting for occurrences for each tank, can be found in Table S2.