

Appendix V: Survival of subsampled eyed eggs retained in the hatchery from all families outplanted in the experimental river.

Table 1: Survival of subsampled eyed eggs retained in the hatchery from all families outplanted in the experimental river.

Vibert No.	Box	Stripping Date	Female Parent	Male Parent	Starting n(eggs)	n(morts) eggs	Date all hatched	n(morts) alveins	n(morts) total	n(with deformities)
1A		22/12/2008	OF_6	OM_1	25	0	18/03/2009	0	0	0
1B		22/12/2008	OF_5	OM_2	25	1	20/03/2009	0	1	0
2A		22/12/2008	OF_4	OM_3	25	0	20/03/2009	0	0	0
2B		22/12/2008	OF_3	OM_4	25	0	20/03/2009	0	0	0
3A		22/12/2008	OF_2	OM_5	25	0	20/03/2009	0	0	0
3B		22/12/2008	OF_7	OM_6	25	1	20/03/2009	1	2	0
4A		22/12/2008	OF_1	OM_7	25	1	20/03/2009	0	1	0
4B		22/12/2008	OF_8	OM_8	25	0	20/03/2009	0	0	0
5A		22/12/2008	OF_8	BM_2	25	0	20/03/2009	0	0	0
5B		22/12/2008	OF_3	BM_3	25	0	20/03/2009	0	0	0
6A		22/12/2008	OF_2	BM_4	25	0	23/03/2009	0	0	0
6B		22/12/2008	OF_7	BM_7	25	0	23/03/2009	0	0	0
7A		22/12/2008	OF_4	BM_8	25	0	23/03/2009	0	0	0
7B		22/12/2008	OF_6	BM_11	25	0	23/03/2009	0	0	0
8A		22/12/2008	OF_5	BM_12	25	0	20/03/2009	0	0	0
8B		22/12/2008	OF_1	BM_13	25	0	20/03/2009	0	0	0
9A		22/12/2008	BF_4	BM_2	25	0	18/03/2009	0	0	0
9B		22/12/2008	BF_5	BM_3	25	3	20/03/2009	0	3	0

Table 1 continued

Vibert Box No.	Stripping Date	Female Parent	Male Parent	Starting n(fry)	n(morts) eggs	Date all hatched	n(morts) alveins	n(morts) total	n(with deformities)
10A	22/12/2008	BF_2	BM_4	25	0	20/03/2009	0	0	0
10B	22/12/2008	BF_1	BM_5	25	0	20/03/2009	0	0	0
11A	22/12/2008	BF_3	BM_7	25	5	20/03/2009	0	5	0
11B	22/12/2008	BF_7	BM_8	25	0	20/03/2009	0	0	0
12A	22/12/2008	BF_6	BM_11	25	7	20/03/2009	0	7	0
12B	22/12/2008	BF_8	BM_12	25	0	20/03/2009	0	0	0
13A	22/12/2008	BF_9	BM_13	25	0	23/03/2009	0	0	0
13B	22/12/2008	BF_5	OM_1	25	0	18/03/2009	0	0	1 curved spine
14A	22/12/2008	BF_9	OM_2	25	0	23/03/2009	0	0	1 curved spine
14B	22/12/2008	BF_3	OM_3	25	0	20/03/2009	0	0	0
15A	22/12/2008	BF_8	OM_4	25	1	20/03/2009	0	1	0
15B	22/12/2008	BF_7	OM_5	25	0	20/03/2009	0	0	0
16A	22/12/2008	BF_1	OM_6	25	0	20/03/2009	0	0	0
16B	22/12/2008	BF_4	OM_7	25	0	20/03/2009	1	1	0
17A	22/12/2008	BF_6	OM_8	25	1	18/03/2009	0	1	0
17B	22/12/2008	BF_2	OM_9	25	0	20/03/2009	0	0	0
18A	29/12/2008	OF_11	OM_10	25	0	25/03/2009	0	0	0
18B	29/12/2008	OF_9	OM_11	25	0	27/03/2009	0	0	0
19A	29/12/2008	OF_12	OM_12	25	0	25/03/2009	0	0	0
19B	29/12/2008	OF_10	OM_13	25	0	25/03/2009	0	0	0
20A	29/12/2008	OF_9	BM_2	25	0	25/03/2009	0	0	0
20B	29/12/2008	OF_10	BM_14	25	0	25/03/2009	0	0	0
21A	29/12/2008	OF_11	BM_3	25	0	25/03/2009	0	0	0
21B	29/12/2008	OF_12	BM_5	25	0	25/03/2009	0	0	0
22A	29/12/2008	BF_12	BM_2	25	0	27/03/2009	0	0	1 curved spine
22B	29/12/2008	BF_14	BM_14	25	0	27/03/2009	1	1	0
23A	29/12/2008	BF_11	BM_3	25	2	27/03/2009	1	3	0
23B	29/12/2008	BF_11	OM_10	25	5	25/03/2009	0	5	0
24A	29/12/2008	BF_12	OM_11	25	5	27/03/2009	0	5	0
24B	29/12/2008	BF_14	OM_13	25	0	27/03/2009	0	0	0
25A	14/01/2009	BF_13	BM_10	25	0	22/04/2009	0	0	0
25B	14/01/2009	BF_13	OM_14	25	0	22/04/2009	0	0	0
26A	14/01/2009	OF_13	OM_14	25	0	22/04/2009	11	11	0
26B	14/01/2009	OF_13	BM_10	25	0	22/04/2009	24	24	0

Statistical analysis of survival from fertilisation to eyed-egg stage in the hatchery

A binomial GLMM (fit using penalised quasi-likelihood with the *glmmPQL* function in the R library *nlme*) including dam and sire as random effects was used to analyse variation in survival (at the full-sib family level) from fertilisation to eyed-egg stage in the hatchery. The response variable was a concatenated vector of the number of surviving eggs and the number non-surviving; all estimates and variance components are on the logit scale. Number of observations: 52; n= 26 dams; n = 25 sires. Group was a factor with four levels: Local_{female} x Local_{male}, Local_{female} x Foreign_{male}, Foreign_{female} x Local_{male} and Foreign_{female} x Foreign_{male}. Stripping date was a factor with three levels: early, mid and late. Results are presented as an ANOVA table based on Type II tests, with non-significant terms removed sequentially until all remaining terms were significant at the 5% level.

<i>Random effects:</i>	<i>Variance</i>			
Dam	0.58			
Sire	0.33			
Residual	4.21			

<i>Fixed effects:</i>	<i>NumDF</i>	<i>DenDF</i>	<i>F</i>	<i>P</i>
Intercept	1	26	124.0	<0.001
<i>Non-significant terms:</i>				
Group	3	23	2.90	0.057
Stripping date	2	21	0.27	0.763
Dam L_F	1	20	0.06	0.811
Dam life-history	1	23	0.84	0.368
Sire life-history	1	22	4.10	0.055
Eyed-egg diameter	1	24	1.01	0.324