

Appendix B: Table 1. Analysis of the effects of environmental variability ( $CV_E$ ) and within-brood variability ( $CV_B$ ) on  $\Delta W$ , the relative fitness of mothers producing offspring of variable size within each brood (variable strategy).

Source	Df	MS	F	P
Intercept	1	39.4426	10103.66	<0.0001
Egg Fitness Function Shape	2	0.3282	84.07	<0.0001
Environmental Variability ( $CV_E$ )	5	38.3871	9833.28	<0.0001
Within-Brood Variability ( $CV_B$ )	6	5.9295	1518.91	<0.0001
$EFFS \times CV_E$	10	0.8451	216.49	<0.0001
$EFFS \times CV_B$	12	0.0679	17.39	<0.0001
$CV_E \times CV_B$	30	5.4435	1394.42	<0.0001
$EFFS \times CV_E \times CV_B$	60	0.0950	24.33	<0.0001
Error	86374	0.0039		

Appendix C: Table 2. Analysis of the effects of maternal strategy (variable *versus* invariant) and degree of environmental variability ( $CV_E$ ) on the coefficient of variation in mean maternal fitness across generations. Coefficients of variation in mean maternal fitness were calculated over 100 generations or reproductive bouts, and 35 coefficients of variation were calculated for each level of  $CV_E$  for each maternal strategy. Results shown are for an egg fitness function with  $m_{\min} = 30$  and  $m_{\max} = 70$  (function “b” in Fig. 2); other functions (see Fig. 2) yielded similar results (not shown).

Source	Df	MS	F	P
Intercept	1	1.58012	17666.25	<0.0001
Strategy	1	0.02358	263.67	<0.0001
Environmental Variability ( $CV_E$ )	5	0.03640	406.94	<0.0001
Strategy $\times$ $CV_E$	5	0.00031	3.49	0.0043
Error	408	0.00009		

Appendix C: Table 3. Analysis of the effects of egg fitness function width (see Fig. 2), environmental variability ( $CV_E$ ) and within-brood variability ( $CV_B$ ) on the proportion of variable strategy-females suffering complete reproductive failure.

Source	Df	MS	F	P
Intercept	1	9538.014	26662245	<0.0001
Egg Fitness Function Shape	2	405.833	1134453	<0.0001
Environmental Variability ( $CV_E$ )	5	383.349	1071601	<0.0001
Within-Brood Variability ( $CV_B$ )	6	246.209	688243	<0.0001
$EFFS \times CV_E$	10	2.861	7998	<0.0001
$EFFS \times CV_B$	12	12.963	36238	<0.0001
$CV_E \times CV_B$	30	2.540	7102	<0.0001
$EFFS \times CV_E \times CV_B$	60	0.893	2496	<0.0001
Error	86374	0.000		