

Table S5.

(A)	Trait	Model Comparison	degrees-of-freedom	likelihood-ratio test statistic	p
	NWF	GLS v. Random Intercept	1	2.27	0.13
	NWF	GLS v. Random Slope	1	2.27	0.13
	NWF	GLS v. Random Slope + Intercept	1	2.28	0.13
	GSI	GLS v. Random Intercept	1	5.10E-11	1
	GSI	GLS v. Random Slope	1	2.20E-11	1
	GSI	GLS v. Random Slope + Intercept	1	0	1

(B)	Trait	Predictors	degrees-of-freedom	likelihood-ratio test statistic	p
	NWF	year	1	66.55	<0.0001
	NWF	sex	1	66.56	<0.0001
	NWF	log(estuary_date)	1	104.63	<0.0001
	GSI	year	1	2.5	0.11
	GSI	sex	1	347.54	<0.0001
	GSI	log(estuary_date)	1	82.98	<0.0001
	GSI	log(estuary_date)^2	1	94.27	<0.0001

(C)	Trait	Predictors	Estimates	95% confidence interval of Estimates	p
	NWF	(Intercept)	0.73	0.65 – 0.81	<0.001
	NWF	log(estuary_date)	-0.08	-0.10 – -0.07	<0.001
	NWF	sex [m]	0.03	0.03 – 0.04	<0.001
	NWF	year [2010]	0.03	0.03 – 0.04	<0.001
	GSI	(Intercept)	1.6	1.25 – 1.96	<0.001
	GSI	log(estuary_date)	-0.66	-0.79 – -0.52	<0.001
	GSI	log(estuary_date)^2	0.07	0.05 – 0.08	<0.001
	GSI	sex [m]	-0.01	-0.02 – -0.01	<0.001

(A) Results from likelihood ratio test model selection analyzing if including RoSA genotype as a random effect (random slope, random intercept or random slope and intercept) explained more variance in maturation status (gonadosomatic index) or adiposity (non-water fraction of liver, NWF) than a fixed effects model with sampling date (julian day), sex and year as fixed effects. Likelihood ratio tests were used to evaluate if the random effects models explained more variance than the fixed effect model. Including RoSA as any sort of random effect did not increase variance explained in either trait after accounting for effects of sampling date, sex and year. The lack of significance indicates that GSI and NWF are primarily influenced by a combination of sampling date, sex and year. (B) Likelihood ratio test results for significance of