

Supplementary Table 2. Significance level of parameters, coefficient of determination (r^2), and Akaike information criterion (AIC) for potential general linear models used to predict fecundity of lumpfish (*Cylopterus lumpus*) at oocyte size frequency distribution (OSFD) stage 3. In ovaries classified as at OSFD stage 3, a break in size frequency distribution separates oocytes into a group of large oocytes (diameters >1800 μm) that have a bimodal distribution and a group of small oocytes (diameters $\leq 1800 \mu\text{m}$) that have a variable distribution. Parameters include carcass weight, liver weight, leading cohort (LC) oocyte diameter, date of capture, and spawning year. Asterisks indicate levels of significance: $P < 0.0001$ (****), $P < 0.001$ (***), $P < 0.01$ (**), and $P < 0.05$ (*). Bold type indicates the best model. The models were fit to data from fish sampled around Iceland during 2009 and 2014–2019.

Model	Carcass	Liver	LC	Date	Year	r^2	AIC
Carcass	****					0.42	14867
Carcass + year	****				*	0.43	14855
Carcass + liver	****	****				0.43	14831
Carcass + date	****			****		0.49	14767
Carcass + LC	****		****			0.42	14869
Carcass + liver + year	****	****			*	0.44	14823
Carcass + liver + date	****	****		****		0.50	14731
Carcass + liver + LC	****	****	****			0.43	14830
Carcass + date + year	****			****		0.50	14765
Carcass + date + LC	****		****	****		0.50	14754
Carcass + year + LC	****		****		*	0.43	14857
Carcass + liver + date + LC	****	**	****	****		0.50	14728
Carcass + liver + date + year	****	****		****		0.51	14729
Carcass + liver + LC + year	****	****	****		*	0.44	14822
Carcass + LC + date + year	****		****	****		0.50	14753
Carcass + liver + date + year + LC	****	**	****	****		0.51	14727