

Supplementary Table 1. 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 2. Ovaries classified as at OSFD stage 2 contain a single group of oocytes between 400 and 1800 μm with a unimodal size frequency 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 2013–2019.

Models	Carcass	Liver	LC	Date	Year	r^2	AIC
Carcass	****					0.12	8647
Carcass + sp. year	****				*	0.20	8618
Carcass + liver	****	****				0.16	8607
Carcass + date	****			**		0.13	8643
Carcass + LC	****		****			0.50	7782
Carcass + liver + sp. year	****	****			*	0.23	8578
Carcass + liver + date	****	****				0.16	8607
Carcass + liver + LC	****		****			0.51	7758
Carcass + date + sp. year	****			***	****	0.22	8609
Carcass + date + LC	****		****	**		0.51	7780
Carcass + sp. year + LC	****		****		**	0.56	7744
Carcass + liver + date + LC	****		****	**		0.51	7755
Carcass + liver + date + sp. year	****	****		**	****	0.24	8575
Carcass + liver + LC + sp. year	****	*	****		*	0.56	7720
Carcass + LC + date + sp. year	****		****	*	****	0.56	7742
Carcass + liver + date + sp. year + LC	****		****	*	****	0.57	7718