

Table S2. AIC values for reduced Cormack-Jolly-Seber (CJS) and Jolly-Seber-Schwarz-Arnason (JSSA) models tested using the R package openCR for apparent survival and per capita recruitment rate estimates of *Bettongia lesueur* at Matuwa.

Model type	Likelihood	Model parametrizations	logLik	AIC	AICc	dAIC
CJS		$p \sim 1 \phi \sim 1$	-9074.23	18152.46	18152.48	0
JSSA	Conditional likelihood	$p \sim 1 \phi \sim 1 b \sim 1$	-15053.3	30112.58	30112.62	11960.12
JSSA	Conditional likelihood	$p \sim 1 \phi \sim 1 f \sim 1$	-14939.6	29885.22	29885.26	11732.76
JSSA	Conditional likelihood	$p \sim 1 \phi \sim 1 \gamma \sim 1$	-14939.6	29885.22	29885.26	11732.76
JSSA	Conditional likelihood	$p \sim 1 \phi \sim 1 \lambda \sim 1$	-14939.6	29885.22	29885.26	11732.76
JSSA	Full likelihood	$p \sim 1 \phi \sim 1 b \sim 1 \text{super}N \sim 1$	-15057.6	30123.28	30123.34	11970.81
JSSA	Full likelihood	$p \sim 1 \phi \sim 1 f \sim 1 \text{super}N \sim 1$	-14944	29895.91	29895.97	11743.45
JSSA	Full likelihood	$p \sim 1 \phi \sim 1 \gamma \sim 1 \text{super}N \sim 1$	-14944	29895.91	29895.97	11743.45
JSSA	Full likelihood	$p \sim 1 \phi \sim 1 \lambda \sim 1 \text{super}N \sim 1$	-14944	29895.92	29895.98	11743.45
JSSA	Full likelihood	$p \sim 1 \phi \sim 1 BN \sim 1$	-15083.6	30173.16	30173.2	12020.7
JSSA	Full likelihood	$p \sim 1 \phi \sim 1 N \sim 1$	-14993	29991.92	29991.96	11839.46