

Individual Condition vs Nest Size with sex and instar as numeric value

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AIC Values of all possible models with instar always included

note: InstarNumber is numeric

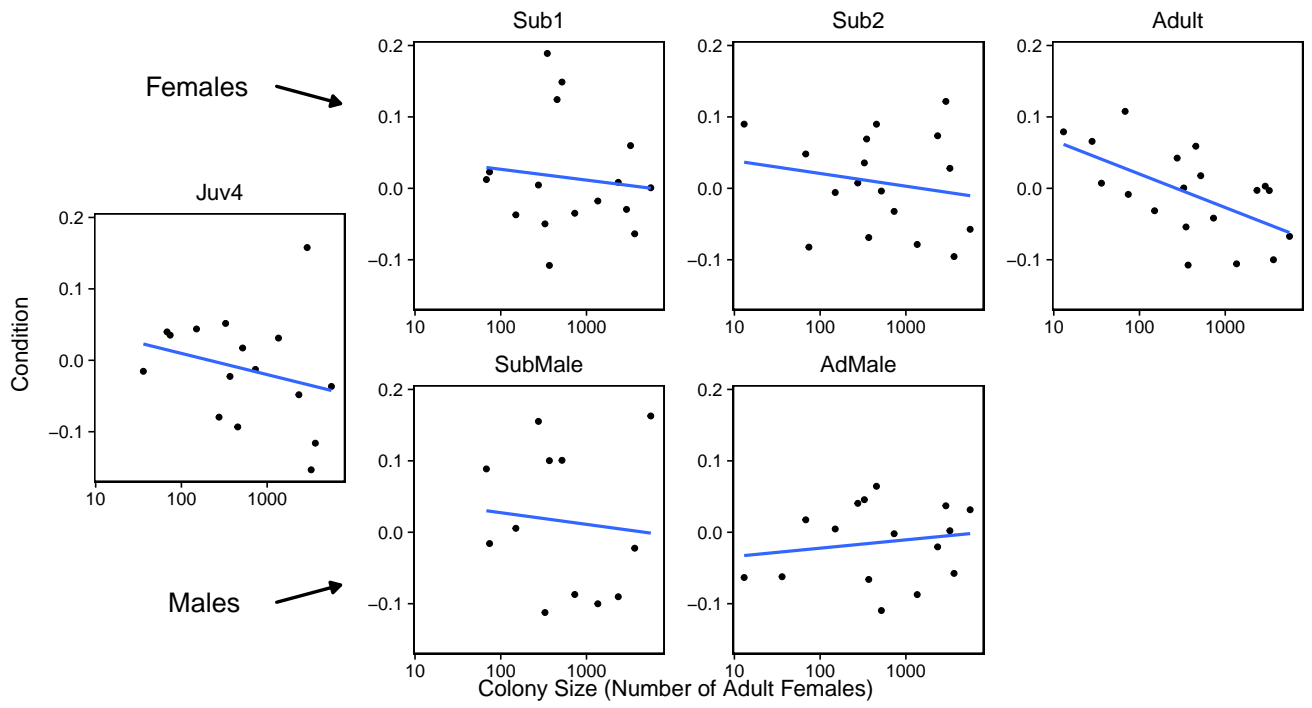
AIC_Diff	AIC	model	num.predictors
0	-2087	condResiduals ~ logCtFm + logCtFm:InstarNumber + (1 NestID)	5
0.96	-2086	condResiduals ~ logCtFm + InstarNumber + (1 NestID)	5
1.53	-2085	condResiduals ~ logCtFm + logCtFm:InstarNumber + logCtFm:InstarNumber:InstarSex + (1 NestID)	6
1.76	-2085	condResiduals ~ logCtFm + InstarNumber + logCtFm:InstarNumber + (1 NestID)	6
2.84	-2084	condResiduals ~ logCtFm + InstarNumber + InstarNumber:InstarSex + (1 NestID)	6
3.28	-2083	condResiduals ~ logCtFm + InstarNumber + logCtFm:InstarNumber + logCtFm:InstarNumber:InstarSex + (1 NestID)	7
3.3	-2083	condResiduals ~ logCtFm + InstarNumber + InstarNumber:InstarSex + logCtFm:InstarNumber + logCtFm:InstarNumber:InstarSex + (1 NestID)	8
3.63	-2083	condResiduals ~ logCtFm + InstarNumber + InstarNumber:InstarSex + logCtFm:InstarNumber + (1 NestID)	7

Graph with lowest AIC model superimposed

Model:

`condResiduals ~ logCtFm + logCtFm:InstarNumber + (1 | NestID)`

Note: If line on graph is blue R could not plot the lmer, plotting a simple lm instead



Statistics using model with lowest AIC

Full Model: $\text{condResiduals} \sim \text{logCtFm} + \text{logCtFm:InstarNumber} + (1 \mid \text{NestID})$

Anova of full model alone

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
logCtFm	0.013	0.013	1	28.436	1.165	0.289
logCtFm:InstarNumber	0.073	0.073	1	1,259.713	6.789	0.009

Testing Individual Variables by performing an Anova of full vs reduced model)

Testing Interaction Term nest size * instar against full model. - p < 0.01 SIGNIFICANT **

	Df	AIC	BIC	logLik	deviance	Chisq	Chi Df	Pr(>Chisq)
..1	4	-2,081.925	-2,061.348	1,044.963	-2,089.925			
object	5	-2,086.689	-2,060.967	1,048.345	-2,096.689	6.764	1	0.009

Reduced Model: $\text{condResiduals} = \text{logCtFm} + (1 \mid \text{NestID})$

Testing Nest Size against full model. - p < 0.01 SIGNIFICANT **

	Df	AIC	BIC	logLik	deviance	Chisq	Chi Df	Pr(>Chisq)
..1	3	-2,079.566	-2,064.133	1,042.783	-2,085.566			
object	5	-2,086.689	-2,060.967	1,048.345	-2,096.689	11.123	2	0.004

Reduced Model: $\text{condResiduals} = (1 \mid \text{NestID})$