# Variance in Condition vs Nest Size Instar As Number

### Ruth Sharpe

Run on 24 August, 2017 at 2017-08-24 11:01:20

## glmmPRQ model - not able to get AIC value

Rows removed with 2 or fewer data points

	Chisq	Df	p_value
logCtFm	3.23	1.00	0.073.
InstarNumber	15.25	1.00	0.000***
I(InstarNumber^2)	7.81	1.00	0.005**
InstarNumber:InstarSex	10.15	1.00	0.001**
logCtFm:InstarNumber	0.16	1.00	0.691  RMVD
$\log CtFm: Instar Number: Instar Sex$	0.33	1.00	0.564

### [1] "term with highest p value is: logCtFm:InstarNumber"

	Chisq	Df	p_value
logCtFm	3.23	1.00	0.073.
InstarNumber	15.25	1.00	0.000***
I(InstarNumber^2)	7.81	1.00	0.005**
InstarNumber:InstarSex	10.11	1.00	0.001**
$\log \text{CtFm:} Instar \text{Number:} Instar \text{Sex}$	0.49	2.00	0.783  RMVD

#### [1] "term with highest p value is: logCtFm:InstarNumber:InstarSex"

	Chisq	Df	p_value
logCtFm	3.21	1.00	$0.073~\mathrm{RMVD}$
InstarNumber	15.16	1.00	0.000***
I(InstarNumber^2)	7.76	1.00	0.005**
In star Number: In star Sex	10.10	1.00	0.001**

[1] "i = 1" [1] "term with highest p value is: I(InstarNumber^2)"

Final Model is: boot VarTrans  $\sim \log {\rm CtFm} + {\rm InstarNumber} + {\rm InstarNumber} : {\rm InstarSex}$ 

## Graph

note: blue line just lm model

Note: If line on graph is blue R could not plot the lmer, plotting a simple lm instead[1] "no model selected"

- [1] "no or incorrect model specified"

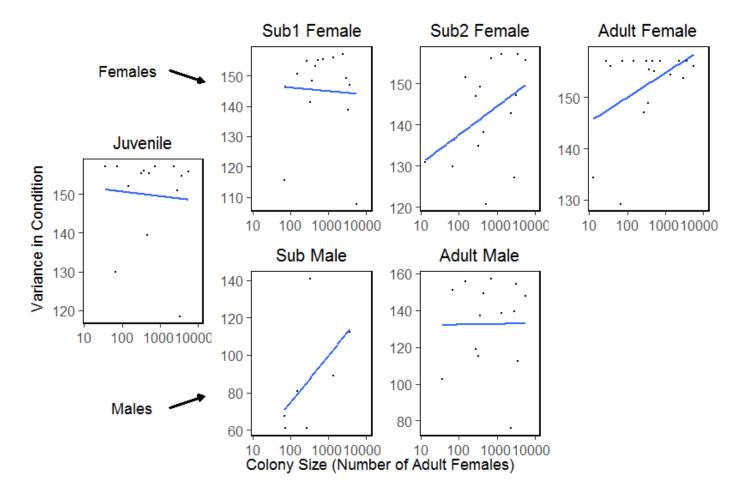


Figure 1: plot of chunk unnamed-chunk-1

#### **Testing Individual Instars**

logCtFm

As the three way interaction is significant testing instar individually

	LR Chisq	Df	Pr(>Chisq)
logCtFm	2.843379	1	0.0917511
	LR Chisq	Df	Pr(>Chisq)

1

0.1220449

2.39088

	LR Chisq	Df	Pr(>Chisq)
logCtFm	0.6262373	1	0.4287389
	LR Chisq	Df	Pr(>Chisq)
logCtFm	0.0476397	1	0.8272225
	LR Chisq	Df	Pr(>Chisq)
logCtFm	0.0417104	1	0.8381727
	LR Chisq	Df	Pr(>Chisq)
logCtFm	2.242466	1	0.1342667

# Graph of condition variance against instar

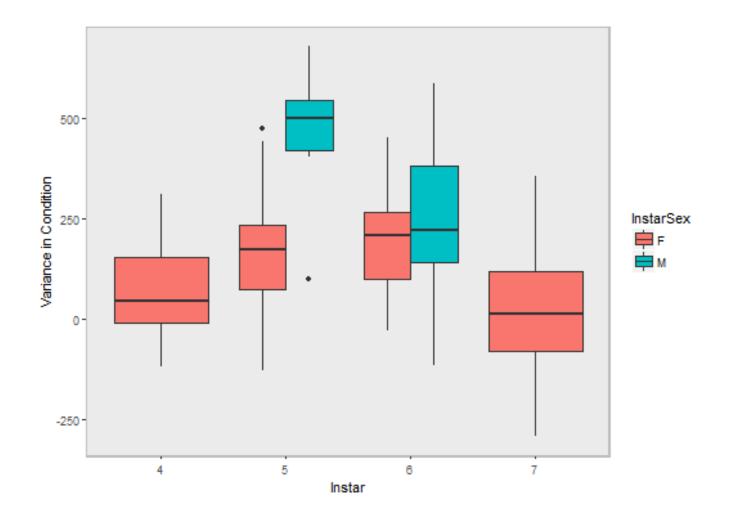


Figure 2: plot of chunk unnamed-chunk-2