

Variance in Condition vs Nest Size

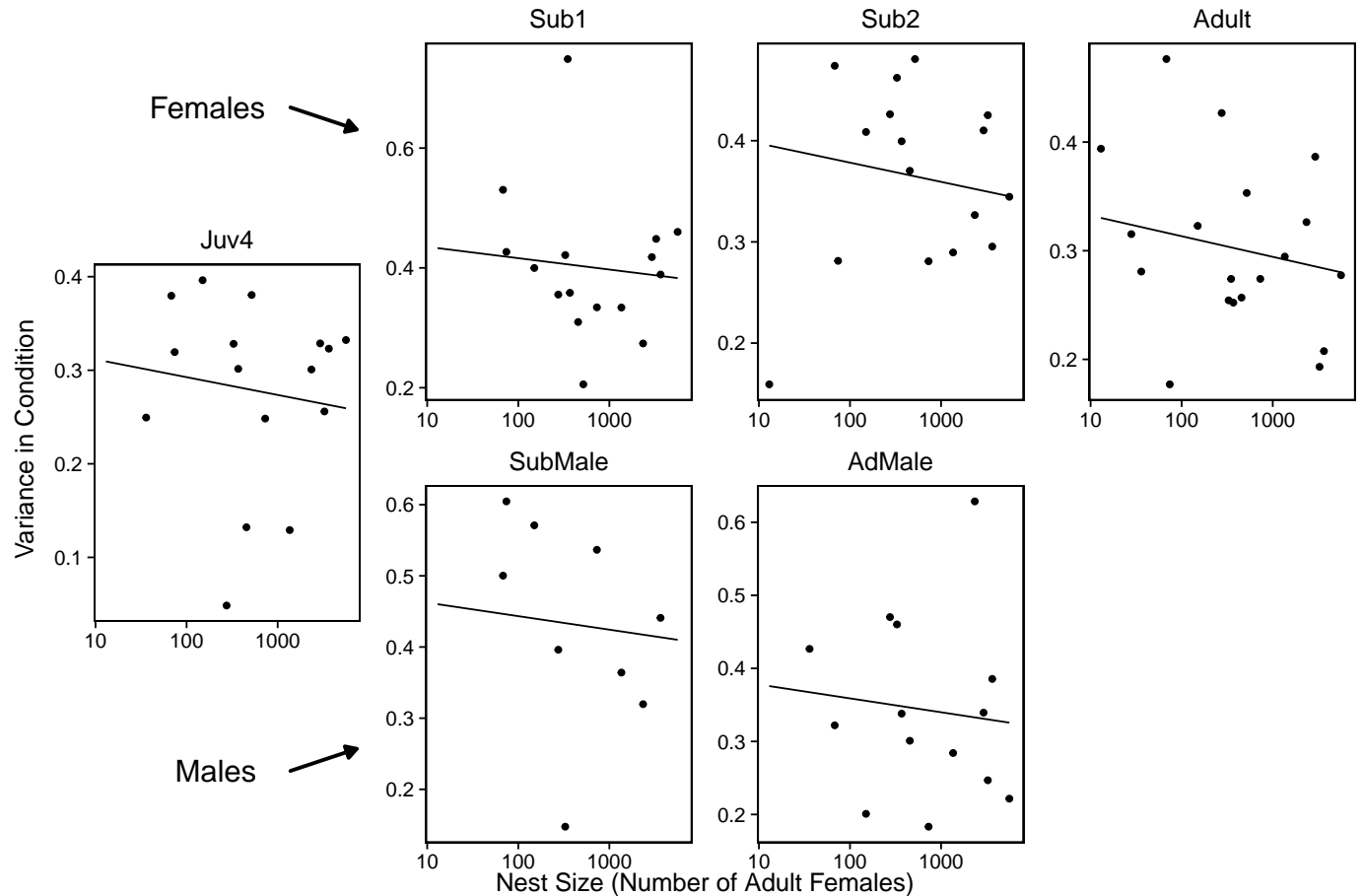
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AIC Values of all possible models with instar included

AIC_Diff	AIC	model	num.predictors
0	-137.2	relativeVar ~ logCtFm + Instar + (1 NestID)	9
0.04	-137.2	relativeVar ~ I(logCtFm^2) + Instar + (1 NestID)	9
2	-135.2	relativeVar ~ logCtFm + I(logCtFm^2) + Instar + (1 NestID)	10
6.62	-130.6	relativeVar ~ logCtFm + logCtFm:Instar + Instar + (1 NestID)	14
7.65	-129.6	relativeVar ~ I(logCtFm^2) + I(logCtFm^2):Instar + Instar + (1 NestID)	14
8.6	-128.7	relativeVar ~ logCtFm + logCtFm:Instar + I(logCtFm^2) + Instar + (1 NestID)	15
8.73	-128.5	relativeVar ~ logCtFm + logCtFm:Instar + I(logCtFm^2) + I(logCtFm^2):Instar + Instar + (1 NestID)	20
8.73	-128.5	relativeVar ~ logCtFm + logCtFm:Instar + I(logCtFm^2):Instar + Instar + (1 NestID)	20
9.6	-127.6	relativeVar ~ logCtFm + I(logCtFm^2) + I(logCtFm^2):Instar + Instar + (1 NestID)	15

Graph with lowest AIC model superimposed



Statistics using model without squared values as the full model (Lowest AIC Model)

Anova of full model alone

-Model: relativeVar ~ logCtFm + Instar + (1 | NestID)

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
logCtFm	0.0145651	0.0145651	1	90.00019	1.396134	0.2404847
Instar	0.2322423	0.0464485	5	90.00019	4.452317	0.0011386

—Testing Individual Variables, (Anova of full vs reduced model)—

Testing Instar Term

-Full Model: relativeVar ~ logCtFm + Instar + (1 | NestID)

-Reduced Model: relativeVar ~ logCtFm + (1 | NestID)

	Df	AIC	BIC	logLik	deviance	Chisq	Chi Df	Pr(>Chisq)
..1	4	-127.3544	-117.3551	67.67719	-135.3544	NA	NA	NA
object	9	-137.2464	-114.7481	77.62318	-155.2464	19.89199	5	0.0013094

Testing Nest Size

-Full Model: relativeVar ~ logCtFm + Instar + (1 | NestID)

-Reduced Model: relativeVar ~ Instar + (1 | NestID)

	Df	AIC	BIC	logLik	deviance	Chisq	Chi Df	Pr(>Chisq)
..1	8	-137.8610	-117.8625	76.93048	-153.8610	NA	NA	NA
object	9	-137.2464	-114.7481	77.62318	-155.2464	1.385416	1	0.2391808

Note: See next page for graph

Graph of condition variance against instar

