Variance in Leg vs Nest Size Instar As Number

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AIC Values of all possible models with instar included and sample size as weight

Mean of untransformed within-colony leg variance is 0.0863835 and standard error is 0.0207265.

| | Chisq | Df | p_value |
|--|-------|------|-------------|
| logCtFm | 0.31 | 1.00 | 0.577 |
| InstarNumber | 1.22 | 1.00 | 0.270 |
| I(InstarNumber^2) | 0.60 | 1.00 | 0.437 |
| InstarNumber:InstarSex | 0.10 | 1.00 | 0.755 RMVD |
| logCtFm:InstarNumber | 2.21 | 1.00 | 0.137 |
| InstarSex:I(InstarNumber^2) | 0.19 | 1.00 | 0.666 |
| logCtFm:I(InstarNumber^2) | 2.95 | 1.00 | 0.086. |
| $\log CtFm: Instar Number: Instar Sex$ | 0.59 | 1.00 | 0.443 |
| logCtFm:InstarSex:I(InstarNumber^2) | 0.80 | 1.00 | 0.371 |

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

| | Chisq | Df | p_value |
|-------------------------------------|-------|------|-------------|
| logCtFm | 0.19 | 1.00 | 0.662 |
| InstarNumber | 1.53 | 1.00 | 0.217 |
| I(InstarNumber^2) | 0.89 | 1.00 | 0.345 |
| logCtFm:InstarNumber | 2.27 | 1.00 | 0.131 |
| InstarSex:I(InstarNumber^2) | 2.11 | 1.00 | 0.146 |
| logCtFm:I(InstarNumber^2) | 4.66 | 1.00 | 0.031* |
| logCtFm:InstarNumber:InstarSex | 0.02 | 1.00 | 0.878 RMVD |
| logCtFm:InstarSex:I(InstarNumber^2) | 0.06 | 1.00 | 0.802 |

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

| | Chisq | Df | p_value |
|-------------------------------------|-------|---------------------|------------|
| logCtFm | 0.18 | 1.00 | 0.673 RMVD |
| InstarNumber | 1.51 | 1.00 | 0.219 |
| I(InstarNumber^2) | 2.36 | 1.00 | 0.124 |
| logCtFm:InstarNumber | 2.27 | 1.00 | 0.132 |
| InstarSex:I(InstarNumber^2) | 3.45 | 1.00 | 0.063. |
| logCtFm:I(InstarNumber^2) | 6.29 | 1.00 | 0.012* |
| logCtFm:InstarSex:I(InstarNumber^2) | 1.39 | 1.00 | 0.238 |

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

| | Chisq | Df | p_value |
|-------------------------------------|-------|------|-----------------------|
| InstarNumber | 2.10 | 1.00 | 0.147 |
| I(InstarNumber^2) | 0.38 | 1.00 | $0.540~\mathrm{RMVD}$ |
| logCtFm:InstarNumber | 6.12 | 1.00 | 0.013* |
| InstarSex:I(InstarNumber^2) | 1.68 | 1.00 | 0.195 |
| logCtFm:I(InstarNumber^2) | 9.68 | 1.00 | 0.002** |
| logCtFm:InstarSex:I(InstarNumber^2) | 2.58 | 1.00 | 0.108 |

^{[1] &}quot;term with highest p value is: I(InstarNumber^2)"

| | Chisq | Df | p_value |
|-------------------------------------|-------|------|------------|
| InstarNumber | 2.10 | 1.00 | 0.147 RMVD |
| logCtFm:InstarNumber | 6.12 | 1.00 | 0.013* |
| InstarSex:I(InstarNumber^2) | 9.49 | 2.00 | 0.009** |
| logCtFm:I(InstarNumber^2) | 9.68 | 1.00 | 0.002** |
| logCtFm:InstarSex:I(InstarNumber^2) | 2.58 | 1.00 | 0.108 |

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

Warning: glm.fit: algorithm did not converge

| | Chisq | Df | p_value |
|-------------------------------------|-------|------|-------------|
| logCtFm:InstarNumber | 6.71 | 1.00 | 0.010** |
| InstarSex:I(InstarNumber^2) | 4.20 | 2.00 | 0.123 RMVD |
| logCtFm:I(InstarNumber^2) | 5.44 | 1.00 | 0.020* |
| logCtFm:InstarSex:I(InstarNumber^2) | 5.77 | 1.00 | 0.016* |

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

| | Chisq | Df | p_value |
|-------------------------------------|-------|------|-------------|
| logCtFm:InstarNumber | 0.27 | 1.00 | 0.602 |
| logCtFm:I(InstarNumber^2) | 0.13 | 1.00 | 0.716 RMVD |
| logCtFm:InstarSex:I(InstarNumber^2) | 1.81 | 1.00 | 0.179 |

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

| | Chisq | Df | p_value |
|-------------------------------------|-------|------|------------|
| logCtFm:InstarNumber | 0.27 | 1.00 | 0.602 RMVD |
| logCtFm:InstarSex:I(InstarNumber^2) | 1.94 | 2.00 | 0.379 |

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

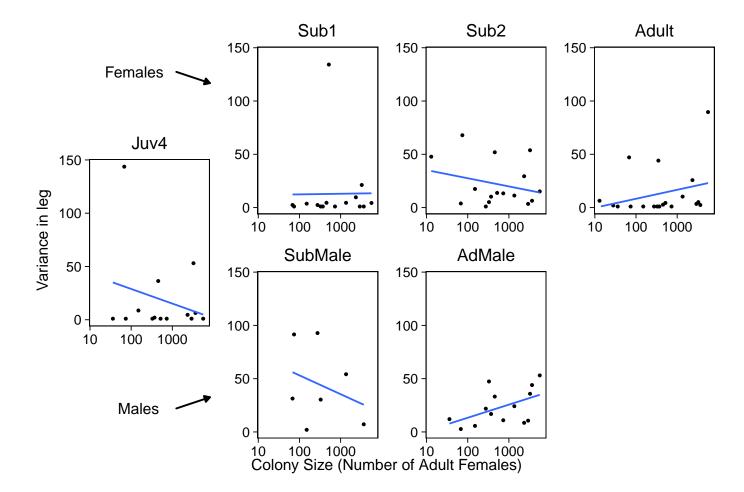
Graphs

Leg Variance against nest size

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"

Warning: Removed 1 rows containing missing values (geom_smooth).



Graph of leg variance against instar

