Biomass by Nest Size

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Biomass per capita calculated as insect biomass over total number of adult females

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Analysis of Variance Table of type III  with  Satterthwaite
approximation for degrees of freedom
          Sum Sq Mean Sq NumDF  DenDF F.value   Pr(>F)
log10AdFm 0.7687  0.7687     1 35.383  8.7373 0.005519 **
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1


Analysis of Variance Table of type III  with  Satterthwaite
approximation for degrees of freedom
                Sum Sq  Mean Sq NumDF  DenDF F.value Pr(>F)
log10AdFm      0.010351 0.010351     1 82.486 0.11766 0.7325
I(log10AdFm^2) 0.010568 0.010568     1 78.670 0.12012 0.7298


Model without square value has the lowest AIC


Data: Biomass
Models:
object: BiomsPerAdFm ~ (1 | ColonyID) + (1 | Date)
..1: BiomsPerAdFm ~ log10AdFm + (1 | ColonyID) + (1 | Date)
       Df    AIC    BIC  logLik deviance  Chisq Chi Df Pr(>Chisq)
object  4 76.162 86.205 -34.081   68.162
..1     5 72.300 84.854 -31.150   62.300 5.8619      1    0.01547 *
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```
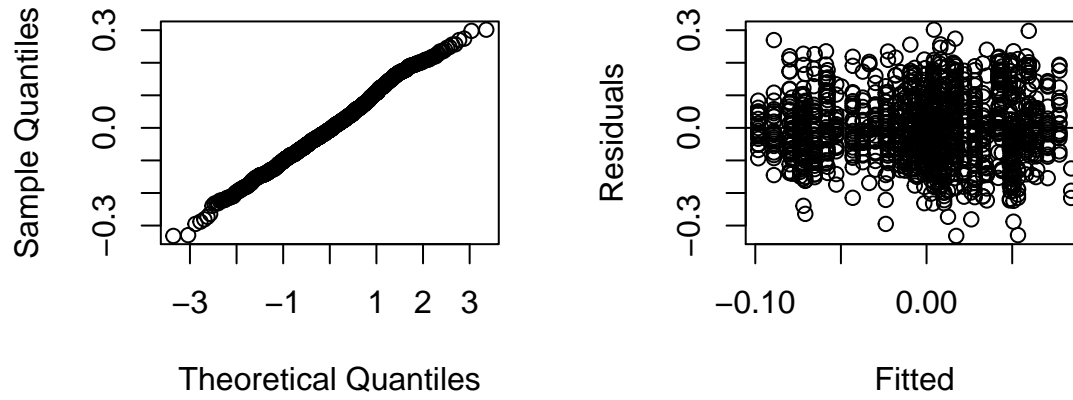
Checking full model fit

[1] "condResiduals ~ logCtFm + logCtFm:InstarNumber + (1 | NestID)"

Graph of biomass against nest size