**Sit as the reference position**

**Model 11 – AIC 3218.163**

Linear mixed model fit by REML ['lmerMod']

Formula: therm\_t ~ pos\_beh + time\_od + sun + date + hab\_type + (1 | individual)

Data: prelim\_temp

REML criterion at convergence: 3178.2

Scaled residuals:

Min 1Q Median 3Q Max

-3.0047 -0.6322 0.0364 0.5649 4.7698

Random effects:

Groups Name Variance Std.Dev.

individual (Intercept) 0.1683 0.4103

Residual 2.8436 1.6863

Number of obs: 810, groups: individual, 12

Fixed effects:

Estimate Std. Error t value

(Intercept) 1.081e+03 1.202e+02 8.990

pos\_behLy -1.277e+00 2.336e-01 -5.467

pos\_behSq -2.028e-01 6.647e-01 -0.305

pos\_behQS 1.785e-01 2.633e-01 0.678

pos\_behQW -1.816e-01 1.698e-01 -1.069

pos\_behBp -6.016e-01 1.792e-01 -3.357

pos\_behSu -1.053e-01 5.524e-01 -0.191

pos\_behVC -5.807e-01 3.590e-01 -1.618

time\_odl\_morning 1.275e+00 1.891e-01 6.742

time\_ode\_afternoon 2.478e+00 2.367e-01 10.471

time\_odl\_afternoon 2.926e+00 1.992e-01 14.684

time\_odevening 2.442e+00 2.014e-01 12.126

sun 4.746e-02 3.110e-03 15.260

date -5.932e-02 6.788e-03 -8.739

hab\_typeBMWD 3.780e-01 8.116e-01 0.466

hab\_typeGA 1.209e+00 8.104e-01 1.492

hab\_typeGL 1.116e+00 8.297e-01 1.345

hab\_typeWD 1.085e+00 7.791e-01 1.392

*Confidence Intervals*

2.5 % 97.5 %

.sig01 0.18143282 0.67923609

.sigma 1.59027830 1.75462332

(Intercept) 843.26932885 1313.60473885

pos\_behLy -1.72731261 -0.81787381

pos\_behSq -1.49388188 1.08755622

pos\_behQS -0.33573053 0.68751850

pos\_behQW -0.51030688 0.14933386

pos\_behBp -0.95091155 -0.25506344

pos\_behSu -1.17870920 0.96680515

pos\_behVC -1.27514500 0.11902759

time\_odl\_morning 0.90218268 1.63847502

time\_ode\_afternoon 2.00988017 2.93261726

time\_odl\_afternoon 2.53026299 3.30824950

time\_odevening 2.04697672 2.83007859

sun 0.04149162 0.05369582

date -0.07246608 -0.04590983

hab\_typeBMWD -1.21465876 1.94176875

hab\_typeGA -0.35692466 2.79134421

hab\_typeGL -0.49663105 2.72526879

hab\_typeWD -0.42425485 2.60148411

*table from when Lie was the reference position*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Estimate | Standard Error | t-value | Confidence | Intervals | Significance |
| Sit | 1.273e+00 | 2.330e-01 | 5.462 | 0.81428992 | 1.72206389 | \* |
| Quadrupedal Stand | 1.455e+00 | 3.275e-01 | 4.442 | 0.80921328 | 2.08565736 | \* |
| Quadrupedal Walk | 1.094e+00 | 2.591e-01 | 4.222 | 0.58641143 | 1.59456329 | \* |
| Bipedalism | 6.737e-01 | 2.655e-01 | 2.538 | 0.15036040 | 1.18483312 | \* |
| Suspensory | 1.170e+00 | 5.887e-01 | 1.987 | 0.02008693 | 2.30893900 | \* |
| Vertical Climb/Cling | 6.938e-01 | 4.074e-01 | 1.703 | -0.09995998 | 1.48342448 |  |
| Late Morning | 1.277e+00 | 1.889e-01 | 6.758 | 0.90413288 | 1.64010383 | \* |
| Early Afternoon | 2.480e+00 | 2.364e-01 | 10.493 | 2.01250798 | 2.93476428 | \* |
| Late Afternoon | 2.931e+00 | 1.985e-01 | 14.766 | 2.53643995 | 3.31194178 | \* |
| Evening | 2.446e+00 | 2.010e-01 | 12.170 | 2.05108311 | 2.83296557 | \* |
| Sun | 4.746e-02 | 3.108e-03 | 15.271 | 0.04149852 | 0.05370248 | \* |
| Date | -5.920e-02 | 6.773e-03 | -8.741 | -0.07232210 | -0.04581272 | \* |
| Bamboo Woodland | 4.186e-01 | 8.002e-01 | 0.523 | -1.15283297 | 1.96122898 |  |
| Gallery Forest | 1.243e+00 | 8.022e-01 | 1.549 | -0.30804659 | 2.81055119 |  |
| Grassland | 1.157e+00 | 8.182e-01 | 1.414 | -0.43428425 | 2.74515526 |  |
| Woodland | 1.124e+00 | 7.676e-01 | 1.465 | -0.36291189 | 2.62008007 |  |

**Model 14 – AIC 3218.819**

Linear mixed model fit by REML ['lmerMod']

Formula: therm\_t ~ pos\_beh + time\_od + sun + date + (1 | individual)

Data: prelim\_temp

REML criterion at convergence: 3186.8

Scaled residuals:

Min 1Q Median 3Q Max

-3.0338 -0.6346 0.0161 0.5416 4.3578

Random effects:

Groups Name Variance Std.Dev.

individual (Intercept) 0.2519 0.5019

Residual 2.8520 1.6888

Number of obs: 810, groups: individual, 12

Fixed effects:

Estimate Std. Error t value

(Intercept) 1.114e+03 1.218e+02 9.145

pos\_behLy -1.223e+00 2.296e-01 -5.329

pos\_behSq -2.984e-01 6.545e-01 -0.456

pos\_behQS 1.908e-01 2.637e-01 0.723

pos\_behQW -1.961e-01 1.679e-01 -1.168

pos\_behBp -5.604e-01 1.783e-01 -3.143

pos\_behSu -1.265e-01 5.525e-01 -0.229

pos\_behVC -5.880e-01 3.592e-01 -1.637

time\_odl\_morning 1.295e+00 1.865e-01 6.944

time\_ode\_afternoon 2.527e+00 2.296e-01 11.007

time\_odl\_afternoon 2.905e+00 1.932e-01 15.038

time\_odevening 2.427e+00 1.989e-01 12.200

sun 4.800e-02 2.882e-03 16.653

date -6.115e-02 6.881e-03 -8.887

*Confidence Intervals*

2.5 % 97.5 %

.sig01 0.26461064 0.81162367

.sigma 1.59642209 1.76129502

(Intercept) 870.82285544 1351.79207598

pos\_behLy -1.66711024 -0.77075095

pos\_behSq -1.57040540 0.97779797

pos\_behQS -0.32543937 0.70200447

pos\_behQW -0.52329730 0.13023313

pos\_behBp -0.90809281 -0.21396127

pos\_behSu -1.20221424 0.94889248

pos\_behVC -1.28529797 0.11348840

time\_odl\_morning 0.92834701 1.65576391

time\_ode\_afternoon 2.07487929 2.97064919

time\_odl\_afternoon 2.52163586 3.27789538

time\_odevening 2.03711535 2.81222545

sun 0.04243457 0.05376851

date -0.07456942 -0.04740691