[1] "the AIC model comparison table SumdistM is"

Model selection based on AICc:

K AICc Delta\_AICc AICcWt Cum.Wt LL

MixModel5\_SexSeasonIntr 8 128486.4 0.00 1 1 -64235.17

MixModel4\_Sex\_Season 6 128615.1 128.72 0 1 -64301.54

MixModel2\_Season 5 128618.8 132.48 0 1 -64304.42

MixModel3\_Sex 4 128769.7 283.30 0 1 -64380.83

MixModelN1 3 128774.2 287.81 0 1 -64384.09

[1] "and the best model for SumdistM was: MixModel5\_SexSeasonIntr - here is the summary:"

Linear mixed model fit by maximum likelihood . t-tests use Satterthwaite's method ['lmerModLmerTest']

Formula: DataF[, YvarInd] ~ 1 + Sex + Season + Sex \* Season + (1 | id)

Data: DataF

AIC BIC logLik deviance df.resid

128486.3 128541.9 -64235.2 128470.3 7696

Scaled residuals:

Min 1Q Median 3Q Max

-2.3937 -0.6492 -0.1051 0.4925 11.3802

Random effects:

Groups Name Variance Std.Dev.

id (Intercept) 77610 278.6

Residual 1010762 1005.4

Number of obs: 7704, groups: id, 31

Fixed effects:

Estimate Std. Error df t value Pr(>|t|)

(Intercept) 2536.18 77.13 35.62 32.881 < 2e-16 \*\*\*

SexM -100.92 108.09 36.23 -0.934 0.357

SeasonRut -297.26 41.99 7691.98 -7.080 1.57e-12 \*\*\*

SeasonWet -586.95 36.94 7692.64 -15.891 < 2e-16 \*\*\*

SexM:SeasonRut 559.66 61.39 7700.50 9.116 < 2e-16 \*\*\*

SexM:SeasonWet 578.59 54.98 7686.98 10.523 < 2e-16 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Correlation of Fixed Effects:

(Intr) SexM SesnRt SesnWt SxM:SR

SexM -0.714

SeasonRut -0.234 0.167

SeasonWet -0.269 0.192 0.487

SexM:SesnRt 0.160 -0.229 -0.684 -0.333

SexM:SesnWt 0.181 -0.257 -0.327 -0.672 0.460

>

> ParameterToModel='DayElevRange'#Choose the name her for running the models

[1] "the AIC model comparison table NetDailyDisplcmnt is"

Model selection based on AICc:

K AICc Delta\_AICc AICcWt Cum.Wt LL

MixModel5\_SexSeasonIntr 8 126266.4 0.00 1 1 -63125.18

MixModel2\_Season 5 126356.2 89.82 0 1 -63173.10

MixModel4\_Sex\_Season 6 126358.1 91.75 0 1 -63173.06

MixModelN1 3 126532.0 265.60 0 1 -63262.99

MixModel3\_Sex 4 126533.9 267.57 0 1 -63262.97

[1] "and the best model for NetDailyDisplcmnt was: MixModel5\_SexSeasonIntr - here is the summary:"

Linear mixed model fit by maximum likelihood . t-tests use Satterthwaite's method ['lmerModLmerTest']

Formula: DataF[, YvarInd] ~ 1 + Sex + Season + Sex \* Season + (1 | id)

Data: DataF

AIC BIC logLik deviance df.resid

126266.4 126322.0 -63125.2 126250.4 7696

Scaled residuals:

Min 1Q Median 3Q Max

-1.9268 -0.6627 -0.2351 0.4293 14.4770

Random effects:

Groups Name Variance Std.Dev.

id (Intercept) 76569 276.7

Residual 756919 870.0

Number of obs: 7704, groups: id, 31

Fixed effects:

Estimate Std. Error df t value Pr(>|t|)

(Intercept) 781.64 75.40 34.95 10.366 3.34e-12 \*\*\*

SexM -190.62 105.57 35.52 -1.806 0.07944 .

SeasonRut 114.50 36.34 7688.56 3.151 0.00164 \*\*

SeasonWet 10.38 31.97 7689.17 0.325 0.74546

SexM:SeasonRut 521.39 53.16 7703.65 9.808 < 2e-16 \*\*\*

SexM:SeasonWet 231.93 47.62 7699.64 4.870 1.14e-06 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Correlation of Fixed Effects:

(Intr) SexM SesnRt SesnWt SxM:SR

SexM -0.714

SeasonRut -0.207 0.148

SeasonWet -0.239 0.170 0.487

SexM:SesnRt 0.141 -0.204 -0.684 -0.333

SexM:SesnWt 0.160 -0.228 -0.327 -0.671 0.460

>

[1] "the AIC model comparison table TortuosityuntilMax is"

Model selection based on AICc:

K AICc Delta\_AICc AICcWt Cum.Wt LL

MixModel5\_SexSeasonIntr 8 14167.48 0.00 0.92 0.92 -7075.73

MixModel2\_Season 5 14173.35 5.87 0.05 0.97 -7081.67

MixModel4\_Sex\_Season 6 14174.60 7.12 0.03 1.00 -7081.30

MixModelN1 3 14213.20 45.72 0.00 1.00 -7103.60

MixModel3\_Sex 4 14214.40 46.92 0.00 1.00 -7103.20

[1] "and the best model for TortuosityuntilMax was: MixModel5\_SexSeasonIntr - here is the summary:"

Linear mixed model fit by maximum likelihood . t-tests use Satterthwaite's method ['lmerModLmerTest']

Formula: DataF[, YvarInd] ~ 1 + Sex + Season + Sex \* Season + (1 | id)

Data: DataF

AIC BIC logLik deviance df.resid

14167.5 14223.1 -7075.7 14151.5 7696

Scaled residuals:

Min 1Q Median 3Q Max

-1.5601 -0.7448 -0.2282 0.4976 9.5142

Random effects:

Groups Name Variance Std.Dev.

id (Intercept) 0.0102 0.1010

Residual 0.3646 0.6038

Number of obs: 7704, groups: id, 31

Fixed effects:

Estimate Std. Error df t value Pr(>|t|)

(Intercept) 1.76870 0.03096 45.46339 57.134 < 2e-16 \*\*\*

SexM 0.08625 0.04351 45.85870 1.982 0.053471 .

SeasonRut -0.09126 0.02519 7703.94213 -3.623 0.000293 \*\*\*

SeasonWet 0.03907 0.02216 7703.98578 1.763 0.077863 .

SexM:SeasonRut -0.04283 0.03675 7637.75883 -1.166 0.243852

SexM:SeasonWet -0.10888 0.03287 7491.93888 -3.313 0.000928 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Correlation of Fixed Effects:

(Intr) SexM SesnRt SesnWt SxM:SR

SexM -0.711

SeasonRut -0.349 0.248

SeasonWet -0.402 0.286 0.487

SexM:SesnRt 0.239 -0.338 -0.685 -0.334

SexM:SesnWt 0.271 -0.382 -0.328 -0.674 0.460

>

[1] "the AIC model comparison table DayElevRange is"

Model selection based on AICc:

K AICc Delta\_AICc AICcWt Cum.Wt LL

MixModel5\_SexSeasonIntr 8 91503.00 0.00 1 1 -45743.49

MixModel4\_Sex\_Season 6 91607.66 104.66 0 1 -45797.82

MixModel2\_Season 5 91609.90 106.91 0 1 -45799.95

MixModel3\_Sex 4 91701.51 198.52 0 1 -45846.75

MixModelN1 3 91704.25 201.26 0 1 -45849.12

[1] "and the best model for DayElevRange was: MixModel5\_SexSeasonIntr - here is the summary:"

Linear mixed model fit by maximum likelihood . t-tests use Satterthwaite's method ['lmerModLmerTest']

Formula: DataF[, YvarInd] ~ 1 + Sex + Season + Sex \* Season + (1 | id)

Data: DataF

AIC BIC logLik deviance df.resid

91503.0 91558.6 -45743.5 91487.0 7696

Scaled residuals:

Min 1Q Median 3Q Max

-2.4715 -0.6513 -0.1419 0.4543 5.7529

Random effects:

Groups Name Variance Std.Dev.

id (Intercept) 1468 38.32

Residual 8287 91.03

Number of obs: 7704, groups: id, 31

Fixed effects:

Estimate Std. Error df t value Pr(>|t|)

(Intercept) 198.770 10.211 32.871 19.467 < 2e-16 \*\*\*

SexM -55.665 14.268 33.290 -3.901 0.00044 \*\*\*

SeasonRut 0.851 3.804 7682.457 0.224 0.82296

SeasonWet -3.058 3.346 7682.921 -0.914 0.36071

SexM:SeasonRut 57.514 5.568 7701.726 10.329 < 2e-16 \*\*\*

SexM:SeasonWet 31.069 4.989 7703.140 6.228 4.97e-10 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Correlation of Fixed Effects:

(Intr) SexM SesnRt SesnWt SxM:SR

SexM -0.716

SeasonRut -0.160 0.114

SeasonWet -0.184 0.132 0.487

SexM:SesnRt 0.109 -0.159 -0.683 -0.333

SexM:SesnWt 0.124 -0.177 -0.327 -0.671 0.460

>

[1] "the AIC model comparison table MeanDayElev is"

Model selection based on AICc:

K AICc Delta\_AICc AICcWt Cum.Wt LL

MixModel5\_SexSeasonIntr 8 90186.55 0.00 1 1 -45085.26

MixModel4\_Sex\_Season 6 90352.14 165.60 0 1 -45170.06

MixModel2\_Season 5 90356.14 169.59 0 1 -45173.07

MixModel3\_Sex 4 90464.65 278.11 0 1 -45228.32

MixModelN1 3 90468.99 282.45 0 1 -45231.49

[1] "and the best model for MeanDayElev was: MixModel5\_SexSeasonIntr - here is the summary:"

Linear mixed model fit by maximum likelihood . t-tests use Satterthwaite's method ['lmerModLmerTest']

Formula: DataF[, YvarInd] ~ 1 + Sex + Season + Sex \* Season + (1 | id)

Data: DataF

AIC BIC logLik deviance df.resid

90186.5 90242.1 -45085.3 90170.5 7696

Scaled residuals:

Min 1Q Median 3Q Max

-3.4461 -0.5214 -0.0731 0.4094 5.0021

Random effects:

Groups Name Variance Std.Dev.

id (Intercept) 5650 75.17

Residual 6943 83.33

Number of obs: 7704, groups: id, 31

Fixed effects:

Estimate Std. Error df t value Pr(>|t|)

(Intercept) -168.551 19.545 31.334 -8.624 8.88e-10 \*\*\*

SexM -89.917 27.234 31.458 -3.302 0.0024 \*\*

SeasonRut -16.150 3.482 7675.171 -4.638 3.58e-06 \*\*\*

SeasonWet 20.451 3.063 7675.302 6.676 2.63e-11 \*\*\*

SexM:SeasonRut 62.711 5.103 7683.746 12.289 < 2e-16 \*\*\*

SexM:SeasonWet 7.475 4.572 7683.768 1.635 0.1022

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Correlation of Fixed Effects:

(Intr) SexM SesnRt SesnWt SxM:SR

SexM -0.718

SeasonRut -0.077 0.055

SeasonWet -0.088 0.063 0.487

SexM:SesnRt 0.052 -0.077 -0.682 -0.332

SexM:SesnWt 0.059 -0.085 -0.326 -0.670 0.460