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

Model selection based on AICc:

K AICc Delta\_AICc AICcWt Cum.Wt LL

MixModel5\_SexSeasonIntr 8 1304.89 0.00 1 1 -643.53

MixModel4\_Sex\_Season 6 1316.65 11.76 0 1 -651.80

MixModel2\_Season 5 1319.84 14.95 0 1 -654.55

MixModel3\_Sex 4 1325.64 20.75 0 1 -658.58

MixModelN1 3 1329.03 24.14 0 1 -661.37

[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

1303.1 1322.9 -643.5 1287.1 80

Scaled residuals:

Min 1Q Median 3Q Max

-1.95571 -0.55734 -0.02068 0.47288 2.48930

Random effects:

Groups Name Variance Std.Dev.

id (Intercept) 82407 287.1

Residual 82308 286.9

Number of obs: 88, groups: id, 31

Fixed effects:

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

(Intercept) 2533.64 104.79 60.19 24.178 < 2e-16 \*\*\*

SexM -92.22 149.56 62.83 -0.617 0.539688

SeasonRut -301.71 104.76 57.86 -2.880 0.005566 \*\*

SeasonWet -577.16 104.76 57.86 -5.509 8.69e-07 \*\*\*

SexM:SeasonRut 579.72 150.12 58.53 3.862 0.000284 \*\*\*

SexM:SeasonWet 565.23 151.98 58.96 3.719 0.000448 \*\*\*

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

Correlation of Fixed Effects:

(Intr) SexM SesnRt SesnWt SxM:SR

SexM -0.701

SeasonRut -0.500 0.350

SeasonWet -0.500 0.350 0.500

SexM:SesnRt 0.349 -0.515 -0.698 -0.349

SexM:SesnWt 0.345 -0.509 -0.345 -0.689 0.498

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

Model selection based on AICc:

K AICc Delta\_AICc AICcWt Cum.Wt LL

MixModel5\_SexSeasonIntr 8 1270.68 0.00 1 1 -626.43

MixModel2\_Season 5 1282.82 12.13 0 1 -636.04

MixModel4\_Sex\_Season 6 1284.75 14.06 0 1 -635.85

MixModelN1 3 1304.04 33.35 0 1 -648.88

MixModel3\_Sex 4 1305.78 35.09 0 1 -648.65

[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

1268.9 1288.7 -626.4 1252.9 80

Scaled residuals:

Min 1Q Median 3Q Max

-1.89549 -0.56890 -0.05841 0.40396 2.43745

Random effects:

Groups Name Variance Std.Dev.

id (Intercept) 82976 288.1

Residual 48042 219.2

Number of obs: 88, groups: id, 31

Fixed effects:

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

(Intercept) 776.95 93.46 50.81 8.313 4.85e-11 \*\*\*

SexM -189.89 132.72 53.30 -1.431 0.1583

SeasonRut 114.99 80.03 57.83 1.437 0.1562

SeasonWet 29.82 80.03 57.83 0.373 0.7108

SexM:SeasonRut 539.06 114.82 58.38 4.695 1.66e-05 \*\*\*

SexM:SeasonWet 220.95 116.33 58.71 1.899 0.0624 .

---

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

Correlation of Fixed Effects:

(Intr) SexM SesnRt SesnWt SxM:SR

SexM -0.704

SeasonRut -0.428 0.302

SeasonWet -0.428 0.302 0.500

SexM:SesnRt 0.298 -0.444 -0.697 -0.349

SexM:SesnWt 0.295 -0.440 -0.344 -0.688 0.497

>

>

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

Model selection based on AICc:

K AICc Delta\_AICc AICcWt Cum.Wt LL

MixModel2\_Season 5 -91.69 0.00 0.57 0.57 51.21

MixModel4\_Sex\_Season 6 -90.37 1.32 0.29 0.86 51.70

MixModel5\_SexSeasonIntr 8 -88.83 2.86 0.14 1.00 53.32

MixModelN1 3 -77.29 14.39 0.00 1.00 41.79

MixModel3\_Sex 4 -75.97 15.72 0.00 1.00 42.23

[1] "and the best model for TortuosityuntilMax was: MixModel2\_Season - here is the summary:"

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

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

Data: DataF

AIC BIC logLik deviance df.resid

-92.4 -80.0 51.2 -102.4 83

Scaled residuals:

Min 1Q Median 3Q Max

-2.21913 -0.52621 0.02408 0.63098 2.67514

Random effects:

Groups Name Variance Std.Dev.

id (Intercept) 0.008875 0.09421

Residual 0.012419 0.11144

Number of obs: 88, groups: id, 31

Fixed effects:

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

(Intercept) 1.810565 0.026942 69.017527 67.202 < 2e-16 \*\*\*

SeasonRut -0.123389 0.029123 58.757644 -4.237 8.1e-05 \*\*\*

SeasonWet -0.009766 0.029448 59.155653 -0.332 0.741

---

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

Correlation of Fixed Effects:

(Intr) SesnRt

SeasonRut -0.553

SeasonWet -0.547 0.499

>

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

Model selection based on AICc:

K AICc Delta\_AICc AICcWt Cum.Wt LL

MixModel5\_SexSeasonIntr 8 899.99 0.00 0.96 0.96 -441.08

MixModel4\_Sex\_Season 6 907.11 7.12 0.03 0.98 -447.03

MixModel2\_Season 5 908.91 8.93 0.01 0.99 -449.09

MixModel3\_Sex 4 910.95 10.96 0.00 1.00 -451.23

MixModelN1 3 912.69 12.71 0.00 1.00 -453.20

[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

898.2 918.0 -441.1 882.2 80

Scaled residuals:

Min 1Q Median 3Q Max

-1.78417 -0.62453 0.03992 0.54328 1.87399

Random effects:

Groups Name Variance Std.Dev.

id (Intercept) 1096.5 33.11

Residual 744.7 27.29

Number of obs: 88, groups: id, 31

Fixed effects:

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

(Intercept) 197.882 11.079 53.102 17.861 < 2e-16 \*\*\*

SexM -55.026 15.757 55.708 -3.492 0.000946 \*\*\*

SeasonRut -1.360 9.964 57.600 -0.137 0.891881

SeasonWet -1.277 9.964 57.600 -0.128 0.898482

SexM:SeasonRut 52.123 14.291 58.192 3.647 0.000568 \*\*\*

SexM:SeasonWet 27.513 14.475 58.550 1.901 0.062267 .

---

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

Correlation of Fixed Effects:

(Intr) SexM SesnRt SesnWt SxM:SR

SexM -0.703

SeasonRut -0.450 0.316

SeasonWet -0.450 0.316 0.500

SexM:SesnRt 0.314 -0.466 -0.697 -0.349

SexM:SesnWt 0.310 -0.461 -0.344 -0.688 0.497

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

Model selection based on AICc:

K AICc Delta\_AICc AICcWt Cum.Wt LL

MixModel5\_SexSeasonIntr 8 994.59 0.00 0.84 0.84 -488.38

MixModel3\_Sex 4 999.38 4.79 0.08 0.91 -495.45

MixModel4\_Sex\_Season 6 1000.01 5.42 0.06 0.97 -493.48

MixModelN1 3 1002.33 7.75 0.02 0.99 -498.02

MixModel2\_Season 5 1002.94 8.35 0.01 1.00 -496.10

[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

992.8 1012.6 -488.4 976.8 80

Scaled residuals:

Min 1Q Median 3Q Max

-2.9729 -0.4049 -0.0675 0.5168 2.8457

Random effects:

Groups Name Variance Std.Dev.

id (Intercept) 5035 70.96

Residual 1805 42.48

Number of obs: 88, groups: id, 31

Fixed effects:

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

(Intercept) -169.323 21.354 43.598 -7.929 5.43e-10 \*\*\*

SexM -91.281 30.182 45.611 -3.024 0.00408 \*\*

SeasonRut -13.380 15.511 57.051 -0.863 0.39196

SeasonWet 18.971 15.511 57.051 1.223 0.22634

SexM:SeasonRut 67.416 22.274 57.487 3.027 0.00370 \*\*

SexM:SeasonWet 6.878 22.577 57.729 0.305 0.76173

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

Correlation of Fixed Effects:

(Intr) SexM SesnRt SesnWt SxM:SR

SexM -0.708

SeasonRut -0.363 0.257

SeasonWet -0.363 0.257 0.500

SexM:SesnRt 0.253 -0.380 -0.696 -0.348

SexM:SesnWt 0.250 -0.376 -0.344 -0.687 0.496