glmmTMB model for Caligus on Chum salmon

> summary(chumrmod.calnbtmb)

Family: nbinom2 ( log )

Formula: all.cal ~ site.region + year - 1 + (1 | week)

Data: chum.region

AIC BIC logLik deviance df.resid

2120.8 2157.3 -1053.4 2106.8 1358

Random effects:

Conditional model:

Groups Name Variance Std.Dev.

week (Intercept) 0.2548 0.5048

Number of obs: 1365, groups: week, 12

Overdispersion parameter for nbinom2 family (): 2.12

Conditional model:

Estimate Std. Error z value Pr(>|z|)

site.regionD -0.8537 0.1846 -4.624 3.76e-06 \*\*\*

site.regionJ -0.6314 0.1926 -3.279 0.00104 \*\*

year2016 -0.5131 0.1637 -3.133 0.00173 \*\*

year2017 -0.2677 0.1306 -2.051 0.04031 \*

year2018 -0.3880 0.1352 -2.870 0.00410 \*\*

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

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glmmADMB model for Caligus on Chum salmon

> summary(chumrmod.calnb)

Call:

glmmadmb(formula = all.cal ~ site.region + year - 1 + (1 | week),

data = chum.region, family = "nbinom", zeroInflation = FALSE)

AIC: 2120.8

Coefficients:

Estimate Std. Error z value Pr(>|z|)

site.regionD -0.854 0.185 -4.62 3.8e-06 \*\*\*

site.regionJ -0.631 0.193 -3.28 0.0010 \*\*

year2016 -0.513 0.164 -3.13 0.0017 \*\*

year2017 -0.268 0.131 -2.05 0.0403 \*

year2018 -0.388 0.135 -2.87 0.0041 \*\*

---

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

Number of observations: total=1365, week=12

Random effect variance(s):

Group=week

Variance StdDev

(Intercept) 0.2547 0.5047

Negative binomial dispersion parameter: 2.1186 (std. err.: 0.60487)

Log-likelihood: -1053.41

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glmmTMB model for Caligus on Chum salmon

> summary(chumrmod.lepsnbtmb)

Family: nbinom2 ( log )

Formula: all.leps ~ site.region + year - 1 + (1 | week)

Data: chum.region

AIC BIC logLik deviance df.resid

510.6 547.1 -248.3 496.6 1358

Random effects:

Conditional model:

Groups Name Variance Std.Dev.

week (Intercept) 2.132e-08 0.000146

Number of obs: 1365, groups: week, 12

Overdispersion parameter for nbinom2 family (): 0.0749

Conditional model:

Estimate Std. Error z value Pr(>|z|)

site.regionD -2.3025 0.2821 -8.162 3.28e-16 \*\*\*

site.regionJ -3.1487 0.3838 -8.205 2.31e-16 \*\*\*

year2016 0.4227 0.4203 1.006 0.31464

year2017 -1.2784 0.4857 -2.632 0.00848 \*\*

year2018 -1.1277 0.4742 -2.378 0.01740 \*

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

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glmmADMB model for Caligus on Chum salmon

> summary(chumrmod.lepsnb)

Call:

glmmadmb(formula = all.leps ~ site.region + year - 1 + (1 | week),

data = chum.region, family = "nbinom", zeroInflation = FALSE)

AIC: 510.6

Coefficients:

Estimate Std. Error z value Pr(>|z|)

site.regionD -2.303 0.282 -8.16 3.3e-16 \*\*\*

site.regionJ -3.149 0.384 -8.20 2.3e-16 \*\*\*

year2016 0.423 0.420 1.01 0.3146

year2017 -1.278 0.486 -2.63 0.0085 \*\*

year2018 -1.128 0.474 -2.38 0.0174 \*

---

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

Number of observations: total=1365, week=12

Random effect variance(s):

Group=week

Variance StdDev

(Intercept) 4.018e-06 0.002004

Negative binomial dispersion parameter: 0.074895 (std. err.: 0.021329)

Log-likelihood: -248.285

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glmmTMB model for Caligus on Chum salmon

> summary(sockrmod.calnbtmb)

Family: nbinom2 ( log )

Formula: all.cal ~ site.region + year - 1 + (1 | week)

Data: sock.region

AIC BIC logLik deviance df.resid

6467.4 6510.9 -3226.7 6453.4 3687

Random effects:

Conditional model:

Groups Name Variance Std.Dev.

week (Intercept) 0.05698 0.2387

Number of obs: 3694, groups: week, 11

Overdispersion parameter for nbinom2 family (): 0.974

Conditional model:

Estimate Std. Error z value Pr(>|z|)

site.regionD -0.57222 0.09288 -6.161 7.25e-10 \*\*\*

site.regionJ -0.41522 0.09257 -4.486 7.27e-06 \*\*\*

year2016 -0.52957 0.07103 -7.456 8.92e-14 \*\*\*

year2017 -0.73482 0.10118 -7.262 3.81e-13 \*\*\*

year2018 -0.80543 0.16844 -4.782 1.74e-06 \*\*\*

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

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glmmTMB model for Caligus on Chum salmon

> summary(sockrmod.calnb)

Call:

glmmadmb(formula = all.cal ~ site.region + year - 1 + (1 | week),

data = sock.region, family = "nbinom", zeroInflation = FALSE)

AIC: 6467.4

Coefficients:

Estimate Std. Error z value Pr(>|z|)

site.regionD -0.5722 0.0929 -6.16 7.2e-10 \*\*\*

site.regionJ -0.4152 0.0926 -4.49 7.3e-06 \*\*\*

year2016 -0.5296 0.0710 -7.46 8.9e-14 \*\*\*

year2017 -0.7348 0.1012 -7.26 3.8e-13 \*\*\*

year2018 -0.8055 0.1684 -4.78 1.7e-06 \*\*\*

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

Number of observations: total=3694, week=11

Random effect variance(s):

Group=week

Variance StdDev

(Intercept) 0.05698 0.2387

Negative binomial dispersion parameter: 0.9739 (std. err.: 0.093428)

Log-likelihood: -3226.72