Brian S. Cade (03/22/23)

Gompertz models for all quantiles are of this form, so Intercept term is for females at 700 mm SVL (prior time) and Intercept + SEXdetermM estimates are intercepts for males at 700 mm SVL (prior time), and log(I(SVL.prev/700) is linear slope with prior SVL. These are the averages across individual snakes in our rqss models, linear in log-log scale. These coefficients are those graphed in Figure 2 of Lardner et al. (in prep).

Formula:

mult.growth.yr ~ log(I(svl.prev/700)) + SEXdeterm + PITTAG:SEXdeterm

> summary(gomp20.both.05.rqss)$tau

[1] 0.05

> summary(gomp20.both.05.rqss)$coef[1:3,]

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

(Intercept) 0.03141408 0.03001982 1.046445 0.2954467

log(I(svl.prev/700)) -0.63964043 0.05663177 -11.294728 0.0000000

SEXdetermM 0.08141386 0.03501859 2.324875 0.0201503

> summary(gomp20.both.10.rqss)$tau

[1] 0.1

> summary(gomp20.both.10.rqss)$coef[1:3,]

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

(Intercept) 0.11599931 0.01564790 7.413093 1.625367e-13

log(I(svl.prev/700)) -0.57343044 0.03491332 -16.424403 0.000000e+00

SEXdetermM 0.05906758 0.01906130 3.098821 1.962218e-03

> summary(gomp20.both.25.rqss)$tau

[1] 0.25

> summary(gomp20.both.25.rqss)$coef[1:3,]

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

(Intercept) 0.20213130 0.01089347 18.555267 0.0000000000

log(I(svl.prev/700)) -0.52878937 0.01922998 -27.498170 0.0000000000

SEXdetermM 0.05100731 0.01345507 3.790936 0.0001532531

> summary(gomp20.both.50.rqss)$tau

[1] 0.5

> summary(gomp20.both.50.rqss)$coef[1:3,]

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

(Intercept) 0.28056394 0.01284185 21.84763 0.000000e+00

log(I(svl.prev/700)) -0.55530229 0.01876979 -29.58489 0.000000e+00

SEXdetermM 0.07215225 0.01593324 4.52841 6.192675e-06

> summary(gomp20.both.75.rqss)$tau

[1] 0.75

> summary(gomp20.both.75.rqss)$coef[1:3,]

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

(Intercept) 0.3817238 0.01292154 29.54167 0.000000e+00

log(I(svl.prev/700)) -0.6409609 0.02458514 -26.07107 0.000000e+00

SEXdetermM 0.1252696 0.01703584 7.35330 2.529088e-13

> summary(gomp20.both.90.rqss)$tau

[1] 0.9

> summary(gomp20.both.90.rqss)$coef[1:3,]

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

(Intercept) 0.5498842 0.02166973 25.375687 0.000000e+00

log(I(svl.prev/700)) -0.7398035 0.03856088 -19.185339 0.000000e+00

SEXdetermM 0.1434048 0.02581472 5.555155 3.035091e-08

> summary(gomp20.both.95.rqss)$tau

[1] 0.95

> summary(gomp20.both.95.rqss)$coef[1:3,]

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

(Intercept) 0.6224156 0.04408919 14.117193 0.000000000

log(I(svl.prev/700)) -0.8061105 0.05613037 -14.361396 0.000000000

SEXdetermM 0.1634791 0.05512590 2.965559 0.003047754

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