site 2



> summary(vbso1, correlation = TRUE)

Formula: len ~ vbso(age, Linf, K, t0, C, ts)

Parameters:

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

Linf 35.847609 0.797315 44.960 < 2e-16 \*\*\*

K 2.011883 0.175063 11.492 < 2e-16 \*\*\*

t0 -0.021090 0.007884 -2.675 0.00764 \*\*

C 1.947936 0.058202 33.469 < 2e-16 \*\*\*

ts -0.118256 0.003957 -29.887 < 2e-16 \*\*\*

---

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

Residual standard error: 3.841 on 746 degrees of freedom

Correlation of Parameter Estimates:

Linf K t0 C

K -0.79

t0 -0.50 0.88

C -0.21 0.49 0.52

ts 0.08 -0.05 0.27 -0.14

Number of iterations to convergence: 8

Achieved convergence tolerance: 1.117e-06

>

> # confint(vbso1)

> Rsq(vbso1)

[1] 0.6917804

site 4



> summary(vbso1, correlation = TRUE)

Formula: len ~ vbso(age, Linf, K, t0, C, ts)

Parameters:

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

Linf 45.97461 3.64924 12.598 < 2e-16 \*\*\*

K 1.04639 0.22612 4.628 4.43e-06 \*\*\*

t0 -0.19740 0.03495 -5.648 2.38e-08 \*\*\*

C 1.28030 0.07662 16.710 < 2e-16 \*\*\*

ts 0.75132 0.01527 49.207 < 2e-16 \*\*\*

---

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

Residual standard error: 4.678 on 681 degrees of freedom

Correlation of Parameter Estimates:

Linf K t0 C

K -0.95

t0 -0.73 0.90

C -0.08 0.03 -0.15

ts -0.43 0.62 0.88 -0.36

Number of iterations to convergence: 9

Achieved convergence tolerance: 1.15e-06

>

> # confint(vbso1)

> Rsq(vbso1)

[1] 0.5927807

site 9



> summary(vbso1, correlation = TRUE)

Formula: len ~ vbso(age, Linf, K, t0, C, ts)

Parameters:

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

Linf 41.54664 1.46561 28.348 < 2e-16 \*\*\*

K 1.31405 0.18338 7.166 1.63e-12 \*\*\*

t0 -0.21375 0.04006 -5.336 1.21e-07 \*\*\*

C 0.62145 0.08730 7.119 2.26e-12 \*\*\*

ts 0.71736 0.02820 25.441 < 2e-16 \*\*\*

---

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

Residual standard error: 4.028 on 882 degrees of freedom

Correlation of Parameter Estimates:

Linf K t0 C

K -0.92

t0 -0.71 0.91

C -0.49 0.57 0.44

ts -0.48 0.71 0.93 0.25

Number of iterations to convergence: 8

Achieved convergence tolerance: 8.478e-08

>

> # confint(vbso1)

> Rsq(vbso1)

[1] 0.7498897

> ages <- seq(0,3,0.01) # choose age range

> plen <- predict(vbso1,data.frame(age=ages)) # predict length @ age

> plot(len~age,data=file8,pch=19,xlab="Age (years)",ylab="Standard Length (mm)",main=SELECTION)

> lines(ages,plen,lwd=2,col="red")