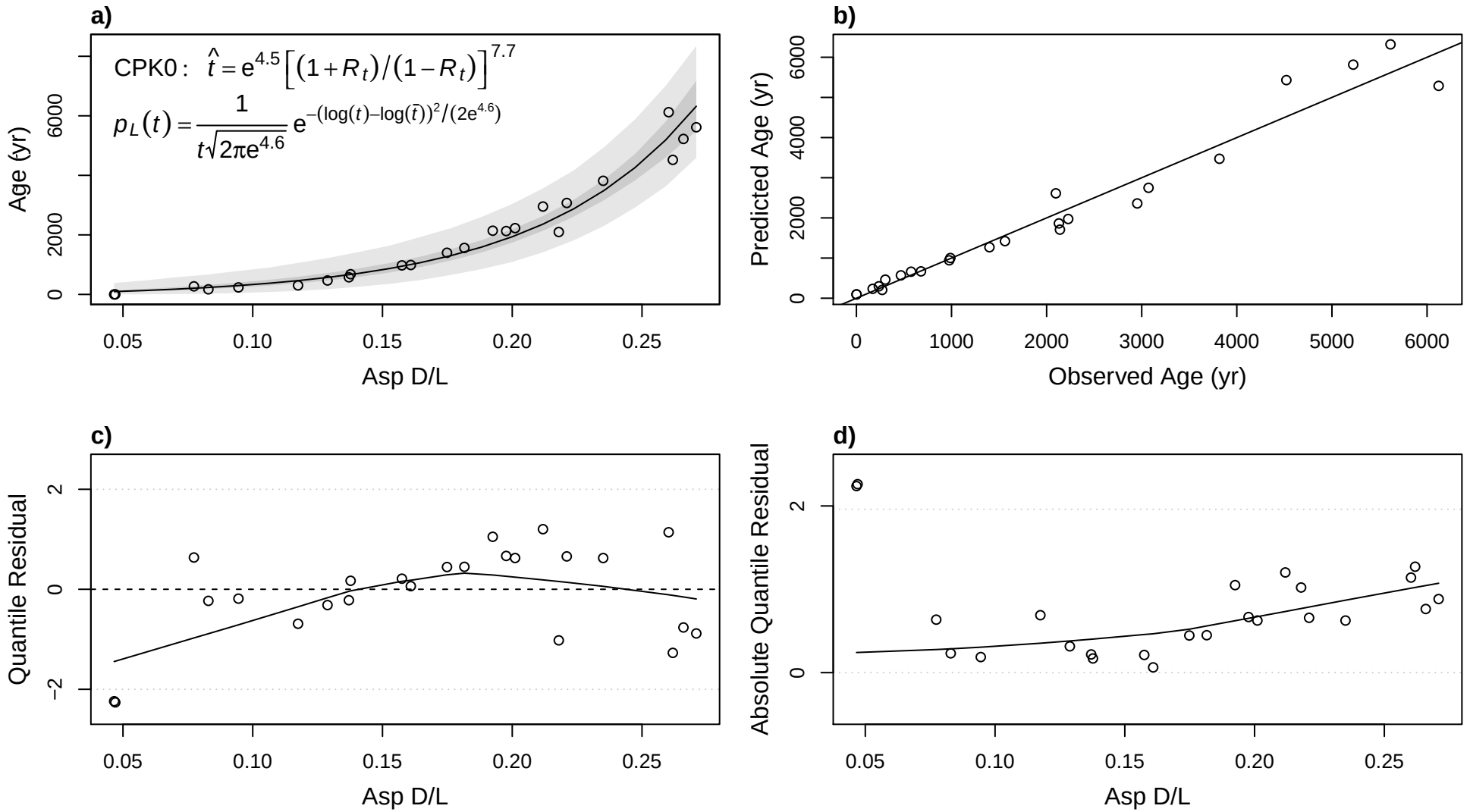
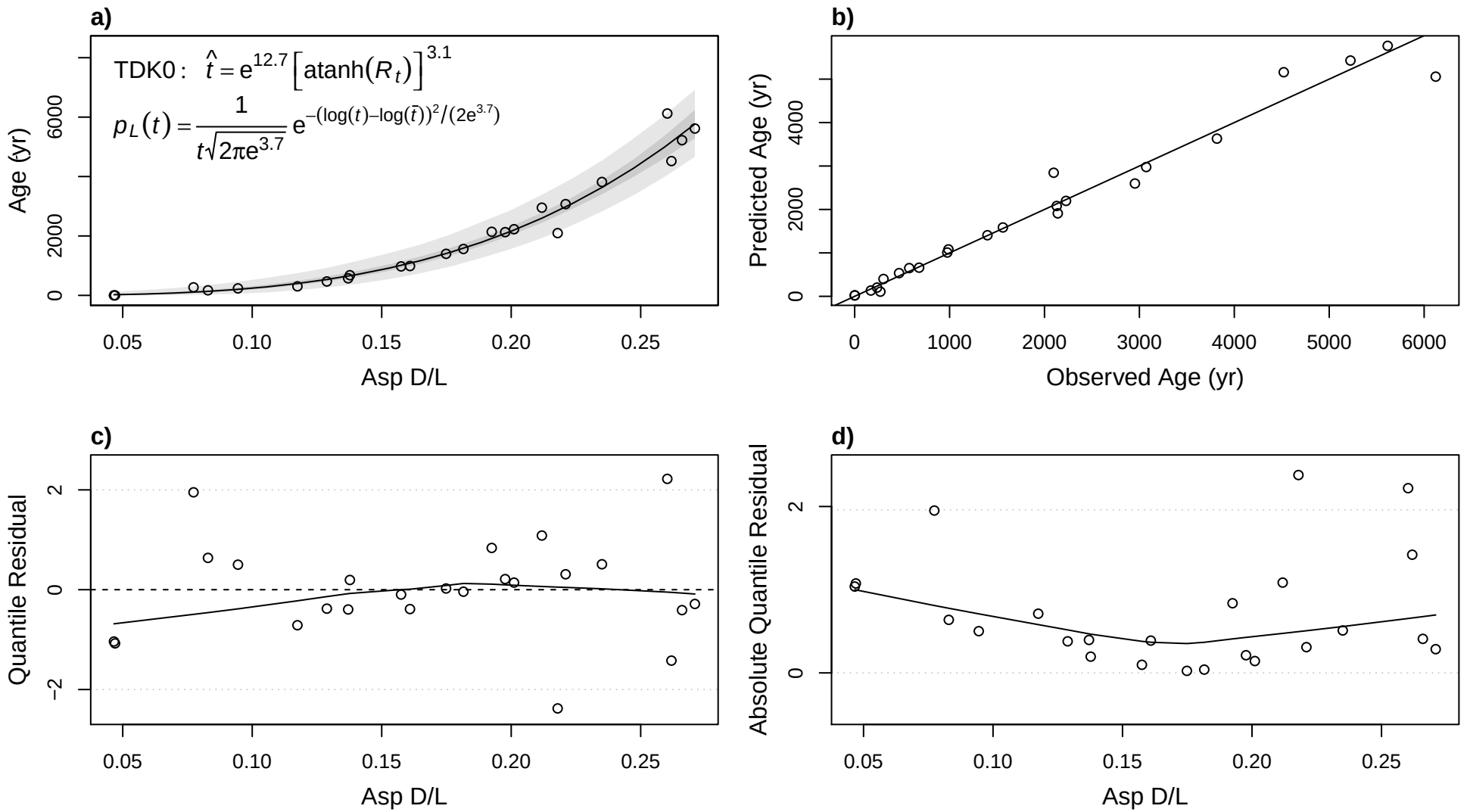
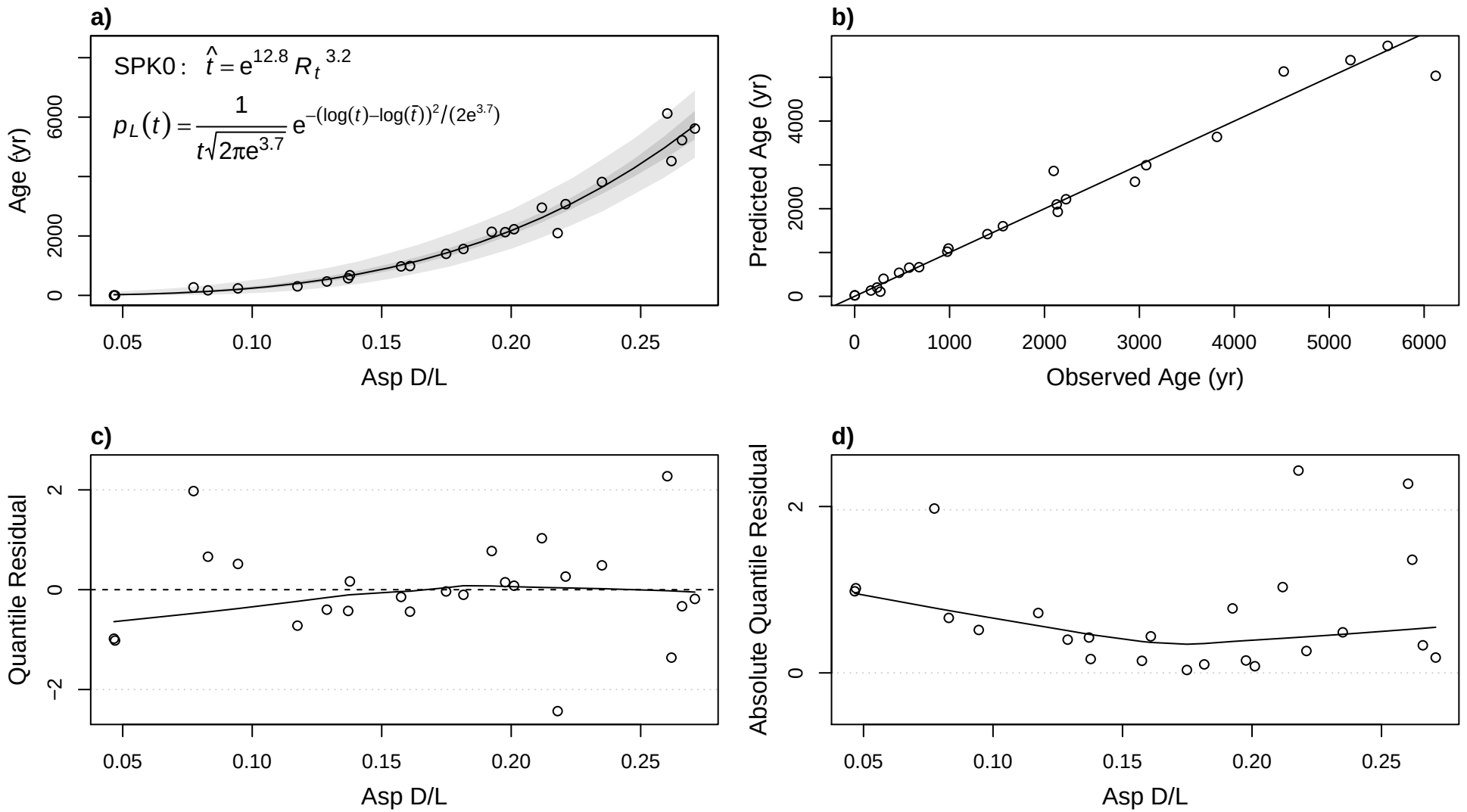
Appendix C. Plots of: (a) fitted model with maximum−likelihood parameter estimates (see Appendix A), (b) relationship of observed to predicted age with one−to−one line, (c) quantile residuals of the fitted model plotted as a function of the D/L, and (d) absolute values of quantile residuals plotted as a function of D/L. Lines depicted in the figures were fitted by lowess with a smoother span of 0.9 (Model 1 from Appendix A).



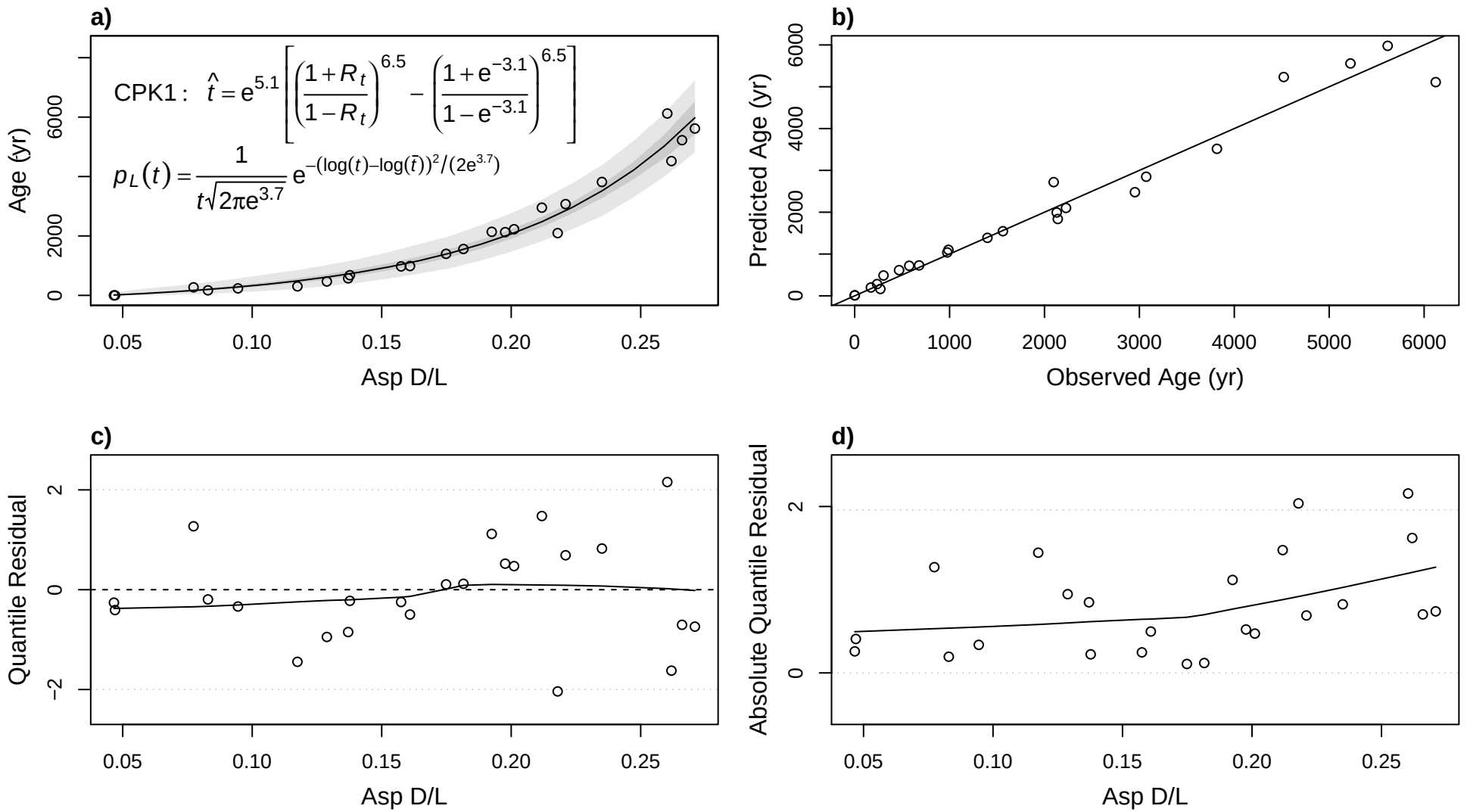
Appendix C. Continued: Model 2 (see Appendix A); Taxon: Fulvia tenuicostata



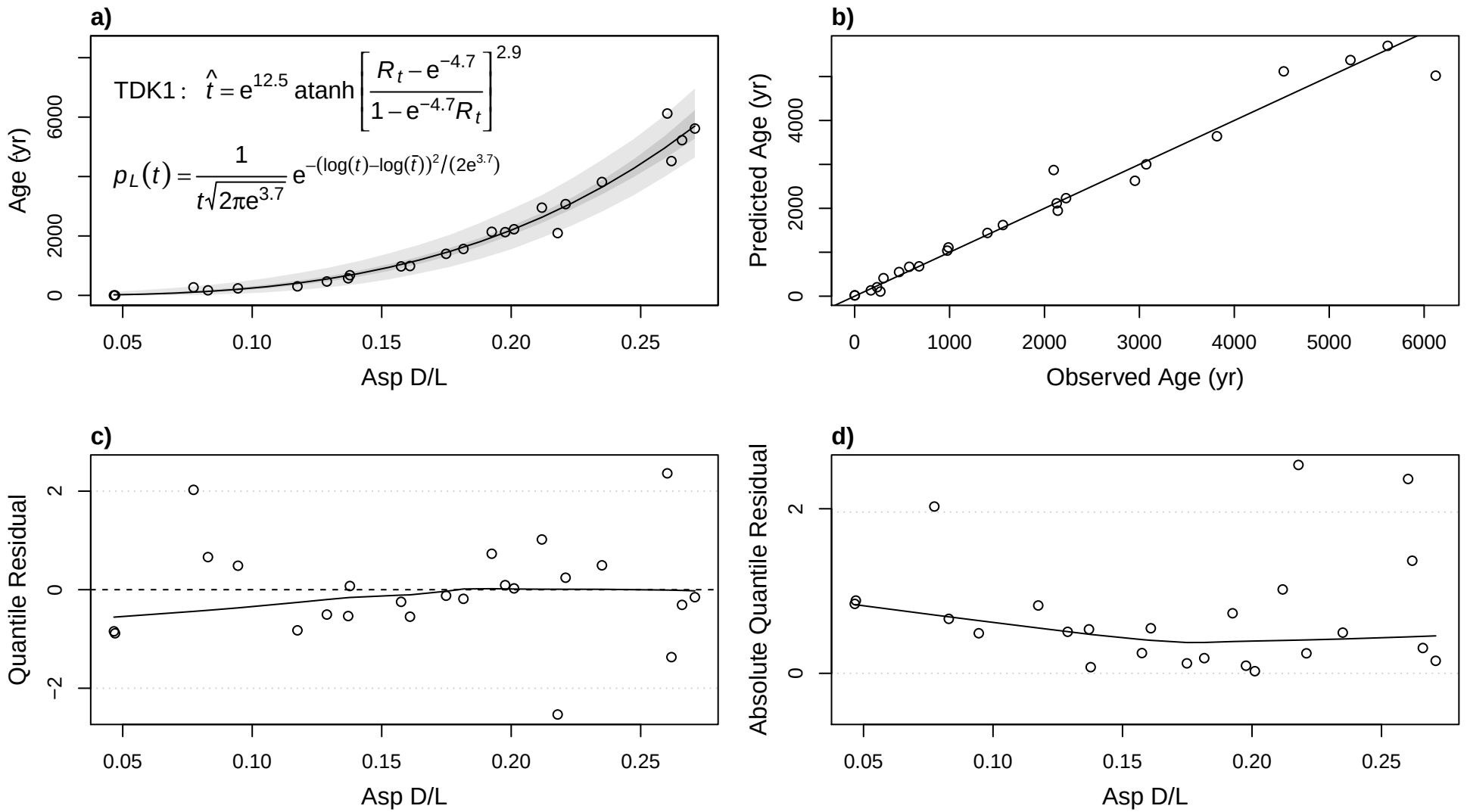
Appendix C. Continued: Model 3 (see Appendix A); Taxon: Fulvia tenuicostata



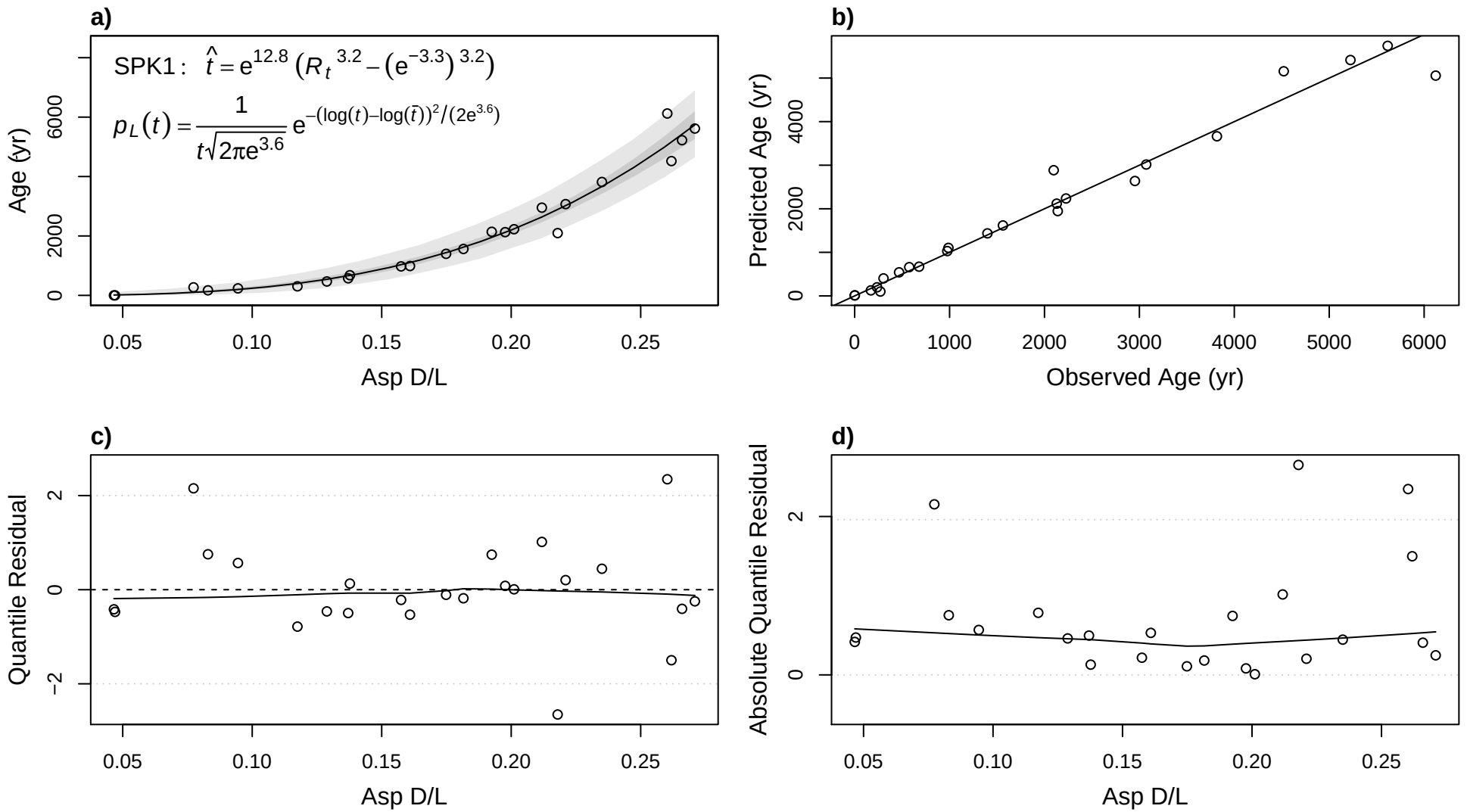
Appendix C. Continued: Model 4 (see Appendix A); Taxon: Fulvia tenuicostata



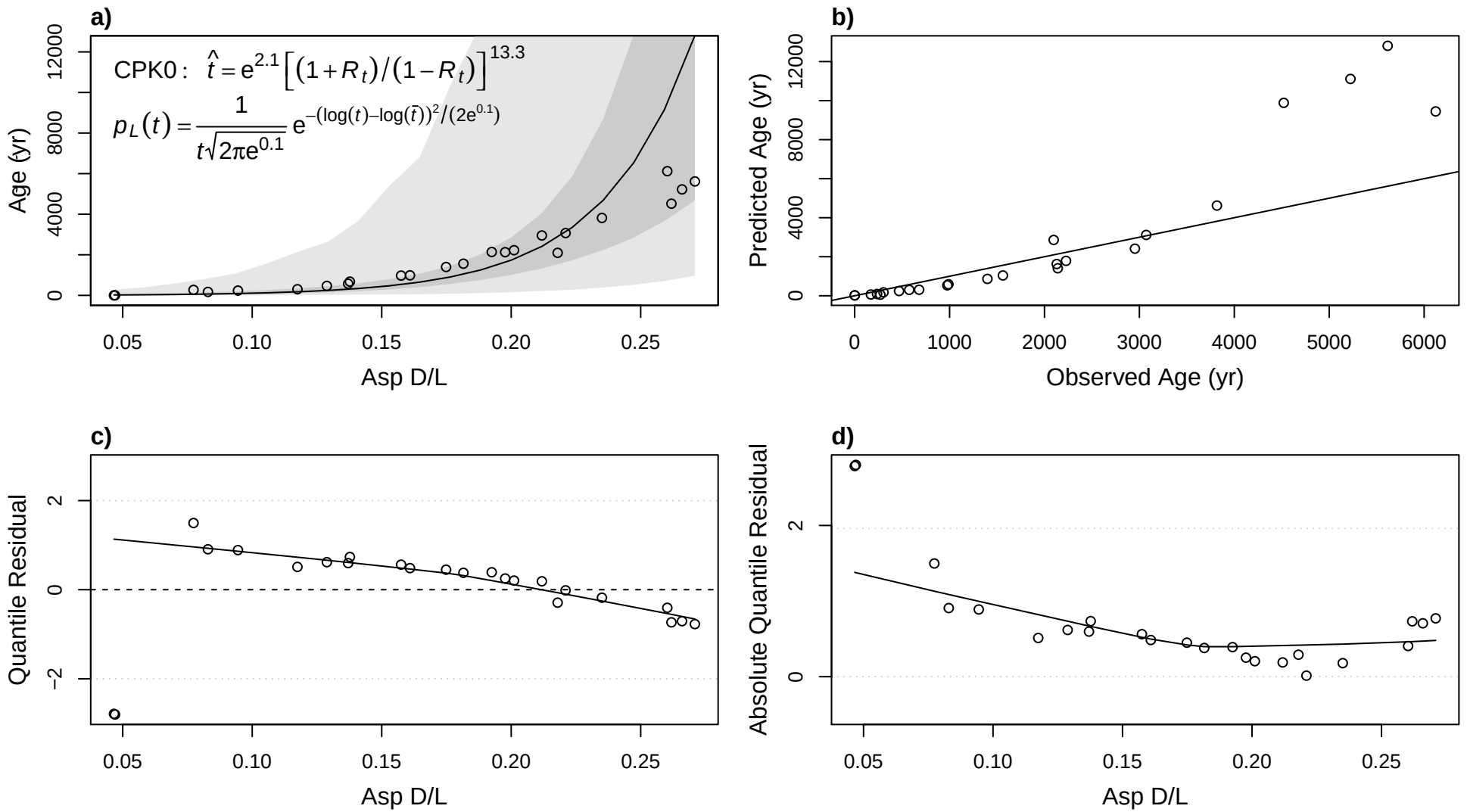
Appendix C. Continued: Model 5 (see Appendix A); Taxon: Fulvia tenuicostata



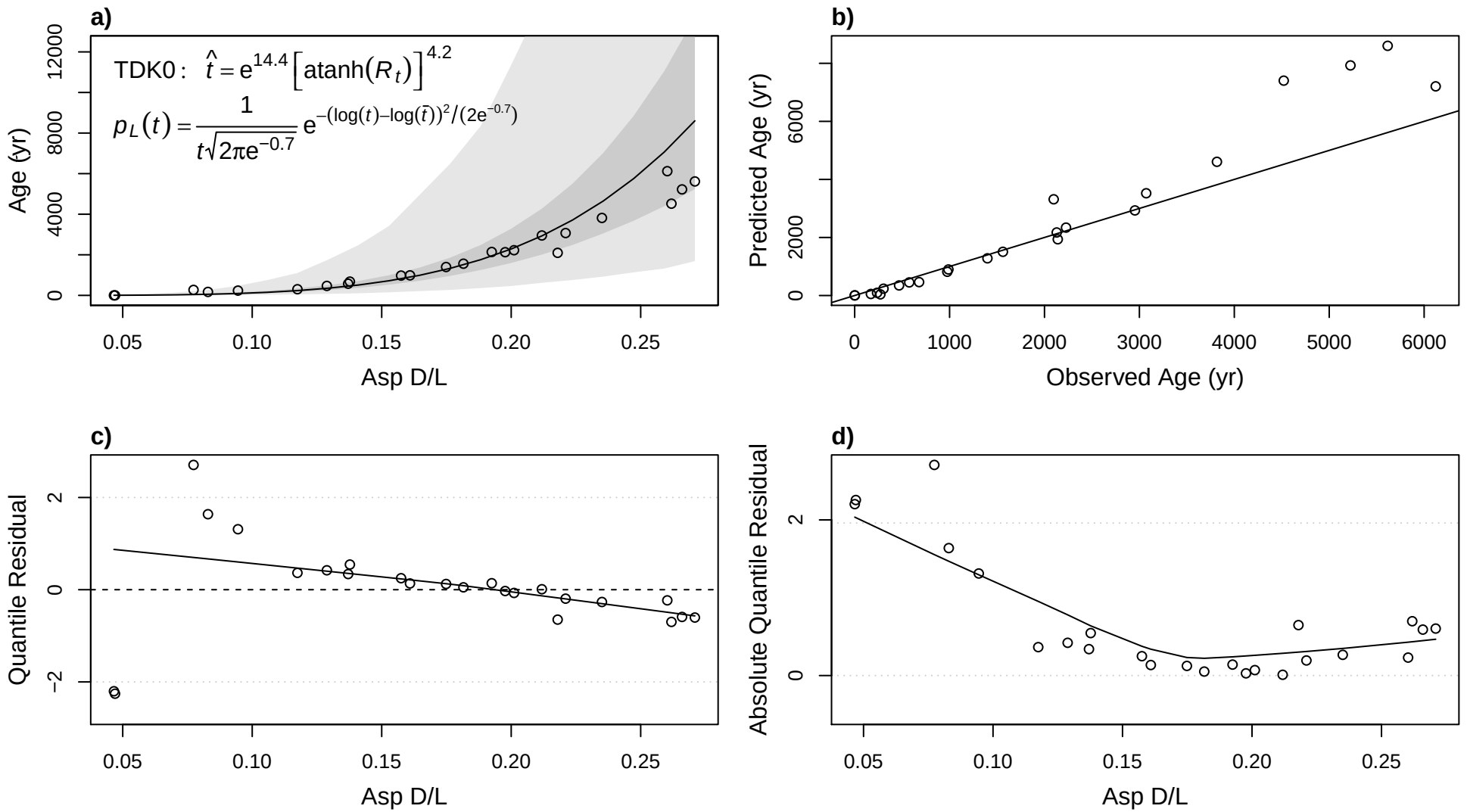
Appendix C. Continued: Model 6 (see Appendix A); Taxon: Fulvia tenuicostata



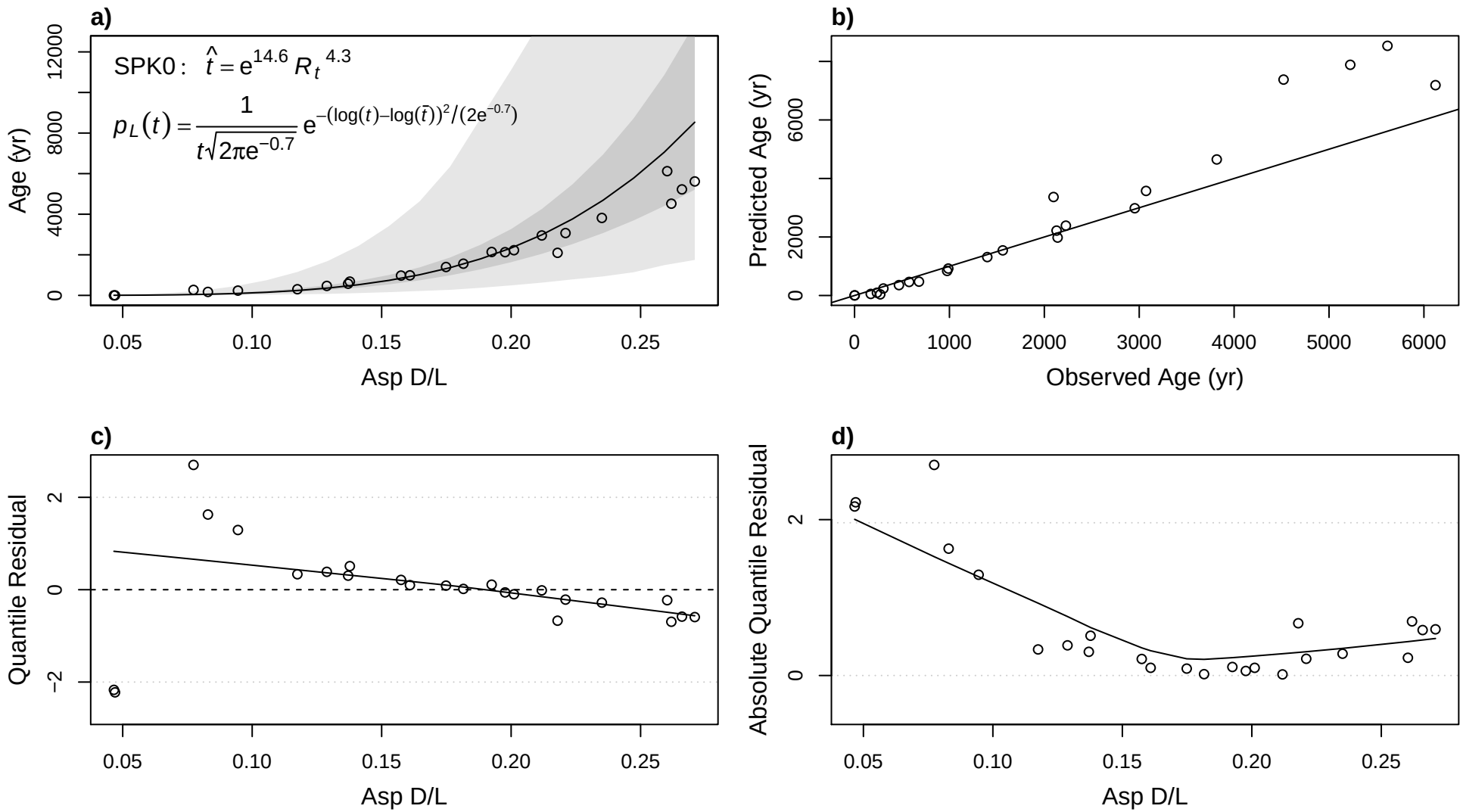
Appendix C. Continued: Model 7 (see Appendix A); Taxon: Fulvia tenuicostata



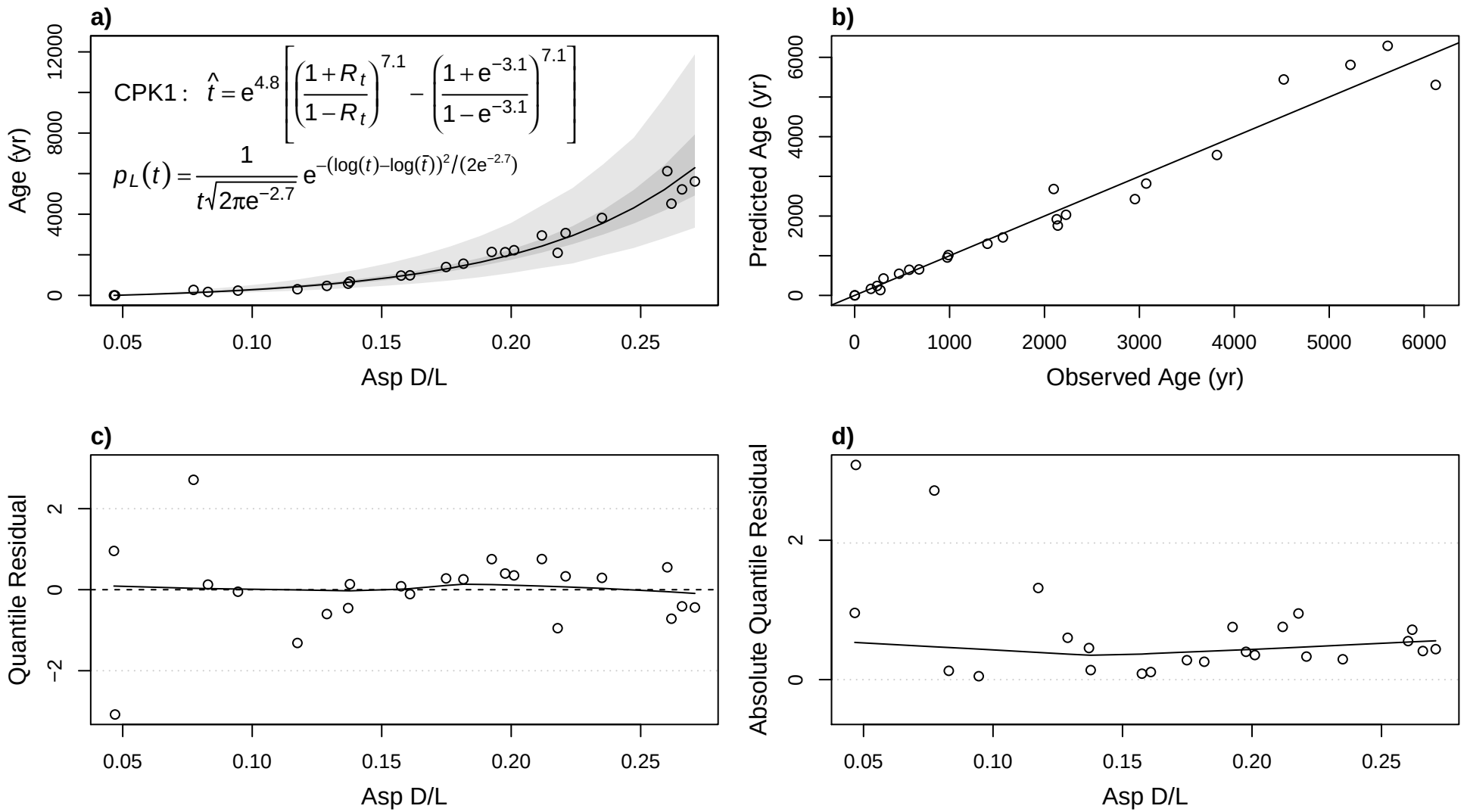
Appendix C. Continued: Model 8 (see Appendix A); Taxon: Fulvia tenuicostata



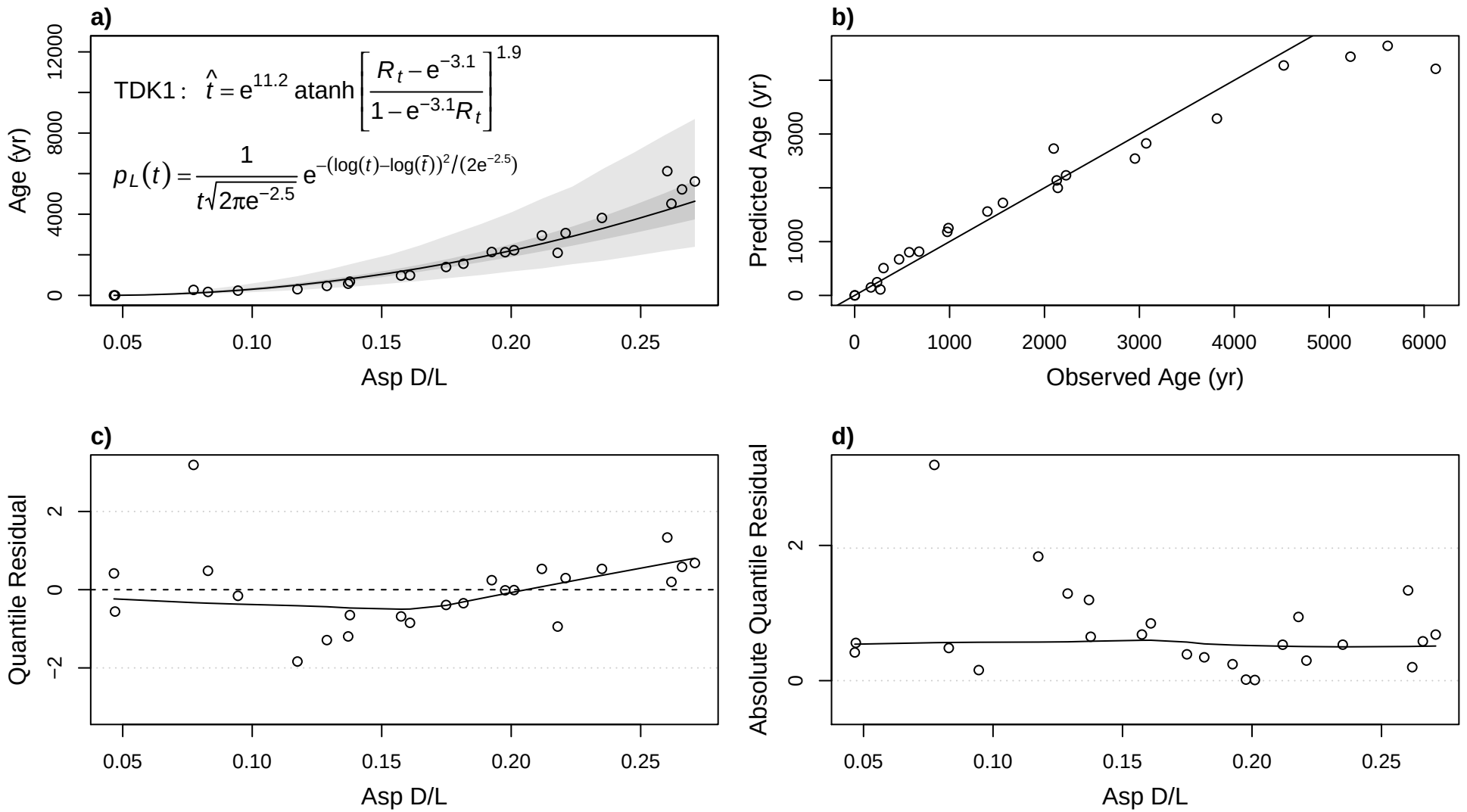
Appendix C. Continued: Model 9 (see Appendix A); Taxon: Fulvia tenuicostata



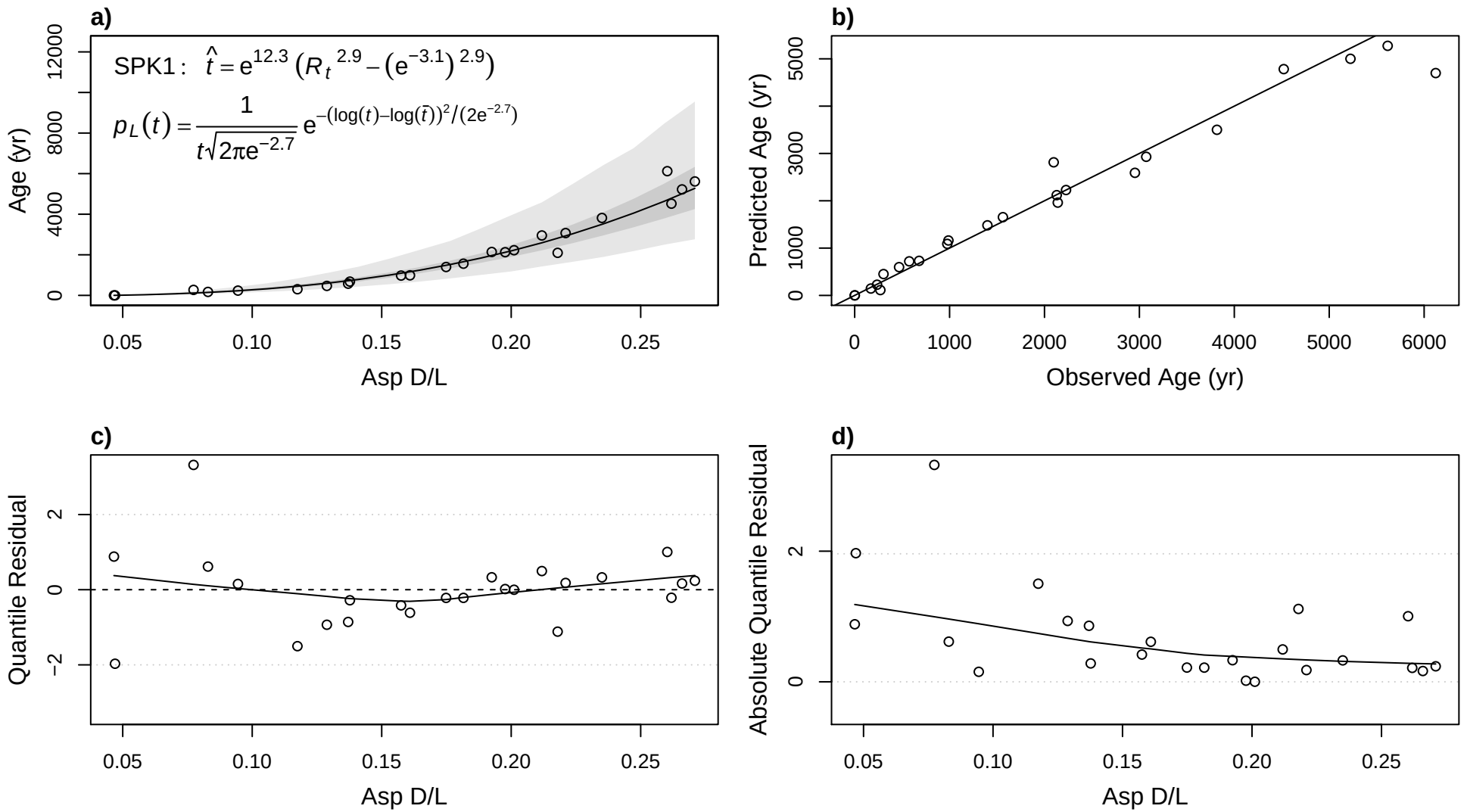
Appendix C. Continued: Model 10 (see Appendix A); Taxon: Fulvia tenuicostata



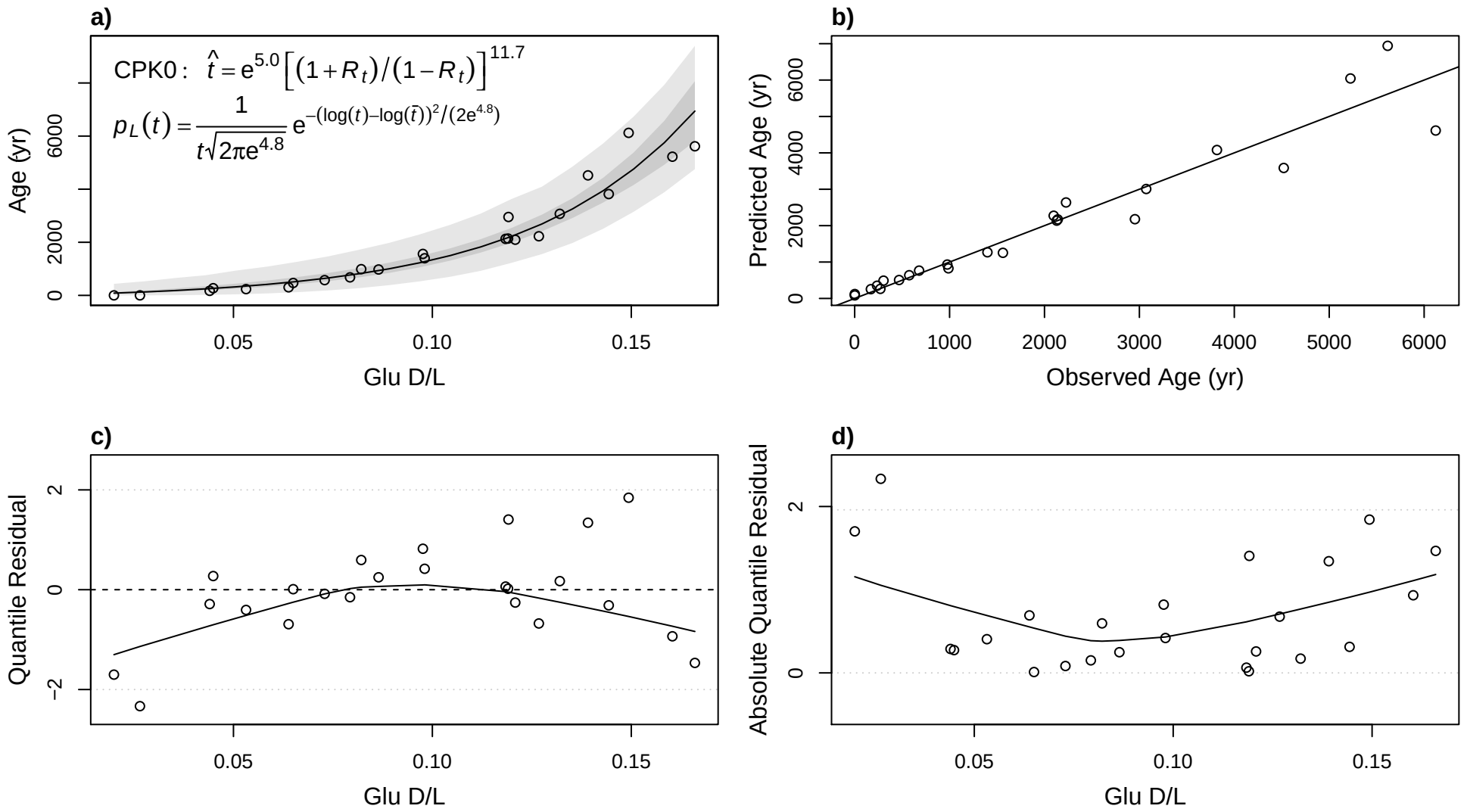
Appendix C. Continued: Model 11 (see Appendix A); Taxon: Fulvia tenuicostata



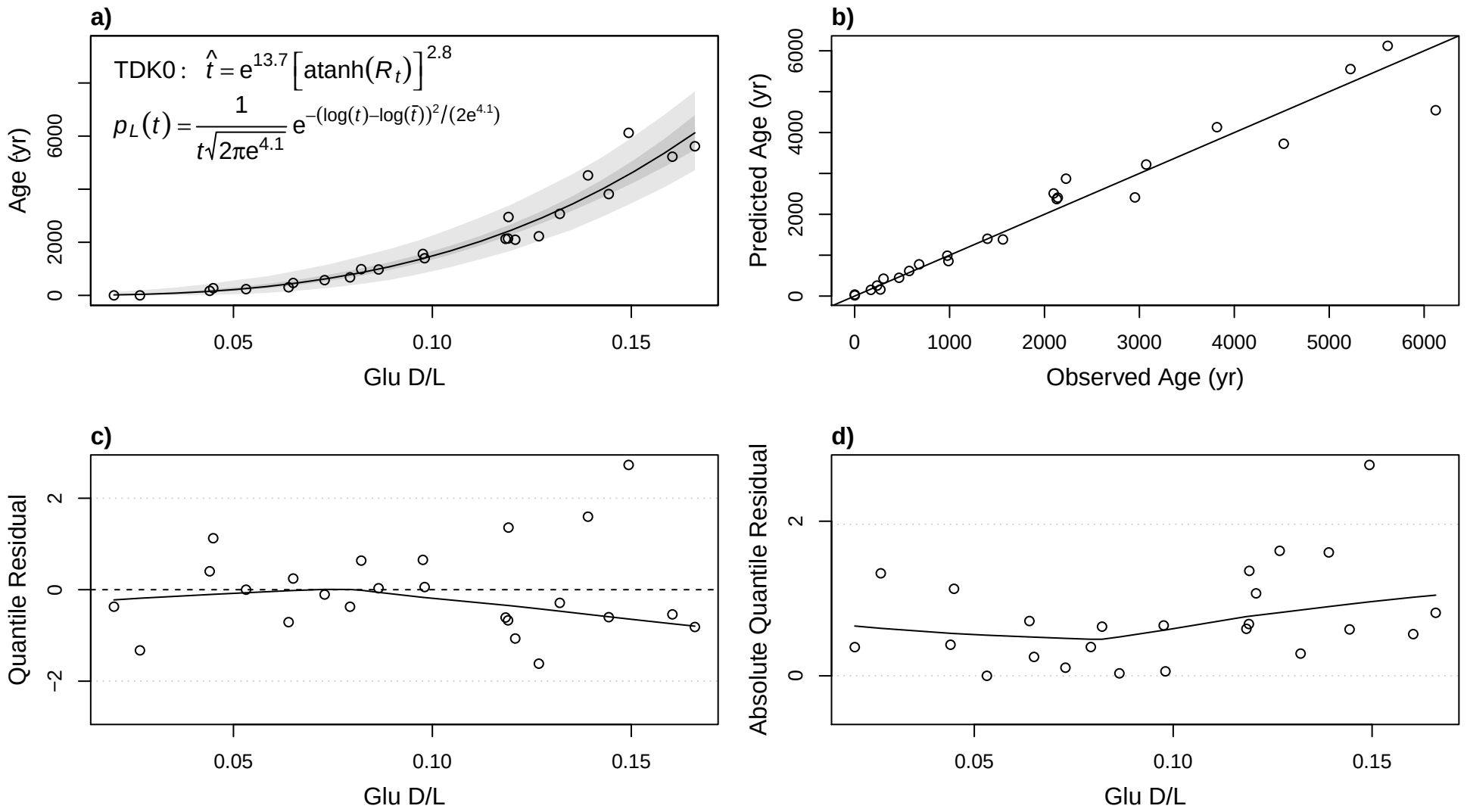
Appendix C. Continued: Model 12 (see Appendix A); Taxon: Fulvia tenuicostata



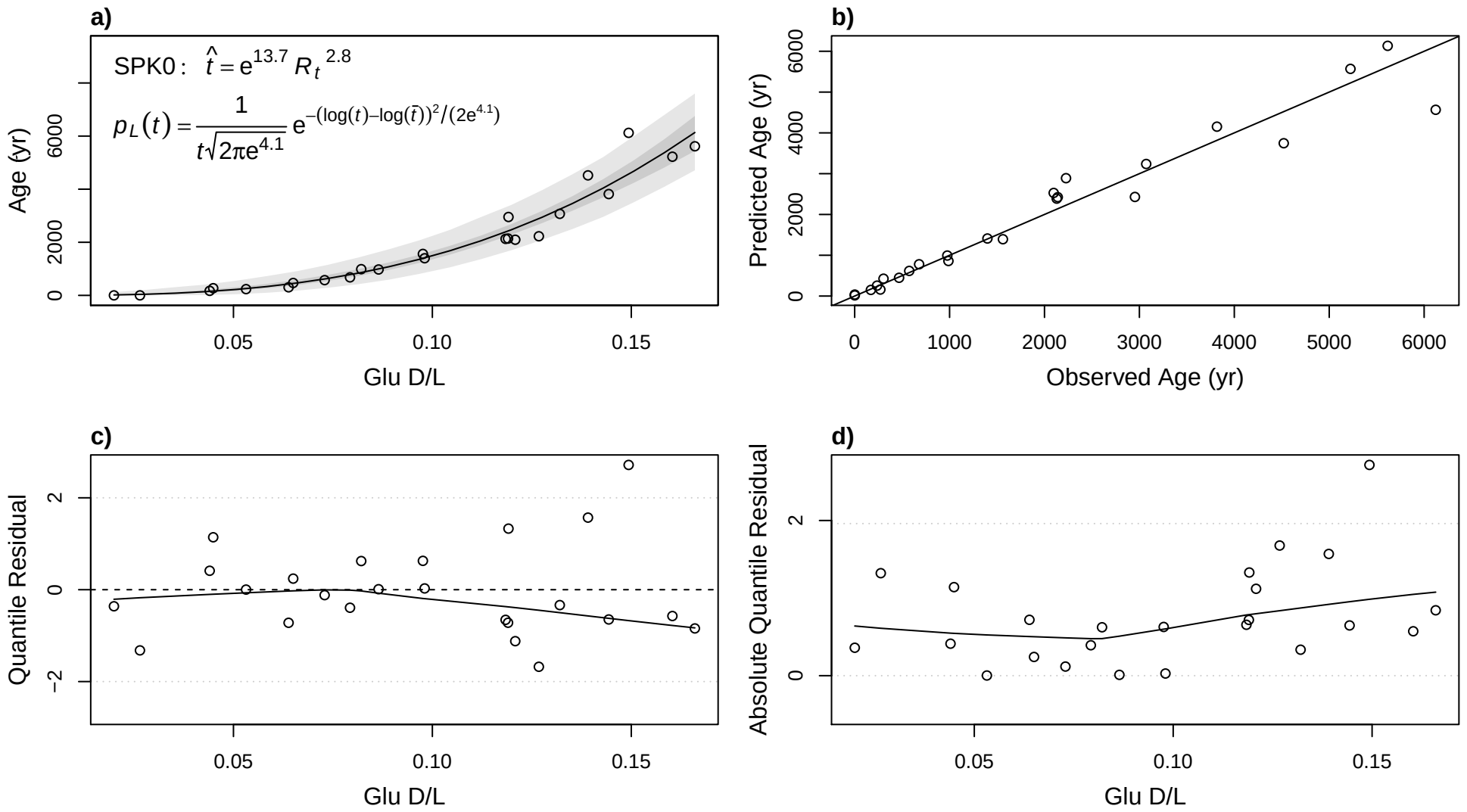
Appendix C. Continued: Model 13 (see Appendix A); Taxon: Fulvia tenuicostata

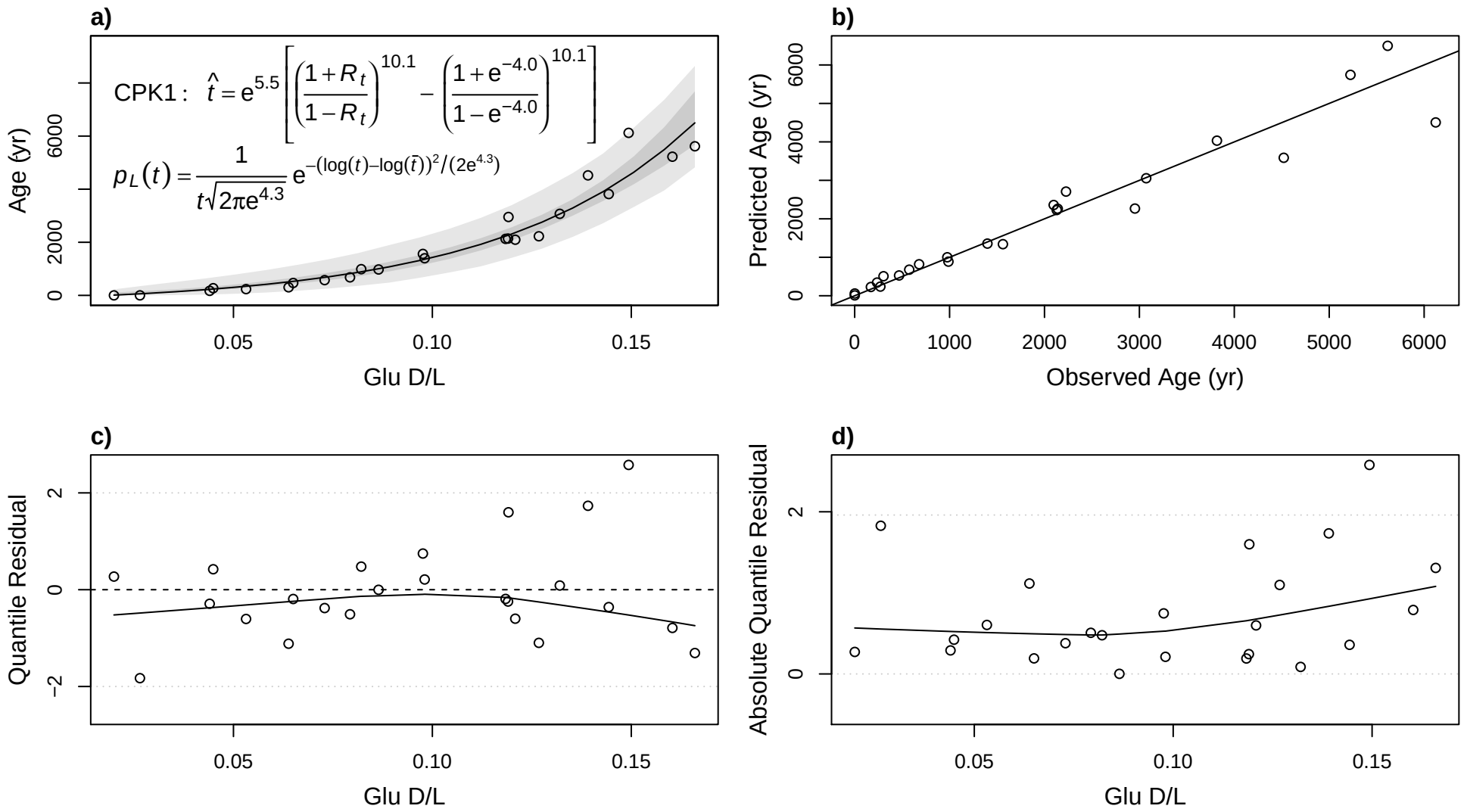


Appendix C. Continued: Model 14 (see Appendix A); Taxon: Fulvia tenuicostata

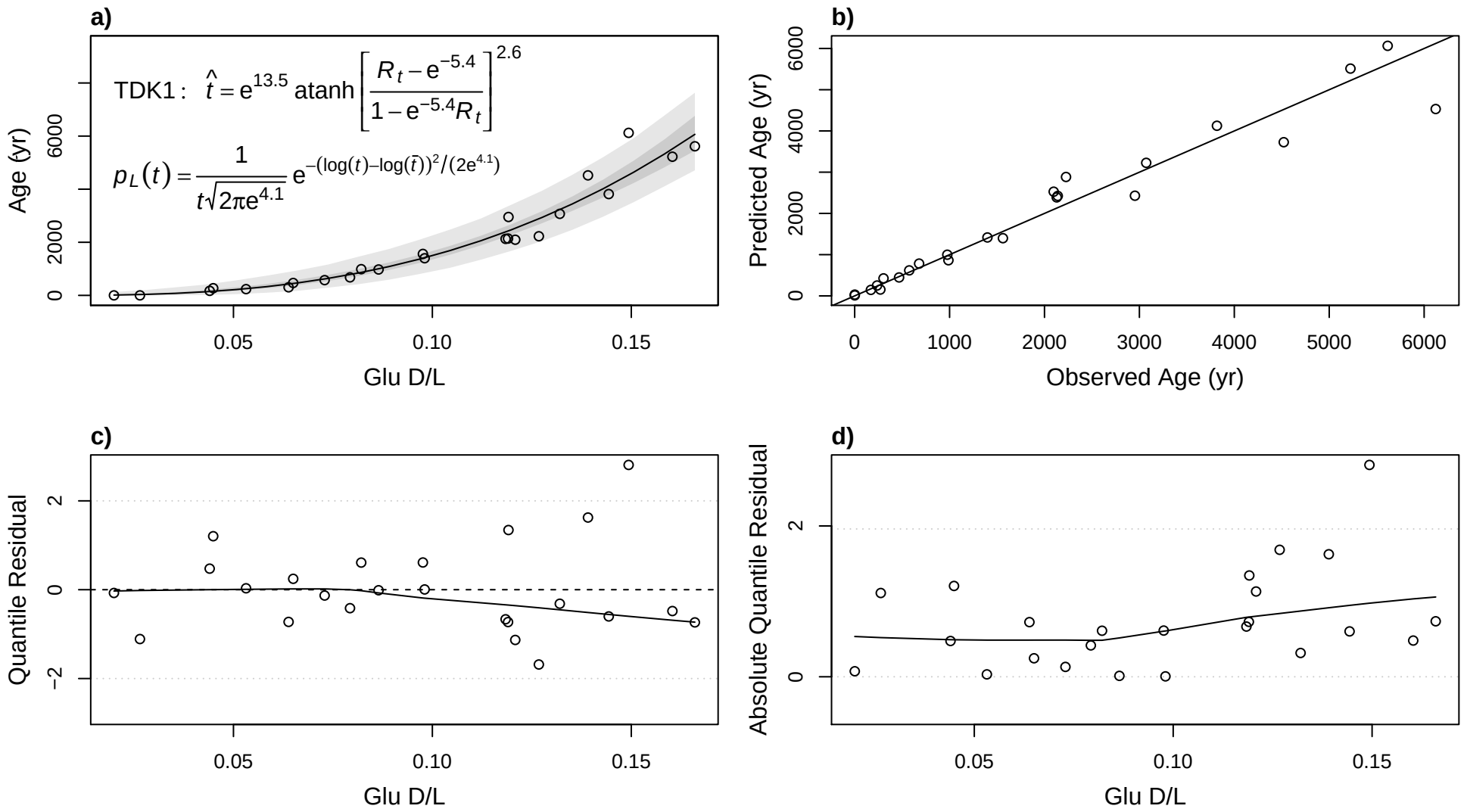


Appendix C. Continued: Model 15 (see Appendix A); Taxon: Fulvia tenuicostata

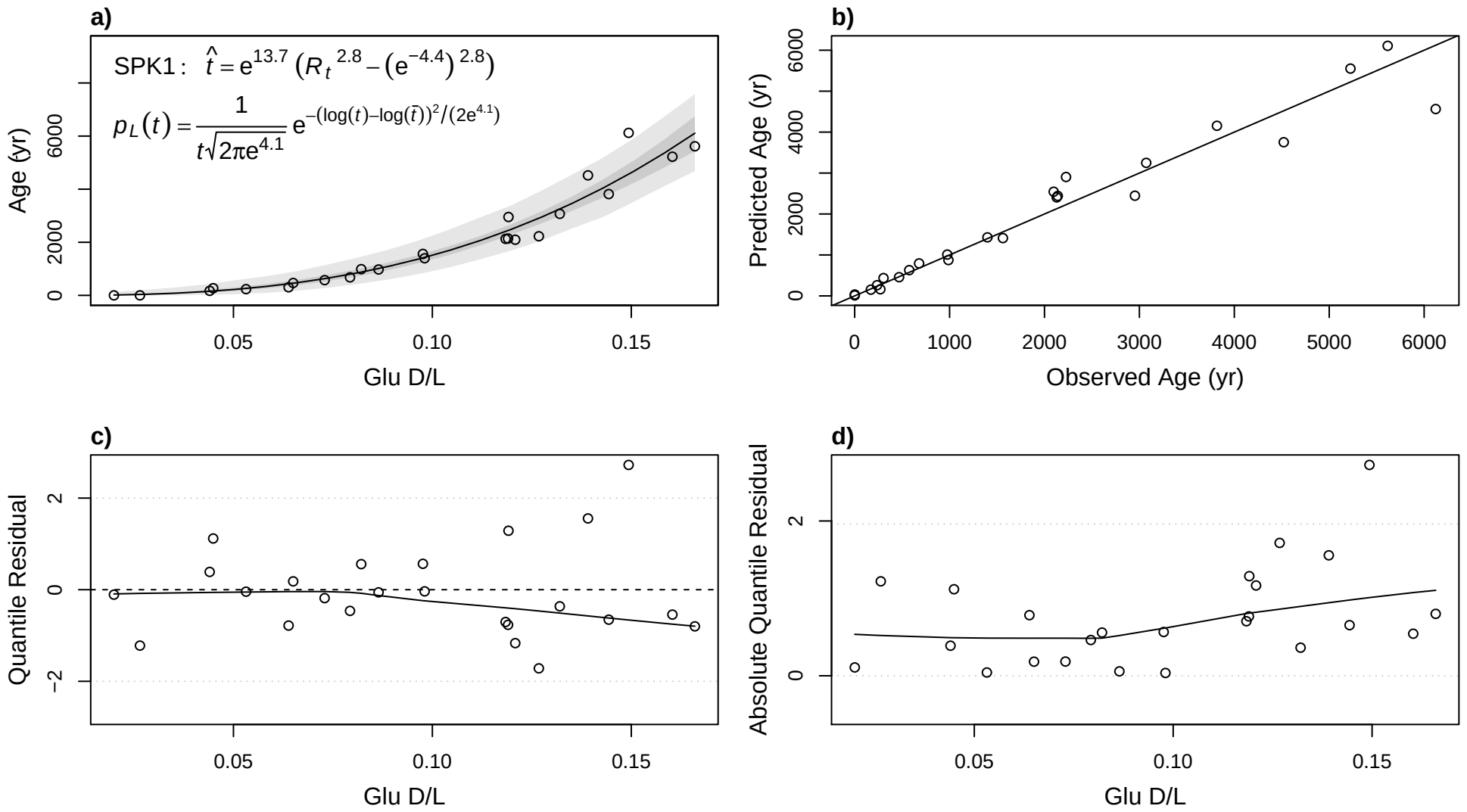


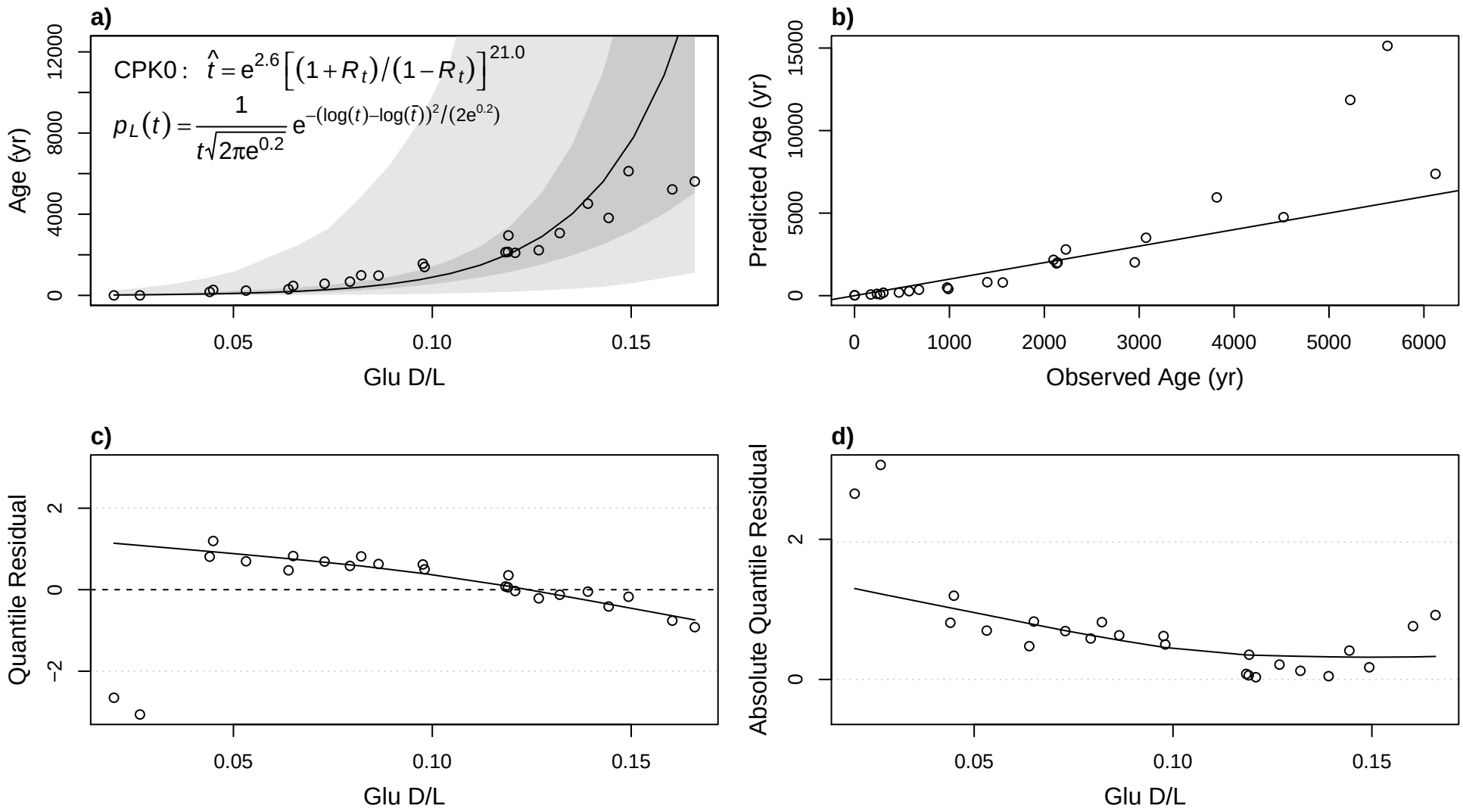

a)
CPK1 : $\hat{t} = e^{5.5}\left[\left(\frac{1+R_t}{1-R_t}\right)^{10.1} - \left(\frac{1+e^{-4.0}}{1-e^{-4.0}}\right)^{10.1}\right]$
$p_L(t) = \frac{1}{t\sqrt{2\pi e^{4.3}}} e^{-(\log(t)-\log(\bar{t}))^2/(2e^{4.3})}$
Age (yr)
0
2000
6000
0.05
0.10
0.15
Glu D/L
b)
Predicted Age (yr)
0
2000
4000
6000
0
1000
2000
3000
4000
5000
6000
Observed Age (yr)
c)
Quantile Residual
−2
0
2
0.05
0.10
0.15
Glu D/L
d)
Absolute Quantile Residual
0
2
0.05
0.10
0.15
Glu D/L

Appendix C. Continued: Model 17 (see Appendix A); Taxon: Fulvia tenuicostata

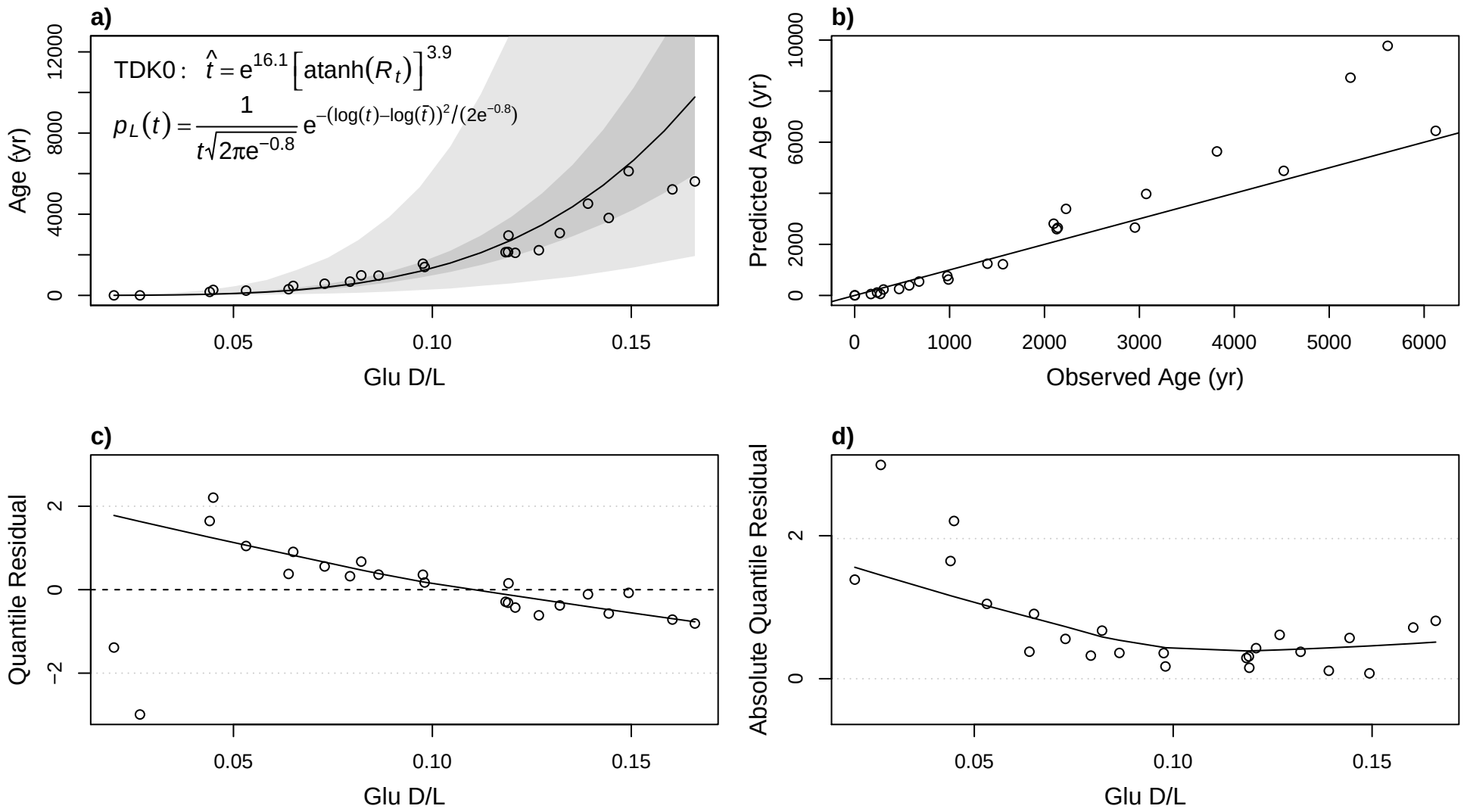


Appendix C. Continued: Model 18 (see Appendix A); Taxon: Fulvia tenuicostata

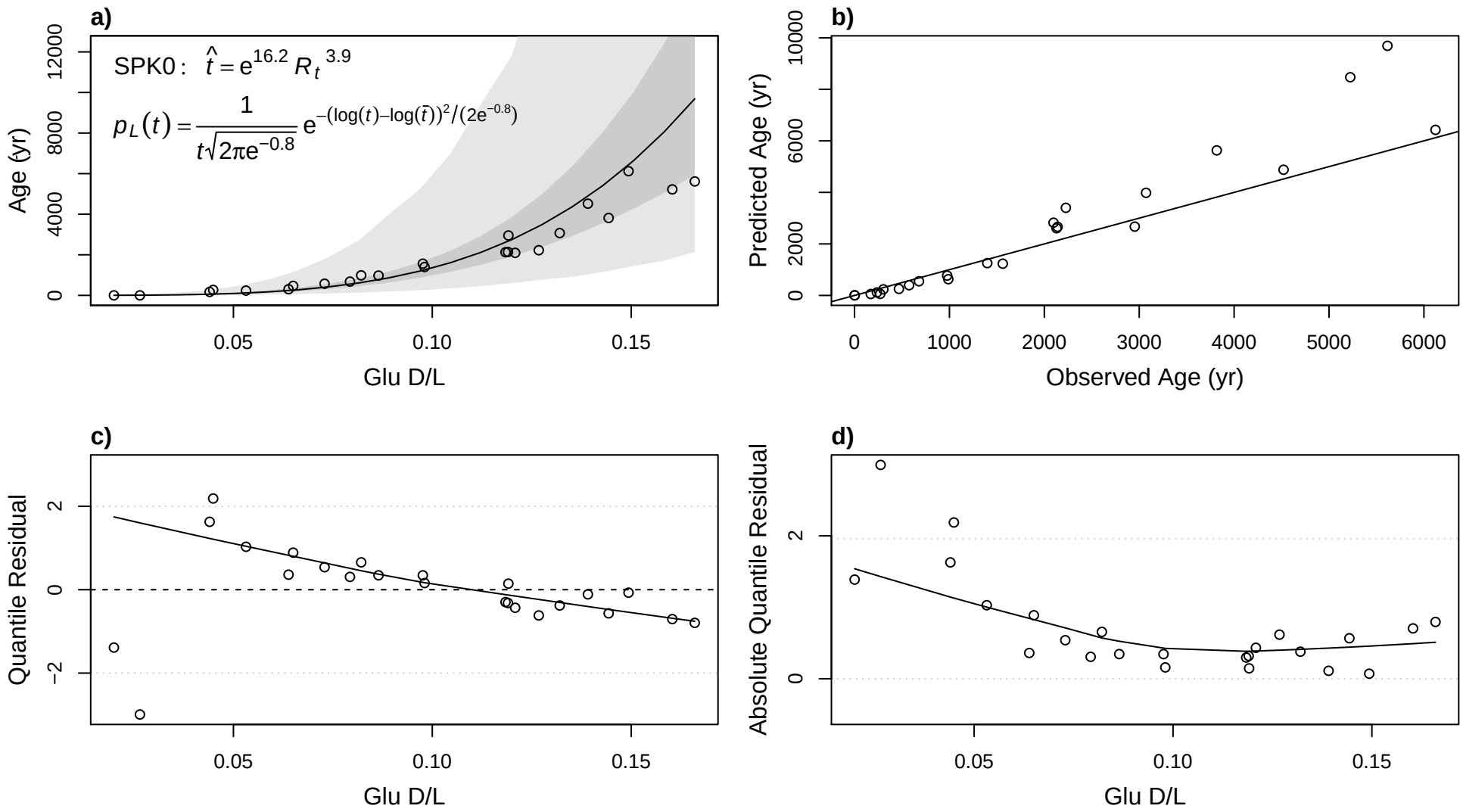


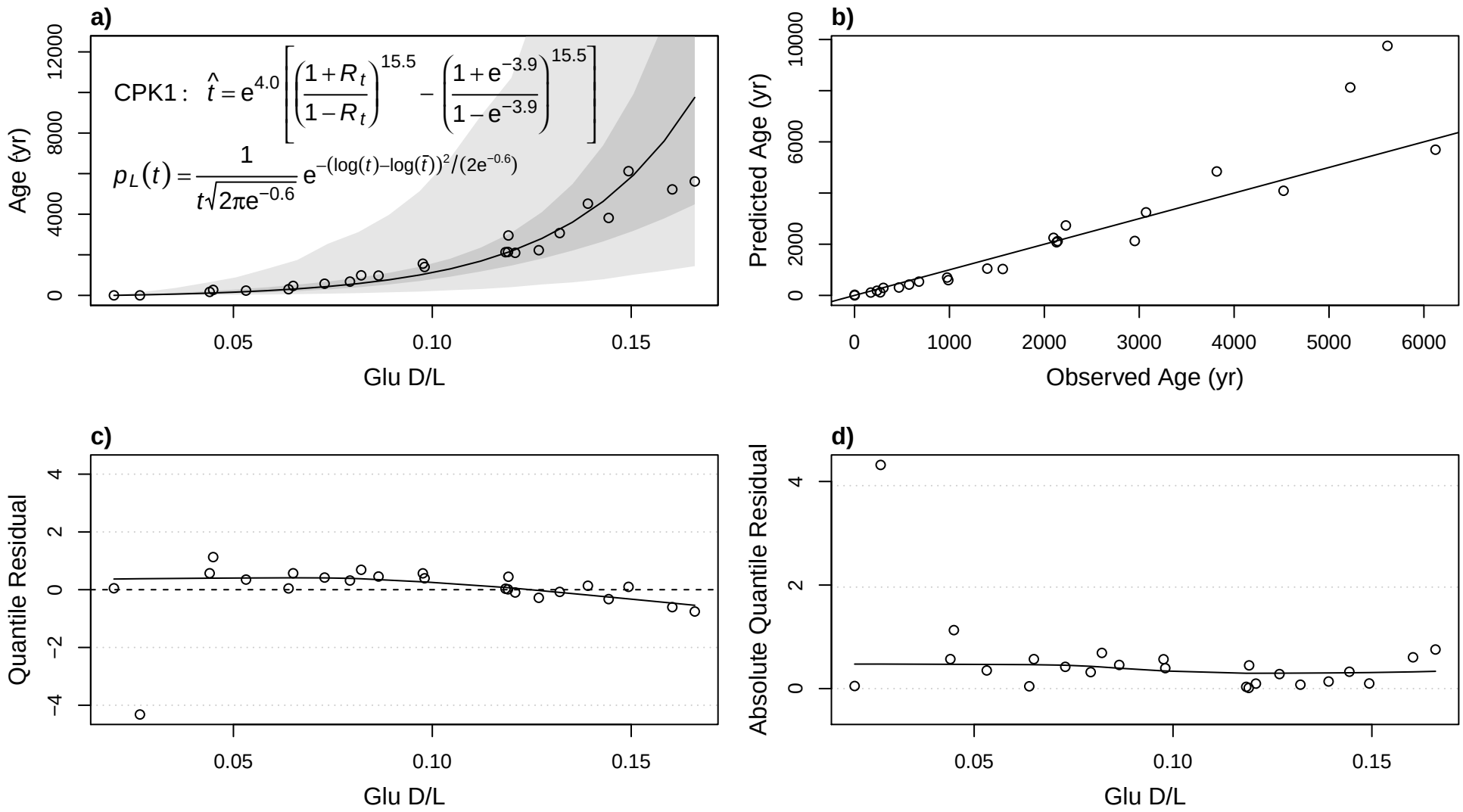

a)
CPK0 : $\hat{t} = e^{2.6}\left[(1+R_t)/(1-R_t)\right]^{21.0}$
$p_L(t) = \frac{1}{t\sqrt{2\pi e^{0.2}}} e^{-(\log(t)-\log(\bar{t}))^2/(2e^{0.2})}$
Age (yr)
0
4000
8000
12000
0.05
0.10
0.15
Glu D/L
b)
Predicted Age (yr)
0
5000
10000
15000
0
1000
2000
3000
4000
5000
6000
Observed Age (yr)
c)
Quantile Residual
−2
0
2
0.05
0.10
0.15
Glu D/L
d)
Absolute Quantile Residual
0
2
0.05
0.10
0.15
Glu D/L

Appendix C. Continued: Model 20 (see Appendix A); Taxon: Fulvia tenuicostata

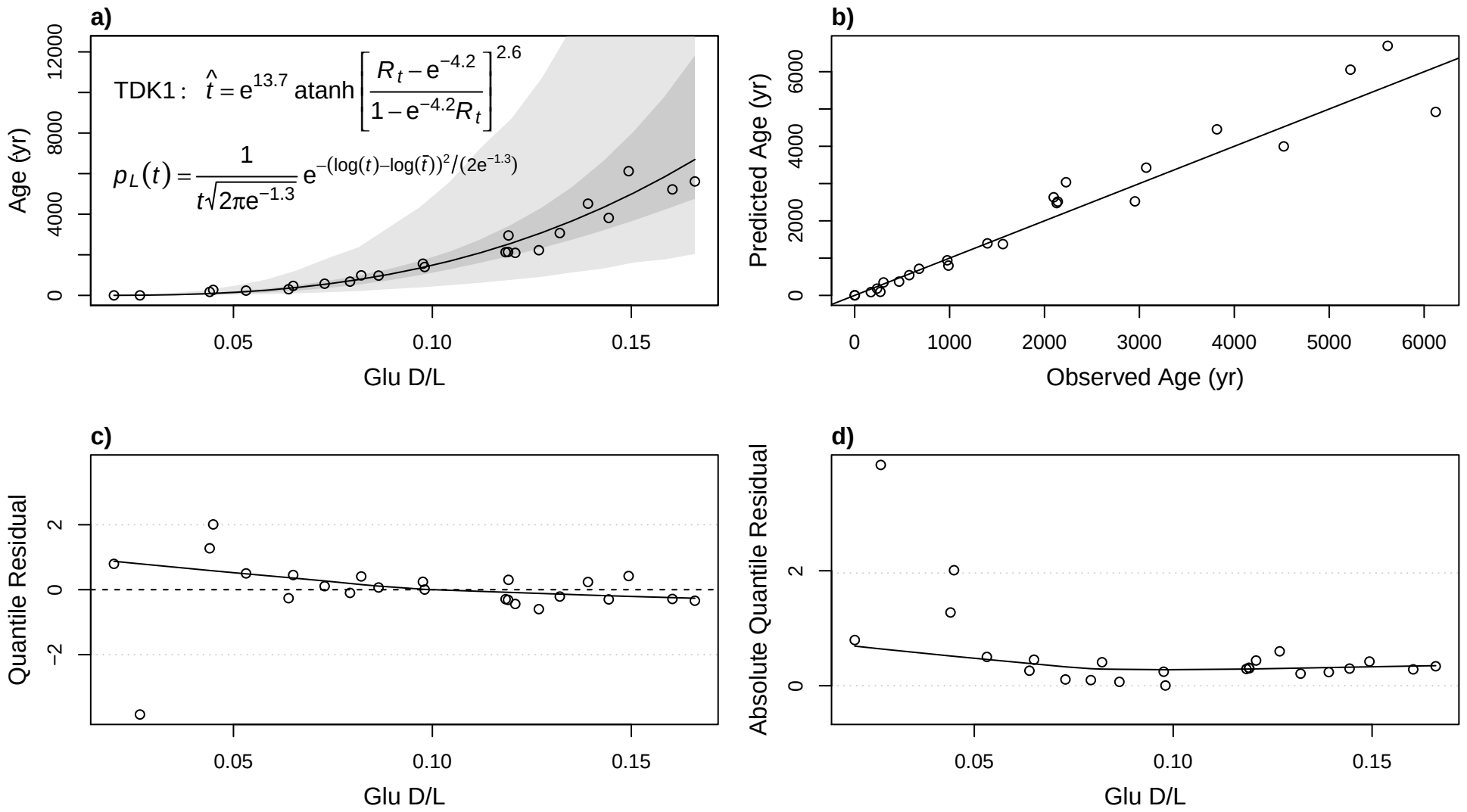


Appendix C. Continued: Model 21 (see Appendix A); Taxon: Fulvia tenuicostata

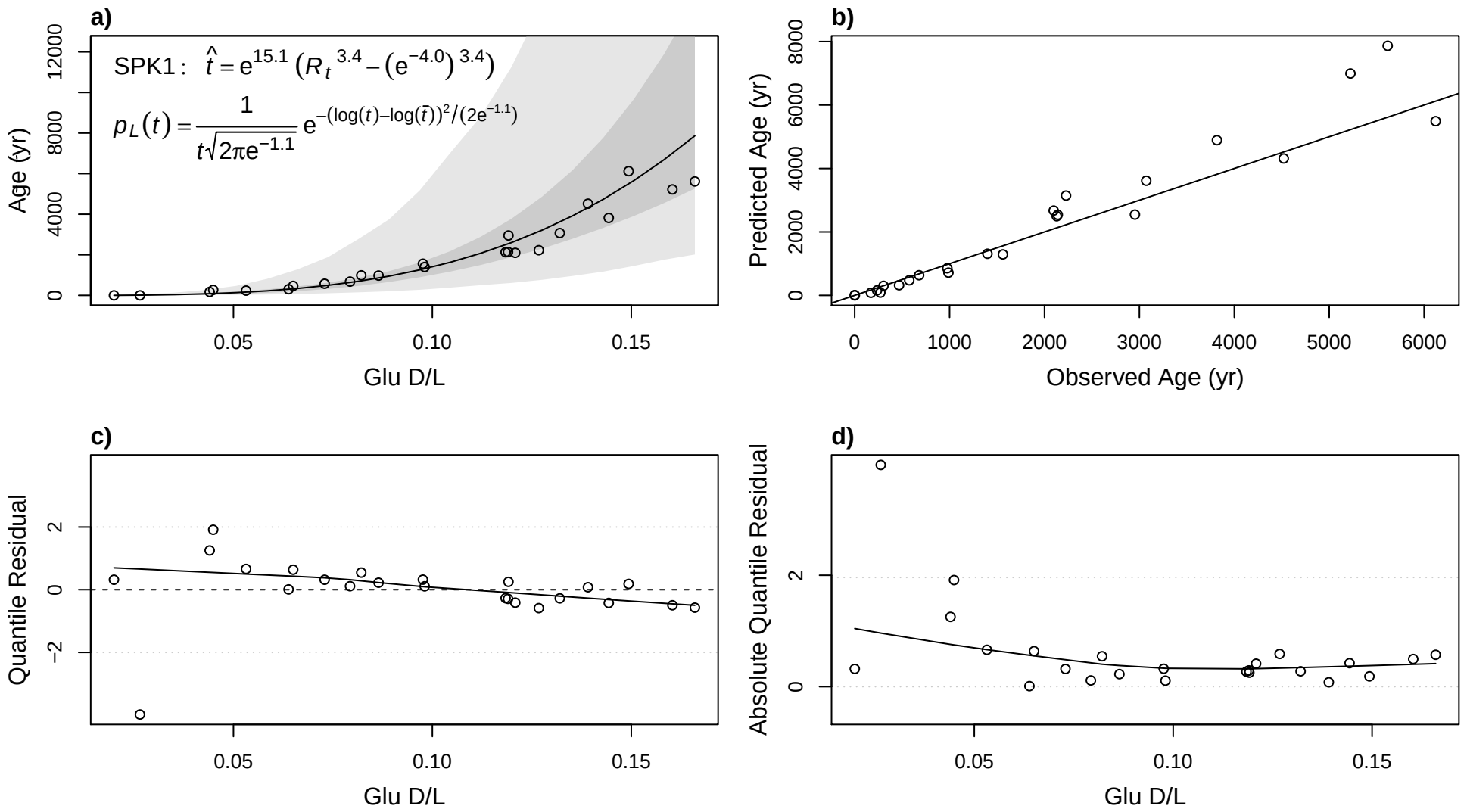



a)
CPK1 : $\hat{t} = e^{4.0}\left[\left(\frac{1+R_t}{1-R_t}\right)^{15.5} - \left(\frac{1+e^{-3.9}}{1-e^{-3.9}}\right)^{15.5}\right]$
$p_L(t) = \frac{1}{t\sqrt{2\pi e^{-0.6}}} e^{-(\log(t)-\log(\bar{t}))^2/(2e^{-0.6})}$
Age (yr)
0
4000
8000
12000
0.05
0.10
0.15
Glu D/L
b)
Predicted Age (yr)
0
2000
6000
10000
0
1000
2000
3000
4000
5000
6000
Observed Age (yr)
c)
Quantile Residual
−4
−2
0
2
4
0.05
0.10
0.15
Glu D/L
d)
Absolute Quantile Residual
0
2
4
0.05
0.10
0.15
Glu D/L

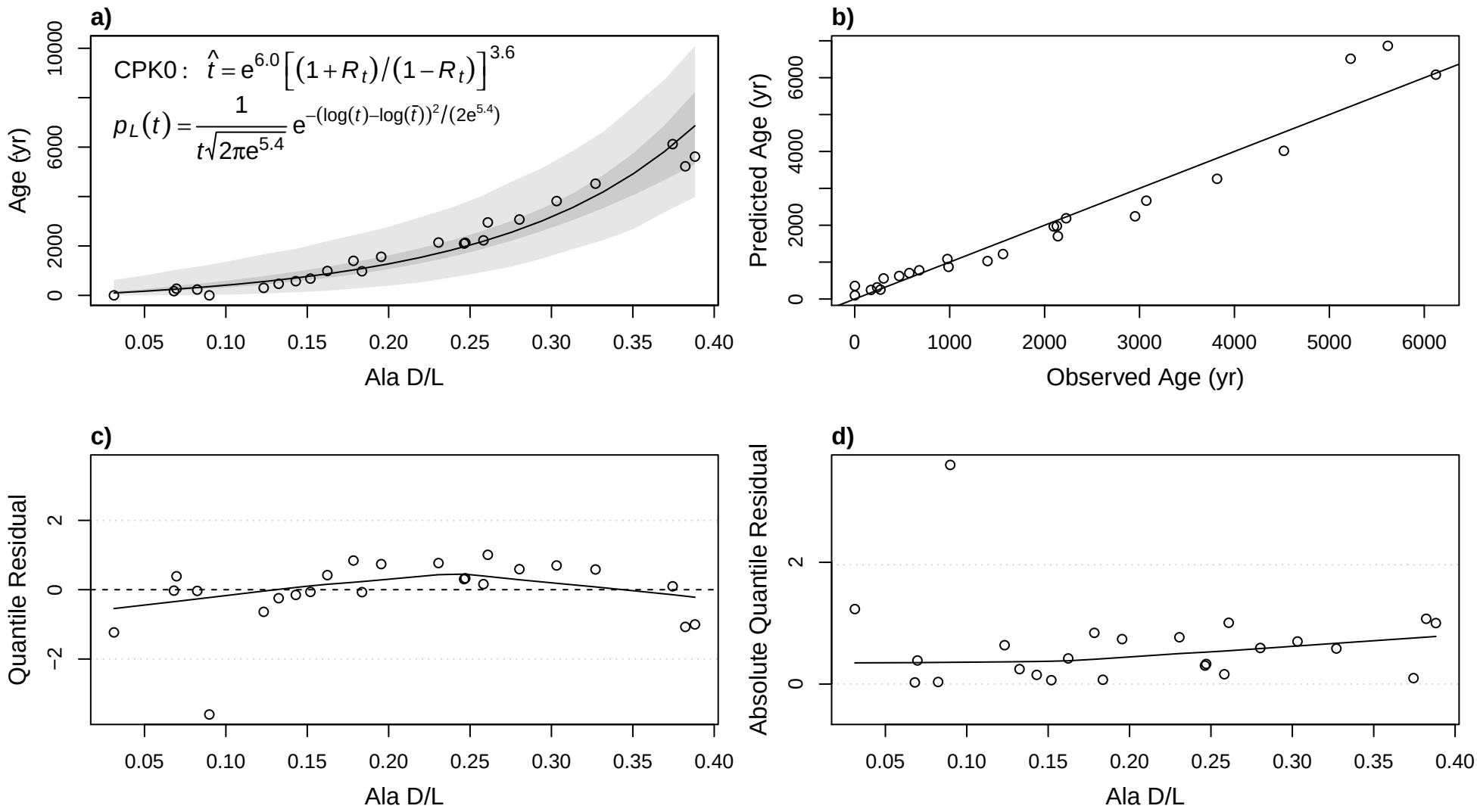
Appendix C. Continued: Model 23 (see Appendix A); Taxon: Fulvia tenuicostata

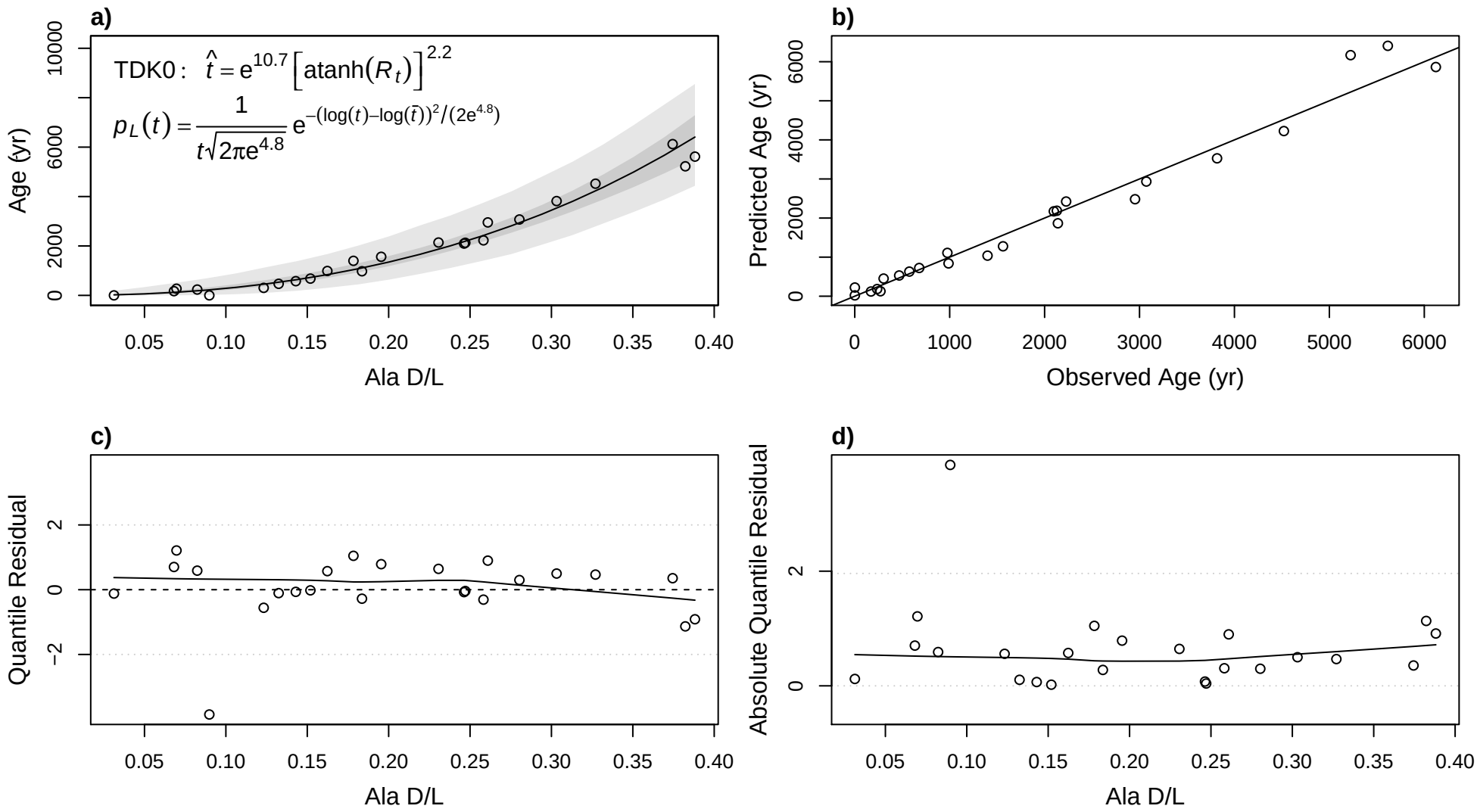


Appendix C. Continued: Model 24 (see Appendix A); Taxon: Fulvia tenuicostata

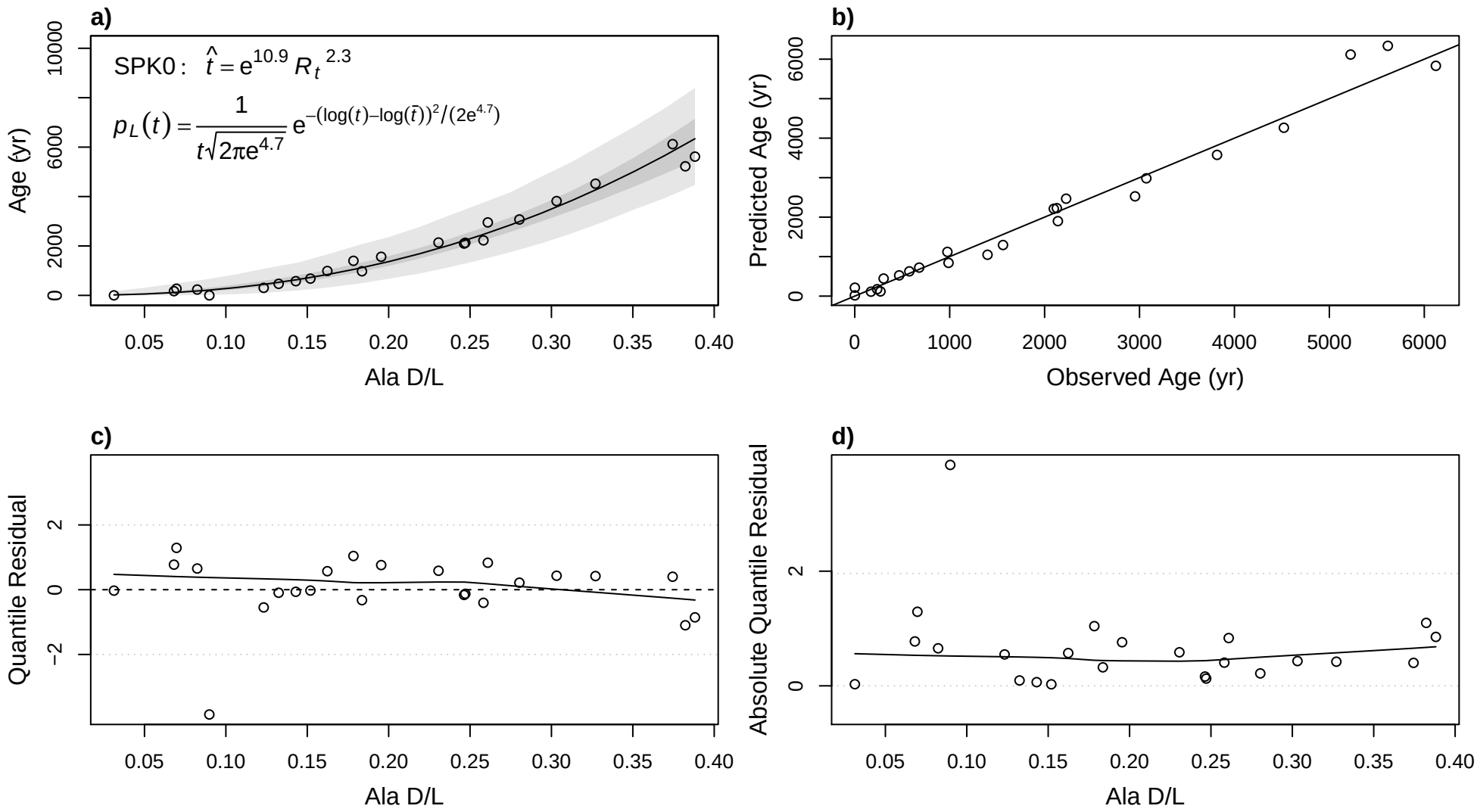


Appendix C. Continued: Model 25 (see Appendix A); Taxon: Fulvia tenuicostata

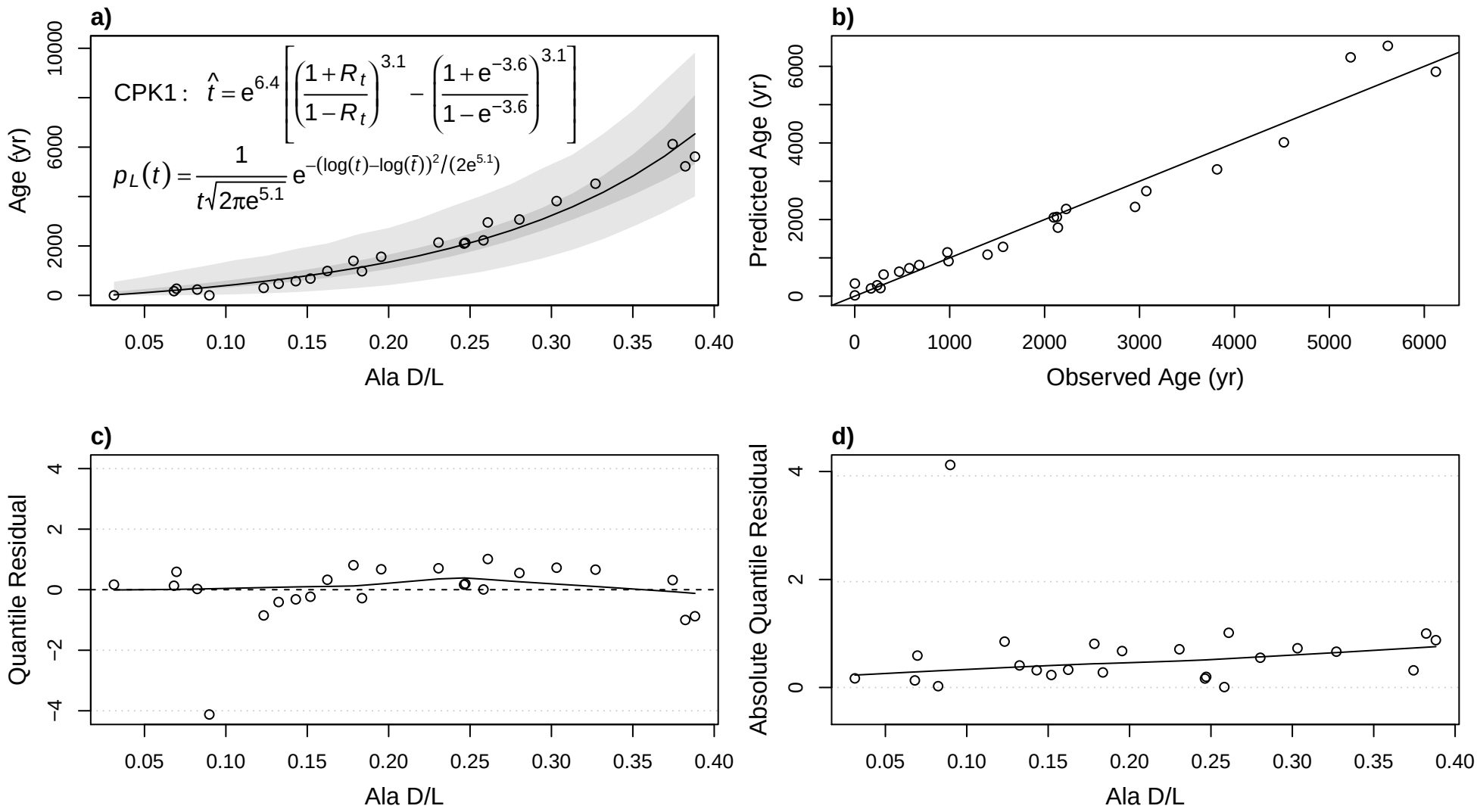



a)
TDK0 : $\hat{t} = e^{10.7}\left[\text{atanh}(R_t)\right]^{2.2}$
$p_L(t) = \frac{1}{t\sqrt{2\pi e^{4.8}}} e^{-(\log(t)-\log(\bar{t}))^2/(2e^{4.8})}$
Age (yr)
Ala D/L
b)
Predicted Age (yr)
Observed Age (yr)
c)
Quantile Residual
Ala D/L
d)
Absolute Quantile Residual
Ala D/L

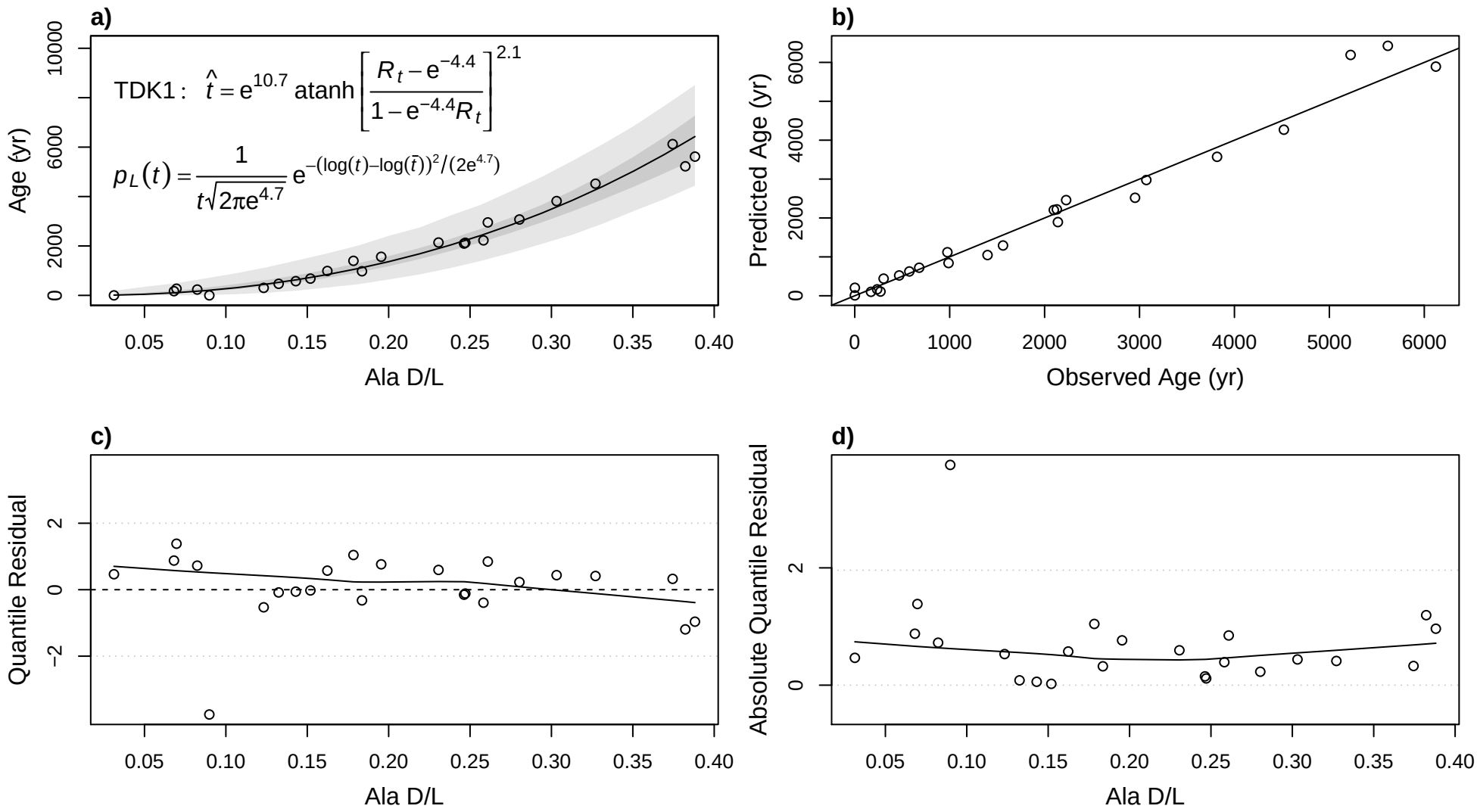
Appendix C. Continued: Model 27 (see Appendix A); Taxon: Fulvia tenuicostata



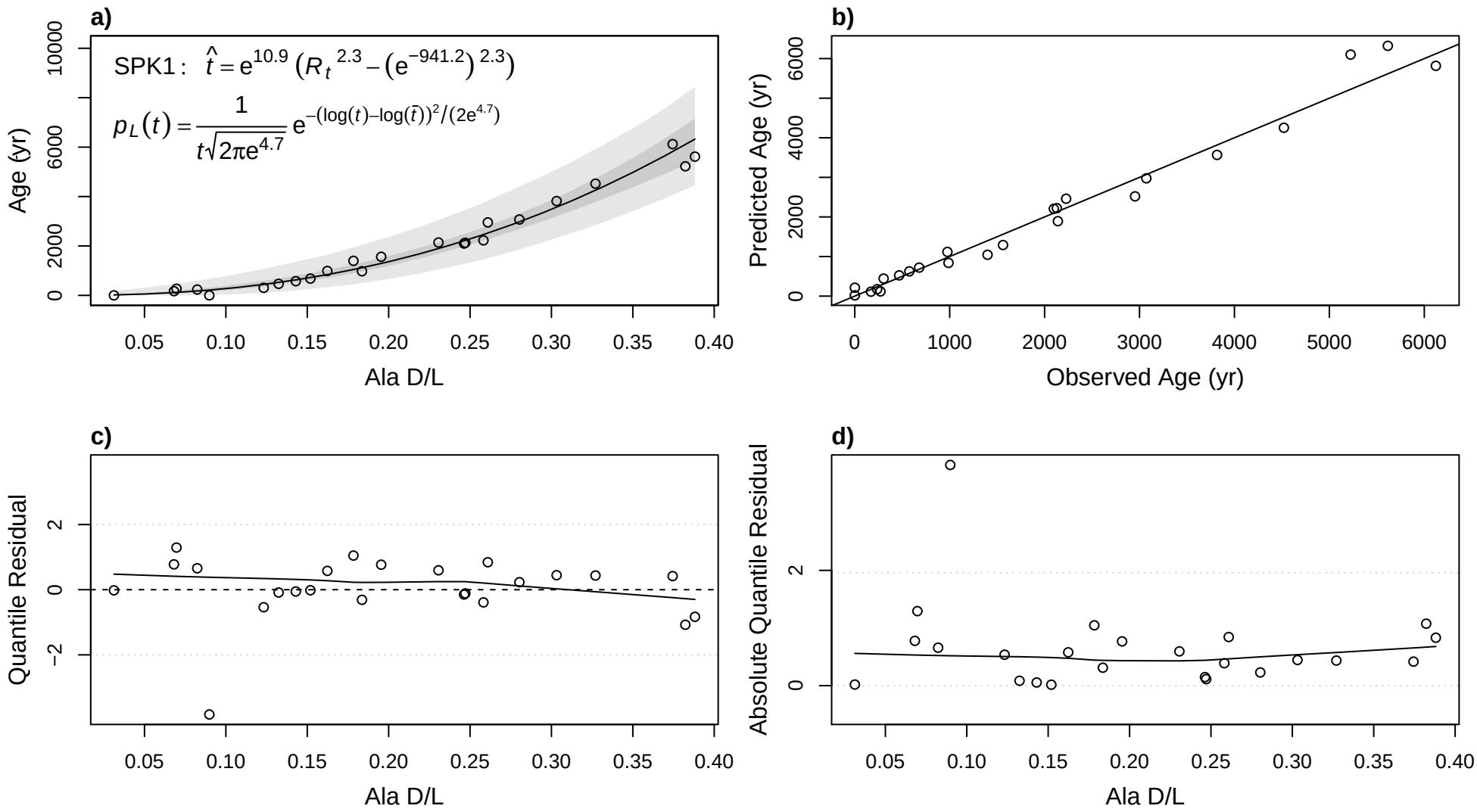
Appendix C. Continued: Model 28 (see Appendix A); Taxon: Fulvia tenuicostata



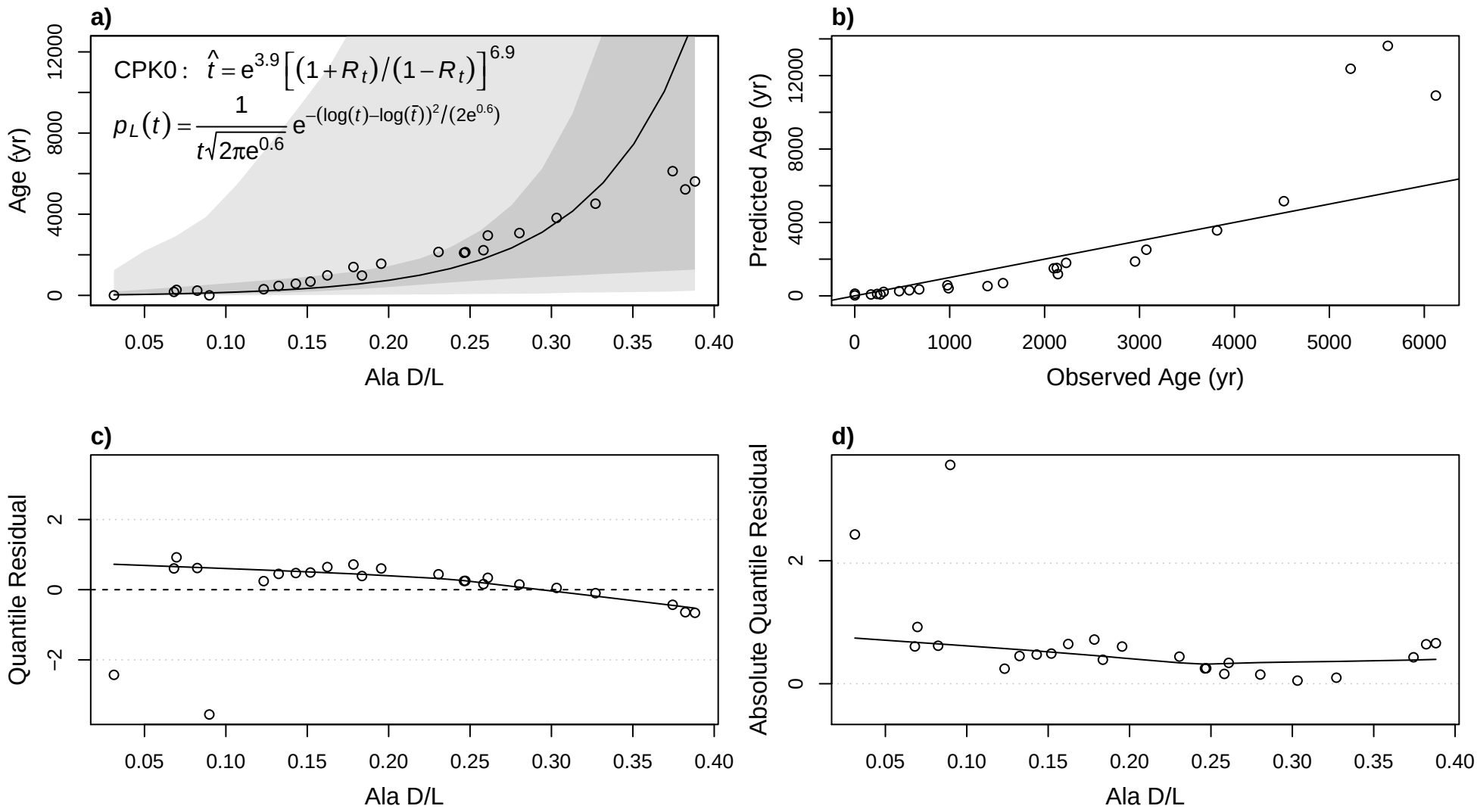
Appendix C. Continued: Model 29 (see Appendix A); Taxon: Fulvia tenuicostata



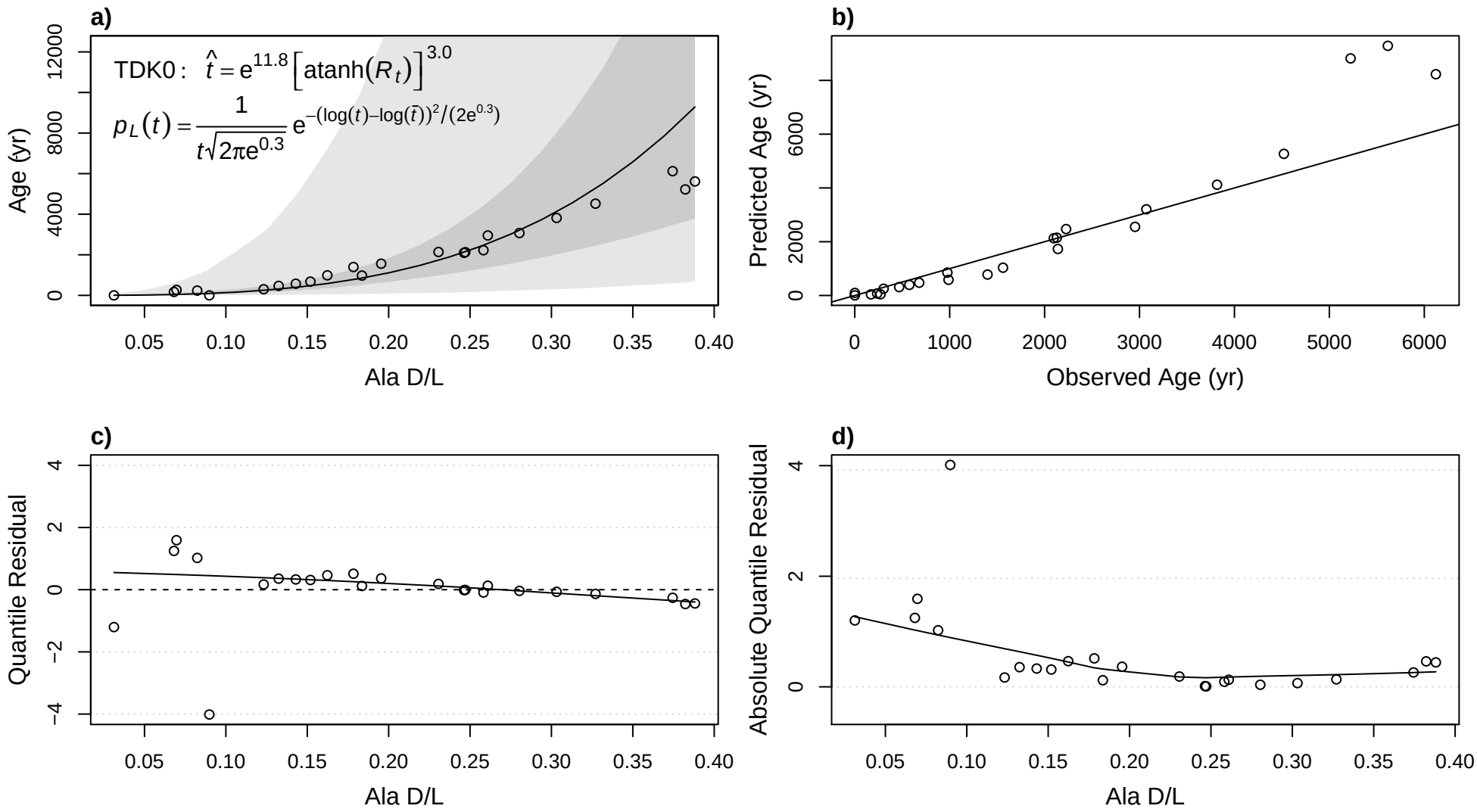
Appendix C. Continued: Model 30 (see Appendix A); Taxon: Fulvia tenuicostata



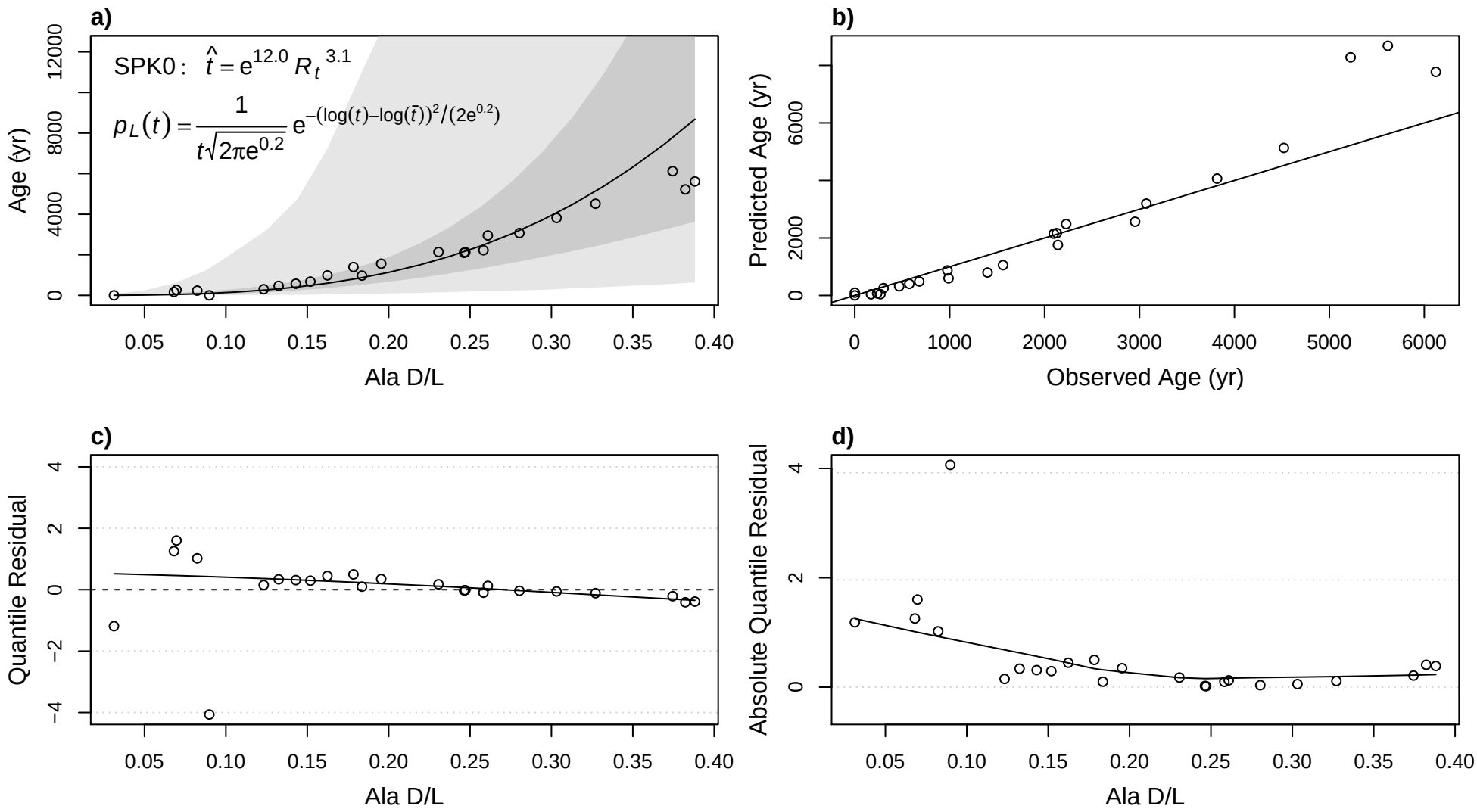
Appendix C. Continued: Model 31 (see Appendix A); Taxon: Fulvia tenuicostata



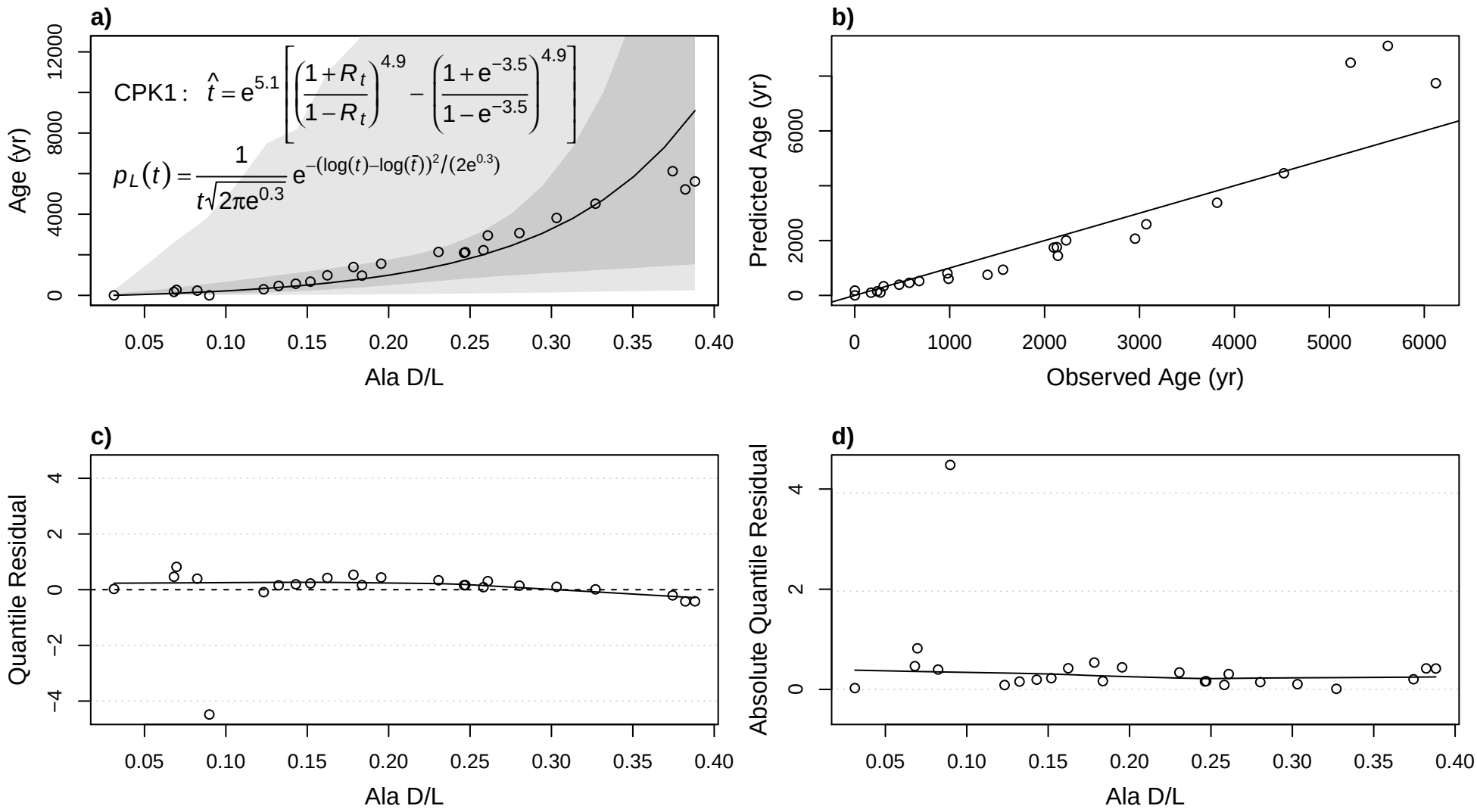
Appendix C. Continued: Model 32 (see Appendix A); Taxon: Fulvia tenuicostata



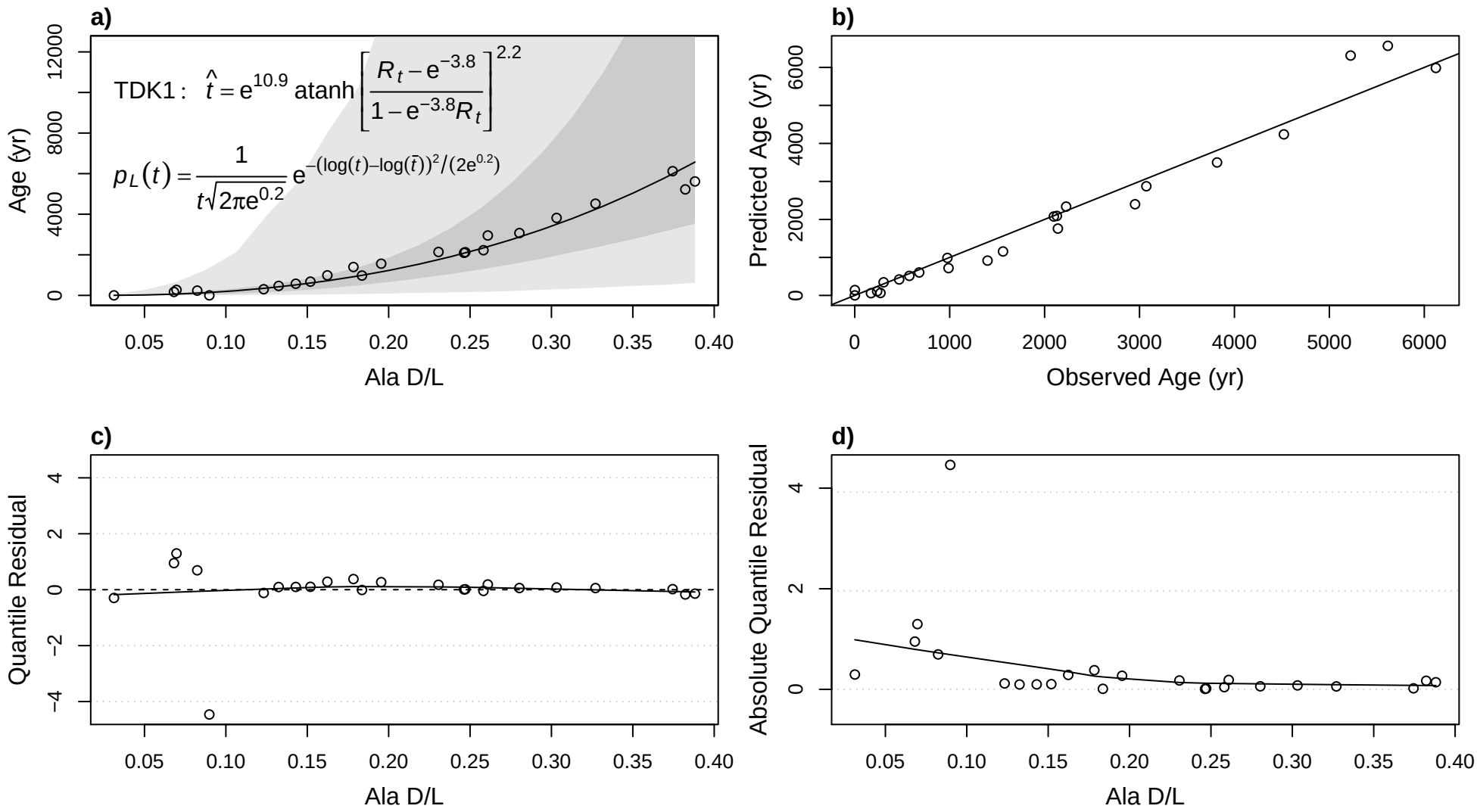
Appendix C. Continued: Model 33 (see Appendix A); Taxon: Fulvia tenuicostata



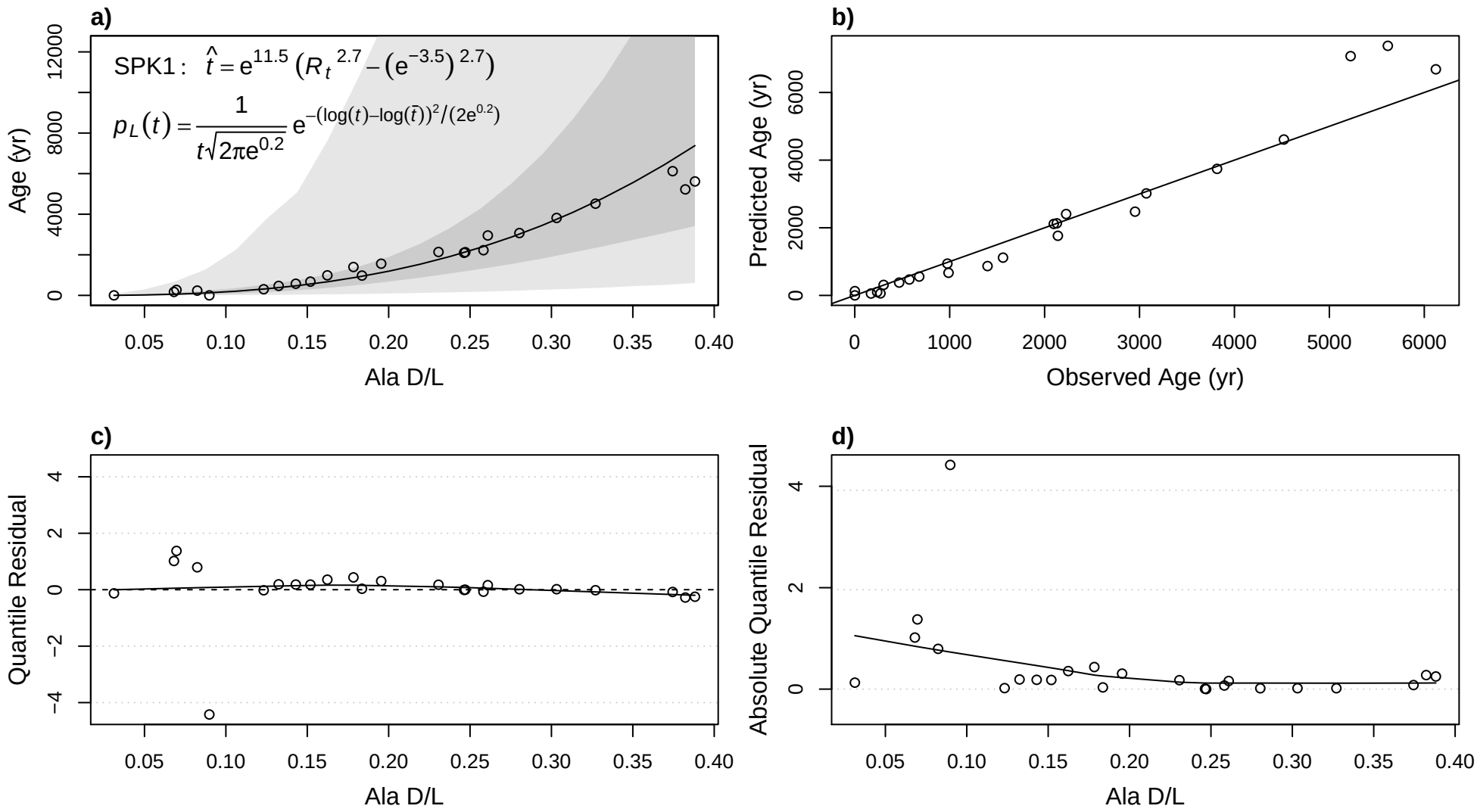
Appendix C. Continued: Model 34 (see Appendix A); Taxon: Fulvia tenuicostata



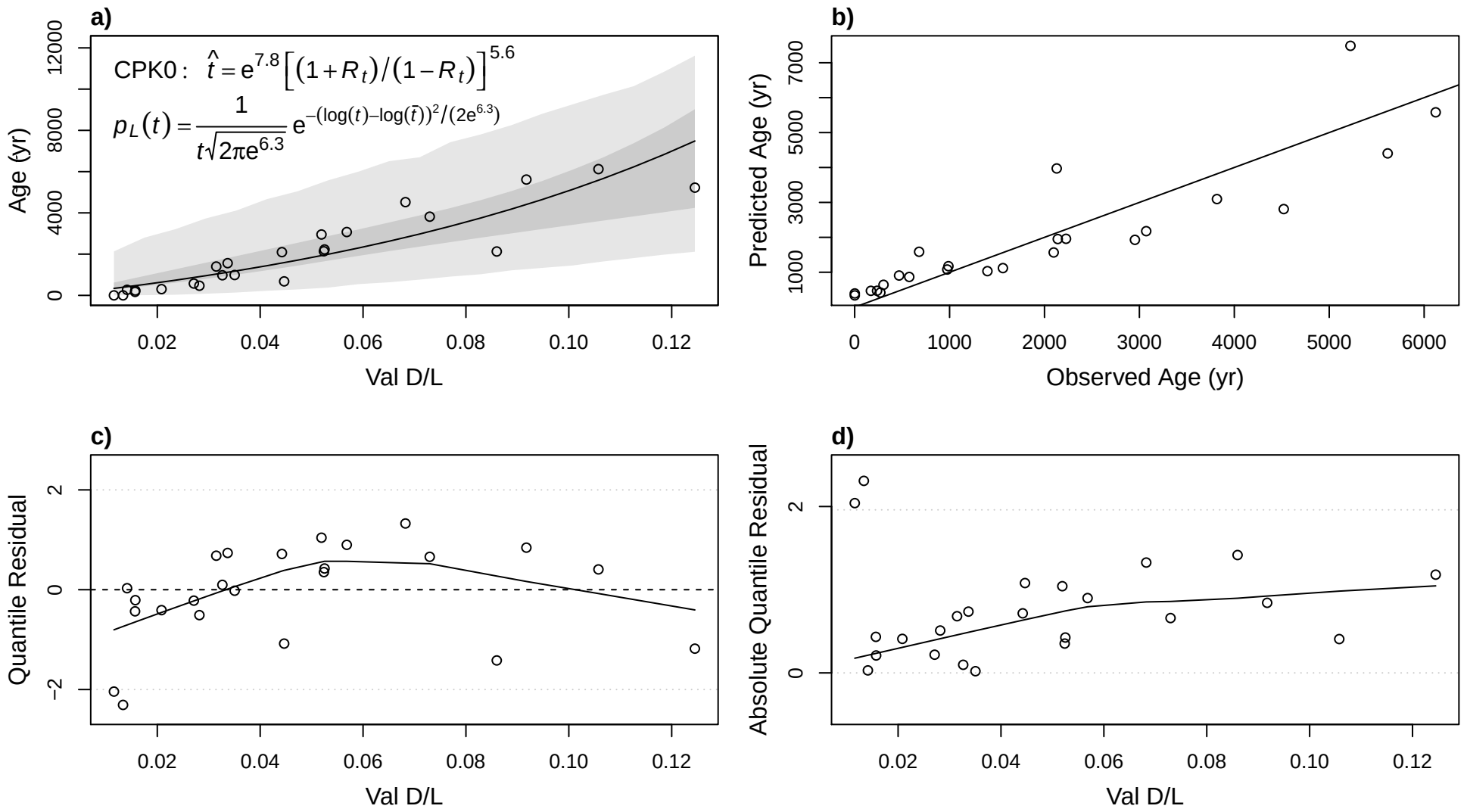
Appendix C. Continued: Model 35 (see Appendix A); Taxon: Fulvia tenuicostata



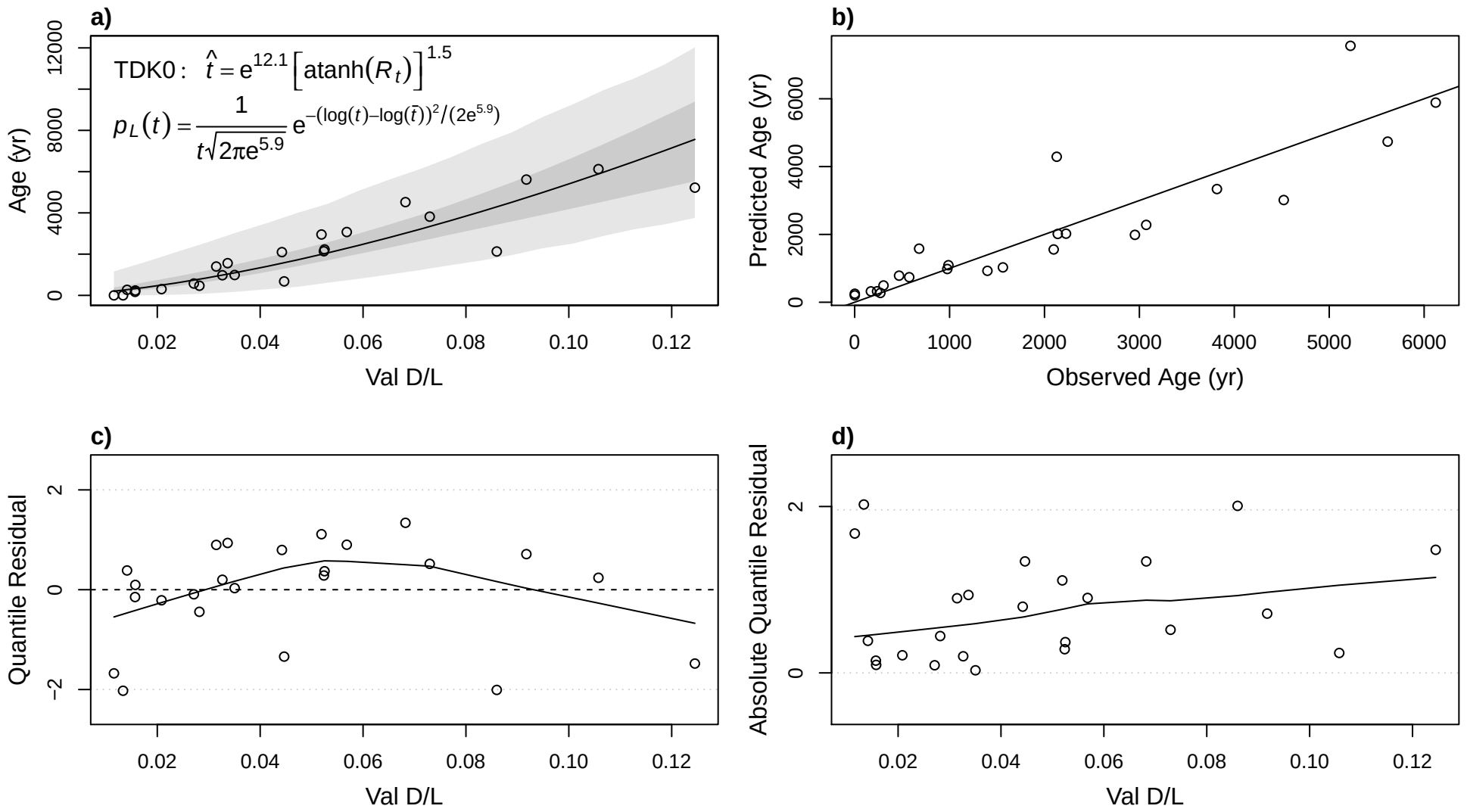
Appendix C. Continued: Model 36 (see Appendix A); Taxon: Fulvia tenuicostata



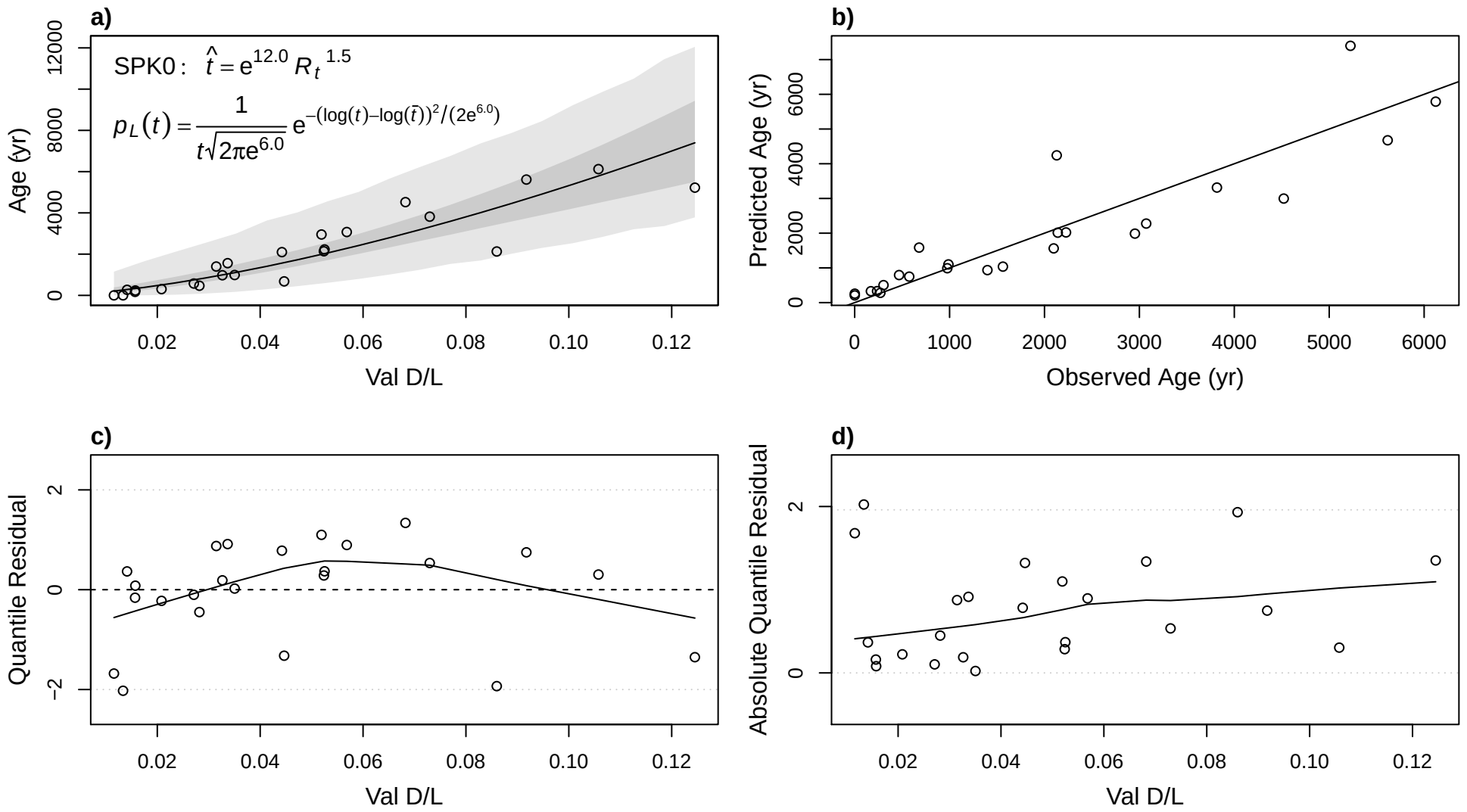
Appendix C. Continued: Model 37 (see Appendix A); Taxon: Fulvia tenuicostata



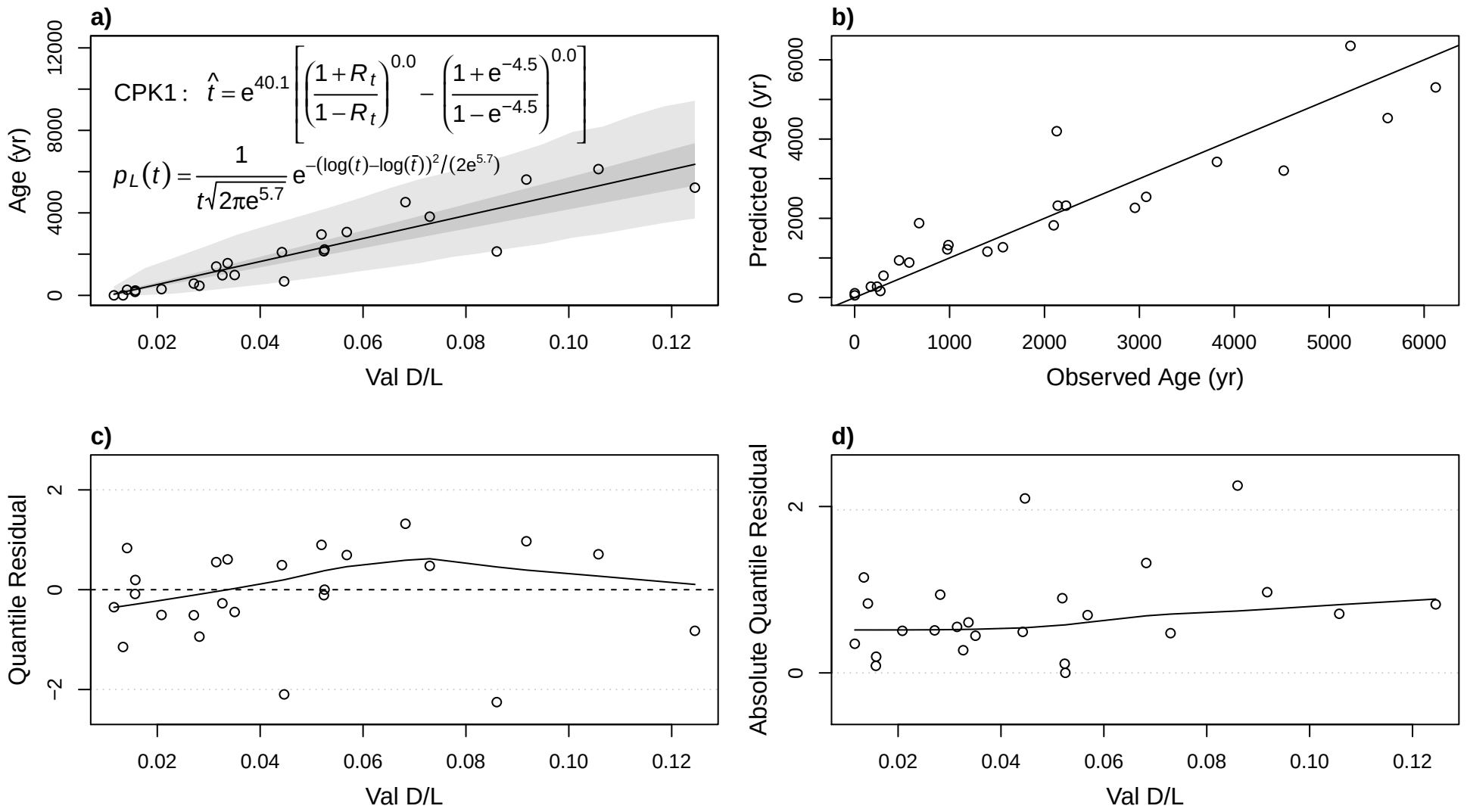
Appendix C. Continued: Model 38 (see Appendix A); Taxon: Fulvia tenuicostata

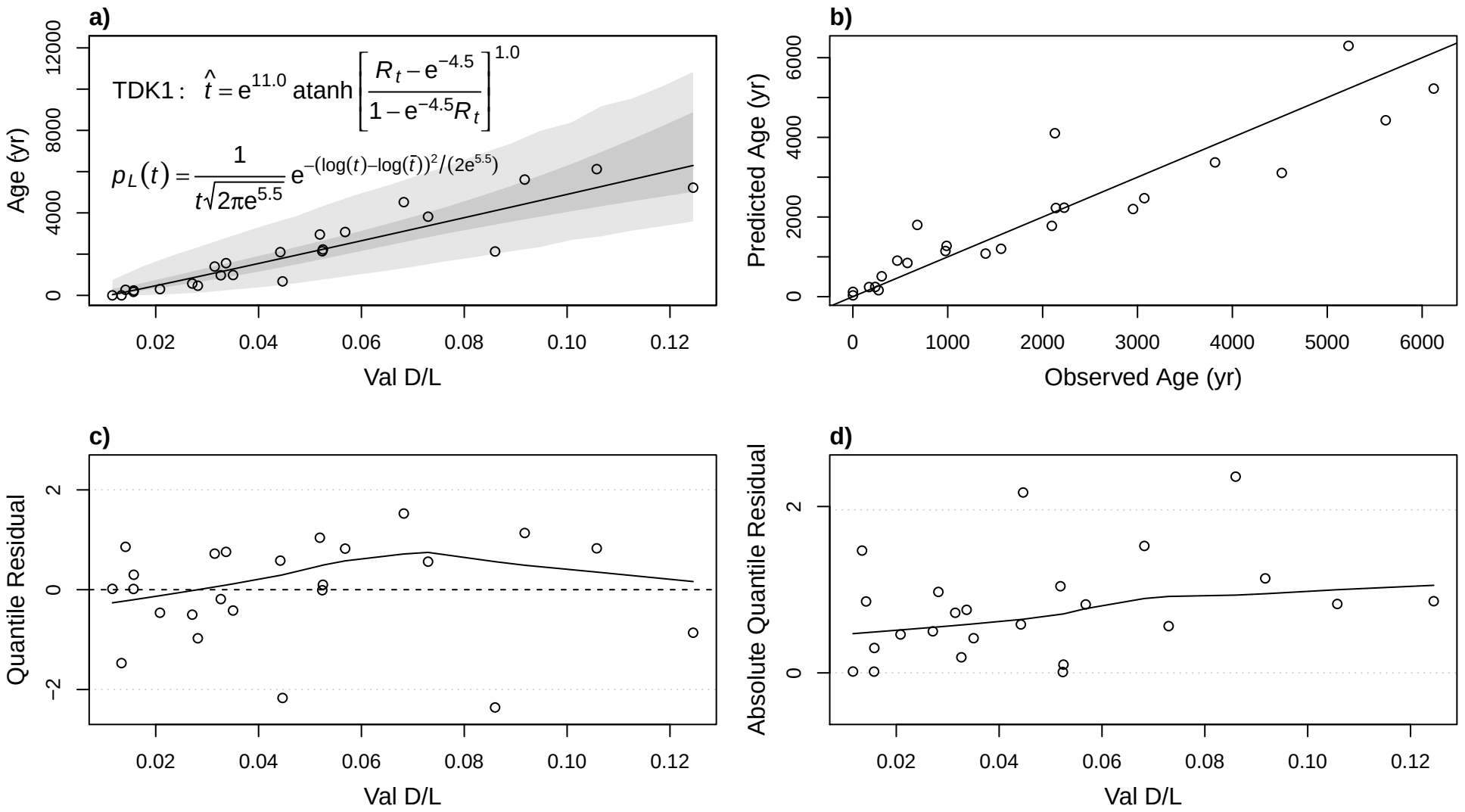


Appendix C. Continued: Model 39 (see Appendix A); Taxon: Fulvia tenuicostata

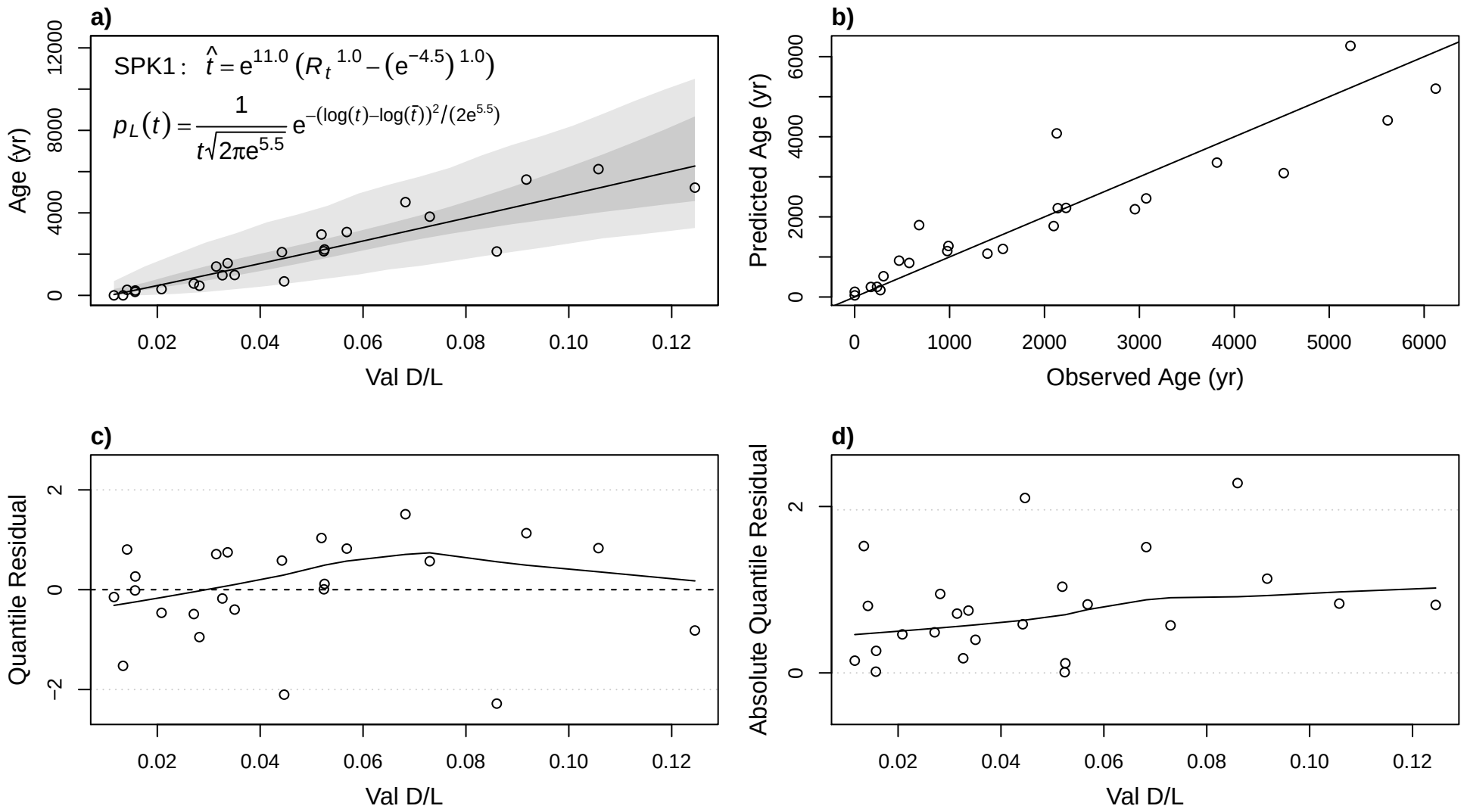


Appendix C. Continued: Model 40 (see Appendix A); Taxon: Fulvia tenuicostata

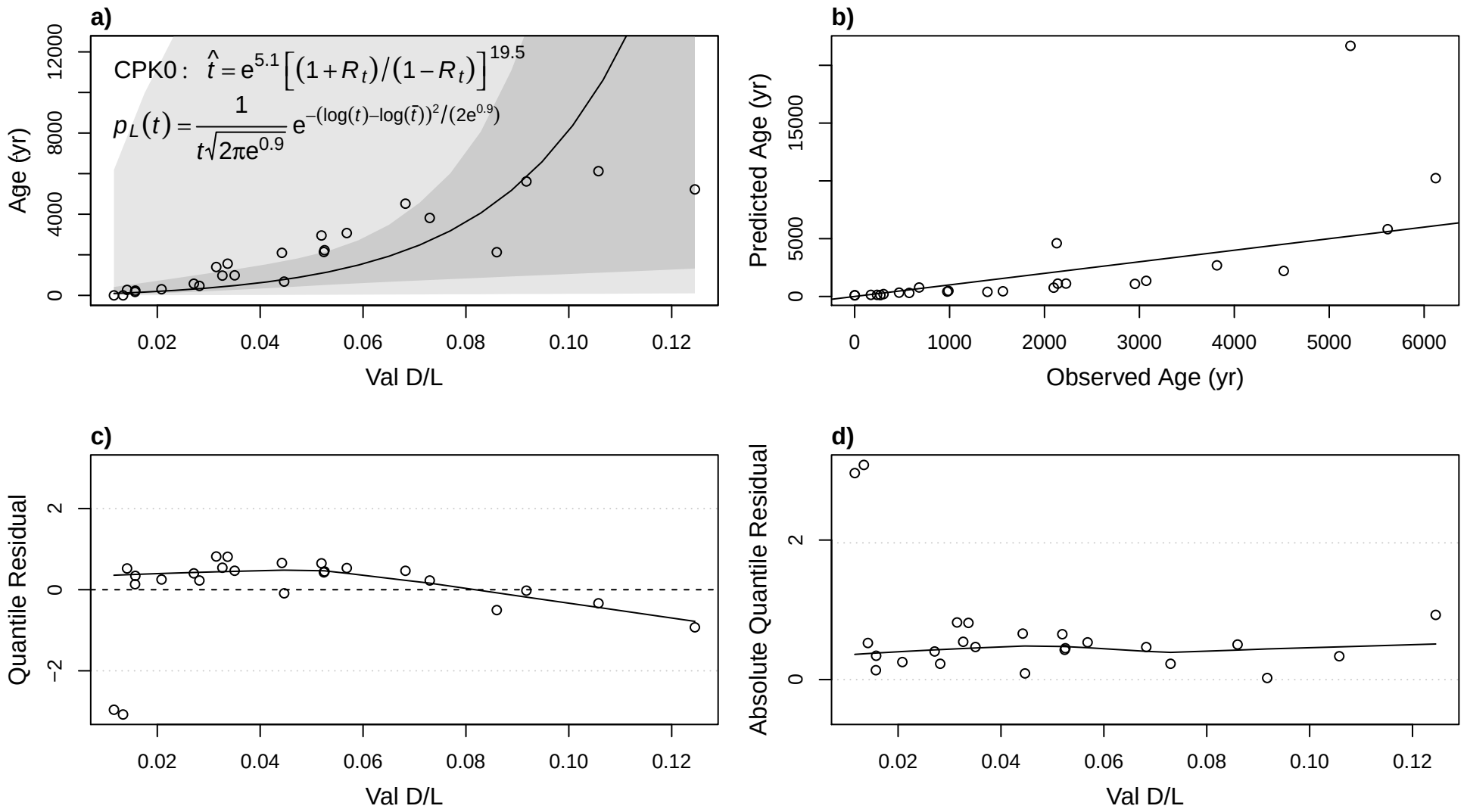



a)
TDK1 : $\hat{t} = e^{11.0}\,\mathrm{atanh}\left[\frac{R_t - e^{-4.5}}{1 - e^{-4.5}R_t}\right]^{1.0}$
$p_L(t) = \frac{1}{t\sqrt{2\pi e^{5.5}}}\, e^{-(\log(t)-\log(\bar{t}))^2/(2e^{5.5})}$
Age (yr)
0
4000
8000
12000
0.02
0.04
0.06
0.08
0.10
0.12
Val D/L
b)
Predicted Age (yr)
0
2000
4000
6000
0
1000
2000
3000
4000
5000
6000
Observed Age (yr)
c)
Quantile Residual
−2
0
2
0.02
0.04
0.06
0.08
0.10
0.12
Val D/L
d)
Absolute Quantile Residual
0
2
0.02
0.04
0.06
0.08
0.10
0.12
Val D/L

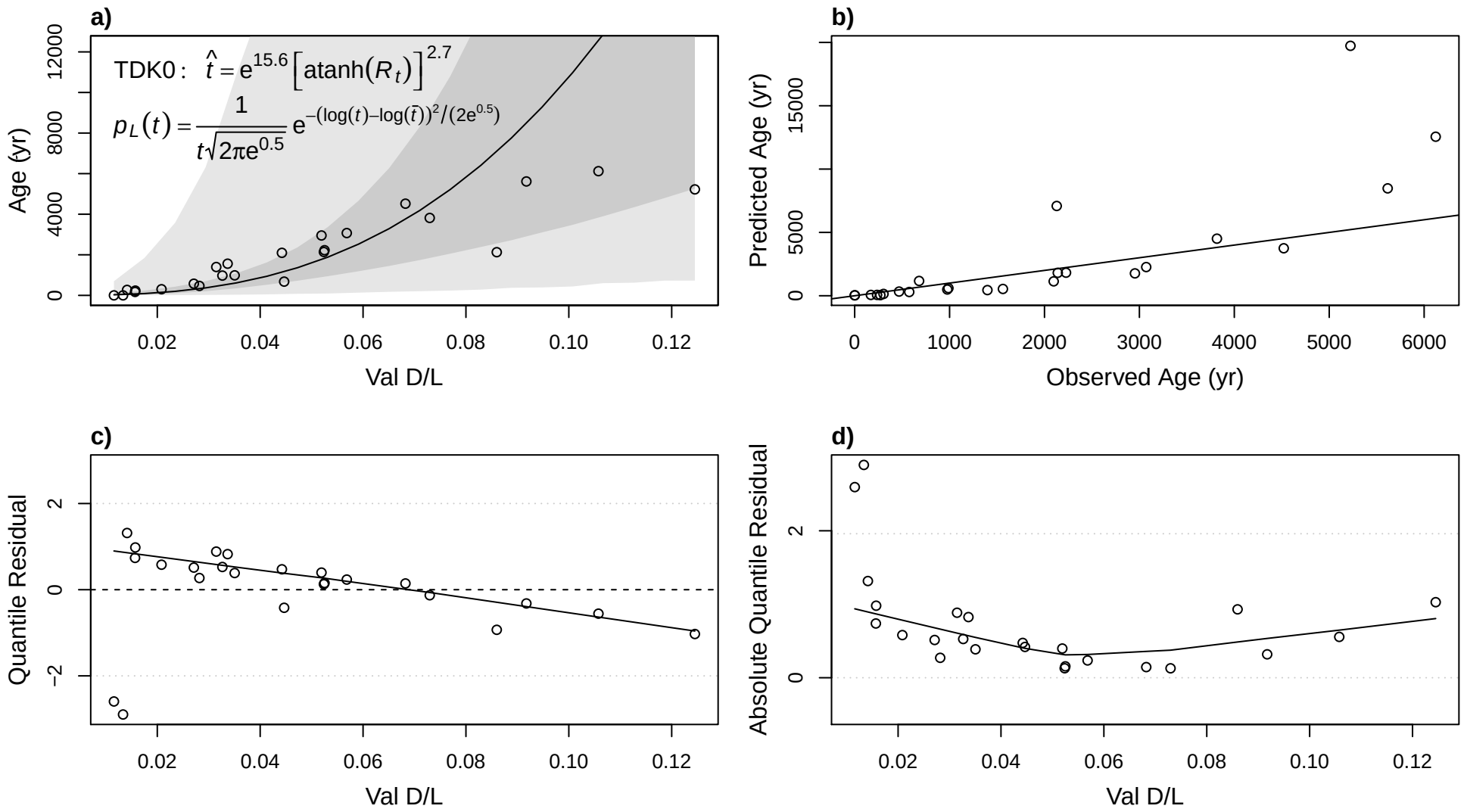
Appendix C. Continued: Model 42 (see Appendix A); Taxon: Fulvia tenuicostata



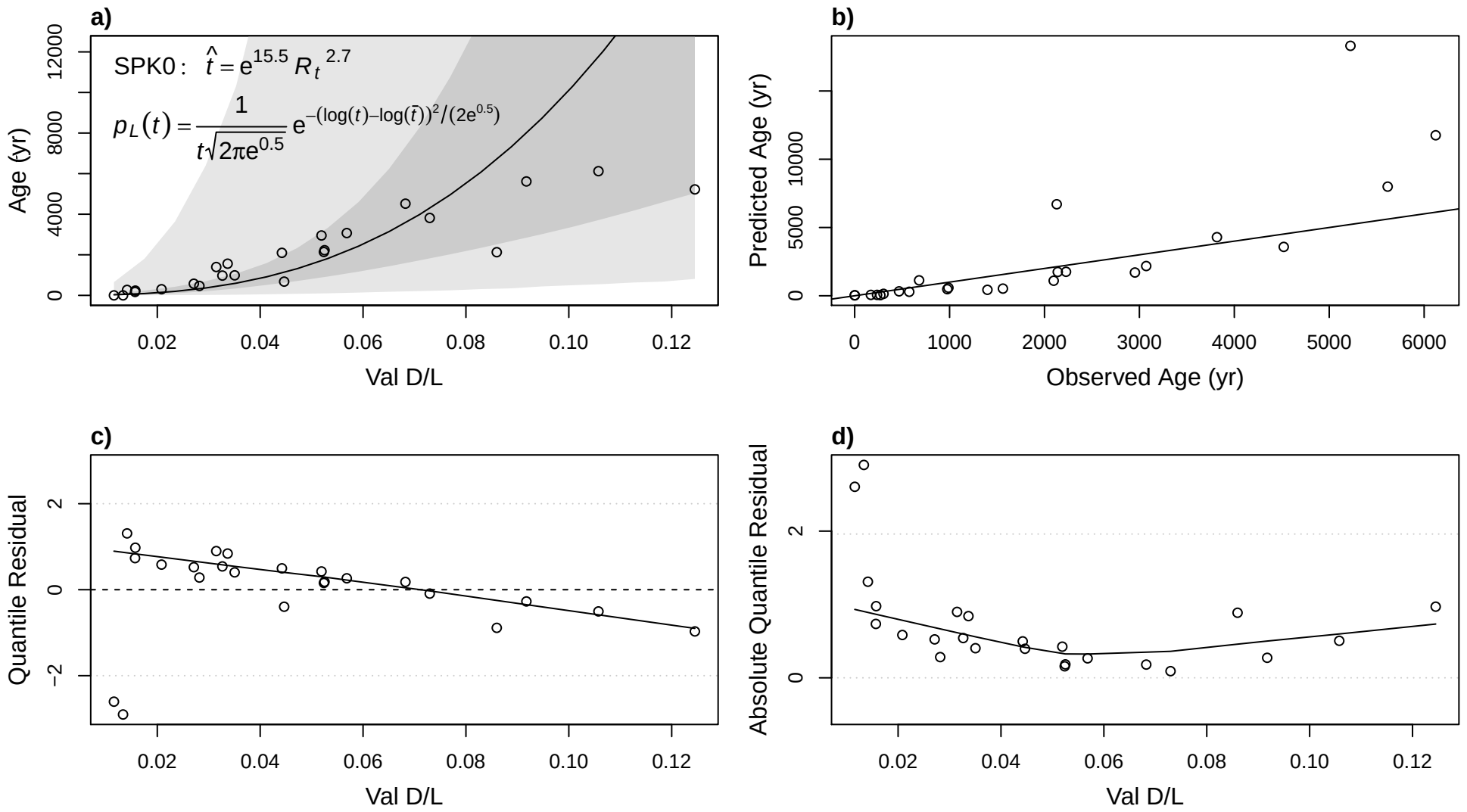
Appendix C. Continued: Model 43 (see Appendix A); Taxon: Fulvia tenuicostata



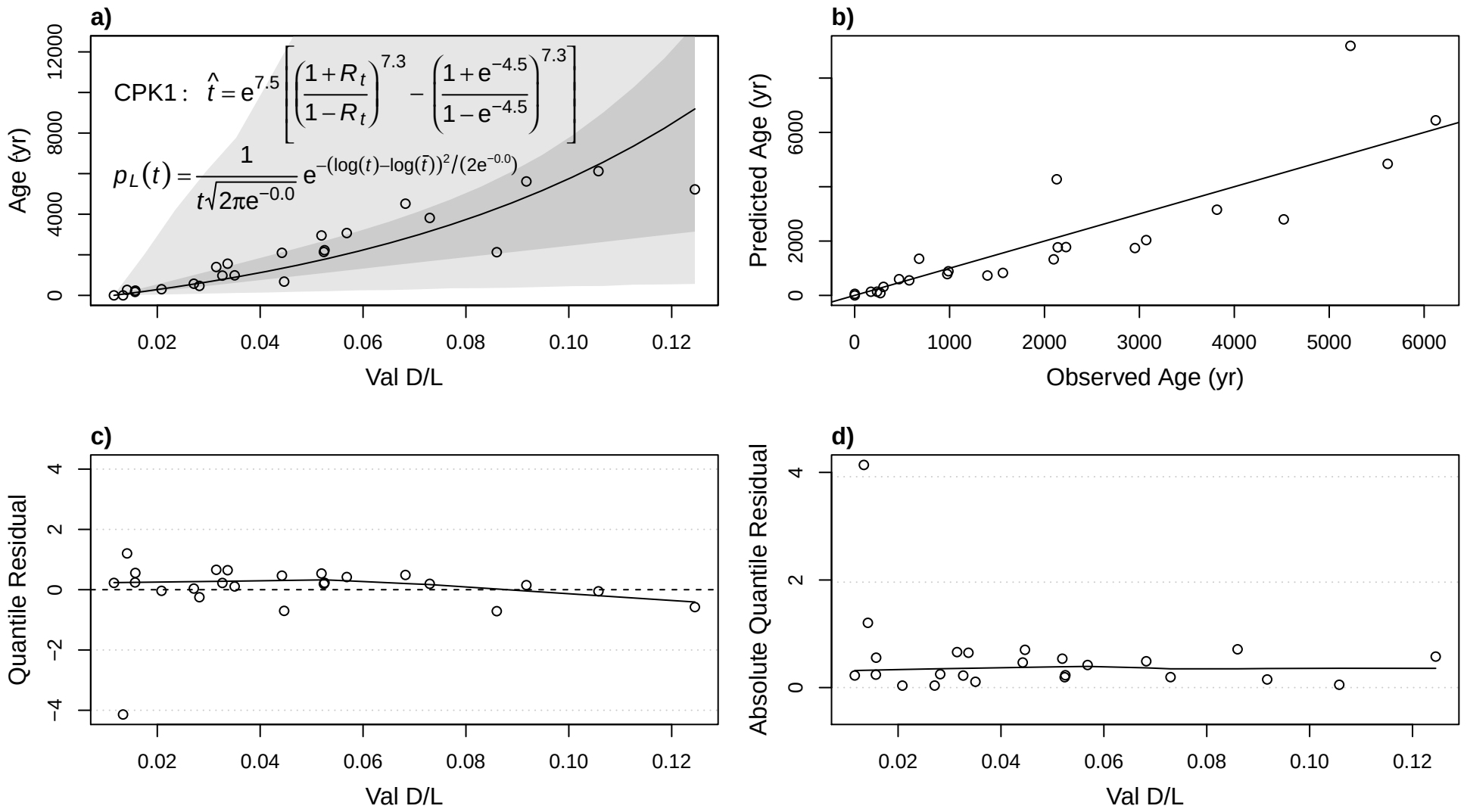
Appendix C. Continued: Model 44 (see Appendix A); Taxon: Fulvia tenuicostata



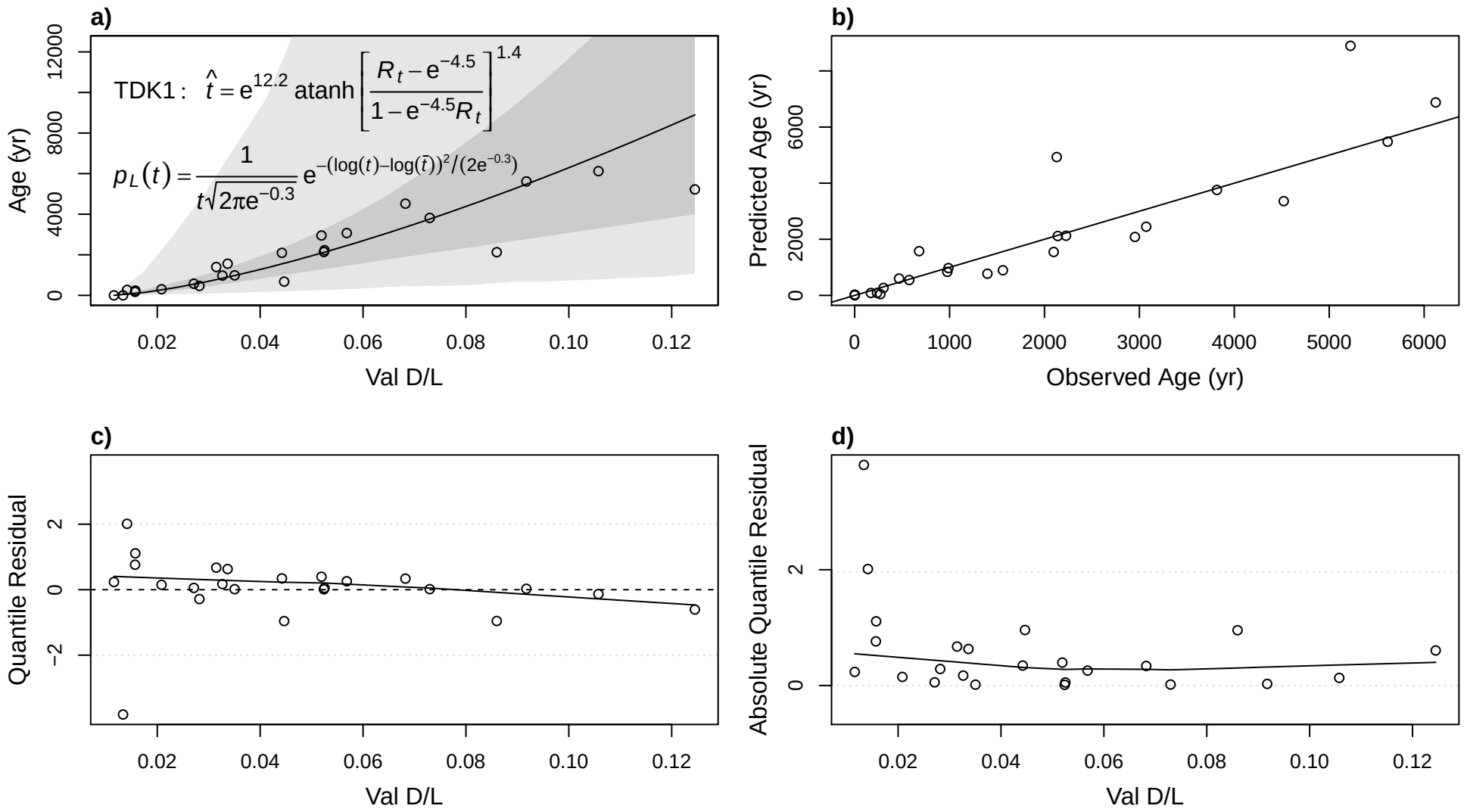
Appendix C. Continued: Model 45 (see Appendix A); Taxon: Fulvia tenuicostata



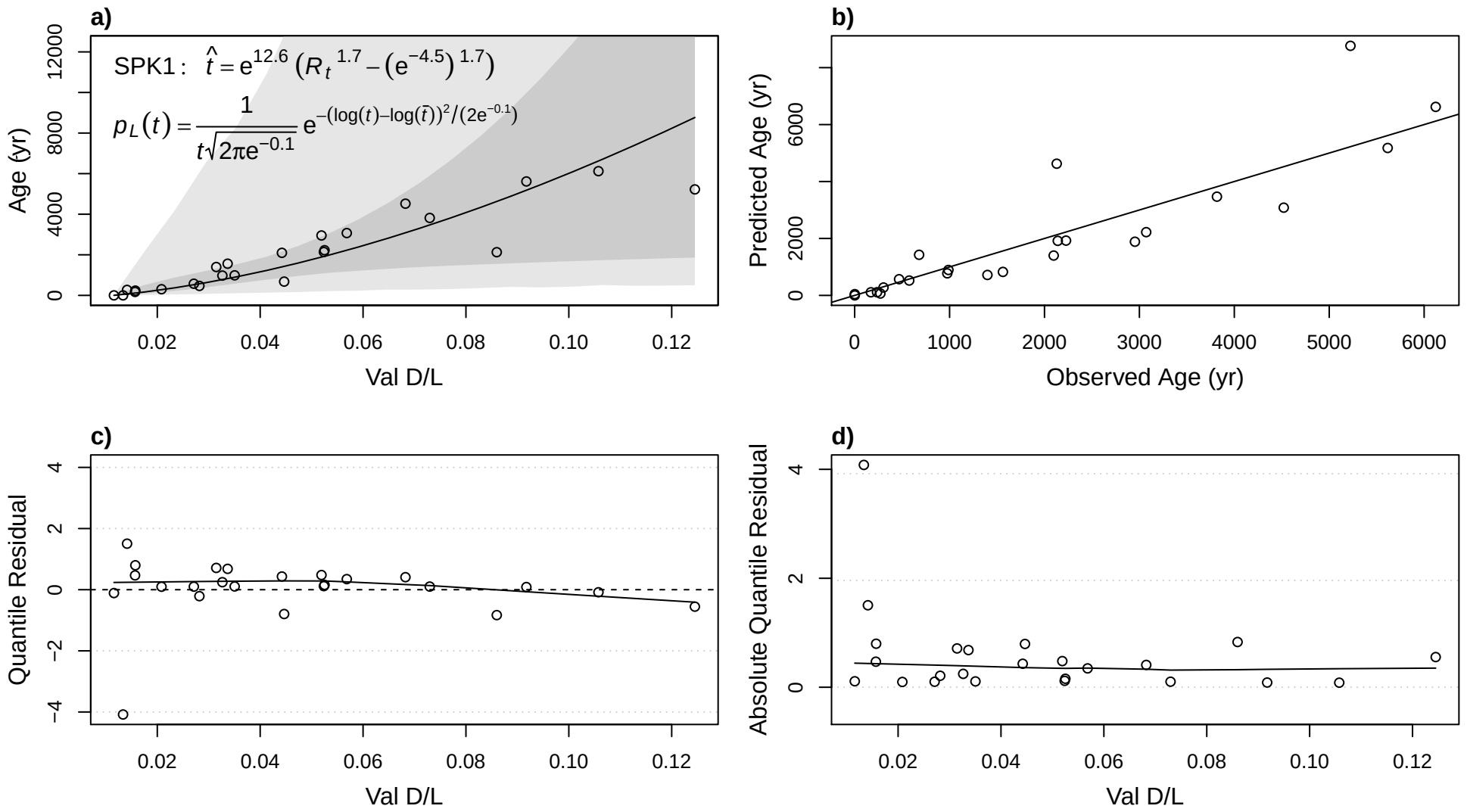
Appendix C. Continued: Model 46 (see Appendix A); Taxon: Fulvia tenuicostata



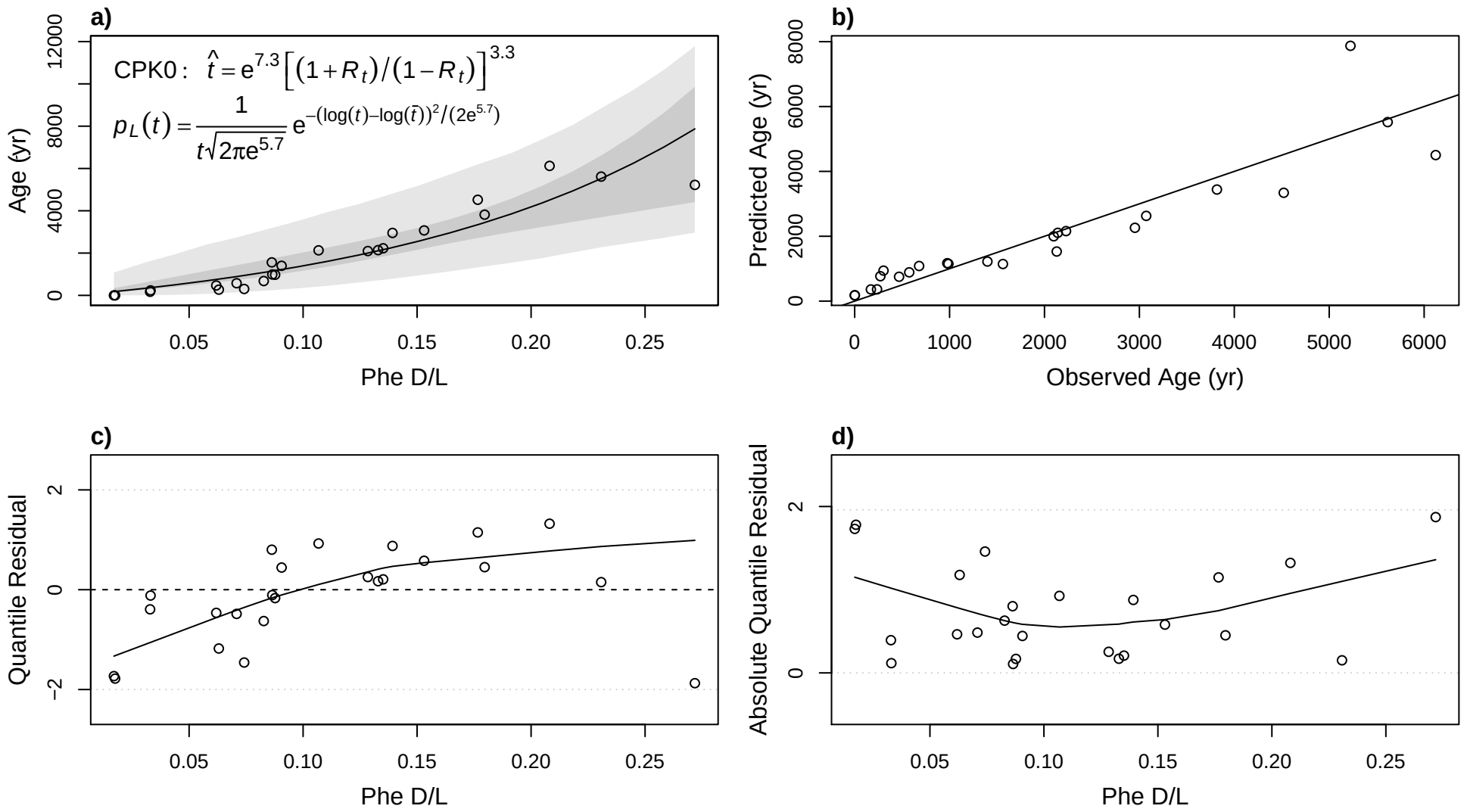
Appendix C. Continued: Model 47 (see Appendix A); Taxon: Fulvia tenuicostata



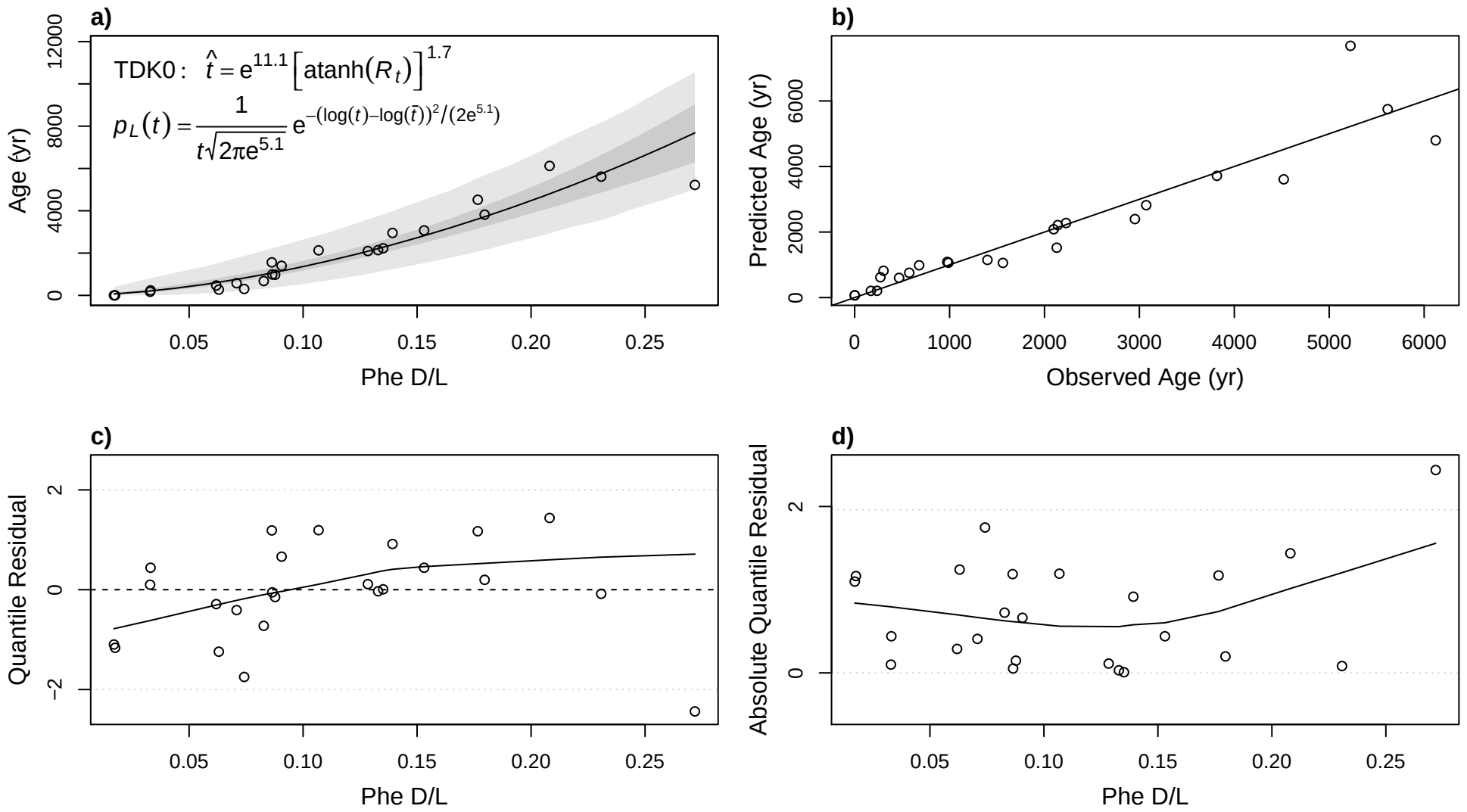
Appendix C. Continued: Model 48 (see Appendix A); Taxon: Fulvia tenuicostata



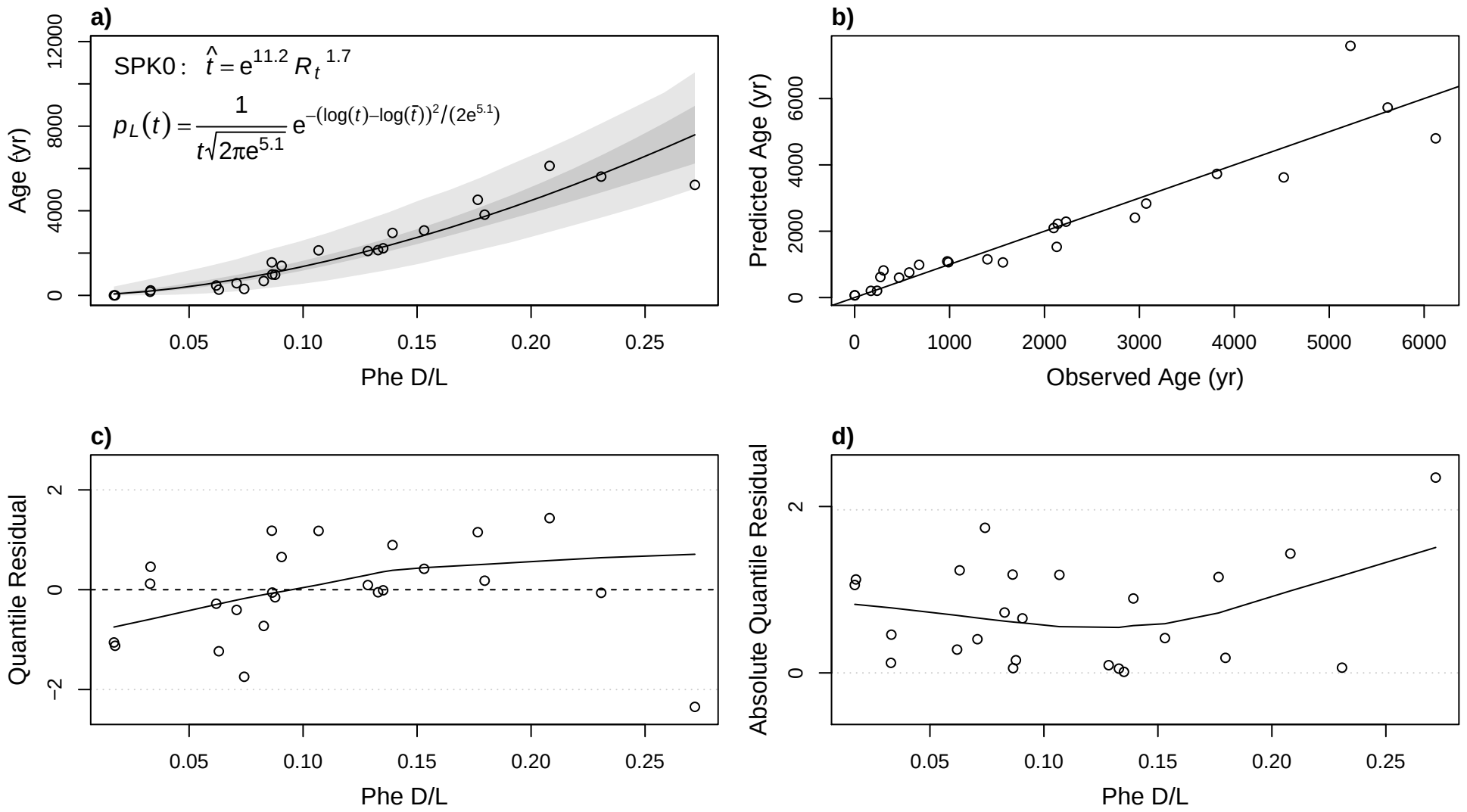
Appendix C. Continued: Model 49 (see Appendix A); Taxon: Fulvia tenuicostata



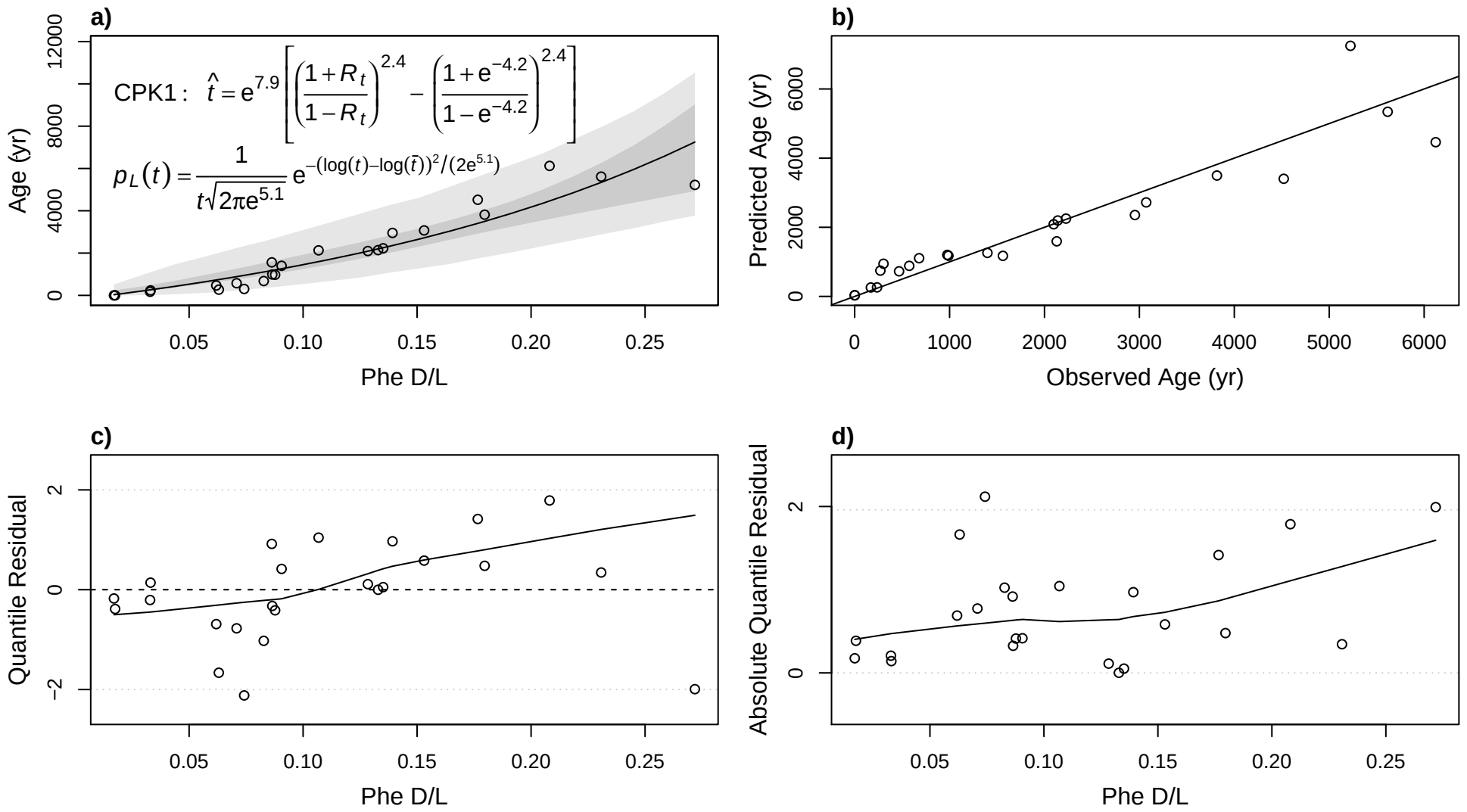
Appendix C. Continued: Model 50 (see Appendix A); Taxon: Fulvia tenuicostata



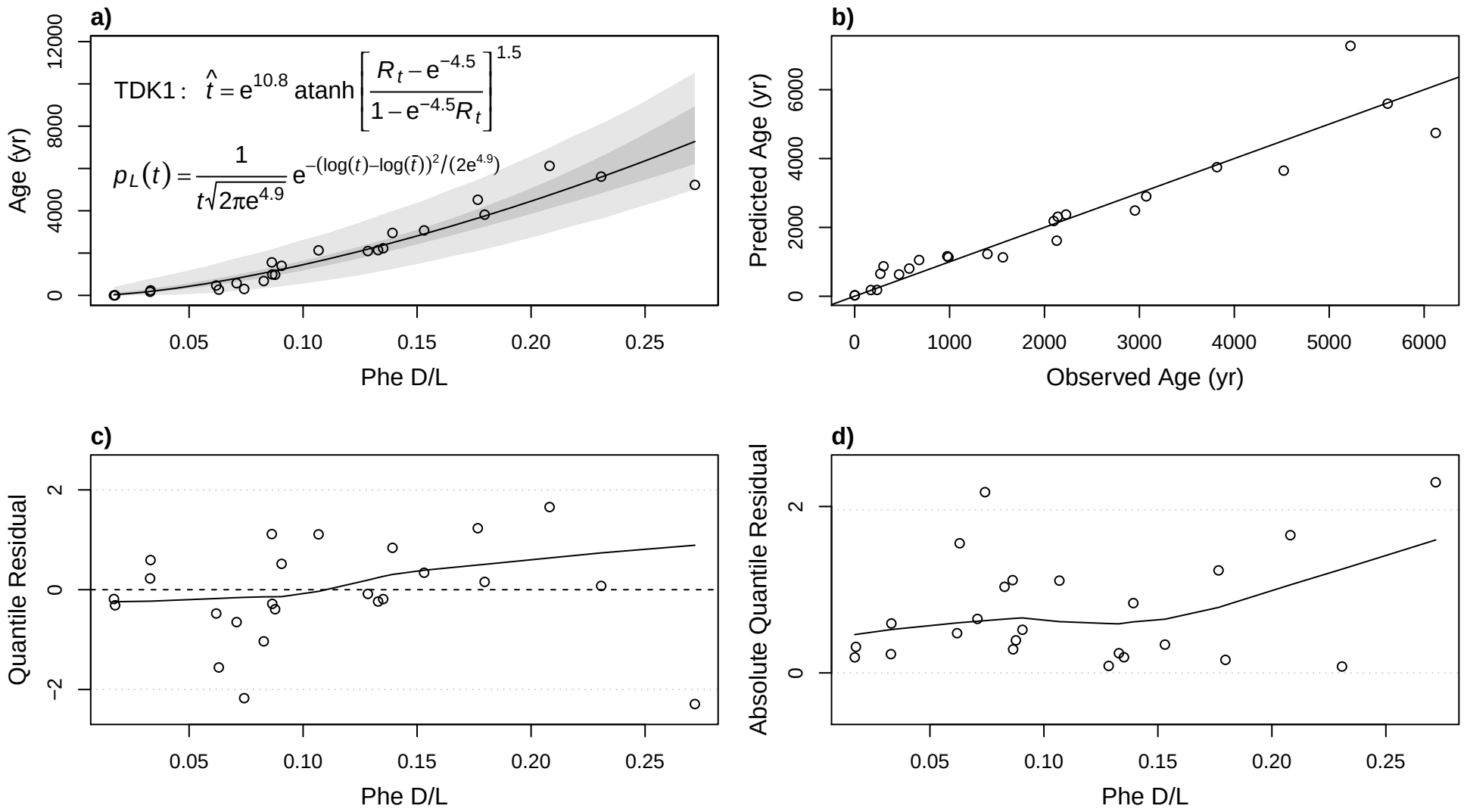
Appendix C. Continued: Model 51 (see Appendix A); Taxon: Fulvia tenuicostata



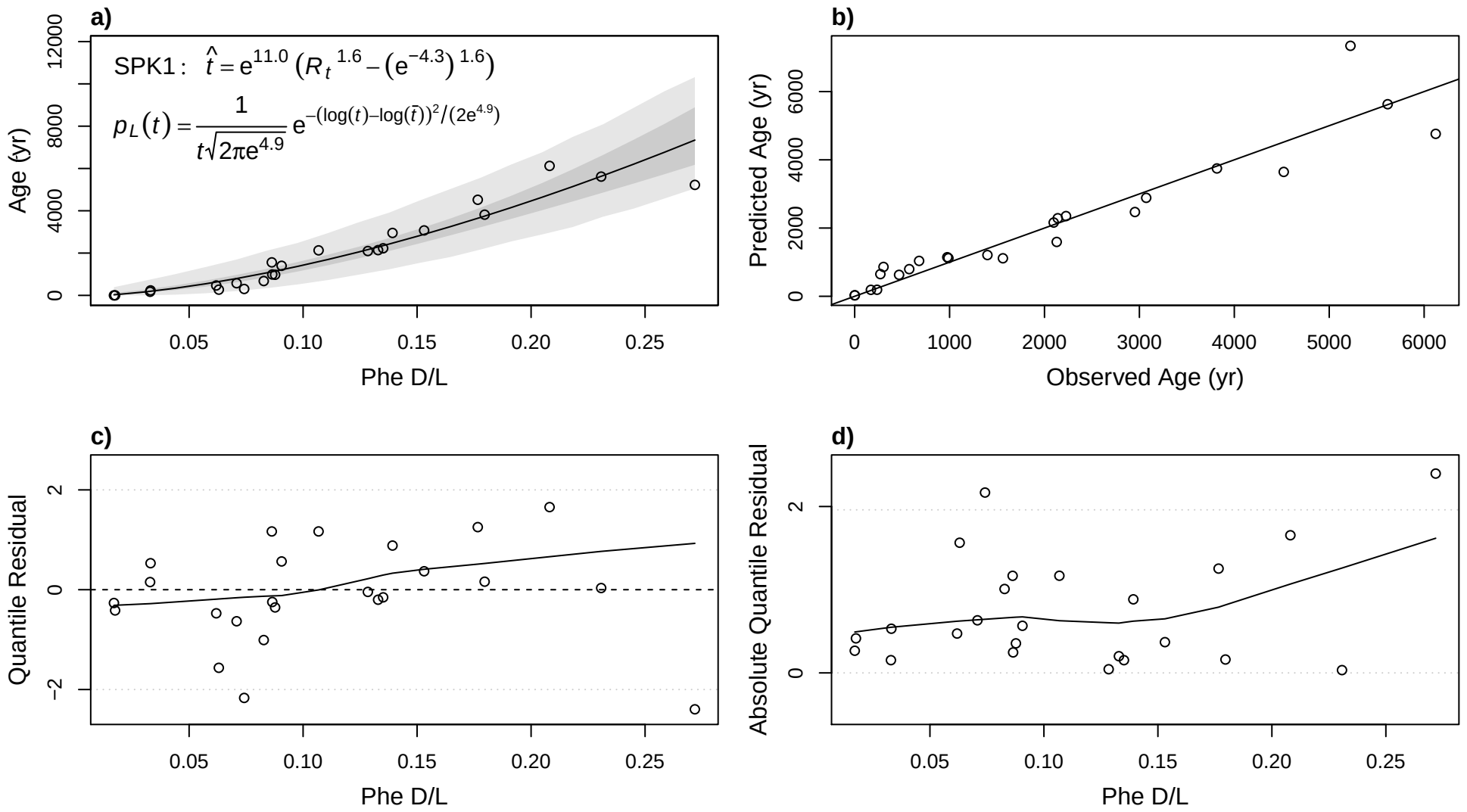
Appendix C. Continued: Model 52 (see Appendix A); Taxon: Fulvia tenuicostata



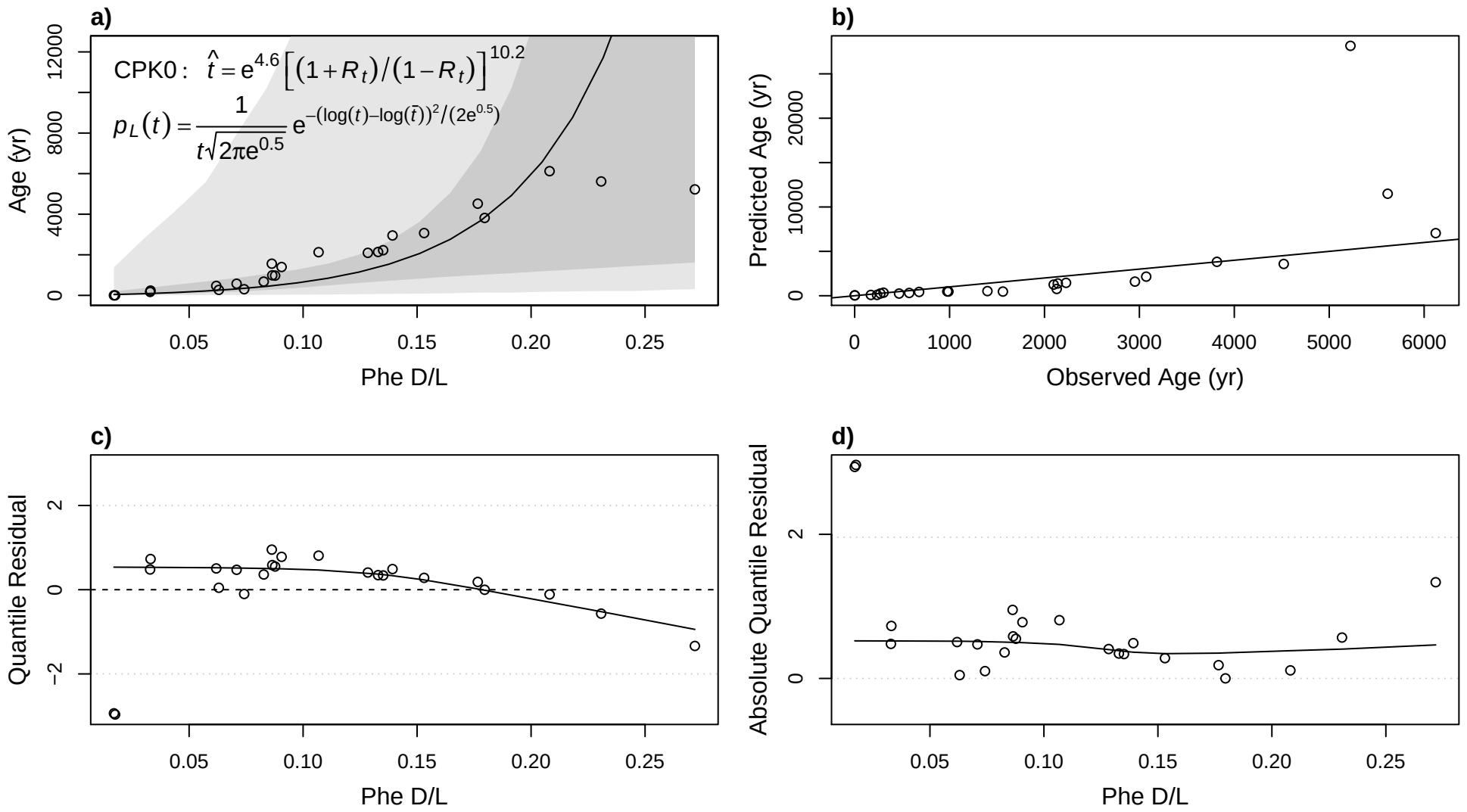
Appendix C. Continued: Model 53 (see Appendix A); Taxon: Fulvia tenuicostata



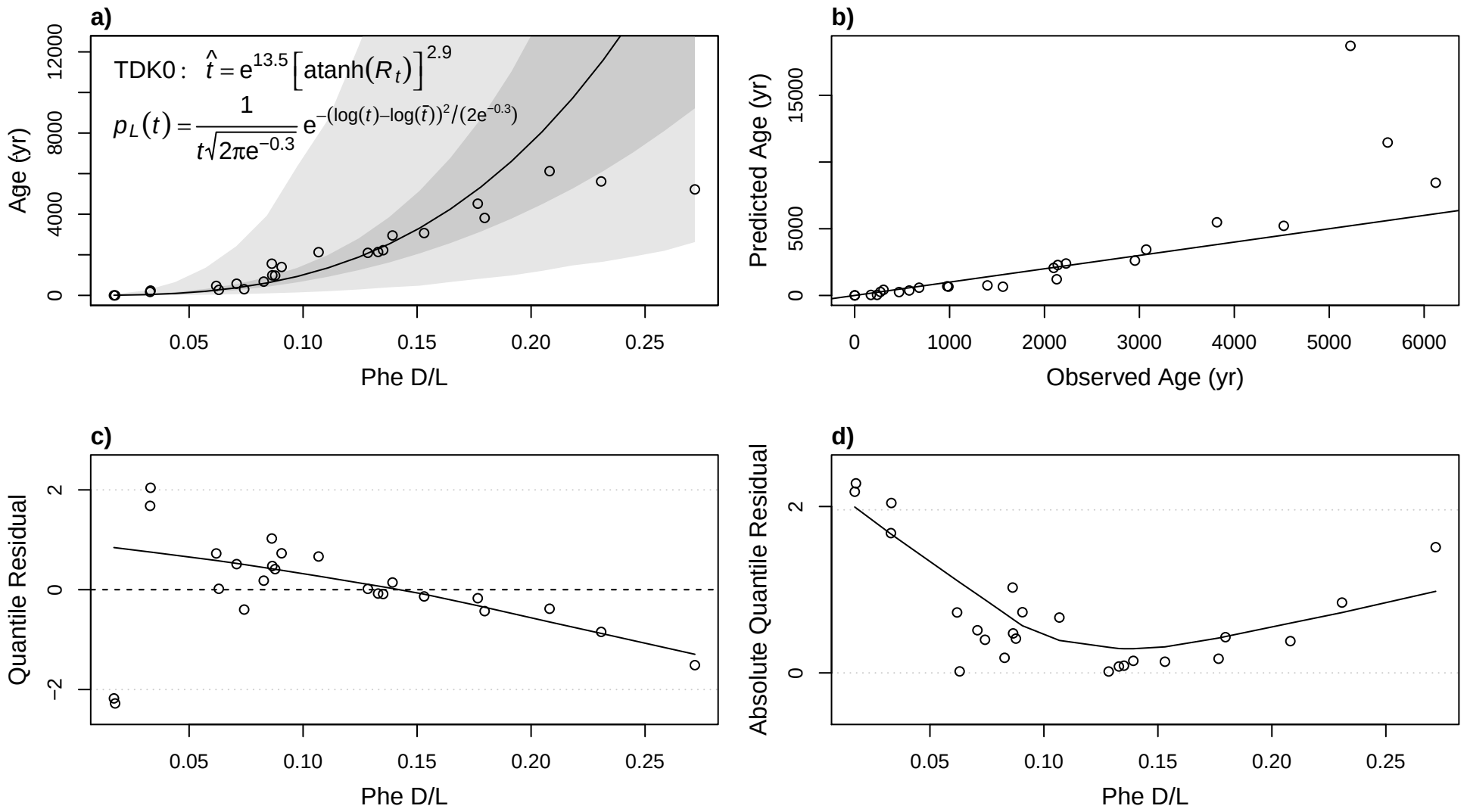
Appendix C. Continued: Model 54 (see Appendix A); Taxon: Fulvia tenuicostata



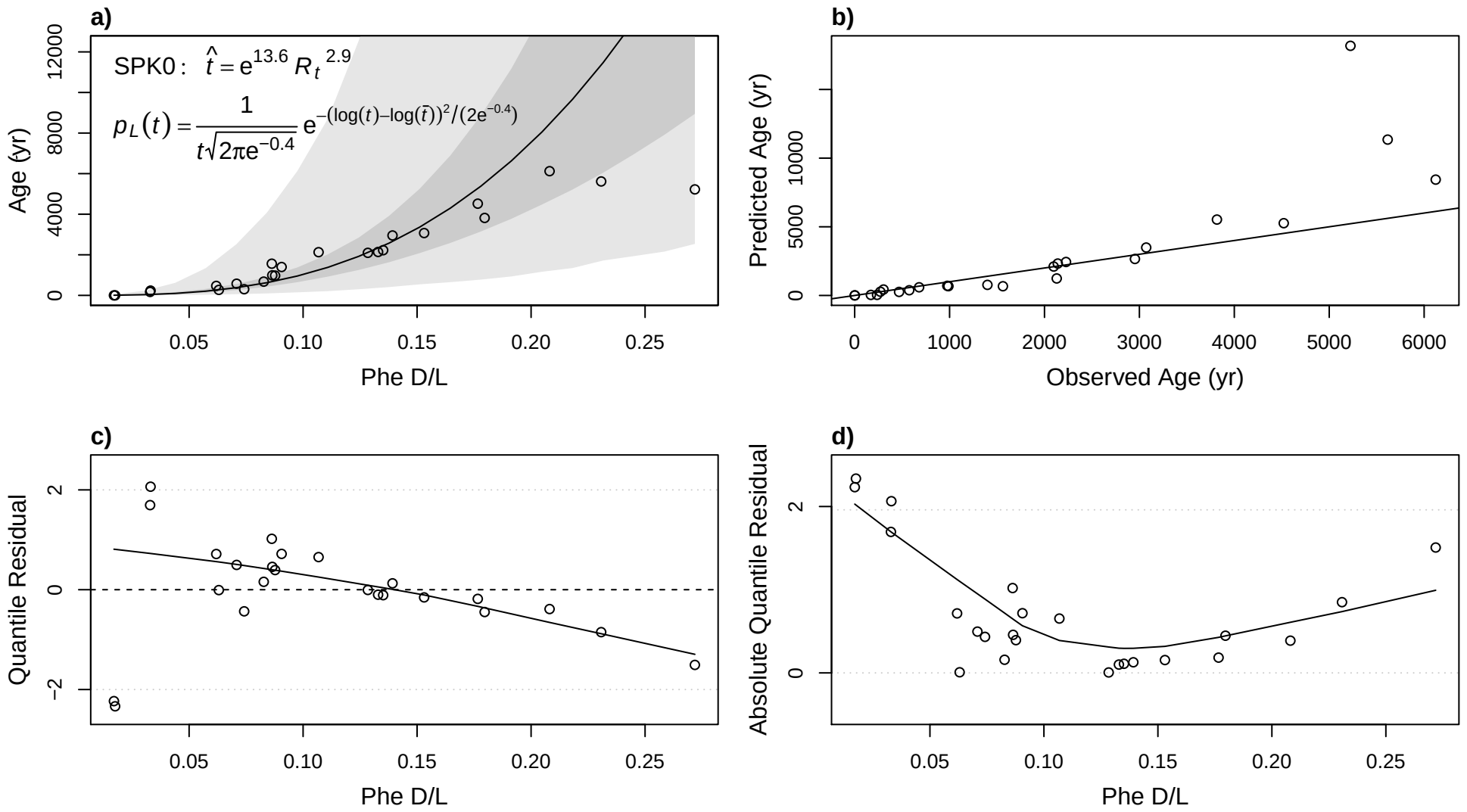
Appendix C. Continued: Model 55 (see Appendix A); Taxon: Fulvia tenuicostata



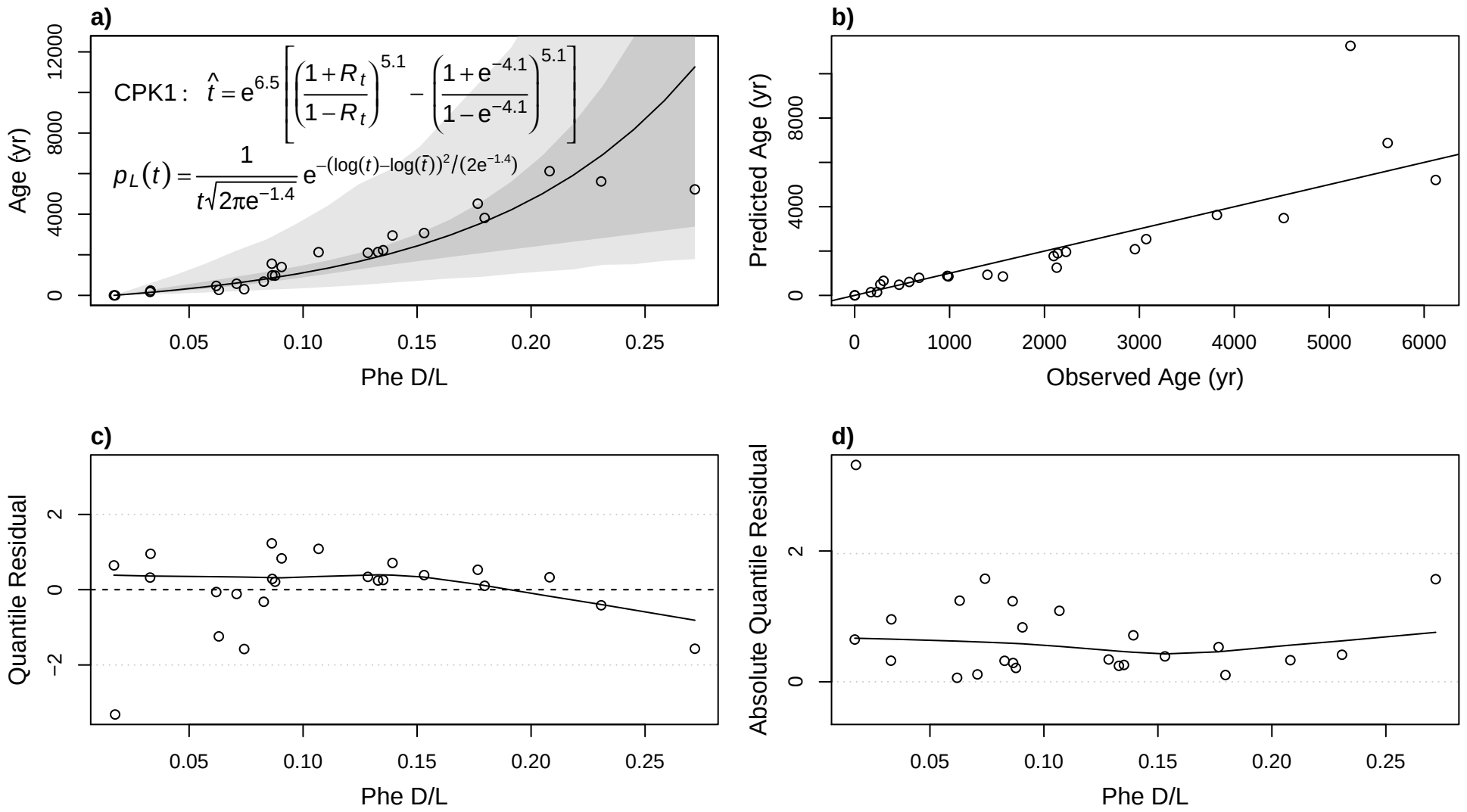
Appendix C. Continued: Model 56 (see Appendix A); Taxon: Fulvia tenuicostata



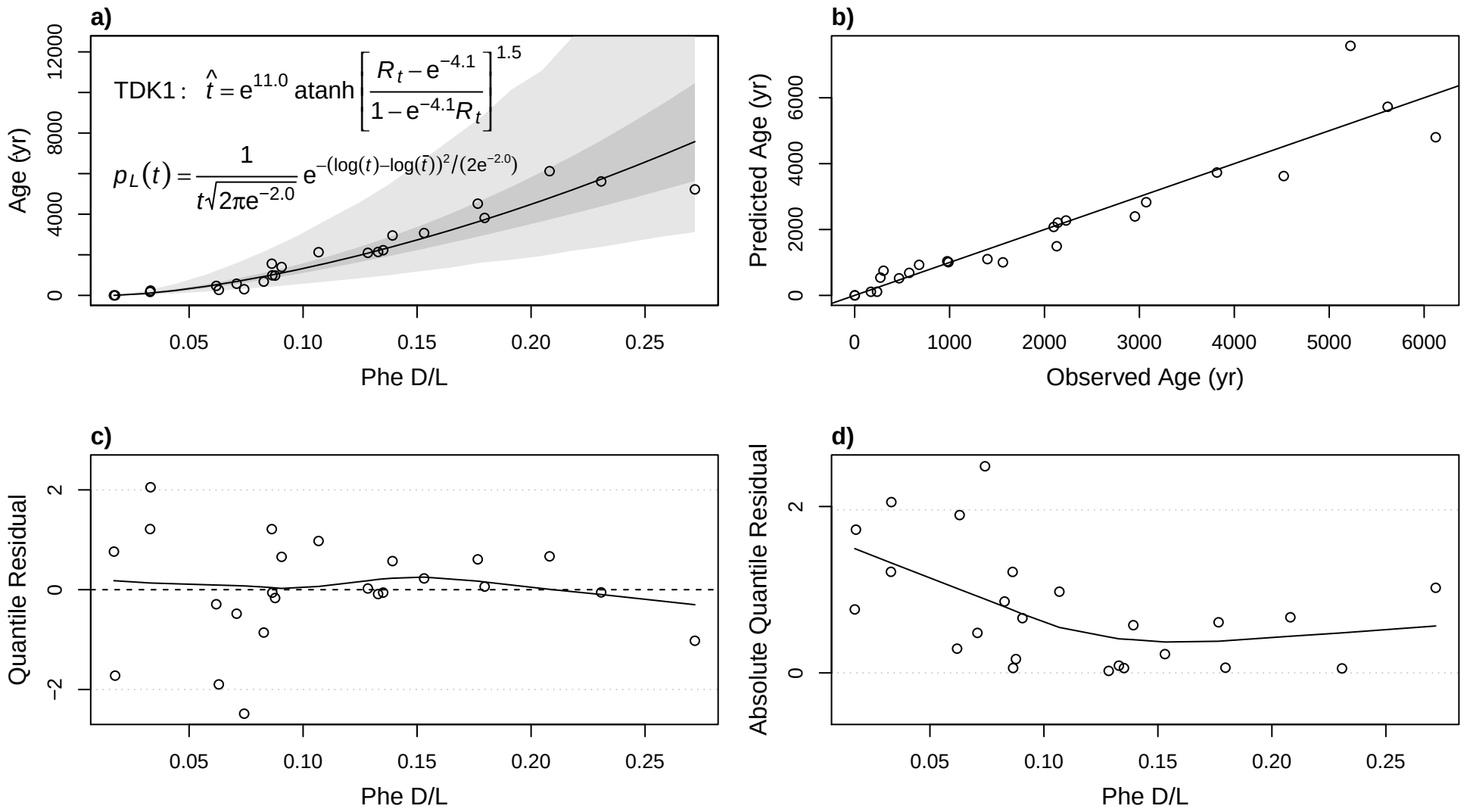
Appendix C. Continued: Model 57 (see Appendix A); Taxon: Fulvia tenuicostata



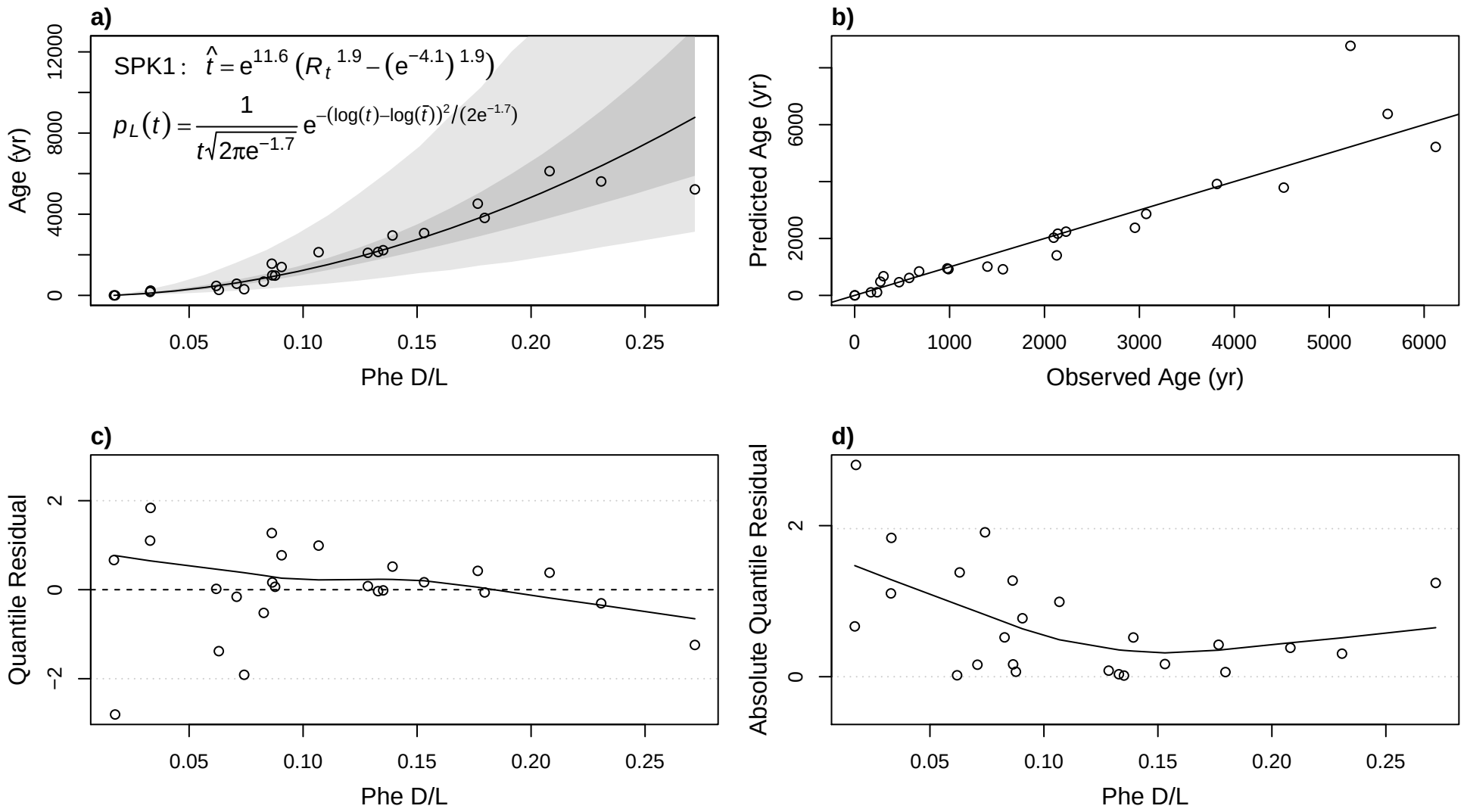
Appendix C. Continued: Model 58 (see Appendix A); Taxon: Fulvia tenuicostata



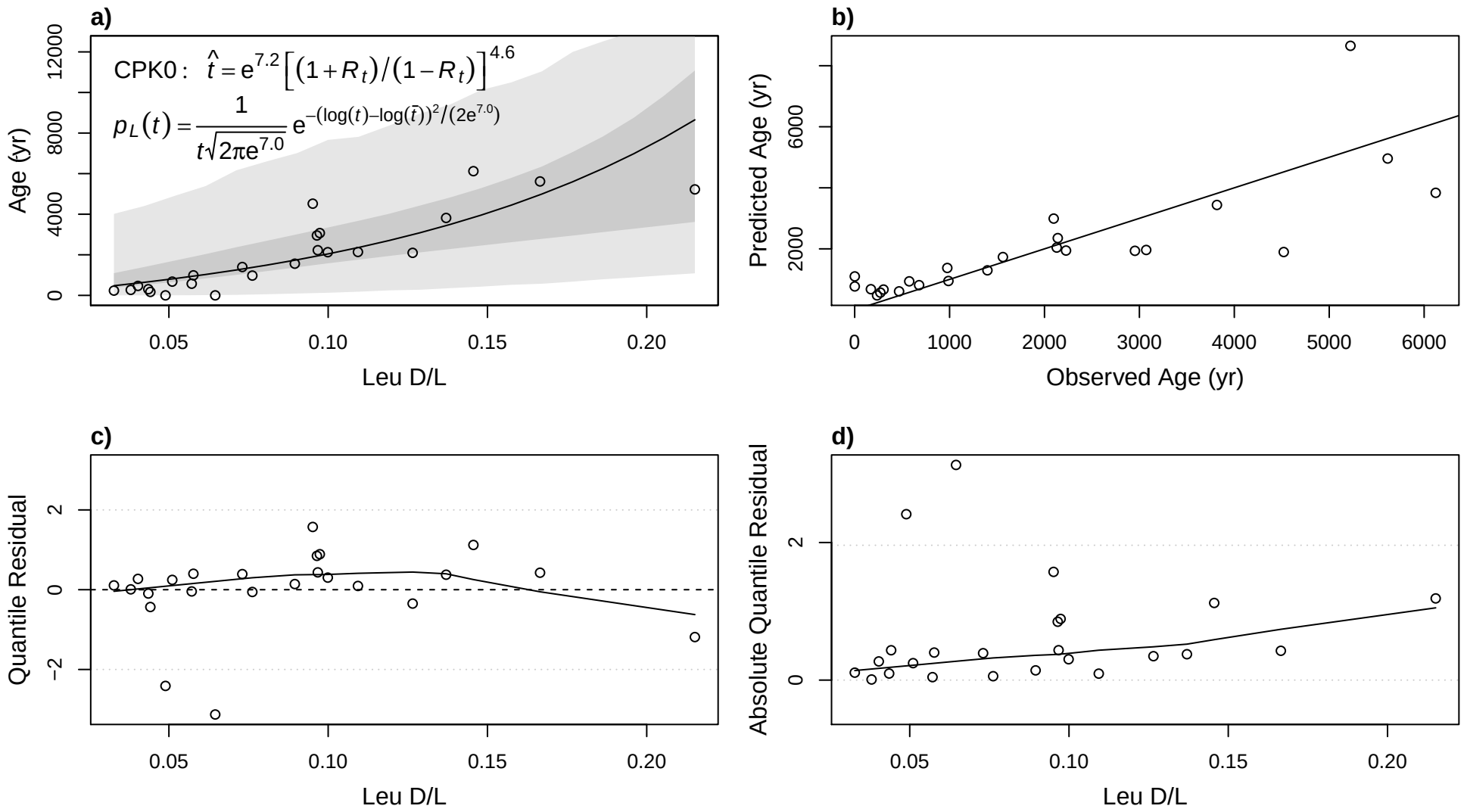
Appendix C. Continued: Model 59 (see Appendix A); Taxon: Fulvia tenuicostata

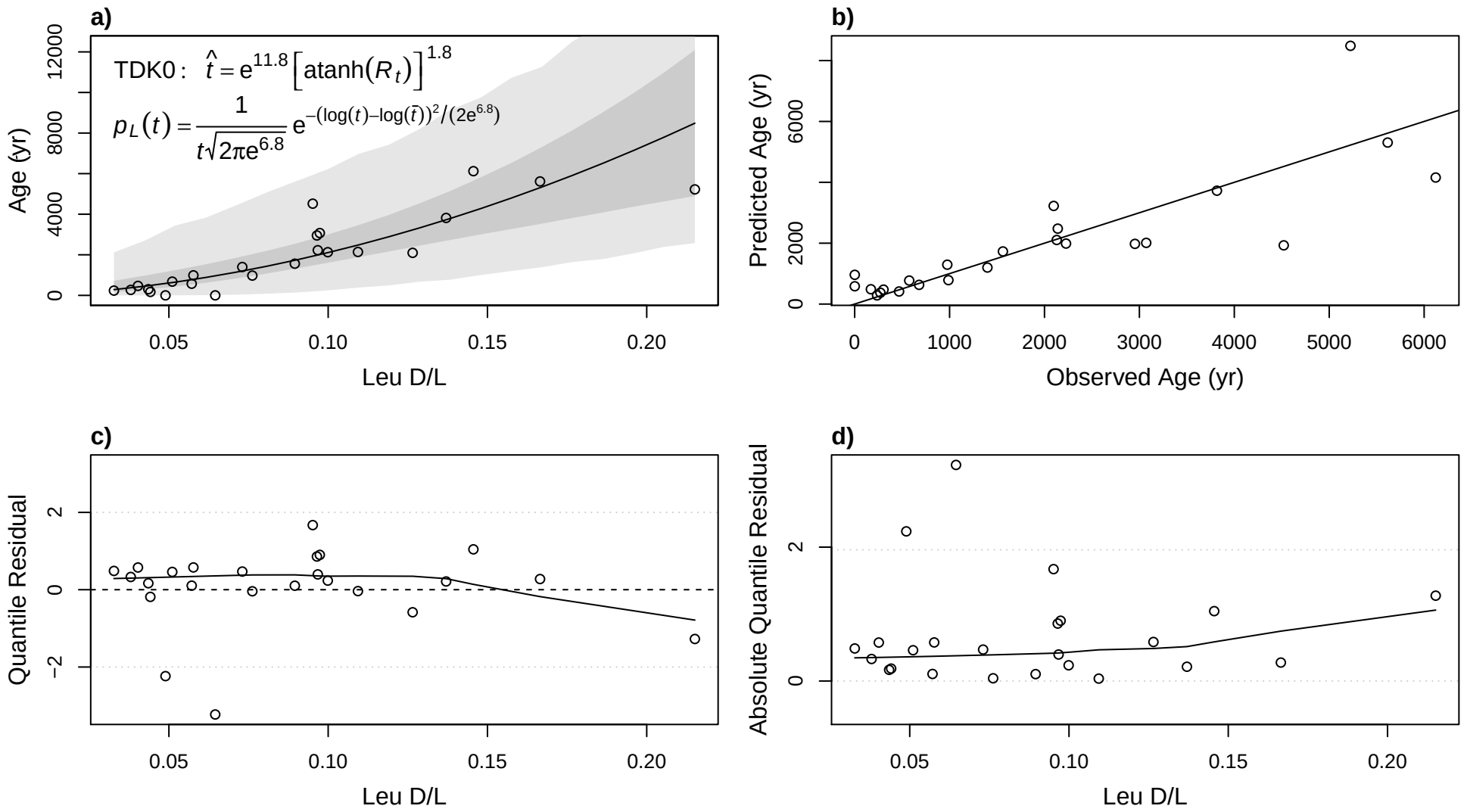


Appendix C. Continued: Model 60 (see Appendix A); Taxon: Fulvia tenuicostata

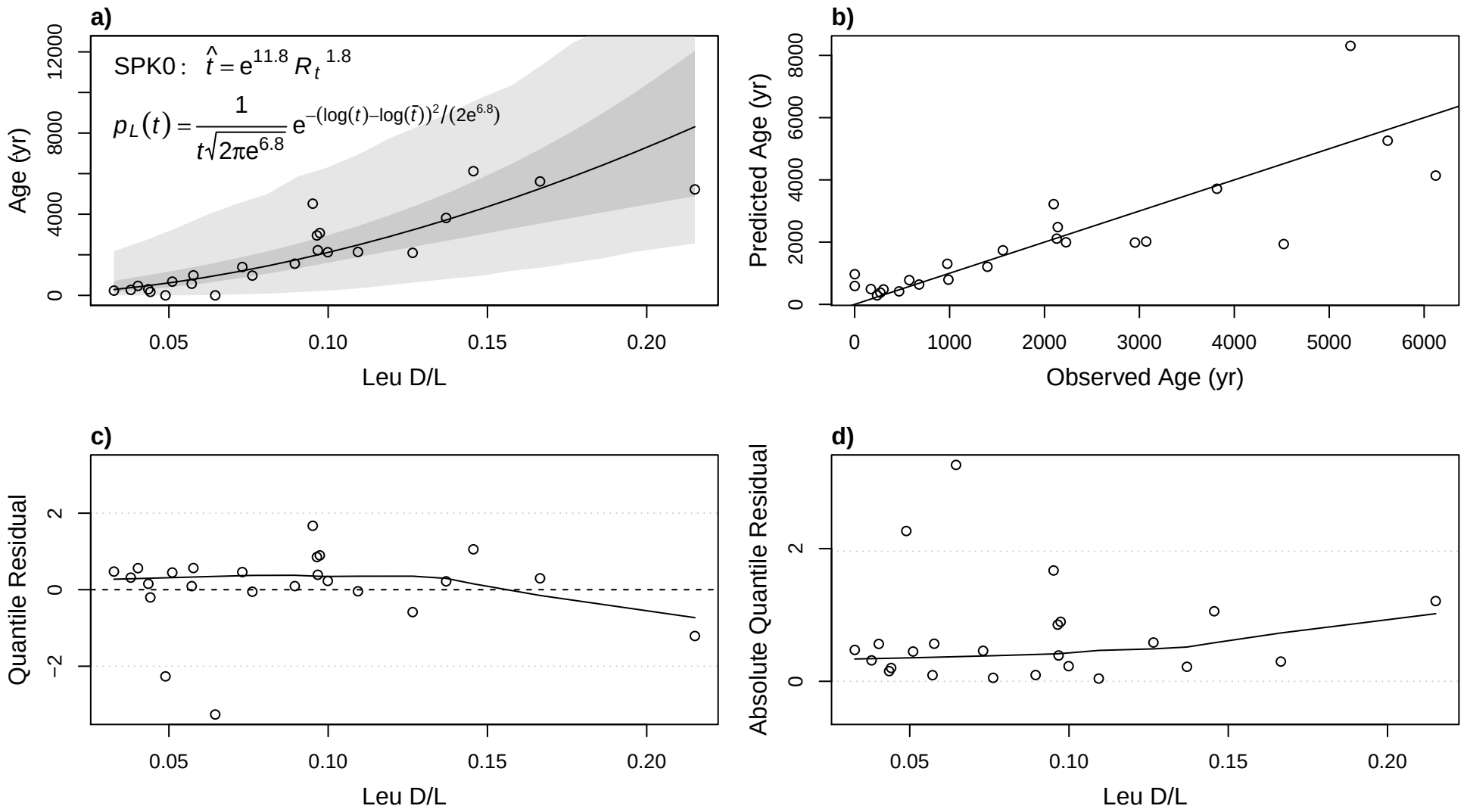


Appendix C. Continued: Model 61 (see Appendix A); Taxon: Fulvia tenuicostata

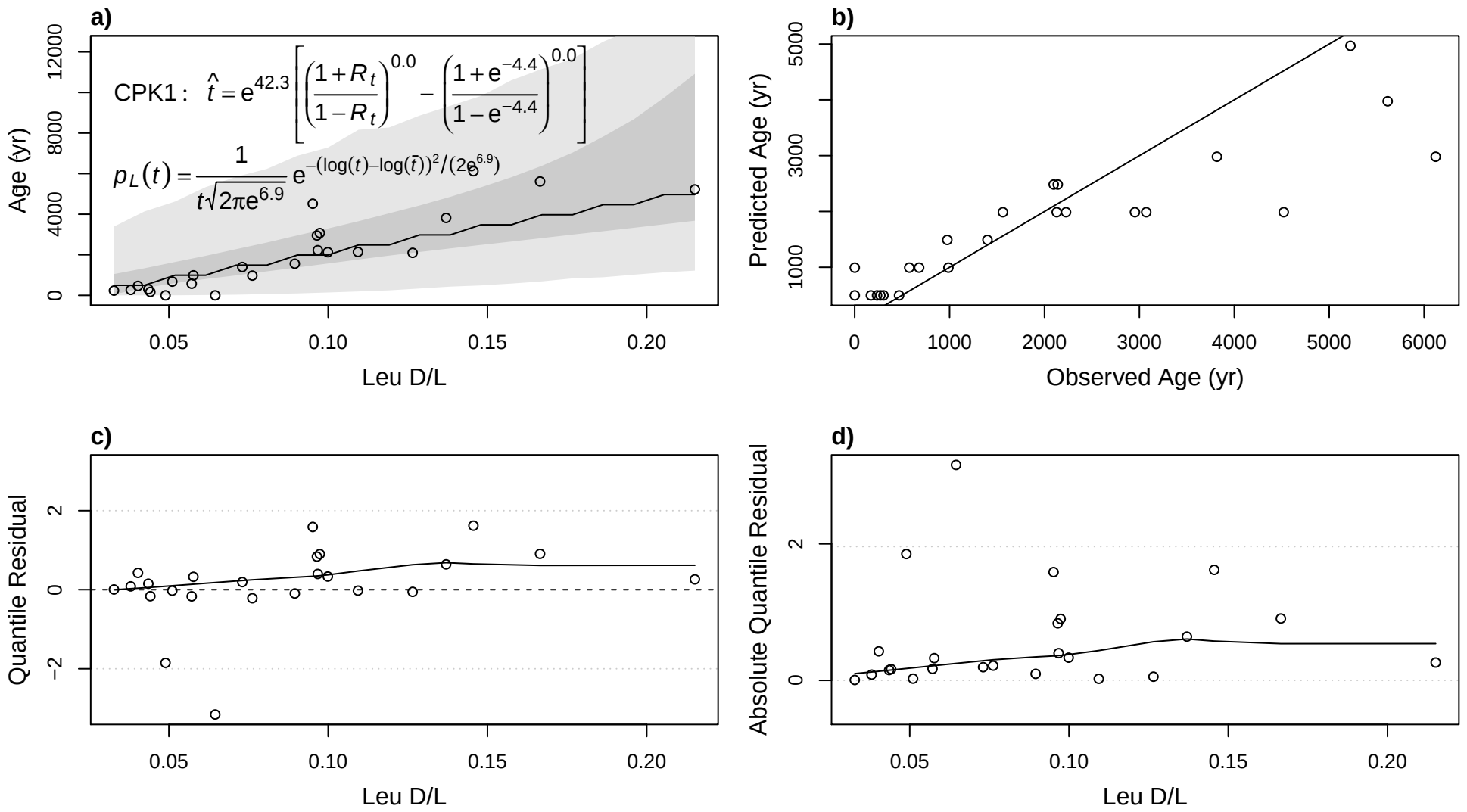



a)
TDK0 : $\hat{t} = e^{11.8}\left[\text{atanh}(R_t)\right]^{1.8}$
$p_L(t) = \frac{1}{t\sqrt{2\pi e^{6.8}}} e^{-(\log(t)-\log(\tilde{t}))^2/(2e^{6.8})}$
Age (yr)
0
4000
8000
12000
0.05
0.10
0.15
0.20
Leu D/L
b)
Predicted Age (yr)
0
2000
6000
0
1000
2000
3000
4000
5000
6000
Observed Age (yr)
c)
Quantile Residual
−2
0
2
0.05
0.10
0.15
0.20
Leu D/L
d)
Absolute Quantile Residual
0
2
0.05
0.10
0.15
0.20
Leu D/L

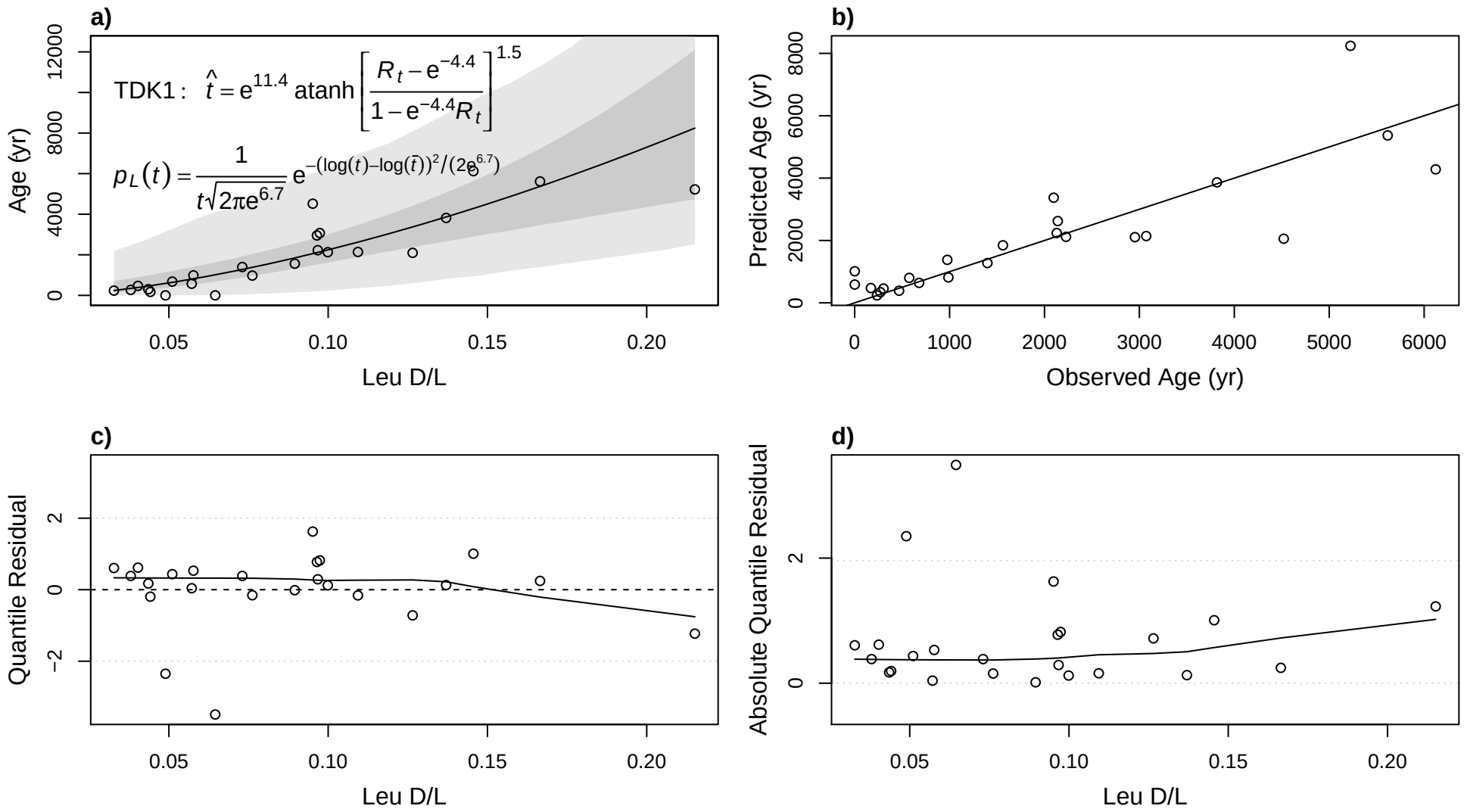
Appendix C. Continued: Model 63 (see Appendix A); Taxon: Fulvia tenuicostata



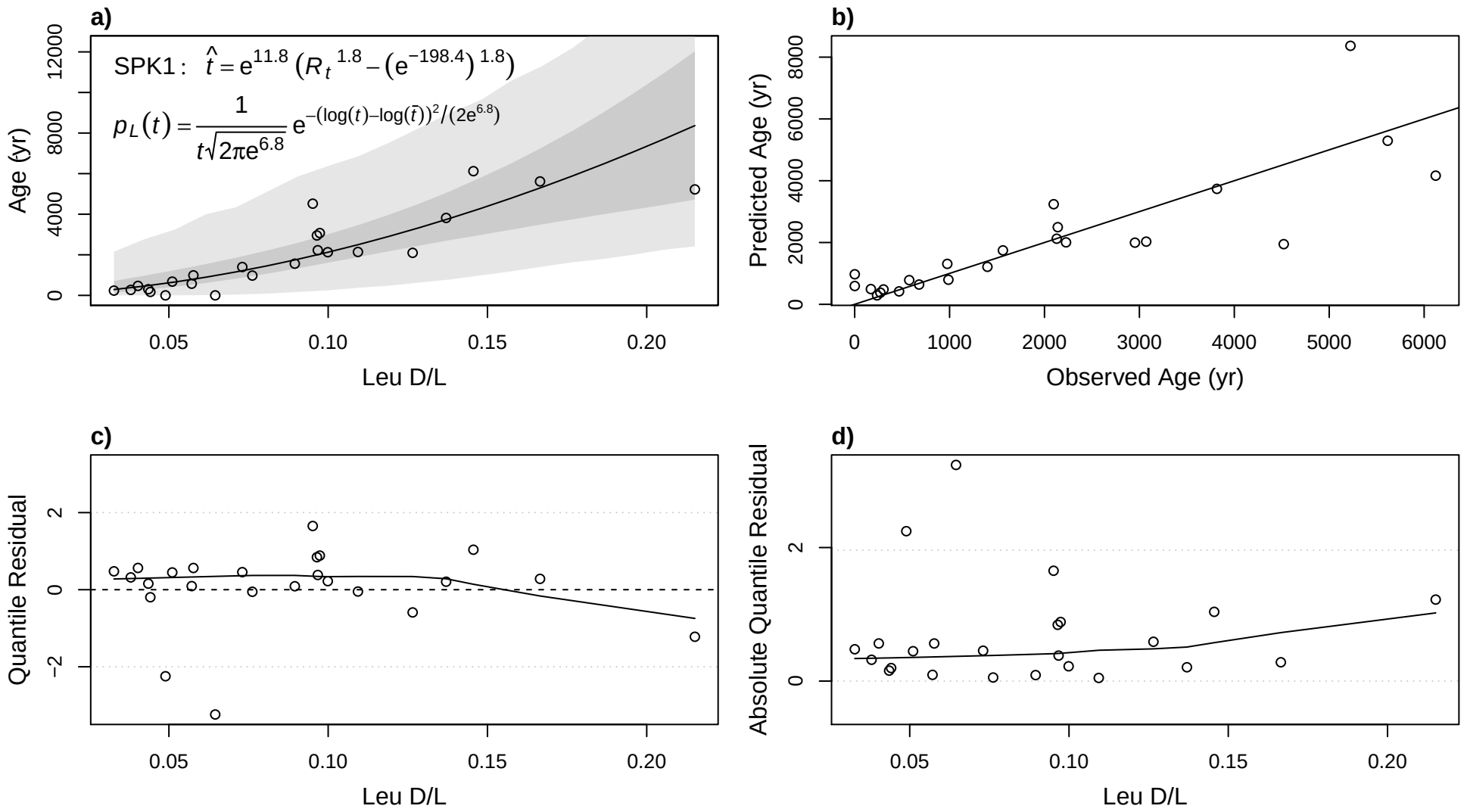
Appendix C. Continued: Model 64 (see Appendix A); Taxon: Fulvia tenuicostata

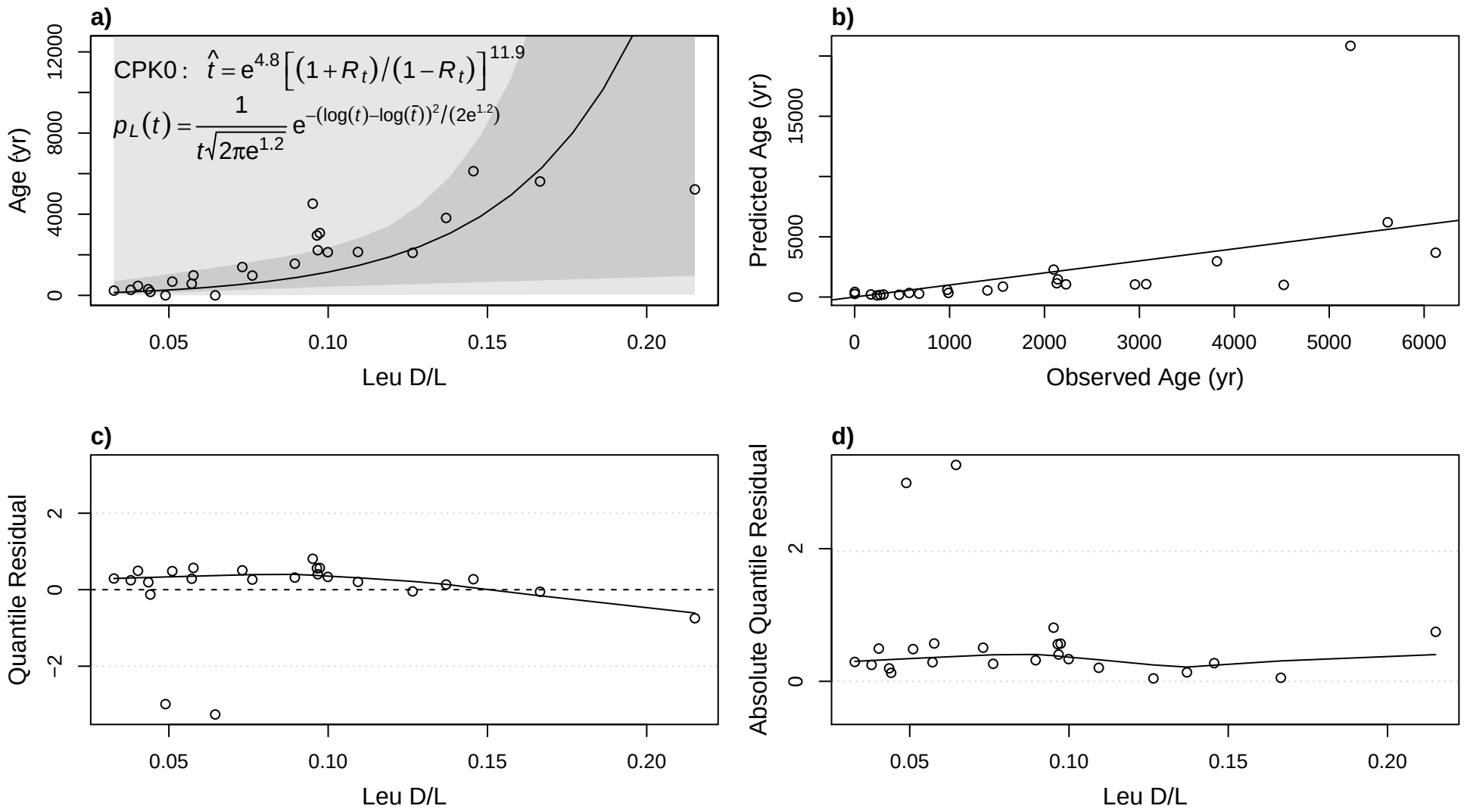


Appendix C. Continued: Model 65 (see Appendix A); Taxon: Fulvia tenuicostata

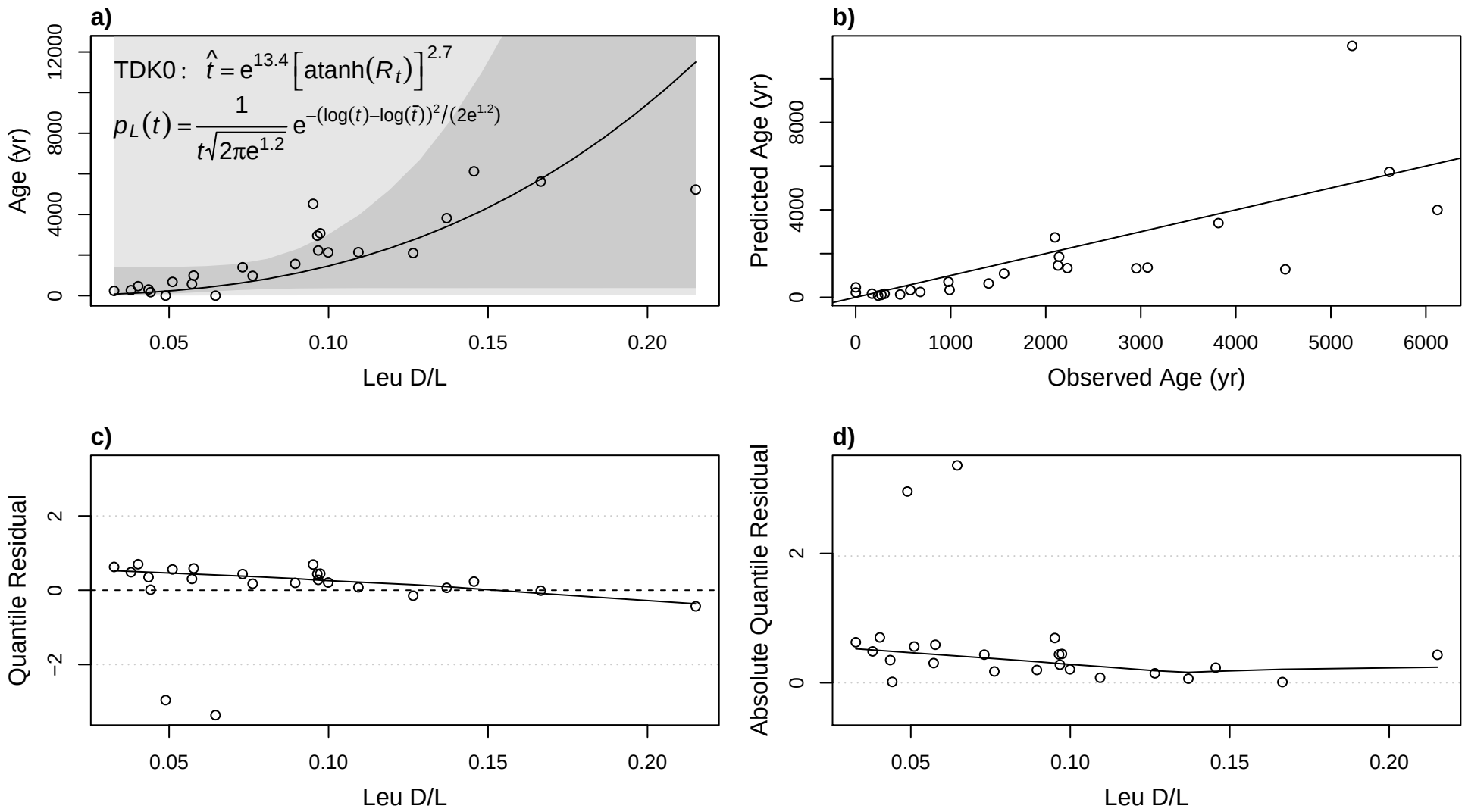


Appendix C. Continued: Model 66 (see Appendix A); Taxon: Fulvia tenuicostata

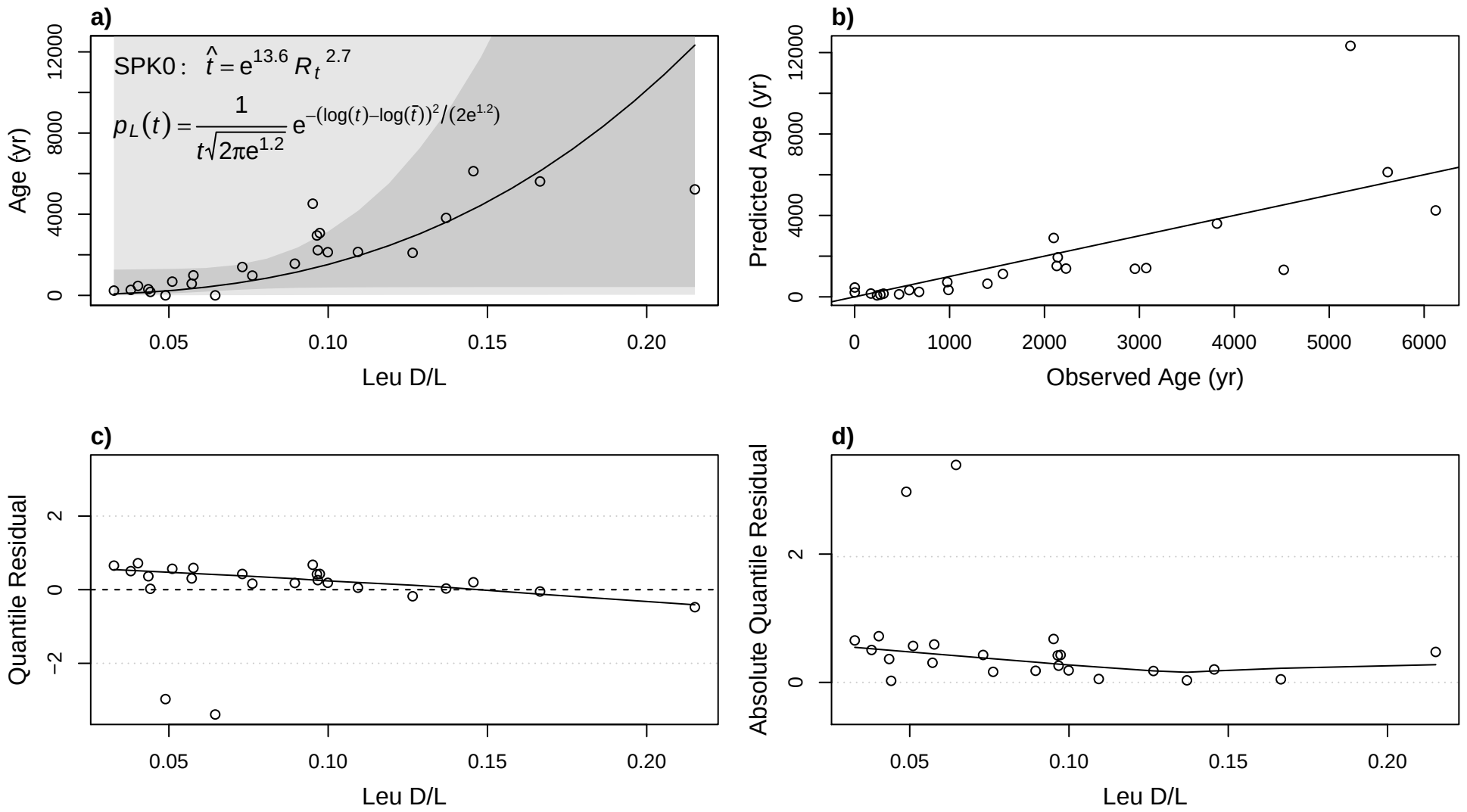



a)
CPK0 : $\hat{t} = e^{4.8}\left[(1+R_t)/(1-R_t)\right]^{11.9}$
$p_L(t) = \frac{1}{t\sqrt{2\pi e^{1.2}}} e^{-(\log(t)-\log(\bar{t}))^2/(2e^{1.2})}$
Age (yr)
0
4000
8000
12000
0.05
0.10
0.15
0.20
Leu D/L
b)
Predicted Age (yr)
0
5000
15000
0
1000
2000
3000
4000
5000
6000
Observed Age (yr)
c)
Quantile Residual
−2
0
2
0.05
0.10
0.15
0.20
Leu D/L
d)
Absolute Quantile Residual
0
2
0.05
0.10
0.15
0.20
Leu D/L

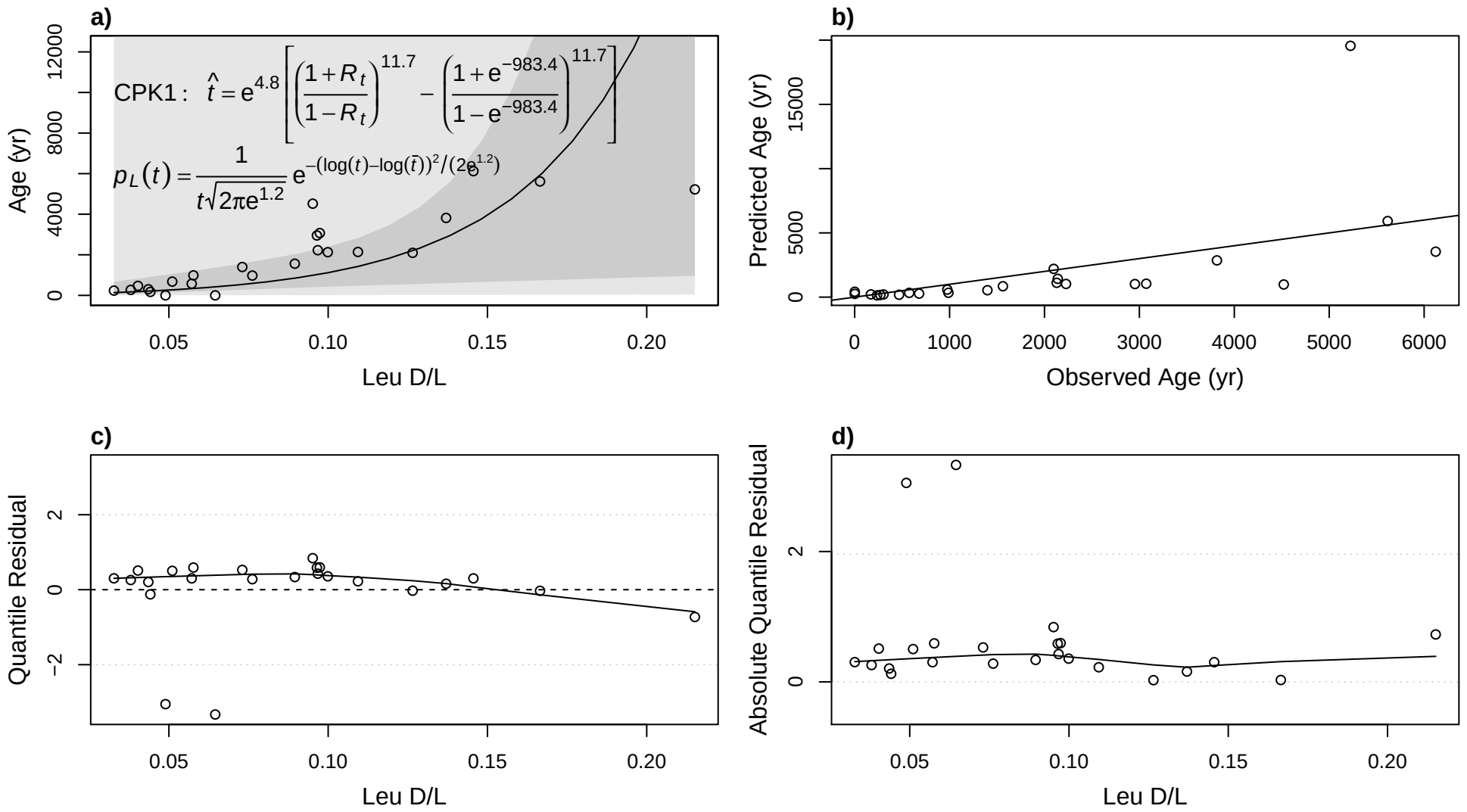
Appendix C. Continued: Model 68 (see Appendix A); Taxon: Fulvia tenuicostata



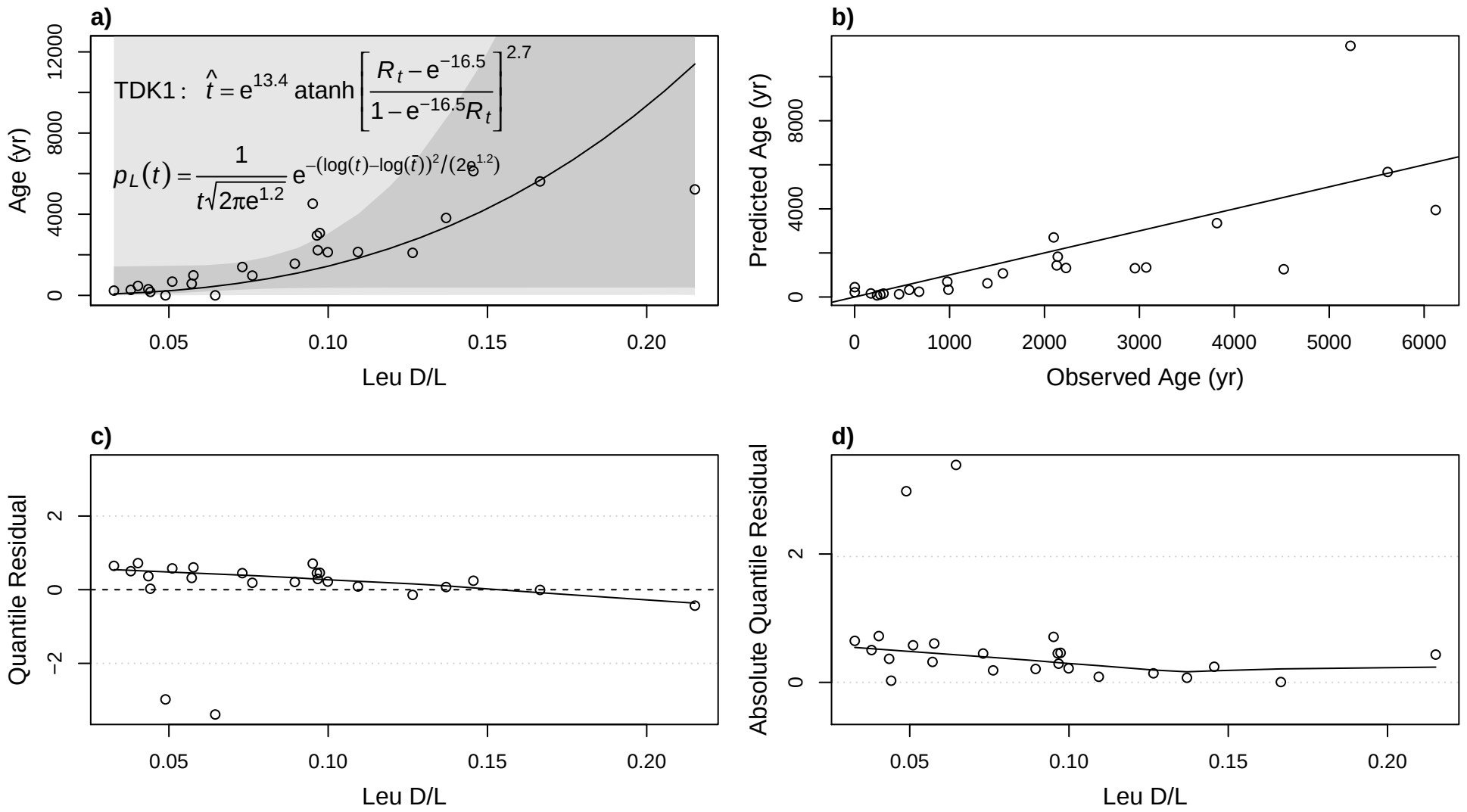
Appendix C. Continued: Model 69 (see Appendix A); Taxon: Fulvia tenuicostata



Appendix C. Continued: Model 70 (see Appendix A); Taxon: Fulvia tenuicostata



Appendix C. Continued: Model 71 (see Appendix A); Taxon: Fulvia tenuicostata



Appendix C. Continued: Model 72 (see Appendix A); Taxon: Fulvia tenuicostata