7.4.3 *Orgilus lepidus* (Canedo et al.)

1. Development Time

Stage: Eggs-Larvae	Stage: Pupae	Stage: Female	Stage: Male
Model: logit	Model: cloglog	Model: cloglog	Model: logit
Slope: 20.27	Slope: 7.67	Slope: 3.21	Slope: 5.17

2. Development Rate

Stage: Eggs-Larvae
Model 13: SharpeDeMichelle 13
Parameters: p=2.429 Tl=303.431 Ha=-91817.898 Hl=-114443.3
Formula: $y \sim (p*(x/298.16)*e^{(Ha/1.987)*((1/298.16)-(1/x))})/(1+e^{(Hl/1.987)*((1/Tl)-(1/x))})$

Stage: Pupae
Model 46: Janish 1
Parameters: Dmin=4.645 Topt=30.216 K=0.172
Formula: $y \sim 2/(Dmin*(e^{K*(x-Topt)}+e^{(-K)*(x-T\text{-}opt)}))$

3. Senescence

Stage: Female
Model 56: Hilbert and Logan 3
Parameters: trid=375397.217 Tmax=50.341 Tmin=15.848 D=1493646849.692 Dt=0.004 Smin=0.044
Formula: $y \sim trid*(((x-Tmin)^2)/((x-Tmin)^2+D)-e^{-(Tmax-(x-Tmin))/Dt})+Smin$

Stage: Male
Model 56: Hilbert and Logan 3
Parameters: trid=3386995.823 Tmax=56.36 Tmin=17.34 D=5053475115.287 Dt=0.021 Smin=0.043
Formula: $y \sim trid*(((x-Tmin)^2)/((x-Tmin)^2+D)-e^{-(Tmax-(x-Tmin))/Dt})+Smin$

4. Mortality

Stage: Eggs-Larvae
Model 12: Polynomial 2
Parameters: b1=2.176 b2=-0.272 b3=0.006
Formula: $y \sim e^{(b1+b2*x+b3*x^2)}$

Stage: Pupae
Model 4: Quadratic with Negative Exponent
Parameters: a=131.476 b=0.039 c=-0.938
Formula: $y \sim a*(1/x^2)+b*x+c$

5. Total Oviposition

Stage: Female
Model 24: Taylor 1
Parameters: rm=-70.134 Topt=26.481 Troh=5.151
Formula: $y \sim 1-rm*e^{(-0.5)*(-(x-Top)/Troh)^2}$

6. Relative Oviposition

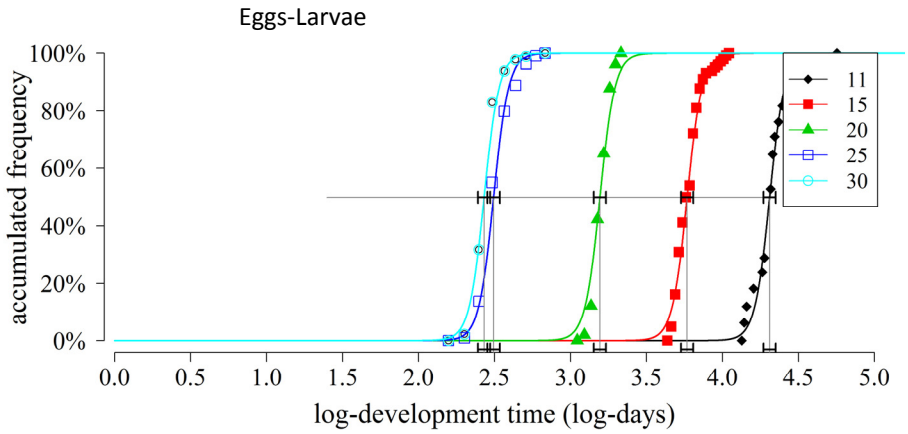
Stage: Female

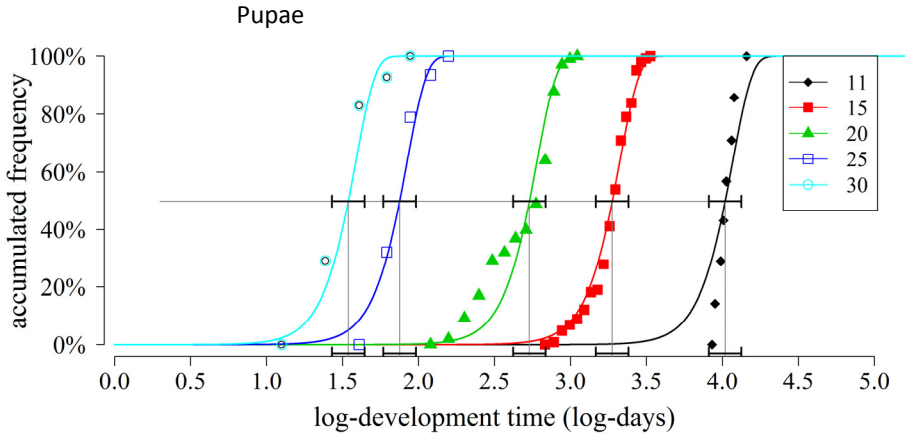
Model -1: Exponential modified 1

Parameters: a=2.428 b=-1.747 c=1.375

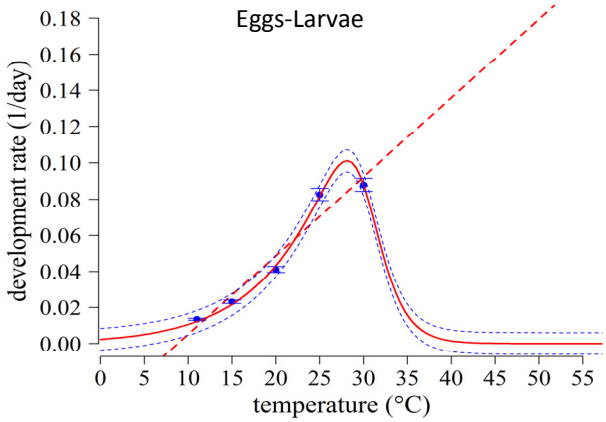
Formula: $y \sim (1- e^{(a*x+b*x^2+c*x^3)})$

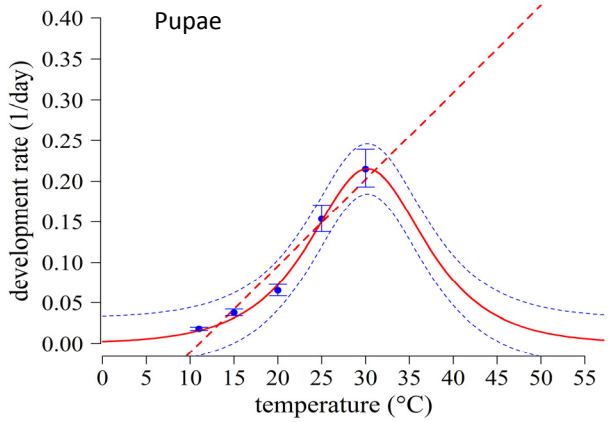
7. Development Time



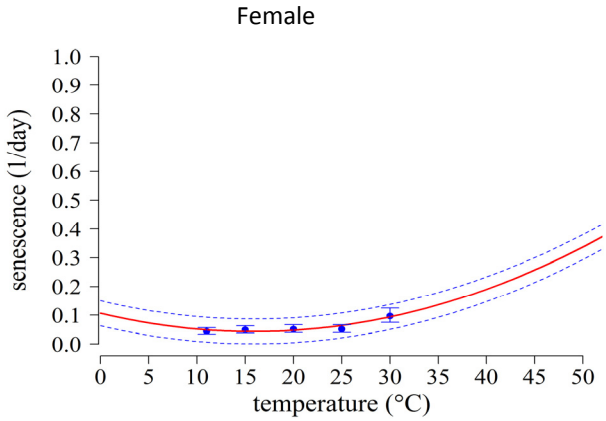


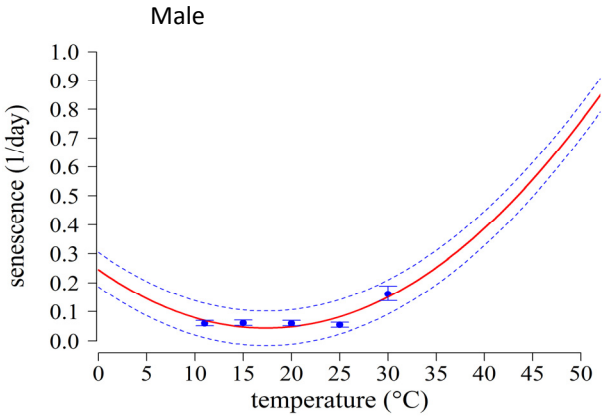
8. Development Rate



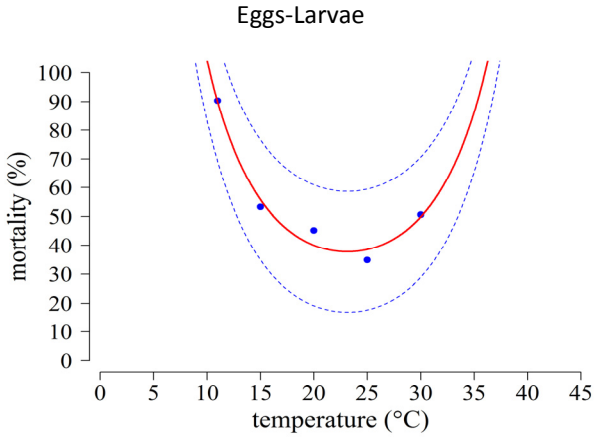


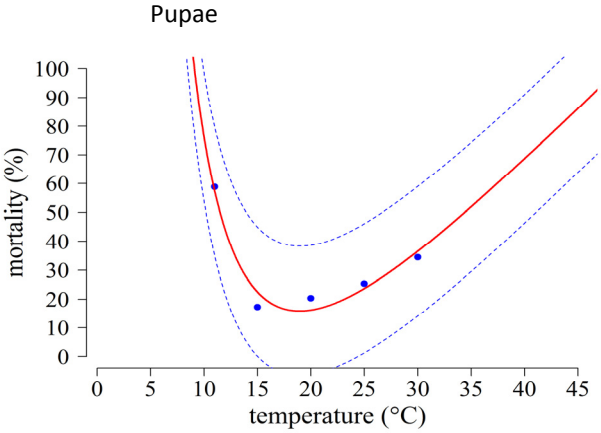
9. Senescence



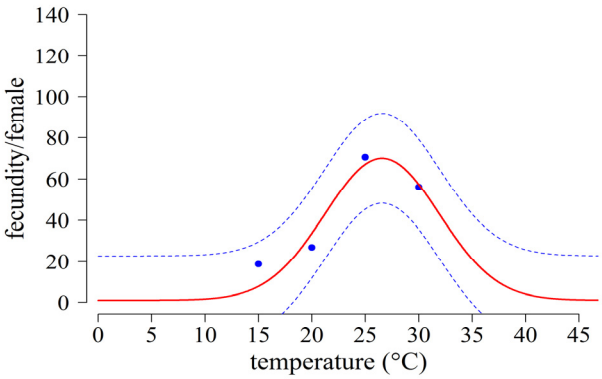


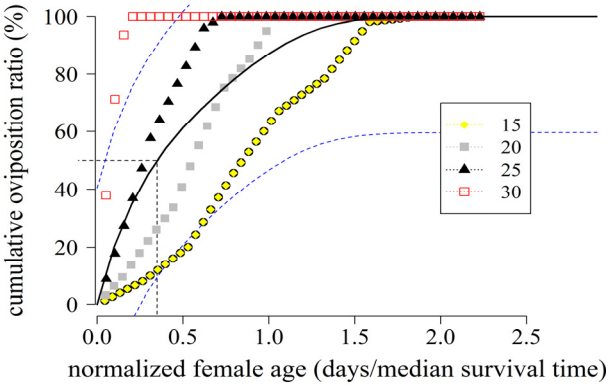
10. Mortality





11. Total and Relative Oviposition





12. Estimated life table parameters using deterministic simulation