

7.4.5 *Phaedrotoma scabriventris* (Mujica et al.)

1. Development Time

Stage: Eggs Model: cloglog Slope: 3.21	Stage: Larvae Model: cloglog Slope: 7.82	Stage: Pupae Model: logit Slope: 14.44	Stage: Female Model: logit Slope: 6.41	Stage: Male Model: cloglog Slope: 2.61
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2. Development Rate

Stage: Eggs Model 13: SharpeDeMichelle 13 Parameters: $p=49.196$ $TI=303.092$ $Ha=-100680.902$ $HI=-122467.168$ Formula: $y \sim (p * (x/298.16))^* e^{(Ha/1.987)*((1/298.16)-(1/x))} / (1 + e^{(HI/1.987)*((1/TI)-(1/x))})$
Stage: Larvae Model 26: Tb Model Parameters: $sy=0.052$ $b=0.174$ $Tb=-0.766$ $DTb=4.27$ Formula: $y \sim sy * e^{(b*(x-Tb)-e^{b*(x-Tb)/DTb})}$
Stage: Pupae Model 47: Janish 2 Parameters: $c=0.091$ $a=4.17$ $b=1.067$ $Tm=33.255$ Formula: $y \sim 2 * c / (a^{((x-Tm)+b^{(Tm-x)})})$

3. Senescence

Stage: Female Model 26: Tb Model Parameters: $sy=0.083$ $b=0.1$ $Tb=14.13$ $DTb=33184.962$ Formula: $y \sim sy * e^{(b*(x-Tb)-e^{b*(x-Tb)/DTb})}$	Stage: Male Model 25: Exponential Simple Parameters: $b1=0.035$ $b2=0.05$ Formula: $y \sim b1 * e^{(b2 * x)}$
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4. Mortality

Stage: Eggs Model 27: Wang 2 Parameters: $TI=29.104$ $Th=8.048$ $B=2.411$ $H=0$ Formula: $y \sim 1 - 1 / (e^{(1+e^{-(x-TI)/B}) * (1+e^{-(Th-x)/B}) + H})$
Stage: Larvae Model 27: Wang 2 Parameters: $TI=31.456$ $Th=13.366$ $B=5.964$ $H=0.005$ Formula: $y \sim 1 - 1 / (e^{(1+e^{-(x-TI)/B}) * (1+e^{-(Th-x)/B}) + H})$
Stage: Pupae Model 27: Wang 2 Parameters: $TI=13.718$ $Th=29.598$ $B=2.08$ $H=0.207$ Formula: $y \sim 1 - 1 / (e^{(1+e^{-(x-TI)/B}) * (1+e^{-(Th-x)/B}) + H})$

5. Total Oviposition

Stage: Female

Model 30: Wang 5

Parameters: $T_{opt}=14.877$ $B=5.625$ $H=-1958.678$

Formula: $y \sim 1 - H / (e^{(1+e^{-(x-T_{opt})/B})} * (1+e^{-(T_{opt}-x)/B}))$

6. Relative Oviposition

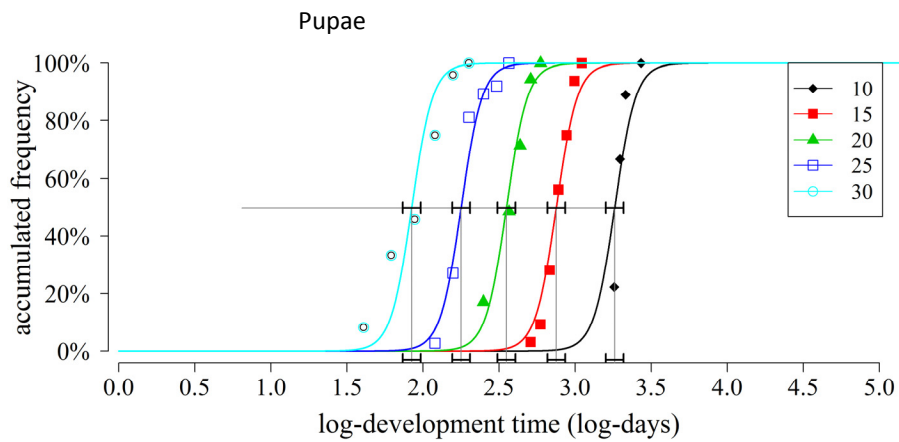
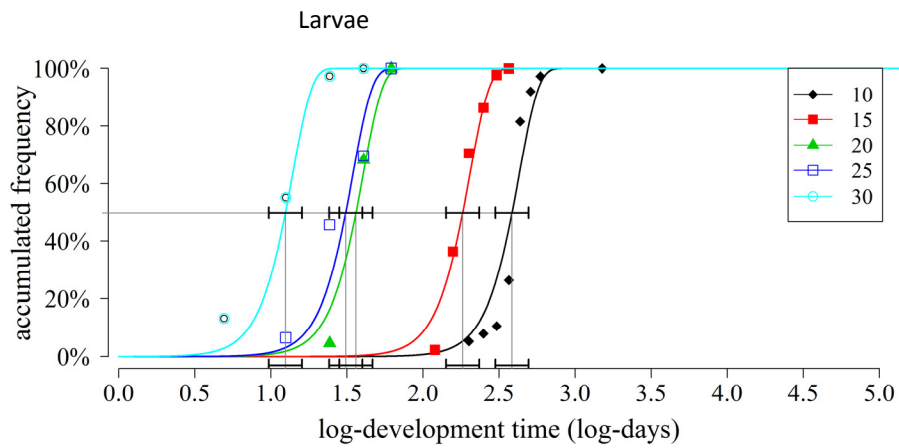
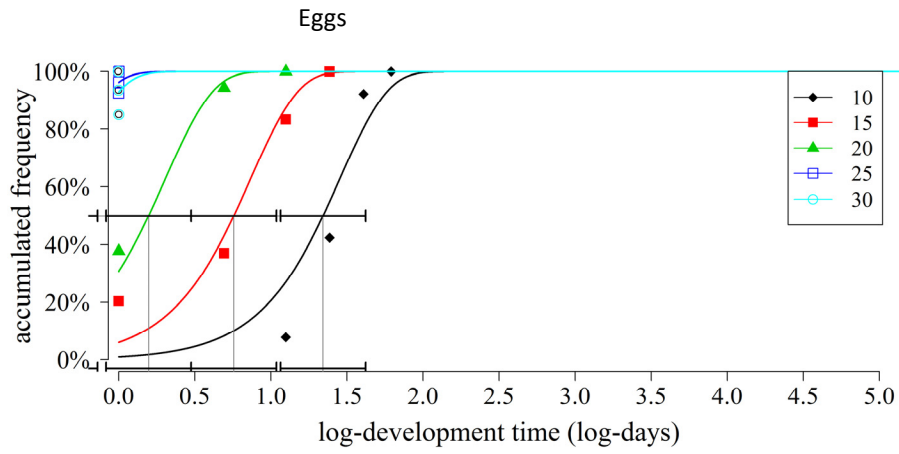
Stage: Female

Model 2: Gamma

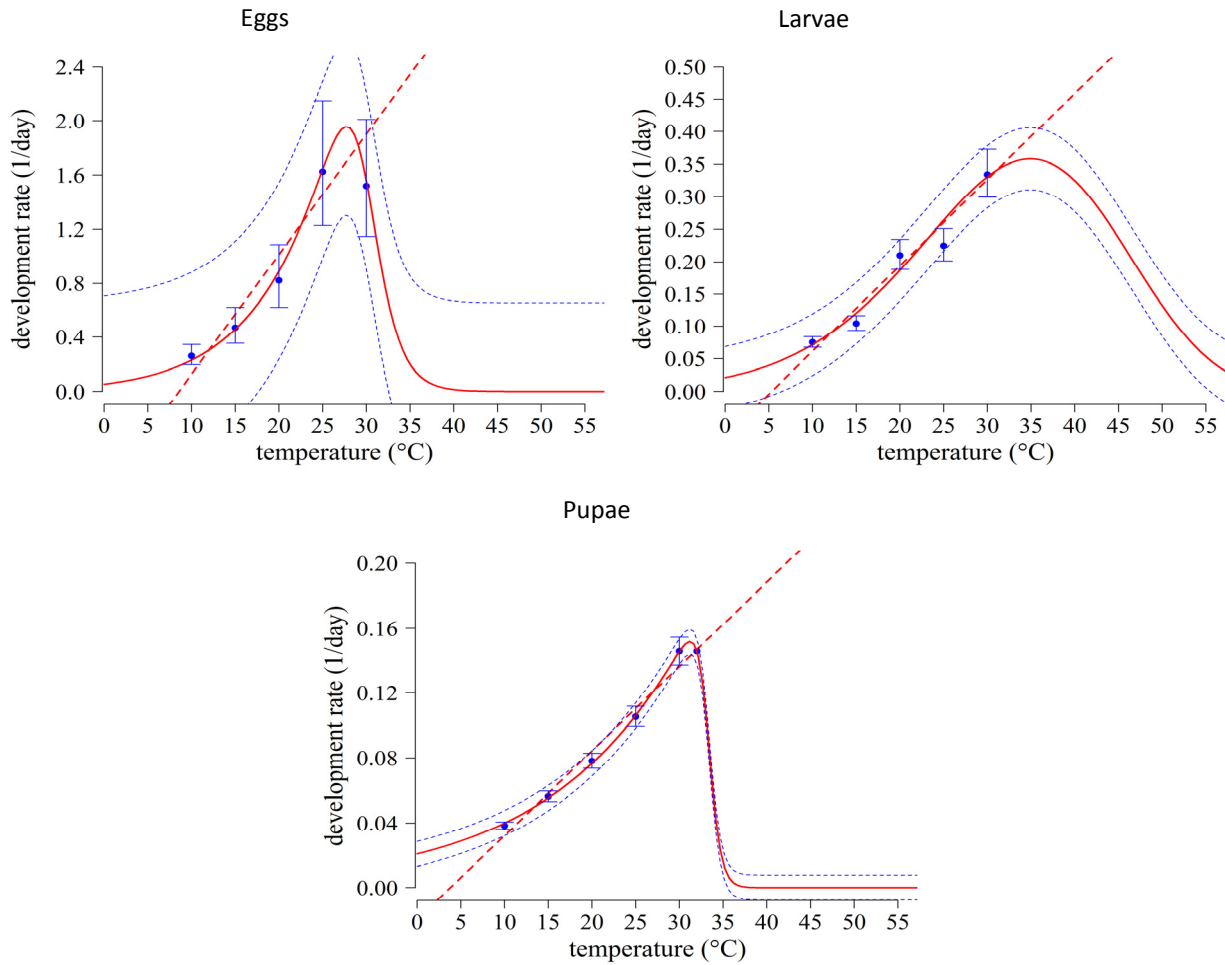
Parameters: $a=1.699$ $b=1.661$

Formula: $y \sim \text{pgamma}(x, a, b)$

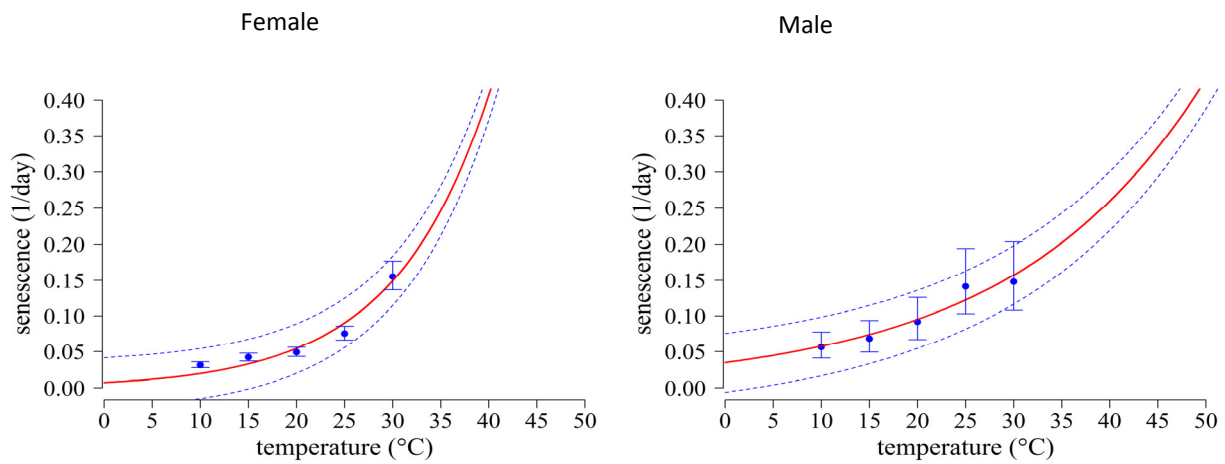
7. Development Time



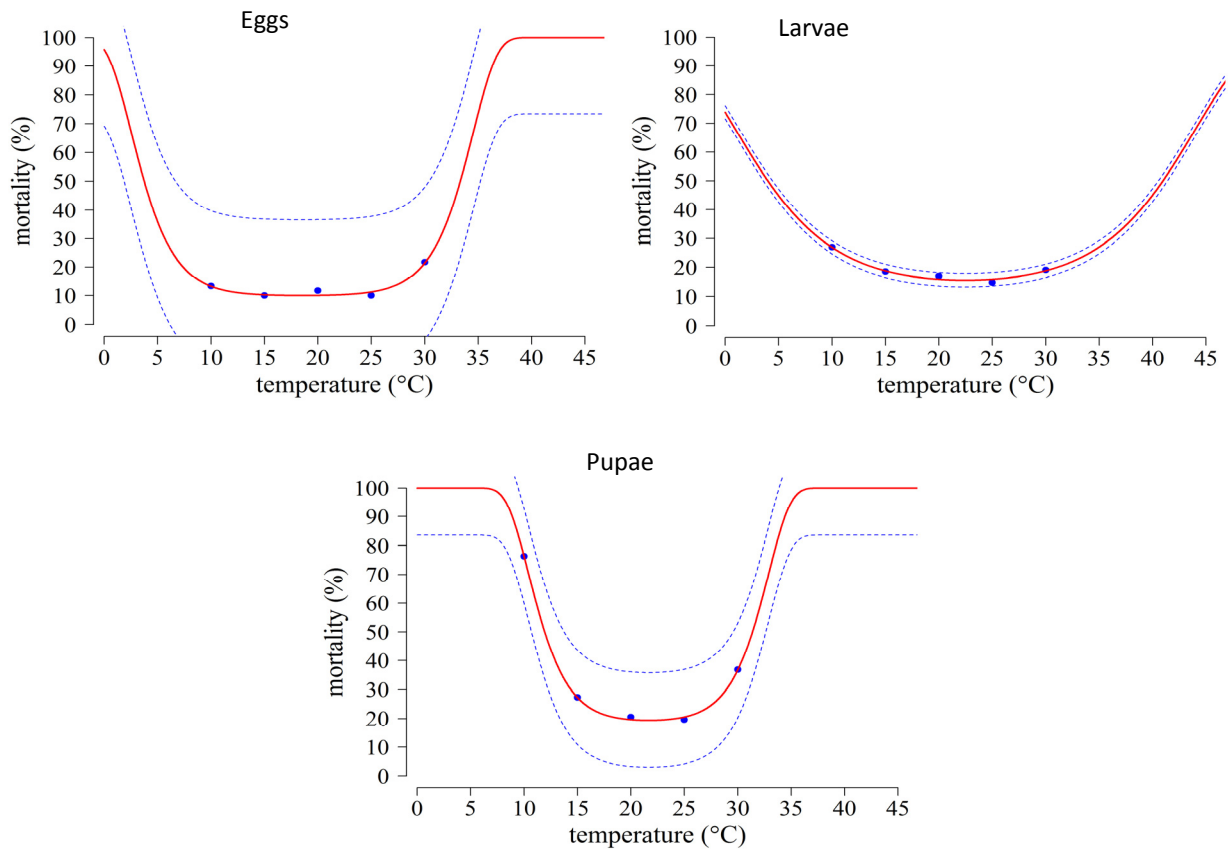
8. Development Rate



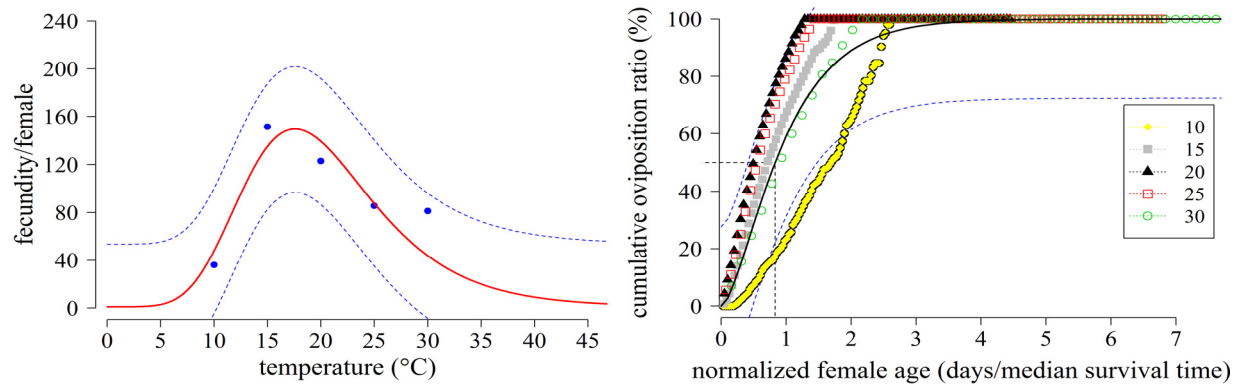
9. Senescence



10. Mortality



11. Total and Relative Oviposition



12. Estimated life table parameters using deterministic simulation

