

7.3.9 Serpentine leafminer fly, *Liriomyza huidobrensis* (Mujica et al.)

1. Development Time

Stage: Eggs Model: cloglog Slope: 4.63	Stage: Larvae Model: logit Slope: 13.96	Stage: Pupae Model: logit Slope: 14.25	Stage: Female Model: cloglog Slope: 2.37	Stage: Male Model: logit Slope: 3.36
--	---	--	--	--

2. Development Rate

<p>Stage: Eggs Model 13: SharpeDeMichelle 13 Parameters: $p=51.183$ $Tl=306.164$ $Ha=-79899.471$ $Hl=-101873.013$ Formula: $y \sim (p * (x/298.16)) * e^{(Ha/1.987) * ((1/298.16) - (1/x))} / (1 + e^{(Hl/1.987) * ((1/Tl) - (1/x))})$</p>
<p>Stage: Larvae Model 23: Lactin 1 Parameters: $Tl=39.514$ $p=0.01$ $dt=2.891$ $L=-1.069$ Formula: $y \sim e^{(p*x)} - e^{-(p*Tl - (x-Tl)/dt)} + L$</p>
<p>Stage: Pupae Model 46: Janish 1 Parameters: $Dmin=6.841$ $Topt=29.037$ $K=0.127$ Formula: $y \sim 2 / (Dmin * (e^{K*(x-Topt)} + e^{(-K)*(x-Topt)}))$</p>

3. Senescence

<p>Stage: Female Model 29: Rawtosky 1 Parameters: $b=0.001$ $Tb=4.471$ Formula: $y \sim b * (x - Tb)^2$</p>	<p>Stage: Male Model 29: Rawtosky 1 Parameters: $b=0.003$ $Tb=10.601$ Formula: $y \sim b * (x - Tb)^2$</p>
--	---

4. Mortality

<p>Stage: Eggs Model 28: Wang 3 Parameters: $Topt=30.443$ $Bl=6.091$ $Bh=0.472$ $H=0.016$ Formula: $y \sim 1 - 1 / (e^{(1+e^{-(x-Topt)/Bl}) * (1+e^{-(Topt-x)/Bh}) * H})$</p>
<p>Stage: Larvae Model 31: Wang 6 Parameters: $Tl=7.542$ $Th=31.156$ $B=0.746$ $H=2.502$ Formula: $y \sim 1 - H / (e^{(1+e^{-(x-Tl)/B}) * (1+e^{-(Th-x)/B})}$</p>
<p>Stage: Pupae Model 28: Wang 3 Parameters: $Topt=24.718$ $Bl=9.268$ $Bh=1.755$ $H=0.08$ Formula: $y \sim 1 - 1 / (e^{(1+e^{-(x-Topt)/Bl}) * (1+e^{-(Topt-x)/Bh}) * H})$</p>

5. Total Oviposition

<p>Stage: Female Model 8: Gaussian Parameters: $a=101.735$ $b=0.522$ $xo=21.901$ $c=5.67$ Formula: $y \sim a * e^{-b * ((x-xo)/c)^2}$</p>
--

6. Relative Oviposition

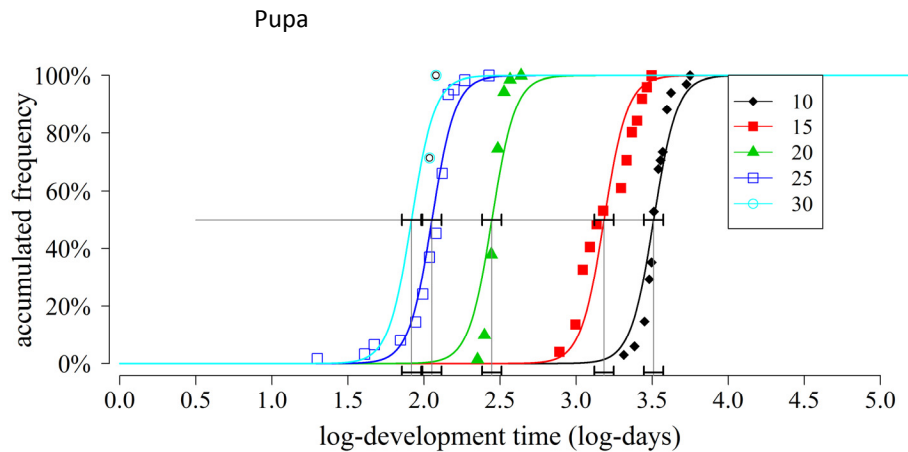
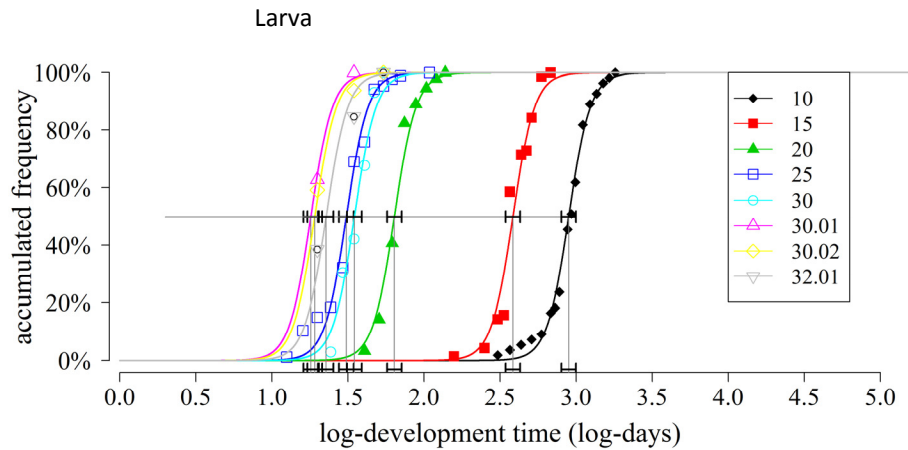
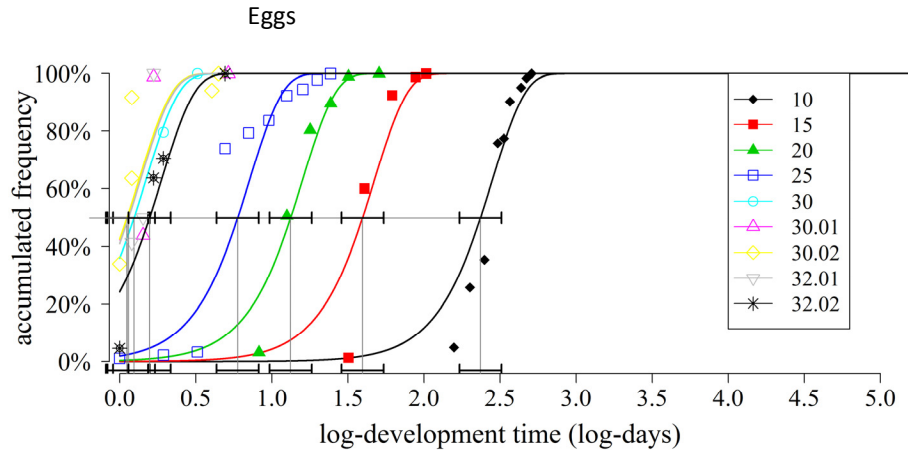
Stage: Female

Model 2: Gamma

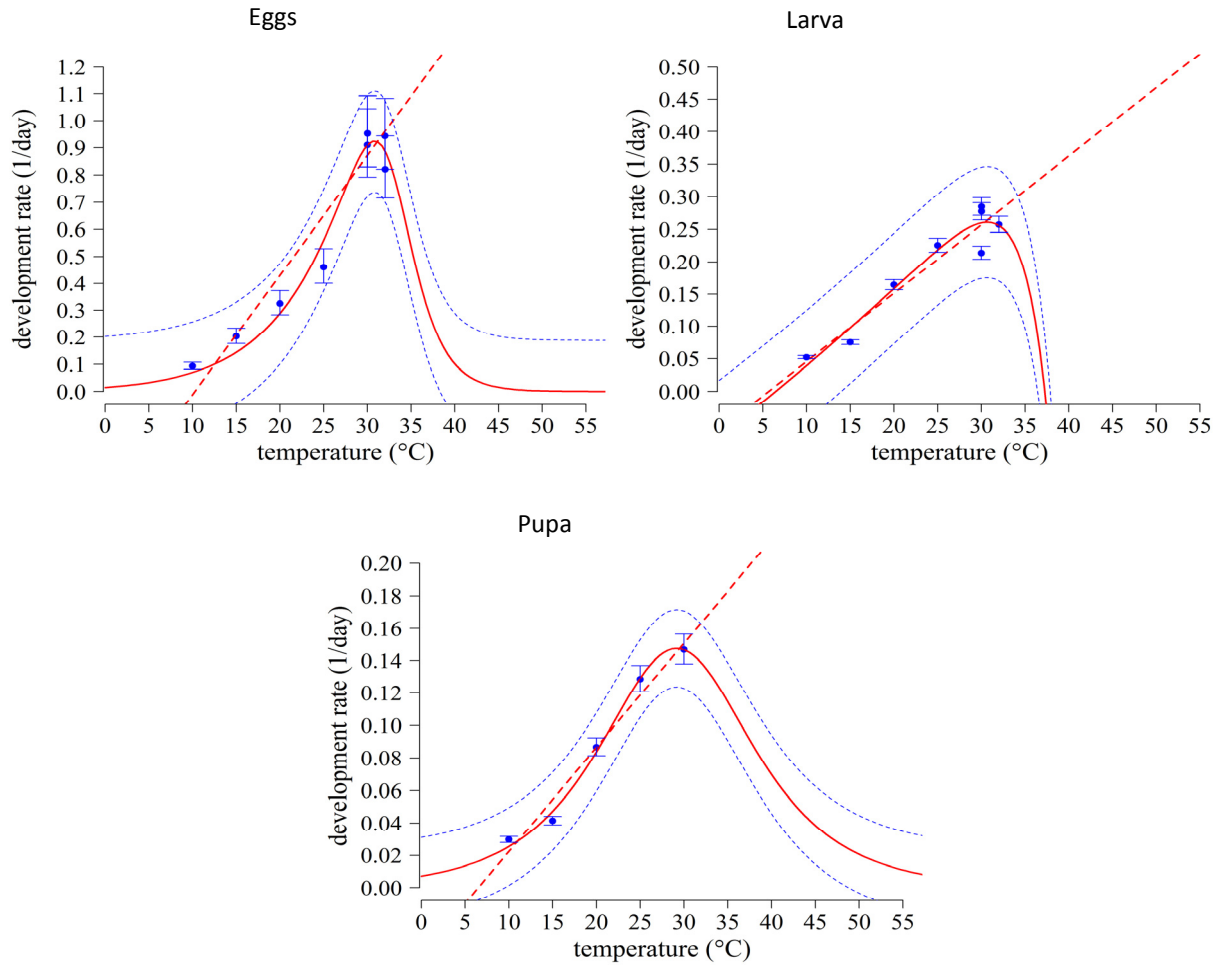
Parameters: $a=3.242$ $b=1.732$

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

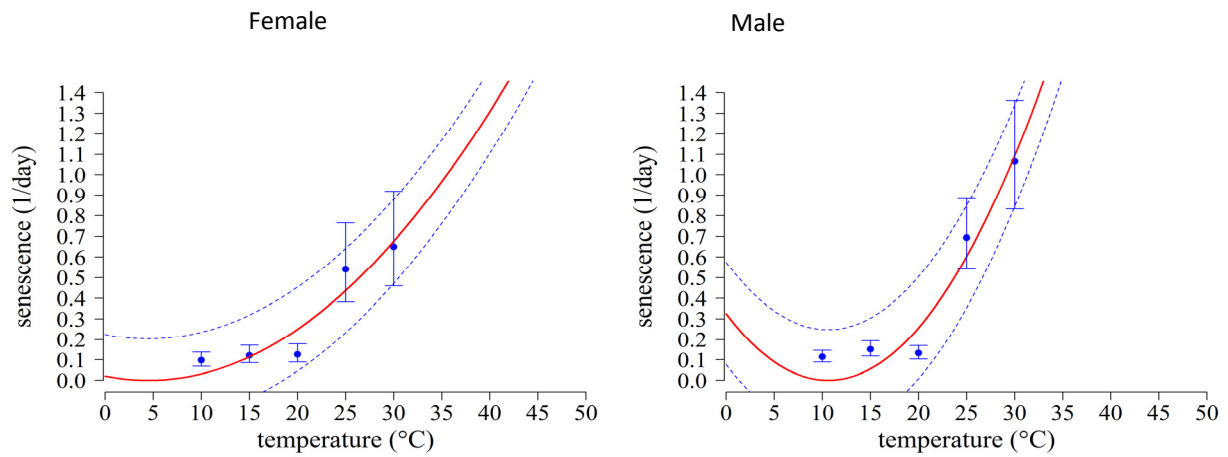
7. Development Time



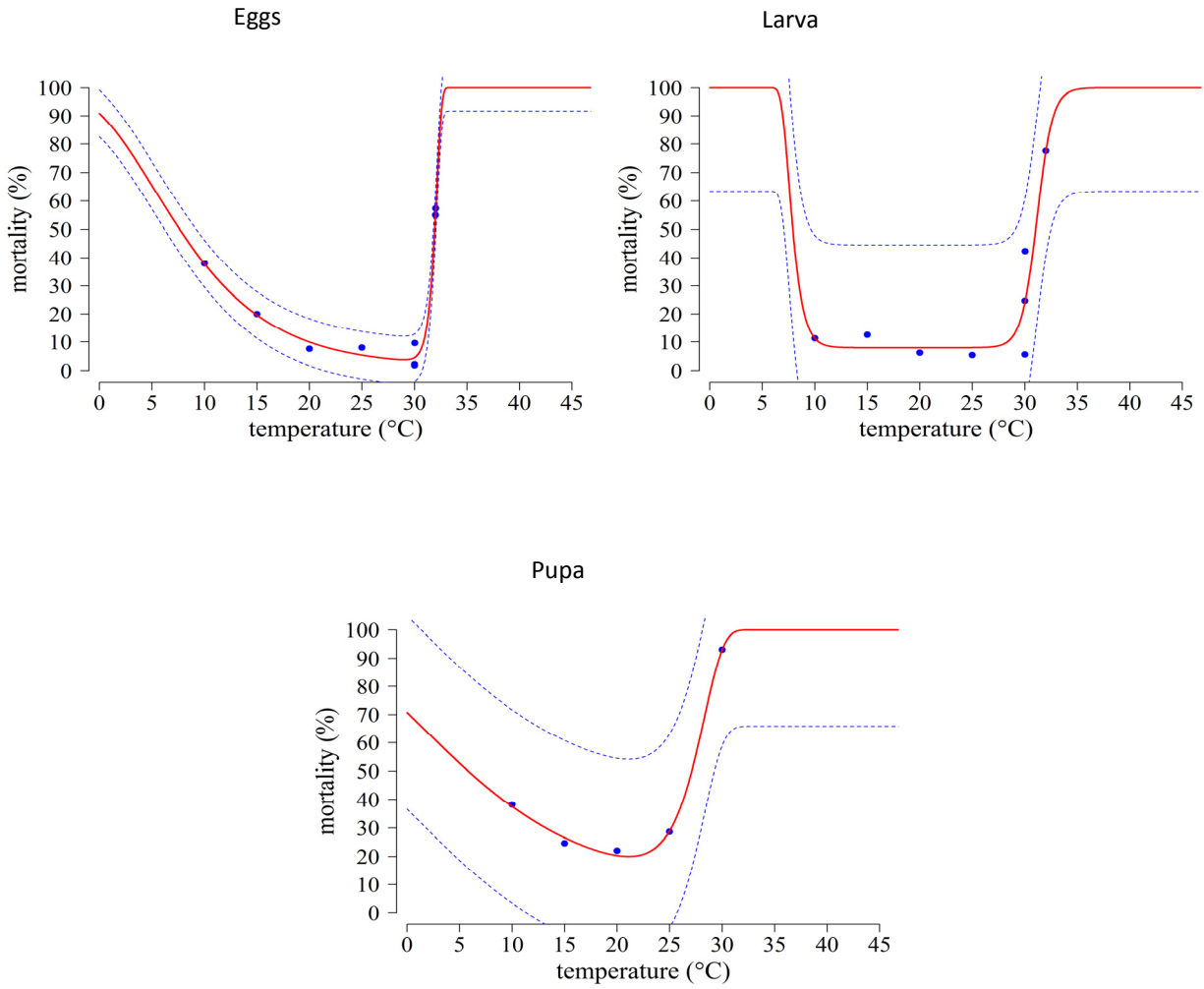
8. Development Rate



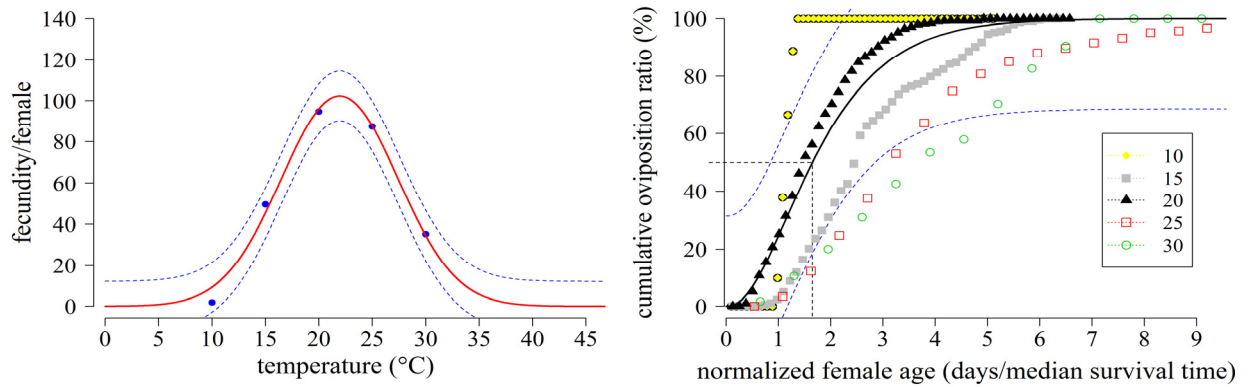
9. Senescence



10. Mortality



11. Total and Relative Oviposition



12. Estimated life table parameters using deterministic simulation

