SUPPORTING TABLES and FIGURES

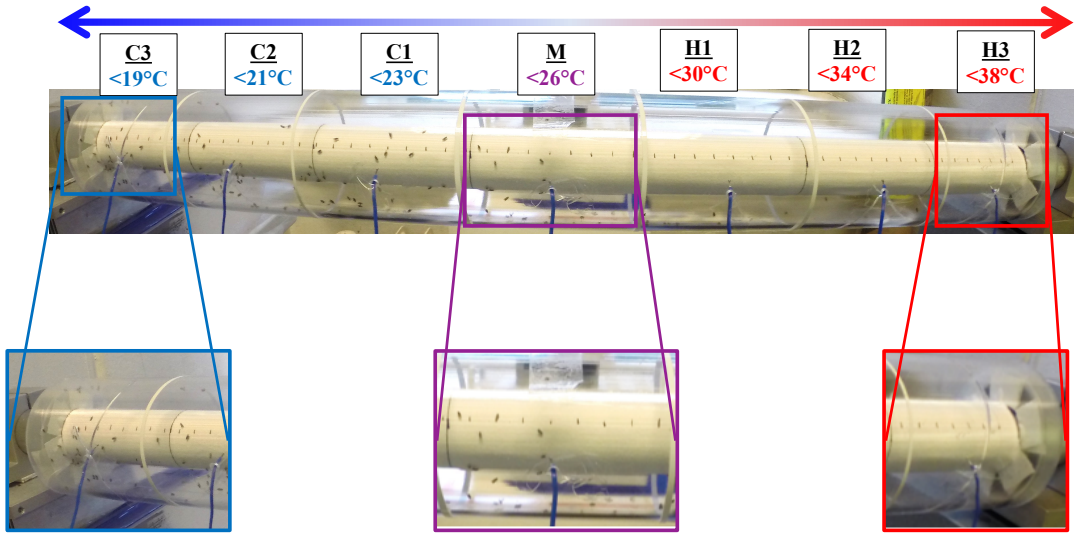

***Figure S1*:** *Thermal* gradient apparatus gradient depicting different temperature zones and fly dispersion (*w*MelPop).

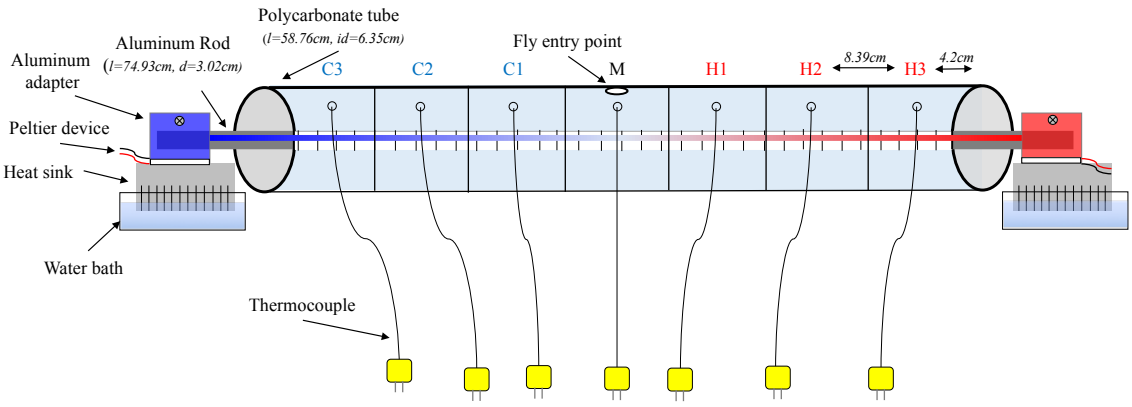

***Figure S2*:** Schematic of the thermal gradient apparatus used for thermal gradient assays as adapted from Rajpurohit & Schmidt (2016). The polycarbonate tube and length of aluminum gradient within the tube were 58.76cm and temperature was recorded with K-type thermocouples.

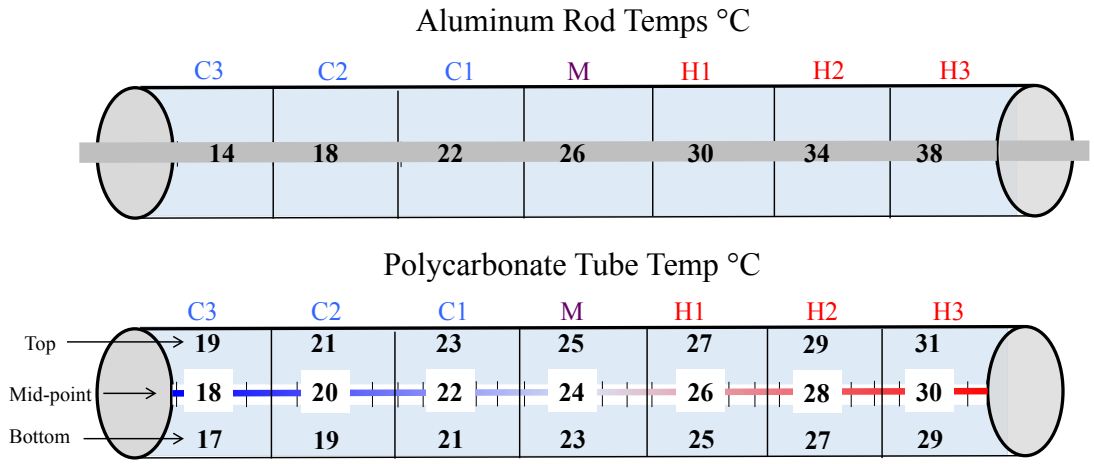

Figure S3: Average + 0.5°C (SD) temperatures from 18 runs that were recorded at each surface measured using k-type thermocouples. There was a linear increase in temperature from cold to hot as measured at each of seven evenly spaced (8.39cm).

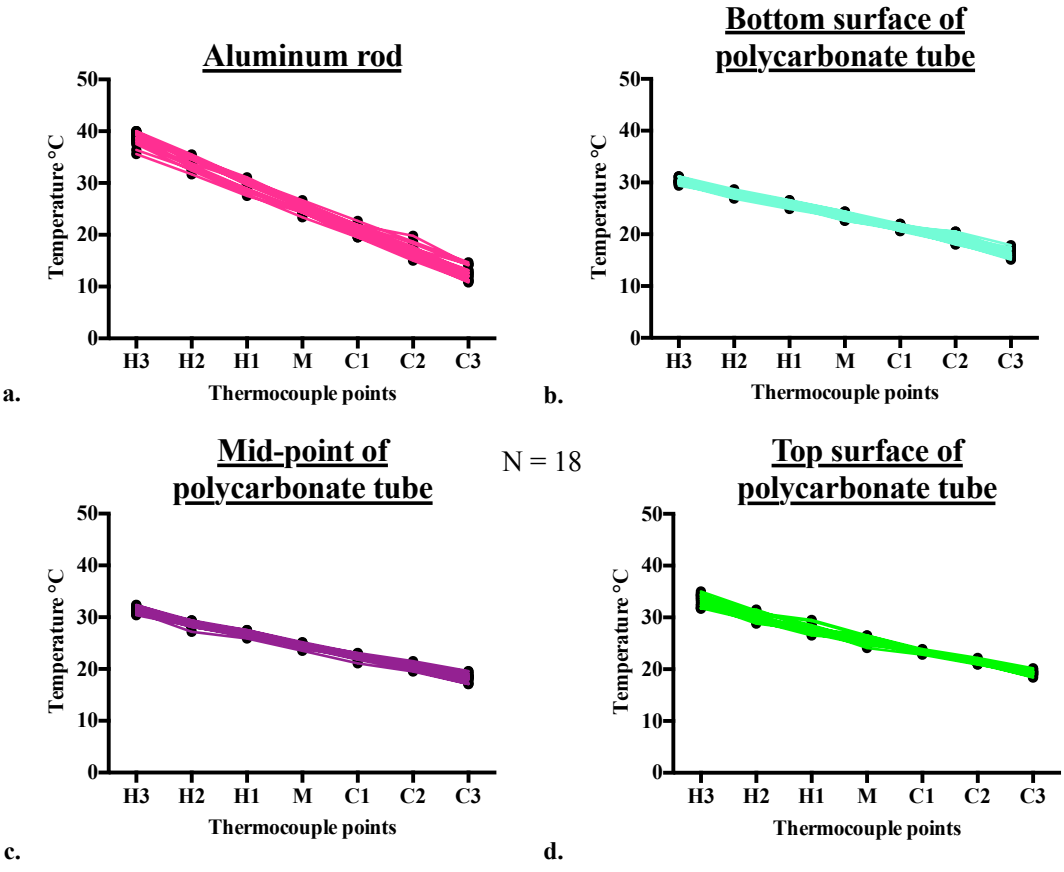

Figure S4: Plots showing linearity of temperature change for the different surfaces (a. aluminum rod, b. top, c. bottom, and mid-point of the polycarbonate tube) as measured with K-

type thermocouples at regular intervals along the length of apparatus from the hottest end (H3) to the coldest (C3).

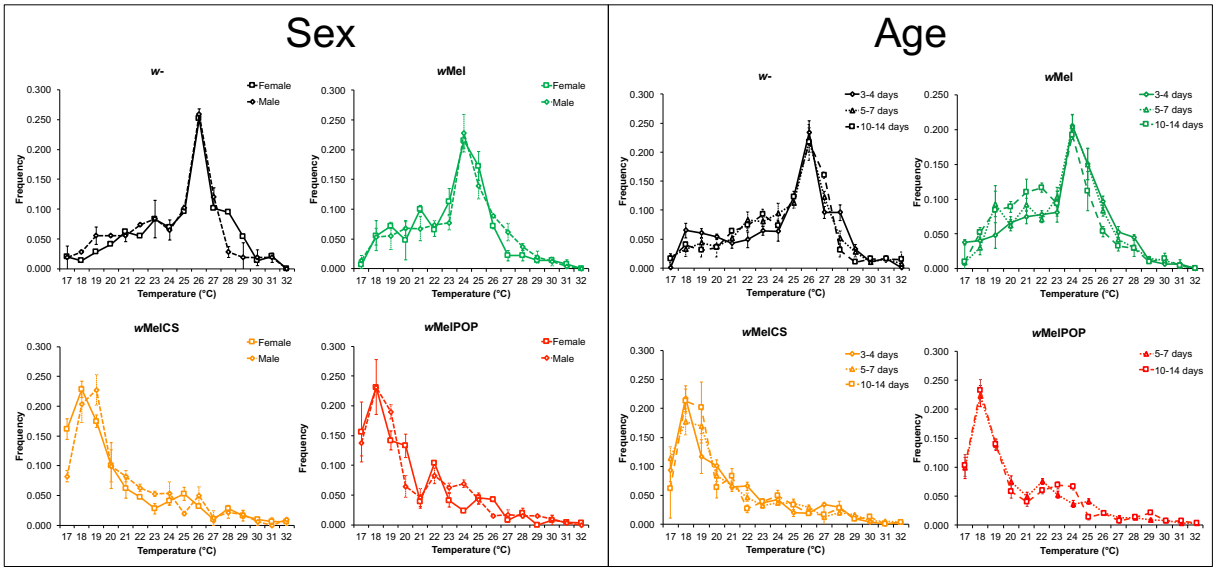

Figure S5: Line plots showing the portion of flies observed at a given temperature for males and females in the left panel and age classes (*young*: 3-4 days or *old*: 10-14 days post eclosion) in the right panel. Each of the four subfigures shows the average proportion of flies with respect to different infection status (uninfected, *w*Mel, *w*MelCS, and *w*MelPop). For *w*MelPop infected flies only two age groups were tested. Error bars represent standard errors for average frequencies at a given temperature across all replicated experiments carried out for a given infection type and levels of the factors sex or age.

***Table S1*:** Counts of flies and number of replicates (in parentheses) per sex and age class

Counts	**Females**	**Males**	**Unknown Sex**	**3-4 days**	**5-7 days**	**10-14 days**
***w*-**	147 (2)	108 (1)	1032 (10)	188 (2)	893 (9)	206 (2)
***w*Mel**	140 (2)	269 (3)	1055 (10)	211 (2)	986 (10)	267 (3)
***w*MelCS**	319 (3)	211 (2)	1089 (10)	276 (3)	1159 (10)	184 (3)
***w*MelPop**	260 (3)	264 (3)	823 (8)	0 (0)	1088 (11)	259 (3)

***Table S2*:** Results of two-way GLMM with independent factors age, *Wolbachia* and the interaction between them (see Table 2 for more detail)**.**

Model	**Factor**	**n**	**Df**	**χ2**	***P*-value**
wol* + *age* + *wol* x *age	***wol***	**5042**	**6**	**149.64**	**9.19E-30**
wol + *age* + *wol* x *age*	*age*	5042	4	0.39	0.98
wol + *age* + *wol* x *age*	*wol* x *age*	5042	3	0.17	0.98