SUPPLEMENTARY INFORMATION

Selecting on age of female reproduction affects lifespan in both sexes and age-dependent reproductive effort in female (but not male) *Ceratitis cosyra*

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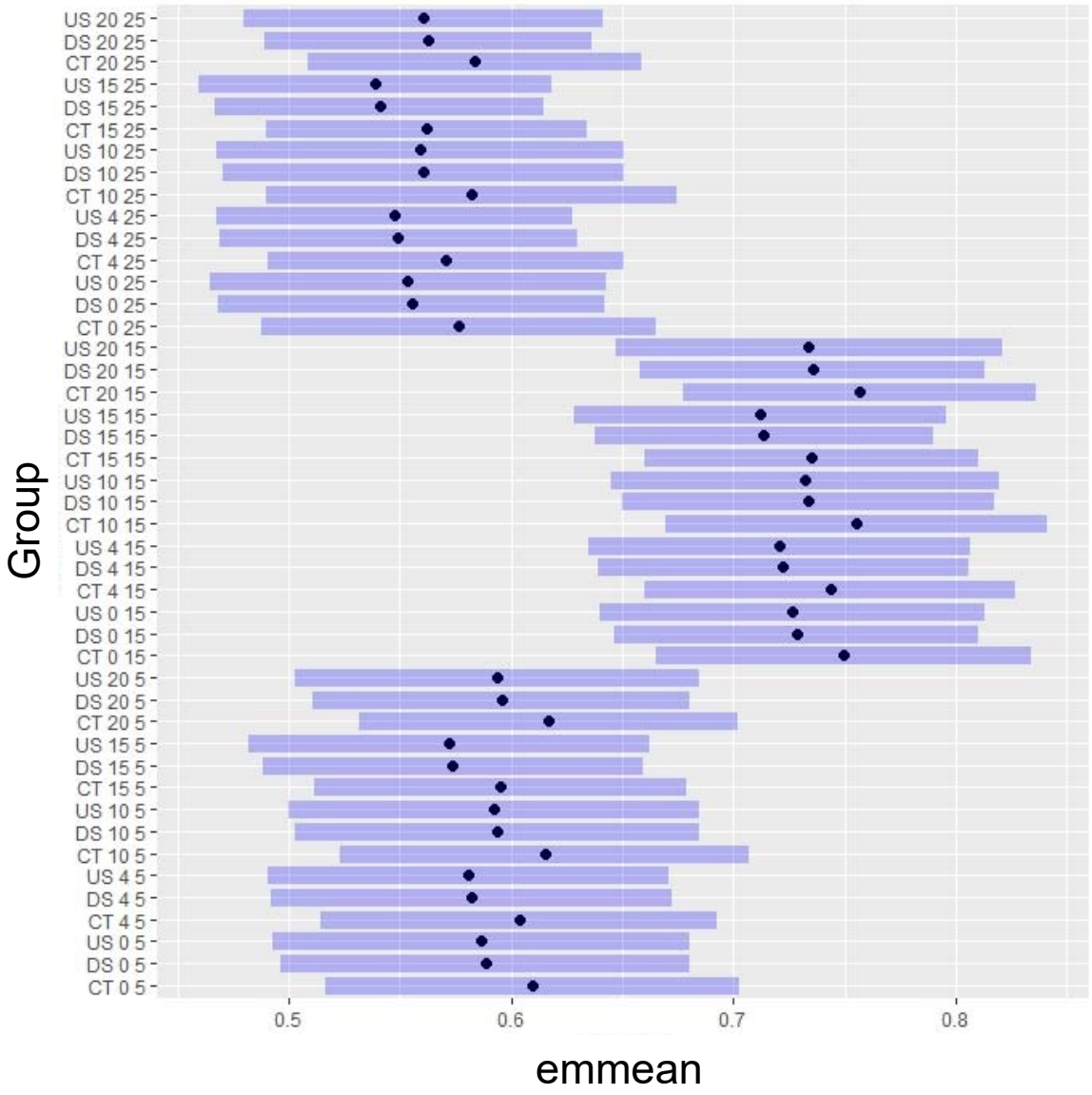
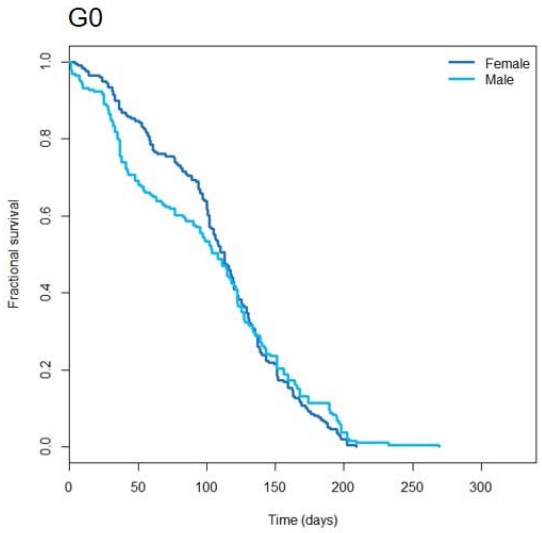
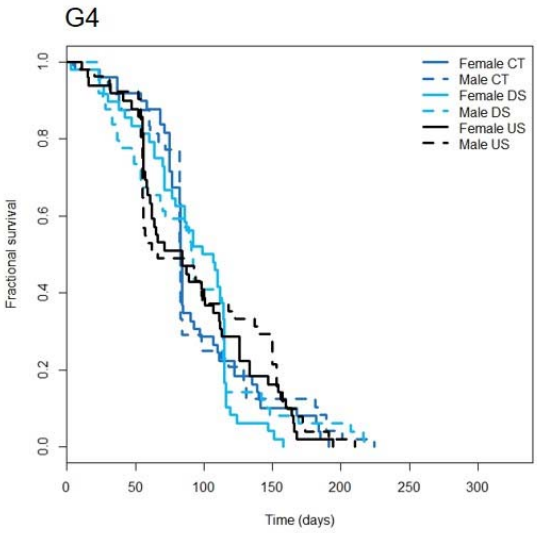
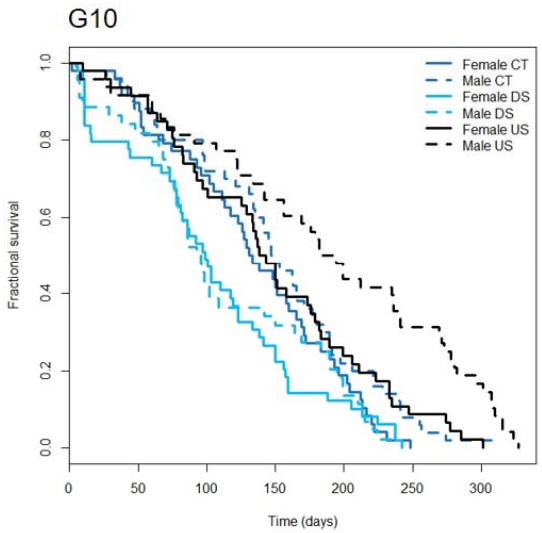
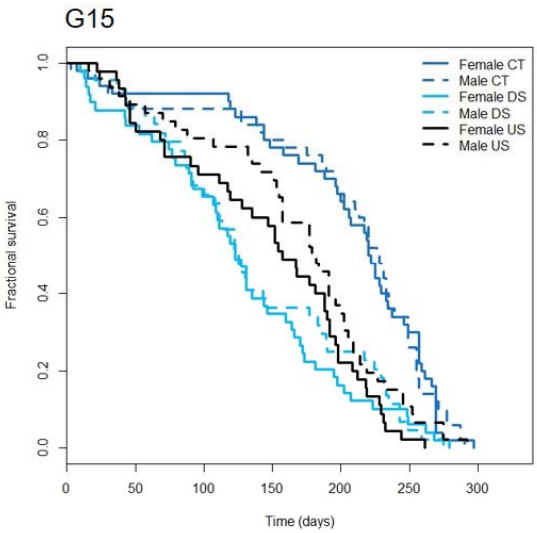


Figure S1. Determination of sperm storage asymmetry of *C. cosyra* from control (CT), downward- (DS) and upward-selected (US) lines across five generations (0, 4, 10, 15 and 20) and a three different ages (5, 15 and 25 days). The blue dots represent the estimated marginal means and the blue shaded bars show the 95 % confidence interval. Confidence intervals that do not overlap with the 0.5 tick mark indicate significant asymmetry (i.e., more sperm stored in one spermatheca than the other).


G0
Female
Male
Fractional survival
Time (days)


G4
Female CT
Male CT
Female DS
Male DS
Female US
Male US
Fractional survival
Time (days)


G10
Female CT
Male CT
Female DS
Male DS
Female US
Male US
Fractional survival
Time (days)


G15
Female CT
Male CT
Female DS
Male DS
Female US
Male US
Fractional survival
Time (days)

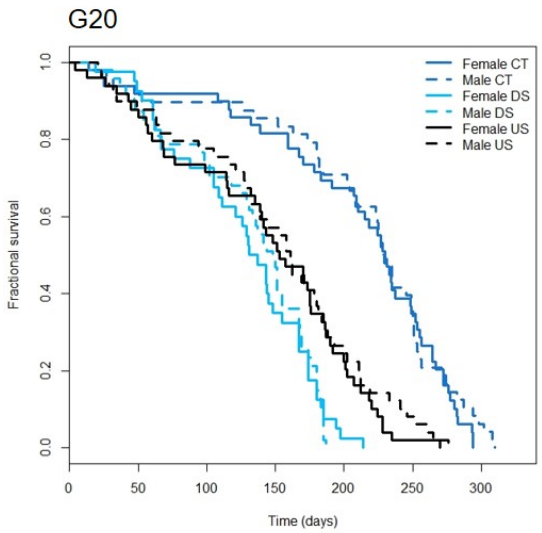

G20
Female CT
Male CT
Female DS
Male DS
Female US
Male US
Fractional survival
Time (days)

Figure S2. Survival curves of *C. cosyra* females and males at five generations (G_0, G_4, G_{10}, G_{15} and G_{20}) and issues from control (CT), downward- (DS) and upward-selected (US) lines. Downward-selection (light blue curves) was performed by allowing females to oviposit only at 5 days after adult emergence, whereas eggs were collected at 15 days from controls (blue curves) and 25 days from upward-selection flies (black curves).

Table S1. Estimated proportional hazards for control (CT), downward- (DS) and upward-selected (US) lines across five generations. The estimated proportional hazards were generated by the emmeans() function after a Cox regression analysis and used as estimated proportional hazards ratios to test significant differences between groups.

	Selection		
Generation	**DS**	**CT**	**US**
G_0	1.83	1.59	1.49
G_4	2.41	2.18	2.16
G_{10}	1.41	0.77	0.35
G_{15}	0.86	0.30	0.61
G_{20}	1.19	0.24	0.71

Table S2. Estimated marginal means of the hazard ratios for females and males across five generations. The estimated proportional hazards were generated by the emmeans() function after a Cox regression analysis and used as estimated proportional hazards ratios to test significant differences between groups.

	Sex	
Generation	**Female**	**Male**
G_0	1.65	1.65
G_4	2.43	2.08
G_{10}	0.94	0.55
G_{15}	0.61	0.47
G_{20}	0.62	0.56

Table S3. Post-hoc comparison of head width between flies from control (CT), downward- (DS) and upward-selected (US) lines. Groups were compared using estimated marginal means.

Generation	Comparison	Estimate	p
G_0	CT vs DS	-0.03	0.263
	CT vs US	0.01	0.833
	DS vs US	0.041	0.083
G_4	CT vs DS	0.06	**< 0.001**
	CT vs US	0.02	**0.023**
	DS vs US	-0.04	**< 0.001**
G_{10}	CT vs DS	-0.05	**< 0.001**
	CT vs US	-0.003	0.956
	DS vs US	0.05	**< 0.001**
G_{15}	CT vs DS	0.06	**< 0.001**
	CT vs US	0.13	**< 0.001**
	DS vs US	0.07	**< 0.001**
G_{20}	CT vs DS	0.05	**< 0.001**
	CT vs US	0.02	**0.039**
	DS vs US	-0.02	0.115