

Table S1: Vortex parameters for the Tasmanian devil insurance population across two housing types; group housing and intensive housing.

	Group Housing	Intensive Housing
Initial population size		40
Carrying capacity (K)		100
Mating system	Polygyny	Forced monogamy
Age of first offspring (years)		2
Maximum age (years)		8
Female reproductive rates		Age 1 = 0% Age 2 = 84.1% Age 3 = 51.7% Age 4 = 17.8% Age 5 = 0%
Maximum progeny/year and % of males at birth	4 progeny/year & 50% males at birth	
Mean litter size		2.62
% males in breeding pool		30-100%
Female mortality rates		Age 0-1 = 8% Age 1-2 = 4.5% Age 2-3 = 4.5% Age 3-4 = 4.5% Age 4-5 = 4.5% Age 5-6 = 22% Age 6-7 = 70% Age 7-8 = 100%
Male mortality rates		Age 0-1 = 11% Age 1-2 = 4.5% Age 2-3 = 4.5% Age 3-4 = 4.5% Age 4-5 = 4.5% Age 5-6 = 22% Age 6-7 = 70% Age 7-8 = 100%
SD in 0-1 mortality due to EV		1
SD in mortality after 1		0.5
Genetic management	Pair according to MK	
Maximum number of female mates	4	1
Number of times to find a mate	4	1

Table S2: Top model set (top 2AIC_c) of generalised linear mixed models for male reproductive skew. All models were fitted with a random factor “year” and “individual ID”. The final model is provided in Table 2.

Model Statement	df	AIC _c	Δ_i^a	w_i^b
β_0 + facility	4	246.31	0.00	0.35
β_0 + facility + age	5	246.96	0.65	0.26
β_0 + age	4	247.41	1.10	0.20
β_0	3	247.54	1.23	0.19

df = degrees of freedom

^a Change in AIC_c from the best model

^b Akaike model weight

Table S3: Top model set (top 2AIC_c) of generalised linear mixed models for female reproductive skew. All models were fitted with a random factor “year” and “individual ID”. The final model is provided in Table 2.

Model Statement	df	AIC _c	Δ_i^a	w_i^b
β_0 + age	4	194.72	0.00	0.49
β_0 + age + facility	5	196.08	1.36	0.25
β_0 + age + weight	5	196.69	1.97	0.18

df = degrees of freedom

^a Change in AIC_c from the best model

^b Akaike model weight

Table S4: Top model set (top 2AIC_c) of generalised linear mixed models for litter size. All models were fitted with a random factor “year” and “individual ID”. The final model is provided in Table 2.

Model Statement	df	AIC _c	Δ_i^a	w_i^b
β_0	4	19.69	0.00	0.62
β_0 + age	5	21.45	1.76	0.26

df = degrees of freedom

^a Change in AIC_c from the best model

^b Akaike model weight

Table S5: Top model set (top 2AIC_c) of generalised linear mixed models for group housing male reproductive success. All models were fitted with a random factor “year” and “pen ID”. The final model is provided in Table 2.

Model Statement	df	AIC _c	Δ_i^a	w_i^b
β_0 + standardised weight	4	111.72	0.00	0.67
β_0 + standardised weight + age	5	113.21	1.49	0.32

df = degrees of freedom

^a Change in AIC_c from the best model

^b Akaike model weight