Table S3. a) The parameter estimates (β), standard errors (SE), t-values (t value) and p-values (P) of a linear mixed model investigating the effects of spore load, milkweed species and CO_2 treatment on monarch lifespan (tolerance). The intercept reflects estimates of monarch lifespan (square-root-transformed) in the ambient CO_2 *A. curassavica* treatment group. Milkweed species codes: CUR =*A. curassavica*, SYR=*A. syriaca*, SPE=*A. speciosa*, INC=*A. incarnata*. b) The intercepts and slope values (± 1 SE) of each treatment group, calculated by running similar linear mixed models on species individually.

a)

Fixed Effect	**Estimate (β)**	**SE**	**t value**	***P***
Intercept	3.904	(0.251800)	15.506	0.01262
sqrt(Spore Load)	-0.0005043	(0.000226)	-2.236	0.02608
INC	0.4404	(0.130600)	3.373	0.00084
SPE	0.2034	(0.138200)	1.472	0.14196
SYR	0.3713	(0.132200)	2.809	0.00531
elevated CO_2	0.3548	(0.139500)	2.543	0.01156
sqrt(Spore Load): INC	-0.0008377	(0.000281)	-2.976	0.00314
sqrt(Spore Load): SPE	-0.0009395	(0.000326)	-2.885	0.0042
sqrt(Spore Load): SYR	-0.0006046	(0.000283)	-2.136	0.03349
sqrt(Spore Load): elevated CO_2	-0.000937	(0.000310)	-3.022	0.00272
INC: elevated CO_2	-0.4471	(0.184600)	-2.422	0.01601
SPE: elevated CO_2	-0.2907	(0.193100)	-1.505	0.13329
SYR: elevated CO_2	-0.2573	(0.185800)	-1.385	0.16714
sqrt(Spore Load):INC: elevated CO_2	0.001244	(0.000397)	3.138	0.00186
sqrt(Spore Load):SPE: elevated CO_2	0.001347	(0.000439)	3.068	0.00235
sqrt(Spore Load):SYR: elevated CO_2	0.0005993	(0.000413)	1.45	0.14816

b)

	A. curassavica	*A. syriaca*	*A. speciosa*	*A. incarnata*
Ambient CO_2 intercept	3.890088 (0.3035391)	4.251585 (0.2684069)	4.104468 (0.2769781)	4.312100 (0.2529741)
Elevated CO_2 intercept	4.246979 (0.1410891)	4.347224 (0.1469451)	4.182931 (0.1366552)	4.199822 (0.1378927)
sqrt(Spore Load): ambient CO_2	-0.000530 (0.0002204)	-0.001143 (0.0001989)	-0.001402 (0.0002274)	-0.001344 (0.0001692)
sqrt(Spore Load): elevated CO_2	-0.001380 (0.0002985)	-0.001505 (0.0003037)	-0.001033 (0.0002985)	-0.001033 (0.0002473)