

## Functional Ecology

**Table S4:** The relationship between the concentration of cardenolides sequestered in monarch wings and milkweed species on monarch wing shape, loading and density. Values are from three linear mixed effects models with either PCA-shape, wing loading or wing density (log-transformed) as dependent variables, monarch cardenolide concentration (square root transformed), milkweed species and their interaction as fixed effects, and chamber and lineage as random effects.

	Monarch cardenolides		Milkweed species		Monarch cardenolides * Milkweed species		Random Effect: Chamber	Random Effect: Lineage
	F	p	F	p	F	p		
<b>PCA-Shape</b>	$F_{1,230} = 0.05$	0.816	$F_{3,228} = 2.19$	0.090	$F_{3,230} = 1.62$	0.184	$3.3 \times 10^{-05} \pm 0.006$	$7.1 \times 10^{-05} \pm 0.008$
<b>Wing Loading</b>	<b><math>F_{1,15} = 8.41</math></b>	<b>0.011</b>	<b><math>F_{3,15} = 4.11</math></b>	<b>0.025</b>	$F_{3,15} = 2.82$	0.073	$3.7 \times 10^{-12} \pm 1.9 \times 10^{-6}$	$4.8 \times 10^{-10} \pm 2.2 \times 10^{-5}$
<b>Wing Density</b>	$F_{1,229} = 3.59$	0.059	$F_{3,227} = 1.95$	0.122	$F_{3,230} = 1.15$	0.330	$0.005 \pm 0.07$	$0.061 \pm 0.25$

**Phytochemical changes in milkweed induced by elevated CO<sub>2</sub> alter wing morphology but not toxin sequestration in monarch butterflies**

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