

ESM 1: Supplementary statistical reports

Here we present additional statistical reports in support of the article. Figure 1 presents the differences in each venom fraction in response to live prey, Table 1 and Figure 2, and Table 2 and Figure 3, present the difference in venom profiles between treatments at $t=0$ (before experiments) and $t=2$ (after a 21 day relaxation period), respectively. Tables 3 and 4 present the fraction-wise difference between controls and vertebrate and invertebrate toxicity assays, respectively.

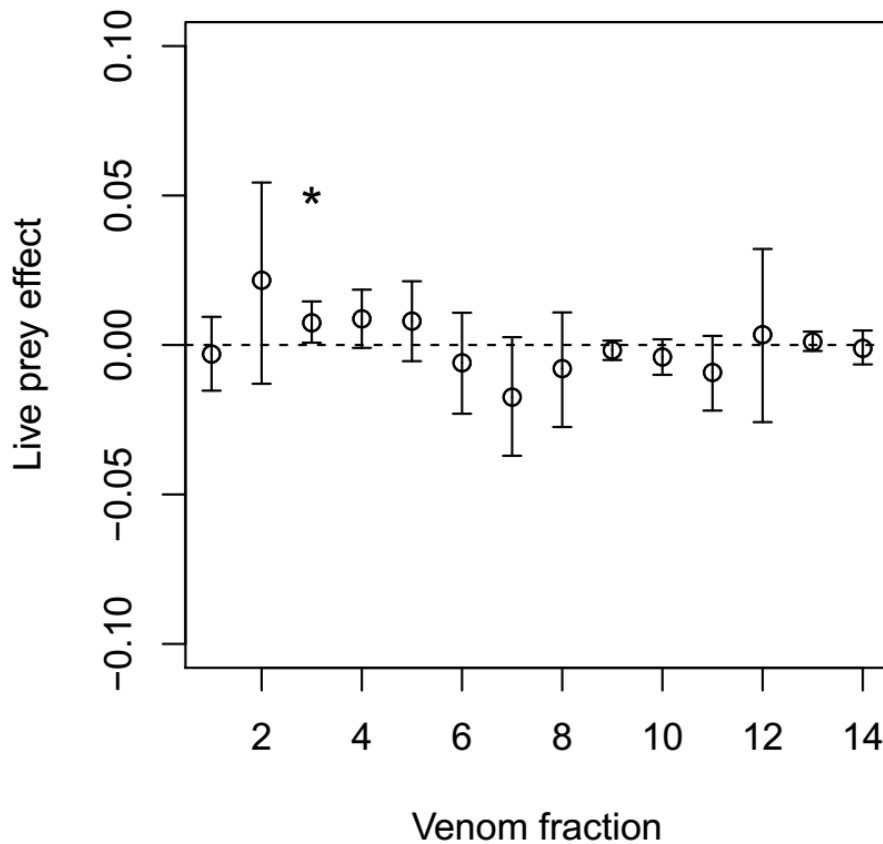


Figure 1: Mean (and 95% non-parametric bootstrap confidence intervals) for the difference between the treatments presented live and dead. Confidence intervals entirely above (or below) zero suggest significant effects of increased (or decreased) production when given live versus dead prey. Differences were calculated after the treatments ended ($t = 49$ days). Chemical fractions five through eight were not easily distinguishable, and likely represent multiple similarly sized compounds. Therefore, we have also calculated this confidence interval separately (predator treatment effect 95% limits: -0.064, 0.019). Asterisks indicate statistical significance.

Table 1: MANOVA results from venom collected prior to commencement of experiments, demonstrating no significant overall difference between the fraction loadings from scorpions that were and were not subjected to the defensive pressure treatment.

Source	d.f.	Pillai	<i>F</i>	Df den	<i>P</i>
Offence	1	0.034	0.94	2, 54	0.39
Defence	1	0.029	0.81	2, 54	0.45
Defence × Offence	1	0.001	0.03	2, 54	0.97
Residuals	55				

Table 2: MANOVA results from venom collected from the third venom extraction, following a 21 day relaxation period from the preceding venom extraction. Results demonstrated no significant overall difference between the fraction loadings from scorpions that were and were not subjected to the defensive pressure treatment.

Source	d.f.	Pillai	<i>F</i>	Df den	<i>P</i>
Offence	1	0.047	1.18	2, 48	0.315
Defence	1	0.035	0.87	2, 48	0.427
Defence × Offence	1	0.015	0.36	2, 48	0.700
Residuals	49				

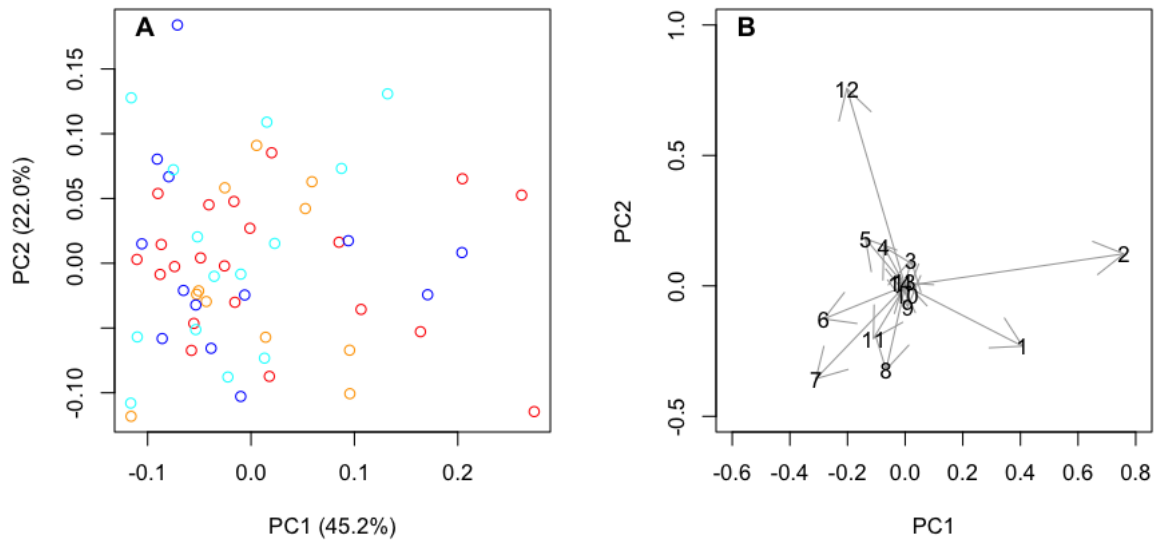


Figure 2. Loadings for principal components 1 and 2 from venom collected prior to commencement of experiments, separated into loadings for each scorpion (A) and loadings for each venom fraction (B, 14 total peaks) with fraction number indicated at the tips of each arrow. For clarity and consistency, colours are as per the curves presented in Figure 1; pressure for defensive venom treatment is indicated in dark (+ pressure for offensive venom) and light (- offensive pressure for offensive venom) blue, while data from scorpions not subjected to the pressure for defensive venom treatment are in red (+ pressure for offensive venom) and orange (- pressure for offensive venom). PC1 and PC2 described 45.2% and 22.0% of the overall variation, respectively.

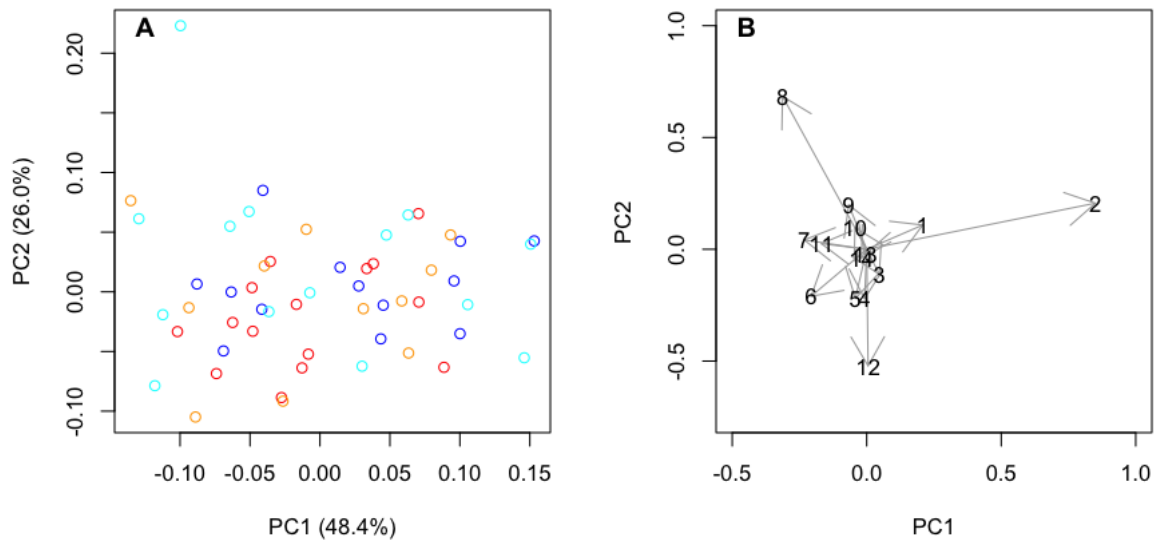


Figure 3. Loadings for principal components 1 and 2 from venom collected from the third venom extraction, following a 21 day relaxation period from the preceding venom extraction, separated into loadings for each scorpion (A) and loadings for each venom fraction (B, 14 total peaks) with fraction number indicated at the tips of each arrow. For clarity and consistency, colours are as per the curves presented in Figure 1; pressure for defensive venom treatment is indicated in dark (+ pressure for offensive venom) and light (- offensive pressure for offensive venom) blue, while data from scorpions not subjected to the pressure for defensive venom treatment are in red (+ pressure for offensive venom) and orange (- pressure for offensive venom). PC1 and PC2 described 53.6% and 25.4% of the overall variation, respectively.

Table 3: Results from two-sided t-tests evaluating statistically significant difference between vertebrate toxicity in each peak and the control (PBS solution), based on maximum drop in cell index.

Peak	t-score	df	<i>P</i>
1	3.58	2	0.070
2	4.48	2	0.046
3	13.61	2	0.005
4	10.46	2	0.009
5	15.15	1	0.042
6	9.70	1	0.065
7	11.35	2	0.008
8	5.60	2	0.030
9	3.41	1	0.182
10	14.02	2	0.005
11	16.50	2	0.004
12	7.77	1	0.081
13	2.86	1	0.214
14	1	1	0.500

Table 4: Results from Fisher's Exact Tests comparing the proportion of crickets paralyzed for >60 seconds by each peak to the control (PBS solution).

Peak	<i>P</i>
1	1
2	0.47
3	0.02
4	0.63
5+6	1
6	1
7	1
8	0.005
9	0.02
10	0.02
11	0.63
12	0.005
13	>0.001
14	0.005