

The following supplement accompanies the article

## Multiple and long-term effects of an introduced predatory crab

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Fig. S1. *Hemigrapsus oregonensis*. Histograms of carapace width across years for all trapped *H. oregonensis*

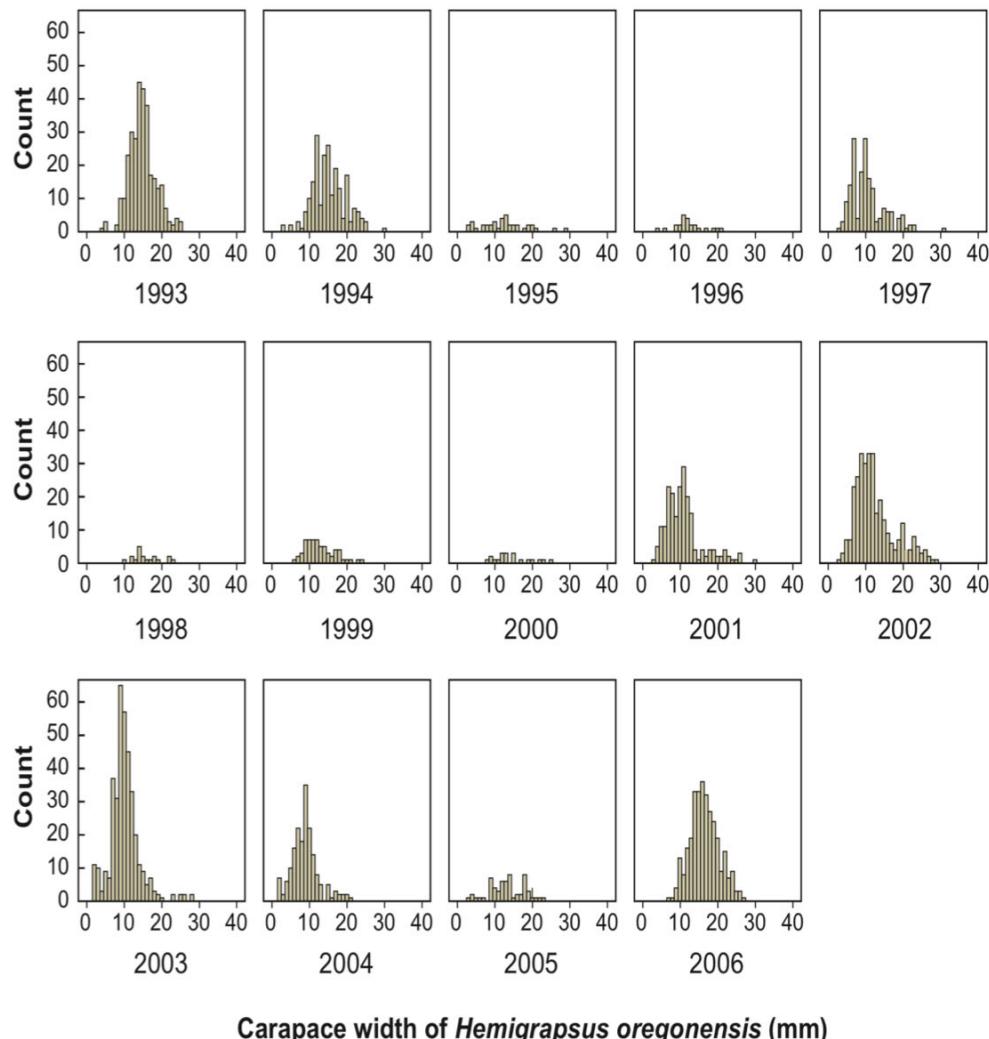


Fig. S2. *Carcinus maenas*, *Hemigrapsus oregonensis*. The numbers of *C. maenas* and *H. oregonensis* in pitfall traps versus Principal Component 3 (PC3; mean, maximum, and total annual rainfall). Least squares regression lines are shown for each species (*Hemigrapsus*:  $r^2 = 0.38$ ; *Carcinus*:  $r^2 = 0.26$ )

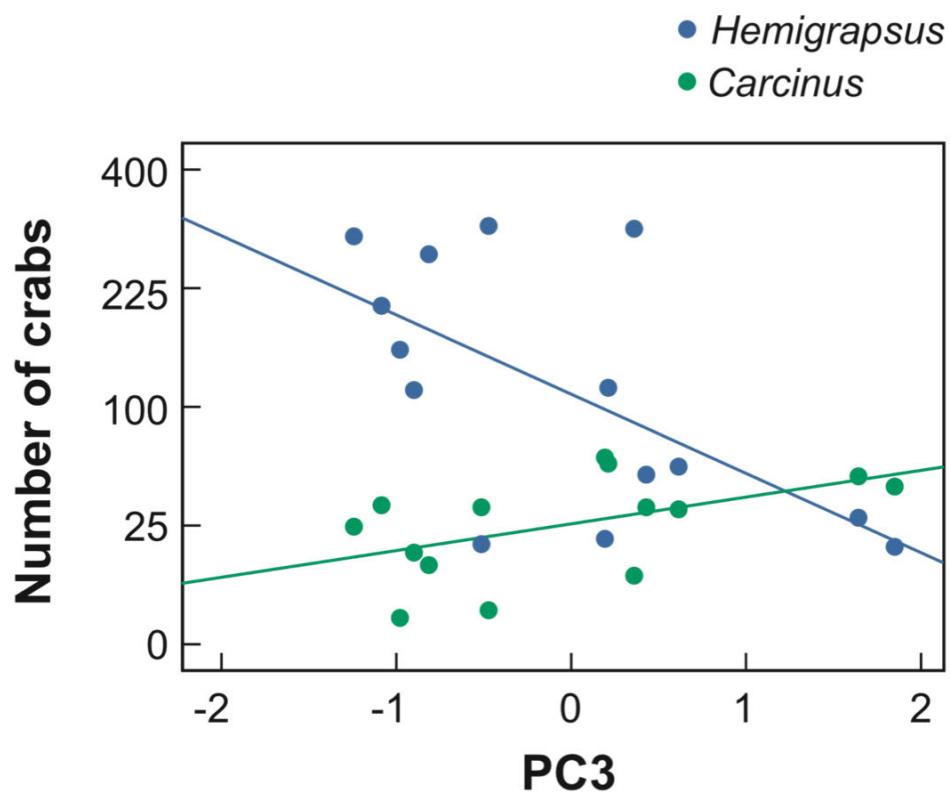


Table S1. *Hemigrapsus oregonensis*, *Carcinus maenas*. Correlation coefficients ( $r$ ) between the environmental principal components (PC1 to PC4) or variables and the crab population measures or time from Pearson correlation, with pairwise exclusions ( $n = 14$ ). Strong correlations ( $r \geq 0.5$ ,  $p \leq 0.07$ ) are in bold. SE: standard error; SST: sea-surface temperature; \*  $p \leq 0.05$ , \*\* $p \leq 0.01$

Variable	<i>Carcinus</i> abundance	<i>Hemigrapsus</i> abundance	<i>Hemigrapsus</i> size	Proportion of <i>Hemigrapsus</i> in the highest transect	Year
<i>Carcinus</i> abundance	1	<b>-0.69**</b>	0.35	-0.14	-0.46
<b>Principal components</b>					
PC1: high air temperature	0.20	0.19	0.39	$r < -0.01$	-0.47
PC2: annual SE of high air temperature	-0.24	0.22	-0.35	0.37	0.42
PC3: mean, max., total annual rainfall	<b>0.51</b>	<b>-0.62*</b>	<b>0.50</b>	<b>-0.58*</b>	-0.39
PC4: 3 d mean and max. SST	0.32	$r < 0.01$	-0.06	0.35	0.07
<b>Annual environmental</b>					
Mean rain		<b>-0.55</b>	0.39	-0.21	-0.16
Min. rain (sqrt)	0.03	0.14	-0.09	0.31	0.41
Max. rain	<b>0.65*</b>	$r = -0.56^*$	0.37	-0.20	-0.30
Total rain	<b>0.55*</b>	$r = -0.55^*$	0.47	-0.33	-0.23
Mean low air temperature	<b>0.50</b>	-0.12	<b>0.55*</b>	-0.30	<b>-0.69**</b>
SE low air temperature	-0.37	0.07	$r < -0.01$	-0.47	-0.15
Min. low air temperature	<b>0.51</b>	-0.06	0.45	-0.06	-0.52
Mean high air temperature	0.33	0.15	0.26	0.11	-0.42
SE high air temperature	-0.25	0.22	<b>-0.51</b>	0.42	0.35
Max. high air temperature	0.08	0.26	-0.06	0.31	-0.10
Mean SST	0.14	-0.06	0.13	-0.03	0.02
SE SST (sqrt)	-0.03	-0.31	0.03	<b>-0.56*</b>	0.29
Min. SST	-0.01	0.16	0.09	0.10	0.13
Max. SST	-0.15	-0.06	-0.10	-0.20	0.01
<b>3 d environmental</b>					
High air temperature	-0.26	<b>0.52</b>	0.47	-0.10	-0.43
Low air temperature	0.17	-0.10	0.43	-0.14	<b>-0.57*</b>
Mean SST	0.36	-0.08	0.04	0.21	-0.10
SE SST	-0.01	0.17	-0.23	<b>0.61*</b>	0.26
Min. SST	0.30	-0.02	0.15	-0.07	-0.18
Max. SST	0.20	0.18	-0.01	0.29	-0.02