

**Supplementary material**

**Evaluation of open- and closed-eyed entrances on retention and escape of invasive swimming crabs and associated fauna from pots in their native range**

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**Table S1. Number of organisms and by-catch caught in open-eyed entrance pots and closed-eyed entrance pots after 24-h soaking time**

Highly significant differences are shown as: \*\*\*,  $P < 0.001$

Catch organisms	Open-eyed entrance pot			Closed-eyed entrance pot		
	Numbers	Proportion	Mean size (range) (cm)	Numbers	Proportion	Mean size (range) (cm)
<b>Crab catch</b>						
Four-lobed swimming crab	365	0.71	5.8 (3.6–7.4)	438	0.65	5.8 (3.1–8.5)
Red swimming crab	3	0.01	8.6 (7.9–9.6)	4	0.01	7.6 (6.2–8.5)
Shore swimming crab	11	0.02	9.1 (7.5–10.6)	17	0.03	8.7 (6.5–11.0)
Blue swimming crab	6	0.01	12.6 (12.0–13.0)	8	0.01	12.7 (7.2–14.3)
Xanthid crab	3	0.01	7.2 (6.7–7.4)			
Total crab	388	0.75		467	0.69	
<b>Non-target organisms</b>						
Hermit crab	8	0.02	2.5 (1.4–3.6)	19	0.03	2.9 (2.2–3.5)
Red shrimp	3	0.01	6.4 (3.4–8.2)	4	0.01	6.6 (5.0–8.4)
Green shrimp	1	0.00	4.6	2	0.00	4.3 (4.3–4.3)
Total non-target crustacean	12	0.03		25	0.04	
Moray eel	2	0.00	68.5 (65.0–72.0)	24	0.04	58.7 (41.5–73.5)
Conger eel				3	0.00	62.6 (58.2–69.0)
Total large fish	2	0.00		27***	0.04	
Marbled rockfish	3	0.01	18.7 (16.3–20.0)	1	0.00	19.6
Catfish	4	0.01	14.1 (10.2–19.2)	5	0.01	15.2 (10.1–23.0)
Total medium fish	7	0.02		6	0.01	
Goby				1	0.00	8.1
Cardinal fish	2	0.00	8.7 (8.2–9.2)	2	0.00	8.5 (8.0–9.0)
Neon damselfish	48	0.09	8.42 (5.8–11.5)	66	0.10	8.4 (4.9–10.1)
Total small fish	50	0.09		69	0.10	
Ivory shell	4	0.01		7	0.01	
Snail	20	0.04		48	0.07	
Octopus	20	0.04	2.3kg (0.2–4.0)	16	0.02	2.3kg (0.5–4.2)
Sea Hare	7	0.01		6	0.01	
Sea cucumber	4	0.01		2	0.00	
Jellyfish	1	0.00				
Total mollusc and others	56	0.11		79	0.11	
Total catch	515			673		
Total by-catch	127	0.25		306	0.31	
Number of pots	100			100		
By-catch per pot	1.27			2.06		

**Table S2. Number of trapped organisms and by-catch during four consecutive days in open-eyed entrance and closed-eyed entrance pots**

Catch organisms	Number of organisms in pot				Sum	Number of escapees	Number of deaths	Individuals caught	Retention index	Escape rate	Mean size (range) (cm)
	1	2	3	4							
Open-eyed entrance											
Crab catch											
Four-lobed swimming crab	76	83	80	78	317	24	2	102	0.24	0.08	5.7 (4.1–7.4)
Shore swimming crab	6	7	9	10	32		1	10	0.00	0.00	8.8 (7.4–10.8)
Blue swimming crab	5	4	6	5	20	1		7	0.14	0.05	13.1 (10.1–14.6)
Xanthid crab	0	1	1	1	3			1	0.00	0.00	5.4
Total crab	87	95	96	94	372	25	3	120	0.21	0.07	
Non-target organisms											
Hermit crab	2	2	2	2	8			2	0.00	0.00	3.3 (2.4–4.1)
Carpenter prawn	0	0	0	1	1			1	0.00	0.00	4.6
Total non-target crustacean	2	2	2	3	9			3	0.00	0.00	
Moray eel (Total large fish)	1	0	0	0	1	1		1	1.00	1.00	64
Marbled rockfish	1	3	2	0	6	5		5	1.00	0.83	18.7 (14.8–21.9)
Catfish	4	1	3	1	9	5	1	6	1.00	0.63	14.7 (11.2–19.8)
Total medium fish	5	4	5	1	15	10	1	11	1.00	0.71	
Cardinal fish								0			
Goby	2	0	0	0	2	2		2	1.00	1.00	11.0 (10.1–11.8)
Neon damselfish	12	5	7	5	29	22		27	0.81	0.76	8.6 (7.2–10.9)
Total small fish	14	5	7	5	31	24		29	0.83	0.77	
Snail	9	1	12	9	31	10		21	0.48	0.32	
Sea Hare	1	2	5	5	13			5	0.00	0.00	
Sea cucumber	0	0	1	2	3			2	0.00	0.00	
Total mollusc and others	10	3	18	16	47	10		28	0.36	0.21	
Total by-catch	32	14	32	25	103	45	1	72	0.63	0.44	
Total catch	119	109	128	119	475	70	4	192	0.37	0.15	
Closed-eyed entrance											
Crab catch											
Four-lobed swimming crab	106	112	115	115	448	10	4	125	0.08	0.02	5.9 (4.2–7.4)
Shore swimming crab	11	12	13	13	49		1	13	0.00	0.00	8.4 (6.3–10.1)
Blue swimming crab	2	3	4	4	13			4	0.00	0.00	13.6 (12.4–15.6)
Xanthid crab	1	1	1	1	4			1	0.00	0.00	9
Total crab	120	128	133	133	514	10	5	143	0.07	0.02	
Non-target organisms											
Hermit crab	1	1	3	3	8			3	0.00	0.00	2.7 (2.3–3.5)
Carpenter prawn								0			
Total non-target crustacean	1	1	3	3	8			3	0.00	0.00	
Moray eel (Total large fish)	10	10	12	15	47	2		17	0.12	0.04	57.4 (38.5–67.5)

Catch organisms	Number of organisms in pot				Sum	Number of escapees	Number of deaths	Individuals caught	Retention index	Escape rate	Mean size (range) (cm)
	Day 1	Day 2	Day 3	Day 4							
Marbled rockfish								0			
Catfish	3	4	10	18	35	2	1	21	0.10	0.06	17.5 (5.2–24.2)
Total medium fish	3	4	10	18	35	2	1	21	0.10	0.06	
Cardinal fish	1	0	0	0	1	1		1	1.00	1.00	9.7
Goby	1	0	0	0	1	1		1	1.00	1.00	7.2
Neon damselfish	14	14	15	15	58	4		19	0.21	0.07	8.8 (7.6–10.3)
Total small fish	16	14	15	15	60	6		21	0.29	0.10	
Snail	24	14	16	18	72	17		43	0.40	0.24	
Sea Hare	1	1	2	4	8	1		5	0.20	0.13	
Sea cucumber	0	1	4	6	11			6	0.00	0.00	
Total mollusc and others	25	16	22	28	91	18		54	0.33	0.20	
Total by-catch	55	45	62	79	241	28	1	116	0.24	0.12	
Total catch	175	173	195	212	755	38	6	259	0.15	0.05	