

Supplementary material

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Table S1

Mongoose bodyweights on the day of arrival in the laboratory study.

ID #	Sex	Pre-test weight (g)
M2214	F	578.0
M2202	F	466.0
M2204	F	459.0
M2201	F	447.0
M2215	F	443.0
M2203	F	429.0
M2216	F	407.0
M2217	F	368.0
M2209	M	911.0
M2208	M	874.0
M2210	M	857.0
M2213	M	754.0
M2207	M	686.0
M2212	M	589.0
M2206	M	577.0
M2211	M	490.0
Males Only		Mean: 717.30
		SD: 156.63
		Min: 490.0
		Max: 911.0
Females Only		Mean: 449.60
		SD: 60.70
		Min: 368.0
		Max: 578.0

Table S2

Analysis of field camera images of mongoose and non-targets at bait stations and descriptive statistics in the field study.

ID	Type	Location	Total Images	Mongoose Images	Time to			Nontarget Images	Nontarget Species
					First Arrival (hh:mm)	Earliest Arrival (hours)	Latest Arrival (hours)		
1A	Prototype	Conservation	483	483	02:50	0534	1850	0	
2A	Prototype	Conservation	447	446	01:04	0429	2016	1	Rat
3A	Prototype	Conservation	429	419	21:53	0547	1903	10	Goat, cat
4A	Prototype	Conservation	155	150	05:28	0556	1857	5	Pig
5A	Prototype	Conservation	127	127	31:42	0612	1822	0	
6A	Prototype	Port of Entry	367	367	02:08	0439	1945	0	
7A	Prototype	Port of Entry	460	443	27:34	0520	1832	17	Rat
8A	Prototype	Port of Entry	536	532	44:03	0757	1852	4	Myna bird
9A	Prototype	Port of Entry	454	454	22:29	0513	1617	0	
10A	Prototype	Port of Entry	162	162	23:45	0630	1823	0	
1B	Protecta LP	Conservation	653	648	01:16	0617	1904	5	Pig, chicken
2B	Protecta LP	Conservation	19	19	00:29	0612	1602	0	
3B	Protecta LP	Conservation	67	57	19:58	0628	1830	10	Pig, goat
4B	Protecta LP	Conservation	221	221	03:29	0909	1930	0	
5B	Protecta LP	Conservation	68	63	06:03	0753	1814	5	Rat
6B	Protecta LP	Port of Entry	48	46	21:03	0513	1524	2	Rat
7B	Protecta LP	Port of Entry	111	103	68:52	0705	1809	8	Rat
8B	Protecta LP	Port of Entry	204	199	04:04	0603	1716	5	Rat
9B	Protecta LP	Port of Entry	142	142	00:14	0725	1548	0	
10B	Protecta LP	Port of Entry	177	175	48:28	0743	1647	2	Pig
All			Mean: 266.50	263.30	18:07	0621	1806	3.70	
			SD: 191.29	218.44	19.05	0.05	0.06	4.61	
			Min: 19	19	00:14	0429	1524	0	
			Max: 653	648	68:52	0909	2016	17	
Prototype			Mean: 362	358.30	18:10	0545	1843	3.70	
			SD: 153.77	152.36	14.71	0.04	0.04	5.72	
			Min: 127	127	01:04	0429	1617	0	
			Max: 536	532	44:03	0757	2016	17	
Protecta LP			Mean: 171	167.30	17:24	0656	1728	3.70	
			SD: 182.59	182.44	23.44	0.05	0.06	3.50	
			Min: 19	19	00:14	0513	1524	0	
			Max: 653	648	68:52	0909	1930	10	
Conservation			Mean: 266.90	263.30	10:00	0623	1840	3.60	
			SD: 218.50	218.44	10.69	0.05	0.05	4.03	
			Min: 19	19	00:29	0429	1602	0	
			Max: 653	648	31:42	0909	2016	10	
Port of Entry			Mean: 248.09	262.30	26:12	0618	1731	3.80	
			SD: 173.57	170.43	22.11	0.05	0.06	5.35	
			Min: 48	46	00:14	0439	1524	0	
			Max: 536	532	68:52	0757	1945	17	

Table S3

T-test results of mongoose and non-target field camera images at bait stations by type and site in the field study.

Time (hh:mm) Until First Mongoose Arrival at Bait Station

Independent variables	N	mean	variance	df	t-stat	p value
Site						
Conservation	10	09:21	118.82	18	-2.17	0.022
Port of Entry	10	26:12	488.80			
Bait station type						
Prototype	10	18:09	216.50	18	0.09	0.461
Protecta LP	10	17:24	549.52			

Number of Mongoose Images at Bait Station

Independent variables	N	mean	variance	df	t-stat	p value
Site						
Conservation	10	263.3	47716.68	18	0.011	0.495
Port of Entry	10	262.3	29047.12			
Bait station type						
Prototype	10	358.3	23214.23	18	2.54	0.010
Protecta LP	10	167.3	33282.90			

Number of Non-target Images at Bait Station

Independent variables	N	mean	variance	df	t-stat	p value
Site						
Conservation	10	3.6	16.27	18	-0.09	0.463
Port of Entry	10	3.8	28.62			
Bait station type						
Prototype	10	3.7	32.67	18	0	0.5
Protecta LP	10	3.7	12.23			

Number of Camera Images at Bait Station

Independent variable	N	mean	variance	df	t-stat	p value
Species						
Mongoose Images	20	262.8	36362.06	19	6.09	<0.0001
Non-target Images	20	3.7	21.27			

Table S4

Number of days until Non-toxic Fish-based Bait for Mongooses bait was completely consumed at bait stations by bait station type and site (*t*-test results) in the field study.

Independent variables	N	mean	variance	df	t-stat	p value
Site						
Conservation Area	10	1.7	0.68	18	-2.92	0.005
Port of Entry	10	3.7	4.01			
Bait station type						
Prototype	10	3.2	2.62	18	1.25	0.113
Protecta LP	10	2.2	3.73			

Table S5

Non-toxic Fish-based Bait for Mongooses daily spillage (percent remaining) by bait station type and site (*t*-test results) in the field study.

Independent variables	N	mean	variance	df	t-stat	p value
Site						
Conservation	40	0.38%	<0.0001	88	-0.58	0.281
Port of Entry	50	0.48%	0.0001			
Bait station type						
Prototype	45	0.32%	<0.0001	88	-1.12	0.133
Protecta LP	45	0.53%	0.0001			

Figure S1

Two pieces of the Fish-based Bait for Mongooses (~35 grams each) manufactured by Animal Control Technologies Australia (ACTA), Establishment No.: 091731-AUS-001.



Figure S2

Four separate artificial test enclosures staged at the NWRC Hawaii Field Station.



Figure S3
Prototype Bait Station, PVC “L” shaped design, deployed at the field sites.



Figure S4

Tamper-resistant commercial (Protecta® LP) bait stations deployed at the field sites.



Figure S5

Images of earliest (A) and latest (B) recorded mongoose bait station visits.

(A)



(B)



Figure S6

Images of spillage (A) inside the bait station and (B) bait wrappers (biodegradable) outside of the bait station.

(A)



(B)



Figure S7

Images of a rat (*Rattus exulans*) entering the bait station (A) and of the bait the following day (B).

(A)



(B)



Figure S8

Images of invertebrate presence in bait stations (A) slugs and (B) ants.



Figure S9

Game camera image of mongoose activity at a modified prototype C bait station (A) and a Protecta[®] LP bait station (B) at field sites.

(A)



(B)

