

Appendices

Appendix 1 GPS coordinates of location of lesser frigatebird colonies at East Island

Colony	Latitude	Longitude	No. birds	Extension (m)
E100-A			80	7 m
E100-B			184	15–20 m
E100-C			58	5.5 m
E100-D			14	3 m
E101-E			34	6 m
E101-F			8	7 m
E102-G			92	8 m
E102-H			40	6 m
E102-I			27	5 m
E102-J			40	3 m
E103-K			70	10 m
E103-L			41	10 m
E103-M			59	12 m
E104-N			33	5 m
E104-O			16	4 m
E105-P			30	6 m
E105-Q			2	1 m
E105-R			5	2

Appendix 2 GPS coordinates of location of lesser frigatebird (FB) and crested tern (CT) colonies, red-footed booby (RFB) – brown morph (b) and white morph (w) – and eastern reef egrets nest on Middle Island

Colony	Latitude	Longitude	No. birds	Extension
B01			68 (CT)	3.5 m
B02-A			4 (FB)	2 m
B02-B			4 (FB)-2(RFB, 1w+1b on nest)	4 m
B02-C			2 (FB)	2 m
B03-A			1 (FB)-1 (RFB,b on nest)	5 m
B03-B			1(RFB,b on nest)	4 m
B04-A			1(RFB,b on nest)	1 m
B04-B			1 (FB) – 1(RFB,b)	5 m
B05			1(FB)	2 m
B06			3 (FB) – 1 (ERE)	2.5 m
B07			1 (RFB,b)	1.5 m
B08			4 (FB) – 6 (RFB,5w on nest+1b)	4 m
B09			1 (FB) – 5 (RFB, 1w on nest+ 4b)	
B10			10 (FB) – 16 (RFB, 13 w on nest, 3 b)	10 m
B12			8 (FB) 3 (RFB w on nest)	5 m
B13			5 (CT)	0.8 m
B14			65 (FB)	7 m
B15			22 (FB)	15 m
B23			39 (FB)	15 m
B24			6 (FB)	3 m
B25 A			95 (FB)	25 m
B25 B			58 (FB)	10 m
B26 A			29 (FB)	6 m
B26 B			7 (FB)	4 m
B27 A			1 (RFB on nest)	3 m
B27 B			2 (FB)	2 m

Appendix 3 Coordinates of location of eastern reef egret nests on Middle Island

In brackets the stage of chick development (for stage codes see Section 3.5.1 'Methods')

	Latitude	Longitude	Eggs	Chicks	Notes
N02	-12.24033000	122.96702000	3		
N05	-12.24038000	122.96511000	3		
N06	-12.24034000	122.96492000	2	1(1)	BIG CLUMP 10 M
N06	-12.24034000	122.96492000	2		BIG CLUMP 10 M
N06	-12.24034000	122.96492000		2(3)	BIG CLUMP 10 M
N06	-12.24034000	122.96492000		3(2)	BIG CLUMP 10 M
N06	-12.24034000	122.96492000	3		BIG CLUMP 10 M
N06	-12.24034000	122.96492000		2(4)	BIG CLUMP 10 M
N07	-12.24057000	122.96386000		2(5)	
N09	-12.24069000	122.96317000	3		RADIUS 20 M
N13	-12.24182000	122.96301000	4		
N13	-12.24182000	122.96301000		2(5)	ON GROUND
N14	-12.24205000	122.96322000	3		
N15	-12.24222000	122.96329000		2(3)	
N19	-12.24282000	122.96413000	3		
N21	-12.24294000	122.96430000	3		RADIUS 7 M
N21	-12.24294000	122.96430000	5		
N22	-12.24311000	122.96461000	3		
N23	-12.24311000	122.96472000	3		
N25	-12.24345000	122.96543000		1(5)	RADIUS 4 M
N26B	-12.24365000	122.96575000		1(3)	
N28	-12.24377000	122.96625000		3	
N29-30	-12.24385000	122.96637000		1	
N29-30	-12.24385000	122.96637000		1(3)	
N31	-12.24375000	122.96658000	1		RADIUS 10 M
N32	-12.24403000	122.96684000		2(5)	
N32	-12.24403000	122.96684000	1	1(2)	
N33	-12.24398000	122.96710000		2(3)	10 M SOUTH OF N33
N34-35	-12.24356000	122.96725000		1(2)	
N34-35	-12.24356000	122.96725000	3		
N34-35	-12.24356000	122.96725000	3		
N34-35	-12.24356000	122.96725000		2(2)	
N34-35	-12.24356000	122.96725000		2(4)	
N34-35	-12.24356000	122.96725000		2(4)	
N36	-12.24405000	122.96751000		1(5)	
N36	-12.24405000	122.96751000		2(4)	
N37	-12.24424000	122.96717000		2(5)	
N38	-12.24433000	122.96751000		1(5)	

	Latitude	Longitude	Eggs	Chicks	Notes
N41	-12.24422000	122.96822000		2(4)	
N42	-12.24406000	122.96830000		1(3)	
N43	-12.24407000	122.96792000		2(3)	
N43	-12.24407000	122.96792000	1	2(2)	
N43	-12.24407000	122.96792000	3		
N44	-12.24369000	122.96798000	2	1(2)	
N45	-12.24335000	122.97011000		1(4)	
N47	-12.24371000	122.97033000	3		
N49	-12.24425000	122.97073000		1(5)	
N50	-12.24428000	122.97064000		1(4)	
N52	-12.24438000	122.97039000		1(4)	
N52	-12.24438000	122.97039000		2(2)	
N53	-12.24410000	122.97028000		3(4)	
N54	-12.24453000	122.97019000		1(5)	
N55	-12.24453000	122.96987000		1(4)	
N56	-12.24453000	122.96945000		1(5)	
N57	-12.24454000	122.96927000		1(5)	

Appendix 4 Counts of seabirds (adults – otherwise specified juvenile) on West, East and Middle Island at the time of the survey in November 2004

Numbers in brackets indicate numbers of active nests, numbers with an asterisk (*) are count estimates.

Common name	Scientific name	West Island	East Island	Middle Island	Estimated total pairs
Red-tailed tropicbird	<i>Phaeton rubricauda</i>	4 (2)			2
Masked booby	<i>Sula dactylatra</i>	-	4 (1)	15	9
Red-footed booby	<i>Sula sula</i>	-	-	32	16
Brown booby	<i>Sula leucogaster</i>	-	1520* (10–20)	2800* (33)	2160
Lesser frigatebird	<i>Fregata ariel</i>	-	833 juv	339 juv	1272
Sooty tern	<i>Sterna fuscata</i>	-	30000*	19000*	24500
Common noddy	<i>Anous stolidus</i>	-	13500* juv	8100* juv	21500
Crested tern	<i>Setrna bergii</i>	-	-	73	73

Appendix 5 Opportunistic counts of shorebirds at West, Middle and East Islands, Ashmore Reef, November 2004

Common name	Scientific name	West Island	East Island	Middle Island
Nankeen night heron	<i>Nycticorax caledonicus</i>	-	8	-
Buff-banded rail	<i>Gallirallus philippensis</i>	-	3	5
Ruddy turnstone	<i>Arenaria interpres</i>	3	9	30
Bar-tailed godwit	<i>Limosa lapponica</i>		25	200
Whimbrel	<i>Numenius phaeopus</i>	16	178	6
Common greenshank	<i>Tringa nebularia</i>			
Terek sandpiper	<i>Tringa cinereus</i>	-	-	2
Common sandpiper	<i>Tringa hypoleucos</i>	1	-	-
Great knot	<i>Calidris tenuirostris</i>	-	41	-
Grey-tailed tattler	<i>Heteroscelus brevipes</i>	4	8	4
Sanderling	<i>Calidris alba</i>	-	2	3
Red-necked stint	<i>Calidris ruficollis</i>	-	-	5
Pacific golden plover	<i>Pluvialis fulva</i>	1	3	12
Lesser sand plover	<i>Charadrius mongolus</i>	-	-	1
Greater sand plover	<i>Charadrius leschenaultii</i>	37	3	2
Oriental plover	<i>Charadrius veredus</i>	8	1	-
Total		70	281	270

Appendix 6 GPS coordinates of points delimiting the transects along which fresh turtle tracks were counted on West Island on the 17th of November 2004

Waypoint	Latitude	Longitude	No. fresh tracks
T01	-12.24448000	122.97120000	14
T02	-12.24344000	122.97038000	10
T03	-12.24187000	122.96915000	4
T05	-12.24044000	122.96755000	1
T06	-12.24038000	122.96605000	11
T07	-12.24032000	122.96484000	4
T08	-12.24043000	122.96340000	3
T10	-12.24087000	122.96275000	14
T11	-12.24204000	122.96291000	1
T12	-12.24306000	122.96424000	2
T13	-12.24402000	122.96639000	0
T14	-12.24476000	122.96927000	0
T15	-12.24472000	122.97016000	

Appendix 7 List of GPS way-point readings (using WGS 84) for each island

West Island			Middle Island			East Island		
Waypoint	Latitude	Longitude	Waypoint	Latitude	Longitude	Waypoint	Latitude	Longitude
W01	-12.24448	122.97105	M01	-12.26394	123.03228	E01	-12.26242	123.09829
W02	-12.24437	122.97026	M02	-12.26438	123.03231	E02	-12.26247	123.09775
W03	-12.24433	122.96952	M03	-12.26437	123.03185	E03	-12.26243	123.09716
W04	-12.24429	122.96879	M04	-12.26440	123.03278	E04	-12.26251	123.09666
W05	-12.24425	122.96806	M05	-12.26441	123.03326	E05	-12.26218	123.09613
W06	-12.24427	122.96732	M06	-12.26440	123.03375	E07	-12.26221	123.09619
W07	-12.24424	122.96690	M07	-12.26487	123.03422	E06	-12.26225	123.09617
W08	-12.24357	122.96733	M08	-12.26485	123.03373	E08	-12.26216	123.09597
W09	-12.24356	122.96663	M09	-12.26487	123.03327	E09	-12.26214	123.09590
W10	-12.24352	122.96590	M10	-12.26485	123.03283	E10	-12.26218	123.09594
W11	-12.24361	122.96807	M11	-12.26482	123.03237	E11	-12.26189	123.09611
W12	-12.24366	122.96878	M12	-12.26480	123.03194	E12	-12.26188	123.09559
W13	-12.24369	122.96951	M13	-12.26479	123.03148	E13	-12.26182	123.09515
W14	-12.24380	122.96989	M14	-12.26523	123.03101	E14	-12.26187	123.09657
W15	-12.24373	122.97025	M15	-12.26523	123.03147	E15	-12.26183	123.09714
W16	-12.24297	122.96953	M16	-12.26527	123.03195	E16	-12.26179	123.09770
W17	-12.24295	122.96882	M17	-12.26512	123.03223	E17	-12.26114	123.09775
W18	-12.24291	122.96807	M18	-12.26530	123.03243	E18	-12.26118	123.09722
W19	-12.24287	122.96735	M19	-12.26533	123.03289	E19	-12.26124	123.09683
W20	-12.24284	122.96665	M20	-12.26534	123.03337	E20	-12.26124	123.09658
W21	-12.24278	122.96583	M21	-12.26537	123.03382	E21	-12.26128	123.09606
W22	-12.24278	122.96512	M22	-12.26538	123.03429	E22	-12.26126	123.09545
W23	-12.24272	122.96435	M23	-12.26540	123.03476	E23	-12.26124	123.09481
W24	-12.24189	122.96359	M24	-12.26590	123.03522	E24	-12.26116	123.09424
W25	-12.24184	122.96284	M25	-12.26590	123.03481	E25	-12.26062	123.09429
W26	-12.24192	122.96433	M26	-12.26588	123.03430	E26	-12.26062	123.09479
W27	-12.24194	122.96506	M27	-12.26586	123.03384	E27	-12.26057	123.09531
W28	-12.24197	122.96578	M28	-12.26585	123.03338	E28	-12.26055	123.09582
W29	-12.24199	122.96653	M29	-12.26584	123.03291	E29	-12.26050	123.09639
W30	-12.24199	122.96727	M30	-12.26581	123.03245	E30	-12.26045	123.09693
W31	-12.24198	122.96809	M31	-12.26579	123.03200	E31	-12.26044	123.09760
W32	-12.24199	122.96883	M32	-12.26578	123.03153	E32	-12.25993	123.09748
W33	-12.24120	122.96866	M33	-12.26576	123.03107	E33	-12.25994	123.09688
W34	-12.24119	122.96792	M34	-12.26622	123.03152	E34	-12.26001	123.09638
W35	-12.24119	122.96723	M35	-12.26622	123.03198	E35	-12.26008	123.09616
W36	-12.24117	122.96649	M36	-12.26624	123.03246	E36	-12.26003	123.09583
W37	-12.24114	122.96576	M37	-12.26626	123.03291	E37	-12.26004	123.09528
W38	-12.24112	122.96503	M38	-12.26627	123.03338	E38	-12.26004	123.09477
W39	-12.24112	122.96433	M39	-12.26629	123.03383	E39	-12.26002	123.09431
W40	-12.24111	122.96360	M40	-12.26630	123.03431	E40	-12.25949	123.09519
W41	-12.24108	122.96279	M41	-12.26631	123.03478	E41	-12.25937	123.09575
W42	-12.24034	122.96362	M42	-12.26633	123.03528	E42	-12.25939	123.09623
W43	-12.24042	122.96431	M43	-12.26632	123.03571	E43	-12.25939	123.09674
W44	-12.24056	122.96494	M44	-12.26663	123.03526			
W45	-12.24041	122.96576	M45	-12.26676	123.03478			
W46	-12.24045	122.96651	M46	-12.26674	123.03433			
W47	-12.24047	122.96726	M47	-12.26670	123.03387			
W48	-12.24060	122.96796	M48	-12.26666	123.03343			
WIWELL	-12.24144	122.96860	M49	-12.26664	123.03299			
			M50	-12.26660	123.03254			
			M51	-12.26394	123.03282			

Appendix 8 Ant abundance and numbers caught in traps

Table A8.1 Ant numbers caught in the pitfall traps at West Island *

Way Point	Vegetation	Night Interval			Day Interval		
		<i>Solenopsis geminata</i>	<i>Paratrechina longicornis</i>	Other ants	<i>Solenopsis geminata</i>	<i>Paratrechina longicornis</i>	Other ants
W01	Under <i>Argusia</i>	Tube full of sand. Sample discarded			0	0	
W02	Under <i>Argusia</i>	0	7	<i>Cardiocondyla</i> sp. x 2	1	4	<i>Cardiocondyla</i> sp. x 1
W03	Near <i>Ipomoea</i>	0	0	0	0	0	0
W04	Open dry grass	11	0	0	9	0	0
W05	Open dry grass	0	0	0	1	0	0
W06	Bare ground	0	57	0	0	11	0
W07	on beach	0	5	0	0	10	0
W08	open dry grass	0	0	0	0	0	0
W09	open dry grass	1	0	0	0	0	0
W10	open dry grass	1	1	0	0	0	0
W11	open dry grass	0	0	0	0	0	0
W12	open dry grass	0	0	0	0	0	0
W13	open dry grass	0	0	0	0	0	0
W14	bare ground, near Indon graves under <i>Cocos nucifera</i>	1	1	0	4	1	0
W15	open dry grass	Tube pulled out. Ethanol remained intact			0	0	0
W16	open dry grass	0	0	0	0	0	0
W17	long dry grass	10	0	0	1	0	0
W18	long dry grass	0	0	0	0	0	0
W19	long dry grass	0	0	0	0	0	0
W20	long dry grass	1	0	0	0	0	0
W21	long dry grass	0	0	0	0	0	0
W22	long dry grass	0	0	0	0	0	0
W23	open dry grass	0	0	0	0	0	0
W24	long dry grass	0	0	<i>Tetramorium simillimum</i> x 1	1	0	0
W25	on beach	Tube pulled out. Ethanol emptied.			0	0	0
W26	long dry grass	0	0	0	0	0	0
W27	open dry grass	0	0	0	0	0	0
W28	rocky sand	5	0	0	0	0	0
W29	rocky sand	53	0	0	0	0	0
W30	rocky sand, near well & pole	18	0	0	0	0	0
W31	long dry grass	0	0	0	0	0	0
W32	bare sand	0	0	0	0	0	<i>Cardiocondyla</i> sp. x 1
W33	beach dune	4	11	0	1	4	0
W34	long dry grass	0	0	0	0	0	0
W35	long dry grass	0	0	0	0	0	0
W36	long dry grass	0	0	<i>Tetramorium simillimum</i> x 8	0	0	0
W37	long dry grass	0	0	0	0	0	0
W38	long dry grass	0	2	<i>Cardiocondyla</i> sp. x 1; <i>Tetramorium simillimum</i> x 2	0	0	0
W39	long dry grass/ <i>Ipomoea</i>	0	5	<i>Tetramorium simillimum</i> x 1	0	0	0
W40	open dry grass	0	0	0	0	0	0
W41	beach dune	2	5	0	23	4	0
W42	beach dune	21	8	0	1	3	0
W43	beach dune	0	13	0	0	36	0
W44	edge of <i>Spinifex</i>	0	5	0	2	22	<i>Cardiocondyla</i> sp. x 3
W45	beach dune	0	47	0	0	24	0
W46	beach dune under <i>Argusia</i>	0	1	<i>Tetramorium simillimum</i> x 4	0	1	<i>Tetramorium simillimum</i> x 1
W47	long dry grass	0	0	0	0	0	0
W48	beach dune	7	0	0	1	0	0

* (average night interval 17hr 28min; average day Interval 7hr 45min)

Table A8.2 Ant abundance in the three bait stations at West Island *

Way Point	Honey Rating		Peanut Butter Rating		Tuna Rating		Bird colony proximity	Predominate species
	<i>Solenopsis geminata</i>	Other ant species	<i>Solenopsis geminata</i>	Other ant species	<i>Solenopsis geminata</i>	Other ant species		
W01	Destroyed		Destroyed		Destroyed		nil	nil
W02	Abandoned		1	0	3	<i>Paratrechina longicornis</i> – 1	nil	nil
W03	0	0	3	0	0	0	nil	nil
W04	3	0	3	0	2	0	nil	nil
W05	0	0	3	0	Abandoned		nil	nil
W06	2	<i>Paratrechina longicornis</i> – 2	1	0	2	0	nil	nil
W07	0	<i>Paratrechina longicornis</i> – 2	Abandoned	0	1	0	nil	nil
W08	0	0	0	0	0	0	nil	nil
W09	0	0	4	0	0	0	nil	nil
W10	0	0	0	0	0	0	nil	nil
W11	0	0	0	0	0	0	nil	nil
W12	0	0	0	0	0	0	nil	nil
W13	0	<i>Monomorium</i> sp. – 3	0	<i>Monomorium</i> sp. – 2	0	0	nil	nil
W14	3	<i>Paratrechina longicornis</i> – 2	1	0	2	<i>Paratrechina longicornis</i> – 1	nil	nil
W15	0	0	0	0	0	0	nil	nil
W16	4	0	0	0	0	0	nil	nil
W17	1	0	0	0	0	<i>Tetramorium simillimum</i> – 1	nil	nil
W18	0	0	0	0	0	0	nil	nil
W19	0	0	0	0	0	0	nil	nil
W20	0	0	0	0	0	0	nil	nil
W21	0	0	0	<i>Tetramorium simillimum</i> – 1	0	0	nil	nil
W22	0	0	0	0	0	0	nil	nil
W23	3	0	3	0	1	0	nil	nil
W24	0	0	0	0	0	0	nil	nil
W25	0	0	0	0	0	0	nil	nil
W26	0	0	0	0	0	0	nil	nil
W27	1	0	0	0	2	0	nil	nil
W28	4	0	0	0	0	0	nil	nil
W29	2	0	3	0	0	0	nil	nil
W30	0	0	0	0	0	0	nil	nil
W31	0	0	0	0	0	0	nil	nil
W32	0	0	Abandoned		Abandoned		nil	nil
W33	0	0	2	0	Abandoned		nil	nil
W34	0	0	0	0	0	0	nil	nil
W35	0	<i>Tetramorium simillimum</i> – 1	0	0	0	<i>Tetramorium simillimum</i> – 1	nil	nil
W36	Abandoned	0	1	<i>Tetramorium simillimum</i> - 1	2	<i>Tetramorium simillimum</i> – 2	nil	nil
W37	0	0	3	0	0	0	nil	nil
W38	0	0	0	0	0	0	nil	nil
W39	Abandoned	0	0	<i>Paratrechina longicornis</i> - 3	0	<i>Paratrechina longicornis</i> - 2	nil	nil
W40	0	0	0	0	0	0	nil	nil
W41	Abandoned	0	2	0	3	<i>Paratrechina longicornis</i> – 1	nil	nil
W42	1	0	2	0	0	<i>Paratrechina longicornis</i> – 3	nil	nil

Table A8.2 continued

Way Point	Honey Rating		Peanut Butter Rating		Tuna Rating		Bird colony proximity	Predominate species
	<i>Solenopsis geminata</i>	Other ant species	<i>Solenopsis geminata</i>	Other ant species	<i>Solenopsis geminata</i>	Other ant species		
W43	Abandoned	0	Abandoned		0	<i>Paratrechina longicornis</i> – 4	nil	nil
W44	Destroyed	0	Destroyed		0	<i>Paratrechina longicornis</i> – 2	nil	nil
W45	Abandoned	0	Abandoned		1	<i>Paratrechina longicornis</i> – 1	nil	nil
W46	1	<i>Paratrechina longicornis</i> – 1; <i>Tetramorium simillimum</i> – 1	1	0	Abandoned		nil	nil
W47	0	0	0	0	0	0	nil	nil
W48	not set	0	0	0	0	0	nil	nil

* 0 = nil; 1 = 1-5 ants; 2 = 5-20 ants; 3 = 21-100 ants; 4 = >100 ants; Abandoned = evidence of ants feeding on bait; Destroyed = could not be rated.

Table A8.3 Ant numbers caught in the pitfall traps at Middle Island *

Way Point	Vegetation	Night Interval		Day Interval	
		<i>Solenopsis geminata</i>	Other ant species	<i>Solenopsis geminata</i>	Other ant species
M01	bare ground among <i>Sporobolus</i>	6	0	4	0
M02	<i>Amaranthus</i>	0	<i>Tetramorium simillimum</i> x 1	0	0
M03	bare ground	7	0	2	0
M04	bare ground	3	0	5	0
M05	bare ground	20	0	3	0
M06	dry grass	32	0	2	0
M07	dry grass	52	0	2	0
M08	dry grass	17	0	145	0
M09	bare ground among <i>Amaranthus</i> , near small patch of <i>Tribulus</i>	6	<i>Tetramorium simillimum</i> x 3	7	<i>Tetramorium simillimum</i> x 1
M10	bare ground among <i>Amaranthus</i>	24	0	6	0
M11	bare ground, <i>Cleome</i> and <i>Amaranthus</i>	2	0	3	0
M12	bare ground	28	0	6	0
M13	bare ground	11	0	3	0
M14	bare ground	0	0	1	0
M15	bare ground	18	0	3	0
M16	bare ground	6	0	9	0
M17	bare ground, at base of <i>Cocos nucifera</i>	0	<i>Tetramorium simillimum</i> x 8	4	0
M18	bare ground among <i>Amaranthus</i>	5	0	1	0
M19	<i>Amaranthus</i>	9	0	3	0
M20	bare ground among <i>Amaranthus</i>	3	0	110	0
M21	dry grass	0	0	0	0
M22	bare ground among <i>Amaranthus</i>	0	<i>Tetramorium simillimum</i> x 5	1	0
M23	bare ground	0	0	1	0
M24	bare ground among <i>Sporobolus</i>	3	<i>Monomorium</i> sp. x 3	3	<i>Monomorium</i> sp. x 1
M25	bare ground	2	0	3	0
M26	dry grass	6	0	13	0
M27	dry grass	8	0	9	0
M28	dry grass	10	0	1	0
M29	bare ground	5	0	7	0
M30	bare ground	18	0	7	0
M31	bare ground among dry <i>Amaranthus</i>	13	0	8	0
M32	dry grass	0	0	0	0
M33	beach, bare ground above high tide mark	0	0	0	0
M34	bare ground	0	0	1	0
M35	bare ground among dry grass	0	0	0	0
M36	bare ground among dry grass	14	0	3	0
M37	bare ground among dry <i>Amaranthus</i>	2	0	0	0
M38	bare ground among dry <i>Amaranthus</i>	0	0	1	0
M39	dry grass	107	0	4	0
M40	bare ground	49	0	1	0
M41	bare ground	2	0	0	0
M42	bare ground	0	0	0	0
M43	above beach - sand	0	0	0	0
M44	Beach	0	0	0	0
M45	Beach	0	0	0	0
M46	<i>Sporobolus</i>	1	0	0	0
M47	bare ground	9	0	1	0
M48	bare ground	24	0	4	0
M49	bare ground	12	0	12	0
M50	bare ground	5	0	1	0
M51	bare ground, dry grass	5	0	10	0

* Average Night Interval 15hr 26min; Average Day Interval 8hr 18min

Table A8.4 Ant abundance in the three bait stations at Middle Island*

Way Point	Honey Rating		Peanut Butter Rating		Tuna Rating		Bird colony proximity	Predominate species
	<i>Solenopsis geminata</i>	Other ant species	<i>Solenopsis geminata</i>	Other ant species	<i>Solenopsis geminata</i>	Other ant species		
M01	3	0	4	0	3	0	nil	nil
M02	1	0	3	0	1	0	5m E	noddy
M03	4	0	4	0	4	0	5m E	noddy
M04	3	0	3	0	0	0	5m NE	noddy
M05	0	0	4	0	2	0	all around	noddy + frigate
M06	2	0	3	0	4	0	near	booby
M07	2	0	3	0	0	0	20m SW	frigate + booby
M08	4	0	0	0	0	0	5m SW	frigate
M09	0	0	1	<i>Tetramorium simillimum</i> – 1	0	<i>Tetramorium simillimum</i> – 1	nil	nil
M10	0	0	3	0	0	0	in nesting colony	noddy
M11	3	0	Abandoned		1	0	nil	nil
M12	0	0	1	0	3	0	in nesting colony	noddy
M13	0	0	3	0	2	0	in nesting colony	noddy
M14	0	0	0	0	0	0	nil	nil
M15	0	0	3	0	2	0	in nesting colony	noddy
M16	0	0	2	0	0	0	in nesting colony	noddy
M17	0	0	Abandoned		2	0	2 ground nests	egret
M18	0	0	1	0	2	0	15m SW	noddy
M19	0	0	Abandoned		Abandoned		noddies 10m N, frigates 20m N	
M20	0	0	1	0	1	0	10m NE	noddy
M21	0	0	0	0	0	0	nil	nil
M22	0	0	3	0	0	0	around	frigates
M23	0	0	0	0	0	0	around	booby
M24	0	0	2	0	1	<i>Monomorium</i> sp. – 1	nil	nil
M25	Abandoned		1	0	1	0	booby	
M26	0	0	Abandoned		0	0	nil	nil
M27	0	0	Abandoned		1	0	nil	nil
M28	0	0	0	0	Abandoned		nil	nil
M29	0	0	0	0	Abandoned		nil	nil
M30	Abandoned		Abandoned		Abandoned		15m NW	noddy
M31	0	0	2	0	3	0	all around	noddy
M32	0	0	0	0	0	0	nil	nil
M33	0	0	0	0	0	0	nil	nil
M34	0	0	2	0	0	0	nil	nil
M35	4	0	0	0	0	0	nil	nil
M36	Abandoned		2	0	3	0	nil	nil
M37	0	0	2	0	1	0	nil	nil
M38	0	0	3	0	2	0	8m E	noddy
M39	3	0	0	0	0	0		booby
M40	4	0	4	0	0	0		booby
M41	3	0	3	0	2	0		booby
M42	0	0	0	0	0	0		booby
M43	0	0	0	0	Destroyed by hermit crabs		nil	nil

Table A8.4 continued

Way Point	Honey Rating		Peanut Butter Rating		Tuna Rating		Bird colony proximity	Predominate species
	<i>Solenopsis geminata</i>	Other ant species	<i>Solenopsis geminata</i>	Other ant species	<i>Solenopsis geminata</i>	Other ant species		
M44	Destroyed by tide		Destroyed by tide		Destroyed by tide		nil	nil
M45	0	0	0	0	0	0	nil	nil
M46	not recorded		not recorded		not recorded		10m E	noddy
M47	3	0	2	0	0	0	near	booby
M48	4	0	4	0	4	0		booby
M49	4	0	4	0	1	0		booby
M50	4	0	Abandoned		0	0		booby
M51	2	0	4	0	2	0		noddy

* 0 = nil; 1 = 1-5 ants; 2 = 5-20 ants; 3 = 21-100 ants; 4 = >100 ants; Abandoned = evidence of ants feeding on bait; Destroyed = could not be rated.

Table A8.5 Ant numbers caught in the pit traps at East Island*

WP	Vegetation	Night Interval		Day Interval	
		<i>Solenopsis geminata</i>	Other ants	<i>Solenopsis geminata</i>	Other ants
E01	dry grass	109	0	4	0
E02	dry grass	0	0	2	0
E03	dry grass + bare ground	14	0	4	0
E04	beach	0	0	0	0
E05	near <i>Argusia</i> bush 1	10	0	7	0
E06	near <i>Argusia</i> bush 1	456	0	37	0
E07	near <i>Argusia</i> bush 1	3	0	0	0
E08	near <i>Argusia</i> bush 2	33	0	1	0
E09	dry grass near <i>Argusia</i> bush 2	43	0	0	0
E10	under <i>Argusia</i> bush 2	6	0	0	0
E11	dry grass	11	0	2	0
E12	dry grass + bare ground	7	0	0	0
E13	dry grass + bare ground	5	0	1	0
E14	green <i>Amaranthus</i>	141	0	0	0
E15	dry grass between lush green <i>Tribulus</i>	0	0	0	0
E16	dry grass near lush green <i>Tribulus</i>	0	0	0	0
E17	dry grass + bare ground	43	0	2	0
E18	lush green <i>Tribulus</i>	0	<i>Tetramorium simillimum</i> x 13	9	0
E19	Dodder choking <i>Tribulus</i>	Not a pit fall trap site		Not a pit fall trap site	
E20	dry grass near lush green <i>Tribulus</i>	0	0	1	0
E21	dry grass + bare ground	2	0	0	0
E22	dry grass + bare ground	0	0	8	0
E23	dry grass	1	0	2	0
E24	dry grass	1	0	3	0
E25	bare ground	3	<i>Tetramorium simillimum</i> x 2	0	0
E26	dry grass	24	0	11	0
E27	dry grass + bare ground	0	0	0	0
E28	dry grass	0	0	0	0
E29	dry grass	15	0	8	0
E30	dry grass	1	0	0	0
E31	bare ground	6	0	5	0
E32	beach	0	0	1	0
E33	dry grass + bare ground	3	0	1	0
E34	dry grass	14	0	1	0
E35	flotsam	Not a pit fall trap site		Not a pit fall trap site	
E36	live grass	2	0	2	0
E37	bare ground	1	0	0	0
E38	dry grass + bare ground	1	0	4	0
E39	bare ground	0	0	0	0
E40	Portulaca	61	0	8	0
E41	bare ground	7	0	3	0
E42	dry grass + bare ground	33	0	31	0
E43	bare ground	6	0	2	0

* Average Night Interval 16hr 20min; Average Day Interval 7hr 45min

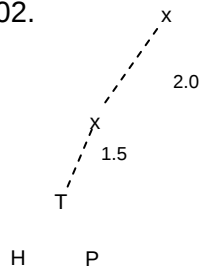
Table A8.6 Ant abundance in the three bait stations at East Island*

Way Point	Honey Rating		Peanut Butter Rating		Tuna Rating		Bird colony proximity	Predominate species
	<i>Solenopsis geminata</i>	Other ant species	<i>Solenopsis geminata</i>	Other ant species	<i>Solenopsis geminata</i>	Other ant species		
E01	Abandoned		Abandoned		0	0	5m	noddy
E02	4	0	Abandoned		0	0	close	noddy
E03	4	0	Abandoned		0	0	20m	noddy
E04	Abandoned		3	0	0	0	10m	noddy
E05	Bait not set		Bait not set		Bait not set		20m	frigate + booby
E06	Bait not set		Bait not set		Bait not set		20m	frigate + booby
E07	Abandoned		Abandoned		2	0	20m	frigate + booby
E08	4	0	3	0	1	0	20m	noddy
E09	Bait not set		Bait not set		Bait not set		20m	noddy
E10	Bait not set		Bait not set		Bait not set		20m	noddy
E11	4	0	Abandoned		0	0	10m	noddy
E12	Abandoned		3	0	1	0	30m	terns
E13	Abandoned		Abandoned		4	0	30m	terns
E14	0	0	Abandoned		0	0	5m all around	noddy
E15	0	0	0	0	0	0	<5m	booby
E16	Abandoned		0	0	3	0		
E17	Abandoned		Abandoned		2	0	next to nest	noddy
E18	Abandoned	<i>Tetramorium simillimum</i> – 1	0	<i>Tetramorium simillimum</i> – 1	0	<i>Tetramorium simillimum</i> – 1	10m	frigate
E19	Not a bait station site		Not a bait station site		Not a bait station site			
E20	0	0	0	0	0	<i>Tetramorium simillimum</i> – 1	<5m	frigate
E21	4	0	3	0	0	0	5-10m	booby + frigate
E22	2	0	3	0	0	0	in nesting colony	noddy
E23	3	0	3	0	0	0	10m	noddy
E24	0	0	0	0	0	0	around	noddy
E25	0	0	4	0	0	<i>Tetramorium simillimum</i> – 1	in colony	noddy
E26	Abandoned		4	0	0	0	5m	noddy
E27	3	0	Abandoned		0	0	10m	noddy + frigate
E28	0	0	0	0	0	0		
E29	0	0	Abandoned		3	0	10m	noddy
E30	Abandoned		0	0	3	0	around	booby
E31	Abandoned		2	0	0	0	near	noddy
E32	3	0	Abandoned		0	0		
E33	Abandoned		Abandoned		3	0	10m	frigate
E34	Abandoned		0	0	4	0	1m	frigate
E35	Not a bait station site		Not a bait station site		Not a bait station site			
E36	1	0	Abandoned		0	0	distant around	noddy
E37	Abandoned		Abandoned		0	0	in colony	noddy
E38	3	0	2	0	0	0	5m	noddy
E39	4	0	0	0	3	0	in colony nest	noddy
E40	1	0	Abandoned		2	0	5m	noddy
E41	Abandoned		3	0	0	0	5m	noddy
E42	1	0	Abandoned		0	0	in colony	noddy
E43	Abandoned		3	0	0	0	5m	noddy + frigate

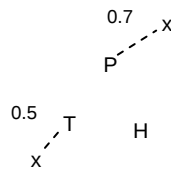
* 0 = nil; 1 = 1-5 ants; 2 = 5-20 ants; 3 = 21-100 ants; 4 = >100 ants; Abandoned = evidence of ants feeding on bait; Destroyed = could not be rated.

Appendix 9 Middle Island ant nest distribution around bait stations

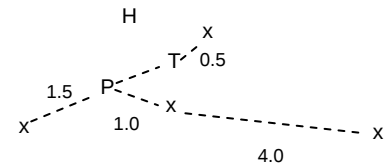
M02.



M04.

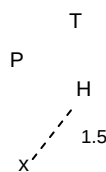


M05.

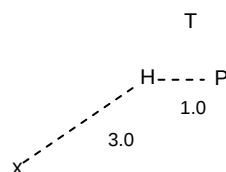


T=Tuna bait station
H=Honey bait station
P=Peanut Butter bait station
x= TFA ant nest
dotted line = ant trail

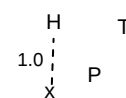
M08.



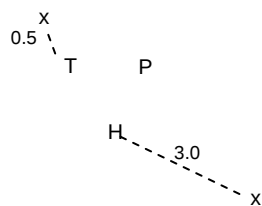
M10.



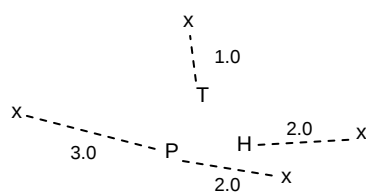
M11.



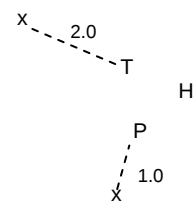
M12.



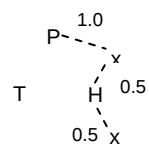
M13.



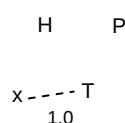
M15.



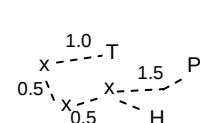
M16.



M17.

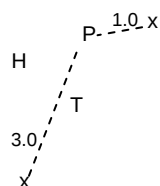


M18.

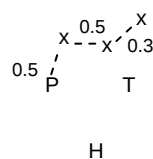


Nest under bait

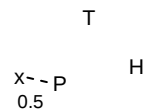
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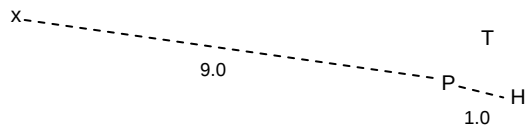
M22.



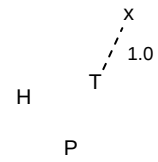
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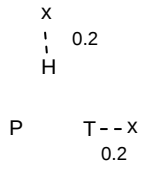
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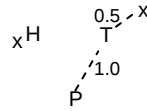
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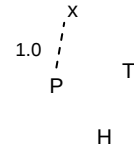
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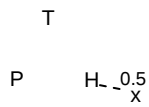
M31.



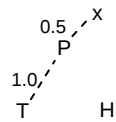
M34.



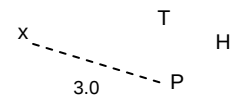
M35.



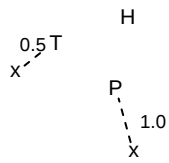
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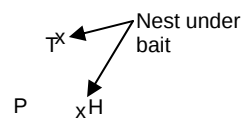
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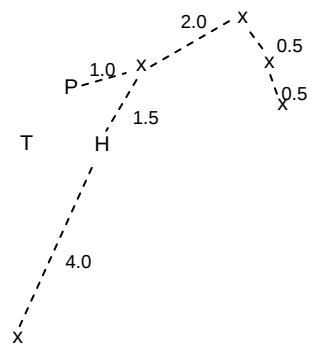
M38.



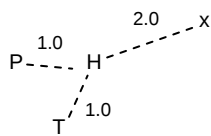
M39.



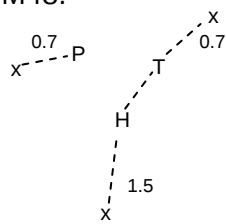
M40.



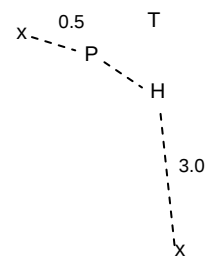
M41.



M48.



M49.



M50.

