

SUPPLEMENTARY MATERIAL

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**Long-term changes in petrel populations on Inaccessible Island, Tristan da
Cunha, inferred from the diet of Brown Skuas *Stercorarius antarcticus***

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Table S1: Numbers of Brown Skua *Stercorarius antarcticus* prey items per month and year recorded in pellets and prey remains at West Point, Inaccessible Island, 1982–2018, listed in descending order of abundance within main prey types (see Table 1)

Year	1982/83*			1987		1988		1989/90*					1999/2000				2004		2009		2011		2018		Total	
month	Oct	Nov	Dec	Jan	Oct	Oct	Oct	Nov	Dec	Jan	Feb	Mar	Oct	Nov	Dec	Jan	Feb	Nov	Sep	Oct	Nov	Sep	Sep	Oct	Nov	
<i>Fregetta</i> storm petrels	20	47	65	56	57	90	105	163	323	277	314	165	89	123	192	183	59	150	116	106	141	156	254	163	63	3477
White-faced Storm Petrel	9	37	39	18	59	85	99	72	72	59	53	26	65	73	55	31	27	85	100	100	92	121	178	146	81	1782
Broad-billed Prion adults	19	59	19	10	20	46	106	53	96	55	21	21	43	51	99	52	16	82	51	113	83	46	66	131	81	1439
chicks													6	11	21					19	48			58	71	234
Great Shearwater adults		2	1	2	3	7	23	16	13	16	5	6	1	8	4	5		28	15	6	45	11	45	59	29	350
chicks											3	48	54			3	2									110
Common Diving Petrel	1	25	40	14	3	18	8	19	17	45	22	8	3	17	10	18	4	13	5	21	21	13	7	11	7	370
Soft-plumaged Petrel	5	5	6	3		1	2			2			2			2	3	1	2	3	6	4	10	16	10	83
Subantarctic Shearwater	1	4					3	6	7	5	1				1	4	1	2	1	1	2	2	2	2		45
Antarctic Prion		1	1											1					1	1			1			6
Kerguelen Petrel		5																								5
Grey-backed Storm Petrel					1									1							1					3
Spectacled Petrel																1										1
Great-winged Petrel							1																			1
Rockhopper Penguin adults	2	2					1			2		3	1			3	1	2		6	1	3	2	9	6	44
chicks																				1	6		1	5		13
Antarctic Tern					1														1							2
Brown Skua																1								1		2
Inaccessible Rail			1	1			1		1	2	1		1	2	2	1		2		1		7	8			31
Tristan Thrush	1				2		1	1		1			1	1	1	1	1	1	1	3	2	2	4	1	2	27
Inaccessible Finch			1				1		1	2		2	3	1	1	2	1		1	1	3	2	1	3		26
Subantarctic Fur Seal																2			1	3	4	3	15	9	5	42
Black Rat								1								1										2
Goose barnacles	2	8	3	2	9	12	10	10	11	10	9	8	6	8	7	8	6	16	9	11	10	12	7	16	9	219
Bony fish					2	3	3	4	8	5	6	4		1				3	1	4	6	2	5	1	5	63
Tristan Rock Lobster																					2		1			3
Total	60	195	176	106	157	262	364	345	549	484	480	297	221	299	392	318	121	385	305	400	471	379	603	636	375	8380

*1982/83 data from Fraser (1984); 1989/90 data from Ryan and Moloney (1991)

Table S2: The occurrence of multiple avian prey remains in Brown Skuas pellets at West Point, Inaccessible Island, 1982–2018

Species combinations	<i>n</i>	%
Pellets with 2 avian prey		
<i>Fregetta</i> storm petrel + <i>Fregetta</i> storm petrel	302	37.9%
<i>Fregetta</i> storm petrel + Broad-billed Prion	117	14.7%
White-faced Storm Petrel + White-faced Storm Petrel	115	14.4%
<i>Fregetta</i> storm petrel + White-faced Storm Petrel	84	10.5%
White-faced Storm Petrel + Broad-billed Prion	36	4.5%
Broad-billed Prion + Broad-billed Prion	34	4.3%
<i>Fregetta</i> storm petrel + Great Shearwater	28	3.5%
Broad-billed Prion + Common Diving Petrel	23	2.9%
<i>Fregetta</i> storm petrel + Common Diving Petrel	10	1.3%
White-faced Storm Petrel + Great Shearwater	5	0.6%
Common Diving Petrel + Common Diving Petrel	5	0.6%
White-faced Storm Petrel + Common Diving Petrel	3	0.4%
Broad-billed Prion + Inaccessible Bunting	3	0.4%
Broad-billed Prion + Great Shearwater	2	0.3%
<i>Fregetta</i> storm petrel + Inaccessible Bunting	2	0.3%
<i>Fregetta</i> storm petrel + Inaccessible Rail	2	0.3%
<i>Fregetta</i> storm petrel + Subantarctic Shearwater	1	0.1%
<i>Fregetta</i> storm petrel + Northern Rockhopper Penguin	1	0.1%
White-faced Storm Petrel + Northern Rockhopper Penguin	1	0.1%
White-faced Storm Petrel + Inaccessible Rail	1	0.1%
Broad-billed Prion + Northern Rockhopper Penguin	1	0.1%
Great Shearwater + Common Diving Petrel	1	0.1%
Great Shearwater + Inaccessible Bunting	1	0.1%
Common Diving Petrel + Northern Rockhopper Penguin	1	0.1%
Pellets with 3 avian prey		
3 <i>Fregetta</i> storm petrels	5	0.6%
3 White-faced Storm Petrels	5	0.6%
2 <i>Fregetta</i> storm petrels + White-faced Storm Petrel	4	0.5%
2 White-faced Storm Petrels + <i>Fregetta</i> storm petrel	1	0.1%
2 White-faced Storm Petrels + Broad-billed Prion	1	0.1%
2 Broad-billed Prions + <i>Fregetta</i> storm petrel	1	0.1%
<i>Fregetta</i> storm petrel + White-faced Storm Petrel + Diving Petrel	1	0.1%
Total	797	

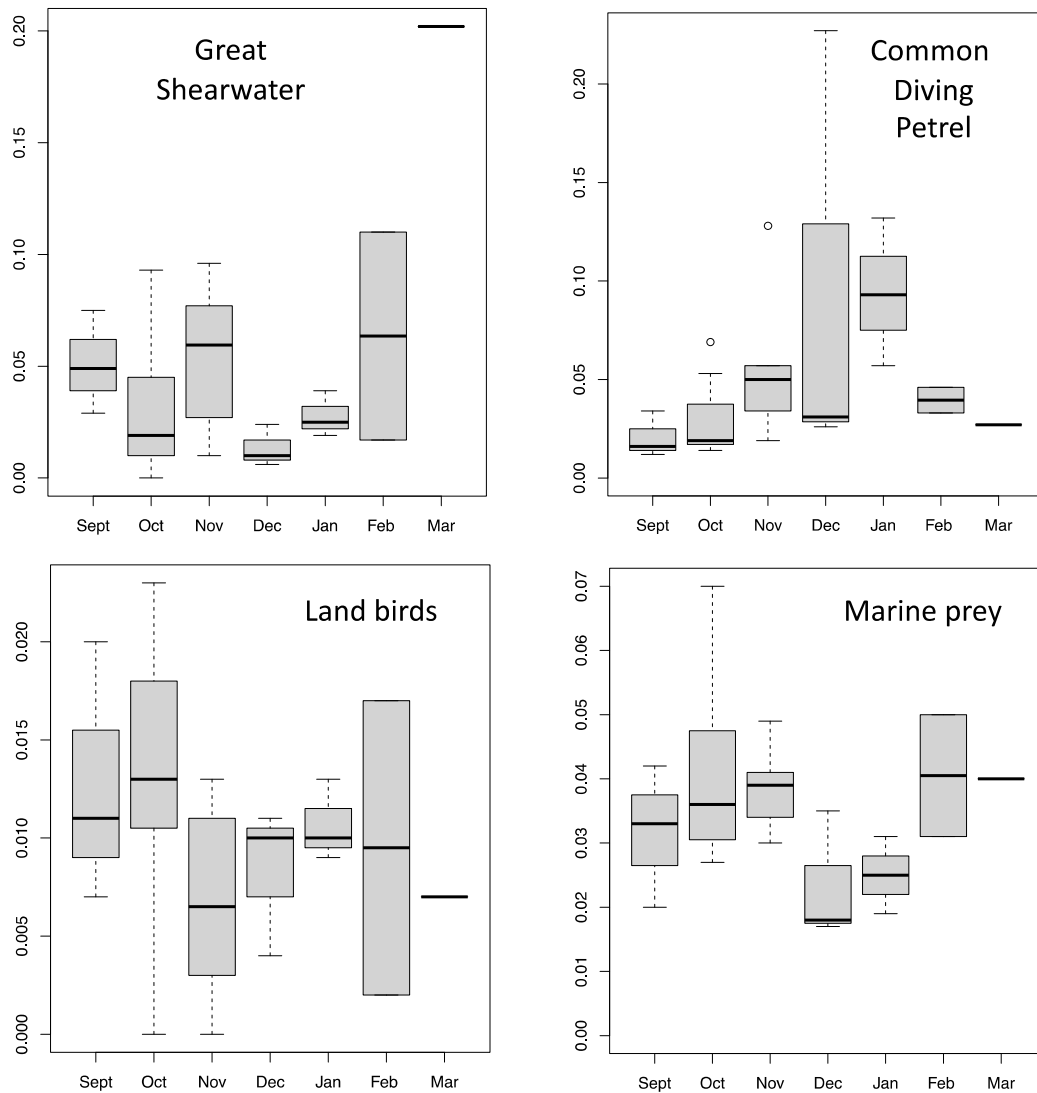


Figure S1: Seasonal trends in the proportions of some of the more common petrels and other prey groups in the diet of Brown Skuas at West Point, Inaccessible Island, 1982–2018. Mammals are not shown because they were largely absent from the diet before 2000 (Table S1, Figure S2), and there was no late-summer sampling post 2000. Box plots show the median (bold line), inter-quartile range (IQR, box), range (whiskers) excluding outliers (open circles) which lie $>1.5 \times$ IQR beyond the upper and lower IQR

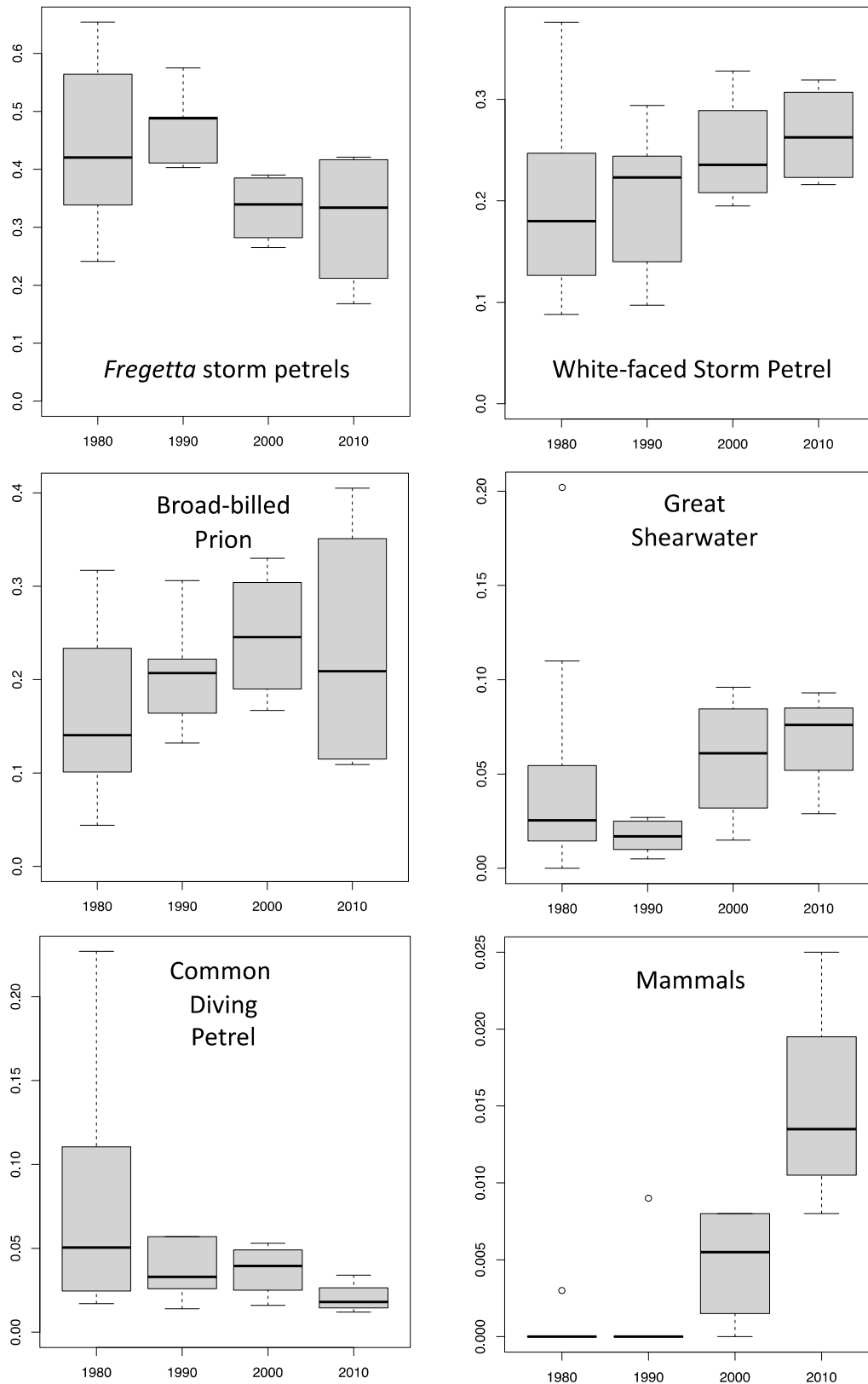


Figure S2: Decadal trends in the proportions of the five most common petrels and mammals (mostly subantarctic fur seals) in the diet of Brown Skuas at West Point, Inaccessible Island, 1982–2018. Box plot conventions as Figure S1