

Supplementary Information

Variation in mammal species richness and relative abundance in the Karoo

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Table S1: Total target species and livestock species detected at each site along with site-specific covariates used in the modelling exercise: longitude, latitude, biomes, terrain roughness, average annual precipitation, and normalised difference vegetation index (NDVI)

Site	Number of target mammal species detected	Longitude	Latitude	Biome	Terrain Ruggedness	Average annual rainfall	NDVI	Sheep (<i>Ovis aries</i>) detections	Cattle (<i>Bos taurus</i>) detections	Goat (<i>Capra hircus</i>) detections	Horse (<i>Equus ferus caballus</i>) detections	Donkey (<i>Equus africanus asinus</i>) detections
1	17	23.32163	−32.80347	Nama-Karoo	90.62	260.09	0.22	12	0	23	0	0
2	13	23.60839	−32.4845	Nama-Karoo	73.54	297.92	0.18	323	0	0	0	11
3	13	23.11499	−32.30156	Nama-Karoo	128.81	255.50	0.15	778	0	21	0	0
4	13	22.87539	−31.9409	Nama-Karoo	135.73	318.88	0.22	0	0	0	0	0
5	12	23.5459	−31.9821	Nama-Karoo	84.13	322.47	0.20	407	65	4	1	0
6	12	23.97209	−31.57234	Nama-Karoo	83.25	359.66	0.21	1	34	0	0	0
7	18	24.04827	−31.13751	Nama-Karoo	92.55	328.99	0.22	0	0	0	0	0
8	11	24.04334	−31.13651	Nama-Karoo	115.18	285.32	0.18	0	48	0	0	0
9	9	20.36362	−32.68	Succulent-Karoo	109.83	234.38	0.26	0	0	0	0	0
10	11	20.88639	−32.51667	Succulent-Karoo	74.29	205.12	0.15	843	0	0	0	0
11	13	25.01023	−30.9104	Nama-Karoo	98.26	381.80	0.27	707	0	0	2	0
12	16	25.70542	−30.97709	Nama-Karoo	108.12	400.84	0.33	219	2	0	6	0
13	7	20.5278	−31.21059	Nama-Karoo	141.01	167.24	0.11	97	0	0	0	0
14	15	25.46861	−31.86245	Nama-Karoo	162.35	426.79	0.24	0	0	0	0	0
15	12	21.89482	−32.23012	Nama-Karoo	74.65	224.87	0.20	0	196	0	0	0
16	14	24.79316	−32.18627	Grassland	78.92	339.57	0.25	0	174	0	0	0
17	18	25.18921	−32.553	Savanna	86.58	473.51	0.25	0	105	0	0	0
18	21	25.66603	−32.51808	Nama-Karoo	127.25	504.32	0.38	0	0	0	0	0
19	13	26.27604	−32.56926	Grassland	154.07	571.41	0.55	0	319	0	0	0
20	20	26.01587	−32.89057	Grassland	162.68	562.19	0.29	498	35	10	0	0
21	14	24.96668	−33.04425	Savanna	76.84	401.40	0.21	9	45	440	0	0
22	10	22.13772	−32.4561	Nama-Karoo	78.34	227.11	0.17	225	0	0	0	0
23	8	21.38803	−31.96062	Nama-Karoo	93.93	242.82	0.12	0	0	0	0	0
24	11	22.35601	−32.96465	Nama-Karoo	115.22	272.79	0.14	0	0	0	1	0
25	6	22.28927	−31.35607	Nama-Karoo	104.83	285.57	0.20	64	0	0	0	0

Table S2: Total number of detections per species ($n = 38$) at each of the sites ($n = 25$)

Site	Aardvark	Aardwolf	African wild cat	Bat-eared fox	Black footed cat	Black-backed jackal	Blesbok	Bushbuck	Bushpig	Cape fox	Cape mountain zebra	Caracal	Chacma baboon	Common duiker	Common hare	Eland	Gemsbok	Genet	Greater kudu	Grey mongoose	Grey rhebok	Ground squirrel	Impala	Klipspringer	Marsh mongoose	Meerkat	Porcupine	Red hartebeest	Rock hyrax	Smith's red rock rabbit	Southern mountain reedbuck	Springbok	Springhare	Steenbok	Striped polecat	Vervet monkey	Warthog	Yellow mongoose
1	9	0	0	4	0	0	0	0	0	3	0	2	0	36	0	0	0	18	25	4	0	0	27	0	8	3	3	1	0	0	0	21	0	42	2	46	0	0
2	4	0	0	14	0	0	0	0	0	0	0	2	0	1	8	0	0	1	5	1	0	0	0	0	0	15	6	0	0	0	0	170	0	65	0	67	0	0
3	2	0	0	18	0	2	0	0	0	3	0	0	0	1	101	0	0	0	6	0	0	0	0	0	0	3	2	0	0	0	0	23	0	61	0	1	0	1
4	2	1	0	0	0	4	0	0	0	0	0	0	3	19	7	0	0	0	46	2	0	0	0	2	0	0	4	0	0	8	0	0	0	3	1	0	0	0
5	0	2	0	1	0	3	0	0	0	0	0	0	0	1	15	0	0	1	0	0	0	0	0	0	1	2	11	0	0	0	0	39	0	4	0	5	0	0
6	7	0	0	38	0	3	2	0	0	0	0	3	0	18	233	0	0	0	8	5	0	0	0	0	0	9	0	0	0	0	0	0	18	82	0	0	0	0
7	3	1	0	0	0	3	0	0	0	3	0	2	13	0	50	41	13	0	25	0	71	0	0	0	0	0	4	2	0	6	7	4	0	17	7	0	0	0
8	0	6	3	2	0	0	0	0	0	19	0	0	0	0	81	0	0	0	0	0	0	10	0	0	0	9	25	0	0	3	0	0	0	67	0	0	0	2
9	1	0	7	0	0	9	0	0	0	0	0	0	15	32	0	0	0	0	10	0	0	0	0	0	0	0	1	0	0	0	0	0	0	22	3	0	0	0
10	0	0	1	0	0	0	0	0	0	0	0	0	0	0	33	0	0	2	0	2	1	0	0	0	1	4	2	0	1	0	0	0	0	3	0	0	0	2
11	9	1	0	0	0	0	0	0	0	0	0	2	0	0	19	0	0	1	7	0	7	0	0	0	0	4	5	0	0	2	5	5	0	3	0	0	0	0
12	5	10	0	0	2	2	0	0	0	0	0	1	23	0	8	0	0	1	0	1	0	0	0	0	0	5	10	4	0	0	10	8	0	2	0	0	0	1
13	0	0	0	2	0	0	0	0	0	1	0	0	0	0	60	0	0	0	0	0	0	0	0	0	0	4	2	0	0	0	0	0	0	22	3	0	0	0
14	8	6	0	25	0	0	0	0	0	0	0	2	0	5	14	0	0	0	39	0	0	0	0	0	0	5	7	0	0	2	36	2	0	52	0	20	0	5
15	4	1	0	0	0	11	0	0	0	0	0	1	108	284	8	0	3	0	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	20	15	0
16	14	0	0	0	0	14	0	15	11	0	0	0	241	97	11	0	0	4	235	0	1	0	0	0	21	0	10	0	0	0	20	0	0	0	0	81	0	0
17	5	0	0	0	0	6	12	0	0	0	7	0	102	65	15	1	1	10	201	2	0	0	0	0	0	0	2	12	0	0	0	43	0	3	0	71	0	1
18	2	2	0	1	0	10	143	4	0	0	0	4	182	0	6	0	0	6	32	3	0	0	209	0	0	86	4	0	0	1	230	102	0	2	3	87	0	0
19	1	0	0	0	0	0	0	66	6	0	0	1	74	67	2	0	0	22	168	0	1	0	0	0	0	0	0	0	0	0	3	0	0	0	0	90	90	0
20	7	7	0	12	0	1	0	0	0	1	0	0	0	81	44	0	0	3	57	0	1	0	5	0	1	0	11	0	4	0	3	27	0	8	3	55	80	0
21	2	0	0	6	0	4	0	0	1	1	0	1	0	78	28	0	0	0	32	0	0	0	0	0	0	4	0	0	0	0	0	0	33	29	0	301	0	1
22	7	0	0	18	1	0	0	0	0	0	0	0	0	72	17	0	0	1	21	0	0	0	0	0	0	0	3	0	0	0	0	0	0	12	1	0	0	0
23	1	0	0	0	0	1	0	0	0	1	0	0	0	0	8	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	3	0	0	40	0	0	0	0
24	0	0	0	0	0	1	0	0	0	0	0	0	107	82	6	0	7	0	25	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1	1	7	0	0
25	12	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	7	0	0	0	0
Total	105	38	11	141	3	74	157	85	18	32	7	21	868	939	776	42	24	70	1002	20	82	10	241	2	32	153	116	19	6	22	317	445	51	548	24	851	185	13

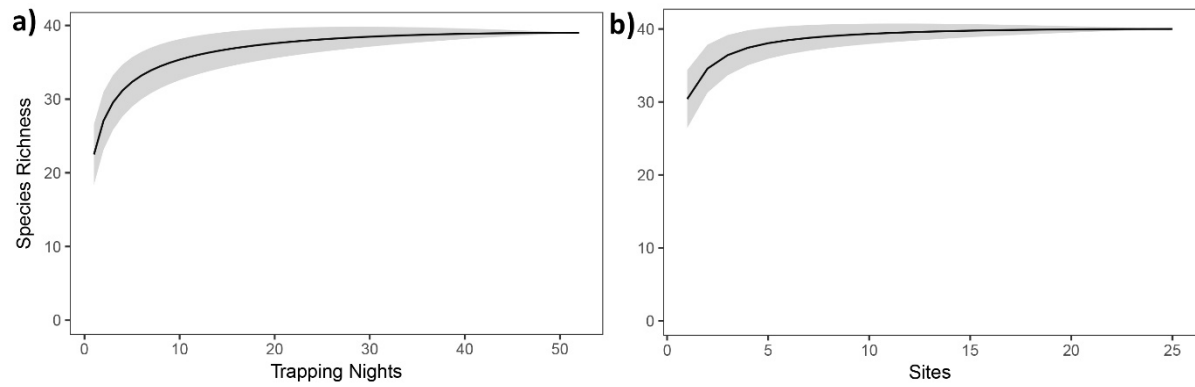


Figure S1: Sample-based rarefaction curves over (a) time (trapping nights) and (b) sites. Shaded polygons are 95% confidence intervals drawn from 1 000 randomisations