

**Supplementary Materials**

**Table S1.** Camera trap survey effort and detailed information about camera trap performance in five habitat types resettled and not resettled area in Limpopo National Park.

Measure	Habitat type						Resettlement of LH		
	LN	PS	RV	SC	NS	Total	RA	NRA	Total
Sampling units ( <i>n</i> ) <sup>1</sup>	40	16	10	30	50	146	76	70	146
Survey effort (trap days/nights)	1999	1062	582	2178	3712	9533	4164	5369	9533
Independent events (IE) <sup>2,3</sup>	2528	205	511	569	1325	5138	2881	2257	5138
Successful images	12819	663	1832	2156	4083	21553	14069	7484	21553
Successful cameras	38	13	9	28	45	133	70	63	133
Mean trapping days/camera	52.6	70.8	64.6	77.8	78.9	69.5*	57.04*	83.9*	69.5*
Stolen cameras	1	0	1	1	2	5	1	4	5
Non-functional cameras	1	1	0	1	1	4	2	2	4
Blank cameras	0	2	0	0	2	4	3	1	4
Overall species/target species	35/15	19/12	22/11	24/11	42/12	49/15*	37/15	43/12	49/15*

Total does not mean sum of numbers from different habitats and resettled/not resettled area: 69.5 – is the overall average for 146 sampling units and 49/15 – is the total species (overall/target) photographed in the Limpopo National Park. LN – Lebombo North, PS – Pumbe Sandveld, RV – Rugged Veld, SC – Shrubveld on Calcrete; NS – Nwambia Sandveld, LH – Large herbivores, RA – Resettled area, NRA – Not resettled area.

**Table S2.** Checklist of overall species recorded grouped by taxonomic order and family in Limpopo National Park.

Taxonomic order	Family	Species	Common name	Functional guild	Habitat type															
					Lebombo North			Nwambia Sandveld			Shruveld Calcrete			Pumbe Sandveld			Rugged Veld			
					IE	I	P	IE	I	P	IE	I	P	IE	I	P	IE	I	P	
Artiodactyla	Bovidae	<i>Aepyceros melampus</i>	Impala		386	1277	1933	71	136	255	44	167	194	19	33	45	71	123	306	
		<i>Connochaetes taurinus</i>	Blue weldebeest		27	63	281				5	11	12	24	25	54				
		<i>Hippotragus niger</i>	Sable antelope											1	1	1				
		<i>Kobus ellipsiprymnus</i>	Waterbuck		552	955	3207	1	1	2	4	9	8				35	36	106	
		<i>Neotragus moschatus</i>	Suni		1	2	3	2	2	6										
		<i>Oreotragus oreotragus</i>	Klipspringer		19	27	85													
		<i>Raphicerus campestris</i>	Steenbok	Herbiv. <sup>4,5</sup>	5	9	18	67	73	159	12	12	26	3	3	4	20	20	73	
		<i>Raphicerus sharpei</i>	Sharpe's Grysbok		23	23	84	2	3	4										
		<i>Sylvicapra grimmia</i>	Common duiker		70	76	229	358	381	917	55	56	129	24	24	33	121	126	312	
	Giraffidae	<i>Syncerus caffer</i>	Buffalo		65	136	364	96	176	517	92	404	663	22	52	229	15	15	37	
		<i>Taurotragus oryx</i>	Eland		3	3	15	1	2	3										
		<i>Tragelaphus angasii</i>	Nyala		337	478	1444	133	171	331	110	143	422	10	13	19	89	116	324	
		<i>Tragelaphus scriptus</i>	Bushbuck		20	25	68													
		<i>Tragelaphus strepsiceros</i>	Greater kudu		195	320	1266	147	197	484	41	43	98	8	8	15	60	75	302	
		<i>Giraffa camaleopardalis</i>	Giraffe		80	111	471	17	19	54				10	13	20	3	3	9	
		Hippopotamidae	<i>Hippopotamus amphibius</i>	Hippopotamus		2	3	4												
			<i>Phacochoerus africanus</i>	Warthog		61	108	242	24	43	150	8	10	11	10	10	11	4	7	15
			<i>Potamochoerus porcus</i>	Bushpig	Omniv. <sup>6,7</sup>				12	15	67	1	1	2						
Bucerotiformes	Bucerotidae	<i>Tockus flavirostris</i>	Hornbills	Omniv.				5	5	12										
		<i>Canis adustus</i>	Side-striped jackal	Carniv. <sup>5,7</sup>	4	4	9	1	1	2				1	1	1				
	Canidae	<i>Canis mesomelas</i>	Black-backed jackal		2	2	3	57	59	129	7	7	12				8	8	19	

Carnivora	Felidae	<i>Lycaon pictus</i>	Wild dog		5	7	32	1	1	3	2	3	3						
		<i>Acinonyx jubatus</i>	Cheetah					11	11	30									
		<i>Felis sylvestris lybica</i>	African Wild Cat		3	3	5	12	12	23									
		<i>Caracal caracal</i>	Caracal					1	1	2	2	2	3						
		<i>Panthera pardus</i>	Leopard		13	13	35	1	1	3	1	1	1				1	1	2
		<i>Panthera leo</i>	Lion		1	1	2												
		<i>Leptailurus serval</i>	Serval					6	6	12	2	2	4				2	2	4
		Herpestidae	<i>Herpestes ichneumon</i>	Large g. mongoose	Carnivore				2	2	4								
			<i>Mungos mungo</i>	Banded Mon-goose	Carnivore				3	3	6								
		Hyaenidae	<i>Crocota crocuta</i>	Spotted Hyaena	Carnivore	5	5	10	3	3	4	31	35	64	2	2	3	3	3
Mustelidae	<i>Mellivora capensis</i>	Honey badger	Omnivo	6	6	17	8	8	19	2	2	2				3	3	8	
Protelidae	<i>Proteles cristatus</i>	Aardwolf	Carnivore	2	2	6	7	7	14										
Viverridae	<i>Civettictis civetta</i>	Civet		40	41	99	9	9	21	1	1	1	2	2	4	10	10	30	
	<i>Genetta genetta</i>	Small-spotted genet		11	11	33	9	9	21	6	6	18				4	4	12	
Crocodylia	Crocodylidae	<i>Crocodylus niloticus</i>	Crocodylus	1	1	2													
Galliformes	Numididae	<i>Numida meleagris</i>	H. Guineafowl				24	88	66										
	Phasianidae	<i>Perdix perdix</i>	Grey partridge	Granivore				22	35	46									
Lagomorpha	Leporidae	<i>Lepus saxatilis</i>	Scrub hare	Herbivore	12	12	34	21	21	37	39	40	114				17	17	81
Primate	Cercopithecidae	<i>Chlorocebus aethiops</i>	Vervet monkey	Omnivo-rous	32	61	163	4	8	10	1	1	2	1	1	1			
		<i>Papio ursinus</i>	Chacma baboon		123	339	779	21	82	209	14	18	27	1	6	2	5	15	31
Perissodactyla	Equidae	<i>Equus quagga</i>	Plain zebra	Herbivore	208	345	1011	8	12	33	17	35	113	26	43	112	15	23	65
Proboscidea	Elephantidae	<i>Loxodonta africana</i>	African elephant		117	157	619	80	115	239	72	101	227	34	51	68	21	24	80
	Hystriidae	<i>Hystrix africaeaustralis</i>	Cape porcupine	Rodent	16	19	49	17	26	39				2	3	4	2	2	4
	Pedetidae	<i>Pedetes capensis</i>	Springhare					12	15	42									
Rodentia	Muridae	<i>Saccostomus campestris</i>	Pouched Mouse	Omniv.				5	5	12									

Struthioniformes	Struthionidae	<i>Struthio camelus</i>	Ostrich	Omniv.				2	2	3												
Testudines	Testudinidae	<i>Kinixys belliana belliana</i>	Bell's hinge-back tortoise					1	1	2												
Tubulidentata	Orycteropodida.	<i>Orycteropus afer</i>	Aardvark					41	41	91			5	5	7	2	2	6				
<b>TOTAL</b>	<b>13</b>	<b>25</b>	<b>49</b>					<b>2528</b>	<b>4734</b>	<b>12819</b>	<b>1325</b>	<b>1808</b>	<b>4083</b>	<b>569</b>	<b>1110</b>	<b>2156</b>	<b>205</b>	<b>297</b>	<b>633</b>	<b>511</b>	<b>635</b>	<b>1832</b>

IE – Independent events, I – Number of individuals recorded, P – Number of photographs

**Table S3.** Comparisons of Shannon – diversity index using diversity t test among habitat types; between resettled and not resettled area in Limpopo National Park. LN – Lebombo North; PS – Pumbe Sandveld; RV – Rugged Veld; SC – Shrubveld on Calcrete; NS – Nwambia Sandveld

Habitat type										Resettlement of large herbivores			
Richness (S)/100 trap nights													
LN	PS	RV	SC	NS	Resettled area	Not resettled area							
15	12	11	11	12	15	12							
Shannon's equitability (E <sub>H</sub> )													
0.74	0.88	0.83	0.75	0.81	0.78	0.81							
Shannon – Wiener diversity index (H')													
LN	1.99	t = 1,185	LN	1,99	t = 0,004	LN	1,99	t = 1,24	LN	1,99	t = 0,12	2,12	2,02
PS	2.18	df = 36,9 p = 0,24	RV	1,99	df = 232,2 p = 0,99	SC	1,78	df = 65,04 p = 0,21	NS	2	df = 55,1 p = 0,9	t = 0,68 df = 73,5	
PS	2.18	t = 1,14	PS	2,18	t = 1,87	PS	2,18	t = 0,88	RV	1,99	t = 1,21	p = 0,49	
RV	1.99	df = 40,9 p = 0,25	SC	1,78	df = 65,5 p = 0,06	NS	2	df = 57,1 p = 0,38	SC	1,78	df = 71,5 p = 0,23		
RV	1.99	t = 0,11	SC	1,78	t = 1,1								
NS	2.0	df = 61,6 p = 0,9	NS	2	df = 81,2 p = 0,27								

**Table S4.** Pairwise comparison of grazer – browser – mixed feeder ratio within and among habitat types and between resettled and not resettled area. Significant differences between group means/medians ( $p < 0.05$ ) were obtained using One-Way ANOVA or Kruskal-Wallis test.

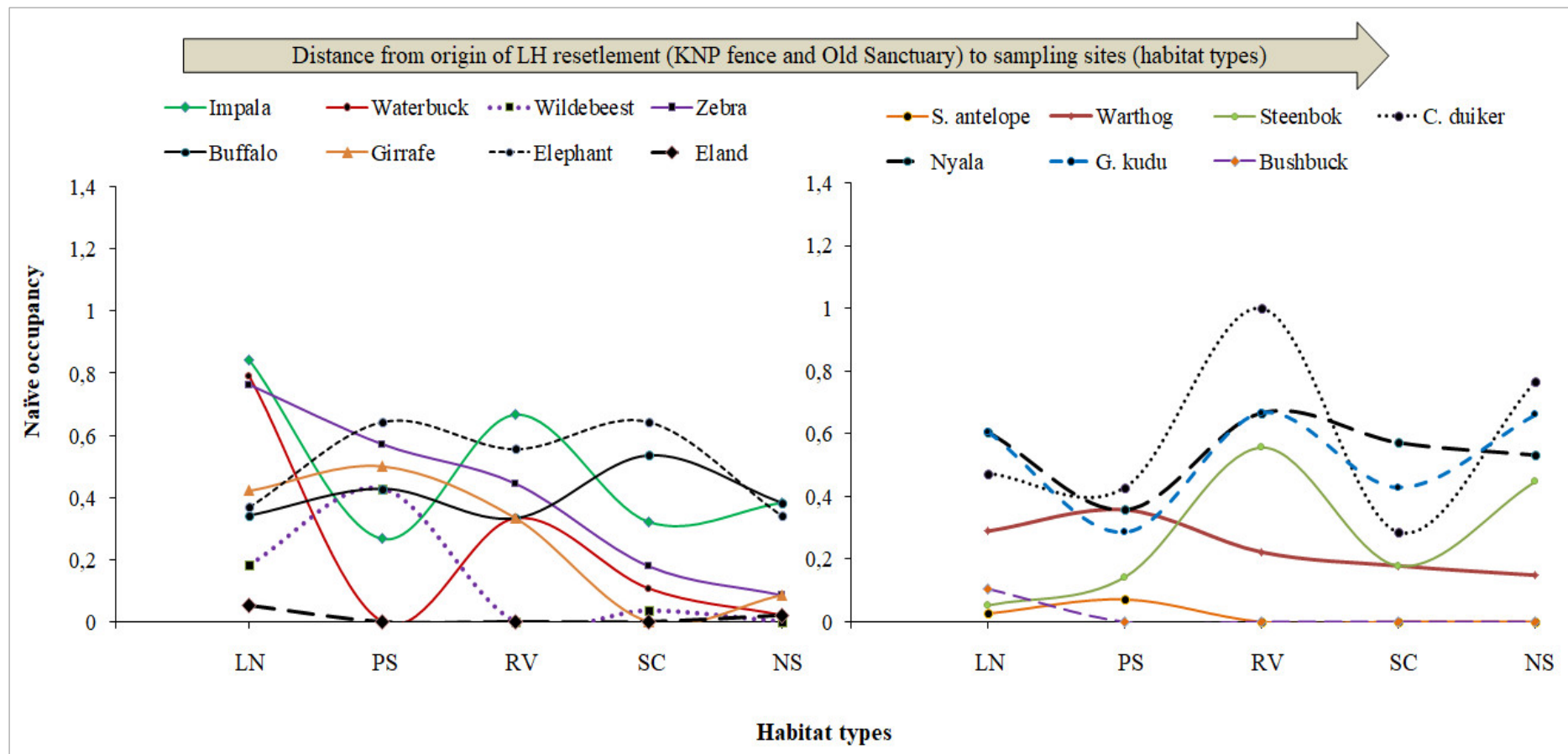
	LN_GZ	LN_BW	LN_MF	PS_GZ	PS_BW	PS_MF	RV_GZ	RV_BW	RV_MF	SC_GZ	SC_BW	SC_MF	NS_GZ	NS_BW	NS_MF
LN_GZ		<b>F(1,74)= 29.83; p=0.0006</b>		F(1, 51) = 0.02; p = 0.9			<b>F(1,45)= 23.51; p=0.0001</b>			<b>KW = 7.38; p=0.006</b>			<b>F(1,83)= 48.87; p=0.006</b>		
LN_BW			<b>KW = 22.74; p=0.001</b>		KW = 0.02; p=0.9			<b>F(1,45)= 17.9; p=0.001</b>			KW = 3.37; p=0.06			<b>KW = 23.08; p=0.0001</b>	
LN_MF	F(1,74)= 29.83; p=0.9					F(1,51)= 3.44; p=0.06			F(1,45)= 0.78; p=0.38			KW = 3.47; p=0.06			KW = 3.51; p=0.06
PS_GZ					<b>F(1,28)= 4.55; p=0.04</b>	F(1,28)= 1.03; p=0.31	<b>F(1,22)= 8.03; p=0.009</b>			KW = 2.0; p=0.14			<b>KW = 8.13; p=0.002</b>		
PS_BW						F(1,28)= 1.4; p=0.24		<b>KW = 5.98; p=0.01</b>			KW = 1.03; p=0.28			<b>KW = 12.43; p=0.0004</b>	
PS_MF									F(1,22)= 3.57; p=0.07			<b>KW = 5.98; p=0.01</b>			KW = 0.42; p=0.51
RV_GZ								<b>KW = 10.67; p=0.001</b>	<b>F(1,16)= 26.3; p=0.0001</b>	KW = 1.17; p=0.26			KW = 0.05; p=0.8		
RV_BW									F(1,16)= 0.1; p=0.75		<b>KW = 9.16; p=0.001</b>			KW = 0.73; p=0.38	

RV_MF													KW = 0.61; p=0.43			KW = 3.23; p=0.07
SC_GZ													KW = 1.03; p=0.28	KW = 12.1; p=0.0004	KW = 2.99; p=0.07	
SC_BW													KW = 21.2; p=0.0002		KW = 21.3; p=0.0001	
SC_MF																KW = 9.17; p=0.002
NS_GZ															KW = 33.7; p=0.0003	KW = 24.2; p=0.0005
NS_BW																KW = 7.68; p=0.006
<b>Comparison between LH resettled area and not resettled area</b>																
RA_GZ vs RA_BW	RA_GZ vs RA_MF	RA_BW vs RA_MF	RA_GZ vs NRA_GZ	RA_MFvs NRA_MF	NRA_GZ vs NRA_MF	NRA_BW vs NRA_MF	RA_BW vs NRA_BW									
<b>KW = 19.6; p=0.0008</b>	KW = 0.49; p=0.48	<b>KW = 14.7; p=0.0001</b>	<b>KW = 42.5; p=0.0003</b>	KW = 3.74; p=0.053	<b>KW = 56.8; p=0.002</b>	KW = 0.71; p=0.39	<b>KW = 17.1; p=0.0003</b>									
NRA_GZvs NRA_BW																
<b>KW = 35.7; p=0.0009</b>																

LN – Lebombo North, PS – Pumbe Sandveld, RV – Rugged Veld, SC – Shrubveld on Calcrete, NS – Nwambia Sandveld, GZ – grazers, BW – browsers, MF – mixed feeders, RA – resettled area, NRA – not resettled area, KW – Kruskal-Wallis value.

**Table S5.** Large herbivores species recorded by habitat type and resettled/not resettled area in Limpopo National Park; RAI – relative abundance based on detected individuals per species per 100 trap nights <sup>89</sup>; IE – independents events; *n* – nr of sample units (camera traps).

Species	Habitat type										Resettlement of large herbivores			
	Lebombo North <i>n</i> = 38		Pumbe Sandveld <i>n</i> = 15		Rugged Veld <i>n</i> = 10		Shrubveld on Calcrete <i>n</i> = 28		Nwambia Sandveld <i>n</i> = 47		LH resettled area (RA) <i>n</i> = 76		Not resettled area (NRA) <i>n</i> = 70	
	IE	RAI	IE	RAI	IE	RAI	IE	RAI	IE	RAI	IE	RAI	IE	RAI
Warthog	61	3.05	10	0.94	4	0.69	8	0.37	24	0.65	86	2.07	20	0.37
Waterbuck	552	27.6	–	–	35	6.01	4	0.18	1	0.03	555	13.3	37	0.69
Blue wildebeest	27	1.35	24	2.26	–	–	5	0.23	–	–	57	1.37	–	–
Plains zebra	208	10.4	26	2.45	15	2.58	17	0.78	8	0.22	256	6.15	17	0.32
African buffalo	64	3.2	22	2.07	15	2.58	92	4.22	96	2.59	168	4.03	122	2.27
Common duiker	70	3.5	24	2.26	121	20.8	52	2.39	358	9.64	145	3.48	478	8.9
Bushbuck	20	1.0	–	–	–	–	–	–	–	–	20	0.48	–	–
Greater kudu	195	9.76	8	0.75	60	10.31	41	1.88	147	3.96	236	5.67	217	4.04
Giraffe	80	4.0	10	0.94	3	0.52	–	–	17	0.45	108	2.6	3	0.06
Steenbok	5	0.25	3	0.28	20	3.44	13	0.6	67	1.8	11	0.26	99	1.84
Impala	386	19.3	19	1.79	71	12.2	44	2.02	72	1.94	441	10.6	150	2.8
Nyala	337	16.9	10	0.94	89	15.3	110	5.05	133	3.58	352	8.45	325	6.05
Sable antelope	1	0.05	1	0.09	–	–	–	–	–	–	2	0.05	–	–
Eland	3	0.15	–	–	–	–	–	–	1	0.03	4	0.09	1	0.02
African elephant	118	5.9	34	3.2	21	3.61	74	3.4	80	2.16	193	4.63	133	2.48
Total Wildlife RAI	106.4		17.9		78.04		21.12		27.05		63.23		29.84	
Grazer's ratio (%)	42.9		43		15.2		27.4		12.8		42.6		12.2	
Browsers ratio (%)	17.1		22		40.5		20.2		52		19.3		43.6	
Mixed feeder ratio (%)	40		35		44.3		52.4		35.2		38.1		44.2	



**Figure S1.** Specie-specific naïve occupancy of reintroduced LH among habitat types in the Limpopo National Park. LN – Lebombo North, PS – Pumbe Sandveld, RV – Rugged Veld, SC – Shrubveld on Calcrete, NS – Nwambia Sandveld



## References

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