GAME COUNTS – NYAE NYAE CONSERVANCY LINE TRANSECTS   July 2023
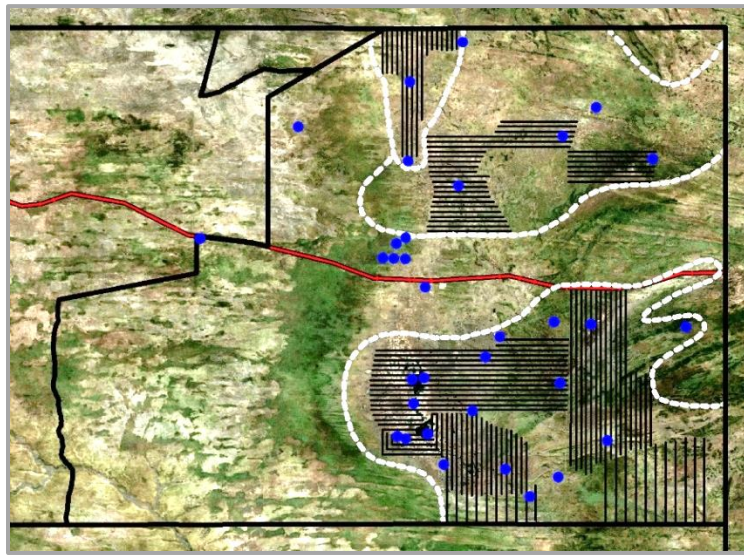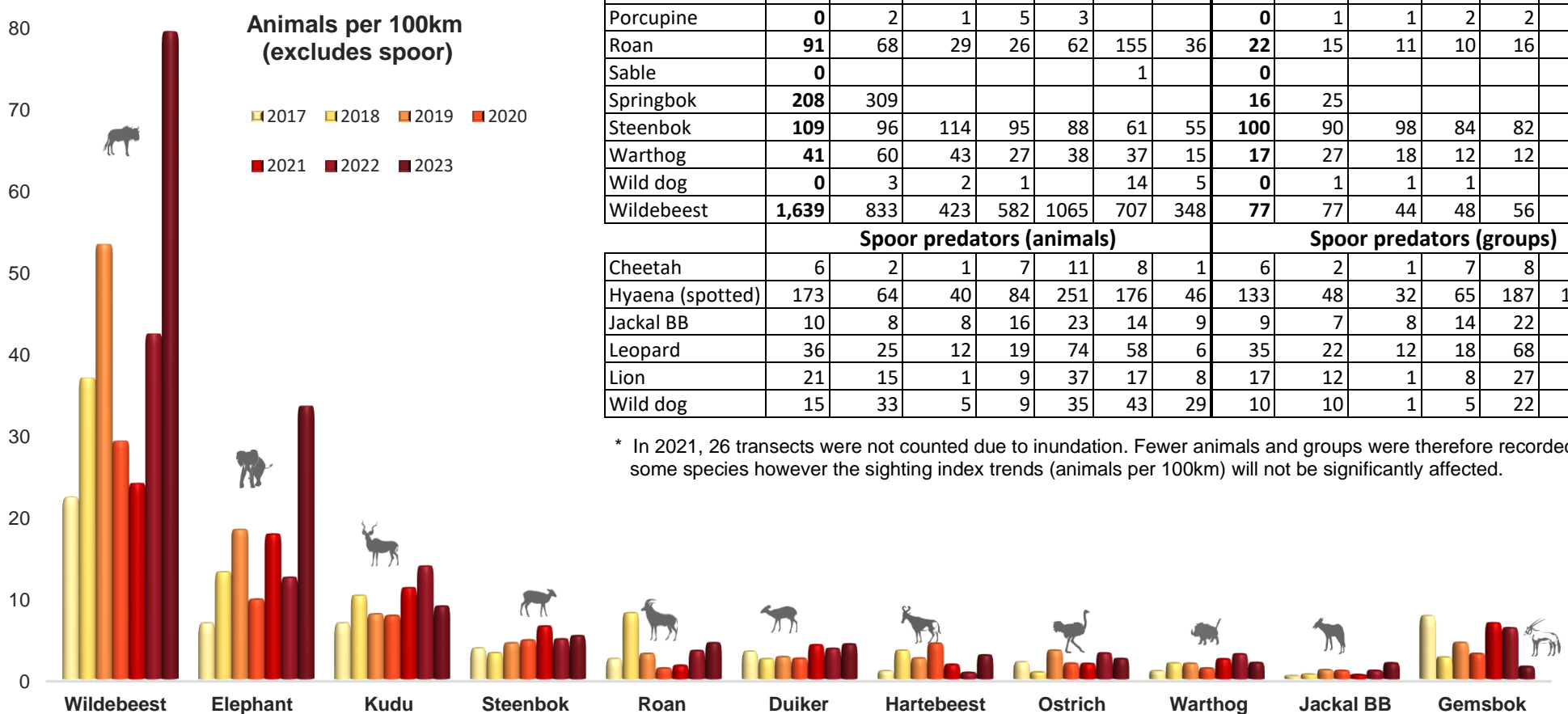
Line Transects

Nyae Nyae Conservancy: transects and waterholes.

Animals per 100km (excludes spoor)

Legend: 2017 2018 2019 2020 2021 2022 2023

Categories: Wildebeest, Elephant, Kudu, Steenbok, Roan, Duiker, Hartebeest, Ostrich, Warthog, Jackal BB, Gemsbok

Animals and groups

Species	Animals Seen							Groups seen						
	2023	2022	*2021	2020	2019	2018	2017	2023	2022	*2021	2020	2019	2018	2017
African Wild Cat	1		2		1			1		2		1		
Bat-eared fox	0			2				0			1			
Burchell's Zebra	103	63						13	9					
Duiker	88	73	74	50	54	47	51	79	71	71	48	53	44	48
Eland	15	1		3		2	5	1	1		1		2	1
Elephant	692	245	316	195	366	251	91	137	56	61	63	70	68	39
Gemsbok	38	123	122	62	89	51	120	17	31	32	28	25	17	22
Giraffe	12	24	1	29	4	2	16	5	7	1	5	3	1	4
Hartebeest	60	15	31	87	51	67	16	9	6	8	9	7	8	3
Honey Badger	1	2	4	1	1			1	1	2	1	1		
Hyaena	1			2	1	1	2	1			2	1	1	2
Impala	0					6		0					2	
Jackal BB	40	20	9	20	22	11	6	22	11	8	17	10	8	6
Kudu	184	272	197	155	159	196	108	64	69	57	44	49	50	33
Leopard	1	1	1	1	1			1	1	1	1	1		
Lion	0				1			0				1		
Ostrich	51	62	33	38	70	16	32	21	12	16	17	27	9	13
Porcupine	0	2	1	5	3			0	1	1	2	2		
Roan	91	68	29	26	62	155	36	22	15	11	10	16	22	9
Sable	0				1			0				1		
Springbok	208	309						16	25					
Steenbok	109	96	114	95	88	61	55	100	90	98	84	82	56	55
Warthog	41	60	43	27	38	37	15	17	27	18	12	12	15	7
Wild dog	0	3	2	1		14	5	0	1	1	1		2	2
Wildebeest	1,639	833	423	582	1065	707	348	77	77	44	48	56	56	30
	Spoor predators (animals)							Spoor predators (groups)						
Cheetah	6	2	1	7	11	8	1	6	2	1	7	8	6	1
Hyaena (spotted)	173	64	40	84	251	176	46	133	48	32	65	187	133	42
Jackal BB	10	8	8	16	23	14	9	9	7	8	14	22	12	8
Leopard	36	25	12	19	74	58	6	35	22	12	18	68	52	6
Lion	21	15	1	9	37	17	8	17	12	1	8	27	10	6
Wild dog	15	33	5	9	35	43	29	10	10	1	5	22	16	6

* In 2021, 26 transects were not counted due to inundation. Fewer animals and groups were therefore recorded for some species however the sighting index trends (animals per 100km) will not be significantly affected.

The fundamental purpose of game counts in communal areas is to inform conservancies and MEFT of wildlife trends for the purposes of adaptive management of resources. While estimates of species numbers are provided, these should only be considered as an approximate guide to species abundance.

Overview

Line transects were initiated in 2017 and represent almost half of the total area of the conservancy and include most of the waterholes. The area not covered by transects has low animal densities due to reduced habitat suitability and people pressure.

Transect counts have recorded 27 species including 7 predator species. Based on average spoor sightings and Event Book records, hyaena are the most common predator, followed by wild dog, leopard and jackal.

The top 3 species in terms of sightings between 2017 and 2023 included wildebeest, elephant and kudu. Most species showed stable or increasing trends.
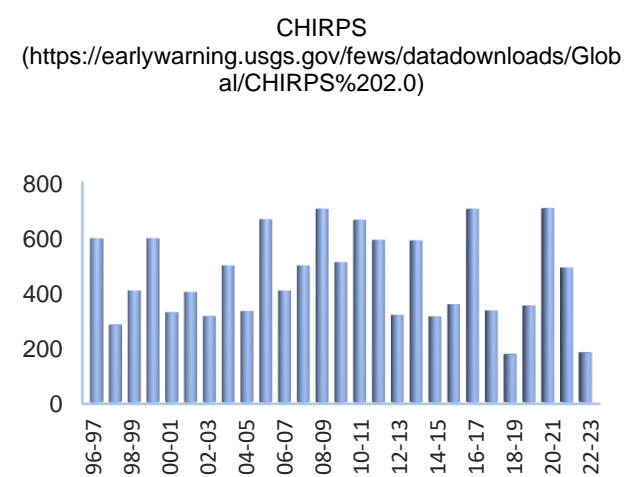
Count Statistics 2023

- 151 transects and a total length of 2,055 km
- 516 transect hours
- 10 count days
- 27 species recorded
- 92% of all live sightings were within 200m of the transect line
- Estimates represent a conservancy area of 4,200 km²

Estimates (rounded) were derived using DISTANCE analysis which takes account of drop-off in animal detectability with distance from the transect line. Ten game species had sufficient sightings to adequately derive species detection curves and therefore produce estimates.
Model: U=uniform; HN=half normal.

Estimates

Species	Estimate	95% CL Low	95% CL High	Model	Average Estimate (2021-23)
Duiker	2,420	1,820	3,220	HN	2,033
Elephant	2,856	2,037	4,006	HN	2,059
Gemsbok	370	150	900	HN	752
Hartebeest	280	120	660	U	259
Kudu	2,580	1,810	3,680	HN	2,438
Ostrich	290	160	540	HN	241
Roan	460	190	1,155	U	283
Springbok	680	290	1,570	U	552
Steenbok	2,220	1,695	2,915	HN	1,902
Warthog	340	200	580	HN	248
Wildebeest	8,295	4,620	14,770	HN	5,480

Rainfall mm (by season Jul-Jun)

CHIRPS (https://earlywarning.usgs.gov/fews/datadownloads/Global/CHIRPS%202.0)

The 22-23 data should be treated with some caution as values across the north-east appear to be unreasonably low.

Predator sighting trend (left) and Mortalities (right) *from Event Book*

Predator categories: Cheetah, Hyaena, Jackal, Leopard, Lion, Wild dog