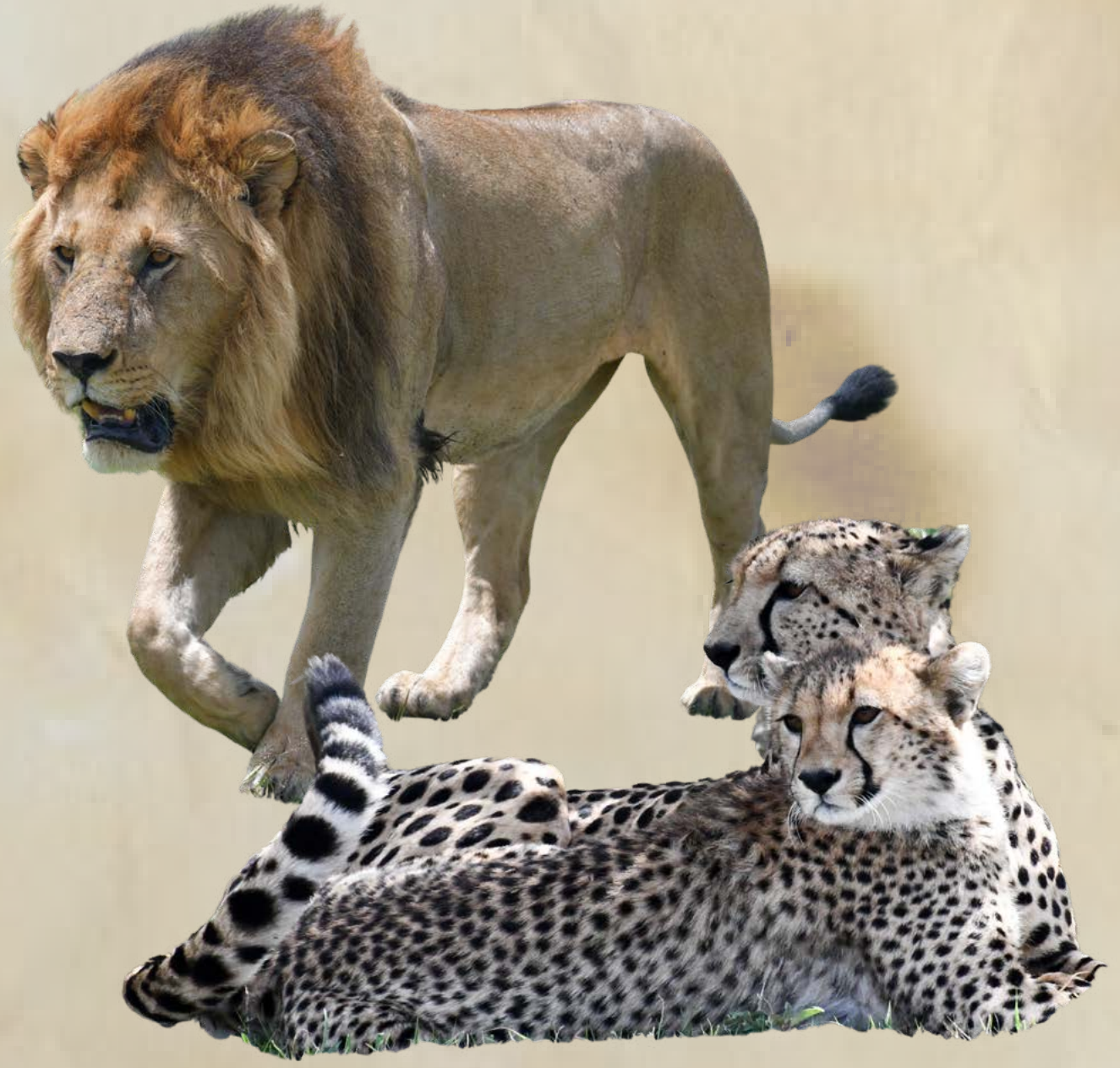
Q1 2023 UPDATED LION & CHEETAH FIGURES



MARA PREDATOR CONSERVATION PROGRAMME

We are pleased to present updated lion and cheetah figures from the 2022 survey period, which spanned from August 1 to October 31.

Lions

New lion figures

Table 1 shows estimates for lion density, abundance, and sex ratio for lions over the age of one year in the Masai Mara (National Reserve and the surrounding wildlife conservancies) for 2021 and 2022. The lion density and hence lion abundance increased slightly from 2021 to 2022.

It is however important to emphasise that this is merely a fluctuation between two consecutive years and not a trend. All wildlife populations fluctuate naturally from year to year as illustrated in figure 1.

The 2022 figure is within the range of previous years.

Lions	2021	2022
Study area (km^2)	2,581	2,581
Lion Density	17.12	18.04
Lion Abundance	436	459
Sex ratio (F:M)	1.94	2.23

Table 1: Lion density is given as lions/100km2 > 1-year-old, lion abundance is lions > 1 year old, sex ratio is female to male

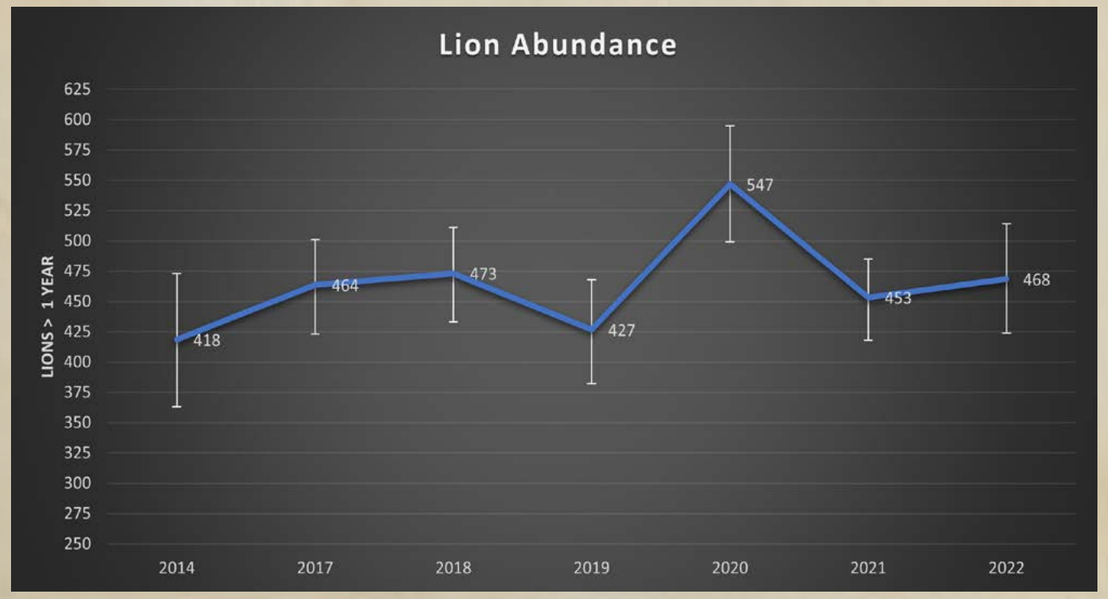


Figure 1. Mara lion abundance from 2014-2022 (2015-2016 numbers are yet to be analysed). Error bars represent the upper and lower limits.

Table 2 shows lion density and abundance for the respective management units.
What is noteworthy here is that almost all the Mara conservancies showed increased lion numbers while the Reserve and Mara Triangle had the opposite trend.
So, the overall density increase is attributed to the conservancies.

Wildlife area	Abundance		Density	
	2021	2022	2021	2022
Enonkishu	5	9	15.4	30.24
Lemek	10	14	16.3	23.12
Mara North	44	61	14.9	20.80
Naboisho	47	44	22.3	20.77
Olarro North	4	4	12.54	14.14
Olarro South	6	8	10.65	14.14
Ol Chorro	8	10	14.7	18.23
Olderikesi	3	5	7	13.13
Ol Kinyei	11	14	16	20.71
Olare-Motorogi	33	36	22.14	24.66
Siana	3	3	10.48	10.29
Mara Triangle	95	83	19.87	17.52
MMNR	187	177	17.78	16.84

Table 2: Lion abundance and density for the different management units for 2021 vs 2022

During our survey period, Enonkishu Conservancy scored highest with regard to lion density, followed by OMC and Lemek conservancies.

The 2022 lion densities can be viewed in the form of a heat map as shown in figure 2.

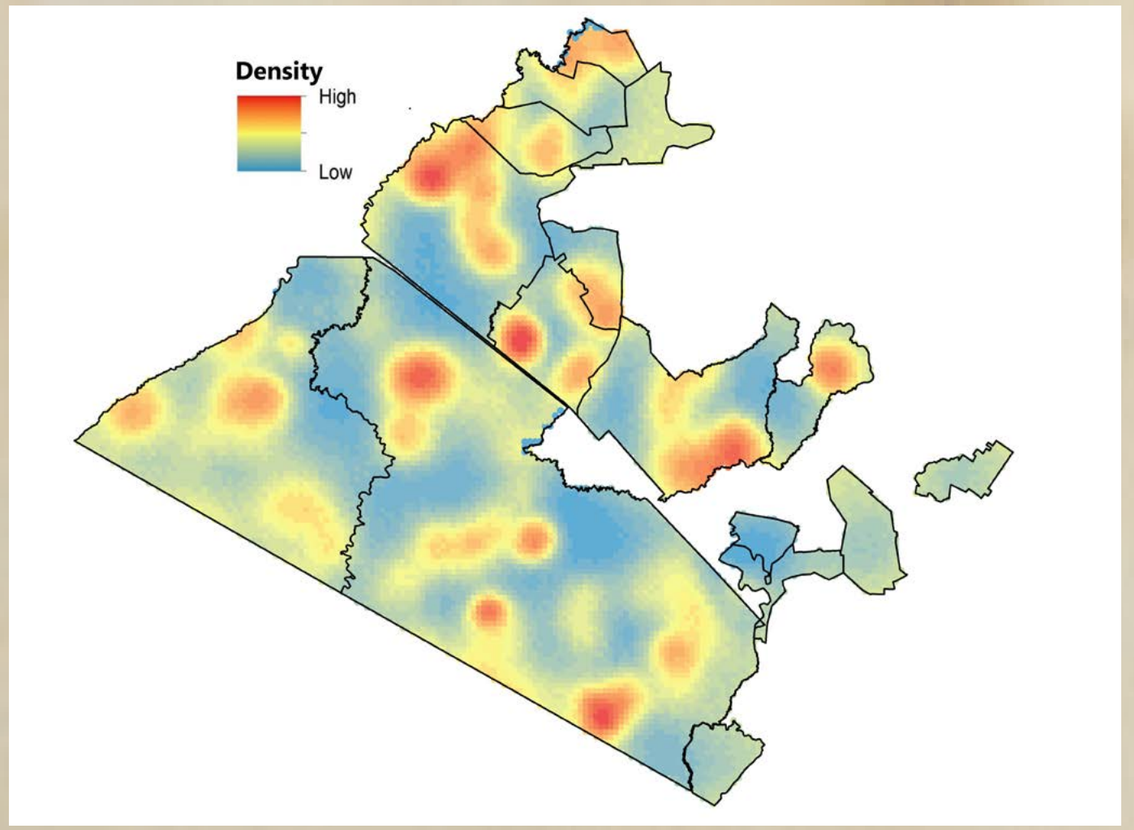


Figure 2. Lion density heat map

Cheetahs

New cheetah figures

Table 3 shows estimates for cheetah density, abundance and sex ratio for independent resident adult cheetahs in the Masai Mara (National Reserve and the surrounding wildlife conservancies) for 2021 and 2022.

Resident independent cheetahs	2021	2022
Study area (km^2)	2,581	2,581
Cheetah Density	1.24	0.88
Cheetah Abundance	32	22
Sex ratio (M:F)	1.05	1.65

Table 3: Cheetah density is given as independent individuals/100km^2, cheetah abundance is for independent individuals, sex ratio is to males to females.

As Table 3 shows, the Mara cheetah population dropped by 31% from 2021. However, it is important to note that we are presenting numbers for resident cheetahs during the three-month survey period. Cheetahs can have enormous ranging areas and there are a number of individuals that come into the wildlife areas that are transient or spend most of their time outside the Masai Mara protected areas, like the Serengeti.

This explains why we can record a higher number of unique cheetah individuals during some surveys than the estimated number of cheetahs within the Mara. The current decrease in the Mara cheetah population could be attributed to the fewer cheetahs within the National Reserve (see MPCP 2022 Q4 for more details).

As with the lion data, we have produced a cheetah density heat map illustrated in figure 3

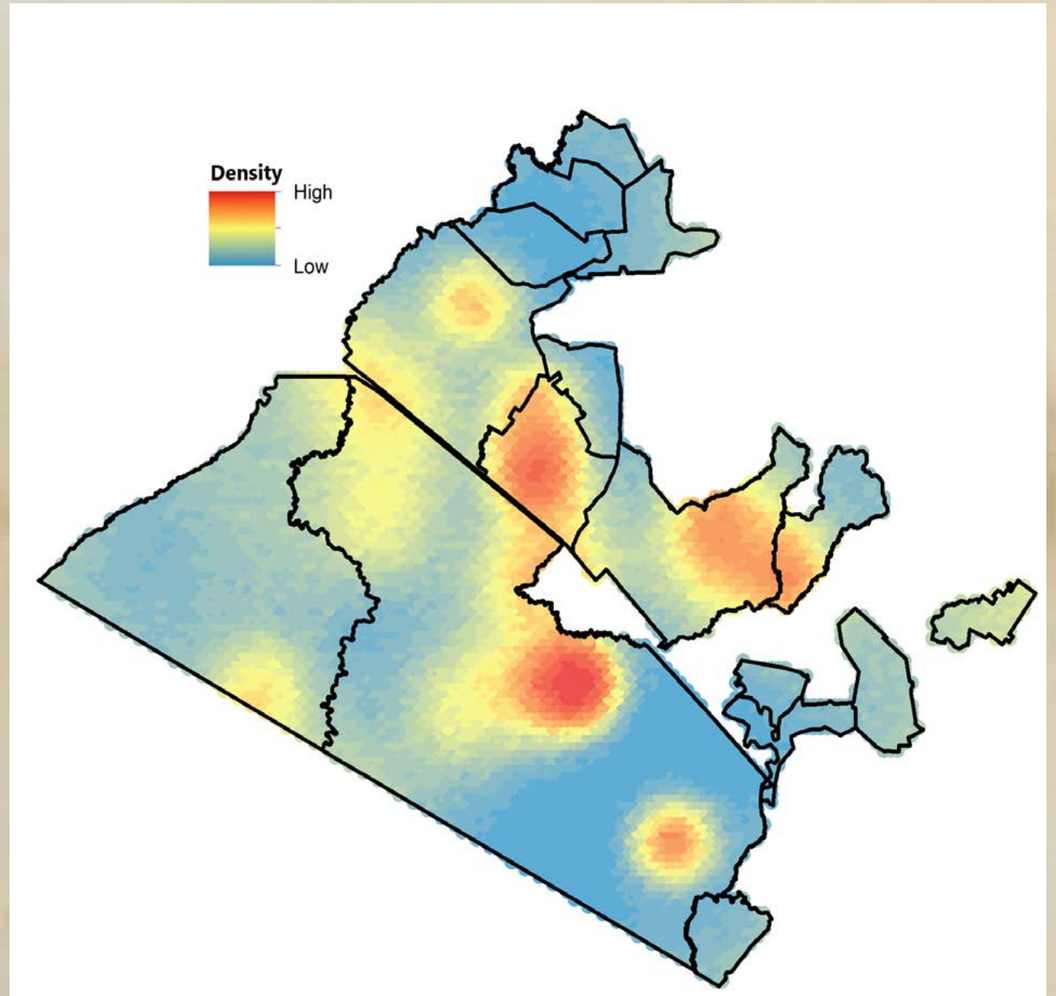


Figure 3: Cheetah density heat map.

We have completed the analysis of cheetah densities from 2014-2022, with two surveys per year from 2015-2018. This is illustrated in figure 4. Having long-term datasets is critical to analyse population trends.

Please note that because cheetahs live at low population densities and hence a small sample size, a sudden increase or decrease in cheetah individuals like a disease outbreak, will cause large fluctuations within the population.

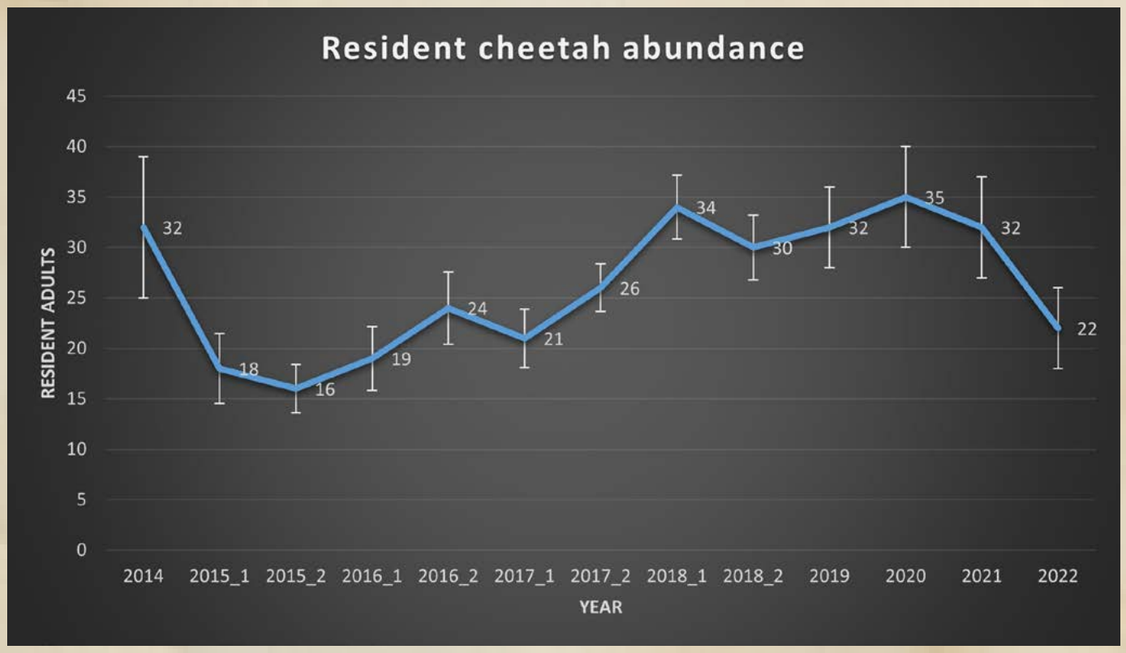


Figure 4: This graph shows cheetah abundance (error bars represent standard deviations) from 2014-2022. There was one survey in 2014 and from 2019-2022 (01August-31October), and two surveys in 2015-2018 (01February-30April & 01August-31October).

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Cheetah ©2022 MPCP



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