



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD



Urban Baboon Programme

Annual Population Census

2022/2023

PREPARED FOR:
City of Cape Town

DATED:
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PREPARED BY:
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1 INTRODUCTION

NCC Environmental Services was awarded the tender to carry out the Urban Baboon Programme for the City of Cape Town (CCT) in October 2020. As part of the programme, an annual census of the baboon population is a requirement of the CCT contract. This population census provides a detailed breakdown of the changes in the baboon population between July 2022 and June 2023.

2 METHODOLOGY

The annual count is a total count in which each individual is recorded. Within each baboon troop, the troop structure is broken down into different age and sex classes. The following categories are used to determine the different classes:

Adult male (AM): Muscular nose ridges fully developed, canines fully descended, shoulder mantle present, testicles fully descended. Physical bulk and neck thickness increase (>8 years).

Adult female (AF): Sexual skin swells/deflates with menstrual cycle. Nipples obvious and elongated in mature females; may show dappled colour in older females. Has had at least one offspring (> 6 years).

Subadult male (SAM): Larger than AF; canine/s project beyond the tooth row but not fully descended (often uneven length); testicles not fully descended, appear flat/slightly rounded from behind; the body is angular in shape and lacks bulk (5 - 8 years).

Subadult female (SAF): First sexual cycle begins; small oestrous swelling may be present; small button-like nipples present; has not had offspring; smaller and slighter than AF (5 – 6 years).

Immatures: Includes juveniles (1 - 5 years) and infants (0 – 1 years)

Large juvenile male: same size/smaller than AF; canines do not extend beyond the tooth row.

Large juvenile female: nipples not obvious; smaller than SAF.

Infants: includes 2 categories - brown & black

Brown: Hair grey/brown; skin dark; eyebrows change colour to brown; clings to mother ventrum but also rides on dorsum (6 – 12 months).

Black: Hair black (natal coat); skin, ears, nose, and scrotum (males) pink; clings to mother's ventrum (0 – 6 months).

3 RESULTS

Population trends

As of 30 June 2023, the total count for the baboon population on the Cape Peninsula (excluding those living exclusively within the Cape Point section of Table Mountain National Park) is 488 and includes the Plateau Road Troop (27 baboons). This report focuses on the population of troops that border urban areas, for which complete data is available from the Urban Baboon Programme, which excludes the Plateau Road Troop. The total for the population that borders urban areas is 461. The Cape Peninsula baboon population which borders on urban areas has experienced an overall 23.2% increase from 2012 to 2023 (354 to 461) but experienced a 7.4% decrease in size from 2022 to 2023 (498 to 461) (Fig. 1). This decrease which was more prevalent in the southern subpopulation than the northern subpopulation (Fig. 2).

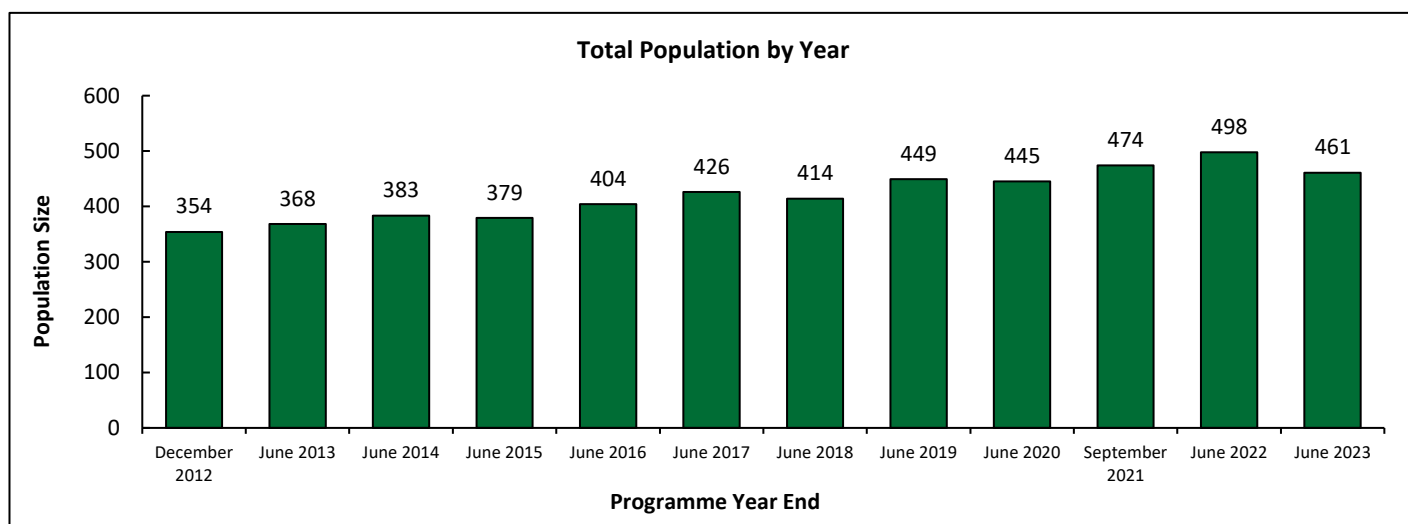


Figure 1. Annual population count for the baboon population on the Cape Peninsula adjacent to urban areas i.e. excluding the Plateau Road Troop.

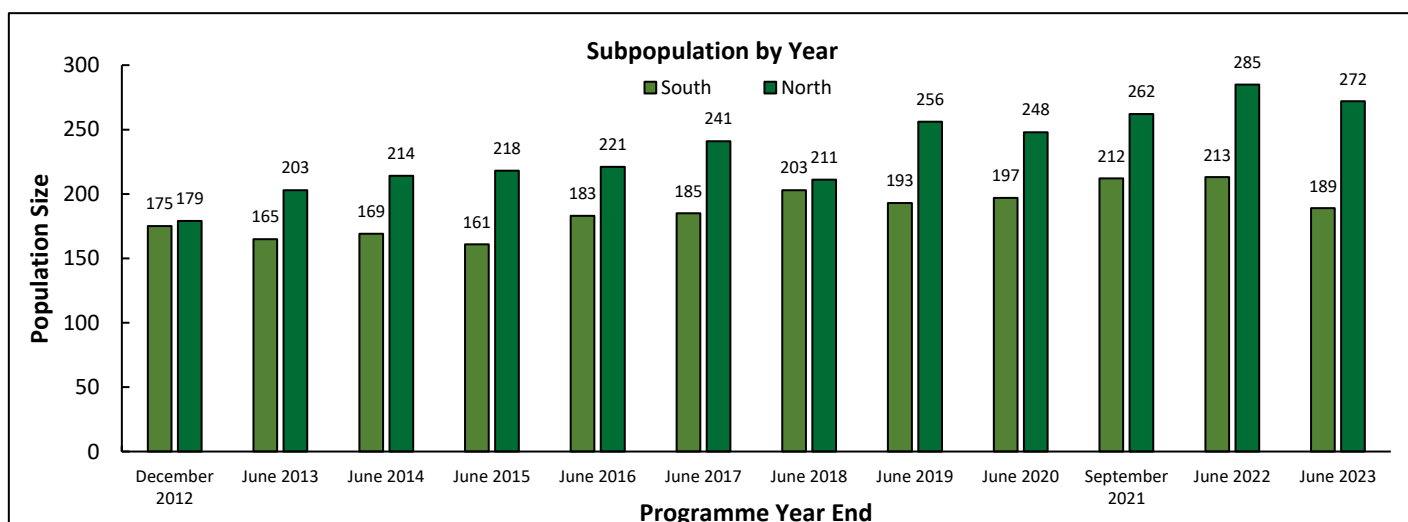


Figure 2. Annual subpopulation counts for the baboon population on the Cape Peninsula adjacent to urban areas i.e. excluding the Plateau Road Troop.

Troop structure

The age and sex class structure of the individual troops remained relatively similar to last year's structure (**Table 1**). This year however there has been an increase in the number of adult males (33 vs. 26) and subadult males (36 vs. 29) in the population. The number of adult females has remained similar (158 vs. 152). The number of subadult females decreased significantly (30 vs. 14), as did the number of immatures (252 vs. 233). See the annual count report from 2021/2022 for further details:

https://resource.capetown.gov.za/documentcentre/Documents/City%20research%20reports%20and%20review/Annual_Baboon_Count_UBP-2021_2022.pdf

Table 1. Age and sex class structure of the baboon troops in June 2023.

Troop	Adult Male	Adult Female	Subadult Male	Subadult Female	Immatures	Total
Da Gama	2	9	1	1	23	36
Groot Olifantsbos	2	9	1	2	21	35
Slangkop	3	16	3	2	12	36
Smitswinkel Bay	2	8	1	2	11	24
Seaforth*	1	6	0	0	7	14
Waterfall	2	19	4	1	18	44
South Subtotal	12	67	10	8	92	189
Constantia 1	1	12	6	0	15	34
Constantia 2	1	6	1	1	11	20
Mountain 1	6	19	3	1	27	56
Mountain 2	2	9	0	1	19	31
Tokai**	6	33	9	3	55	106
Zwaanswyk**	3	6	0	0	14	23
<i>Dispersing males</i>	2	0	0	0	0	2
North Subtotal	21	85	19	6	141	272
TOTAL	33	152	29	14	233	461
<i>Plateau Road***</i>	2	10	2	1	12	27

*This troop is a splinter of the Smitswinkel Bay Troop, which was established after the 2022 annual count. **The Zwaanswyk & Tokai troops are sister troops who overlap throughout their entire range. These troops forage immediately adjacent to each other, with individuals regularly moving between the two. As such, the exact number of baboons belonging to the Zwaanswyk Troop as opposed to the Tokai Troop, and vice versa, is an approximation. ***Plateau Road Troop is excluded from the total count as it does not border on urban areas but contributes to the total population of baboons on the Peninsula.

Troop sizes

Individual troop sizes shown in **Table 2** illustrate the changes in troop numbers between December 2012 and June 2023. In the northern subpopulation, troop size variation ranged from a 15.9% decrease in the Tokai Troop to a 53.3% increase in the Zwaanswyk Troop, although a portion of this variation is due to regular movement between these two troops. The northern subpopulation decreased by 4.6% overall from 285 to 272. In the southern subpopulation, troop size variation was most significant for the Smitswinkel Bay Troop which decreased by 40% due to the formation of a splinter troop, the Seaforth Troop. The decrease in the size of the Da Gama and Waterfall troops this year are notable. The Da Gama Troop has steadily decreased in size since they were recorded at their largest in September 2021 (55 baboons) and are currently at the smallest size recorded since 2013. Similarly, the Waterfall Troop has decreased over the last three years when they were also recorded at their largest (September 2021: 52 baboons). The southern subpopulation overall experienced an 11.3% decrease from 213 to 189 baboons.

Mortalities

The number of known mortalities for this reporting period was higher than the average since 2013 (58 vs. ~47) (**Table 3**) and considerably higher than the two previous contract years (2020/2021: **35**, 2021/2022: **36**). The leading cause of mortalities during the current reporting period were human-induced. 26 baboons died of human-induced causes (mainly due to pellet gun shootings, dog attacks and vehicle collisions). This figure is higher than last year (19 baboons) and considerably higher than the annual average of ~13 baboons. The second highest cause of mortality was due to natural causes (23 baboons), followed by unknown causes (9 baboons). There were no management mortalities this year.

Table 2. Population data for baboon troops including troop size changes for 2023.

SOUTH TROOPS	Dec. 2012	June 2013	June 2014	June 2015	June 2016	June 2017	June 2018	June 2019	June 2020	Sept. 2021	June 2022	June 2023	Annual No. Change	Annual % Change
Da Gama	54	42	43	46	52	52	55	48	48	55	49	36	-13	-26.5%
Groot Olifantsbos	19	20	19	16	17	23	29	23	25	29	33	35	2	6.1%
Misty Cliffs*	18	17	16	9	11									
Slangkop	33	37	40	35	41	40	44	43	42	34	40	36	-4	-10%
Smitswinkel Bay	23	21	22	24	29	33	35	31	35	42	40	24	-16	-40%
Seaforth**												14	14	100%
Waterfall	28	28	29	31	33	37	40	48	47	52	51	44	-7	-13.7%
SUBTOTAL	175	165	169	161	183	185	203	193	197	212	213	189	-24	-11.3%
NORTH TROOPS	Dec. 2012	June 2013	June 2014	June 2015	June 2016	June 2017	June 2018	June 2019	June 2020	Sept. 2021	June 2022	June 2023	Annual No. Change	Annual % Change
Constantia 1	60	70	69	77	81	63	46	64	68	40	39	34	-5	-12.8%
Constantia 2						22	10	8	7	17	18	20	2	11.1%
Mountain 1	33	41	47	49	47	57	60	73	63	51	55	56	1	1.8%
Mountain 2										24	32	31	-1	-3.1%
Tokai	61	64	70	62	65	69	75	91	92	110	126	106	-20	-15.9%
Zwaanswyk	25	28	28	30	28	30	20	20	18	20	15	23	8	53.5%
<i>Dispersing males</i>	-	-	-	-	-	-	-	-	-	-	-	2	2	NA
SUBTOTAL	179	203	214	218	221	241	211	256	248	262	285	272	-13	-4.6%
TOTAL	354	368	383	379	404***	426***	414	449	445	474	498	461	-37	-7.4%

*The Misty Cliff's Splinter Troop merged with the GOB Troop in January 2017. Four individuals from GOB later splintered again and were eventually relocated to a sanctuary in Feb/March 2020.

This troop is a splinter of the Smitswinkel Bay Troop, which was established after the 2022 annual count. *These totals are estimates based on rolling counts, not official census counts.

Table 3. Annual causes of known baboon mortality since June 2013.

KNOWN CAUSE OF MORTALITY	END JUNE TOTALS											Total Deaths since 2013	% Deaths by Cause in 2023	% Average Annual Deaths by Cause
	2013	2014	2015	2016	2017	2018	2019	2020	SEPT. 2021	2022	2023			
Management ¹	17	10	8	4	11	8	4	5	1	1	0	69	0.0%	13.16%
Human-Induced	5	3	23	13	5	8	17	11	14	19	26	144	44.8%	28.76%
Human-induced: Direct ²	5	3	4	8	2	7	8	10	11	15	24	97	92.3%	67.57%
Human-induced: Indirect ³	0	0	19	5	3	1	9	1	3	4	2	47	7.7%	27.41%
Natural ⁴	19	21	22	8	27	28	18	30	18	12	23	226	39.7%	42.88%
PLOHP ⁵	0	0	0	0	0	7	0	0	0	0	0	7	0%	0.99%
Unknown ⁶	5	9	5	8	7	13	6	6	3	3	9	74	15.5%	14.21%
Total Deaths	46	43	58	33	50	64	45	52	36	35	58	520		
Total Population	368	383	379	404	426	414	449	445	474	498	461			

¹**Management:** baboons euthanised following the BTTG3 guidelines. **Human-induced mortality is split into Direct and Indirect:** ²**Direct** – baboons killed by shooting, poisoning, dog attacks, motor vehicle collisions, etc. ³**Indirect** – electrocutions, human-related fires. This category also includes baboons seriously injured from these causes and subsequently euthanised. ⁴**Natural:** baboon-on-baboon altercations, infanticide, etc. This category also includes baboons seriously injured from these causes and subsequently euthanised. ⁵**PLOHP:** Private landowner hunting permit. ⁶**Unknown:** occasionally a baboon carcass is found, and the cause of death cannot be determined. This category includes baboons euthanised for serious injuries which resulted from an unknown cause. **NB:** This table includes only known mortalities and is unlikely to account for all possible mortalities in a given year.

4 EXPERIENCE OF CONTRACTED COUNTER

The individual appointed to conduct this annual census was an independent contractor with an MSc in Primate Conservation and over ten years' experience working with and researching baboons and other primates in both wild populations and in-situ rehabilitation centres.