



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD



Urban Baboon Programme

Annual Population Census

2021/2022

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. This population census provides a detailed breakdown of the changes in the baboon population between September 2021 and June 2022.

2 METHODOLOGY

The annual count is a total count during 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 age 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).
Sub-adult male:	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).
Sub-adult female:	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 AF. Infants: includes 2 categories - Brown & Black Brown: Hair grey/ brown; skin dark; eyebrows change colour to brown; clings to mother belly but also rides on back (6 – 12 months). Black: Hair black (natal coat); skin, ears, nose, and scrotum (males) pink; clings to mother belly (0 – 6 months).

3 RESULTS

As of 20 June 2022, the total count for the baboon population on the Cape Peninsula (excluding those living within the Cape Point section of Table Mountain National Park) is 519. This total includes the Plateau Road Troop (21 baboons).

The baboon population which borders on urban areas has shown a general increase since June 2016 from 404 baboons to 498 baboons presently (**Fig. 1**). The population of the southern subpopulation remained stable this year and the overall population growth was attributed to an increase in the northern subpopulation (**Fig. 2**).

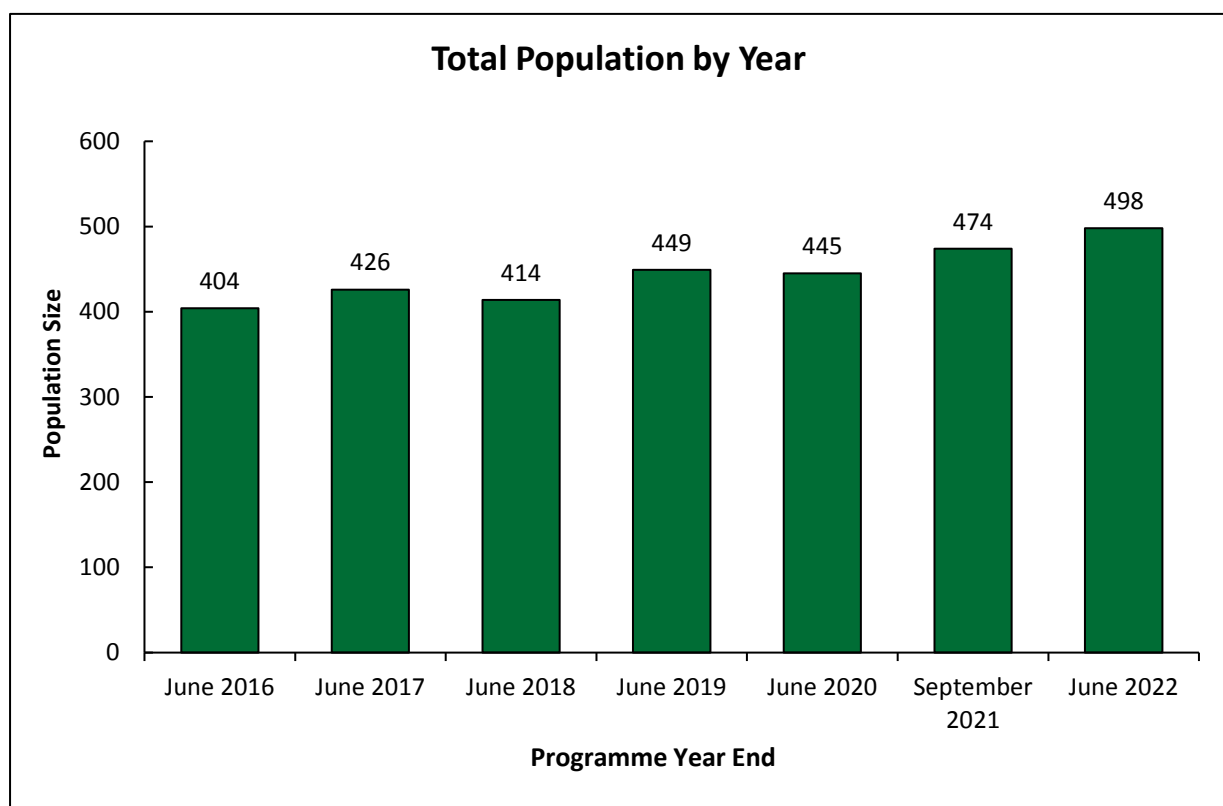


Figure 1. Total annual population counts for the baboon population on the Cape Peninsula, excluding Plateau Road Troop.

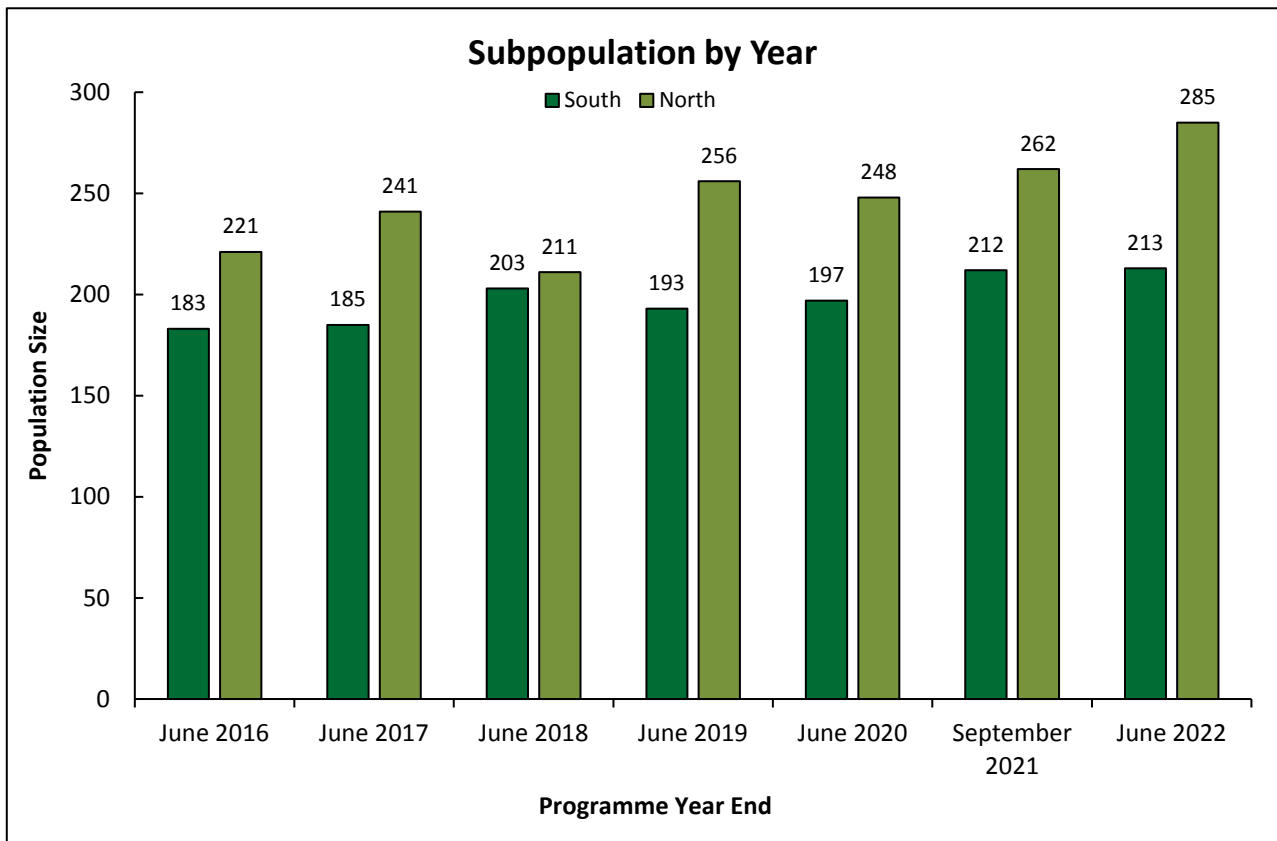


Figure 2. Annual counts for the baboon population by subpopulation, excluding the Plateau Road Troop.

Table 1. Age and sex class structure of the baboon troops in June 2022.

Troop	Adult Male	Adult Female	Sub-adult Male	Sub-adult Female	Immatures	Total
Da Gama	2	12	2	4	29	49
Waterfall	2	20	2	3	24	51
Smitswinkel	3	13	2	3	19	40
GOB	2	12	0	1	18	33
Slangkop	2	14	3	3	18	40
South Subtotal	11	71	9	14	108	213
Zwaanswyk*	1	7	0	0	7	15
Tokai*	8	29	15	11	63	126
Mountain 1	2	22	5	0	26	55
Mountain 2	2	8	3	2	17	32
Constantia 1	1	13	4	3	18	39
Constantia 2	1	8	0	0	9	18
North Subtotal	15	87	27	16	140	285
TOTAL	26	158	36	30	248	498
<i>Plateau Road**</i>	<i>1</i>	<i>5</i>	<i>1</i>	<i>1</i>	<i>13</i>	<i>21</i>

*The Zwaanswyk & Tokai troops are sister troops who overlap throughout their range. These troops forage amongst each other, with individuals regularly moving between the two troops. 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.

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 overall increase in the number of adult females in the population (158 vs. 139), and an increase in the number of sub-adult males (36 vs. 21). The number of adult males has remained the same (26 in both years). The number of sub-adult females in the population has decreased slightly (30 vs. 36), as did the number of immatures (248 vs. 252). Changes in the number of individuals in non-adult categories are largely linked to their maturation into the next oldest age category during the course of a year. See the annual count report from 2020/2021 for further details:

https://resource.capetown.gov.za/documentcentre/Documents/City%20research%20reports%20and%20review/Baboon_Count-Annual-2020-2021_NCC.pdf

Table 2. Annual causes of known baboon mortality since June 2013.

CAUSE OF MORTALITY	END JUNE TOTALS										Total Deaths since 2013	% Deaths by Cause in 2022	% Average Annual Deaths by Cause
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022			
Management*	17	10	8	4	11	8	4	5	1	1	69	2.9%	14.5%
Human-Induced	5	3	23	13	5	8	17	11	14	19	118	54.3%	27.2%
<i>Direct**</i>	5	3	4	8	2	7	8	10	11	15	73	79%	70.2%
<i>Indirect***</i>	-	-	19	5	3	1	9	1	3	4	45	21%	29.8%
Natural	19	21	22	8	27	28	18	30	18	12	203	34.3%	43.2%
PLOHP****	-	-	-	-	-	7	-	-	-	-	7	0%	1.1%
Unknown	5	9	5	8	7	13	6	6	3	3	65	8.6%	14.1%
Total Deaths	46	43	58	33	50	64	45	52	36	35	462		
Total Population	368	383	379	404	426	414	449	445	474	498			

Management:** baboons euthanised following the BTTG3 guidelines. **Human-induced:** *Direct** – baboons killed by shooting, poisoning, dog attacks, motor vehicle collisions, etc. *****Indirect** – electrocutions, human-related fires. This category also includes baboons seriously injured from these causes and subsequently euthanised. **Natural:** baboon-on-baboon altercations, infanticide, etc. This category also includes baboons seriously injured from these causes and subsequently euthanised. ******PLOHP:** Private landowner hunting permit. **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.

In 2022, the highest number of mortalities were due to human-induced causes (54.3%), the majority of which were direct human-induced causes (79%) such as pellet gun shootings, dog attacks and motor vehicle collisions. The second highest cause of mortality was natural causes (34.3%), followed by unknown causes (8.6%) and management deaths (2.9%) (**Table 2**). The known mortalities for this reporting period were lower than the average since 2013 (35 vs. ~46). There were fewer than average mortalities related to management (1 vs. ~7), natural deaths (12 vs. ~20) and unknown causes (3 vs. ~6). The number of human-induced deaths however was higher than average this year (19 vs. ~12).

Individual troop sizes shown in **Table 3** illustrate the changes in troop numbers between December 2012 and June 2022. In the northern subpopulation, troop size variation ranged from a 25% decrease in the Zwaanswyk Troop to a 33.3% increase in the Mountain Two Troop, with an 8.8% increase in the northern subpopulation overall. It must be noted that the Zwaanswyk and Tokai troops are sister troops, overlapping throughout the entirety of their range and regularly foraging in and amongst each other. As such, the exact number of baboons belonging to the Zwaanswyk Troop, as opposed to the Tokai Troop, and vice versa, is an approximation and likely accounts for the decrease in the Zwaanswyk Troop's count this year. In the southern subpopulation, troop size variation ranged from a 10.9% decrease for the Da Gama Troop to a 17.6% increase in the Slangkop Troop, with a 0.5% increase in the subpopulation overall. On a whole, the Cape Peninsula baboon population (excluding the additional Plateau Road and Cape Point troops) has increased by 5.1% since last year's population census. Over the last decade, the population has experienced a 40.7% increase in size overall, with an average annual increase of 3.5%. As the population is closed due to urban sprawl, offers limited undeveloped low-lying areas for foraging, and has no natural predators, a population management plan is strongly recommended to slow the growth of the baboon population. This would aid in ensuring continued management success with the goal of a sustainable Cape Peninsula baboon population.

Table 3. Population data for baboon troops including troop size changes for 2022.

SOUTHERN TROOPS	Dec. 2012	June 2013	June 2014	June 2015	June 2016	June 2017	June 2018	June 2019	June 2020	Sept. 2021	June 2022	Annual No. Change	Annual % Change
Da Gama	54	42	43	46	52	52	55	48	48	55	49	-6	-10.9%
Groot Olifantsbos	19	20	19	16	17	23	29	23	25	29	33	4	13.8%
Misty Cliffs*	18	17	16	9	11								
Slangkop	33	37	40	35	41	40	44	43	42	34	40	6	17.6%
Smitswinkel Bay	23	21	22	24	29	33	35	31	35	42	40	-2	-4.8%
Waterfall	28	28	29	31	33	37	40	48	47	52	51	-1	-1.9%
SUBTOTAL	175	165	169	161	183	185	203	193	197	212	213	1	0.5%
NORTHERN TROOPS	Dec. 2012	June 2013	June 2014	June 2015	June 2016	June 2017	June 2018	June 2019	June 2020	Sept. 2021	June 2022	Annual No. Change	Annual % Change
Constantia 1	60	70	69	77	81	63	46	64	68	40	39	-1	-2.5%
Constantia 2						22	10	8	7	17	18	1	5.9%
Mountain 1	33	41	47	49	47	57	60	73	63	51	55	4	7.8%
Mountain 2										24	32	8	33.3%
Tokai	61	64	70	62	65	69	75	91	92	110	126	16	14.5%
Zwaanswyk	25	28	28	30	28	30	20	20	18	20	15	-5	-25%
SUBTOTAL	179	203	214	218	221	241	211	256	248	262	285	23	8.8%
TOTAL	354	368	383	379	404**	426**	414	449	445	474	498	24	5.1%

*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. **These totals are estimates based on rolling counts, not official census counts.